DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR KENSINGTON ESTATES

Volume II of II
Appendices

HAMLET OF WEST HILLS, TOWN OF HUNTINGTON &
HAMLET OF WOODBURY, TOWN OF OYSTER BAY
SUFFOLK COUNTY & NASSAU COUNTY, NEW YORK

Prepared for: Triangle Equities Development Co., LLC
30-56 Whitestone Expressway
Whitestone, NY 11354
Contact: Elysa Goldman
(718)463-5757

For Submission to: Town of Huntington
Town Board
100 Main Street
Huntington, NY 11743
(631) 351-3196

Prepared by: Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747
Contact: Charles J. Voorhis, CEP, AICP; Managing Partner
(631) 427-5665

December 2009
Accepted April 13, 2010

DRAFT ENVIRONMENTAL IMPACT STATEMENT
for
KENSINGTON ESTATES
CHANGE OF ZONE APPLICATION

Volume II of II

Hamlet of West Hills, Town of Huntington &
Hamlet of Woodbury, Town of Oyster Bay
Suffolk County & Nassau County, New York

Applicant/Prepared for:
Triangle Equities Development Co., LLC
30-56 Whitestone Expressway
Whitestone, NY 11354
Contact: Elysa Goldman
(718)463-5757

For Submission to:
Town Board, Town of Huntington (as Lead Agency)
100 Main Street
Huntington, NY 11743
(631)351-3196

Prepared by:
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572 Walt Whitman Road
Melville, New York 11747
Contact: Charles Voorhis, CEP, AICP
(631) 427-5665

Weber Law Group
290 Broadhollow Road, Suite 200E
Melville, NY 11747
Contact: Sy Gruza
(631)549-2000

Nelson & Pope, Surveyor, Site Plan & Traffic Study
572 Walt Whitman Road
Melville, New York 11747
Contact: Paul Racz
(631) 427-5665

Tracker Archaeology Services, Inc. *(archeologist)*
62 Pickerel Road
Monroe, NY 10950
Contact: Alfred Cammisa, RPA
(845) 783-4082

Axelrod & Cherveny *(architect)*
66 Harned Road
Commack, NY 11725
Contact: Glen Cherveny
(631) 864-4411

Date of Acceptance by Lead Agency: April 13th, 2010

Comments on this document are to be submitted to the Lead Agency by: through June 21st, 2010

APPENDICES

APPENDIX A

BACKGROUND MATERIALS

Appendix A-1

Positive Declaration

Town Board

November 16, 2007

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING & ENVIRONMENT

Anthony J. Aloisio, AICP, *Director*

Frank P Petrone, *Supervisor*

RECEIVED
NOV 2 1 2007
NELSON & POPE

November 16, 2007

Carrie O'Farrell, AICP
Nelson Pope & Voorhis
572 Walt Whitman Road
Melville, NY 11747

RE: Change of Zone Application #2006-ZM-363
Application Name: **Triangle Equities (Kensington Estates)**
Street Location: s/e/c Jericho Tpke (NY 25) & Plainview Rd, West Hills/Woodbury
Suffolk County Tax Map: 0400-226-01-001
Nassau County Tax Map: 13-D-114 & 115
Zone Request: R-40 Residence to R-RM Retirement Community (Huntington)
R1-1A to RMF-10 (Oyster Bay)

Dear Ms. O'Farrell,

Attached please find the Town of Huntington Town Board resolution issuing a Positive Declaration in accordance with SEQRA for the zone change application, the EAF Parts II and III, and the ENB Notice.

Very truly yours,

Craig Turner

Craig Turner, AICP
Planner

For Anthony J. Aloisio
Director of Planning and Environment

The ENB SEQRA Notice Publication Form

____Negative Declaration - Type I

____Conditioned Negative Declaration

____Draft Negative Declaration

__✓__Positive Declaration
____ with Public Scoping Session
__✓_ with Public Scoping Period

___Draft EIS
____with Public Hearing
____Generic
____Supplemental

___Final EIS
____Generic
____Supplemental

DEC Region # 1 **County:** Suffolk & Nassau **Lead Agency:** Huntington Town Board

Project Title: **Triangle Equities LLC [Kensington Estates] Zone Change (#2006-ZM-363)**

Brief Project Description: The property lies in both the Town of Huntington (Suffolk County) and the Town of Oyster Bay (Nassau County). On the Huntington side the applicant is requesting a zone change from R-40 Residential to R-RM Retirement Community District on 13.6 acres of land. On the Oyster Bay side the zoning would be changed from R1-1A One-Family Residence to RMF-10 Multi-Family Residence on 5.1 acres of land. The applicant intends to build a senior-aged residential community of 136 units in 19 buildings, of which 109 units are located in Huntington and 27 units are located in Oyster Bay. The property is located in the West Hills-Melville and Oyster Bay Special Groundwater Protection Areas (SGPAs), and is listed on the Town of Huntington Open Space Index as parcel SW-1. The project also lies within the Town of Oyster Bay's Aquifer Protection Overlay (APO) District. The development would be connected to the Nassau County sewer system to eliminate on-site sanitary discharge. The only proposed road access is from Plainview Road. Except for the retention of some wooded buffers along the property lines, most of the site will be disturbed by clearing and/or grading.

Project Location: Property is located on the southeast corner of Jericho Turnpike (NYS 25) and Plainview Road, West Hills/Woodbury. The Suffolk County Tax Map number is 0400-226-01-001 and the Nassau County Tax Map numbers are 13-D-114 & 115.

Potential Environmental Impacts:

1. The proposed action is inconsistent with the towns' Comprehensive Plans and the SGPA Plan that recommend low-density residential use of the site and preservation of open space.
2. The proposed action may not be in compliance with sections of the Town of Oyster Bay Aquifer Protection Overlay District.
3. The project's compatibility with the character of the neighborhood, which is mostly low-density residential use.
4. The rezoning of this property may pose a precedent for the rezoning of other large properties in the

neighborhood.

5. The clearing and grading of the majority of the property will reduce open space and wildlife habitat and change drainage patterns, affecting the nearby wetlands.
6. Soils may contain contaminants from agricultural uses and the soil composition may affect drainage design.
7. The aesthetic impacts from the significant change in the appearance of the property from the clearing, grading, and construction of high-density attached housing units and a recharge basin.
8. The increase in traffic generation and impact on neighboring roads and intersections.
9. The loss of the horse stables as a provider of recreation.
10. The potential to meet demand for senior housing.

Scoping: The Huntington Town Board as Lead Agency is requiring a formal scoping of the project. A public scoping meeting will not be held. Involved agencies and the public will have the opportunity to comment on the draft scope for a period of thirty (30) days following the posting of the draft scope on the Town of Huntington web site at http://town.huntington.ny.us or the receipt of the document by mail. Copies of the draft scope will also be available for review at the Town of Huntington Department of Planning & Environment, 100 Main St., Huntington, NY 11743 and by contacting Aldona Lawson at the Town of Oyster Bay Department of Environmental Resources, 150 Miller Pl., Syosset, NY 11791, (516) 677-5717.

For further information:

Contact Person:	Craig Turner, AICP, Planner, or Scott Robin, Senior Environmental Analyst Town of Huntington Department of Planning and Environment
Address:	100 Main Street, Huntington, NY 11743 Telephone Number: (631) 351-3196
E-mail:	planning@town.huntington.ny.us

A Copy of this Notice Sent to All Agencies In Categories Asterisked Below:

* Commissioner, Department of Environmental Conservation, 625 Broadway, Albany, NY 12233-1010
* Appropriate Regional Office of the Department of Environmental Conservation -- *Region I*, SUNY @ Stony Brook, 50 Circle Road, Stony Brook, NY 11790-3409
* Office of the Chief Executive Officer of the political subdivision in which the action will be principally located -- *Supervisor Frank Petrone*
* All other involved agencies (if any):
  - ✓ Town of Huntington Town Board
  - ✓ Town of Oyster Bay Town Board
  - ✓ Town of Oyster Bay Town Clerk
  - ✓ Town of Oyster Bay Planning Advisory Board
  - ✓ Town of Huntington Planning Board
  - ✓ Suffolk County Department of Health Services, Office of Ecology
  - ✓ Nassau County Department of Health, Division of Environmental Health
  - ✓ South Huntington Water District
  - ✓ Jericho Water District

✓ Nassau County Department of Public Works
✓ New York State Department of Transportation, Region 10

* Interested agencies (if any):

✓ Nassau County Planning Commission
✓ Suffolk County Planning Commission
✓ Long Island Regional Planning Board
✓ Town of Huntington Dept. of Engineering Services
✓ Town of Huntington Dept. of Engineering Services, Bureau of Fire Prevention
✓ Syosset Fire Department
✓ Town of Oyster Bay Department of Environmental Resources
✓ Town of Huntington Conservation Board
✓ Applicant: Triangle Equities 496 West Jericho Turnpike, LLC, 30-56 Whitestone Expressway, Whitestone, NY 11354
✓ Bram Weber, Esq., and Sy Gruza, Esq., Weber Law Group, LLP, 201 North Service Rd., Suite 300, Melville, NY 11747
✓ Carrie O'Farrell, AICP, Nelson, Pope & Voorhis, 572 Walt Whitman Rd, Melville, NY 11747

cc: Town Attorney
Town Clerk (#2006-ZM-363)

Encls. - Town Board resolution 2007-658 and Dept. of Planning & Environment EAF Parts II & III

2007-658.

RESOLUTION ISSUING A POSITIVE DECLARATION FOR THE ZONE CHANGE OF TRIANGLE EQUITIES, TOWN OF HUNTINGTON APPLICATION #2006-ZM-363, TO CHANGE THE ZONE FROM R-40 RESIDENCE DISTRICT TO R-RM RETIREMENT COMMUNITY DISTRICT IN THE TOWN OF HUNTINGTON AND R1-1A DISTRICT TO RMF-10 DISTRICT IN THE TOWN OF OYSTER BAY FOR PROPERTY LOCATED ON THE SOUTHEAST CORNER OF JERICHO TURNPIKE AND PLAINVIEW ROAD, WEST HILLS/WOODBURY.

Resolution for Town Board Meeting dated: NOVEMBER 7, 2007

The following resolution was offered by: COUNCILMAN CUTHBERTSON

and seconded by: SUPERVISOR PETRONE

WHEREAS, Triangle Equities 496 West Jericho Turnpike LLC, 30-56 Whitestone Expressway, New York 11354, submitted application #2006-ZM-363 for a change of zone from R-40 Residence District to R-RM Retirement Community District in the Town of Huntington and R1-1A District to RMF-10 District in the Town of Oyster Bay for property located on the southeast corner of Jericho Turnpike (NYS Route 25) and Plainview Road, West Hills/Woodbury, and designated as 0400-226-01-001 on the Suffolk County Tax Map and 13-D-114 & 115 on the Nassau County Tax Map; and

WHEREAS, said application was forwarded to the Planning Board by the Town Board for study and recommendation under the applicable provisions of Huntington Town Code §198-127, and pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), 6 NYCRR Part 617; and

WHEREAS, the Huntington Town Board has been declared Lead Agency by the Commissioner of the New York State Department of Environmental Conservation in accordance with 6 NYCRR 617.6(b)(5); and

WHEREAS, the applicant has submitted an Environmental Assessment Form (EAF) Part I in connection with the application, and the Department of Planning and Environment has reviewed the information provided with the EAF, and has duly classified the action Type I in accordance with the provisions of 6 NYCRR 617.4(a)(2) & 617.4(b)(11), since projects in the Oyster Bay Special Groundwater Protection Area have been declared as Type I Actions by the Oyster Bay Town Board, an involved agency; and

WHEREAS, the Department of Planning and Environment has coordinated the action and prepared an EAF Parts II and III dated October 25, 2007 which analyzes the planning and zoning issues relative to the subject application as well as consistency with the 1993 Town of Huntington Comprehensive Plan and evaluates potential project impacts in accordance with the SEQRA regulations; and

2007- 658.

WHEREAS, the Town Board, upon due deliberation of the completed EAF, has found that the action will have significant effects upon the environment based upon the reasons stated in the EAF Parts II and III;

NOW THEREFORE BE IT

RESOLVED, that the Town Board hereby:

(1) Issues a Positive Declaration based upon the impacts identified in the EAF; and

(2) Directs the Director of Planning and Environment to file the Notice of the Determination of Significance pursuant to 6 NYCRR 617.12; and

(3) Directs the Director of Planning and Environment to conduct scoping to assist in the preparation of a Draft Environmental Impact Statement (DEIS), and upon the receipt of a draft scope sufficient for review to invite all involved agencies to a scoping meeting at which their concerns will be heard, and to make the draft scope available for public comment for a period of thirty (30) days; and

(4) Requires the applicant to prepare a DEIS in accordance with the final scope that would identify and analyze the impacts and alternatives in accordance with the standards listed in 6 NYCRR 617.9.

VOTE: AYES: 5 NOES: 0 ABSTENTIONS: 0

Supervisor Frank P. Petrone	AYE
Councilwoman Susan A. Berland	AYE
Councilman Stuart P. Besen	AYE
Councilman Mark A. Cuthbertson	AYE
Councilwoman Glenda A. Jackson	AYE

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED.

triangle equities_TB pos dec.doc
PlanningKT 10/25/07

ENVIRONMENTAL ASSESSMENT FORM
PARTS II & III

TRIANGLE EQUITIES (#2006-ZM-363)
(SHIRE ESTATES AT WOODBURY)
(KENSINGTON ESTATES)

PROJECT DESCRIPTION: The property is located on the southeast corner of Jericho Turnpike (NYS 25) and Plainview Road. It lies in both the Town of Huntington (Suffolk County) and the Town of Oyster Bay (Nassau County). On the Huntington side the applicant is requesting a zone change from R-40 Residential to R-RM Retirement Community District on 13.6 acres of land. On the Oyster Bay side the zoning would be changed from R1-1A One-Family Residence to RMF-10 Multi-Family Residence on 5.1 acres of land. The applicant intends to build a senior-aged residential community of 136 units in 19 buildings, of which 109 units are located in Huntington. Most of the units (93) would be two-bedroom, two-story townhouses with 2,300 to 2,400 sq. ft. The remainder is split between two- and one-bedroom, one-story units of 2,100 and 1,700 sq. ft., respectively. Half of the one-bedroom units are set aside as affordable. All of the units have at least one garage parking space; there is conflicting information as to whether some of the townhouses will have two garage spaces. Driveway parking is also provided. The proposed site plan shows a community building, outdoor pool, tennis courts, gated entrance, and recharge basin, all of which are found in the Oyster Bay portion of the property. There is no road access from Jericho Turnpike. Dumpsters are shown for garbage, which means that they would have to contract with a private carter for collection.

Both of the existing zones are 1-acre residential zones, while the R-RM zone allows 1 dwelling unit per 3,000 sq. ft. (14.5 units per acre) and the RMF-10 zone allows one dwelling unit per 4,000 sq. ft. (10.9 units per acre). The proposed residential density is approximately 7.25 units per acre. The ability to build more units is limited by the size of the proposed units and the attached-townhouse design of the development. The Huntington Deparament of Planning and Environment has reviewed the property for compliance with Article X (The Steep Slope Conservation Law) of the Huntington Town Code. There are 3.86 acres of Hillside Area with an average slope of 16.49%. This reduces the maximum potential yield of the Huntington land from 197 units to 167 units. The slopes on the Oyster Bay portion of the property are similar to the slopes on the Huntington side.

The R-RM zone requires 100-foot front yard setbacks and 50-foot side and rear yard setbacks. The buildings on the Huntington side are shown with 100-foot setbacks on all sides. The RMF-10 zone requires 50-foot front yard, 25-foot side yard, and 30-foot rear yard setbacks. The proposed buildings on the Oyster Bay side have 50-foot setbacks on all sides. The maximum building coverage is 25% in Huntington and 20% in Oyster Bay. The building coverage for the overall project is approximately 17%. The project also lies within the Town of Oyster Bay's Aquifer Protection Overlay (APO) District, which limits the amount of land that can be cleared and the amount of land that can be covered by impervious (buildings, driveways, parking lots) surfaces. The proposed site plan conflicts with the APO requirements, but the zone change application does not include rezoning the parcels out of the APO District or mention that relief will be sought from the Oyster Bay Zoning Board of Appeals.

The property is located in the West Hills-Melville and Oyster Bay Special Groundwater Protection Areas (SGPA), and is listed on the Town of Huntington Open Space Index as parcel SW-1. The development would be connected to the Nassau County sewer system to eliminate on-site sanitary discharge. No parkland dedication is proposed. Except for the retention of some wooded buffers along the eastern, southern, and southwestern property lines, the entire site will be disturbed. Most of the rear of the property is currently wooded. The developed portion of the land is at the front along Jericho Turnpike. There are a variety of site uses, including horse stables, a woodcarving business, and a tree service. A small restaurant use has been closed down. The site is developed informally, with dirt parking lots and no curbs, although the horse riding parking area and some of the internal driveways have recently been covered with compacted asphalt that was scraped off the surface of Jericho Turnpike during the recent repaving. Despite a variety of structures on site, some built within the last few years, there have been no Certificates of Occupancy granted for construction. The last building permit activity on the Huntington side was in 1955.

COMPREHENSIVE PLAN: The Huntington Comprehensive Plan Map shows that the property and surrounding area is recommended for low-density residential use, which corresponds with the existing R-40 zoning. The Plan recommends that density increases be limited to areas with few environmental constraints such as steep slopes or wetlands and projects that provide significant public benefit such as affordable housing. Residential rezonings should also create minimal disruptions to the character of existing neighborhoods. The SGPA Plan matches the Comprehensive Plan in recommending the land for low-density residential housing. Additionally, the Town of Huntington Comprehensive Plan Update: Goals, Policies, and Action Strategies Report, prepared by the Huntington Comprehensive Plan Advisory Committee and dated September 2006, recommends improved protection of wetlands as well as the requirement of minimum open space acreage within new developments. The high-density development also fails to meet affordable housing needs by providing the minimum number of required affordable units. While senior housing is needed, the type of units that are proposed will likely be unaffordable to most seniors, so the need is not served.

Any future Environmental Impact Statements for the property should also address conformance with Oyster Bay's Comprehensive Plan.

SURROUNDING LAND USE AND ZONING: The property is surrounded by low-density residential uses with the exception of the Woodbury Country Club. The neighbors on the south side of Jericho Turnpike share the same R-40 and R1-1A one-acre residential zoning as the subject property. On the north side of Jericho Turnpike, the homes in the Cold Spring Hills development are located in a variety of residential zones, but are primarily on half-acre lots on the edges of the Cold Spring Country Club. The lots to the north in Oyster Bay are zoned R1-1A. A small real estate office lies across the street in a R-80 zone. This commercial use was legalized by the Zoning Board of Appeals. This is one of the few stretches of Jericho Turnpike where there is residential zoning on both sides of the street. Starting a few hundred feet to the east, C-6 zoning develops along the south side and further on along the north side of the road, with higher-density R-5 zoning behind it. Where the commercial zoning is only on the south side there is R-40 zoning across the street, but the houses do not have access to Jericho Turnpike. To the west in Oyster Bay, the zoning is residential on both sides of the street for some distance. It is similar to Huntington in the fact that there are few residential homes with direct access to Jericho Turnpike. There are access roads to new high-density developments, open space buffers from clustered subdivisions, and other uses sometimes permitted in residential zones such as a nursing home and the Woodbury Country Club catering hall and tennis club.

EXISTING PROPERTY DESCRIPTION: The Oyster Bay frontages and approximately 50 feet of the westernmost Huntington frontage is used as a storage/dumping site for a tree service, containing piles of stumps, branches, and wood chips scattered throughout this area. Some of the wood is used by the woodcarving operation that displays and sells large carvings in the front. Additionally there are several vehicles parked in this area and an abandoned house with a collapsed roof. The eastern frontage of the property is used by a horse stable. There is an outdoor riding corral at the front of the property, with a parking lot on the west side of the corral. Behind the riding area is an office building (converted house), stables for the riding horses, storage buildings, and a metal building containing stables and an indoor riding area. Behind these buildings are outdoor horse pens with sheds or truck trailer bodies to provide shelter for the horses. These horses are raised for sale. Other animals besides horses are kept on the property, including a few goats, cows, donkeys, and a zebra. The far eastern edge of the property is also used for the woodcarving business; this is the area where much of the carving is done. Behind the woodcarving operations is a small area used by a construction contractor. Various building materials are piled here (appears to be project leftovers), along with some construction equipment and several abandoned cars (in restorable condition). The uses listed above occupy the northern third of the property. This area slopes gently to the south and east in the direction of the wetlands.

The middle third of the property is disturbed woodland in which much of the natural understory has been cleared. Some of the disturbance is a result of the dumping of animal waste mixed in with hay and wood chips, forming compost piles. Some piles also contained tree limbs and branches. Weeds and grasses growing on the piles thrive because of the high nitrogen content. Some trees in this area were cut down within the past year to provide increased storage area for wood chips. A small abandoned house on the west side of this area was demolished. Some of the driveways through this area have recently been paved with the compacted asphalt. This entire area slopes to the north toward Jericho Turnpike.

The rear third of the property is mostly undisturbed woodland comprised of tall deciduous trees with low open understory, but very limited mid-level species. Ferns and moss grow throughout the area. A valley coming from the southeast opens up into a large flat area on the west side of the property. The compost piles stop at the northern edge of the valley, although there are a few tree branch piles on the valley floor. Large piles of wood chips and cut logs cover the western flat area. The valley walls keep all drainage on this portion of the site.

PLANNING AND ZONING HISTORY: As stated earlier, although there are numerous buildings on site, none of them have Certificates of Occupancy, which insures the safety of construction as well as establishes legal use. It may be possible that some of the structures predate zoning and building permits. However, aerial photographs show that the indoor riding barn and stables were built in between 2001 and 2004. Should the zone change not be entertained, these structures will need to be legalized.

In 1998 an application was submitted for a zone change to R-RM (#98-ZM-317, Marriott International) on the rear part of this property in order to construct a 75,235 sq. ft. assisted living facility with 129 beds on 8.9 acres of land. The initial planning report viewed the project unfavorably, and the applicant withdrew the application before a formal recommendation was made by the Planning Board. The project did not reach the public hearing stage.

SEQRA CLASSIFICATION: Type I. The proposed rezoning lies within the Oyster Bay Special Groundwater Protection Area. The Town of Oyster Bay has established their own Type I list that classifies Unlisted Actions within the SGPA as Type I Actions (Oyster Bay Town Code Chapter 110 Appendix A). In accordance with the Type I list established by 6 NYCRR 617.4(b)(11), the Town of Huntington must recognize the Type I classification of another involved agency. This assessment considers the impact of the proposed rezoning and potential impacts from construction in view of the applicant's Environmental Assessment Form Part I, dated October 4, 2006, and the preliminary site plan, dated October 2, 2006, both prepared by Nelson & Pope, which are to be considered an appendix hereto.

SEQR RECOMMENDATION: It is suggested that if the proposed rezonings from R-40 to R-RM and RI-1A to RMF-10 are entertained, a positive declaration pursuant to SEQRA should be issued. Although portions of the property have been disturbed by existing site uses, there are also large areas of undisturbed woodland that would be lost to development. The proposed high-density residential land use contrasts with the low-density residential uses surrounding it and the recommended land use shown in the Town of Huntington Comprehensive Plan. The property is recognized as environmentally sensitive land by its inclusion in the West Hills-Melville and Oyster Bay Special Groundwater Protection Areas, the Oyster Bay APO District, and its designation as an Open Space Index parcel. These designations call for the protection of open space and the clustering of new construction, which are not features of the proposed development. The adjacent wetlands are a common feature along this section of Jericho Turnpike so there may be soil conditions that affect development. The rezoning must also be studied to determine its impact on other large parcels in the neighborhood that could be redeveloped for high-density residential uses. The traffic impacts of this proposal must be considered along with the traffic impacts of other zone change applications in this area of Jericho Turnpike. The number of new vehicle trips generated will impact the awkward road intersections adjacent to the project. A positive declaration would also improve the review coordination between involved agencies, which is especially an issue in this instance because the property crosses both town and county lines and the boundaries of numerous service districts.

IMPACT ON LAND:

1. Will the proposed action result in a physical change to the project site?

*Yes. There will be significant physical changes to the property. All of the existing structures will be demolished and removed from the site. Most of the trees and vegetation will also be removed since the entire property will be regraded to direct drainage into the recharge basin at the northwest corner of the site. This clearing conflicts with the requirements of the Oyster Bay APO District, and the overlay district regulations recommend the use of drainage reserve areas instead of recharge basins. There will be a significant amount of grading in the northeast corner of the site, since this is currently the lowest area of the front of the property. The land will have to be raised as much as ten (10) feet in order to change the direction of runoff flow from east to west. The most significant grading will be in the rear of the property, where the valley will be destroyed. The denuded property will be a great contrast with the neighboring community, where most of the lots are heavily wooded. The development would result in a large increase in impervious surfaces from the buildings, driveways, and roads. The open space will be owned as common space by a homeowners' association or similar group, so it is unlikely that successional vegetation will be allowed to grow naturally. Most of the open space area will be developed as lawn and ornamental, manicured landscaping to provide a neat and orderly appearance, which conflicts with APO District development standards for minimizing lawn areas and retaining natural vegetation.

2. Will there be an effect to any unique or unusual land form(s) found on the subject site? (i.e.: cliffs, dunes, etc.)

*No.

IMPACT ON WATER:

3. Will the proposed action affect any body of water designated as protected under Articles 15, 24 or 25 of the NYS Environmental Conservation Law or Town of Huntington Marine Conservation Law?

*Yes. A NYS DEC regulated Class II freshwater wetland designated as H-29 is located on an adjacent parcel to the east. The wetland lies a few feet below the elevation of Jericho Turnpike and it appears that the pond area holds water year-round. The pond and wetland are fed by runoff and groundwater flow from the west, south, and east, and are also used by the NYS DOT as a recharge basin for Jericho Turnpike drainage. The wetland area extends furthest from the pond to the south, where the wetland is fed by drainage from a slight valley between the residential backyards to the east and the subject property to the west. The wetland is surrounded by fencing in poor condition; in many areas the fence has completely collapsed. This has led to some dumping in the pond and is a safety hazard, although it also probably provides better access for local animals. All land development within 100 feet of the wetlands, including clearing and grading, requires permits from the DEC.

The proposed intensification of land use and regrading of the land could have a major impact on the wetland. The regrading of the property is designed to minimize runoff from developed land into the wetland. Fill will be added to the northeastern corner of the property to reverse the ground slope from east to west. Runoff from building roofs, roads, and driveways will be directed into drywells or the recharge basin on the western side of the property. This runoff redirection is important since there will be a large increase in impervious surface over existing site conditions. The runoff often contains small amounts of chemical pollutants, not only petroleum-based compounds from vehicle leaks and the asphalt paving mixes, but also from chemicals applied to landscaping. Lawn and garden fertilizers contain nitrogen, which stimulate the growth of algae in bodies of water, and also contain other chemicals in pesticides and weed killers that can directly harm plants and animals. Areas of landscaping beyond the regraded area may leach these contaminants into the wetland. The retention of existing wooded areas is important to reduce fertilizer usage and to intercept runoff before it reaches the water. It is unknown how the clearing and regrading of the property will affect water levels in the pond and the size of the wetland area. Since the regrading will reduce the tributary area of the wetland, it is possible that the wetland may shrink. However, the addition of fill in the northeast corner of the site will produce greater slopes than exist in that area now, so it is possible that runoff could increase, although it could be offset by an increase in landscaping and groundcover. Changes in the quantity or quality of water flow could affect wetland species.

It is unknown how addition of nitrogen from lawn and garden fertilizers will compare to the elimination of nitrogen from farm animal waste. The existing animal areas are close to and upslope from the wetland, which may cause some water quality problems. There will be no new compost piles of animal waste and the existing piles will likely be buried during the regrading of the property. Since many of the animal areas are unvegetated areas of exposed soil, erosion and runoff are problems. Impacts to the wetland can be mitigated by proper site design and maintenance. The site regrading should be done to minimize runoff of chemicals and other pollutants while allowing natural areas to continue to provide runoff to the pond. Existing vegetation should be retained along the property line as much as possible. Disturbed areas near the wetland should be planted with appropriate native vegetation, and should not be chemically maintained. A conservation easement may be necessary to prevent future homeowners from disturbing the natural areas. A Draft Environmental Impact Statement should analyze all of the issues mentioned in this section and create a mitigation plan to insure the health of the wetland.

4. Will proposed action affect any non-protected existing or new body of water?

*No

5. Will the proposed action affect surface or groundwater quality or quantity?

Surface Water

*Yes. See answer to #3 above

Groundwater

*Yes. The removal of the animal operations and existing sanitary systems may result in less nitrogen recharge into the groundwater. This is both a point (compost piles and septic systems) and nonpoint (all areas used by animals throughout the site) source of pollution. This is a significant human health concern if any of the residences in the neighborhood are using private well water. All homes in this area should have access to public water supplies. The more intensive human use of the property will add additional pollutants to the site. These will be concentrated in the runoff entering the recharge basin. The pollutant levels would be no different than any other developed area on Long Island, and there have been no findings to indicate that there is a groundwater contamination concern. Lawn chemical use can also be a groundwater concern, with much public debate over the impacts on human health. The preservation of large areas of open space would reduce potential groundwater impacts.

The purpose of the Special Groundwater Protection Areas on Long Island is to protect the sole-source aquifer water supplies from both contamination and depletion. The SGPAs cover large areas of predominantly low-density development and open space that maximizes the recharge of clean water into the aquifers. The high-density development covering the majority of the site conflicts with the SGPA Plan, which recommends low-density cluster development with natural areas preserved. On Page 2-7, the Plan states:

> "If development must be allowed, then it should be subject to mandatory cluster zoning based on five acre residential zoning."

Regarding high-density developments, it states on Page 2-7:

> "It is also important that multi-family or condominium development be strictly limited. In those instances that overriding considerations of social need warrant such construction, units should be clustered and the sites selected to provide sewage collection and hookup to a treatment facility that maximizes SGPA watershed protection."

The one conformance to the SGPA Plan is the project's connection to the Nassau County sewer system. Although septic systems would increase the amount of recharge, the pollutants found in the sewage water are judged to be undesirable. And the site's soils are considered to be unsuitable for septic systems because of the poor subsoil drainage. The sewer system will remove wastewater from the site and properly treat it before discharge back into the environment (in this case, the ocean).

6. Will proposed action alter drainage flow or patterns of surface water run-off?

*Yes. As previously stated, the development will result in a large increase in impervious surface, and the entire site will be regraded to direct runoff from developed areas into the proposed recharge basin. This will replace the current situation where water naturally recharges directly into the ground or flows into the adjacent wetland. The Town of Oyster Bay Aquifer Protection Overlay District lists as a Best Management Practice the use of drainage reserve areas in place of recharge basins. The increase in impervious surface will probably produce more runoff than will be reduced by the reduction in sloped areas. The new development will result in all surfaces either being paved or landscaped, so erosion should decrease from current levels. The wetland area to the east will have a smaller tributary area, but greater slopes and more landscaping in the immediate neighborhood will also have affects on drainage.

The Suffolk County Soil Survey indicates that the site is covered by soil in the Montauk silty loam classifications, MkB and MkC. This soil is known for having poorly draining subsoil with scattered deposits of clay, which leads to high water tables in wet seasons and large amounts of runoff and erosion from slopes. These factors likely contributed to the formation of the wetland and pond on the adjacent parcel. Soil tests will be needed to determine if the northwest corner of the site is suitable for a recharge basin. Erosion control measures such as silt fencing will be needed during site grading and construction. The review of the grading plan must take into account that low points or flat areas may occasionally flood. Septic systems are strongly discouraged in these soils.

IMPACT ON AIR:

7. Will proposed action affect air quality?

*Yes. There will be temporary, localized issues with dust and particulates during clearing, grading, and construction activity at the site, typical of any construction project. There is also an impact from the loss of so much mature woodland and the increase in vehicle traffic generated by the proposed use. This impact is not noticeable at the local level, but is a small part of a regional development pattern that affects the overall air quality in the metropolitan area.

IMPACTS ON PLANTS AND ANIMALS:

8. Will the proposed action affect any threatened and/or endangered species? (as per Federal or State Law)

*Unknown. The rear of the property contains mature, undisturbed forests that could contain significant plant and animal species. A previous site visit to the property during the Marriott application revealed several state-protected native plants within the woodland understory, including Canada mayflower, which is particularly dense and extensive throughout the woodland, Solomon's seal, euonymus, and American holly. It is unknown how much of this vegetation remains today. Threatened species could also be found around the wetlands near the northeastern corner of the property. This issue should be studied further during the preparation of an Environmental Impact Statement. There may be an opportunity to design the project to protect any threatened or endangered species.

9. Will proposed action substantially affect non-protected, non-threatened or non-endangered species?

*Unknown. The regrading of the property may impact the wetland near the northeast corner of the parcel, which could impact animals that use the wetland as a water source. The impact depends on the specific type of animal and whether they could reach other water supplies in the area if the wetland dries up. Chemical pollutants could also kill plants and animals outright or trigger algal blooms that indirectly kill wildlife. Most of plants and animals on site are found throughout the surrounding community. Animals such as squirrels, chipmunks, raccoons, and birds may be displaced by the loss of the woods. Raccoons in particular are found in high numbers in the surrounding neighborhood. The animals live in the woods but find sources of food on nearby residential properties. While these animals are capable of moving to new locations, residential lots make poor homes and the proposed development of several other large parcels in the area may result in a cumulative impact to animal species and possibly a nuisance to local residences. The preservation of larger woodland areas would help to reduce the impact on local animals.

IMPACT ON AGRICULTURAL LAND RESOURCES:
10. Will the proposed action affect agricultural land resources?

*Yes. The site is currently used for horse riding and breeding. It is a viable site for the continuation of these operations due to its large size, existing buildings and corrals, and location in a wealthy neighborhood where residents can afford the high costs of horseback riding. Due to high land values horse farms are continually under threat of development. The only protected horse uses are located in West Hills County Park approximately two miles to the southeast and in Caumsett State Park. There are also other farm animals on site, but they are kept as pets and are not commercially important, nor would it be likely that there is a market for other farm animal operations. The wooded slopes are inappropriate for most types of field plantings.

IMPACT ON AESTHETIC RESOURCES:
11. Will proposed action affect aesthetic resources?

*Yes. The appearance of the property will change noticeably. Currently the most visible portions of the property are the horse corral and the display of woodcarvings along Jericho Turnpike. For many people this may be a positive aesthetic image. A more detailed viewing may reveal the piles of cut logs and wood chips. This provides a more unkempt appearance than the surrounding residential properties. The depth of the property is hidden by the tall trees behind the buildings. From Plainview Road and most of the surrounding residences all that is visible is forested area.

Most views of the property will be altered by the proposed development. The corral area will now be a 10-foot high slope with buildings on top of it. Buildings will also be visible from Plainview Road and some of the surrounding residences. The two lots surrounded by the development will be the most affected, as they would see buildings on all sides. North of them the view from Plainview Road would be of a recharge basin and gated entrance, which are unlikely to be considered as positive aesthetic resources.

Many of these impacts would not change if the property were developed as a conventional subdivision with single-family homes on one-acre lots. However, a cluster development under R-40/R1-1A or R-RM/RMF-10 zoning could produce a different aesthetic impact by retaining larger open space areas with more existing vegetation. The preservation of mature trees is important to the appearance of the property. Neighboring parcels developed under one-acre zoning either retained mature trees on their property or were developed enough years ago that new trees and shrubs have grown to full height. This provides a different appearance than most new developments, where land is fully cleared and few trees are replaced. Modern landscaping uses evergreen trees and shrubs and deciduous shrubs that can be pruned to shaped forms. This provides a formal appearance that contrasts with natural growth, and frequently new developments can be distinguished from older developments without viewing the houses by simply looking at the landscaping around them.

IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES:
12. Will proposed action impact any site or structure of historic, prehistoric, or paleontological importance?

*Unknown. Old aerial photos and maps indicate that the property was once part of various larger property holdings along the south side of Jericho Turnpike east to Round Swamp Road and along Plainview Road to the south. The front portion of the property, currently occupied by equestrian uses, was once farmed. No buildings predating the 20th century are thought to have been on the property. Native American artifacts have been found near several ponds in the area, including on the Votypka property to the northwest of the site and near the original location of the John Oakley House on Sweet Hollow Road in West Hills. As a result the adjacent wetland would be considered archaeologically sensitive. An archaeological study should be considered to examine the property for the presence of historical artifacts.

IMPACT ON OPEN SPACE AND RECREATION:

13. Will the proposed action affect the quantity or quality of existing or future open spaces or recreational opportunities?

*Yes. The riding stables that exist on site provide an important recreational opportunity for local residents. Although most of the riding appears to occur in the corral and riding barn, the forestland in the rear contains trails that would also be useful for horseback riding. Passive recreational use would be unlikely except by adjacent residents as there are more substantial hiking trail systems at the nearby West Hills County Park and Trailview State Park.

Since the site is located in a Special Groundwater Protection Area and is an Open Space Index parcel in the Town of Huntington, preservation of open space should be given strong priority. Important open space areas include the land near the adjacent wetlands, mature forest areas, the valley, and areas of steep slopes. The rear of the property contains wooded slopes, which run onto neighboring oversized lots to the south containing large open space areas. A cluster development would allow the preservation of large areas of open space. The Oyster Bay APO District requires such open space preservation. It is unknown whether the project will be revised to comply with the APO standards or whether the applicant will seek relief from those restrictions.

IMPACT ON CRITICAL ENVIRONMENTAL AREAS:

14. Will Proposed Action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6 NYCRR 617.14(g)? List the environmental characteristics that caused the designation of the CEA.

*No.

IMPACT ON TRANSPORTATION:

15. Will there be an effect to existing transportation systems?

*Yes. The project is proposing no driveway access from Jericho Turnpike. The only access point would be on Plainview Road, a road that is not heavily traveled because it serves a small low-density residential area with no commercial development or access to local highways. It runs from Jericho Turnpike to the

Plainview hamlet center. However, there may be some impact to traffic on Jericho Turnpike. The closest commercial services are located to the west and east along Jericho Turnpike. Therefore, it is likely that many trips to and from the site will utilize that road. Plainview Road intersects Jericho Turnpike 180 feet to the west of Avery Road. Both intersections share a connected traffic signal system. The left-turn lanes to enter these roads from Jericho Turnpike share a central turning lane (separately striped for each lane – not a "suicide" lane), leaving space for only two or three vehicles in each direction. Since these are minor roads compared with Jericho Turnpike, the traffic signal changes infrequently, so a queuing line forms in the turn lanes. Since the turn lanes cannot accommodate many vehicles, there are many occasions where turning traffic backs up into the adjacent through traffic lane. This becomes a safety problem because of the high speed of traffic, which averages 50-55 mph in this area. The short, shared turning lane leaves no room for deceleration. When the turn lanes become heavily backed up, the queuing vehicles may even block the intersection behind them. And since the traffic signals lack a dedicated left-turn light, it is not easy to empty the turning lane. The high speed and amount of vehicles on Jericho Turnpike makes it difficult to make left-hand turns here. These intersections are further complicated by the fact that West Gate Drive enters the Avery Road intersection on a diagonal. The additional signal time required for West Gate Drive increases the traffic buildup on Jericho Turnpike at the intersection, which further reduces the ability to make left turns.

An Environmental Impact Statement would allow the involved agencies concerned with traffic flow the ability to evaluate different mitigation measures. There are numerous alternatives that vary greatly in complexity. The traffic signal system could be changed to add green left-turn arrows on Jericho Turnpike. The turn lanes could be restriped and signage installed to prohibit left turns in one or both directions. The road could be widened by one lane to have two separate left-turn lanes, since the land to the south is part of the development and the land to the north is a municipal recharge basin. A small property taking could allow West Gate Drive to intersect Avery Road north of the Jericho Turnpike intersection, which would allow signal timing to be changed (and would provide time for left-turn arrows). This could be done close to the existing intersection or further north in the golf course. The most costly and complicated alternative would be to reroute Plainview Road and Avery Road to intersect at the same location.

The proposed senior development is not within walking distance of local services, making automobile ownership essential. Although there is bus service along Jericho Turnpike, it is unlikely that the buses stop nearby because of the surrounding low-density residential use and because car ownership is probably universal in this high-income neighborhood. Even if a bus stop were added to allow travel along Jericho Turnpike from the site, most areas of the road lack proper pedestrian crossings and pedestrian signals, so it would be difficult to cross the street to catch return buses.

Any analysis of traffic and transportation system impacts must take into account all of the active rezoning applications in the Town of Oyster Bay along Jericho Turnpike, as well as recently built projects in the corridor that may have not been accounted for in past transportation plans. The cumulative impacts of all of these projects would add a significant number of housing units to the corridor. Some of these developments may require new or revised traffic signals on Jericho Turnpike, which would affect traffic flow. The combination of the redevelopment of the Woodbury Country Club and the Triangle Equities property would add a significant number of homes to the Plainview Road corridor in comparison to the relatively small number of existing homes in the corridor.

IMPACT ON ENERGY:

16. Will the proposed action have an adverse effect on the community's sources of fuel or energy supply?

*No. Although the availability of energy continues to be a concern on Long Island, the proposed project will not have a measurable impact on energy demand.

NOISE AND ODOR IMPACTS:

17. Will there be objectionable odors, noise or vibration as a result of proposed action?

*Yes. The construction activity associated with the planned development will create noise and some odors. These impacts are temporary and should not occur much outside of normal business hours. Once construction is complete no problems are expected. Existing treed buffers should be retained to the greatest extent practicable to decrease noise and visual impacts from and to surrounding properties. The new residents may experience high noise levels from traffic on Jericho Turnpike, although the noise would drop considerably during sleeping hours.

IMPACT ON PUBLIC HEALTH:

18. Will proposed action adversely affect public health and safety?

*Unknown. As mentioned earlier, the Jericho Turnpike offset intersections with Plainview Road and Avery Road is a traffic safety concern due to the high speeds on Jericho Turnpike and the small size of the left-turn lanes. The insufficient queuing area and deceleration space can result in rear-end collisions, especially since oncoming left-turning vehicles block the view of the left turn lane behind them. Since Plainview and Avery Roads only serve small residential neighborhoods, they often serve as shortcut routes for speedy drivers trying to avoid more well-traveled routes. This may impact the slower traffic traveling to the proposed senior citizen developments.

The site is included on the Suffolk County Department of Health Services' CLEARS inventory (airphoto inventory of potential hazardous dump sites in Suffolk County, NY) identified as site# D47. The site data sheet describes the site from the 1977 aerial photo as undisturbed woodland and then, shows "two small private off-the-road dumps; both are screened by woodlands from roads and residences". A site visit during the Marriott zone change found piles of tires in the rear of the property. Along with the abandoned structures, vehicles, compost piles, and construction debris found on site, an Environmental Site Assessment is warranted as part of a DEIS to test the site for soil contamination. This study should be coordinated with the NYS DEC and SCDHS to determine if they have any site concerns.

The large amounts of manure in piles throughout the property leach nitrates into the soil and groundwater. This would be a significant health concern if there were any potable water supply wells in the area, especially if there were private wells using water from the Upper Glacial aquifer. The nearest public water wells are operated by the Jericho Water District to the northwest. While it is unlikely that any residences are still using private wells, this must be confirmed. It should be noted that the manure piles are an existing condition and the impact will be reduced in the future should animal operations cease at the site. The South Huntington Water District's well on West Rogues Path was identified in the SGPA Plan as a well with increasing levels of nitrates, but it is uncertain if the subject property's groundwater flow contributes to that problem. The removal of the compost piles, animal pens, and other site garbage could result in the displacement of rats and mice that may be living in them. A rodent control plan may be necessary during site cleanup and demolition.

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD:

19. Will the proposed action affect the character of the existing community?

*Yes. The property is located in an R-40 zoning district and is essentially surrounded by one-acre residential lots, although there are some lots as small as half an acre to the north and east, and oversized lots to the south. The neighborhood character is low-density residential. There are large areas of open space in the community, such as the Cold Spring Country Club and West Hills County Park. The proposed high-density residential development would conflict with the established neighborhood pattern, the Comprehensive Plan, APO District regulations, and the SGPA Plan. There is a concern that this rezoning could set a precedent for further rezonings. In recent years the Town of Oyster Bay has seen several applications to rezone land along Jericho Turnpike to higher-density residential uses. This includes the Woodbury Country Club across Plainview Road from the subject property. One key difference between the two towns that affects land use is that the properties in Oyster Bay have access to the Nassau County sewer system. There is no public sewer in this area of Huntington. Another factor to consider is that the Woodbury Country Club already generates high levels of traffic during its hours of operations and has large areas of impervious surface.

Smart Growth Principles

The *Principles of Smart Growth and Livability* adopted by the Town Board on October 5, 1999 (see attached checklist) conflict with some elements of the proposed development since this high-density senior development is located far from commercial services and involves a large loss of open space.

20. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts that may result if the proposed action is implemented?

*Unknown. Neighbors may be opposed to a higher residential density at the site, but they could also be supportive of the redevelopment that would establish a residential use as opposed to the current horse stables and woodcarving. They may also be concerned with any precedent set that could affect the future development of the Cold Spring Country Club. More information will be known after a public hearing is held.

THE PRINCIPLES OF SMART GROWTH & LIVABILITY

CONSISTENCY CHECKLIST FOR THE TRIANGLE EQUITIES REZONING

Town Board resolution 1999-610 of October 5, 1999 accepted *The Principles of Smart Growth & Livability*, as adopted by the Huntington Smart Growth Steering Committee, and advised Departments and Boards in the Town to consider these principles in their review of applications, land use decisions and amendments to the Town Code and regulations.

Check if proposed action/project meets Smart Growth & Livability Principle(s). Otherwise, indicate if principle is not applicable (NA) to or inconsistent (IC) with the proposed action/project or if there is not sufficient information (NSI) to make a determination.

NSI The proposed action/project encourages comprehensive land use planning that is ongoing, community-based and consistent with the needs and objectives of the local community, adjacent communities, and the region as a whole.

IC The proposed action/project encourages development that contains a mix of uses essential to the daily life of its residents, which includes housing, shops, work places, schools, parks, and civic facilities ideally situated within easy walking distances of each other or otherwise within short travel distances.

The project is isolated from services, especially those needed by a senior citizen population.

IC The proposed action/project encourages land uses that link economic development decisions with environment and quality of life, and protect the property values of its residents.

IC The proposed action/project encourages efficient development that is pedestrian-friendly, is attractive, reduces automobile dependency, provides transportation alternatives, and is focused around existing or newly designed transportation centers.

√/IC The proposed action/project encourages development that enhances existing communities, and which particularly targets downtown and neighborhood centers for expanded or new development. The proposed action/project is directed to areas of existing infrastructure or where infrastructure can be upgraded or introduced to foster redevelopment, rather than toward areas of open spaces, and, when consistent with the community goals, include recycling of existing structures.

√ The proposed action/project encourages a sufficiency of housing to meet the needs of the residents of the Town, and which includes a natural diversity of housing types and facilities to enable citizens from a wide range of age groups, ethnic backgrounds, and economic levels to live within the neighborhood boundaries and interact.

NA The proposed action/project encourages planning, decision-making, and development practices that emphasize extensive and broad-based community participation, dialogue, the use of visual models, consensus-building and envisioning.

Consistent with the principles of Smart Growth & Livability, the proposed action/project results in:

☒	Protection of open space and the environment	IC - Limited natural area retained
☐	Strengthening of the local economy	NA
☐	An improved sense of community	NSI
☒	A decrease or stabilizing of traffic congestion	IC - Some new traffic
☒	A reduction in auto dependency	IC - Long trips to basic services
☐	Preservation of historic structures	NA
☐	Enhancement of the community character and aesthetics	NSI
☐	Efficient use of public money	NA
☐	Safe and secure communities	NA
☐	An improvement in the overall quality of life	NSI

Appendix A-2

Final Scope

Town Board

January 24, 2008

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING & ENVIRONMENT

Anthony J. Aloisio, AICP, *Director*

Frank P Petrone, *Supervisor*

RECEIVED
NOV 2 1 2007
NELSON & POPE

November 16, 2007

Carrie O'Farrell, AICP
Nelson Pope & Voorhis
572 Walt Whitman Road
Melville, NY 11747

RE: Change of Zone Application: #2006-ZM-363
Application Name: Triangle Equities (Kensington Estates)
Street Location: s/e/c Jericho Tpke (NY 25) & Plainview Rd, West Hills/Woodbury
Suffolk County Tax Map: 0400-226-01-001
Nassau County Tax Map: 13-D-114 & 115
Zone Request: R-40 Residence to R-RM Retirement Community (Huntington)
R1-1A to RMF-10 (Oyster Bay)

Dear Ms. O'Farrell,

Attached please find the draft scope submitted by the applicant to direct the preparation of the Draft Environmental Impact Statement (DEIS). Written comments on the draft scope should be provided within thirty (30) days in order to be incorporated into the DEIS. In addition, a scoping meeting with all of the involved and interested agencies has been scheduled for **Thursday, December 13, at 9:30 AM** in Huntington Town Hall, Room 114. This will not be a public hearing. If you plan on attending the scoping meeting, please let me know by calling (631) 351-3379 or e-mailing me at cturner@town.huntington.ny.us.

Very truly yours,

Craig Turner

Craig Turner, AICP
Planner

For Anthony J. Aloisio
Director of Planning and Environment

Draft Scope for
Draft Environmental Impact Statement

"Kensington Estates"

Proposed Change of Zone Application
1130 West Jericho Turnpike,
Nassau-Suffolk County border, New York

November 2, 2007

1.0 Introduction

This document is the Draft Scope of the issues and analyses to be included in the DEIS for the proposed "Kensington Estates" an age restricted residential project on approximately 18.6 acres of land. This site is located on the border of both the Hamlet of West Hills, Town of Huntington and the Hamlet of Woodbury, Town of Oyster Bay at 1130 West Jericho Turnpike on the southeast intersection of Jericho Turnpike and Plainview Road.

A detailed and thorough analysis of the proposed project and its anticipated impacts in a DEIS has been required by the Town of Huntington Town Board, as Lead Agency for administration of the change of zone review and as required by the New York State Environmental Quality Review Act (SEQRA).

The information prepared in conformance with this scope and the SEQRA process is intended to provide comprehensive input in the decision-making process for use by involved agencies in preparing their own findings and issuing decisions on their respective permits. The document must be concise but thorough, well documented, accurate and consistent. Figures and tables will be presented in support of the discussions and analyses contained in the document. Technical information will be summarized in the body of the DEIS and attached in their entirety in an appendix.

2.0 Brief Description of the Proposed Project

The proposed project involves rezoning the two adjacent properties that comprise the subject site, from their existing R-40 zoning in Huntington and R1-1A zoning in Oyster Bay to R-RM and RMF-10, respectively. The proposal involves the removal of the existing horse farm, wood carving business, and outdoor BBQ for the proposed construction of 136 age restricted multi-family townhomes and flats (27 units located within the Town of Oyster Bay and 109 units within the Town of Huntington). Twenty-two (22) of the units will be one bedroom flats, of which 11 will be set aside as affordable, 22 two bedroom flats, and 92 three bedroom townhouses ranging in size from 1,700 s.f. to 2,400 s.f. The units will be age restricted to require at least one occupant be 55 years of age or older, which will be specified as part of the offering plan filed with New York State for the condo owners association and regulated by including a rider on all contracts of sale for units. Site amenities include a 3,000 SF community building with a lounge, library, card room, exercise room, office, multi-purpose room and lobby and an outdoor pool and two tennis courts. Other site improvements include access roadways, an on-site drainage system designed for a 5-inch rainfall event (including a recharge basin), and landscaping. Connection to the Nassau County sewer system is proposed for sanitary wastewater. The proposed project includes one gated access point via Plainview Road. The proposed roadways and drainage features and the proposed age-restricted common area and amenities will be owned and maintained by a Homeowners Association (HOA). The HOA will also contract maintenance services, snow removal and landscape management.

It is the applicant's goal to develop a high-quality residential use. It is expected that the proposed dwellings and common area amenities will employ attractive, traditional building architecture that the Applicant believes will be congruent with the surrounding land use. Though it will result in incremental increases in demand for services, the proposed development of the property will significantly increase the amount of tax revenue generated by the property to taxing jurisdictions. The proposed project is anticipated to generate very limited school aged children (due to the proposed age restriction), thereby minimizing potential impacts to school enrollments.

The subject property contains eleven structures: a concrete building, metal barn, horse stable, framed structure, wood workshop, wood shed, two wood walls, two concrete plats, and one mobile home; all which will be removed under the proposed action. There is a small wetland feature located immediately adjoining the northeast corner of the subject site which has been considered in the design of the project.

The following approvals are anticipated to be necessary:

Applicable Board/Agency	Approval Type
Town of Huntington Town Board	Change of Zone
Town of Huntington Planning Board	Site Plan Review
Town of Huntington Building Department	Demolition/Building Permits
Town of Huntington Engineering Department	Roadwork
Town of Oyster Bay Town Board	Change of Zone, Site Plan Review
Town of Oyster Bay Building Department	Building Permits
Town of Oyster Bay Department of Public Works	Roadwork
Suffolk County Department of Health Services (SCDHS)	Sanitary connection and water supply system design review
Suffolk County Planning Commission	239m (change of zone and site plan approval)
Nassau County Department of Public Works (NCDPW)	Subdivision and 239f (Sanitary connection, roadwork, drainage and civil design review)
Nassau County Planning Commission	239m (change of zone and site plan approval), Subdivision
Nassau County Health Department (NCHD)	Sanitary connection and water supply system design review

NYSDEC	Stormwater Management (GP-02-01), Article 24 Freshwater Wetlands
NYSDOT	Roadwork
South Huntington Water District	Water Supply
Jericho Water District	Water Supply

3.0 Potentially Significant Adverse Impacts

The following is a listing of the categories of potential adverse impacts that the lead agency has indicated as meriting detailed review and analysis in the DEIS.

1. Geological Resources *(including soils, topography and subsurface geology)*
2. Water Resources *(including surface water and groundwater)*
3. Ecological Resources *(including vegetation, wildlife, habitats and rare/threatened species)*
4. Transportation Resources *(including cars, trucks, pedestrians and public transit)*
5. Land Use, Zoning & Land Use Plans
6. Community Facilities and Services *(including taxes/economics, utilities, public services & open space)*
7. Aesthetic Resources and Community Character *(including aesthetics and public health/safety)*
8. Historic and Archaeological Resources
9. Construction Activities
10. Cumulative Development
11. Adverse Impacts That Cannot Be Avoided
12. Effects on the Use and Conservation of Energy Resources
13. Irreversible and Irretrievable Commitment of Resources
14. Growth-Inducing Aspects

4.0 Organization and Overall Content of the DEIS Document

The DEIS must conform to the basic content requirements as contained in 6NYCRR Part 617.9 (b)(3). The outline of the DEIS should include the following sections:

COVER SHEET

TABLE OF CONTENTS

SUMMARY

1.0 DESCRIPTION OF THE PROPOSED PROJECT
- **1.1 Introduction**
- **1.2 Project Background, Need, Objectives and Benefits**
  - 1.2.1 Project Background and History
  - 1.2.2 Public Need and Municipality Objectives
  - 1.2.3 Objectives of the Project Sponsor
  - 1.2.4 Benefits of the Project
- **1.3 Location and Existing Site Conditions**
- **1.4 Project Design and Layout**
  - 1.4.1 Overall Site Layout

5.0 Extent and Quality of Information Existing and Needed

As required under SEQRA, the DEIS should include "a statement and evaluation of potential significant adverse impacts at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence". Included in this evaluation should be reasonably related short-term and long-term impacts, with other required sections identified in Section 6.0 of this scoping document. This section further describes the level of analysis and the type of analysis expected with respect to the key environmental impacts of the project as outlined in the Positive Declaration. Each major section is followed by a description of the extent and quality of information needed to perform the evaluation of each of the impacted resources.

Description of the Proposed Project

Introduction

- There should be a brief introductory section that describes what this document is, under what regulation(s) it is required, what it is intended to accomplish, and the subsequent regulatory actions to be taken to implement the project, if approved. It should also briefly describe the proposed project, present the zoning for which the project is proposed, and describe the relationship between the two.

Project Background and History

- There should be a brief description of the site and application history; this should include a full description of the existing and historic use of the site, status of current use, site ownership and related background and history.
- If such are prepared, Phase I and Phase II ESAs (Environmental Site Assessments) related to site conditions should be summarized and attached or excerpts attached to establish background soil conditions.
- Description of the applicant's outreach efforts to local community groups will be provided.

Public Need and Municipality Objectives

- Include justification of proposed project in terms of Town goals for site as indicated in the Comprehensive Plan and any other applicable planning documents relevant to the project site.
- Public need for the project should be discussed.
- Population potentially affected by the project should be identified.

Objectives of the Project Sponsor

- The objectives of the project sponsor should be described and discussed.

Benefits of the Project

- Include a discussion of the community benefits expected to accrue from the proposed project.
- Include a discussion of economic benefits expected (tax revenue and jobs).

Location and Existing Site Conditions

- Using appropriate mapping and/or tables, describe location of site, in terms adjacent/nearby significant properties, zoning and service districts, available services, etc.
- The existing conditions of the site in terms of site survey, structures, vegetative cover, etc. should be provided as an overall background of existing site conditions.

Project Design and Layout

- Include a brief description of the site and project layout; describe basis for site yield, proposed structures, services, utilities, access points, road system, drainage, site quantities table.
- The grading program and associated areas disturbed should be discussed along with volumes of soil excavated, cut/filled, removed from site and maximum depths of cut/fill.
- Site drainage and proposed drainage system and provide capacity and function information should be provided along with a discussion of conformance to NYSDEC SPDES stormwater and erosion control regulations for construction and post-construction conditions.
- The vehicle access points, internal roadway layout and traffic circulation should be identified.
- The adequacy of on-site parking should be discussed and established; a breakdown of parking requirements shall be provided.
- Identify options for garbage collection.
- Include a description of water supply system and quantify domestic use, sanitary wastewater generation, irrigation demand and proposed wastewater system.
- The sizes and locations of all other utilities and services should be described and quantified, along with the status of future connections.
- The Town lighting requirements, proposed lighting and, if an illumination analysis is available, it should be provided and described.
- Information on the type, amount and location of landscaping proposed should be provided as well as information on maintenance requirements such as irrigation and fertilization.
- Include a discussion on retained open space areas; areas of retention by applicant; easements or restrictions to ensure retention of open space.

Construction Process & Schedule

- Provide generalized method of construction and construction schedule/timetable, including project phasing (if applicable).
- Identify: construction management, equipment storage/staging, delivery routes, hours of operation, workers' parking, protection of natural and sensitive areas.
- Quantity of soil import/export, truck routes, soil/erosion control management and mitigation.

Site Operations

- Describe site management and operation; describe road, landscape and open space maintenance practice, describe any special conditions that may apply.
- Projected number of employees required for the various uses.

Permits and Approvals Required

- Identify all required permits and reviews, including agency having jurisdiction
- Coordinate project review between municipalities
- Determine whether services will be split or have single providers for services such as water supply and garbage collection and how fee/taxing arrangements would be handled.

Natural Environmental Resources

Geological Resources

- The existing soil types and their limitations and constraints on development will be determined pursuant to Nassau and Suffolk County Soil Survey.
- Soil borings will be completed and described to determine subsurface soil quality and depth to groundwater for high and low points.
- The soil quality shall be described in terms of analytical results from Phase II Environmental Site Assessment sampling.
- The topography of the site will be determined and analyzed using site-specific topographic surveys of the property.
- Constraints in terms of depth to groundwater shall be evaluated by establishing that sanitary and drainage systems can function properly; vertical profiles of these systems establishing minimum surface elevation, maximum groundwater elevation and system installation to required design standards shall be included.
- Proposed topographic alteration and grading of the site will be evaluated on the basis of resultant slopes, volume and disposition/origin of cut or fill, and proposed changes to topographic elevations. Evaluation may include description, profiles, contour maps and/or other methods to perform effective evaluation. Use of retaining walls, if any, will be discussed.
- Corrective measures necessary to overcome soil limitations will be identified and include evaluation of the Town of Huntington steep slope ordinance.
- Mitigation in terms of erosion control, retention of soils, fugitive dust and related impacts shall be identified.

Water Resources

- The groundwater management zone as classified under Article 6 of the Suffolk County Sanitary Code and the Nassau County hydrogeologic zone classification shall be referenced and described.
- The depth to groundwater in key development locations of the site should be determined by use of on-site soil borings.
- The expected direction of groundwater flow based on hydrologic interpolation will be identified.
- The existing groundwater quality will be referenced from existing literature.
- The recharge and nitrogen budgets for the site (considering all potential sources of nitrogen) shall be determined using mass-balance modeling methods. Potential impacts of the current site uses on groundwater quality and the wetland water quality will be discussed.
- Historic and current water use shall be provided.
- The expected impact of the project with respect to water quantity and quality shall be fully examined in terms of sanitary discharge compliance, wastewater treatment system operation and regulatory requirements including an evaluation of the proposed project's conformance to the Special Groundwater Protection Area (SPGA) Plan and water resource recommendations pertinent to the subject site. The Town of Oyster Bay Aquifer Protection Overlay District

regulations will be evaluated for that portion of the site located within the Town of Oyster Bay, including a comparison of the quantitative standards for disturbance of natural vegetation and lot coverage, as well as the use of best management practices for both the proposed RMF-10 zoning and that which would be allowed under the existing Town of Oyster Bay R1-1A zoning.

- Applicable Nassau County Department of Health (NCDH) and Suffolk County Department of Health Services (SCDHS) regulations and requirements will be identified, and the project's compliance to these limits will be evaluated.
- Other water quality impacts related to pesticides, chemical storage, tank storage (if applicable) and any other sources shall be analyzed.
- The consistency of the proposed action with the findings of the *Nationwide Urban Runoff Program (NURP)* and *Non-Point Source Management Handbook* will be evaluated as related to stormwater management and discharge.
- Potential impacts of site re-grading activities on the adjacent wetlands in terms of water quality and quantity will be explored, including evaluation of the proposed action's conformance to the NYSDEC Article 24 Freshwater Wetlands regulations.
- The existing stormwater management system and surface drainage conditions on the site will be described. This will include, but not be limited to: stormwater generated, available information relative to collection and management systems, and system capacity. In addition, post-development stormwater management conditions will be evaluated. This evaluation will include: calculations of stormwater to be generated, details of the proposed collection and management systems, system capacity, future maintenance practices for stormwater collection and leaching structures and analysis of how the proposed stormwater management system will comply with applicable regulatory requirements, including the NYSDEC SPDES GP 02-01 Phase 2 stormwater regulations.
- The change in hydrology of the site in terms of quantity of recharge under existing and future conditions shall be established using appropriate hydrologic analysis methods.
- Mitigation measures which may reduce potential water quality impacts shall be identified

Ecological Resources

- Existing upland habitats shall be inventoried through an inspection of the site by a qualified biologist/ecologist to determine the vegetation, wildlife, and general habitat character. An inventory of flora and fauna observed and expected will be provided in this section of the DEIS.
- In addition, protected native plants, plant and animal species listed as endangered, threatened, special concern (or with other protective status) and significant habitat areas on or in the vicinity of the project site will be identified.
- The type, quantity and quality of wetlands present on the adjoining property shall be mapped and described using current site conditions and applicable regulations and setbacks discussed.
- The NY Natural Heritage Program shall be contacted for site file information concerning habitats, plant and animal species.
- Impact to habitats, considering the proposed project and future potential development of the Woodbury Country Club and Votpka propery, shall be quantified and discussed qualitatively in terms of ecological impact to plants and animals.
- Mitigation measures to reduce potential impacts should be identified and method of implementation determined.

<u>Human Resources</u>

Land Use, Zoning and Plans

- This section will describe existing land use and zoning on the subject site and in the surrounding area.

- This section will also provide information on the development history of the site and surrounding area; the existing land use character of the site and surrounding area within 1,000 feet will be described and mapped.
- The zoning of the site and the area within 1,000 feet should be described and mapped, and a brief description of zoning regulations for the project site and surrounding area zoning shall be provided.
- Land use plans and zoning regulations that pertain to the project site should be outlined and discussed in terms of their general intent and applicability to the project site. Discussion to include proposed use, community need, acquisition lists, reference to aesthetic impacts, use of facilities and community character which may be examined in more detail in subsequent sections.
- The need for the change of zone and the compatibility with the surrounding area will be assessed, including a discussion of what other uses allowed under the site's existing R-40 and R1-1A zoning are permissible.
- Once the above information is compiled, the DEIS will assess the impacts of the proposed action on land use and zoning. The impact assessment will concentrate on evaluating the consistency of the proposed action with prevailing land use and zoning.
- The conformance of the project with land use plans and applicable zoning regulations (including the Oyster Bay APO District and Huntington Steep Slope ordinance) should be evaluated and discussed.
- The impacts to land use, zoning and community character resulting from the proposed action shall be assessed.
- Impacts of the proposed development on the existing two single-family residential parcels on Plainview Road will be examined. If applicable, measures that would be applicable to mitigate these impacts will be identified.
- The project's conformance to the proposed R-RM and RMF-10 zoning district will be discussed.
- A map of "potential developments" in the immediate area will be provided based on a specific list of projects provided by the Towns to the applicant, in order to demonstrate how the various properties could be coordinated in the future, including pedestrian and vehicular connection.
- Measures which may be used to mitigate potential land use, zoning or impacts with respect to land use plans should be provided.

Transportation

- This section will be based on the contents of the Traffic Impact Study (TIS), which will include the following:
- A detailed field inspection will be conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing, signal timings, phasing and cycle lengths.
- Turning movement volume counts will be conducted during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods on a typical weekday and during the Saturday midday (11:00 AM – 2:00 PM) peak period at the following study intersections.
    - Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive
    - Jericho Turnpike (NYS Route 25) at Plainview Road
    - Jericho Turnpike (NYS Route 25) at Juneau Boulevard
    - Plainview Road at Orchard Drive
- Hourly traffic volumes collected on Jericho Turnpike (NYS Route 25) will be obtained from the New York State Department of Transportation (NYSDOT).
- An annual growth factor, obtained from the NYSDOT, will be applied to the existing traffic

volumes to estimate the increase in background traffic that would occur in 2010.

- Estimates of traffic that would be generated by two other proposed developments, Votypka Development ("Votypka") and the Woodbury Country Club ("Woodbury"), as well as the constructed and partially occupied Hunting Hills Estates project ("Huntington Hills") and development of the Cold Spring Country Club ("Cold Spring") (based on both the existing residential zoning yield of R-20 and a potential post-moratorium residential zoning yield of R-40), will be prepared utilizing data within the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Seventh Edition* and included in the No-Build condition.
- Justification for the ITE land use code applied for the proposed development will be provided.
- Estimates of traffic that would be generated by the proposed residential development will be prepared utilizing trip generation data published by the ITE publication, Trip Generation, Seventh Edition. The site-generated traffic volumes assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope will be added to the No Build Condition volumes to generate the proposed Build Condition volumes.
- Capacity analyses will be performed at the study intersections for the Existing, No Build and Build Conditions. The results of the analyses for the No Build and Build Conditions will be compared to identify any significant impacts associated with the proposed project.
- Three separate Build conditions will be analyzed. The first will add to the No Build condition only the Kensington Estates traffic. The second will add to the No Build condition traffic from Kensington Estates, Votypka, Woodbury and the additional to-be-developed increment of Huntington Hills. The third scenario will also add traffic from Cold Spring, alternatively evaluating both residential zoning yields.
- Accident rates at study intersections and roadway segments in the project area will be compared to State-wide averages for similar intersections and roadways.
- The stacking capacity of the left-turn lane on Jericho Turnpike at Plainview Road-Avery Road-West Gate under the existing no-build scenario will be analyzed with other proposed projects and cumulative build-out conditions.
- Adjacent roadways will be examined to determine if curbing, drainage, shoulders, lighting and sidewalks currently exist, or will need to be installed or replaced. Any improvements provided by the current NYSDOT project on Jericho Turnpike to the north of the site will be discussed. Additionally, potential future improvements to the intersection of Jericho Turnpike and Plainview Road/Avery Road/West Gate based on ITE/DOT/local highway design standards will be discussed, if warranted to improve traffic flow.
- The results of the TIS will be outlined in a detailed report containing text, tables and graphics for submission to Town and involved agencies.

Community Facilities and Services

- The existing community services and the ability of these services to accommodate the proposed project will be described. The services include:
  - Schools;
  - Police Protection;
  - Fire Protection and Ambulance Services;
  - Public Water Supply;
  - Sanitary Wastewater Treatment and Disposal;
  - Solid Waste Handling and Disposal;
  - Public Parks and Recreational Facilities; and
  - Energy
- The impact analysis will include consultations with service providers regarding existing demand for services and capacity such that the DEIS will objectively analyze the impact of the proposed action on community facilities and services.

- The DEIS will include detailed projections of service demand.
- The existing and future tax revenue of the site shall be established.
- Hydrant installation/location or other development considerations that assist in addressing emergency services should be included.
- The DEIS will provide projections for water consumption for each use proposed and, in consultation with the South Huntington and Jericho Water District's, will evaluate the ability to meet this projected water demand. The availability of public water supply will be confirmed through communication with the water districts.
- Impact with respect to energy consumption and ability of utilities to serve project demand will be addressed through contact with service providers.
- Open space areas within the vicinity of the site will be evaluated and the potential loss in the amount of open space available on the site discussed.
- Mitigation for emergency service access to ensure that equipment can ingress/egress the site should be addressed.
- The use of energy efficient devices will be evaluated and addressed.

Community Character

- The visual character of the existing site and vicinity should be established by use of ground photography from various publicly-accessible viewpoints.
- Other aspects of the existing visual character of the site and vicinity, in terms of vegetation, lighting, utilities, etc., should be described.
- Architectural renderings are anticipated, along with descriptive text, to fully describe the change of visual character of the site.
- The aesthetic impact of the proposed structures will be evaluated. The significance of visual impacts will be assessed and mitigation proposed. Lighting impacts will be discussed from a visual impact perspective.

Historic and Archaeological Resources

- The potential for the presence of historic and/or archaeological resources on the site will be addressed by a review of the NY State Historic Preservation Office (SHPO) archaeological sensitivity maps and preparation of a Phase I Cultural Resources Assessment (CRA). Any mitigation that may be appropriate, including the preparation of a Phase 2 CRA, should be identified.

6.0 Other Required Sections

In addition to the key resources identified in the Positive Declaration, SEQRA identifies other required sections for a complete DEIS as included in 6NYCRR Part 617.9 (b)(3). Mitigation measures will be included with respect to each key impact area as noted in Section 5.0. Alternatives to be studied are identified in Section 7.0. The following Other Required Sections and evaluations will be provided in the DEIS.

- Cumulative Impacts (Describe the three pending projects in the vicinity, the Votypka Development, Woodbury Country Club, and the Hunting Hills Estate development (which has been constructed immediately west of the Woodbury Country Club but is not yet fully occupied) and determine potential for impacts due to implementation of proposed project in combination with others and discuss/analyze impacts.

- Adverse Impacts That Cannot Be Avoided (Provide brief listing of those adverse environmental impacts described/discussed previously which are anticipated to occur, which cannot be completely mitigated).
- Effects on the Use and Conservation of Energy Resources (Provide brief description of anticipated energy-conserving features of proposal that would reduce the magnitude of increased energy consumption. Indicate potential impacts on ability of energy supplier to provide energy to project.)
- Irreversible and Irretrievable Commitment of Resources (Provide brief discussion of those natural and human resources which will be committed to and/or consumed by the proposed project).
- Growth-Inducing Aspects (Provide brief discussion of those aspects of the proposed project which will or may trigger or contribute to future growth in the area).

7.0 Alternatives to be Studied

SEQRA requires a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. As noted in SEQRA, "The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed". The following alternatives and methods of evaluation are anticipated:

- No Action Alternative (assumes the site remains in its current use and condition).
- Development per Existing Zoning (assumes the site is developed in conformance with its existing R-40 and R1-1A zoning).
- Non-Age Restricted Development (assumes the site is developed with yields and layout similar to that of the proposed project, but assumes no age restriction is imposed on the project).
- Alternative Access (assumes the site is developed with the same yield and layout to that of the proposed project, but provides an additional site access [limited to rights in and rights out] to Jericho Turnpike).
- Reduced Density Alternative (assumes a 115 unit multi-family plan and open space provided both in the Town of Oyster Bay and Town of Huntington portions of the site).

* * * * *

The document assists the lead agency in evaluating the DEIS for content and adequacy for public review and assists the applicant in understanding the extent and quality of information needed to evaluate the proposed project and allow the lead agency and involved agencies to obtain the information necessary to reach an informed decision on the project.

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING & ENVIRONMENT

Anthony J. Aloisio, AICP, *Director*

Frank P Petrone, *Supervisor*

RECEIVED
JAN 28 2008 PR
NELSON & POPE

January 24, 2008

Carrie O'Farrell, AICP
Nelson Pope & Voorhis
572 Walt Whitman Road
Melville, NY 11747

RE: Change of Zone Application: #2006-ZM-363
Application Name: **Triangle Equities (Kensington Estates)**
Street Location: s/e/c Jericho Tpke (NY 25) & Plainview Rd. West Hills/Woodbury
Suffolk County Tax Map: 0400-226-01-001
Nassau County Tax Map: 13-D-114 & 115
Zone Request: R-40 Residence to R-RM Retirement Community (Huntington)
R1-1A to RMF-10 (Oyster Bay)

Dear Ms. O'Farrell,

Attached please find the final scope prepared by the Town of Huntington Department of Planning and Environment on behalf of the Huntington Town Board. You may now prepare and submit the Draft Environmental Impact Statement (DEIS). We will need 23 paper copies and 2 CD-ROM discs as referenced in the final scope. If data sheets are packaged into appendices as suggested in the final scope, we would only need 17 copies of each appendix. Also attached for your reference are the comment letters we received on the draft scope and an article from New York Zoning Law and Practice Report on properties straddling municipal boundaries.

Very truly yours,

Craig Turner

Craig Turner, AICP
Planner

For Anthony J. Aloisio
Director of Planning and Environment

TOWN HALL • 100 MAIN STREET, HUNTINGTON, N.Y. 11743-6991 • (631) 351-3196 • FAX (631) 351-3257

FINAL SCOPE
FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

TRIANGLE EQUITIES ZONE CHANGE
TOWN OF HUNTINGTON APPL. #2006-ZM-363
(SHIRE ESTATES AT WOODBURY)
(KENSINGTON ESTATES)

PROJECT DESCRIPTION: The property lies in both the Town of Huntington (Suffolk County) and the Town of Oyster Bay (Nassau County). On the Huntington side the applicant is requesting a zone change from R-40 Residential to R-RM Retirement Community District on 13.6 acres of land. On the Oyster Bay side the zoning would be changed from R1-1A One-Family Residence to RMF-10 Multi-Family Residence on 5.1 acres of land. The applicant intends to build a senior-aged (55+) residential community of 136 units in 19 buildings, of which 109 units are located in Huntington and 27 units are located in Oyster Bay. The property is located in the West Hills-Melville and Oyster Bay Special Groundwater Protection Areas (SGPAs), and is listed on the Town of Huntington Open Space Index as parcel SW-1. The project also lies within the Town of Oyster Bay's Aquifer Protection Overlay (APO) District. The development would be connected to the Nassau County sewer system to eliminate on-site sanitary discharge. The proposed road access is from Plainview Road. Except for the retention of some wooded buffers along the property lines, most of the site will be disturbed by clearing and/or grading. Most of the rear of the property is currently wooded. The developed portion of the land along Jericho Turnpike contains a variety of site uses, including horse stables, a woodcarving business, and a tree service.

POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS: The project poses the potential for the following adverse environmental impacts:

1. The proposed action is inconsistent with the towns' Comprehensive Plans and the SGPA Plan that recommend low-density residential use of the site and preservation of open space.
2. The proposed action may not be in compliance with sections of the Town of Oyster Bay Aquifer Protection Overlay District.
3. The project's incompatibility with the character of the neighborhood, which is mostly low-density residential use.
4. The rezoning of this property may pose a precedent for the rezoning of other large properties in the neighborhood.
5. The clearing and grading of the majority of the property will reduce open space and wildlife habitat and change drainage patterns, affecting the nearby wetlands.
6. Soils may contain contaminants from agricultural uses and the soil composition may affect drainage design.
7. The aesthetic impacts from the significant change in the appearance of the property from the clearing, grading, and construction of high-density attached housing units and a recharge basin.
8. The increase in traffic generation and impact on neighboring roads and intersections.
9. The loss of the horse stables as a provider of recreation.

INFORMATION REQUIRED FOR FURTHER REVIEW: The draft scope submitted by Nelson, Pope & Voorhis dated November 2, 2007 is considered part of the final scope. Additional information is provided below.

In order to properly analyze the impacts on the adjacent wetlands, proposed drainage, and general soil conditions, test borings should be obtained from several locations throughout the property. This includes the center of the proposed recharge basin in the northwest corner of the property and the approximate center of the recharge basin if it were moved to the northeast corner of the property. If either of these borings contains samples of the clay lenses believed to exist in the area or groundwater, further test borings shall be conducted in the area to determine the extent of the lenses on the property. Test borings shall also be performed in the center and rear of the property to determine if soil conditions change away from Jericho Turnpike.

The boundary of the wetlands at the northeast corner of the property shall be identified in the field using the following three indicators:

- Wetlands hydrology - the presence of water at or near the surface for part of the growing season.
- Presence of hydric soils (poorly drained or very poorly drained soils).
- Prevalence of wetlands vegetation.

Using the topographic map of the property and available topographic lines from existing sources such as the Suffolk County Sewer Maps, as well as observations in the field, the drainage shed of the adjacent wetlands should be determined to help analyze runoff contributions to the wetlands and the expected impacts from the regrading of the property including the potential for algae blooms from nutrients.

The DEIS shall evaluate the following in assessing the impact of the proposed project on the wetlands:

- The quality of the existing wetlands.
- The drainage shed of wetlands subject to impacts.
- The hydrologic connection of the pond; and
- The impact upon abutting owners.

Locations for soil sampling should include any areas of chemical storage, active woodcarving operations, vehicle storage, and the new crushed asphalt driveway. A soil sample shall also be taken close to the wetlands to show if any contaminants have migrated in the direction of the wetlands.

When reviewing senior-aged residential developments it is helpful to know if the project will incorporate design elements intended to serve the special needs of its population. The impact statement should list the amenities that will be provided in the units or on the grounds of the development that will make independent living easier for elderly residents.

MITIGATION/ALTERNATIVES: The draft scope submitted by Nelson, Pope & Voorhis dated November 2, 2007 is considered part of the final scope. Additional information is provided below.

A trend has been observed regarding rezoning applications from low-density single-family residential zones to high-density multi-family residential zones in the Jericho Turnpike corridor. The DEIS should indicate whether there have been any single-family residential major subdivisions (5+ lots) adjacent to Jericho Turnpike in the last five to ten years. The name of the subdivision should be listed, along with its location, zoning, acreage, number of lots, and a description of what was done to preserve open space and buffer the residences from Jericho Turnpike. There have been no major subdivisions along Jericho Turnpike in the Town of Huntington during this time period.

An alternative should be examined that shows how the environmental impacts of a cluster development would compare to the proposed development. The impacts affected by a cluster design would include the amount of clearing and grading, aesthetics, open space, wildlife habitat, and possibly wetlands impacts. The review of the alternatives will require the submission of conceptual maps.

While there is a need for a traffic study that will forecast other potential development projects in the neighborhood, it would not be considered reasonable for the applicant to bear the responsibility of making traffic improvements for other projects. It is understood that the comprehensive traffic data is for planning purposes only, and the goal is that any improvements developed for this site would not conflict with additional traffic improvements that may be recommended or required for other development projects.

ORGANIZATION OF THE DEIS: The traffic, soil, and archaeological studies that have been requested typically contain several pages of analysis followed by numerous pages of data sheets which may not be needed by many of the reviewers involved with a larger SEQRA coordination such as the one for this project, which has over two dozen involved or interested agencies. It is recommended that the traffic study be packaged as an appendix in a separate volume, with only the analysis and recommendations carried over into the main volume of the DEIS. If the soil or archaeological studies also contain a significant number of data sheets, they may also be packaged as a separate volume. However, if the material for these studies is not large, they can be included in the main volume. A copy of all text documents shall be submitted on two compact discs in .doc or .pdf formats.

APPENDIX B

ENVIRONMENTAL SITE ASSESSMENT

Appendix B-1

Phase I Environmental Site Assessment
Freudenthal & Elkowitz Consulting Group
August 2006

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OF
INDIAN HEAD RANCH PROPERTY
1130 WEST JERICHO TURNPIKE
HAMLETS OF HUNTINGTON AND WOODBURY
TOWNS OF HUNTINGTON AND OYSTER BAY
SUFFOLK AND NASSAU COUNTIES, NEW YORK

Prepared by:

Freudenthal & Elkowitz Consulting Group, Inc.
368 Veterans Memorial Highway
Commack, New York 11725
(631) 499-2222

August 2005

Table of Contents

EXECUTIVE SUMMARY

This document is a Phase I Environmental Site Assessment prepared to determine evidence of recognized environmental conditions and/or potential environmental concerns in connection with a 19±-acre residentially-zoned property, currently improved with a horse farm, wood carving and roadside bar-b-que stand operations. The property is located at the southeast corner of West Jericho Turnpike (NYS Route 25) and Plainview Road, in the Hamlets of Huntington and Woodbury. The majority of the property is utilized as the Indian Head Ranch horse farm and commonly known by the street address of 1130 West Jericho Turnpike, Huntington, New York.

Topography of the subject property is characterized as rolling terrain. Elevations at the subject property vary from approximately 240 to 280 feet above msl. Comparison of the 2000 Suffolk County Water Table Elevation Map with the Topographic Map indicates depth to groundwater at the site ranges from approximately 170-feet bgs to 210-feet bgs. The subject property is located within the West Hills/Melville SGPA. According to review of the West Hills/Melville SGPA, the subject property is located proximate to a groundwater divide. Based upon the map depiction, groundwater flow direction in the site vicinity of the subject property is to the north. Review of the 2000 Water Table Elevation Map, further indicates a potential for a northwesterly flow component in the site vicinity. Thus, for the purposes of this report, it is assumed that the groundwater flow direction is to the north to northwest.

According to reviews of Town and County records, and historic aerial photographs, the northern and southwestern portions of the subject property were agricultural in use circa 1947. In the early 1950s, the Dougal family acquired the land, and with the exception of brief tree nursery venture, the property was not farmed again. Family members cut trees for employment and sold firewood at the northwestern portion of the site. Firewood storage and splitting activities appeared to have occurred at that portion of the property.

From at least 1970 through 1980, a small dumping area at the southwestern portion of the property was visible in aerial photographs and noted in a CLEARS Study conducted for the area.

The oldest structure identified at the subject property was built circa 1956 at the northeast portion of the property. Although described by the Town of Huntington Tax Assessor as a five-car garage with unfinished apartment, it appears that this structure was utilized by members of the Dougal family as a primary residence until succumbing to a fire at least ten years ago. A built-in swimming pool was noted in later aerial photographs to be present south of house. Several frame structures were also identified on aerial photographs. Mr. Wayne Dougal, the current property owner, reported that the building located at the northern portion of the site was used to sell firewood and the remaining structures were historically used as barns.

This Phase I Environmental Site Assessment has been prepared in conformance with the scope and limitations of ASTM Practice E1527-00 for a 19±-acre residentially-zoned property, currently improved with a horse farm, wood carving and roadside bar-b-que stand operations. The property is located at the southeast corner of West Jericho Turnpike (NYS Route 25) and Plainview Road, in the Hamlets of Huntington and Woodbury. Any exceptions to, or deletions from, this practice are described in the section of the report entitled Methodology. The following recognized environmental conditions and potential environmental concerns for the subject property (as defined by ASTM Practice E1527) were identified:

- Historic aerial photography indicates that portions of the subject property were cleared and used for agricultural purposes as early as 1947. Therefore, there is a potential for pesticides to have historically been applied at the site;

- An out-of-service 550 gallon fuel oil UST is present at the southeastern building exterior of a fire-damaged building. The condition of the UST and subsurface soils are unknown. Further, Suffolk County regulations require that an out-of-service UST be properly abandoned and/or removed;

- One in-service AST and one out-of-service 275 gallon AST were observed at located at the subject property;

- Evidence of historic dumping activities was observed at the southwestern portion of the subject property. During the July 29, 2005 site inspection, only non-hazardous debris (e.g., tires and bricks) were observed at this portion of the property;

- Additional debris and mounding was observed at the subject property. The debris consisted of abandoned vehicles and discarded construction materials. The mounds were composed of manure, RCA and crushed asphalt;

- The presence of an out-of-service potable water well is suspected at the northeastern interior of a fire damaged building; and

- There is a potential for LBP to present at the fire-damaged former residence, and non-friable ACM within the roofing materials at the site.

Based upon the foregoing, F&E recommends the following:

- Past agricultural use of the subject parcel (based upon review of aerial photographs and site inspection), which had cause to apply pesticides, fertilizers etc., may have impacted surficial and subsurface soil conditions. Consequently, prior to any development of the subject parcel, it would be prudent to perform surficial soil sampling to ascertain the presence, if any, of residual pesticides and their breakdown products as well as arsenic and lead;

- Investigate subsurface conditions related to the out-of-service 550 gallon UST. Based upon conversations with the client and the current property owner, equipment (e.g., backhoe) located at the site may be utilized to excavate the UST. This may expedite the investigation and allow for the greatest cost savings. However, please note that F&E recommends that the UST be excavated (and removed) under prevailing SCDHS and/or NYSDEC regulations;

- It has been explained to F&E that the site may be re-developed. As such, it may be prudent to have the current property be responsible for the proper removal of both 275 gallon ASTs located at the site, prior to transfer of title;

- As previously stated, the current property owner maintains earth moving equipment at the site. F&E recommends that a backhoe be utilized to conduct test pits in the vicinity of the historic dumping located at the southwestern portion of the site. The soils should be field screened for visual and olfactory impacts, and utilize a photo-ionization detector (PID) in order to detect the presence of volatile organic compounds (VOCs), if present;

- No investigation regarding the potential out-of-service potable water well is recommended. However, in the event that during site re-development activities the presence of the out-of-service potable water well is confirmed, same would be required to be properly abandoned in accordance with NYSDEC regulations; and

- No recommendations are warranted with respect to LBP and ACM at this time. However, as part of a demolition project, the Town(s) may require a LBP and/or ACM survey prior to the issuance of a demolition permit.

1.0 INTRODUCTION

This document is a Phase I Environmental Site Assessment (ESA) prepared to determine recognized environmental conditions (RECs) and/or potential environmental concerns (PECs) in connection with a residentially-zoned property, currently improved with a horse farm, wood carving and roadside bar-b-que stand operations. The property is located at the southeast corner of West Jericho Turnpike (New York State [NYS] Route 25) and Plainview Road, in the Hamlets of Huntington and Woodbury. The majority of the property is utilized as the Indian Head Ranch horse farm and commonly known by the street address of 1130 West Jericho Turnpike, Huntington, New York. All figures referenced in this report are included in Appendix A. Representative site photographs are included in Appendix B.

1.1 Prepared and Client Information

This report was prepared in August of 2005 by Stephen Kaplan and was supervised by Richard Baldwin, CPG, Vice President of Freudenthal & Elkowitz Consulting Group, Inc. (F&E) at the request of Steven Krieger, Esq. This report was prepared for The Engel Burman Group, its successors and assigns. Use by other parties is not authorized.

1.2 Standards and Limitations

This Phase I Environmental Site Assessment has, at a minimum, been prepared in conformance with the scope and limitations of ASTM Practice E 1527-00. This report has been prepared by persons experienced in evaluating sites for environmental conditions. However, such evaluations are limited by a variety of factors (e.g., site configuration, accessibility, etc.). A reasonable effort has been made to assess the site and render an opinion consistent with prevailing regulations and current professional practices. Use of this report by any party for any purpose constitutes acceptance of these limitations.

1.3 Methodology and Scope

This document has been prepared in accordance with procedures established by environmental professionals and in concert with the guidance of regulatory agencies and funding institutions and ASTM Practice E1527-00. The purpose of ASTM Practice E1527-00 is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. As such, Practice E1527-00 is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 USC §9601 (35)(B).

The goal of the processes established by ASTM Practice E1527-00 is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water on the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate government agencies. Conditions determined to be de minimis are not recognized environmental conditions.

An historical recognized environmental condition is an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.

A material threat is a physically observable or obvious threat that is reasonably likely to lead to a release that is threatening and might result in impact to human health and the environment.

A complete evaluation of business environmental risk associated with a parcel of commercial real estate may necessitate investigation beyond that identified in ASTM Practice E1527-00. A business environmental risk is a risk that can have a material environmental or environmentally-driven financial impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in Practice E1527-00. Consideration of business environmental risk issues necessitates that one or more non-scope considerations be addressed.

This Phase I Environmental Site Assessment, as required by ASTM Practice E1527-00, specifically consists of the following components:

- Records Review (Federal, State and Local Agencies and Historical Sources)
- Site Reconnaissance and Interviews
- Non-scope Considerations (see below)
- Findings
- Conclusions

Areas of concern that are beyond the scope of Practice E1527-00 are classified as non-scope considerations. The following is a list of non-scope considerations which are addressed within this Phase I Environmental Assessment:

- Radon
- Lead-based Paint
- Asbestos-containing Materials
- Wetlands
- Special Groundwater Protection Areas
- Central Pine Barren
- CLEARS Inventory of Potential Hazardous Waste Sites

In preparing this Phase I Environmental Site Assessment, Freudenthal & Elkowitz Consulting Group, Inc. assumes that all readily available and relevant environmental and historical data reviewed in conjunction with this assessment and any information obtained during interviews and inquiries with available and knowledgeable parties is accurate.

2.0 SITE DESCRIPTION

2.1 Property Address and Location

The subject property is divided by the border between Nassau and Suffolk Counties. As such, the property is located within two hamlets and two townships, but is commonly referred to by the street address of 1130 West Jericho Turnpike, Huntington, New York. The parcel is situated at the southeast corner of West Jericho Turnpike and Plainview Road. The eastern portion of the subject property is located within the Hamlet of Huntington, Town of Huntington, Suffolk County, New York. The western portion of the subject property is located within the Hamlet of Woodbury, Town of Oyster Bay, Nassau County, New York (Figures 1 through 3).

2.1.1 Tax Map Number

The eastern portion of the subject property is designated in the Suffolk County Tax Maps as District 0400 - Section 226.00 - Block 01.00 - Lot No. 001.000 (hereafter referred to as Lot No. 1). The western portion of the subject property is designated in the Nassau County Tax Maps as Section 13 -- Block D -- Lot Nos. 114 and 115 (hereafter referred to as Lot Nos. 114 and 115).

2.1.2 Acreage and Building Size

Acreages for the subject property were identified on County tax maps and are as follows:[1]

- Lot No. 1: 13.9 acres;
- Lot No. 114: 2.08 acres; and
- Lot No. 115: 2.95 acres.

[1] Town of Huntington and Nassau County tax assessment information (Appendix C) for the individual parcels differed slightly from the tax map information. Tax Assessor data for associated acreages are as follows: Lot No. 1: 13.87 acres; Lot No. 114: 2.3 acres; and Lot No. 115: 2.85 acres.

No historic or current structures were noted in Nassau County Tax Assessor records. The Town of Huntington Tax Assessor maintained a record of a one-and-one-half-story concrete block and shingle, five-car garage with apartment constructed in 1956; no square footage of the structure was provided in the Town records.

A compilation map prepared by Fauser Associates P.C., dated May 24, 2005, supplied by the client indicates six structures, two wood stalls, two concrete plats and one mobile home present at the property (Figure 2). The approximate square footages (s.f.) assigned to the mapped structures are listed below:

- Concrete building: 1,725.6 s.f.;
- Metal barn: 12,169.44 s.f.;
- Horse stable: 3,462.58 s.f.;
- Framed structure: 342.77 s.f.;
- Wood workshop: 602.68 s.f.;
- Wood shed: 83.43 s.f.;
- Wood stall (north): 464.4 s.f.;
- Wood stall (south): 127.19 s.f.;
- Concrete plat (east): 312.5 s.f.;
- Concrete plat (west): 312.5 s.f.; and
- Mobil home: 690 s.f.

2.1.3 Ownership

According to information maintained by the Town of Huntington Tax Assessor and the Nassau County Tax Assessor, the current property owner for all three tax parcels comprising the subject property is Big Dougs Enterprises, LLC.

2.1.4 Zoning

According to the Town of Huntington Planning Department, the eastern portion of the subject property is located within the Town of Huntington's R40 residential zoning district. The Town of Oyster Bay Planning Department indicated that the western portion of the subject property is located within the Town of Oyster Bay's R1-1A residential zoning district.

2.2 Current Occupancy and Property Use

The subject property is currently utilized as a horse farm, with a wood carving and bar-b-que stand operations located on-site. The horse farm utilizes the majority of the property with corrals, stables and wooded bridle paths. The wood carving operation is primarily unenclosed, however, sheds, tents and trailers are utilized to store tools and products. The bar-b-que stand utilizes a mobile trailer for cooking purposes and an outdoor eating area.

3.0 SITE GEOLOGY AND HYDROLOGY

3.1 Topography and Surface Characteristics

3.1.1 Elevation

Topography of the subject property is undulating terrain. Elevations at the subject property vary from approximately 240 to 280 feet above mean sea level (msl), according to review of the USGS Topographic Map, Huntington Quadrangle (Figure 3).

3.1.2 Surface Water Bodies

No surface water bodies exist on the subject property. However, one surface water body was identified at the eastern adjoining property located at West Jericho Turnpike. According to Mr. Wayne Dougal (the current property owner), the water body receives stormwater runoff from the site vicinity. The adjoining water body has been mapped on the New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands Map of Suffolk County Map No. 24 of 39 and the National Wetlands Inventory Map No. 402 (see Figures 7 and 8, and Section 7.4 for additional details).

3.1.3 Soils

According to the Soil Survey of Suffolk County, New York, and Soil Survey of Nassau County, New York, the soil on the subject property is mapped as Montauk silt loam, three to eight percent slopes (MkB) and Montauk silt loam, eight to 15 percent slopes (MkC).

Montauk Series

The Montauk Series consists of deep, well drained to moderately well drained, moderately coarse textured to medium textured soils that formed in fine sandy loam or in a mantle of silt loam and loam. These soils have a fragipan over a compact firm glacial till. They are on terminal moraines and have the topography characteristic of this landform. Slopes range from zero to 15 percent, but are generally from three to 15 percent. In many places, slopes are complex and are characterized by closed depressions. Native vegetation is white oak, red oak and scarlet oak.

In a representative profile, in wooded areas, the surface layer is brown to dark brown fine sandy loam about two inches thick. In cultivated areas the surface layer is mixed with material formerly in the upper part of the subsoil, and a plow layer of brown to dark brown fine sandy loam, about nine inches thick, is present. The subsoil is yellowish brown, friable to very friable fine sandy loam to a depth of about 27 inches. The lower part is a dark brown to reddish brown sandy loam fragipan to a depth of about 40 inches. It is firm and brittle and the content of gravel is five to ten percent. The substratum, to a depth of about 60 inches, is reddish brown to dark brown loamy sand that is firm and brittle.

Montauk soils have moderate to high available moisture capacity. Permeability is moderate to moderately rapid in the surface layer and in the upper part of the subsoil and moderately slow in the fragipan and underlying till. On lower slopes, the seasonal water table rises to within two or three feet of the surface. Crop response is good to applications of lime and fertilizer, however, natural fertility is low.

Montauk silt loam, three to eight percent slopes (MkB) - This gently sloping to undulating soil is on moraines. Areas of this soil are medium to large in size. The profile of this soil is similar to the one of the soil described as representative of the series, except that the surface layer is silt loam. This soil also contains more gray streaks in the lower part of the subsoil than the soil described as representative of the series. In cultivated areas, this soil is six to eight inches shallower to compact, firm glacial till than in the soil described as representative, and it contains more gravel.

The hazard of erosion is moderate to slight on this Montauk soil. The soil is well suited to all crops commonly grown in the County. In areas that are farmed, the main concern of management is the control of runoff and erosion.

Montauk silt loam, eight to 15 percent slopes (MkC) – This soil is on rolling moraines where many kettle holes or closed depressions dot the landscape. It is mainly in the area between Montauk and Montauk Point. Slopes are complex in many places. Ares of this soil are medium to large in size.

A few areas near Montauk are in old grassland, and they are idle and slowly growing up in brush. Most other areas are wooded or are used as sites for housing development.

3.2 Groundwater Characteristics

3.2.1 Depth to the Water Table

Comparison of the 2000 Suffolk County Water Table Elevation Map (Figure 4) with the Topographic Map indicates depth to groundwater at the site ranges from approximately 170-feet below grade surface (bgs) to 210-feet bgs.

3.2.2 Groundwater Flow Direction

According to review of the West Hills/Melville Special Groundwater Protection Area (SGPA), the subject property is located proximate to a groundwater divide. Based upon the map depiction, groundwater flow direction in the site vicinity of the subject property is to the north. Review of the 2000 Water Table Elevation Map (Figure 4), further indicates a potential for a northwesterly flow component in the site vicinity. Thus, for the purposes of this report, it is assumed that the groundwater flow direction is to the north to northwest.

3.2.3 Groundwater Classification

Groundwater underlying the subject property and the surrounding area is categorized as Class GA, a source of potable water supply. This classification requires quality standards to be the most stringent. Groundwater underlying Long Island is also designated as a sole source aquifer.

3.2.4 Groundwater Quality

In an effort to obtain general information on groundwater quality, the Final Long Island Groundwater Management Program (NYSDEC, 1986) was consulted. Information relating to organic contamination and nitrate contamination was ascertained.

Organic contamination is considered to be "... the highest priority threat to Long Island groundwater." According to the referenced NYSDEC publication, there are three major categories of organics that are considered as high priority water quality problems. These include:

- industrial/commercial solvents and de-greasers;
- gasoline and petroleum products constituents; and
- pesticides and herbicides.

The subject property is not located within an area where shallow groundwater or public water supply wells are documented as contaminated with organics (Figure 5).

Nitrate contamination is not considered to be as severe as organic contamination. However, the NYSDEC states that, "particularly in agricultural areas and in developed or developing areas nitrates are a significant priority problem..." Sources that contribute to nitrate contamination include:

- precipitation;
- agricultural and turf fertilizer;

- sewage effluent through cesspools, septic tank leaching fields and subsurface treatment plant discharges; and
- animal wastes.

Through analysis of Figure 6, it may be concluded that the subject site is located in an area where shallow groundwater is contaminated with nitrates, however, this is not specific to the subject property.

3.2.5 Hydrogeologic Zone

The subject property is located within Hydrogeologic Zone I: Deep Flow System (Magothy Recharge Area). Zone I encompasses much of the residential, transport, commercial and industrial activity areas of Nassau and Suffolk Counties. Zone I, located in Nassau County and western Suffolk, contributes water to the middle and lower portions of the Magothy aquifer. Portions of the Glacial aquifer, and to a lesser extent, the Magothy aquifer have been contaminated by nitrates from fertilizers and on-site wastewater disposal systems and by synthetic organic chemicals from industrial and other discharges. Initially, the nitrate contamination was a result of farming practices and then, later, of urbanization. Although the greater part of Zone I is urbanized and subject to contamination, several of the northern sectors are still relatively undeveloped and provide opportunities for clean recharge of the aquifers. Only a small portion of Zone I is sewered (roughly ten percent).

3.3 Geology

Concise and accurate descriptions of the geology, physiography and drainage of Suffolk and Nassau Counties are found in the Soil Survey of Suffolk County, New York (USDA) and Soil Survey of Nassau County, New York (USDA). Relevant excerpts of these studies are included below.

Suffolk County

The bedrock under Suffolk County varies in depth from 400 feet below sea level at Lloyd Neck to 2,200 feet below sea level in the south-central part of the County. The bedrock is overlain by Cretaceous sediment called the Raritan formation and the Magothy formation. The Raritan formation, which rests on the bedrock, is subdivided into the Lloyd Sand member and the clay member, the uppermost part. The Raritan formation is below sea level. The Magothy formation crops out at only a few locations on Long Island, and most of these are in Nassau County.

Part of the Magothy formation is overlain by Jameco gravel, which is believed to have been deposited by glaciers of the Kansan stage. These deep gravel deposits are mainly in the southwestern part of the County and their extent is unknown. Elsewhere, the Magothy is overlain by a marine clay identified as Gardiners clay. This formation is thought to be an interglacial deposit, possibly of the Sangamon interglacial stage. In all other parts of the County, the Magothy is overlain directly by upper Pleistocene deposits.

The Pleistocene epoch is divided into four major glacial stages, the Nebraskan, Kansan, Illinoian, and Wisconsinan. The youngest, the Wisconsinan, produced Long Island Sound and most of the topographic features of Suffolk County as it is known today.

During the earlier part of the Wisconsinan stage, the ice sheet moved to about the middle of the County and stopped, leaving before it a central ridge or terminal moraine. This ice sheet was called the Ronkonkoma sheet and the moraine, which runs the entire length of the County from the Nassau County line to Montauk Point, was given the same name. The glacier retreated from this point back to the north of Long Island and then re-advanced. The last advance terminated along the north shore; and, again, a hilly terminal moraine was formed. This last advance of the ice was called the Harbor Hill sheet, and the moraine was called the Harbor Hill Moraine.

After the two ice sheets reached their southern limits in the County, they began to melt. As they melted, melt-water streams flowed from the glaciers and carried a large volume of sand and gravel farther south. This sand and gravel was deposited in a more or less flat plain, developing what is known as an outwash plain. Two outwash plains are in the County, one between the Ronkonkoma moraine and the Atlantic Ocean and the other between the Harbor Hill moraine and the Ronkonkoma moraine.

After the retreat of the glaciers, recent developments further shaped the County as it exists today. Rainfall has eroded some of the hills and redeposited the material. The barrier beach is probably all of recent origin and tidal marshes of the south shore are a recent geologic development. To illustrate the recent building of the barrier beach, the western tip of Fire Island is now about 6 miles west of the Fire Island lighthouse. When the lighthouse was built in the late 1800s it was built on what was then the western tip. Other recent geologic changes consist of the joining of small nearby islands to the main island by sand bars which have risen above sea level. Examples of these connected islands are Lloyd Neck, Eatons Neck, Montauk Point, and North Haven.

Elevation in the County ranges from almost 400 feet at West Hills to sea level. The most prominent landforms in the County are the two morainic ridges with their uneven surfaces, the gently sloping outwash plains extending southward from the hills, the eroded head-lands along the northwestern shore line of the County, and the barrier beaches of the south shore and the tidal marshes. Fishers Island, Great Gull Island, Plum Island, Gardiners Island, Shelter Island, and Robins Island, all part of Suffolk County, have uneven landforms typical of the morainic deposits.

Few perennial streams drain the County. The largest stream is the Peconic River, which heads near Brookhaven National Laboratory and empties into Flanders Bay near Riverhead. It drains an area of about 75 square miles. The second largest is Carmans River which heads near Middle Island and empties into the Great South Bay near Shirley. It drains about 71 square miles. Carlls River heads near Wyandanch and empties into the Great South Bay near Babylon. It drains about 35 square miles.

The Nissequogue River heads near Hauppauge and empties into the Smithtown Bay of Long Island Sound. It drains about 27 square miles. The Connetquot River heads between Ronkonkoma and Central Islip and empties into the Great South Bay near West Sayville. It drains an area of about 24 square miles. Sampawams Creek heads near Deer Park and empties into the Great South Bay at Babylon. It drains an area of about 23 square miles. Many other small creeks empty into the southern bays. Most of these creeks are subject to tidal flow.

Two basins that have no surface-drainage outlet are in the County. The largest is the Selden basin near Coram, the other is the Lake Ronkonkoma basin. Elsewhere in the County small areas have no surface-drainage outlet. Runoff runs into shallow, closed depressions and evaporates or percolates into the groundwater.

Runoff from most developments and highways is disposed of by recharge basins dug into the highly permeable sand and gravel substratum.

Nassau County

Nassau County is part of the Coastal Plain physiographic province. The County is characterized by undulating or rolling landscapes in the northern part and a flat plain with a gently southward tilt in the southern part. A lobe of rolling topography protrudes farther to the south along the eastern edge of the County. Extensive tidal areas and marshes are just south of the plain, and a barrier beach and dunes form the southern outline of the County.

Elevation in the County ranges from sea level to about 340 feet above sea level near the eastern edge of the County, just south of NYS Route 25. The landforms at the higher elevations were deposited as a terminal moraine. These areas have irregular topography that is crossed by deep glacial drainage channels near the north shore. These channels empty into deep bays on the north shore. The steepest relief is along drainage channels or on the side slopes adjacent to the bays. An outwash plain, which is to the south of the terminal moraine, has a maximum elevation of about 180 feet just northeast of Hicksville and slopes gradually to the south some eight to ten miles, finally reaching tidal area at sea level.

Nassau County is underlain by bedrock, but most of it is at a depth of several hundred feet. The closest surficial bedrock is to the west in the boroughs of Bronx and Queens in New York City and areas to the northwest in Westchester County near Long Island Sound. From these areas of surface exposure, the rock surface dips to the southeast to form a solid basement below Nassau County. Most of the bedrock consists of Cretaceous sedimentary layers. Some of the older rocks in the area are the 200 million year old Triassic red beds and lava flows off New Jersey and Connecticut and Cambrian metamorphic rocks in the New York City area that are 450 million years old.

During the late Cretaceous Period the sediments from the eroding Appalachian Highlands were carried by streams and rivers to low-lying coastal areas. The sand, silt, and clay of the Raritan and Magothy formations, which form the foundation of Long Island, were deposited as deltas in areas of shallow water. The Raritan formation is below sea level, and the Magothy formation is at the surface of several sites along the north shore.

During the Tertiary Period the area of Long Island was uplifted above sea level and the Cretaceous sediments were eroded and dissected by streams and rivers. The valley now occupied by Long Island Sound was cut by a major river, and smaller tributary streams formed valleys which are now the north shore bays.

During the Pleistocene Epoch of the Quaternary Period, several major glacial advances into the northern United States occurred. This epoch is divided into four major glacial stages. From oldest to youngest, they are: Nebraskan, Kansan, Illinoian, and Wisconsinan. During the Illinoian advance, the ice sheet reached a position just north of the Long Island area. Outwash sand and gravel, of the Jameco gravel formation, was deposited by meltwater streams. Following the Illinoian stage, sea level rose close to its present level and a clay (Gardiner clay) containing marine fossils was deposited in the shallow coastal waters surrounding Long Island.

During the Wisconsinan glacial advance, the ice reached a position represented on most of Long Island by the Ronkonkoma terminal moraine. In the latter part of this stage, the ice sheet receded from a point east of Lake Success and established a new position along the north shore marked by the Harbor Hill terminal moraine. West of Lake Success this lobe of ice overrode the Ronkonkoma moraine and pushed as far south as Staten Island.

This caused the terminal moraine/deposits in Nassau County to form a wide band of irregular topography occupying the northern half of the County, while in adjacent Suffolk County the terminal moraine deposits were far enough apart to be two distinct landforms separated by a flat plain. During the Wisconsinan advance, sea level dropped about 350 feet below its current elevation to expose a broad, flat coastal plain.

As the climate again warmed about 11,000 years ago, the Wisconsinan period ended and the Holocene, or present, period began. The ice sheet receded to its present polar limits, and sea level rose to its present level. Currents and wave action modified the outwash plain to create the present-day shoreline.

4.0 SITE HISTORY

4.1 Municipal Records Review

Local government record keeping, pertaining to the subject property being located in the Town of Huntington, Suffolk County, and Town of Oyster Bay, Nassau County, New York, is under the jurisdiction of the following agencies:

Agency Name	Type of Records Maintained	Date Freedom of Information Request Submitted	Date of Agency Response, Records Review or Records Receipt
Town of Huntington Tax Assessor	Tax assessment records, ownership.	July 21, 2005	July 21, 2005 Records received.
Nassau County Tax Assessor	Tax assessment records, parcel/building size, ownership.	July 20, 2005	July 20, 2005
Town of Huntington Building Department	Building permit applications, building permits, site plans, surveys.	July 21, 2005	July 21, 2005 Records received.
Town of Oyster Bay Building Department	Building permit applications, building permits, site plans, surveys	July 21, 2005	July 21, 2005 Records received.
Town of Huntington Fire Marshal	Fire department violations, hazardous materials storage, fires.	July 19, 2005	Response pending.
Nassau County Fire Marshal	Fire department and hazardous materials storage violations, registration and testing of underground gasoline and diesel fuel tanks.	July 19, 2005	July 21, 2005 Response received.
Suffolk County Department of Health Services	Registration and testing of underground storage tanks, registration of chemical and hazardous materials storage facilities, potable water and sanitary disposal facilities, Underground Injection Control Program.	July 19, 2005	Response pending.
Nassau County Department of Health	Registration and testing of underground storage tanks (except gasoline and diesel fuel), registration of chemical and hazardous materials storage facilities, potable water and sanitary disposal facilities, Underground Injection Control Program, lead and asbestos.	July 19, 2005	Response pending.

Copies of local government correspondence and/or records are provided in Appendix C. Pertinent records, if any, that have yet to be provided or made available for review by the above-listed local government agencies will be provided as an addendum to this report.

Summary of Records Reviewed/Obtained as of the Date of Report Issuance

Town of Huntington Tax Assessor

The subject property is designated in the Suffolk County Tax Maps as District 0400 - Section 226.00 - Block 01.00 - Lot No. 001.000. The Town of Huntington Tax Assessor indicates that the parcel is approximately 13.87-acres in size, owned by Big Dougs Enterprises, LLC and classified as a one-family year-round residential parcel.

Assessment records indicate that a one-and-one-half-story concrete block and shingle construction, five-car garage with unfinished apartment was constructed at the site in 1956. No additional structures were assessed for the subject property.

Town of Huntington Building Department

One building permit application was noted within the Building Department files for the subject property. Building Permit No. A19940003286 was applied for on July 20, 1994. The aforementioned permit was not provided to F&E by the Town of Huntington Building Department, however, the database summary associated with the application indicates that an NYSDEC wetland determination may have been required.

Suffolk County Department of Health Services (SCDHS)

The SCDHS indicated in correspondence dated July 22, 2005, that the Freedom of Information application submitted by F&E was being processed. Pertinent information, if any will be forwarded as an addendum to this report.

Nassau County Tax Assessor

Nassau County Tax Assessor's records indicate that the western portion of the subject property is comprised of two tax parcels located within Nassau County: Section 13 – Block D – Lot Nos. 114 and 115. The ownership of both parcels is noted by the Assessor as Big Dougs Enterprises, LLC. According to historic and current property record cards, neither tax lot has been assessed for any structures. Tax Lot Nos. 114 and 115 are currently assessed as 2.3-acres and 2.85-acres in size, respectively.

Town of Oyster Bay Building Department

The Town of Oyster Bay Building Department did not maintain any records of permits associated with any structures (demolished or existing) at the subject property. However, a March 10, 1998 Change of Zone Petition was noted. Tax Lot No. 114 was described as 496 West Jericho Turnpike, Woodbury on the petition, John J. Dougal was identified as the fee owner, and ManorCare Health Services, Inc. was identified as the contract vendee on the petition. Documentation associated with the petition indicates that the property was located within a "B" Residence District. Plans for the construction of a 60 bed, 27,180 s.f. residential care facility prompted the petition for change of zone to an "F" Neighborhood Business District. Resolution No. 645-99, adopted on October 5, 1999, indicates that the petition application was withdrawn on September 8, 1999, by the attorney for the applicants.

Nassau County Fire Marshal

On July 21, 2005, the Nassau County Fire Marshal's office officially responded to F&E's Freedom Information application requesting records of storage tank registrations, documentation regarding the storage or handling of chemical or toxic materials and flammables, Fire Marshal inspection reports and/or violations at the subject property. According to the Fire Marshal, no applicable information was identified for the subject property.

Nassau County Department of Health

The NCDH indicated in correspondence received by F&E on July 25, 2005, that the Freedom of Information application submitted by F&E was being processed. Pertinent information, if any will be forwarded as an addendum to this report.

4.2 Historical Resources Review

4.2.1 Sanborn Fire Insurance Map Review

Environmental Data Resources, Inc. (EDR) completed a Sanborn Map search on July 19, 2005, for which no coverage was determined for the subject property and site vicinity (Appendix D).

4.2.2 Aerial Photograph Review

In an effort to ascertain abutting property uses and evidence of potential hazardous materials disposal on or adjacent to the overall property, historical aerial photographs were obtained from the Suffolk County Department of Planning for the years 1947, 1970, 1980, 1988, 1996 and 2001 (Appendix E). The following is a summary of information obtained from a review of the aforementioned aerial photographs.

1947: In 1947, the majority of the subject property is cleared and utilized for agricultural purposes. The southeastern portion of the lot is potentially wooded. The site vicinity is sparsely developed and predominantly agricultural in use or wooded.

1970: By 1970, the subject property agricultural activities have ceased at the northern portion of the subject property and begin to revegetate. The southwestern portion of the subject property appears to have remained cleared but may be fallow land. The southeastern section of the property remains unchanged and wooded.

At the eastern section of the northern portion of the property, a structure is visible. Based upon the site inspection of the property and statements made by the current property owner Mr. Wayne Dougal, the aforementioned structure is the former Dougal family residence.

Development in the surrounding area has significantly increased in the site vicinity. Residential subdivisions and scattered single-family houses are prevalent to the north, south, east and west.

1980: No significant changes to the subject property are visible in 1980. The northern portion of the property has continued to revegetate, however, a cleared area is present at the northwestern portion of the site. Similarly, the southwestern portion of the property has revegetated, but a small cleared area is visible. Based upon the appearance of this cleared area, there is a potential that dumping may have occurred.

1988: By 1988, the potential dumping area at the southwestern portion of the property is clearly visible with areas of mounded soil and/or debris. The cleared portion observed in 1980 at the northern portion of the site is an active area as a small structure, and what appear to be four trailers, are visible in that portion of the site.

1996: By 1996, the dumping area at the southwestern section of the site has begun to revegetate again. The northwestern section of the site is active, but the usage cannot be determined by observations of the aerial photograph alone. Mr. Wayne Dougal reported to F&E that the Dougal family were formerly in the tree cutting business. As such, firewood was stored, split and sold at the northern portion of the site.

By 1996, two structures are visible at the northeastern portion of the site and one additional structure is visible at the central portion of the site. Based upon Mr. Wayne Dougal's account of the site, the structures appear to have been frame barns. Additionally, a built-in swimming pool can be seen at the central-eastern portion of the property.

2001: The firewood sales activities appear to continue at the northwestern portion of the site. The present-day horse farm use of the property has begun. Three structures are visible proximate to West Jericho Turnpike. These three structures were likely utilized as horse stables and replaced with the existing barns constructed after 2001.

4.2.4 Site Interviews

Mr. Wayne Dougal, current owner of the property was available for interview during the site inspection. Mr. Dougal reported that his father acquired the subject property in the early 1950s. The family worked as tree cutters and did not conduct any agricultural activities at the property, other than a short-lived venture as a tree nursery. According to Mr. Dougal, the nursery business was not popularly accepted by the sons and the tree planting operation quickly failed and the cleared portions of the site were allowed to revegetate.

The on-site residence was constructed in the 1950s and succumbed to a fire over ten years ago. The house utilized a 550 gallon fuel oil underground storage tank (UST) and a wood fireplace for heating purposes, and a potable water well and on-site sanitary system (e.g., cesspool). The UST is out-of-service and located at the southeastern building exterior. The location of the out-of-service water well could not be confirmed by Mr. Dougal. The cesspool associated with the Dougal family house was reportedly backfilled by Mr. Dougal approximately three years ago at the northern exterior of the building.

The small structure first observed in the 1988 aerial photograph at the northern portion of the site was reported by Mr. Dougal to have been utilized as a warming structure utilized in the wintertime while selling firewood. The building was reported to have never been improved with any plumbing and heated by a wood fireplace only.

4.2.5 Summary of Site History

According to reviews of Town and County records, and historic aerial photographs, the northern and southwestern portions of the subject property were agricultural in use circa 1947. In the early 1950s, the Dougal family acquired the land, and with the exception of brief tree nursery venture, the property was not farmed again. Family members cut trees for employment and sold firewood at the northwestern portion of the site. Firewood storage and splitting activities appeared to have occurred at that portion of the property.

From at least 1970 through 1980, a small dumping area at the southwestern portion of the property was visible in aerial photographs, same was noted in a CLEARS Study (Section 7.7) conducted for the area.

The oldest structure identified at the subject property was built circa 1956 at the northeast portion of the property. Although described by the Town of Huntington Tax Assessor as a five-car garage with unfinished apartment, it appears that this structure was utilized by members of the Dougal family as a primary residence until succumbing to a fire at least ten years ago. A built-in swimming pool was noted in later aerial photographs to be present south of house. Several frame structures were also identified on aerial photographs. Mr. Wayne Dougal, the current property owner, reported that the building located at the northern portion of the site was used to sell firewood and the remaining structures were historically used as barns.

5.0 REGULATORY AGENCY DATABASE SEARCH

5.1 Subject Site Regulatory Review

Agency	Federal Environmental Review Listing Name or Database Searched	Abbreviation	Site Listed Yes/No
USEPA	National Priorities List Report	NPL	No
USEPA	Comprehensive Environmental Response Compensation and Liability Act Registry	CERCLIS	No
USEPA	Resource Conservation and Recovery Act Treatment/Storage/Disposal Facilities and RCRA Corrective Actions	RCRIS TSD/ CORRACTS	No
USEPA	Resource Conservation and Recovery Act Very Small/Small/Large Quantity Hazardous Waste Generators	RCRIS VG/SG/LG	No
USEPA	Emergency Response Notification System	ERNS	No
USEPA	Facility Index System Database	FINDS	No

Agency	State Environmental Review Listing Name or Database Searched	Abbreviation	Site Listed Yes/No
NYSDEC	Inactive Hazardous Waste Disposal Sites in New York State	IHWDS	No
NYSDEC	Hazardous Substance Waste Disposal Site Study	HSWDS	No
NYSDEC	Spill Information Database	SPILLS	No
NYSDEC	Brownfields	BF	No
NYSDEC	Leaking Underground Storage Tank Sites[2]	LUST	No
NYSDEC	Registered Underground Storage Tank Sites	RUST	No
NYSDEC	Solid Waste Facility Register	SWF	No

5.1.1 Regulatory Agency Listings for the Overall Property

As noted in the table above, the subject property was not any United States Environmental Protection Agency (USEPA) or NYSDEC databases.

[2] Compiled from NYSDEC Spill Information Database.

5.2 Area Regulatory Review

Federal and State listings, databases and registries of Superfund sites, known or suspected hazardous waste disposal sites, hazardous waste generators, landfills and facilities with reported spills, environmental violations or environmental permits maintained by the USEPA and NYSDEC were reviewed to determine if properties within a predetermined distance from the subject site were reported. Listings and registries reviewed and minimum distance searched are included below:

Agency	Listing Name or Database Searched	Abbreviation	Search Distance
USEPA	National Priorities List Report	NPL	1 mile
USEPA	Comprehensive Environmental Response Compensation and Liability Act Registry	CERCLIS	0.5 mile
USEPA	Resource Conservation and Recovery Act Treatment/Storage/Disposal Facilities and RCRA Corrective Actions	RCRIS TSD/ CORRACTS	1 mile
USEPA	Resource Conservation and Recovery Act Very Small/Small/Large Quantity Hazardous Waste Generators	RCRIS VG/SG/LG	adjoining
USEPA	Facility Index System Database	FINDS	adjoining
NYSDEC	Inactive Hazardous Waste Disposal Sites in New York State	IHWDS	1 mile
NYSDEC	Hazardous Substance Waste Disposal Site Study	HSWDS	1 mile
NYSDEC	Brownfields	BF	0.5 mile
NYSDEC	Spill Information Database	SPILLS	0.5 mile
NYSDEC	Leaking Underground Storage Tank Sites[3]	LUST	0.5 mile
NYSDEC	Registered Underground Storage Tank Sites	RUST	0.1 mile
NYSDEC	Solid Waste Facility Register	SWF	0.5 mile

A regulatory agency report (FirstSearch Report) generated by FirstSearch Technology Corp. on July 18, 2005 has been included in Appendix F and contains more detailed descriptions of sites listed below.

[3] Compiled from NYSDEC Spill Information Database.

5.2.1 Federal Database Review Summary

United States Environmental Protection Agency

National Priority List (NPL):

The NPL Report documents confirmed hazardous waste sites that pose a significant threat to the environment and human health. These sites have been designated by the USEPA for remedial action under the Superfund Act.

No NPL sites were reported within the one mile radius review.

Comprehensive Environmental Response Compensation and Liability Act (CERCLIS):

The CERCLIS registry is a compilation of known or suspected hazardous waste sites. The USEPA has monitored these sites for the release or the potential release of hazardous materials into the environment. Listing in this registry does not necessarily indicate a hazardous discharge. It may indicate that the site is a hazardous waste generator with a number assigned by the USEPA.

No CERCLIS sites were identified within the one mile radius review.

Resource Conservation and Recovery Information System (RCRIS TSD, CORRACTS, SG/LG):

RCRIS TSD Reports contain information pertaining to facilities that either treat, store or dispose of hazardous waste. Hazardous waste activities at these sites are monitored by the USEPA. Listing in this registry does not necessarily indicate a hazardous discharge. RCRIS CORRACTS identifies hazardous waste generators with RCRA corrective action activity.

No RCRIS TSD or RCRIS CORRACTS sites were found within the one mile search distance.

RCRIS VG contains information pertaining to facilities that generate less than 100 kg of hazardous waste per month. RCRIS SG contains information pertaining to facilities which generate between 100 kg and 1,000 kg of hazardous waste per month or meet other applicable requirements of RCRA. RCRIS LG contains information pertaining to facilities that generate more than 1,000 kg of hazardous waste per month or meet other applicable requirements of RCRA.

No facilities which adjoined the subject property were reported on the RCRIS database.

Facility Index System (FINDS):

The FINDS database is an inventory of all facilities regulated or monitored by the USEPA. These facilities have been assigned identification numbers which enable the cross-referencing of other USEPA databases. Listing on this registry does not, by itself, indicate hazardous discharge.

No facilities which adjoined the subject property were listed on the FINDS database.

5.2.2 State Database Review Summary

New York State Department of Environmental Conservation (NYSDEC)

Division of Hazardous Waste Remediation, NYSDEC, Inactive Hazardous Waste Disposal Sites in New York State:

This registry, published by the NYSDEC, documents known inactive hazardous waste sites in the State of New York based upon recommendations from counties, complaints from the public, data obtained from hazardous waste generators and other sources. These sites are inspected by NYSDEC staff and classified according to the potential for or imminent threat posed to the environment and public health.

No Inactive Hazardous Waste Disposal Sites (IHWDS) were identified within the one-mile search distance.

Hazardous Substance Waste Disposal Site Study:

The Hazardous Substance Waste Disposal Site Study was produced in accordance with amendments to the Environmental Conservation Law and Public Health Law that require the NYSDEC in consultation with the NYSDOH to conduct a study of potential hazardous waste disposal sites in order to assess the need to expand the scope of the State Superfund program. The study is considered a preliminary estimate of sites that may require further investigation and/or remedial action. Listing in this study does not necessarily indicate a hazardous discharge.

No Hazardous Substance Waste Disposal Sites were located within the one-mile search radius.

Brownfields (BF):

A brownfield is a property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. It is estimated that there are more than 450,000 brownfields in the U.S. Cleaning up and reinvesting in these properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment. Grants, tax exceptions and initiatives are available under the Brownfields Program to provide municipalities and community-based organizations with assistance to complete area-wide brownfield redevelopment plans and site assessments for priority brownfield sites.

No mapped BF facilities were reported within the 0.5 mile search radius.

Spills Information Database and Leaking Underground Storage Tanks (LUSTs):

The NYSDEC Spill Information Database was reviewed. The LUST/LAST database is a list of sites extracted from the SPILLS database where the source of the spill is reported as a leaking underground or above ground storage tank.

Twenty-one mapped spills were reported within the search radius, and an additional 94 spills, locations unmapped, were reported in pertinent zip codes. Four mapped spills and seven unmapped spills were the result of Leaking Underground Storage Tanks (LUSTs). No spill or LUST sites, with the potential to have impacted subsurface conditions in the site vicinity, were identified within the one-half mile search radius. However, one minor spill was identified proximate to the subject property and summarized below:

- Professional Tree Care (Spill No. 8604327), located at Avery Road and NYS Route 25, approximately 0.02 miles northeast of the subject property and crossgradient. On October 4, 1986, a traffic accident resulted in the release of approximately five gallons of gasoline. Reportedly, the Town of Oyster Bay cleaned up the material. The NYSDEC closed the spill on October 6, 1986.

See Appendix F, Environmental First Search Report, for a complete list of spills and LUSTs reported in the search radius.

Registered Underground Storage Tanks (RUSTs):

No facilities reported RUSTs within the 0.1 mile search radius.

New York State Department of Environmental Conservation Facility Register:

The Facility Register contains information about active solid waste management facilities managed by the Bureau of Municipal Waste Permitting in the Division of Solid Waste. This includes landfills (mixed solid waste, industrial/commercial, construction and demolition debris, and ash residue monofill), transfer stations and landfill gas recovery facilities.

No mapped registered solid waste facilities were identified within the 0.5-mile search radius.

6.0 SITE RECONNAISSANCE

6.1 Site Inspection

F&E representative, Stephen Kaplan, inspected the subject property on July 29, 2005. Messrs. Craig Kirsch, Harvey Weiner and Wayne Dougal were present during portions of the site inspection. The subject property is approximately 19-acres in size and irregular-shaped. Property uses include a horse farm, residences, firewood and woodcarving sales, and a bar-b-que roadside stand. The majority of the site improvements are located at the northern portion of the subject property.

The northeastern section of the subject property is utilized as a horse farm and improved with a mobile home located on concrete blocks (used as an office), a wood-framed horse stable, a metal barn, two wood stalls, corrals and a concrete building (Photograph Nos. 1 through 5). The concrete building is a fire-damage structure currently used to store horse feed, but was formerly utilized as the Dougal family residence. Mr. Wayne Dougal, the current property owner, stated that the building was damaged in a fire approximately ten years ago.

The former residence was heated via a fuel oil-fired system. Evidence of an out-of-service fuel oil UST (vent pipe) was observed at the southeastern building exterior, proximate to the brick chimney (Photograph No. 6). Mr. Dougal recalled that the UST was approximately 550 gallons in capacity and was still in place.

A second fuel oil-fired system was observed at the northern portion of the building. The second system was installed by Mr. Dougal subsequent to the fire and intended to heat the northern section of the damaged building only. The heating system is a forced-air fuel oil-fired unit suspended from the ceiling (Photograph No. 7). The fuel oil is stored within a 55-gallon drum located atop the poured concrete floor beneath the heating unit. No areas of staining or release were observed. A 275 gallon diesel fuel aboveground storage tank (AST) is located at the northwestern exterior of the building and is likely the fuel source for the aforementioned 55-gallon drum. A de minimis area of staining was noted at the exposed soil located beneath the AST (Photograph No. 8).

Proximate to and south of the aforementioned 55-gallon drum, a metal cover with what appeared to have been cast iron piping extending outward, was observed. Access beneath the metal cover was not possible during the Phase I site inspection. Mr. Dougal stated that he did not recall if a potable well was located within the footprint of the house, or elsewhere on the subject property. Mr. Dougal reported that his father used the northern portion of the building as a workshop, and that various equipment and materials obscured the vision of the majority of the floor area previously. Mr. Dougal did not recall seeing the metal cover prior to the F&E representative showing it to him. Based upon the appearance of the piping, it is likely that a potable water well is present at that location, but unconfirmed (Photograph No. 9).

Proximate and to the north of the aforementioned 55-gallon drum is a sanitary cleanout pit (Photograph No. 10). A sanitary vent was observed at the northeastern building exterior. According to Mr. Dougal, the on-site sanitary system (cesspool) was abandoned by him several years ago. Mr. Dougal reported that the cesspool, which was located north of the building (in the general area of a present-day horse corral), was exposed and filled with sand.

Trailers and a shed are located at the southern and eastern exteriors of the former residence. The storage units located proximate to the building are primarily utilized by the woodcarving operation at the site (Photograph No. 11). Limited amounts of oils and gasoline were observed to be stored and utilized in association with the chainsaws and similar power tools. No significant areas of soil staining were noted. The woods used by the woodcarving operation were untreated and no pressure-treated (copper, chromium arsenate [CCA]) materials were observed or suspected.

The office trailer is located north of the two horse stables/barns. The trailer is a mobile unit with a wood deck and electric-fired heating system. According to Mr. Dougal, the trailer was moved to the site approximately three years ago and completed with an on-site sanitary system. The sanitary system reportedly consists of one active cesspool located south of the trailer.

The two horse stables/barns are unheated structures and are not equipped with any sanitary systems. According to Mr. Dougal, the metal stable was constructed approximately three years ago and the wood-framed stable located to the west of same was enlarged at that time. Both buildings were noted to be uninsulated and used solely as horse stables with an exercise area and tack rooms.

Along the northern portion of the site, proximate to West Jericho Turnpike, the woodcarvings were displayed and sold. Proceeding westward along the northern portion of the property, a small wood-framed structure was observed. According to Mr. Dougal the building was constructed approximately ten years ago to assist in firewood sales. Mr. Dougal stated that the building was not equipped with any plumbing. The F&E representative inspected the building and observed a wood-burning fireplace located in the center of the structure. No other heating sources were reported or observed. The building was uninsulated and constructed on bare dirt. Currently, the building is dilapidated and unoccupied (Photograph Nos. 12 and 13).

Based upon observations at the subject property, firewood sales continue at the site. Southwest of the aforementioned dilapidated firewood sales building were mounds of tree cuttings and a log splitter. De minimis oil staining was observed on and beneath the log splitter.

The northwestern portion of the property is utilized as a roadside bar-b-que stand. A trailer kitchen-unit is located in this area and is utilized to prepare the food and drinks. All seating associated with the bar-b-que stand is arranged north of the trailer on picnic tables. The trailer is situated on a poured concrete slab. Heat for cooking purposes (and possibly hot water, but unconfirmed) is derived from propane tanks observed at the eastern trailer exterior (Photograph No. 14).

A second poured concrete slab was observed west of the bar-b-que stand. Although the purpose of same was not confirmed, based upon the size and shape, it appeared likely for a trailer to have also been located on it at some time in the past (Photograph No. 15).

Proceeding westward to the northwest corner of the property, proximate to West Jericho Turnpike and Plainview Road, a small wood-framed shed was noted (Photograph No. 16). The interior of the shed was accessed and observed to store typical household support equipment (e.g., lawnmower, hand tools, etc.).

Two additional improvements were noted at the property in a more central location. South of the former Dougal family residence is an out-of-service built-in swimming pool. The pool is of concrete construction and partially filled with stagnant rainwater (Photograph No. 17).

Proceeding west-southwest is a wood-framed structure utilized as a residence. According to Mr. Dougal, the building was a former barn. Access within the building was not possible at the time of inspection. Propane tanks were noted at the eastern building exterior and likely utilized for cooking purposes (Photograph No. 18).

The majority of the central and southern portion of the subject property is wooded. Bridle paths traverse the property boundary and intersect in several areas. A recently-cleared area was observed in the central-southern portion of the site, however, no significant construction was underway (Photograph No. 19). The terrain at the property is characterized by rolling topography. Although historic aerial photographs indicate areas of dumping at the south-southwestern portion of the site, no unusual mounding of soils was noted. However, several piles of non-hazardous debris (e.g., tires and brick) were observed (Photograph Nos. 20 and 21).

Mounding of materials were identified in other sections of the property. The mounds consisted of manure, recycled concrete aggregate (RCA) and crushed asphalt (Photograph Nos. 22 and 23). The mounds of manure are simply a storage of non-hazardous waste generated by the on-site livestock. According to Mr. Dougal, the RCA is dispersed along the trails, footpaths and vehicle parking areas to control mud. The crushed asphalt was observed at several locations at the north side of the property. According to Mr. Dougal, the asphalt was delivered to the site with the expectations of spreading at the north side of the property for vehicle parking, however, with the sale of the property pending, this will likely not occur.

As part of the property inspection, a second 275-gallon AST was observed proximate to the out-of-service swimming pool (Photograph No. 24). The AST was empty and no staining in the area of same was observed.

Areas of concentrated debris and dumping were noted proximate to the swimming pool, the former barn that is converted to a residence and in the general vicinity of the firewood splitter. The materials ranged from abandoned vehicles, an empty pesticide tank, concrete blocks to unused cut wood (Photograph Nos. 25 and 26). No significant areas of release, nuisance characteristics such as visual or olfactory indications of petroleum, or stressed vegetation was noted.

6.2 Surrounding Land Use

North: West Jericho Turnpike and Oheka Castle.

South: Single family residential houses.

East: Plainview Road and single-family residential houses.

West: Regulated wetland and single-family residential houses.

6.3 Summary of Environmental Site Features

6.3.1 Hazardous Materials Handling, Storage and Disposal

The subject facility was not identified on any USEPA or NYSDEC databases. Further, no hazardous materials storage or disposal activities were reported or observed. Dumping was identified in historic aerial photographs at the southwestern portion of the site and non-hazardous materials (e.g., tires and bricks) were noted in this portion of the property during the site inspection.

6.3.2 Underground and Above Ground Storage Tanks

One out-of-service 550 gallon fuel oil UST was identified at the southeastern building exterior of the former Dougal family residence. The UST was likely installed circa 1956 and has been out-of-service for approximately ten years. The current condition of the UST and subsurface soil conditions is unknown.

One active AST and one out-of-service 275 gallon AST were observed at the subject property. The active AST appeared to contain and dispense diesel fuel for the on-site equipment utilized at the horse farm. Additionally, the active UST was likely utilized to fill the 55-gallon drum located within the adjoining building and used in association with a forced air heating unit suspended from the ceiling.

The out-of-service 275 gallon AST was noted to have been empty and located proximate to an out-of-service built-in swimming pool. No evidence of staining or release was observed.

6.3.3 Utilities and Sanitary and Stormwater Disposal Facilities

Utilities Provided to the Site:

- Electricity via overhead and subgrade conduit to the on-site buildings
- Telephone via overhead and subgrade conduit lines to the on-site buildings.

Sanitary and Stormwater Disposal Systems

- Stormwater runoff is directed toward the ground surface.
- Sanitary disposal is currently directed to one on-site sanitary system associated with the mobile trailer (office) and reportedly consists of one cesspool.

Water Supply

- The subject property currently utilizes a municipal water supply.

6.3.4 Underground Injection Control Program-Regulated Site Features

Underground injection wells are regulated by the Underground Injection Control (UIC) Program under the authority of Part C of the Safe Drinking Water Act (SDWA) (42 U.S.C. 300h *et seq.*). The SDWA is designed to protect the quality of drinking water in the United States, and Part C specifically mandates the regulation of underground injection fluids through wells. The USEPA has promulgated a series of UIC regulations under this authority. Recent applicable revisions to UIC regulations were published in the State Implementation Guide - Revisions to the Underground Injection Control Regulations for Class V Injection Wells, September 2000. This document specifically addresses Class V injection wells which include on-site wastewater disposal features such as drywells, cesspools and in-situ drains. The USEPA issued a Notice of Final Determination for Class V wells; Final Rule on June 7, 2002. With the exception of motor vehicle waste disposal wells and large-capacity cesspools, Class V wells are "authorized by rule" (40 CFR 144.24) and may inject non-hazardous waste as long as the following criteria are met:

- The injection does not endanger underground sources of drinking water 40 CFR 144.12); and

- The well owners or operators submit basic inventory information (40 CFR 144.26).

The EPA *may* , at its discretion, require the owner or operator of any well authorized by rule to submit information for review to determine if a well may be endangering an underground source of drinking water. In regard to motor vehicle waste disposal wells and large capacity cesspools (those that serve more than 20 persons per day), owners and/or operators of such wells in regulated areas must close the wells or obtain a permit. These requirements are being phased-in through 2008. Owners and operators of large-capacity cesspools must close same by April 5, 2005.

Based upon the records reviews, site inspection and interview with the current property owner, one in-service and one out-of-service on-site sanitary systems are present at the subject property. The former Dougal family residence was constructed circa 1956 with one sanitary cesspool located at the northern building exterior. According to Mr. Dougal, approximately three years ago, the out-of-service cesspool was exposed and backfilled with sand.

Also approximately three years ago, the mobile trailer (office) was placed at its current location and equipped with one sanitary cesspool. Reportedly, the cesspool is located south of the office trailer.

No floor drains were observed in any of the structures observed during the site inspection, nor were any stormwater drywells present. As there was no indication of industrial discharges to either reported on-site sanitary system, no potential USEPA UIC Program violations were identified at the subject property.

6.3.5 Potable Water Supply and On-Site Wells

The subject property is currently provided with municipal water service. The former Dougal family residence was constructed circa 1956 and likely was equipped with an on-site potable water well.

At the northeastern interior of the former Dougal family residence, a metal cover, with what appeared to have been cast iron piping extending outward, was observed. Access beneath the metal cover was not possible during the Phase I site inspection. Mr. Dougal stated that he did not recall if a potable well was located within the footprint of the house, or elsewhere on the subject property. Mr. Dougal reported that his father used the northern portion of the building as a workshop, and that various equipment and materials still obscured the vision of the majority of the floor area previously. Mr. Dougal did not recall seeing the metal cover prior to the F&E representative showing it to him. Based upon the appearance of the piping, it is likely that a potable water well is present at that location, but unconfirmed.

6.3.6 Polychlorinated Biphenyls

PCBs were used until 1978 and are a group of compounds formed by the chlorination of biphenyl. PCBs have extremely high physical and chemical stabilities which led to their being used in many applications, including heat transfer fluids, hydraulic fluids, and dielectrics. PCBs are often found in transformers, capacitors and hydraulic systems.

Electrical equipment containing PCBs are still in use and can pose a serious health hazard if fluids come in direct contact with humans, soil or groundwater. Fires involving electrical equipment containing PCBs can cause the material to be dispersed over a large area and potentially expose many people to a health risk. Because of the health hazard associated with PCBs, they are regulated under the Toxic Substances Control Act (TSCA).

With the exceptions of fluorescent lighting ballasts located within on-site buildings and hydraulicly-driven equipment (e.g., backhoe, wood splitter, etc.), no other potential PCB-containing equipment was observed.

6.3.7 Debris, Dumping and Surficial Staining

The terrain at the property is characterized by rolling topography. Although historic aerial photographs indicate areas of dumping at the south-southwestern portion of the site, no unusual mounding of soils was noted. However, several piles of non-hazardous debris (e.g., tires and brick) were observed.

Mounding of materials were identified in other sections of the property. The mounds consisted of manure, RCA and crushed asphalt. The mounds of manure are simply a storage of non-hazardous waste generated by the on-site livestock. According to Mr. Dougal, the RCA is dispersed along the trails, footpaths and vehicle parking areas to control mud. The crushed asphalt was observed at several locations at the north side of the property. According to Mr. Dougal, the asphalt was delivered to the site with the expectations of spreading at the north side of the property for vehicle parking, however, with the sale of the property pending, this will likely not occur.

As part of the property inspection, a second 275-gallon AST was observed proximate to the out-of-service swimming pool. The AST was empty and no staining in the area of same was observed.

Areas of concentrated debris and dumping were noted proximate to the swimming pool, the former barn that is converted to a residence and in the general vicinity of the firewood splitter. The materials ranged from abandoned vehicles, an empty pesticide tank, concrete blocks to unused cut wood. No significant areas of release, nuisance characteristics such as visual or olfactory indications of petroleum, or stressed vegetation was noted.

A de minimis area of surficially stained soil was observed beneath the one in-service 275 gallon diesel fuel AST.

6.3.8 Stressed Vegetation

No stressed vegetation was present at the time of inspection.

7.0 NON-SCOPE CONSIDERATIONS

7.1 Radon

Indoor Radon Potential

The NYSDOH publication, Indoor Radon in New York State: Distribution, Source and Controls (November, 1990) was reviewed to determine the indoor radon potential.

According to the NYSDOH report, Long Island is part of the broader Atlantic Coastal Plain. The geometric mean basement radon concentration in Suffolk County ranges between 0.0 and 1.9 picocuries per liter (pCi/L). The EPA remedial action level is 4.0 pCi/L.

The NYSDOH publication states that, in general, the radium content of the soils on Long Island is "... below average and their permeability is moderate to low. Based on these conditions, the entire island can be classified as having a low indoor radon potential."

The report also states that, "... a number of the boulders in the moraines have been identified emitting high levels of gamma radiation indicating the presence of uranium. These boulders are indicative of the sources for the sand and pebbles that cover most of the island. Isolated concentrations of uranium and radium may exist within the outwash deposits by way of the fluvial process that deposited the sand. Homes built on or into these concentrations may possess elevated indoor radon levels."

As there is no exposed rock in the vicinity, it is unlikely that radon is a problem in this area.

7.2 Lead-Based Paint

The oldest painted structure was built circa 1956. This building is the fire-damaged former Dougal family residence. Based upon the age, there is a potential for same to have been painted with lead-based paint (LBP), however, as the structure will not likely be re-utilized, LBP is not likely a concern. Further, the remaining structures were likely erected and/or painted subsequent to 1977, thus, the potential for LBP to be present is minimal.

7.3 Asbestos-Containing Materials (ACM)

Asbestos is the name given to a group of fibrous silicate minerals, typically those of the serpentine group. The tensile strength, flexibility, and non-flammability of asbestos have led to many uses including structural materials, brake linings, insulation, and pipe manufacture. Asbestos is of concern as an air pollutant because when inhaled it may cause asbestosis, mesothelioma, and bronchogenic carcinoma. In 1989, the USEPA announced regulations that would phase out most uses of asbestos by 1996.

No friable ACM (e.g., pipe insulation) were identified during the site inspection. However, typical roofing materials (e.g., asphalt roof shingles, flashing, etc.) have the potential to contain non-friable ACM. Non-friable ACM is not normally a concern, however, in the event that the structures were to be demolished, identification of friable and non-friable ACM may be required by Town-permitting procedures.

7.4 Wetlands

According to Map 24 of 39 and 7 of 15 of the NYSDEC Freshwater Wetlands Maps of Suffolk and Nassau Counties, respectively, and National Wetlands Inventory (NWI) Map No. 402, there are no regulated freshwater wetlands on the subject property. No NYSDEC Tidal Wetlands are located in the site vicinity.

The eastern adjoining property and a nearby property located at the west side of Plainview Road were identified on aforementioned NYSDEC Freshwater Wetlands and NWI Maps (Figures 7 and 8). According to Mr. Wayne Dougal (the property owner), the water body located at the eastern adjoining property receives stormwater runoff from the site vicinity. The wetland is designated by NYSDEC Freshwater Wetlands Map No. 24 of 39 as H-29. According to NWI Map No. 402, the wetland is designated as Palustrine, Open-water, Unknown, Semi-permanently flooded (POWF).

The wetland noted on the west side of Plainview Road, opposite the subject property, was depicted on NYSDEC Freshwater Wetlands Map No. 7 of 15, but not designated. The wetland is depicted on the aforementioned map as an unregulated recharge basin. However, NWI Map No. 402 designated the recharge basin as a regulated wetland; described as Palustrine, Open-water, Unknown, Semi-permanently flooded, Excavated (POWFx).

7.5 Special Groundwater Protection Area (SGPA)

SGPAs are significant, largely undeveloped or sparsely developed geographic areas of Long Island that provide recharge to portions of the deep flow aquifer system. They represent a unique, final opportunity for comprehensive, preventive management to preclude or minimize land use activities that can have a deleterious impact on groundwater. Nine SGPAs are located on Long Island: North Hills, Oyster Bay, West Hills/Melville, Oak Brush Plains, South Setauket Woods, Central Suffolk, Southold, South Fork and Hither Hills.

The subject property is located within the West Hills/Melville SGPA.

7.6 Central Pine Barrens

The Central Pine Barrens was defined by the Long Island Pine Barrens Protection Act and includes two geographic areas: the Core Preservation Area (CPA) and the Compatible Growth Area (CGA). In general, it is the policy of the Long Island Pine Barrens Protection Act and the Final Central Pine Barrens Plan that development be re-directed from the CPA. The Final Central Pine Barrens Plan provides standards and guidelines for development within the CGA.

The subject property is not located within the Central Pine Barrens.

7.7 CLEARS Inventory

Cornell Laboratory for Environmental Applications of Remote Sensing (CLEARS) performed an air photo-derived inventory of active and inactive waste disposal sites in Suffolk County for the Suffolk County Department of Health Services. Because Suffolk County is a sole source aquifer region, the objective of the CLEARS study, Inventory of Potential Hazardous Disposal Sites, was to utilize existing aerial photographs to locate likely waste disposal sites in order that they could be further investigated, as appropriate. The activities that could potentially contaminate groundwater were noted in the inventory and include dumps, landfills, pits, lagoons, barrels/drums, aboveground tanks, mined areas, and disturbed land.

The CLEARS inventory was compiled from aerial photographs taken in 1947, 1962, 1972, 1977/1978 and 1984. This inventory was reviewed to determine if the subject site or adjoining properties were potential hazardous waste sites. The subject property was identified as CLEARS Site No. D47 (Appendix G); no other CLEARS sites were identified in the site vicinity.

In 1977, the subject property was reported in the CLEARS Study as undisturbed woodland. In 1984, two small private off-the-road dumps, screened by woodlands and private residences were identified. This description within the CLEARS Study is consistent with F&E's observations made during the reviews of aerial photographs and site inspection conducted on July 29, 2005.

8.0 FINDINGS

This document is a Phase I Environmental Site Assessment prepared to determine evidence of recognized environmental conditions and/or potential environmental concerns in connection with a 19±-acre residentially-zoned property, currently improved with a horse farm, wood carving and roadside bar-b-que stand operations. The property is located at the southeast corner of West Jericho Turnpike (NYS Route 25) and Plainview Road, in the Hamlets of Huntington and Woodbury. The majority of the property is utilized as the Indian Head Ranch horse farm and commonly known by the street address of 1130 West Jericho Turnpike, Huntington, New York.

Topography of the subject property is characterized as rolling terrain. Elevations at the subject property vary from approximately 240 to 280 feet above msl. Comparison of the 2000 Suffolk County Water Table Elevation Map with the Topographic Map indicates depth to groundwater at the site ranges from approximately 170-feet bgs to 210-feet bgs. The subject property is located within the West Hills/Melville SGPA. According to review of the West Hills/Melville SGPA, the subject property is located proximate to a groundwater divide. Based upon the map depiction, groundwater flow direction in the site vicinity of the subject property is to the north. Review of the 2000 Water Table Elevation Map, further indicates a potential for a northwesterly flow component in the site vicinity. Thus, for the purposes of this report, it is assumed that the groundwater flow direction is to the north to northwest.

According to reviews of Town and County records, and historic aerial photographs, the northern and southwestern portions of the subject property were agricultural in use circa 1947. In the early 1950s, the Dougal family acquired the land, and with the exception of brief tree nursery venture, the property was not farmed again. Family members cut trees for employment and sold firewood at the northwestern portion of the site. Firewood storage and splitting activities appeared to have occurred at that portion of the property.

From at least 1970 through 1980, a small dumping area at the southwestern portion of the property was visible in aerial photographs and noted in a CLEARS Study conducted for the area.

The oldest structure identified at the subject property was built circa 1956 at the northeast portion of the property. Although described by the Town of Huntington Tax Assessor as a five-car garage with unfinished apartment, it appears that this structure was utilized by members of the Dougal family as a primary residence until succumbing to a fire at least ten years ago. A built-in swimming pool was noted in later aerial photographs to be present south of house. Several frame structures were also identified on aerial photographs. Mr. Wayne Dougal, the current property owner, reported that the building located at the northern portion of the site was used to sell firewood and the remaining structures were historically used as barns.

The subject facility was not identified on any USEPA or NYSDEC databases. Further, no hazardous materials storage or disposal activities were reported or observed. Dumping was identified in historic aerial photographs at the southwestern portion of the site and non-hazardous materials (e.g., tires and bricks) were noted in this portion of the property during the site inspection.

One out-of-service 550 gallon fuel oil UST was identified at the southeastern building exterior of the former Dougal family residence. The UST was likely installed circa 1956 and has been out-of-service for approximately ten years. The current condition of the UST and subsurface soil conditions is unknown.

One active AST and one out-of-service 275 gallon AST were observed at the subject property. The active AST appeared to contain and dispense diesel fuel for the on-site equipment utilized at the horse farm. Additionally, the active UST was likely utilized to fill the 55-gallon drum located within the adjoining building and used in association with a forced air heating unit suspended from the ceiling.

The out-of-service 275 gallon AST was noted to have been empty and located proximate to an out-of-service built-in swimming pool. No evidence of staining or release was observed.

Based upon the records reviews, site inspection and interview with the current property owner, one in-service and one out-of-service on-site sanitary systems are present at the subject property. The former Dougal family residence was constructed circa 1956 with one sanitary cesspool located at the northern building exterior. According to Mr. Dougal, approximately three years ago the out-of-service cesspool was exposed and backfilled with sand.

Also approximately three years ago, the mobile trailer (office) was placed at its current location and equipped with one sanitary cesspool. Reportedly, the cesspool is located south of the office trailer.

No floor drains were observed in any of the structures observed during the site inspection, nor were any stormwater drywells present. As there was no indication of industrial discharges to either reported on-site sanitary system, no potential USEPA UIC Program violations were identified at the subject property.

The subject property is currently provided with municipal water service. The former Dougal family residence was constructed circa 1956 and likely was equipped with an on-site potable water well.

At the northeastern interior of the former Dougal family residence, a metal cover, with what appeared to have been cast iron piping extending outward, was observed. Access beneath the metal cover was not possible during the Phase I site inspection. Mr. Dougal stated that he did not recall if a potable well was located within the footprint of the house, or elsewhere on the subject property. Mr. Dougal reported that his father used the northern portion of the building as a workshop, and that various equipment and materials obscured the vision of the majority of the floor area previously. Mr. Dougal did not recall seeing the metal cover prior to the F&E representative showing it to him. Based upon the appearance of the piping, it is likely that a potable water well is present at that location, but unconfirmed.

With the exceptions of fluorescent lighting ballasts located within on-site buildings and hydraulically-driven equipment (e.g., backhoe, wood splitter, etc.), no other potential PCB-containing equipment was observed.

The terrain at the property is characterized by rolling topography. Although historic aerial photographs indicate areas of dumping at the south-southwestern portion of the site, no unusual mounding of soils was noted. However, several piles of non-hazardous debris (e.g., tires and brick) were observed.

Mounding of materials were identified in other sections of the property. The mounds consisted of manure, RCA and crushed asphalt. The mounds of manure are simply a storage of non-hazardous waste generated by the on-site livestock. According to Mr. Dougal, the RCA is dispersed along the trails, footpaths and vehicle parking areas to control mud. The crushed asphalt was observed at several locations at the north side of the property. According to Mr. Dougal, the asphalt was delivered to the site with the expectations of spreading at the north side of the property for vehicle parking, however, with the sale of the property pending, this will likely not occur.

As part of the property inspection, a second 275-gallon AST was observed proximate to the out-of-service swimming pool. The AST was empty and no staining in the area of same was observed.

Areas of concentrated debris and dumping were noted proximate to the swimming pool, the former barn that is converted to a residence and in the general vicinity of the firewood splitter. The materials ranged from abandoned vehicles, an empty pesticide tank, concrete blocks to unused cut wood. No significant areas of release, nuisance characteristics such as visual or olfactory indications of petroleum, or stressed vegetation was noted.

A de minimis area of surficially stained soil was observed beneath the one in-service 275 gallon diesel fuel AST.

The oldest painted structure was built circa 1956. This building is the fire-damaged former Dougal family residence. Based upon the age, there is a potential for same to have been painted with LBP, however, as the structure will not likely be re-utilized, LBP is not likely a concern. Further, the remaining structures were likely erected and/or painted subsequent to 1977, thus, the potential for LBP to be present is minimal.

No friable ACM (e.g., pipe insulation) were identified during the site inspection. However, typical roofing materials (e.g., asphalt roof shingles, flashing, etc.) have the potential to contain non-friable ACM. Non-friable ACM is not normally a concern, however, in the event that the structures were to be demolished, identification of friable and non-friable ACM may be required by Town permitting procedures.

According to Map 24 of 39 and 7 of 15 of the NYSDEC Freshwater Wetlands Maps of Suffolk and Nassau Counties, respectively, and National Wetlands Inventory (NWI) Map No. 402, there are no regulated freshwater wetlands on the subject property. No NYSDEC Tidal Wetlands are located in the site vicinity.

The eastern adjoining property and a nearby property located at the west side of Plainview Road were identified on aforementioned NYSDEC Freshwater Wetlands and NWI Maps. According to Mr. Wayne Dougal (the property owner), the water body located at the eastern adjoining property receives stormwater runoff from the site vicinity. The wetland is designated by NYSDEC Freshwater Wetlands Map No. 24 of 39 as H-29. According to NWI Map No. 402, the wetland is designated as POWF.

The wetland noted on the west side of Plainview Road, opposite the subject property, was depicted on NYSDEC Freshwater Wetlands Map No. 7 of 15, but not designated. The wetland is depicted on the aforementioned map as an unregulated recharge basin. However, NWI Map No. 402 designated the recharge basin as a regulated wetland; described as POWFx.

The subject property is not reported on listings, databases, or registries of Superfund Sites, known or suspected active or inactive hazardous waste disposal sites, hazardous waste generator facilities, facilities with reported spills, registered underground or aboveground storage tanks, hazardous waste transporters or disposal facilities, or facilities with outstanding environmental violations.

9.0 CONCLUSIONS

This Phase I Environmental Site Assessment has been prepared in conformance with the scope and limitations of ASTM Practice E1527-00 for a 19±-acre residentially-zoned property, currently improved with a horse farm, wood carving and roadside bar-b-que stand operations. The property is located at the southeast corner of West Jericho Turnpike (NYS Route 25) and Plainview Road, in the Hamlets of Huntington and Woodbury. Any exceptions to, or deletions from, this practice are described in the section of the report entitled Methodology. The following recognized environmental conditions and potential environmental concerns for the subject property (as defined by ASTM Practice E1527) were identified:

- Historic aerial photography indicates that portions of the subject property were cleared and used for agricultural purposes as early as 1947. Therefore, there is a potential for pesticides to have historically been applied at the site;

- An out-of-service 550 gallon fuel oil UST is present at the southeastern building exterior of a fire-damaged building. The condition of the UST and subsurface soils are unknown. Further, Suffolk County regulations require that an out-of-service UST be properly abandoned and/or removed;

- One in-service AST and one out-of-service 275 gallon AST were observed at located at the subject property;

- Evidence of historic dumping activities was observed at the southwestern portion of the subject property. During the July 29, 2005 site inspection, only non-hazardous debris (e.g., tires and bricks) were observed at this portion of the property;

- Additional debris and mounding was observed at the subject property. The debris consisted of abandoned vehicles and discarded construction materials. The mounds were composed of manure, RCA and crushed asphalt;

- The presence of an out-of-service potable water well is suspected at the northeastern interior of a fire damaged building; and

- There is a potential for LBP to present at the fire-damaged former residence, and non-friable ACM within the roofing materials at the site.

Based upon the foregoing, F&E recommends the following:

- Past agricultural use of the subject parcel (based upon review of aerial photographs and site inspection), which had cause to apply pesticides, fertilizers etc., may have impacted surficial and subsurface soil conditions. Consequently, prior to any development of the subject parcel, it would be prudent to perform surficial soil sampling to ascertain the presence, if any, of residual pesticides and their breakdown products as well as arsenic and lead;

- Investigate subsurface conditions related to the out-of-service 550 gallon UST. Based upon conversations with the client and the current property owner, equipment (e.g., backhoe) located at the site may be utilized to excavate the UST. This may expedite the investigation and allow for the greatest cost savings. However, please note that F&E recommends that the UST be excavated (and removed) under prevailing SCDHS and/or NYSDEC regulations;

- It has been explained to F&E that the site may be re-developed. As such, it may be prudent to have the current property be responsible for the proper removal of both 275 gallon ASTs located at the site, prior to transfer of title;

- As previously stated, the current property owner maintains earth moving equipment at the site. F&E recommends that a backhoe be utilized to conduct test pits in the vicinity of the historic dumping located at the southwestern portion of the site. The soils should be field screened for visual and olfactory impacts, and utilize a photo-ionization detector (PID) in order to detect the presence of volatile organic compounds (VOCs), if present;

- No investigation regarding the potential out-of-service potable water well is recommended. However, in the event that during site re-development activities the presence of the out-of-service potable water well is confirmed, same would be required to be properly abandoned in accordance with NYSDEC regulations; and

- No recommendations are warranted with respect to LBP and ACM at this time. However, as part of a demolition project, the Town(s) may require a LBP and/or ACM survey prior to the issuance of a demolition permit.

10.0 REFERENCES

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New York State Department of Environmental Conservation. Freshwater Wetlands Map 7 of 15, Nassau County, New York.

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The Long Island Comprehensive Special Groundwater Protection Area Plan, Long Island Regional Planning Board, 1992.

The Long Island Comprehensive Waste Treatment Management Plan (The 208 Study) - Volume One: Summary Plan, Nassau-Suffolk Regional Planning Board, July 1978.

U.S. Department of the Interior, Fish and Wildlife Service. National Wetlands Inventory Map No. 402.

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This Phase I Environmental Site Assessment was prepared by:

Prepared by: Stephen Kaplan
Project Manager
Freudenthal & Elkowitz Consulting Group, Inc.

Signature:

Supervised by: Richard J. Baldwin, C.P.G.
Vice President, Environmental Services
Freudenthal & Elkowitz Consulting Group, Inc.

Signature:

APPENDIX A

Street Atlas USA® 2005

Figure 1 - Site Location Map

Data use subject to license.

Scale 1 : 12,800

1" = 1,066.7 ft

Data Zoom 14-0

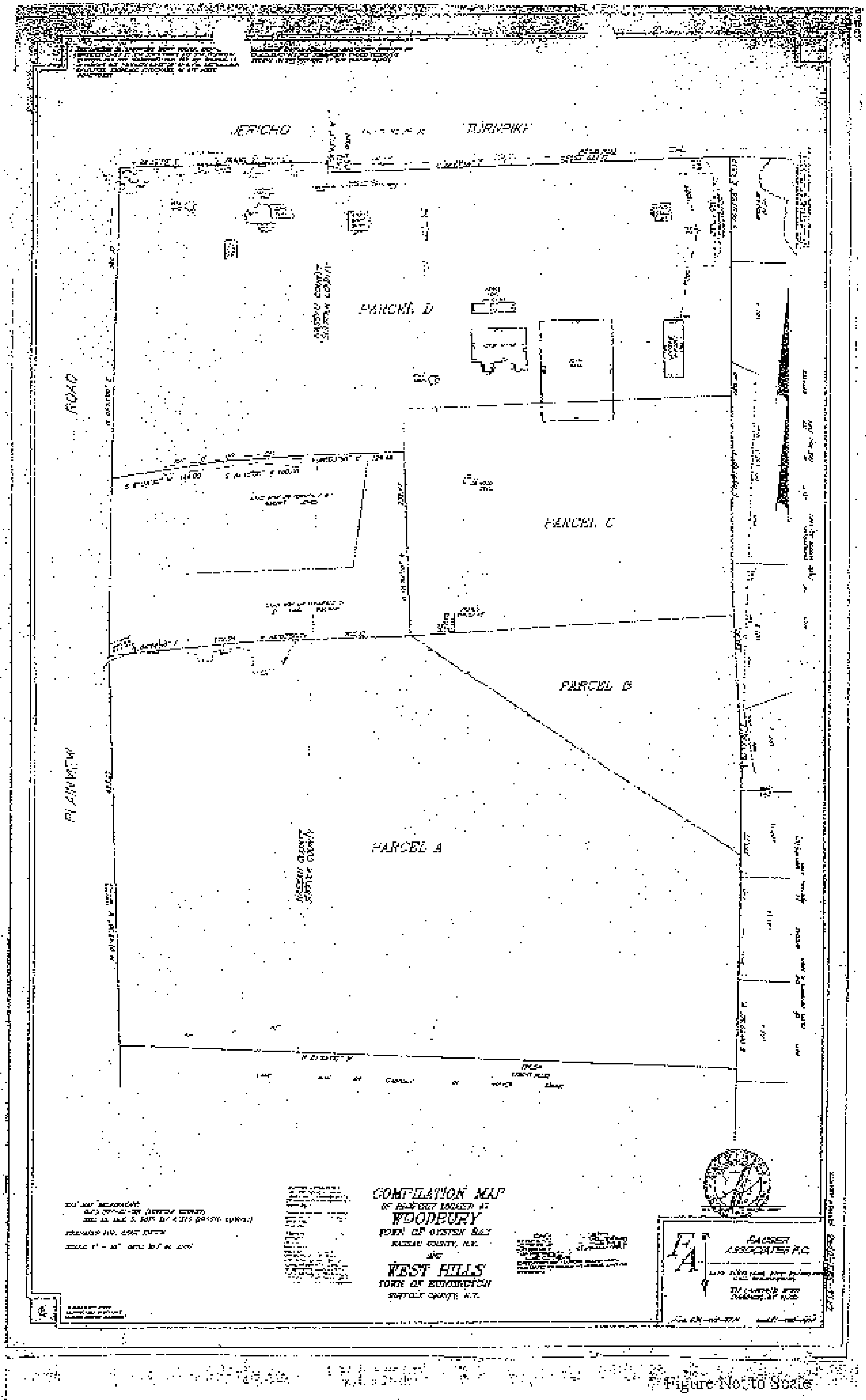
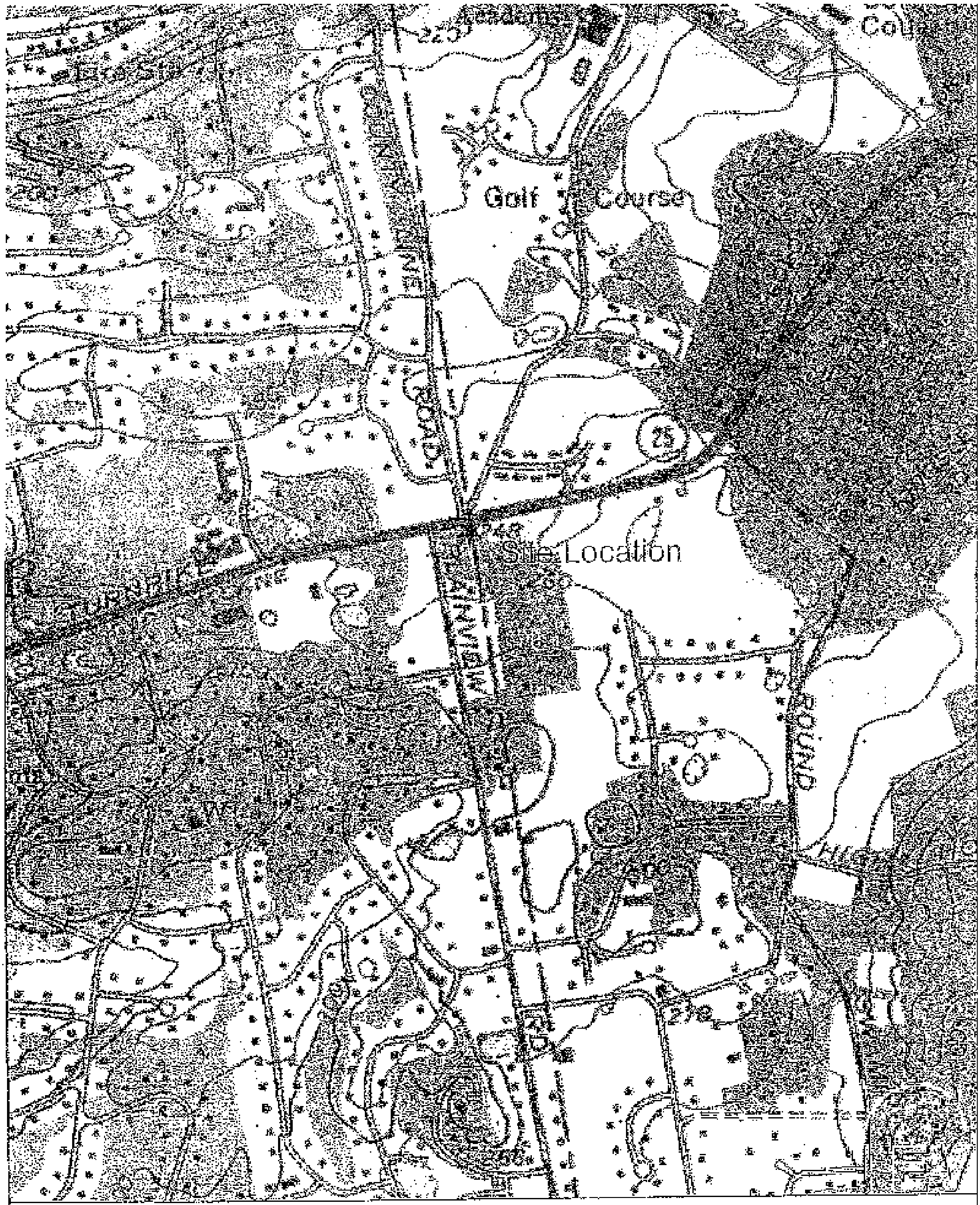


Figure Not to Scale

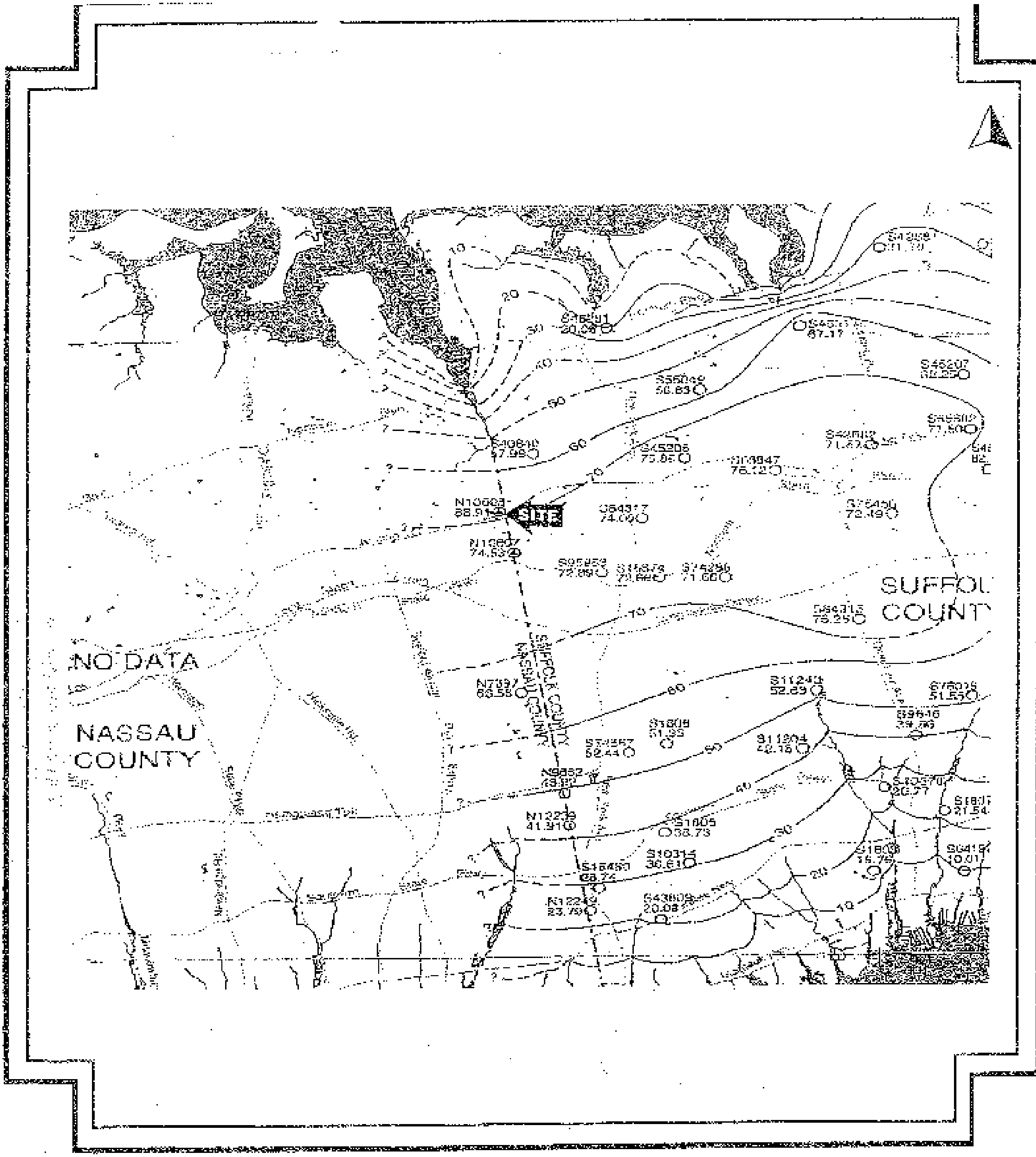
Figure 2

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.



Name: HUNTINGTON
Date: 7/27/105
Scale: 1 inch equals 800 feet

Location: 040° 49' 05.1" N 073° 27' 05.4" W
Caption: Figure 3 - Topographic Map



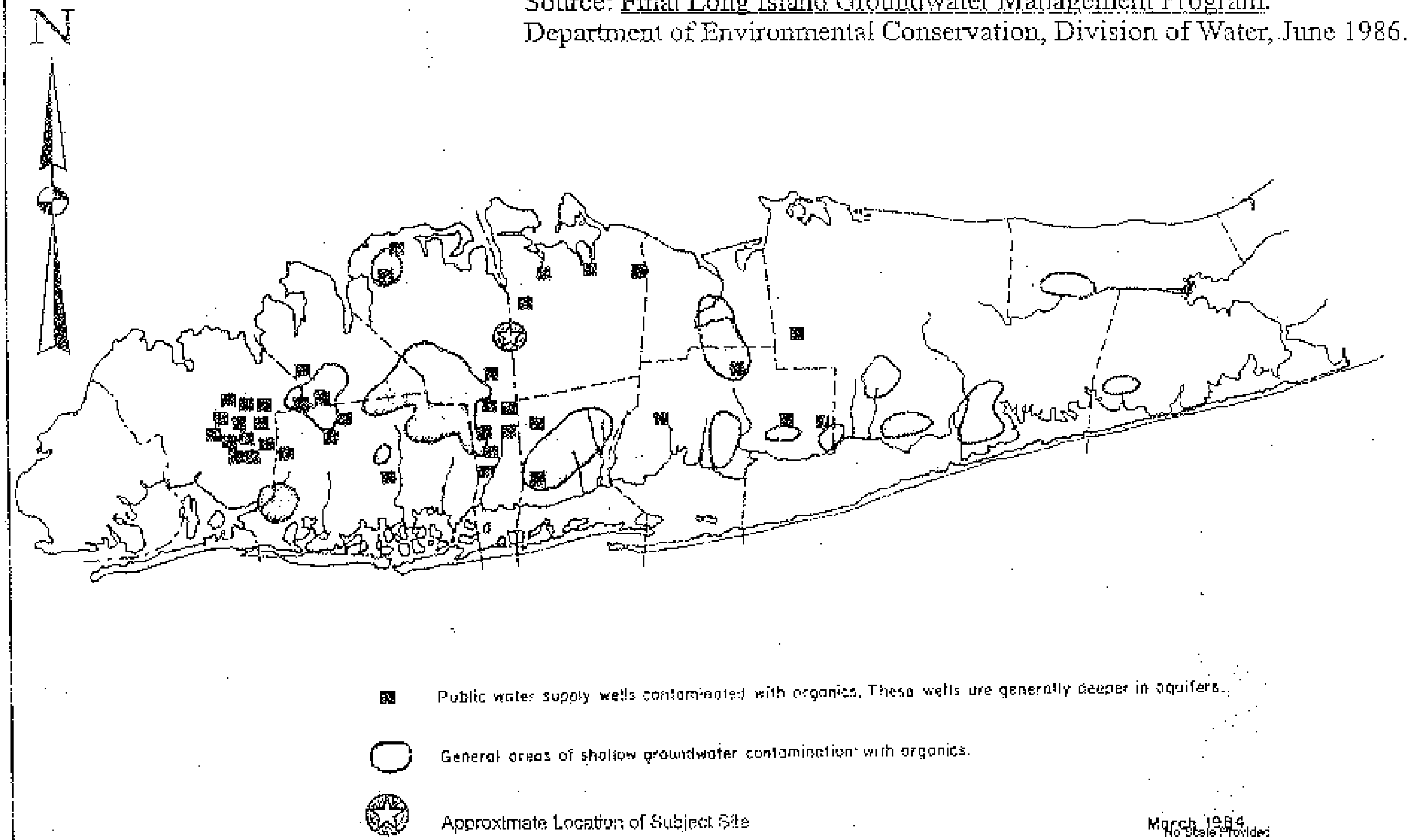
Source: Water-Table and Potentiometric-Surface Altitudes
of the Upper Glacial, Magothy, and Lloyd Aquifers
on Long Island, New York, in March-April 2000,
with a Summary of Hydrogeologic Conditions.

U.S. Geological Survey
Water-Resources Investigations Report 01-4165
Coram, New York, 2002

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Figure 4 - Water Table Elevation Map

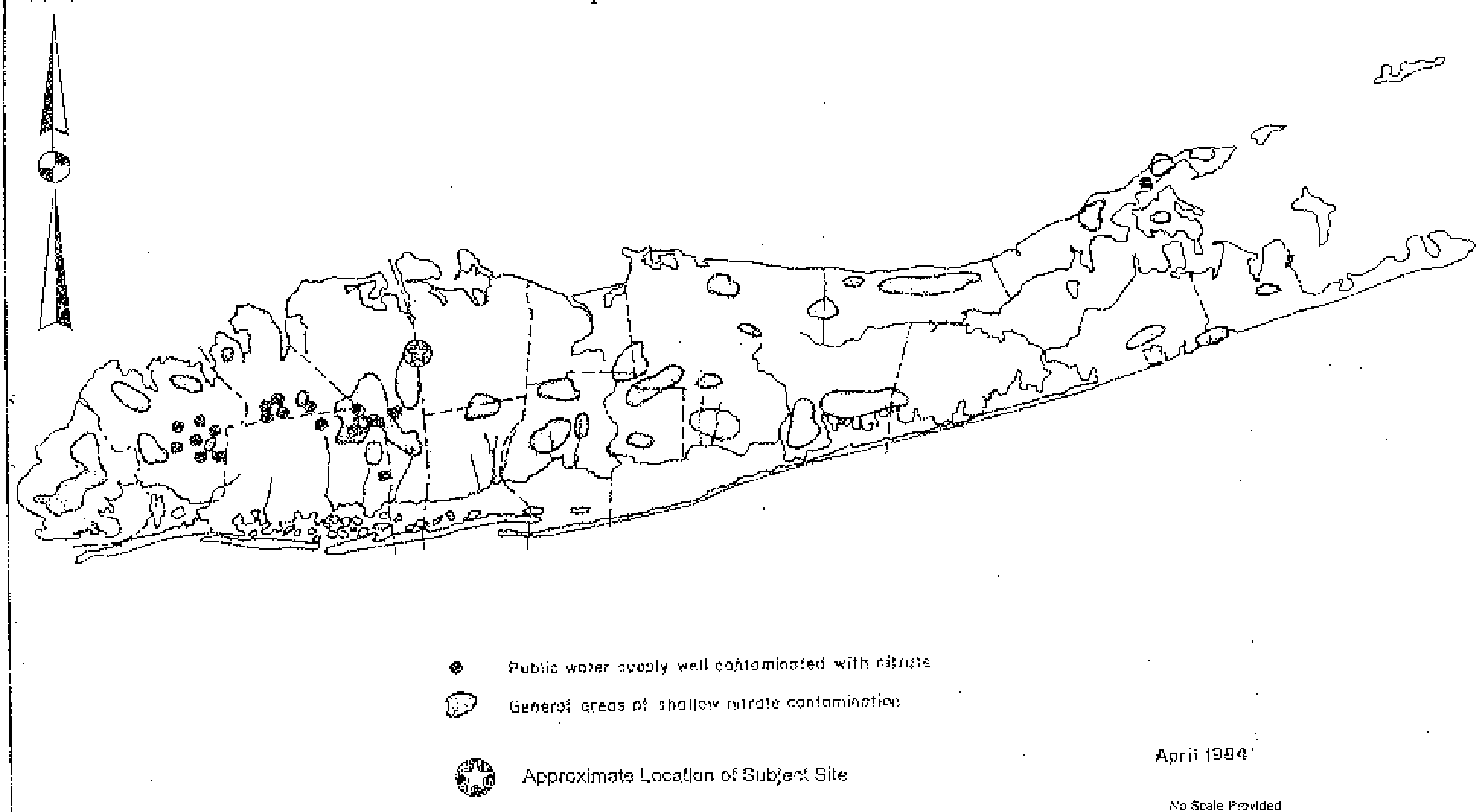
Source: Final Long Island Groundwater Management Program.
Department of Environmental Conservation, Division of Water, June 1986.



FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

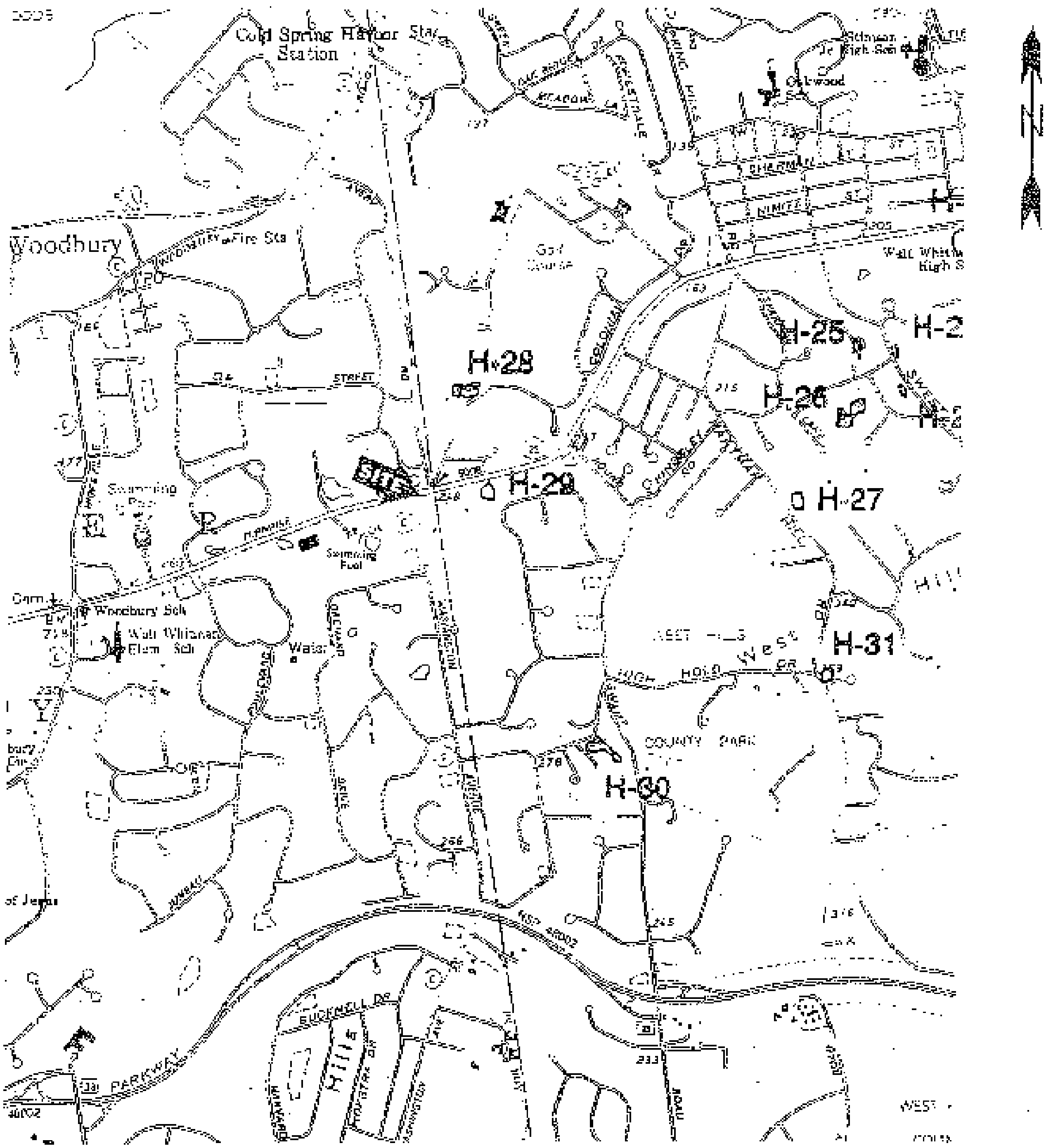
Figure 5

Source: Final Long Island Groundwater Management Program.
Department of Environmental Conservation, Division of Water, June 1986.



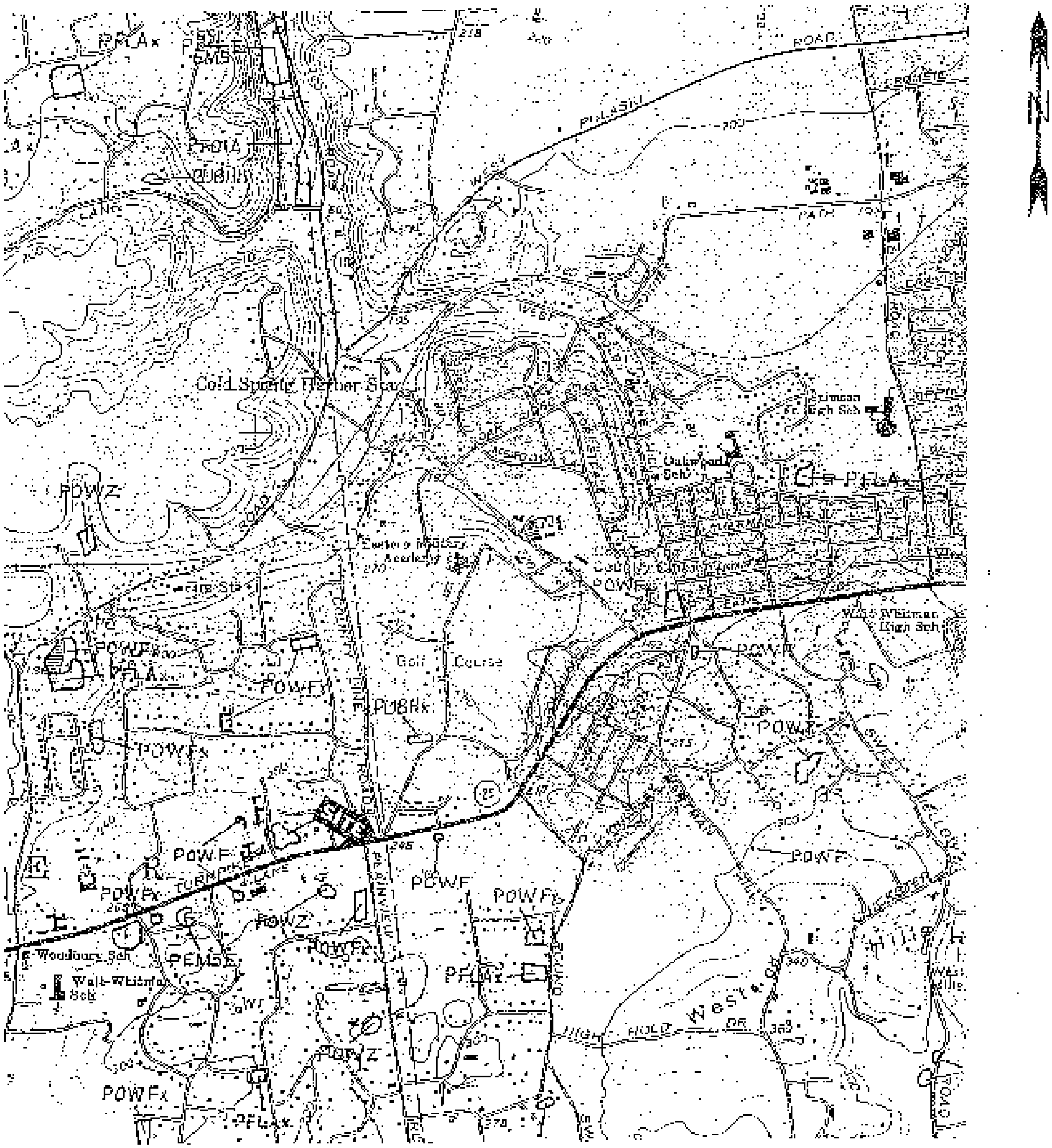
FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Figure 6



Freshwater Wetlands Suffolk County Map 24 of 39

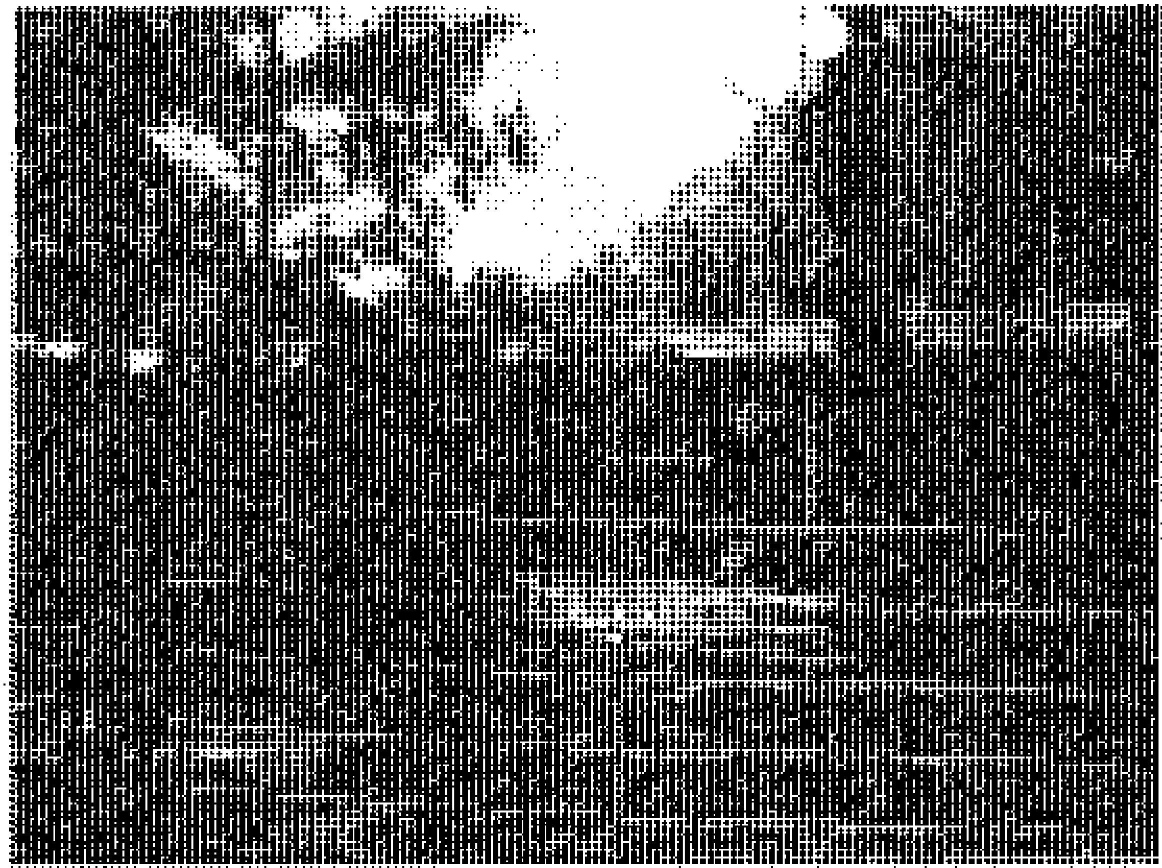
Source: New York State Department of Environmental Conservation
Freshwater Wetlands Maps of Suffolk County



National Wetlands Inventory Map

Source: U.S. Department of the Interior
Fish and Wildlife Service
Map No. 402

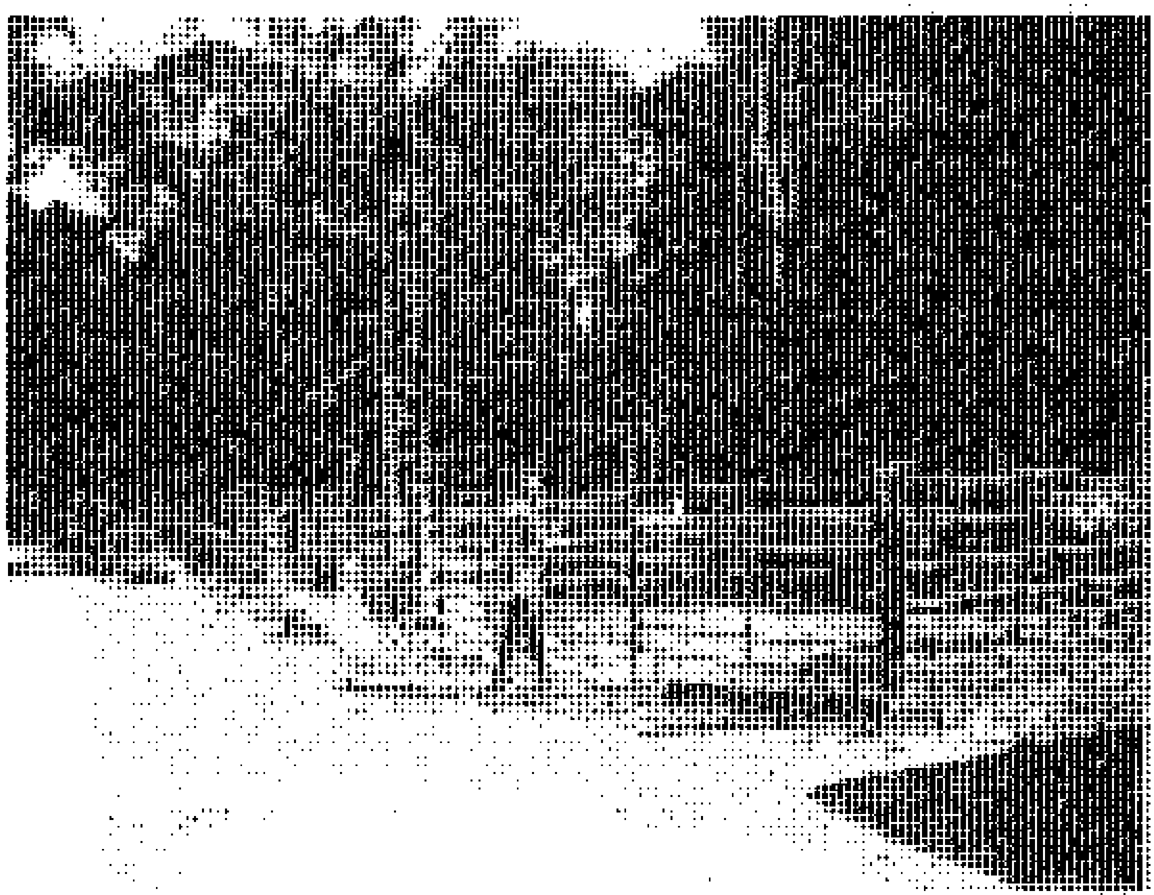
APPENDIX B



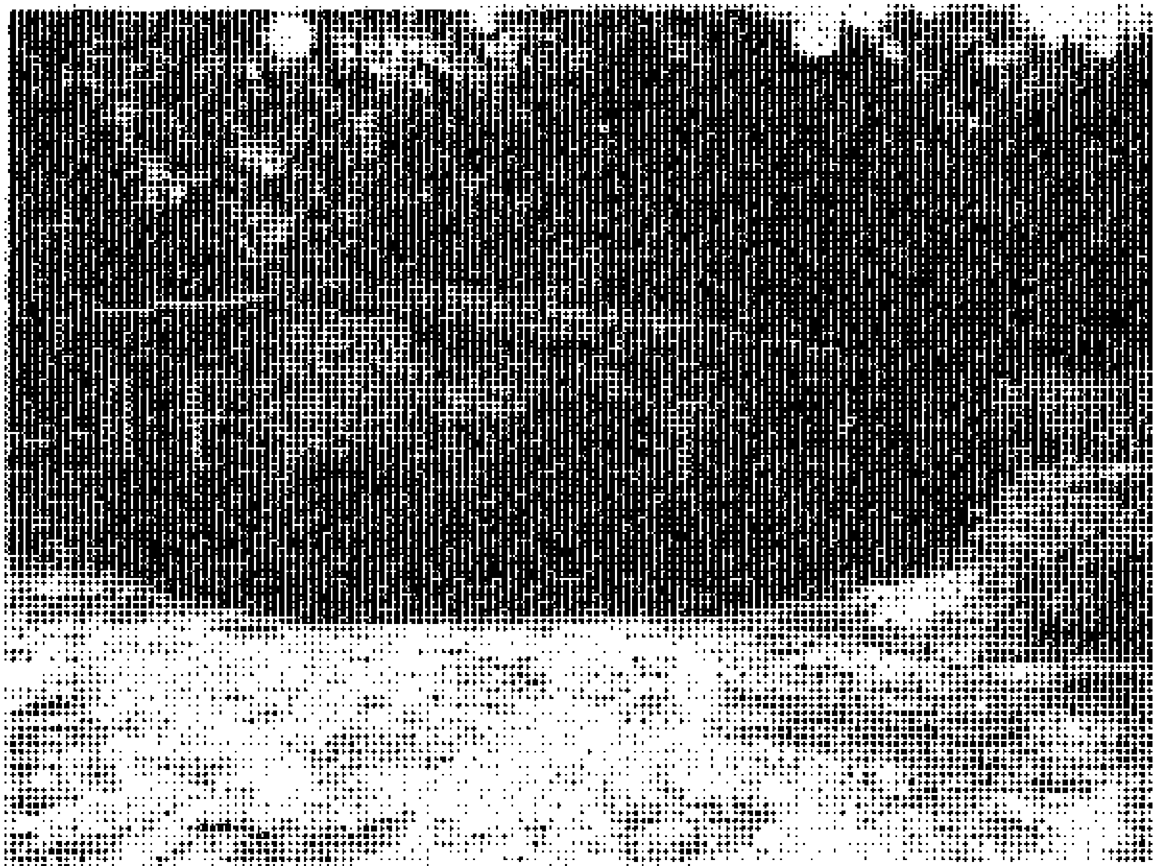
Photograph No. 1: Mobile home utilized as office.

Photograph No. 2: Wood-framed horse stable.

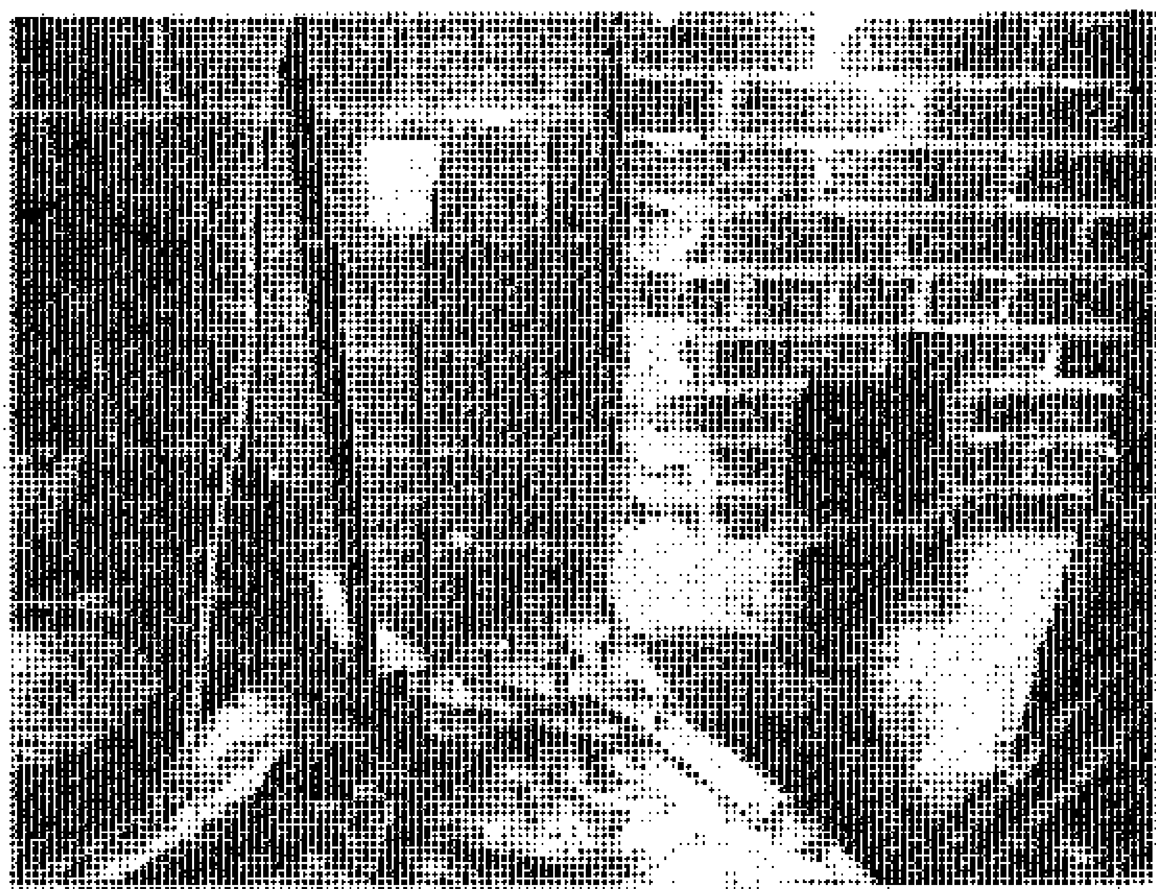
Photograph No. 3: Metal barn.



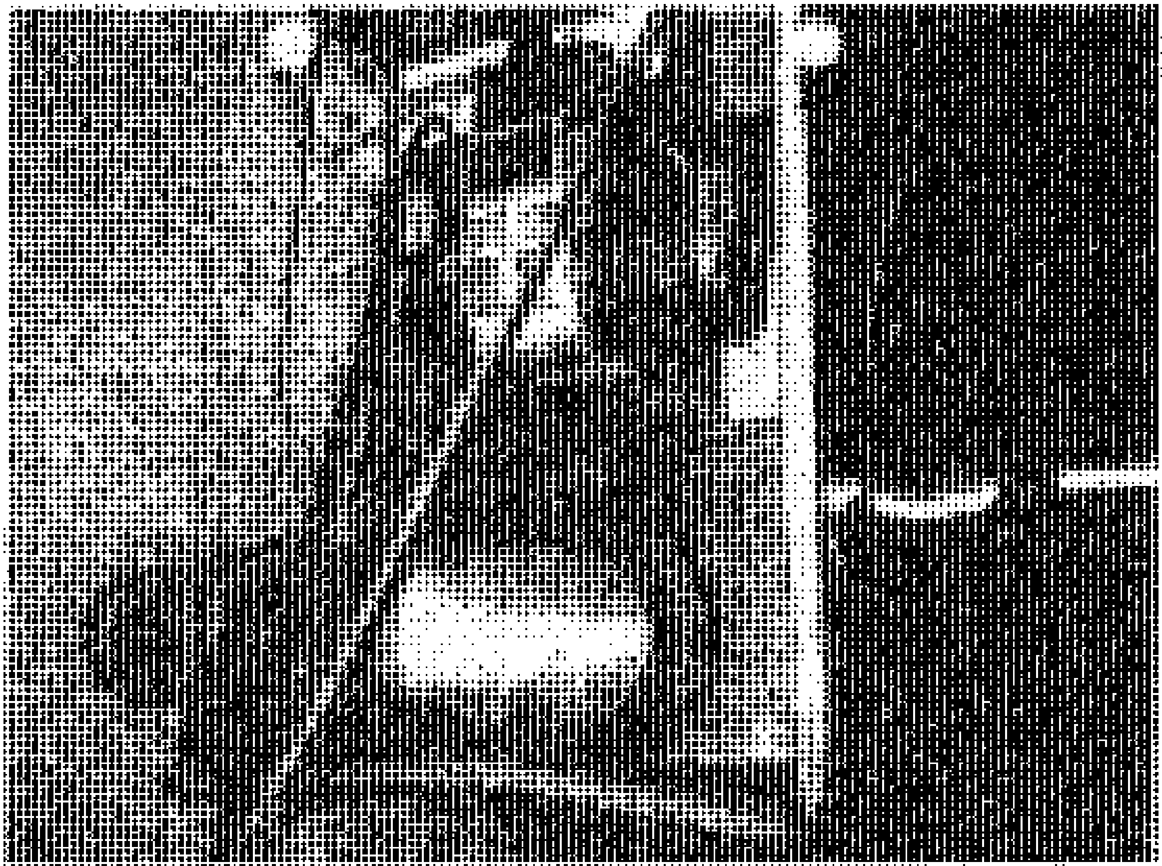
Photograph No. 4: Northeastern wood stall and representative horse corral.



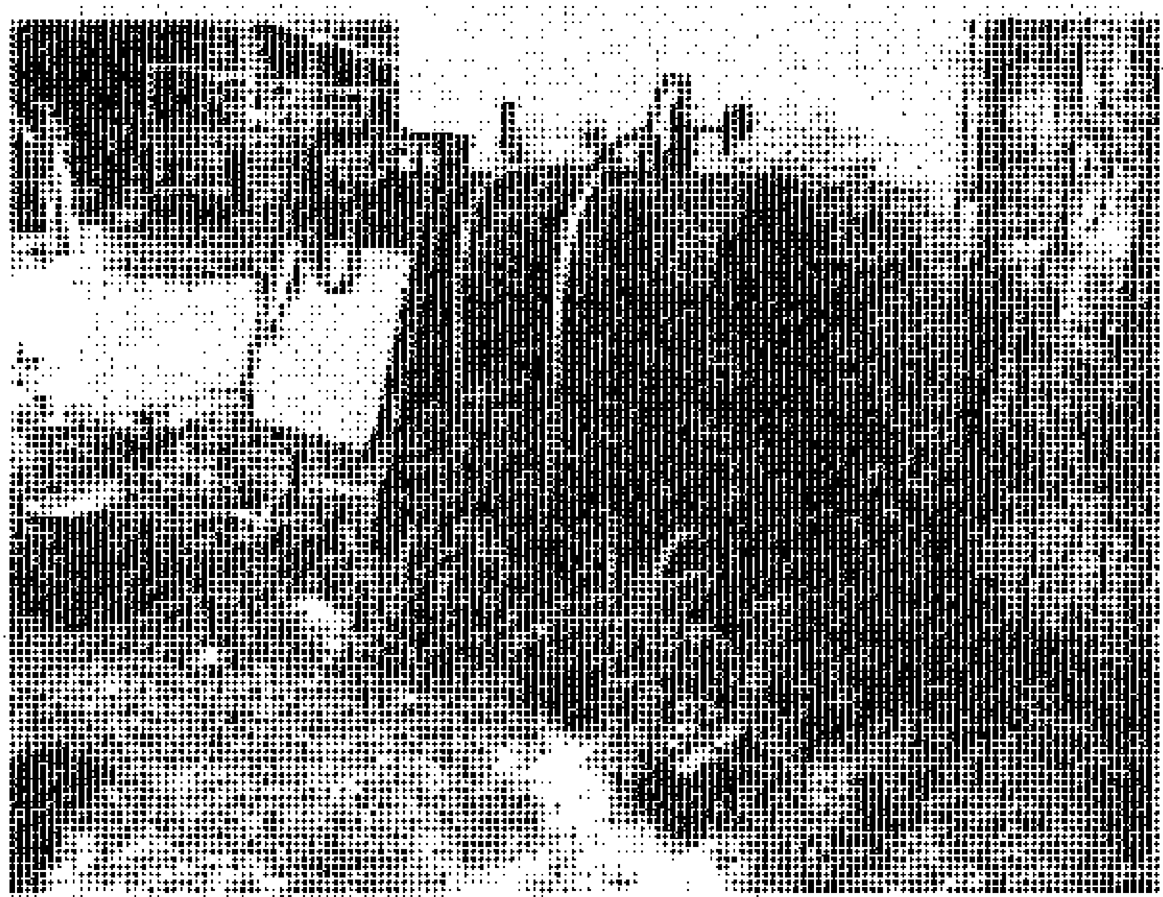
Photograph No. 5: Fire damaged concrete building (former Dougal family residence.



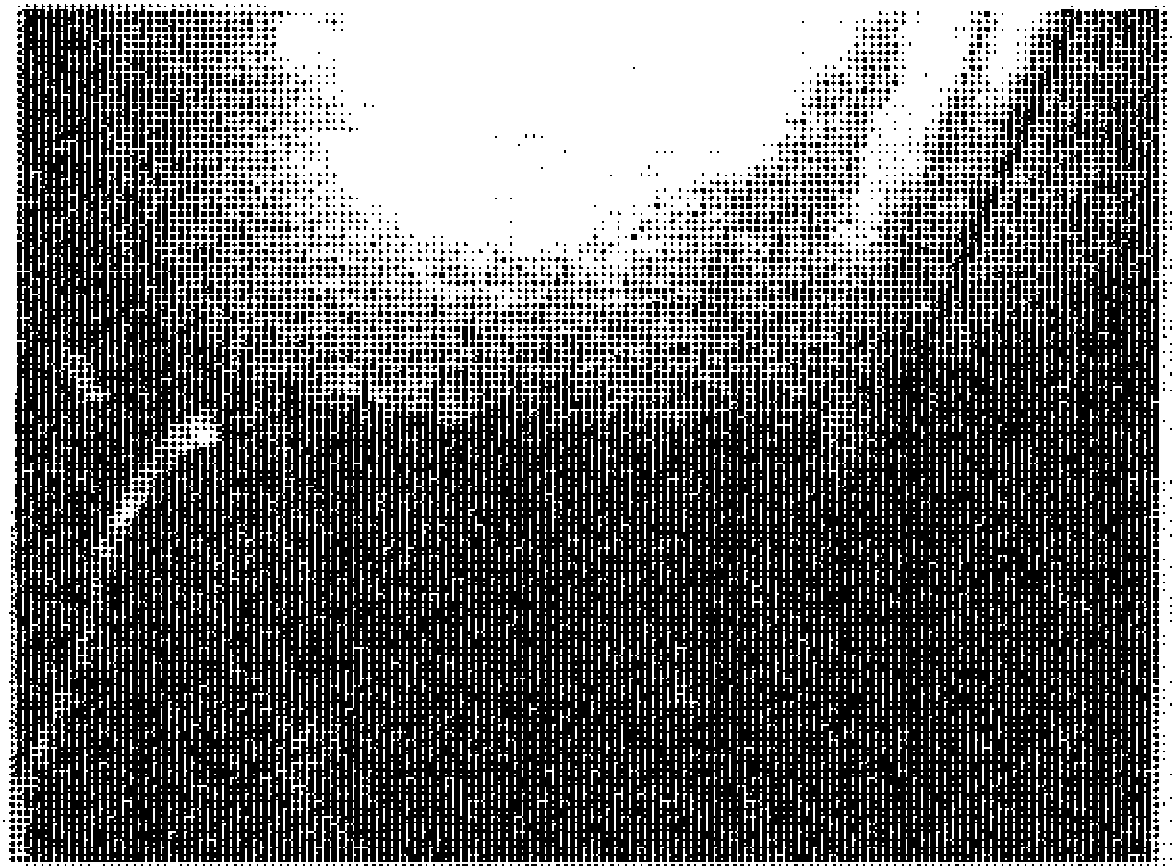
Photograph No. 6: Fuel oil UST vent pipe located at southeastern exterior of former Dougal family residence.



Photograph No. 7: Fuel oil-fired forced-air heating unit suspended from the ceiling in the northern section of the former Dougal family residence.



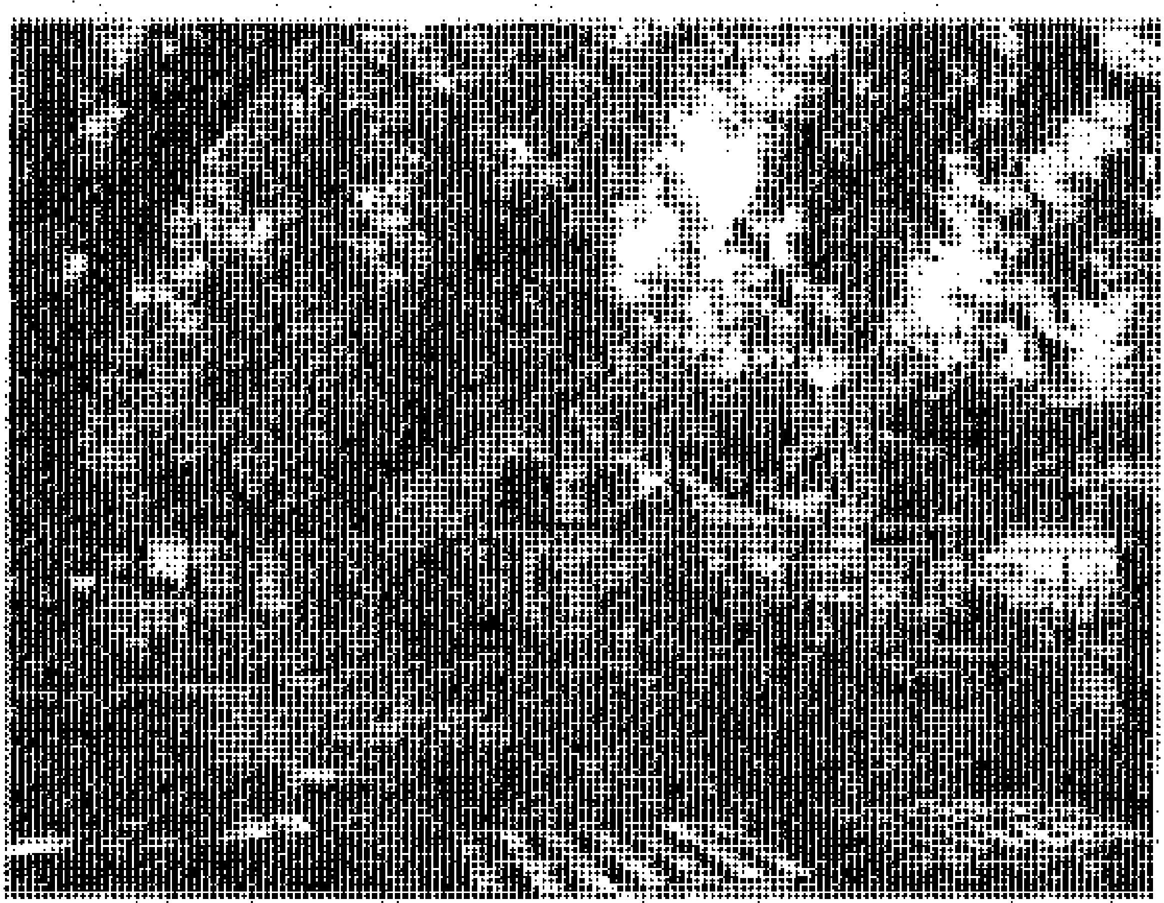
Photograph No. 8: 275 gallon diesel fuel AST located at northwestern exterior of former



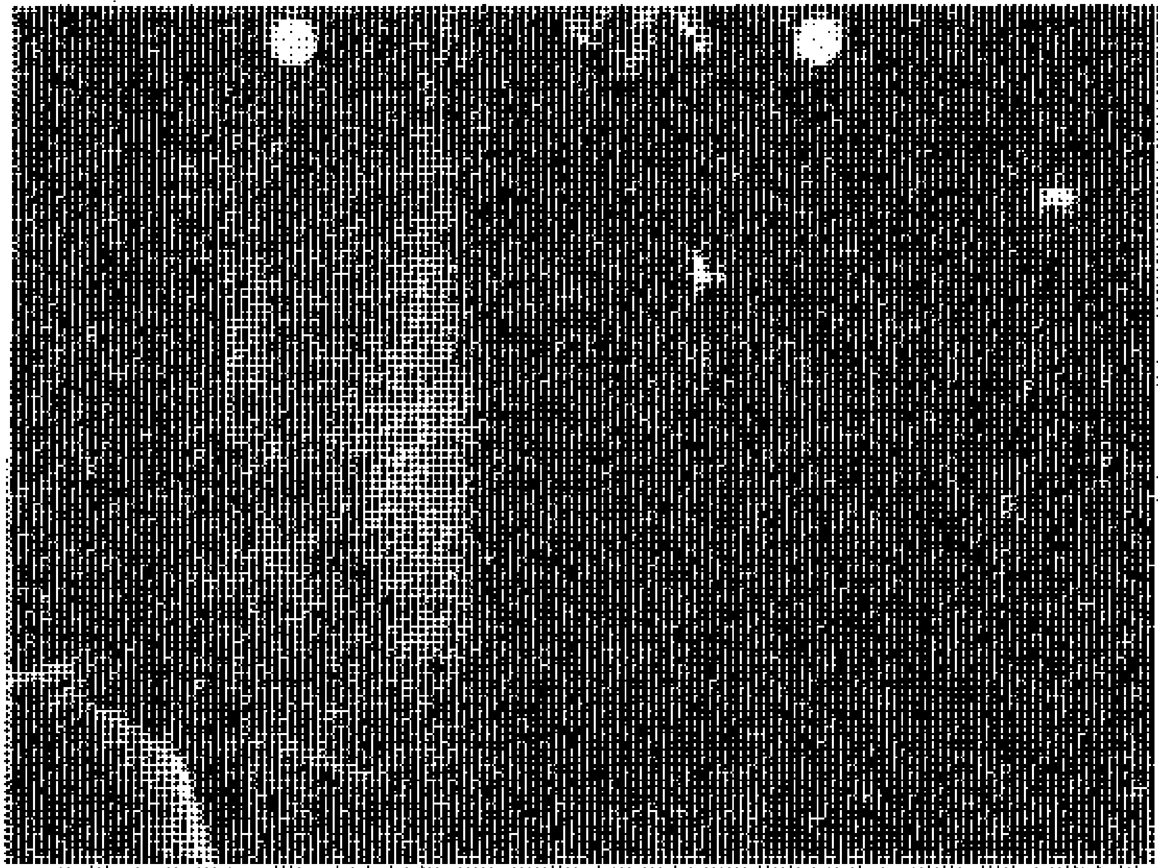
Photograph No. 9: Potential out-of-service potable water well located in northern portion of former Dougal family residence.

Photograph No. 10: Sanitary cleanout pit associated with reportedly abandoned on-site

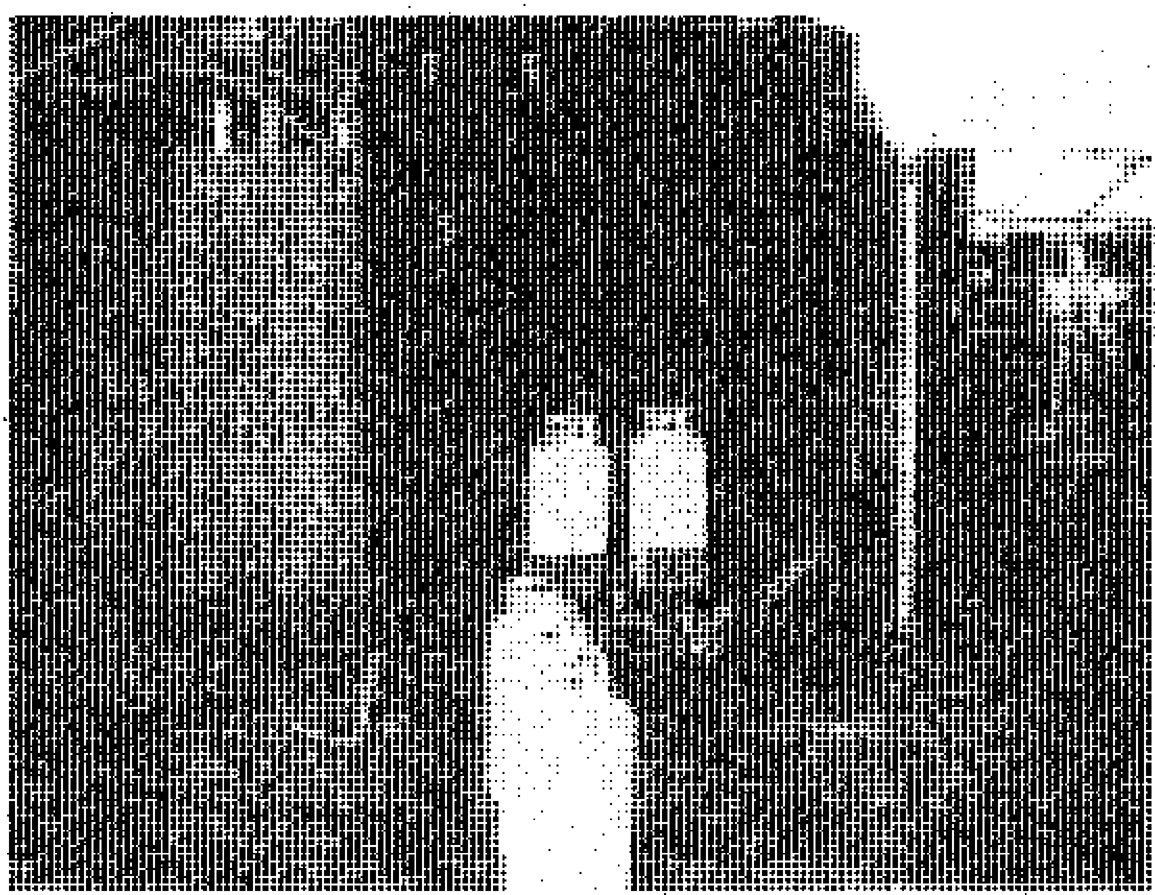
Photograph No. 11: Woodcarving operation located at eastern exterior of former Dougal family residence.



Photograph No. 12: Wood-framed structure located at northern section of property, reportedly built approximately ten years ago for firewood sales support.

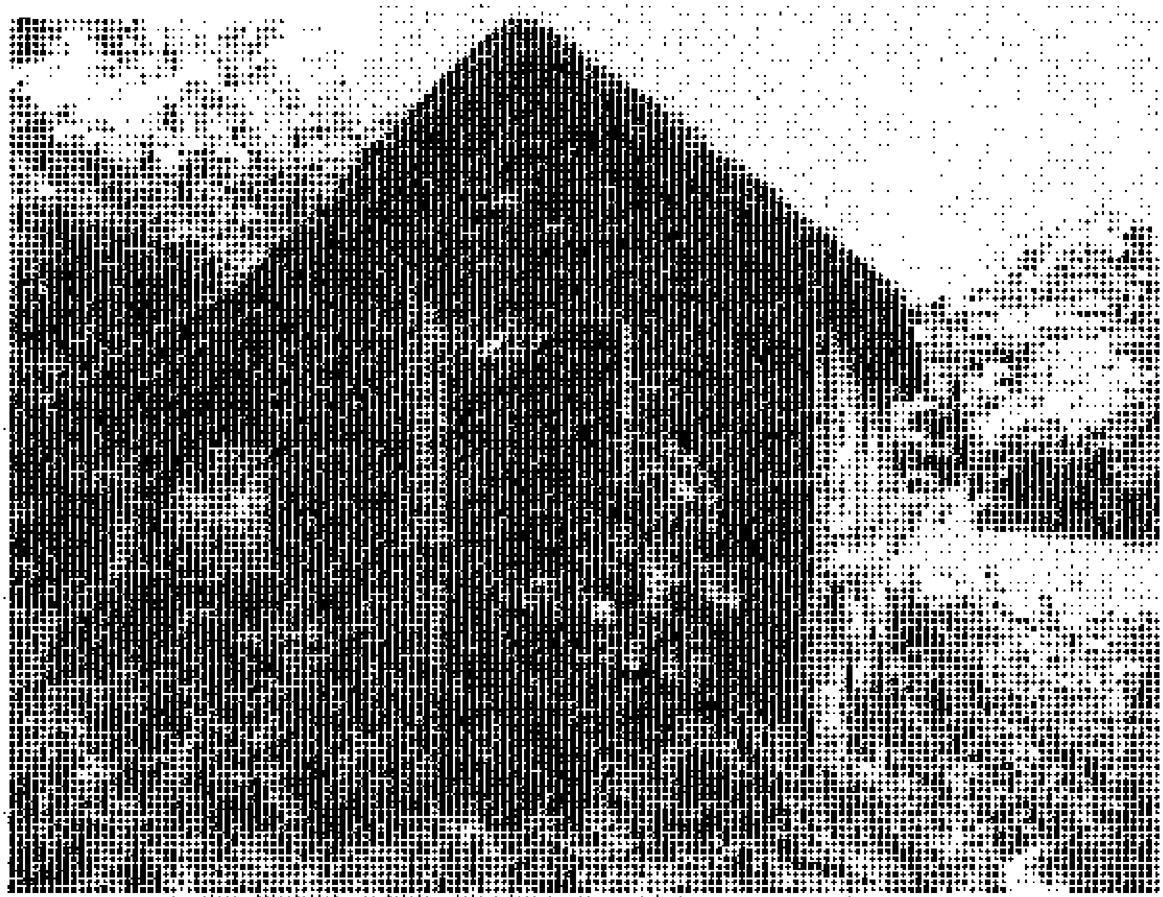


Photograph No. 13: Interior of firewood sales support building.

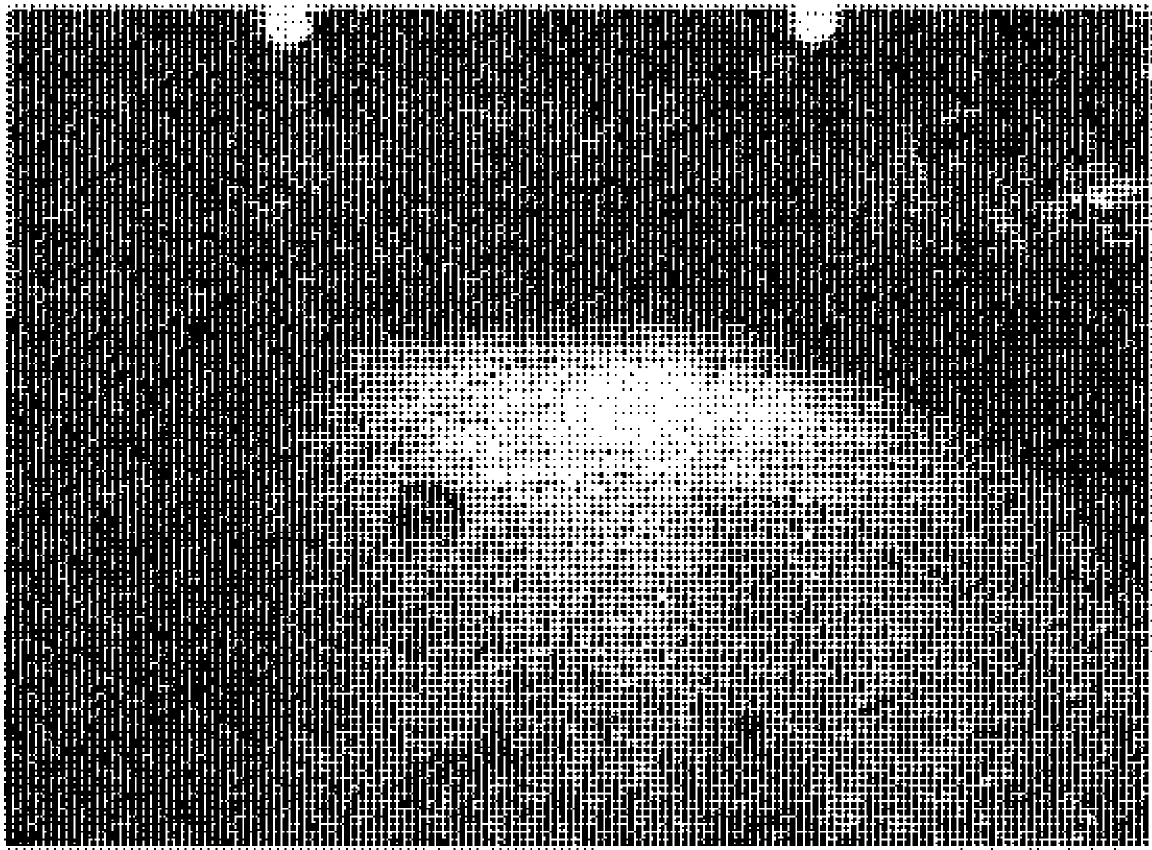


Photograph No. 14: Roadside bar-b-que stand located at northern portion of the site.

Photograph No. 15: Second poured concrete slab located at northern portion of subject property.



Photograph No. 16: Small wood-framed shed located at northwestern portion of subject property.



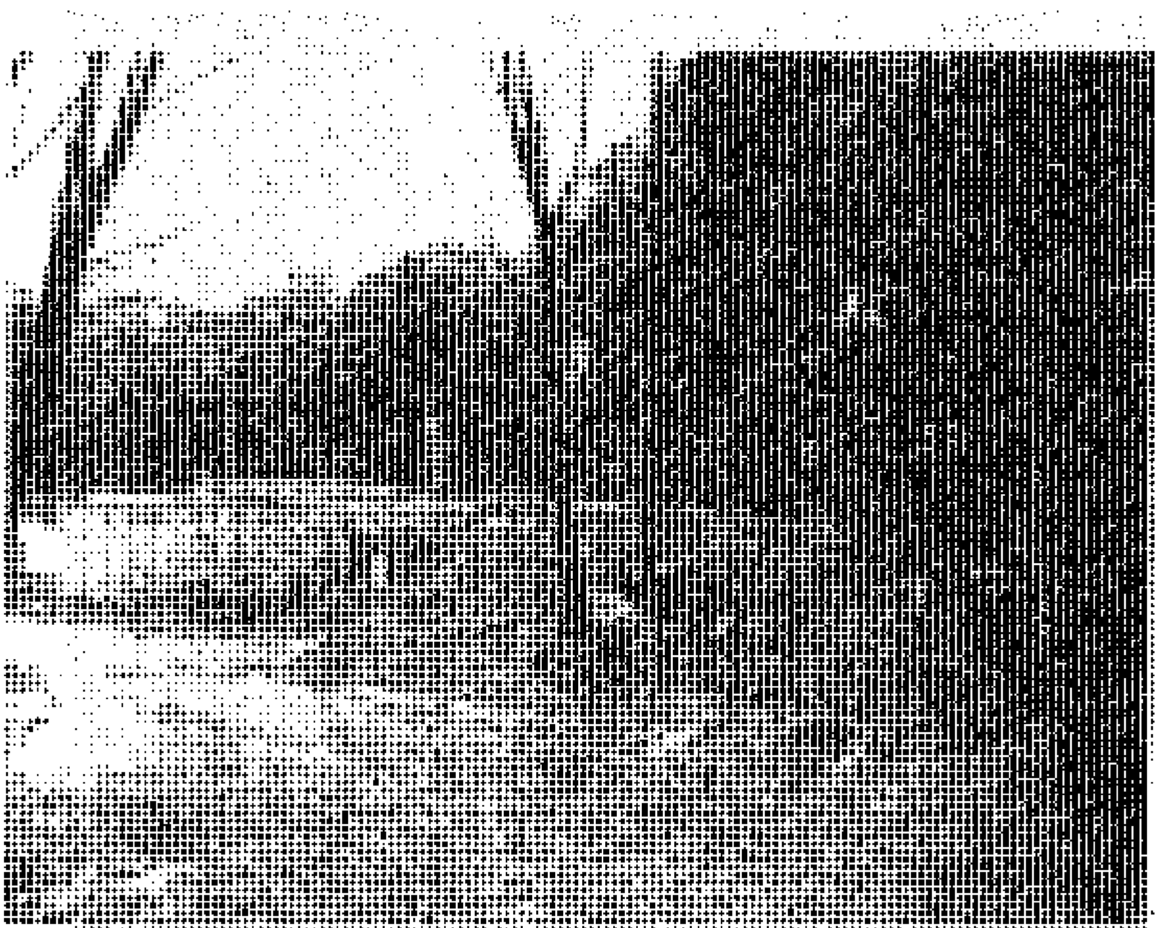
Photograph No. 17: Out-of-service in-ground swimming pool.

Photograph No. 18: Wood-framed structure located in central portion of the property. Former barn converted for residential use.

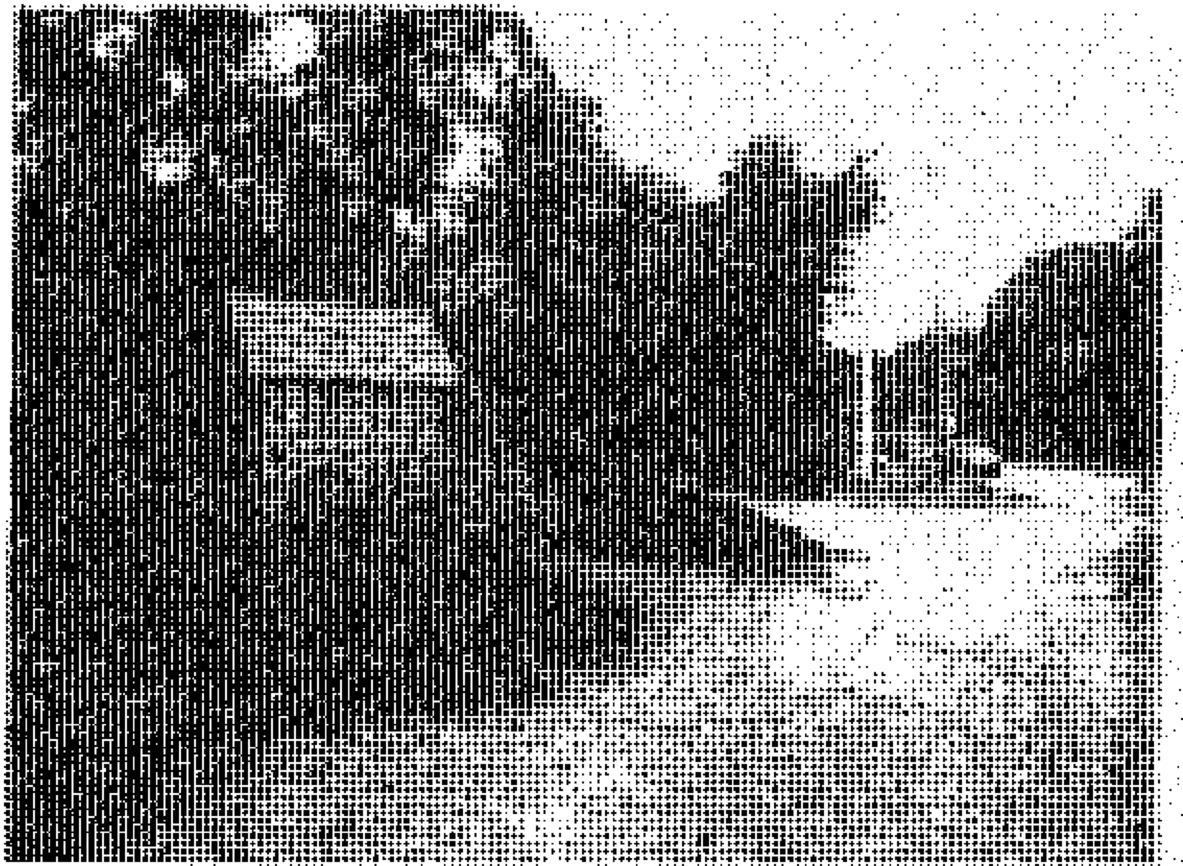
Photograph No. 19: Recently cleared area located in central-southern portion of the subject property.

Photograph No. 20: Representative non-hazardous debris noted at south-southwestern portion of subject property.

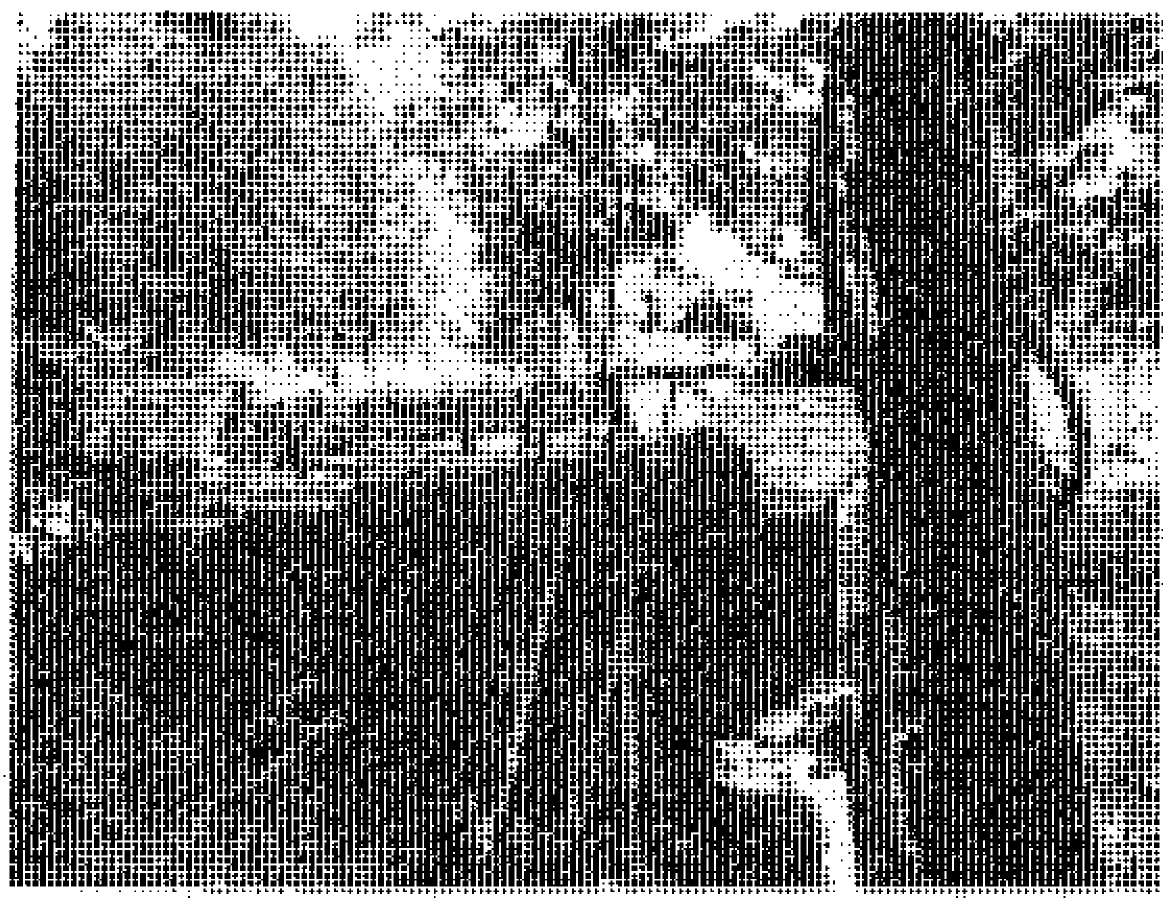
Photograph No. 21: Representative non-hazardous debris noted at south-southwestern portion of subject property.



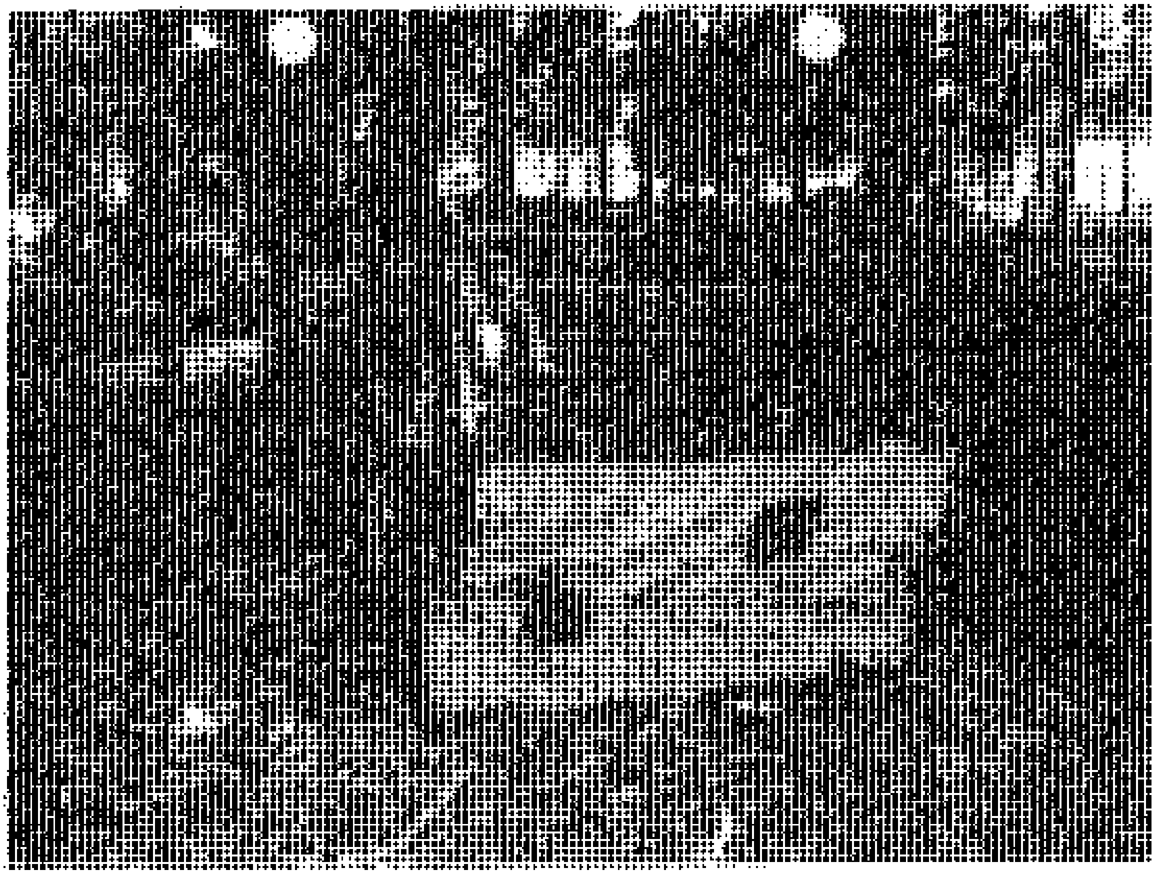
Photograph No. 22: RCA stored at the site and dispersed on-site for drainage purposes.



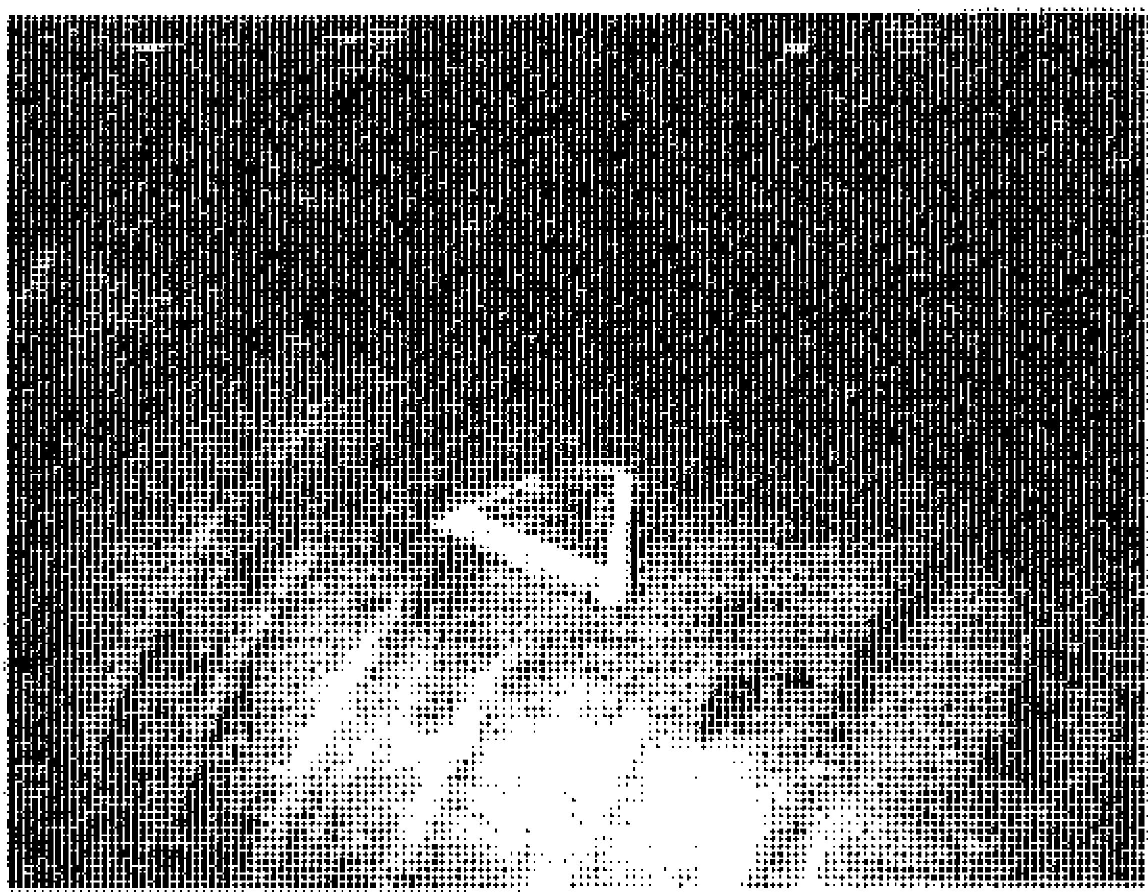
Photograph No. 23: Crushed asphalt piles observed on-site.



Photograph No. 24: Empty 275 gallon AST located proximate to out-of-service swimming pool.

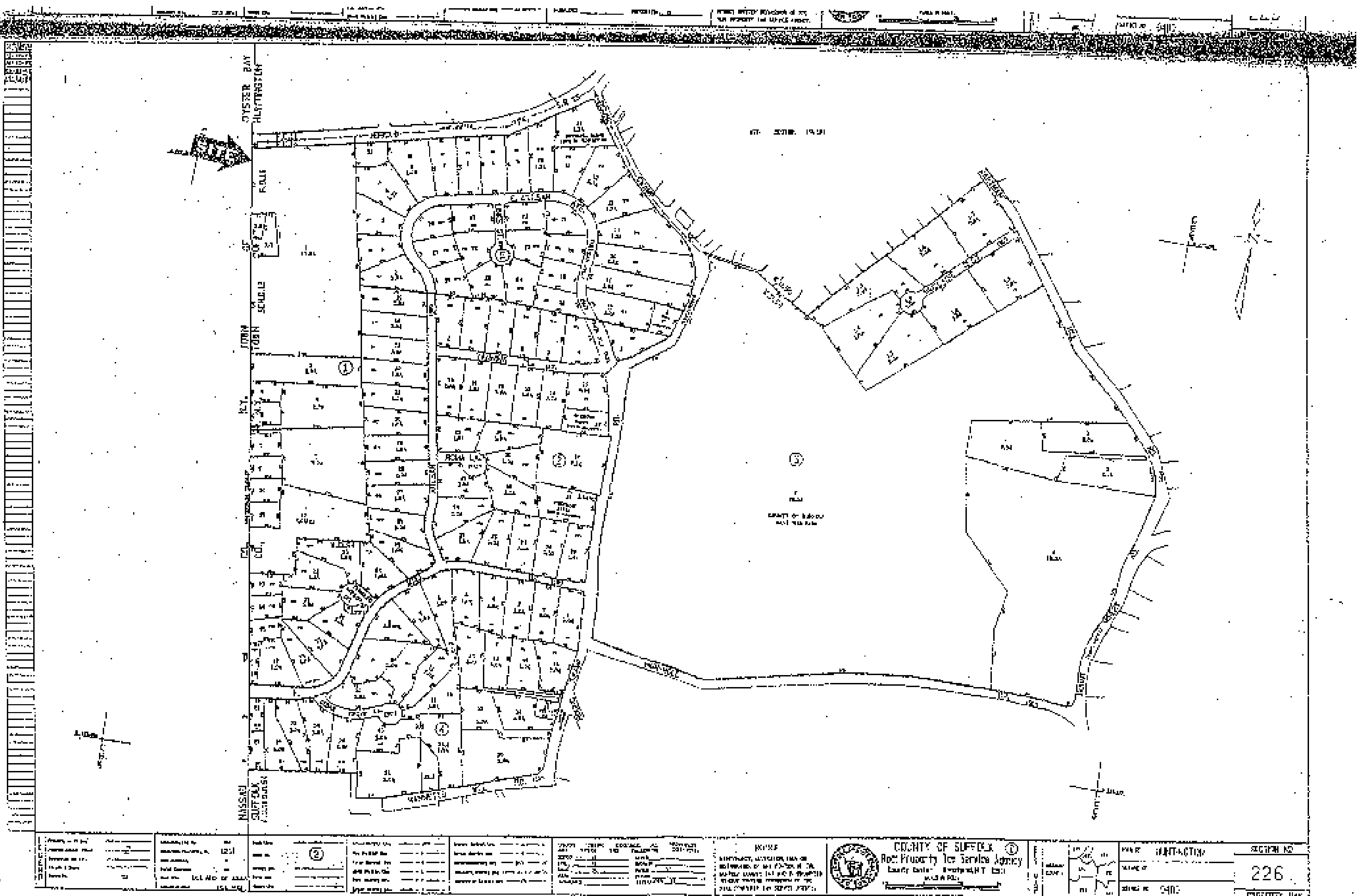


Photograph No. 25: Abandoned equipment located proximate to former barn (converted residence).



Photograph No. 26: Abandoned pesticide tank located proximate to former barn (converted residence).

APPENDIX C



OYSTER BAY
HUNTINGTON
NASSAU
SUFFOLK
ROMA LA.
COUNTY OF SUFFOLK
Real Property Tax Service Agency
HUNTINGTON
226
0400
PROPERTY MAP

1130 W. JERICHO TPKE — 25 ALPHABETICAL NAME CODE

NAME OF OWNER

BIG DOUGS ENTERPRISES, LLC.

1130 W. JERICHO TPKE

HUNTINGTON, N.Y. 11743

LOCATION

NAME CODE NUMBER

CHARACTER OF PROPERTY R1-3

SCHOOL DIST. NO. 13

ASSESSMENT CHANGES

12/8/03 650,000

DESCRIPTION 0400-236-01-007

NORTH

EAST

SOUTH

WEST

ACREAGE	CODE	FULL VALUE OF LAND ONLY	AMOUNT OF EXEMPTION	BLDGS. & LAND LESS EXEMPTION	APPORTIONMENTS
13.87	125 / 209	5500		8000	F / L / R / W / S

7/3/70

R-40 Zone

FORMER OWNER

LIGHT DISTRICT NO. — REFUSE 1 2 — WATER DISTRICT NO. — EXCL. USED — PEN-SION — SEWER DIST. NO. 1 2 3 4 — FIRE DIST. NO.

7/3/70

BOARD OF ASSESSORS — TOWN OF HUNTINGTON — NEW YORK

Re-op Land 5500 — 1968
Bldg. 2500
8000

land 450

AA-1/2 ...

5700
3700
2700
4200

★ JOHN WAYNE DOUGAL
PAMELA DOUGAL
VICTORIA DOUGAL
JOSEPH DOUGAL

× John J. Dougal

300

3237

Town of Huntington
Tax Map # 0400-226.00-01.00-001.000
1130 W JERICHO TPKE, HUNTINGTON
BIG DOUGS ENTERPRISES, LLC

Name/Mail Address
BIG DOUG ENTRPRISES, LLC
1130 W JERICHO TPKE
HUNTINGTON, NY 11743-6043

Class	210 One Family Year-round Res
Book No	29 Sect 224-232
Zoning	R40
Size Total	13.87 Acres

Roll Section	1 Taxable
Property Type	1 Residential
School District	472013 South Huntington
Tax Code	125 Town Outside Village
Fiscal Year	2004-2005

Assessment

CURRENT YEAR (2004-2005)

Land Value	5500.00
Total Value	8000.00
Tax Rate	240.916
True Taxes	$19,643.65
Total Taxes	$19,863.17

PRIOR YEAR (2003-2004)

Land Value	5500.00
Total Value	8000.00
Total Taxes	$17,226.30

Tax Billing

Bill Number: 29480541

Sub System: Real Property Tax

Date	Installments	Transaction Type	Amount	Balance Due	Amount Billed
12/08/2004	1 st	Inv./Bill.	$9,931.59	$9,931.59	
12/08/2004	2 nd	Inv./Bill.	$9,931.58	$19,863.17	$19,863.17

Tax Levy

Levy No	Levy Desc	Levy Type	Exempt	Taxable Val.	Tax Rate	Taxes
sc013	School Dist-S. Hunt	School District		8000	165.742	$13,259.36
ld013	Library Dist-S.Hunt	Library District		8000	9.922	$793.76
d006	County General Fund	County District		8000	1.021	$81.68
d021	County NYS Mandated	County District		8000	1.909	$152.72
d005	Cty NYS Real Prop Tax Law	County District		8000	1.814	$145.12
d008	County Police District	Police District		8000	30.105	$2,408.40
d007	Town/Pt.Town	Town District		8000	9.148	$731.84
d009	Highway Tax	Highway		8000	9.405	$752.40
d020	Lighting Dist. -Town Wide	Light District		8000	0.974	$77.92
d022	Open Space Bonds I & II	Open Space		8000	1.331	$106.48
ga014	Refuse District	Special District		1	370.37	$370.37
d016	Fd - Huntington Manor	Fire District		8000	7.239	$579.12
d091	Ambulance Dist - Hunt	Ambulance District		8000	2.306	$184.48
re005	Pro-rata	Prorate District				$219.52

Tax Exemptions

Exempt No	Exempt Desc	Exemption	Amount

Alert Codes

Codes

ARREARS

T(a of Huntington

Tax Map # 0400-226.00-01.00-001.000

1130 W JERICHO TPKE, HUNTINGTON
BIG DOUGS ENTERPRISES, LLC Since Dec 2003
1130 W JERICHO TPKE
HUNTINGTON, NY 11743

Class	210 One Family Year-round Res	Roll Section	1 Taxable
Book No	29 Sect 224-232	Property Type	1 Residential
Nbhd	40551 40551	School District	472513 South Huntington
Zoning	r40 R40	Tax Code	325 Tax Districts
Size Total	13.87 Acres		
FY	2005		

Bldg Permits

Building & Housing

Type	Application	Permit	Certificate	Estimated Cost	Total Fee
Building Permit converted	A19946003286 7/20/1994				$0.00

Purpose
, CHECK D.E.C. , WETLAND.

Applicant name CHECK D.E.C.
Owner Name CHECK D.E.C.

FREUDENTHAL & ELKOWITZ CONSULTING GROUP, INC.

Theresa Elkowitz, President

368 Veterans Memorial Highway, Suite 3
Commack, New York 11725
Tel: (631) 499-2222
Fax: (631) 499-5928
fecg@fecg.us

July 19, 2005

Town of Huntington
Fire Prevention Bureau
100 Main Street
Huntington, NY 11743

Re: Freedom of Information Request
Dougal Farm Property
1130 West Jericho Turnpike, Huntington, New York
SCTM No. District 400 - Section 226 - Block 1 - Lot 1

To whom it may concern:

We have been retained to prepare an Environmental Assessment for the property located at 1130 West Jericho Turnpike, Huntington, New York. This property is located at the southeast corner of Jericho Turnpike and Plainview Road. It is designated in the Suffolk County Tax Maps as District 400 - Section 226 - Block 1 - Lot 1.

We are requesting information relating to fires, spills, the existence of present and previous chemical and/or petroleum storage tanks and any past or present fire department permits and/or violations.

Thank you for your anticipated cooperation.

Sincerely,

FREUDENTHAL & ELKOWITZ
CONSULTING GROUP, INC.

Karen Schwarz

Karen Schwarz
Environmental Technician II

KS/lm

ENG-05-170

APPLICATION FOR PUBLIC ACCESS TO RECORDS
SUFFOLK COUNTY

INSTRUCTIONS TO APPLICANT: Please **complete** section 1 of this form. Submit the **original** form to the agency Freedom of Information Officer. The Freedom of Information Officer or Designee will respond to your request as soon as possible.

Acting Freedom of Information Officer: Tanja McCarthy
Agency Name: Suffolk County Department of Health Services
Address: 225 Rabro Drive East, Hauppauge, NY 11788

I HEREBY APPLY TO: ☑ Inspect the following record ☐ Receive a copy of the following document(s). Describe the record sought and include a **complete** tax map number (District, Section, Block & Lot). If possible supply date, a file title and any other information that will help locate the record desired.

Records of chemical and/or petroleum underground - or above ground storage tanks, chemical storage, industrial waste files, UIC and on-site septic SCDHS inspections, SPDES documentation past or current permits, violations issued, Article 7 or Article 12 information for:

Dougal Farm Property - 1130 West Jericho Turnpike, Huntington New York
SCTM Nos.: 0400 - 226.00 - 01.00 - 001.000

Signature of Applicant: Karen Schwarz Applicant Represents: Freudenthal & Elkowitz Consulting Group, Inc.
Print Name: Karen Schwarz Date of Application: July 19, 2005
Applicants Mailing Address: 368 Veterans Memorial Highway, Commack, New York 11725
Phone : (631) 499-2222

Section II – FOR USE BY AGENCY FREEDOM OF INFORMATION OFFICER ONLY

☐ Approved. Call to arrange an appointment to inspect the requested record.
Contact Person: ____________ Phone#: ____________

☐ Records not possessed or maintained by this agency.

☐ Records cannot be found after diligent search.

☐ Denied. Reason for denial: ____________ (see attached)

☐ Document(s) enclosed, as requested.

☐ Receipt of this request is acknowledged. There will be a delay in supplying the requested record until: Payment of reproduction fee $ ____________

☐ Other: ____________

Signature: ____________ Title: ____________ Date: ____________

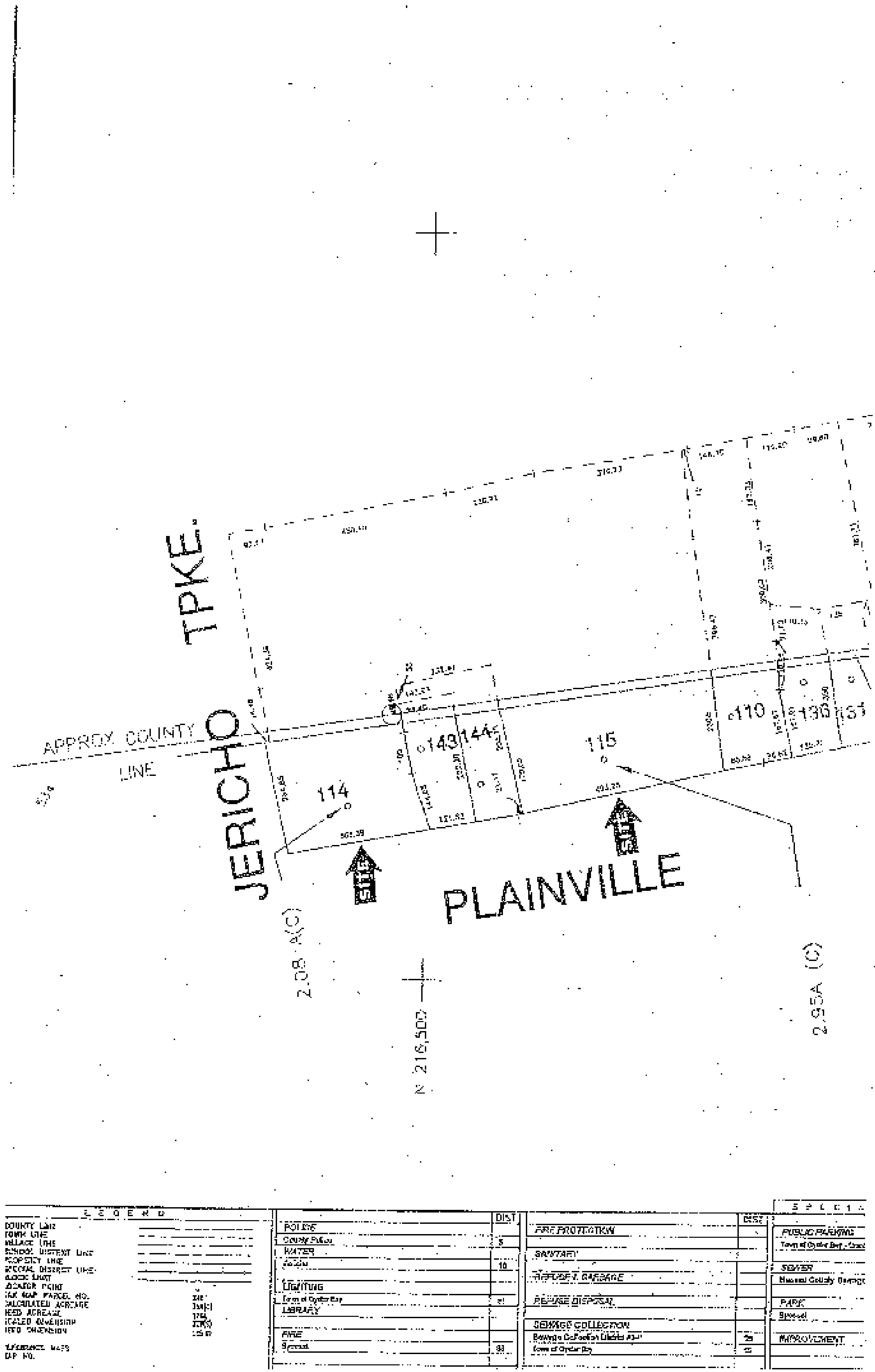
Section III – NOTICE TO APPLICANT

You have the right to appeal a denial of this application in writing to the Office of the County Attorney within 30 days of the denial. Information as to the person to contact is shown below. The contacted person must respond to you in writing within ten business days of receipt of your appeal.

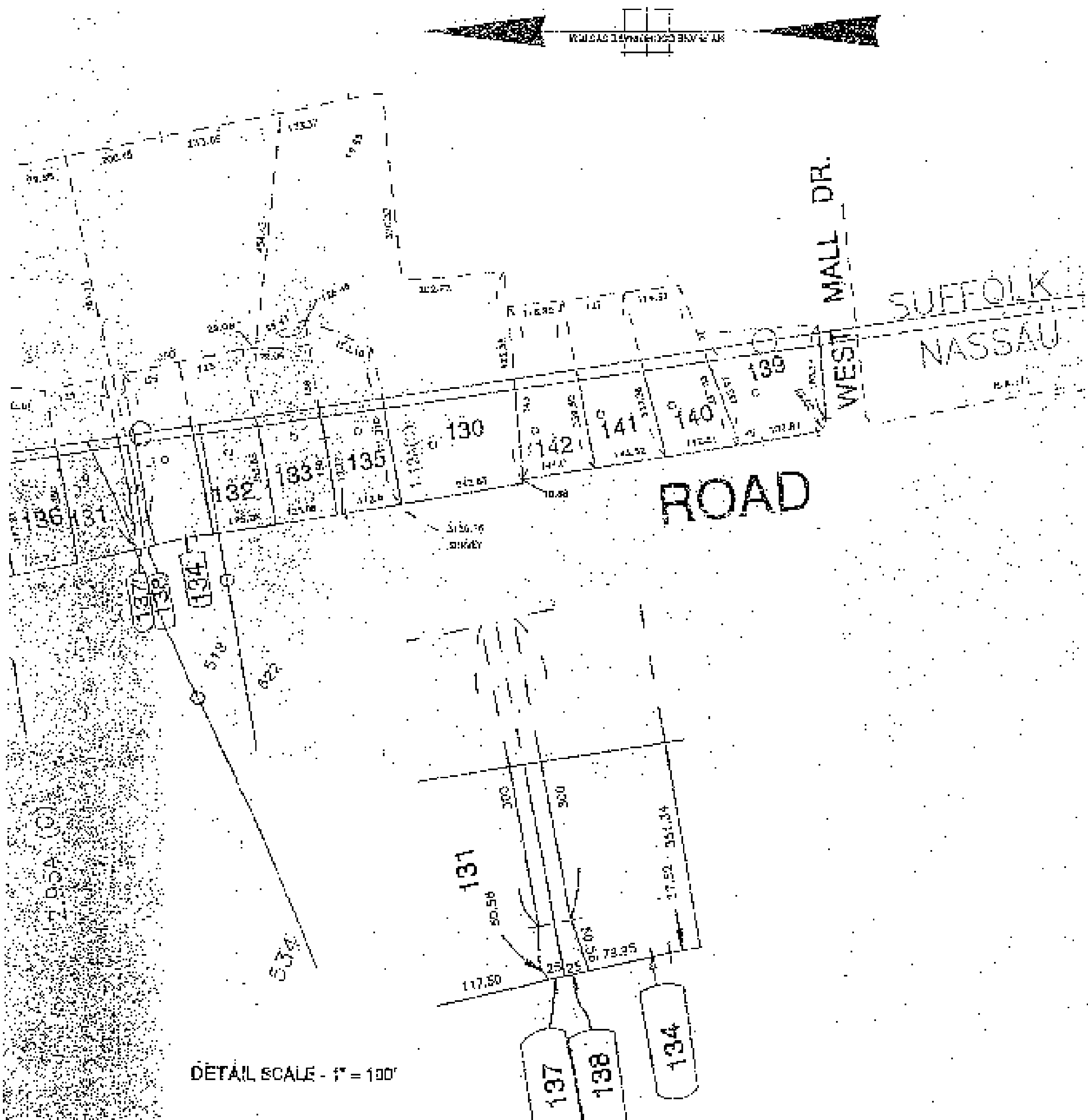
Suffolk County Attorney
H. Lee Dennison Bldg. 6th floor
Veterans Memorial Highway
Hauppauge, NY 11788

Business Telephone: (631) 853-4049

Tracking No. ____________



JERICHO TPKE
APPROX. COUNTY LINE
PLAINVILLE
114
115
143
144
110
130
SITE
SITE
2.08 A(C)
2.95A (C)
N 216,500
LEGEND
COUNTY LINE
TOWN LINE
VILLAGE LINE
SCHOOL DISTRICT LINE
PROPERTY LINE
SPECIAL DISTRICT LINE
BLOCK LIMIT
LOCATOR POINT
TAX MAP PARCEL NO.
CALCULATED ACREAGE
DEED ACREAGE
SCALED DIMENSION
DEED DIMENSION
REFERENCE MAPS
DIST
POLICE
County Police
WATER
LIGHTING
Town of Oyster Bay
LIBRARY
FIRE
FIRE PROTECTION
SANITARY
REFUSE & GARBAGE
REFUSE DISPOSAL
SEWAGE COLLECTION
Town of Oyster Bay
PUBLIC PARKING
SEWER
Nassau County
PARK
IMPROVEMENT



DETAIL SCALE - 1" = 100'

SPECIAL DISTRICTS

	DIST
PUBLIC PARKING	
	A
SEWER	
	35
PARK	
	65
IMPROVEMENTS	
SIDEWALK	

	DIST
DRAINAGE	
	D
FIRE HYDRANT RENTAL	
GARBAGE	
ESCALATOR	
WATER POLLUTION CONTROL	
Town, County, College, Police (2)	1
Town Highway	8

MUNICIPALITIES

TOWN OF:
HEMPSTEAD
NORTH HEMPSTEAD
OYSTER BAY
CITY OF:
GLEN COVE
LONG BEACH
VILLAGE OF:

SCHOOL DISTRICT

Woodbury

Nass
Departme
Charles
Land

SEC. 13
BLK. D
SHEET

SECTION 13 | BLOCK D | LOT 114 | ADDRESS | CARD No.

PROPERTY DESCRIPTION

[redacted]

REMARKS

ADJS. 114 APPORTIONED FOR 1951

11-23-50

Area of lot 114 in Nassau Co. = 2.3±

5/14/64 Blvd

Land corrected

5/20/64

ASSESSMENT SUMMARY

Year		
1951	LAND	1495
	BLDGS.	
	TOTAL	
1957	LAND	3443
	BLDGS.	
	TOTAL	
1962	LAND	5405
	BLDGS.	
	TOTAL	
1965	LAND	7840
	BLDGS.	
	TOTAL	
19	LAND	
	BLDGS.	
	TOTAL	
1966	LAND	6670
	BLDGS.	
	TOTAL	
19	LAND	
	BLDGS.	
	TOTAL	
19	LAND	
	BLDGS.	
	TOTAL	
19	LAND	
	BLDGS.	
	TOTAL	
19	LAND	
	BLDGS.	
	TOTAL	

1/1/67 LAND RECORD

NO UTILITIES		LOW	
NO SEWER		HIGH	
NO WATER		ROUGH	
NO GAS		ROCKY	
NO ELECTRICITY		SWAMPY	
		HILLSIDE	
NO STREET		WOODED	
DIRT STREET		BRUSH LAND	
SEMI IMPROVED ST.		TILLABLE	
NO SIDEWALK			

LAND VALUE COMPUTATIONS

FRONTAGE FIGURED	AVERAGE DEPTH	UNIT PRICE	UNIT PERCENT	FRONT FT. PRICE	COR. INFL.	TOTAL	% DEPR.	VALUE
~~2.7~~						~~2707~~		
2702	Acre	@ 2000				5404		
2.70	acres	@ 2900 per acre				7836		
2.3 ac.	@ 2900 per Ac.					6670		

ASSESSMENT RECORD NASSAU COUNTY, NEW YORK

JUL 20, 2005 NASSAU, NY RESIDENTIAL/RURAL REVIEW DOCUMENT PAGE: 1
12:46 PM AP922

PARCEL 13- D- -0114.0 CARD 1 OF 1 TAX YEAR 2007 TIEBACK ALT ID MAP # ROUTE
ADDRESS 4 JERICHO TPKE
NBHD 256 RESTRICTION / / / /
USE 3111 CONDO.LVL TYPE
DEV UNIT 0 ---- OWNER INFORMATION
CLASS 1 BIG ROUGE ENTERPRISES LLC
ZONING 1130 N JERICHO TPKE
BOOK 11711 HUNTINGTON NY 11746
PAGE 0336

DATE	TYP	PRICE	SR	VAL
12/10/03	2	0	4	X
12/09/03	2	650,000	4	3
12/06/03	2	650,000	4	3

--------------- PROPERTY FACTORS ---------------
TOPO 1 LEVEL / /
UTILITY 1 ALL PUBLIC/ /
RDS/TRF 1 1 PAVED / / LIGHT
FRT

-- ENTRANCE INFORMATION
DATE CODE INFO.C ID
07/11/00 0 323

---------- BUILDING PERMIT RECORD ----
DATE NUMBER AMOUNT PURPOSE O/C

---------- NOTES ----------
NOTECD:
NOTECD:
NOTES:
NOTES:

---------- L A N D D A T A ---------- C A L C T A B L E ----------

TY	ACRE/SFT/UNITS	PRICE	INFL-FAC	BASE SIZE	BASE RATE	INCR /DECR	LAND-VAL
F LN CD	FRONT DEPTH						
5 1 1	100,135	9.72		30000.00	23.11	4.42	973,530
PRIMARY SITE						4.42	

GROSS LN CD VALUE INFLFAC LAND-VAL

TOTAL ACRES 3.3000 TOTAL LAND-VALUE 973,530
LEGAL:

----- OTHER BUILDING & YARD IMPROVEMENTS ----- MISC. IMPROV 0
TYP QN YEAR SIZE GRD MODS C FND% VALUE TOT OBY & MISC IMPROV VALUE 0
GROSS BUILDING SUMMARY
DESC VALUE 0
---------- A D D I T I O N S ----------
LINE LOW 1S 2ND 3RD AREA VALUE

-------- DWELLING DESCRIPTION ----
STORY HEIGHT
EXT. WALL
STYLE
YR BUILT REMODELED
BASEMENT
HEATING
FUEL TYPE
SYSTEM
ATTIC
TOT RMS 0 BDRMS 0 FRMS 0
FBTHS 0 HBTHS 0 ADDN STCK-FIX 0
PHYS. COND
INT/EXT
MASON TRIM AREA 0 0
UNFIN.AREA 0 0
REC. ROOM AREA 0 0
FBLA 0 0
not used: 0 0
WBFP STACK 0 OPENINGS 0
PREFAB FIREPLACE 0 0
BSMT.GAR.(NO CARS) 0 0
MSC O.F.DES QUAN 0
MSC O.F.DES QUAN 0
NOTES1
NOTES2

G.F.L.A. 0
S.F.L.A. 0
---- DWELLING COMPUTATIONS ----
BASE PRICE 0
BSMNT 0
HEAT 0
PLUMBING(TOTAL) 0
ATTIC 0
OTH FEATURES 0
ADDITIONS 0
SUB TOTAL 0
GRADE FACTOR X 0.00
C & D FACTOR 0.00
CDU
RCN PSF .00 0
PERCENT GOOD X 0%
RCNLD PSF .00 0

OBY & MISC IMP VALU 0
GROSS IMPRV. 0
TOT CARD VALUE 0
----- PARCEL SUMMARY VALUE ----
COST LAND VALUE 973,530
COST BLDG VALUE 0
TOTAL COST VALUE 973,530

---------- C U R R E N T A P P R A I S E D V A L U E S ----------
CURRENT LAND 973,530 BUILDING 0 TOTAL 973,530
RVW CD 1 COST APPROACH RSN REV REVAL VALUE DT 15-AUG-03 ID
STATUS 7
ESTIMATE LAND ____ BUILDING ______ TOTAL ______
REVIEW CODE RSN DATE ID
PREV ASMT LAND: BUILDING TOTAL:

SECTION 13 | BLOCK D | LOT 115 | ADDRESS | CARD NO.

PROPERTY DESCRIPTION

[redacted]

[redacted]

7,490. 7,480.

28 1 2 5 10 38 D 25 69 594

JOHN & IRENE DONGAL 5231-431

SEC 13 BLK D

LOT 115

REMARKS

2070 115 APPORTIONED FOR 1951 (2)

11-22-58

Area of lot 115 in Nassau Co = 2.85

5/14/64 BWH

land corrected

5-20-64 - mga

ASSESSMENT SUMMARY

51	LAND	2050
	BLDGS.	
	TOTAL	
54	LAND	3765
	BLDGS.	
	TOTAL	
62	LAND	7480
	BLDGS.	
	TOTAL	
65	LAND	10850
	BLDGS.	
	TOTAL	
	LAND	
	BLDGS.	
	TOTAL	
64	LAND	8280
	BLDGS.	
	TOTAL	
	LAND	
	BLDGS.	
	TOTAL	
	LAND	
	BLDGS.	
	TOTAL	
	LAND	
	BLDGS.	
	TOTAL	
	LAND	
	BLDGS.	
	TOTAL	

LAND RECORD

NO UTILITIES		LOW	
NO SEWER		HIGH	
NO WATER		ROUGH	
NO GAS		ROCKY	
NO ELECTRICITY		SWAMPY	
		HILLSIDE	
NO STREET		WOODED	
DIRT STREET		BRUSH LAND	
SEMI IMPROVED ST.		TILLABLE	
NO SIDEWALK			

LAND VALUE COMPUTATIONS

FRONTAGE INQUIRED	AVERAGE DEPTH	UNIT PRICE	UNIT PERCENT	FRONT FT. PRICE	COR. INFL.	TOTAL	$ DEPR.	VALUE
2.740	1000		100%			2740		3765
2.740	Acres @ 2700					7460		
2.740	acres @ 2700					10846		
2.85	Ac @ 2900					8265		

ASSESSMENT RECORD NASSAU COUNTY, NEW YORK.

JUL 20, 2005 NASSAU, NY RESIDENTIAL/RURAL REVIEW DOCUMENT PAGE: 1
02:15 PM AP922

PARCEL:13- D- -0115.0 CARD: 1 OF 1 TAX YEAR 2007 TIEBACK ALT ID MAP # ROUTE

ADDRESS PLAINVILLE RD
NBHD 050 RESTRICTION / / / /
CUSE 2111 CONDO.LVL TYPE
LIV UNIT 0 ---- OWNER INFORMATION -------- SALES INFORMATION ---
CLASS 1 BIG DOUGS ENTERPRISES LLC DATE TYP PRICE SK VAL
ZONING 1130 W JERICHO TPKE
BOOK 11711 HUNTINGTON NY 11743
PAGE 0396

------------- PROPERTY FACTORS ------------- -- ENTRANCE INFORMATION
TOPO 1 LEVEL / / DATE CODE INFO.C ID
UTILITY 1 ALL PUBLIC/ / 07/11/03 6 323
RDS/TAF 1 1 PAVED / / LIGHT
FRT

---------- BUILDING PERMIT RECORD ---- ---------- NOTES ----------
DATE NUMBER AMOUNT PURPOSE O/C NOTECD:
NOTECD:
NOTES:
NOTES:

---------- L A N D D A T A ---------------- C A L P T A B L E ----------

QTY ACRE/SFT/UNITS			BASE	BASE	INCR	
P LN CD	FRONT DEPTH	PRICE INFL-FAC	SIZES	RATE	/DECR	LAND-VAL
S 1 1	124,146	8.69	30000.00	25.11	4.42	1079,430
PRIMARY SITE					4.42	

GROSS LN CD VALUE INFLFAC LAND-VAL

TOTAL ACRES 2.6500 TOTAL LAND-VALUE 1,079,430
LEGAL:

----- OTHER BUILDING & YARD IMPROVEMENTS ----- MISC. IMPROV 0
TYP QN YEAR SIZE GRD MODE C EMDY VALUE TOT OBY & MISC IMPROV VALUE 0
GROSS BUILDING SUMMARY
DESC VALUE 0
----------- A D D I T I O N S -----------
LINE LOW 1S 2ND 3RD AREA VALUE

-------- DWELLING DESCRIPTION ----
STORY HEIGHT
EXT. WALL
STYLE
YR.BUILT REMODELED
BASEMENT
HEATING
FUEL TYPE
SYSTEM
ATTIC
TOT RMS 0 BDRMS 0 FRMS 0
FBTHS 0 HBTHS 0 ADDN OTHR-FIX 0
PHYS. COND
INT/EXT

MASON TRIM AREA	0	0
UNFIN.AREA	0	0
REC. ROOM AREA	0	0
FBLA	0	0
Not Used:	0	0
WBFP STACK 0 OPENINGS		0
PREFAB FIREPLACE	0	0
BSMT.GAR.(NO CARS)	0	0
MSC O.F.BSS QUAN		0
MSC O.F.BSS QUAN		0

NOTES1
NOTES2

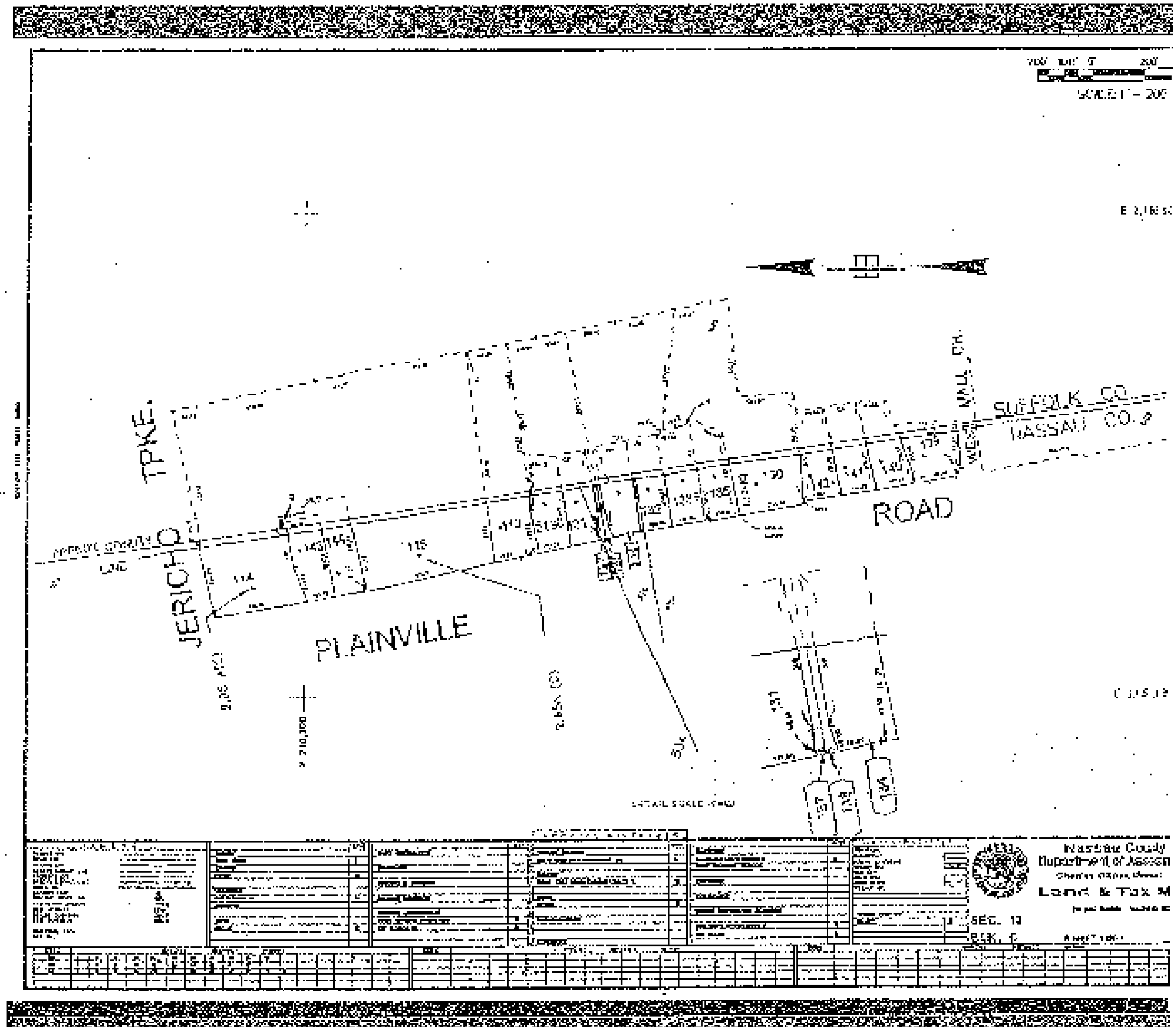
G.F.L.A. 0
S.F.L.A. 0
---- DWELLING COMPUTATIONS ----
BASE PRICE 0
BSMNT 0
HEAT 0
PLUMBING(TOT-) 0
ATTIC 0
OTH FEATURES 0
ADDITIONS 0
SUB TOTAL 0
GRADE FACTOR X 0.00
C & D FACTOR 0.00
CDU
RCN R&F .00 0
PERCENT GOOD X 0%
RCNLD R&F .00 0

OBY & MISC IMP VALU 0
GROSS IMPRV. 0
TOT CARD VALUE 0
----- PARCEL SUMMARY VALUE ----
COST LAND VALUE 1,079,430
COST BLDG VALUE 0
TOTAL COST VALUE 1,079,430

---------- C U R R E N T A P P R A I S E D V A L U E S ----------
CURRENT LAND 1,079,430 BUILDING 0 TOTAL 1,079,430
RVW CD 1 COST APPRAC RSN REV REVAL VALUE DT 18-SEP-03 ID
STATUS 7
ESTIMATE LAND ______ BUILDING __________ TOTAL __________
REVIEW CODE RSN DATE ID
PREV ASMT LAND: BUILDING TOTAL:

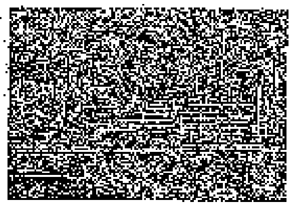
Click here to download viewer if you have difficulty viewing tax map

Page: 1 2



Department Home | Property Search | Map | Land Use Codes | Main Page | Help

Section	13	**Block**	D	**Lot**	115	**Condo-Bldg**		**Condo Unit**		**Town**	Oyster Bay
Address	Plainville Rd, Woodbury, 11797										
Village						**School**	Woodbury				



Enlarge photos

View Area Maps

View Tax Ma

Market Value | Sale Comparables | General and School Taxes | Property Description

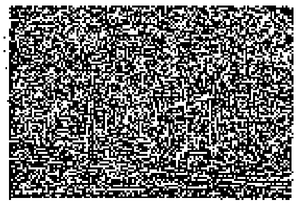
		Values used for County/Town '05' and School ('04-05')	Values used for County/Town '06' and School ('05-06')	Values u County/Tow School ('
Appraised Values	Land	$406,900	$849,600	$1,079,600
	Building	$0	$0	$0
	Total	$406,900	$849,600	$1,079,600
% of Appraised Value *		1%	0.5%	0.25%
Assessed Value **	Land	4069	4248	2699
	Building	0	0	0
	Total	4069	4248	2699

* The Board of Assessors has chosen to establish the assessed value as a percentage of appraised value. This percentage may vary l

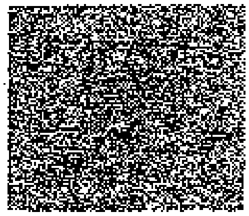
** May include transitional assessments. Any increase in value from the prior tax year (excluding new construction and renovations) fo Class IV properties will be phased-in by equal amounts over a five year period. Class II includes: apartments (buildings with 4 or more cooperatives, and high-rise condominiums (greater than 3 stories).

Department Home | Property Search | Map | Land Use Codes | Main Page | Help

Section	13	Block	D	Lot	114	Condo-Bldg		Condo Unit		Town	Oyster Bay
Address	Jericho Tpke, Huntington, 11743										
Village						School	Woodbury				



Enlarge photos



View Area Maps

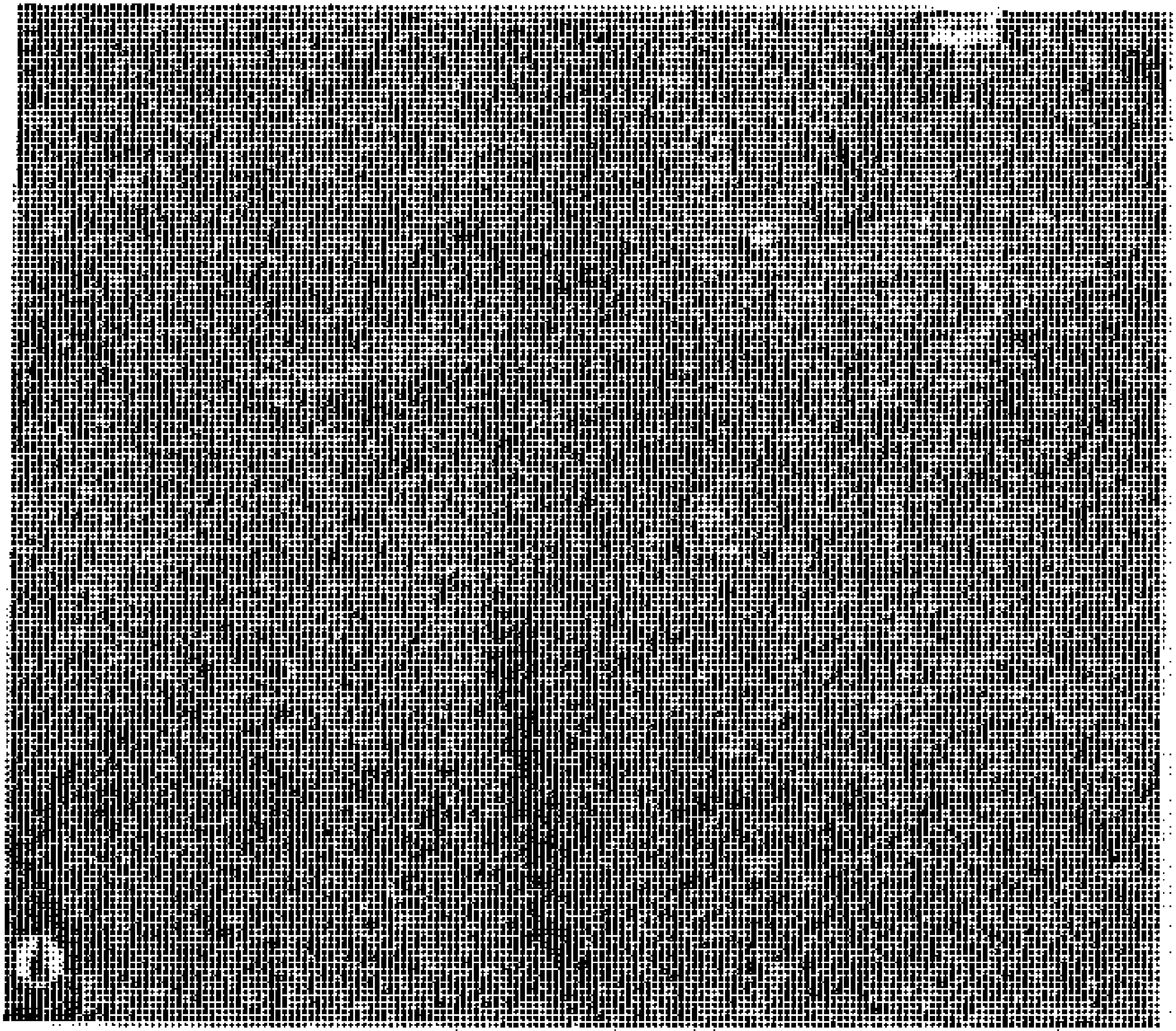
View Tax Map

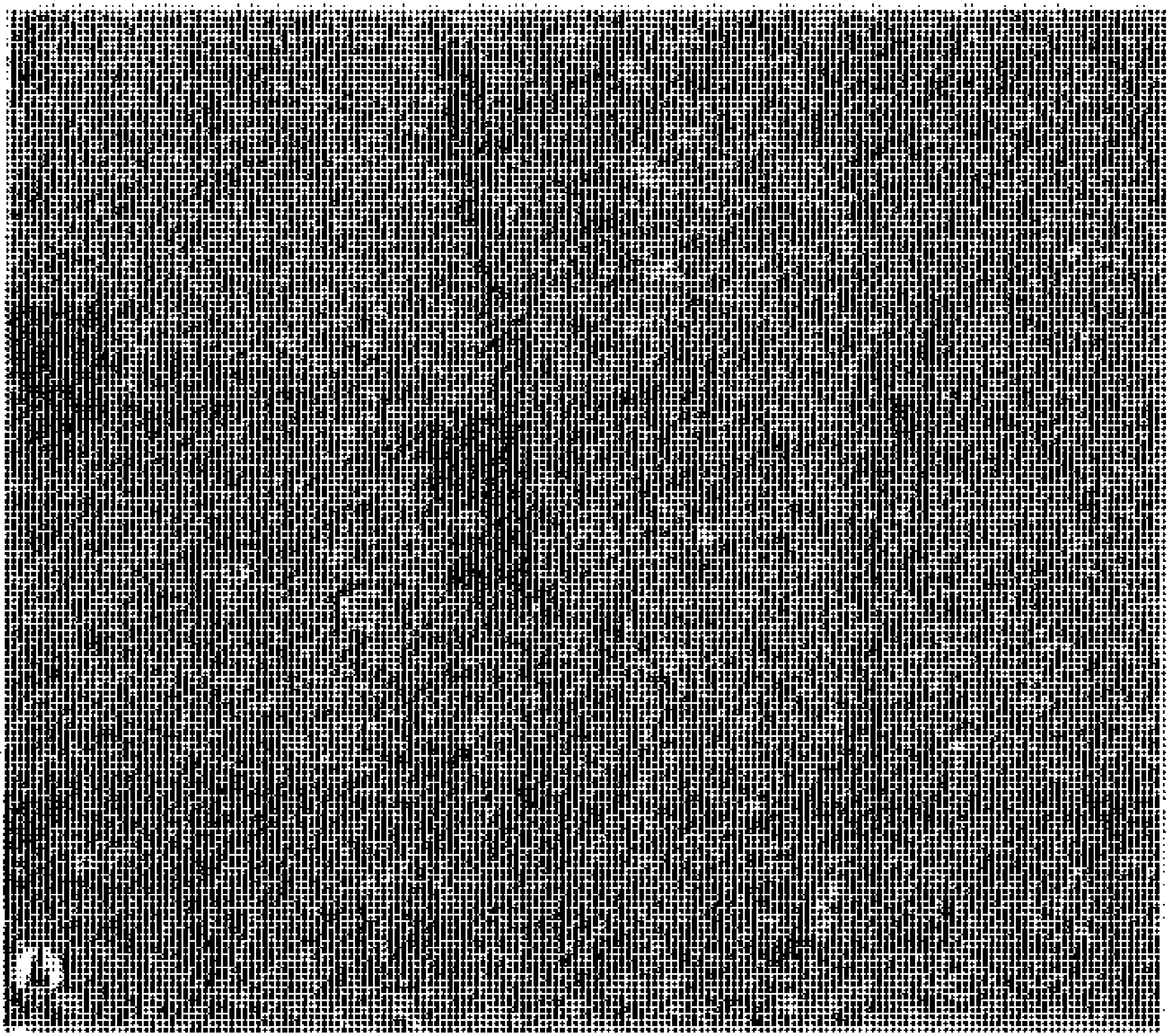
Market Value | Sale Comparables | General and School Taxes | Property Description

		Values used for County/Town '05' and School ('04-05')	Values used for County/Town '06' and School ('05-06')**	Values u County/Tow School ('
Appraised Values	Land	$385,300	$819,000	$973,600
	Building	$0	$0	$0
	Total	$385,300	$819,000	$973,600
% of Appraised Value *		1%	0.5%	0.25%
Assessed Value **	Land	3853	4095	2434
	Building	0	0	0
	Total	3853	4095	2434

* The Board of Assessors has chosen to establish the assessed value as a percentage of appraised value. This percentage may vary

** May include transitional assessments. Any increase in value from the prior tax year (excluding new construction and renovations) fo Class IV properties will be phased-in by equal amounts over a five year period. Class II includes: apartments (buildings with 4 or more cooperatives, and high-rise condominiums (greater than 3 stories).





TOWN OF OYSTER BAY

Inter-Departmental Memo

March 10, 1998

To: DIVISION OF BUILDING

From: DIVISION OF PLANNING

Subject: PETITION OF MANORCARE
CHANGE OF ZONE
496 WEST JERICHO TPKE.
WOODBURY

Attached hereto, please [illegible] the above-
captioned Town Board [illegible]

S 13

You are requested to re[illegible] classification.
section, block and lot [illegible]

B D

L 114

Zone B

R.
OF PLANNING

PLM/LCW/gf
Attachments

LAZER, APTHEKER, FELDMAN
ROSELLA & YEDID, LLP

TOWN BOARD : TOWN OF OYSTER BAY
COUNTY OF NASSAU : STATE OF NEW YORK
--X

In the Matter of the Application of
ManorCare Health Services, Inc. and
John J. Dougal,

VERIFIED PETITION

For a Change of Zone from B
Residential to F Business on a parcel
of property known as 496 West Jericho
Turnpike, Woodbury, New York.

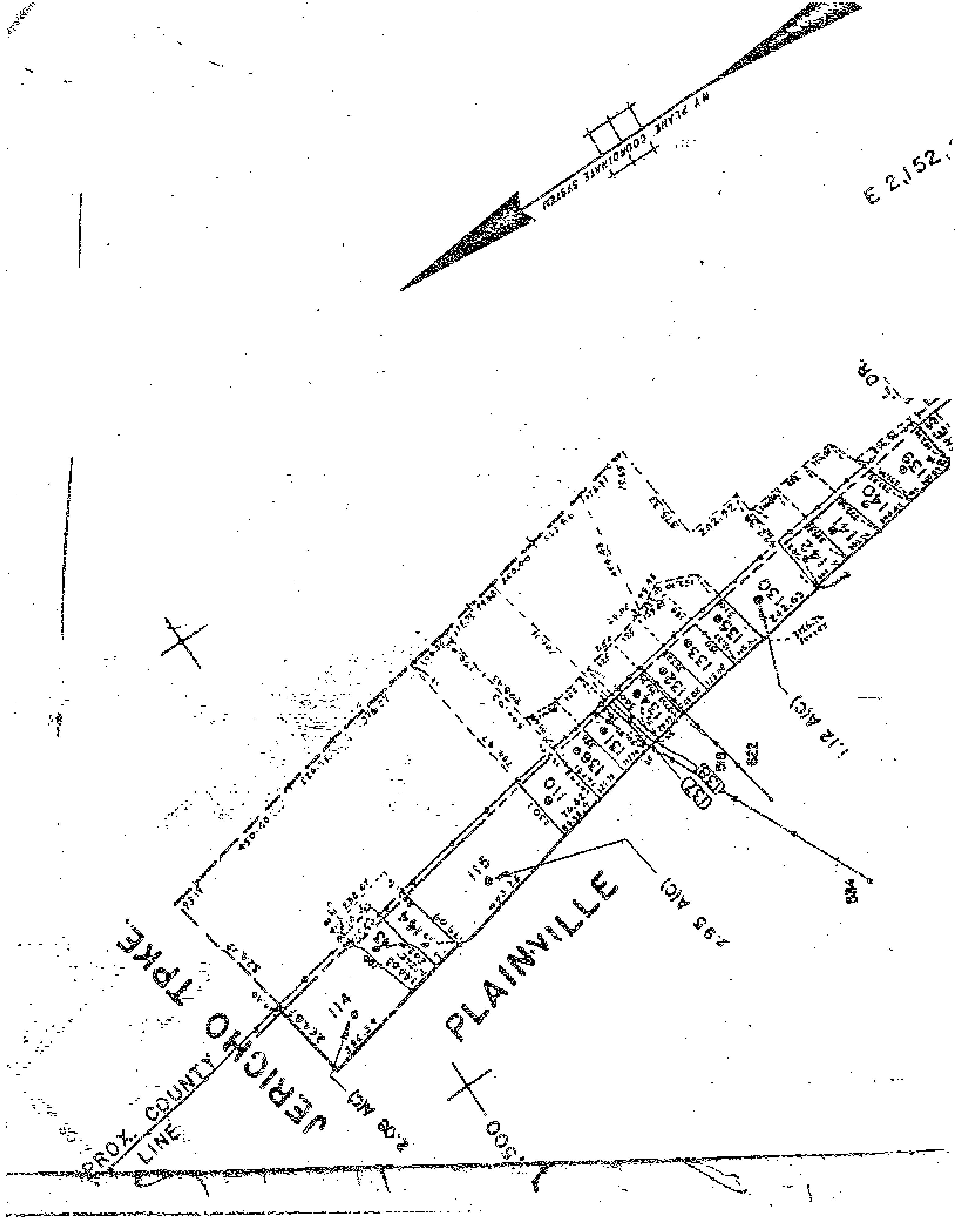
--X

Petitioner ManorCare Health Services, Inc., by its attorneys, Lazer, Aptheker, Feldman, Rosella & Yedid, LLP, as and for its verified petition states the following:

1. The fee owner of 496 West Jericho Turnpike, Woodbury, New York (the "premises") is John J. Dougal, who has verified the contents of this petition. ManorCare Health Services, Inc. is the contract vendee of the premises.

2. The metes and bounds description of the premises is as follows:

> ALL that certain plot, piece or parcel of land situate, lying and being in the Town of Oyster Bay, County of Nassau and State of New York, bounded and described as follows:
>
> BEGINNING at the intersection of the Southerly side of Jericho Turnpike with the Easterly side of Plainview Road;
>
> RUNNING THENCE along the Southerly side of Jericho Turnpike North 88 degrees 22 minutes



NY PLANE COORDINATE SYSTEM
JERICHO TPKE
PLAINVILLE
COUNTY LINE
2.95 A(C)
1.12 A(C)
2.8 A(C)

RESOLUTION NO.645-99

Meeting of October 5, 1999

WHEREAS, MANORCARE HEALTH SERVICES, INC., contract vendee, and JOHN J. DOUGAL, fee owner, applied for a Change of Zone from a "B" Residence District to an "F" Neighborhood Business, to allow construction of a sixty (60) bed, 27,180 square foot residential care facility on approximately 2.24 acres, at Woodbury, Town of Oyster Bay, County of Nassau, State of New York, described as Section 13, Block D, Lot 114 on the Land and Tax Map of Nassau County; and

WHEREAS, a duly advertised public hearing on said Petition was held by the Town Board of the Town of Oyster Bay on June 22, 1999; and

WHEREAS, David Lazer, attorney for the applicants, by letter dated September 8, 1999, requests the withdrawal of the above mentioned application,

NOW, THEREFORE, BE IT RESOLVED, That the application of MANORCARE HEALTH SERVICES, INC., contract vendee, and JOHN J. DOUGAL, fee owner, for a Change of Zone from a "B" Residence District to an "F" Neighborhood Business to allow construction of a sixty (60) bed, 27,180 square foot residential facility on approximately 2.24 acres, at Woodbury, New York, described as Section 13, Block D, Lot 114, is hereby WITHDRAWN WITH PREJUDICE.

The foregoing resolution was declared adopted after a poll of the members of the Board; the vote being recorded as follows:

Supervisor Venditto	Aye
Councilman Delligatti	Aye
Councilman Symons	Aye
Councilman Muscarella	Aye
Councilman Altimari	Aye
Councilwoman Preston	Aye
Councilman Masseli	Aye

cc: Supervisor
Town Attorney
Comptroller(2)
Building Division
Planning & Development
Env.Control

Reviewed By
Office of Town Attorney

THOMAS S. SUOZZI
COUNTY EXECUTIVE

JOHN R. SPECHT
FIRE MARSHAL

RECEIVED
N. C. FIRE COMMISSION

2005 JUL 20 A 9:49

NASSAU COUNTY FIRE COMMISSION
OFFICE OF FIRE MARSHAL
899 JERUSALEM AVENUE
P.O. BOX 128
UNIONDALE, NEW YORK 11553
516-566-5200

APPLICATION FOR PUBLIC ACCESS TO RECORDS

TO: Records Access Officer

DATE: July 19, 2005

I hereby apply to inspect the following record: (Exact address including Number & Street)

History of storage tank registration (above and underground), documentation regarding the storage or handling of chemical or toxic materials and flammables, NCFM inspection reports, violations of NCFM codes for Dougal Farm Property
1130 West Jericho Turnpike
Woodbury, New York

Reason for inspection: (Be specific)

Information is necessary to complete Environmental Assessment for property

Karen Schwarz
Name (Please Print)

Pending Litigation YES [ ] NO [X]

Karen Schwarz
Signature

Person or Firm your office represents

Freudenthal & Elkowitz
Consulting Group, Inc.
Representing (Business Name)

Mailing Address: 368 Veterans Memorial Highway
Commack, New York 11725

Address

Phone No.: (631) 499-2222

FOR FIRE MARSHAL USE ONLY

[ ] Approved

[X] Denied for reason(s) checked

[ ] Confidential Disclosure - Part of Investigatory Files

[ ] Unwarranted Invasion of Personal Privacy

[ ] Record of which this Agency is Legal Custodian, cannot be found

[ ] Record is not Maintained by this Agency

[ ] Exempted by Statute other than Freedom of Information Act

[X] Other No applicable info

Signature

FM
Title

7/21/05
Date

NOTICE: You have a right to appeal denial of this application to the head of this agency.
Fire Marshal ______________, 899 Jerusalem Avenue, PO Box 128, Uniondale, NY 11553, who must fully explain his reasons for such denial in writing within seven days of receipt of an appeal.

I hereby Appeal: ______________
Signature

Date

FMACCESS[011491]

GENERAL INSPECTION 566-5256 * HAZ MAT 566-5254 * INDUSTRIAL 566-5277 * SCHOOLS 566-5272
INSTITUTIONAL 566-5251 * INVESTIGATIONS 566-5216 * LICENSE & PERMITS 566-5241

ENG-05-170

THOMAS S. GULOTTA
COUNTY EXECUTIVE

JOHN R. SPEICHT
FIRE MARSHAL

NASSAU COUNTY FIRE COMMISSION
OFFICE OF FIRE MARSHAL
899 JERUSALEM AVENUE
P.O. BOX 128
UNIONDALE NEW YORK 11553
516-566-5250

APPLICATION FOR PUBLIC ACCESS TO RECORDS

TO: Records Access Officer

DATE: July 19, 2005

I hereby apply to inspect the following record: (Exact address including Number & Street)

History of storage tank registration (above and underground), documentation regarding the storage or handling of chemical or toxic materials and flammables, NCFM inspection reports, violations of NCFM codes for No Number Jericho Turnpike and No Number Plainview Road (AKA Southeast corner of Jericho Turnpike and Plainview Road, Woodbury, N.Y.)

Reason for Inspection: (Be specific)

Information is necessary to complete Environmental Assessment for property

Karen Schwarz
Name (Please Print)

Pending Litigation YES ☐ NO ☒

Karen P. Schwarz
Signature

Person or Firm your office represents

Freudenthal & Elkowitz Consulting Group, Inc.
Representing (Business Name)

Address

Mailing Address: 368 Veterans Memorial Highway Commack, New York 11725

Phone No.: (631) 499-2222

FOR FIRE MARSHAL USE ONLY

☐ Approved

☐ Denied for reason(s) checked

☐ Confidential Disclosure - Part of Investigatory Files

☐ Unwarranted Invasion of Personal Privacy

☐ Record of which this Agency is Legal Custodian, cannot be found

☐ Record is not Maintained by this Agency

☐ Exempted by Statute other than Freedom of Information Act

☐ Other ______

Signature ______ Title ______ Date ______

NOTICE: You have a right to appeal denial of this application to the head of this agency.
Fire Marshal ______, 899 Jerusalem Avenue, PO Box 128, Uniondale, NY 11553, who must fully explain his reasons for such denial in writing within seven days of receipt of an appeal.

I hereby Appeal: ______ Signature ______ Date

FMACCESS(01/401)

GENERAL INSPECTION 566-5256 • HAZ MAT 566-5254 • INDUSTRIAL 566-5277 • SCHOOLS 566-5272
INSTITUTIONAL 566-5251 • INVESTIGATIONS 566-5218 • LICENSE & PERMITS 566-5241

ENG-05-170

APPLICATION FOR PUBLIC ACCESS TO ENVIRONMENTAL HEALTH RECORDS
NASSAU COUNTY DEPARTMENT OF HEALTH

To: Records Access Officer
Nassau County Department of Health
240 Old Country Road
Mineola, New York 11501

Date of Request: July 19, 2005

Fax: (516) 571-1475

I, Karen Schwarz
Print Your Name

Karen Schwarz
Signature

REPRESENTING Firm: Freudenthal & Elkowitz Consulting Group, Inc.   Client: ____

Your Mailing Address: 368 Veterans Memorial Highway, Commack, NY 11725

Phone Number: (631) 499-2222   Fax Number: (631) 499-5928

HEREBY APPLY TO INSPECT RECORDS FOR THE FOLLOWING ESTABLISHMENT:
Complete One Application for Each Establishment

Name: Dougal Farm Property   Previous Name: N/A

Address: 1130 West Jericho Turnpike, Woodbury, New York
Number, Street, Community, Zip Code (MUST BE ACCURATE)   *(We cannot identify parcels by their Section/Block/Lot)*

Is the Establishment still in business? Yes ☑ No ☐   If no, enter year closed: ____

ADDITIONAL RECORD(S) INFORMATION *(to assist with records search)*: ____

PLEASE CHECK ONLY THE SPECIFIC BOX(ES) FOR THE AREA(S) WITHIN THE BUREAU(S) PERTAINING TO YOUR REQUEST.

Note: Requests for Lead Files MUST use separate FOIL Form available by calling (516) 571-4563.
Note: Requests for Animal Bite Files MUST use separate Animal Bite FOIL Form available by calling (516) 571-2290.
Note: Requests for West Nile Virus, Mosquito Complaint or Pesticide Notification Files MUST use separate FOIL Form available from Records Access Officer (516) 571-3601.
Note: Requests for Realty Subdivision, Commercial On-Site Sewage Disposal or Source Water Assessment Program (SWAP) MUST use separate Engineering FOIL Form by calling (516) 571-3323.

Bureau of Environmental Protection (has files concerning):
- ☐ Drinking Water, Public Water Supply Well Data
- ☐ Bottled Water (COMPLAINTS ONLY)
- ☑ Sewer Connections, Underground Injection Control (UIC)
- ☑ Hazardous Waste Sites
- ☑ Petroleum & Chemical Tanks, Bulk Storage
  - ☑ Including Spills and Leaks
  - ☑ Medical Wastes
- ☐ Road Salt Storage
- ☑ Homeowner Confirmation of Oil Tank Abandonment/Removal
- ☐ Air Emission Permits

Bureau of Environmental Investigation (has files concerning):
- ☐ Odors
- ☐ Asbestos
- ☐ Tobacco Smoking
- ☐ Tobacco Sales to Minors
- ☐ Housing
- ☐ Rodent Control
- ☐ Heat
- ☐ General Nuisance

Bureau of Environmental Sanitation (has files concerning):
- ☐ Food Protection
- ☐ Bathing Facilities
- ☐ Temporary Residences
- ☐ Summer Camps
- ☐ Radiological Health

FOR HEALTH DEPARTMENT USE ONLY BELOW THIS LINE

Signature ____   Date ____   ☐ Approved ☐ Denied

1/14/05

APPLICATION FOR PUBLIC ACCESS TO ENVIRONMENTAL HEALTH RECORDS
NASSAU COUNTY DEPARTMENT OF HEALTH

To: Records Access Officer
Nassau County Department of Health
240 Old County Road
Mineola, New York 11501

Date of Request: July 19, 2005

Fax: (516) 571-1475

Karen Schwarz
Print Your Name

Karen P. Schwarz
Signature

REPRESENTING Firm: Freudenthal & Elkowitz Consulting Group, Inc.   Client: ______

Your Mailing Address: 368 Veterans Memorial Highway, Commack, NY 11725

Phone Number: (631) 499-2222   Fax Number: (631) 499-5928

HEREBY APPLY TO INSPECT RECORDS FOR THE FOLLOWING ESTABLISHMENT:
Complete One Application for Each Establishment

Name: NCTM Section 13 - Block 9 - Lot Nos. 114 & 115   Previous Name: N/A

Address: No Number Jericho Turnpike and No Number Plainview Road (aka Southeast Corner of Jericho Turnpike and Plainview Road) Woodbury, New York
Number, Street, Community, Zip Code (MUST BE ACCURATE) *(We cannot identify parcels by their Section/Block/Lot)*
Is the Establishment still in business? Yes ☐ No ☐   If no, enter year closed ______

ADDITIONAL RECORD(S) INFORMATION *(to assist with records search)*: ______

PLEASE CHECK ONLY THE SPECIFIC TOPIC(S) FOR THE AREA(S) WITHIN THE BUREAU(S) PERTAINING TO YOUR REQUEST.

Note: Requests for Lead Files MUST use separate Lead FOIL Form available by calling (516) 571-4962.
Note: Requests for Animal Bites Files MUST use separate Animal Bites FOIL Form available by calling (516) 571-2180.
Note: Requests for West Nile Virus, Mosquito Spraying or Pesticide Notification Files MUST use separate FOIL Form available from Records Access Officer (516) 571-3621.
Note: Requests for Realty Subdivision, Commercial Site Sewage Disposal or Source Water Assessment Program (SWAP) MUST use separate Engineering FOIL Form by calling (516) 571-3523.

Bureau of Environmental Protection (has files concerning):

☐ Drinking Water, Public Water Supply Well Data
☐ Bottled Water (COMPLAINTS ONLY)
☑ Sewer Connections, Underground Injection Control (UIC)
☑ Hazardous Waste Sites
☑ Petroleum & Chemical Tanks, Bulk Storage
☑ including Spills and Leaks
☑ Medical Waste
☐ Road Salt Storage
☑ Homeowner Confirmation of Oil Tank Abandonment/Removal
☐ Air Emission Permits

Bureau of Environmental Investigation (has files concerning):

☐ Odors
☐ Asbestos
☐ Tobacco Smoking
☐ Tobacco Sales to Minors
☐ Housing
☐ Rodent Control
☐ Heat
☐ General Nuisance

Bureau of Environmental Sanitation (has files concerning):

☐ Food Protection
☐ Bathing Facilities
☐ Temporary Residences
☐ Summer Camps
☐ Radiological Health

FOR HEALTH DEPARTMENT USE ONLY BELOW THIS LINE

Signature ______   Date ______   ☐ Approved ☐ Denied

7/19/05

APPENDIX D

EDR™ Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Ms. Beth Christensen
First Search Technology
10 Cottage Street
Norwood, MA 02062

Order Date: 7/19/2005 **Completion Date:** 7/19/2005

Inquiry #: 1469462.1

P.O. #: na

Site Name: Jericho Tpke

Address: Jericho Tpke

City/State: Huntington, NY 11743

Cross Streets:

Customer Project: na

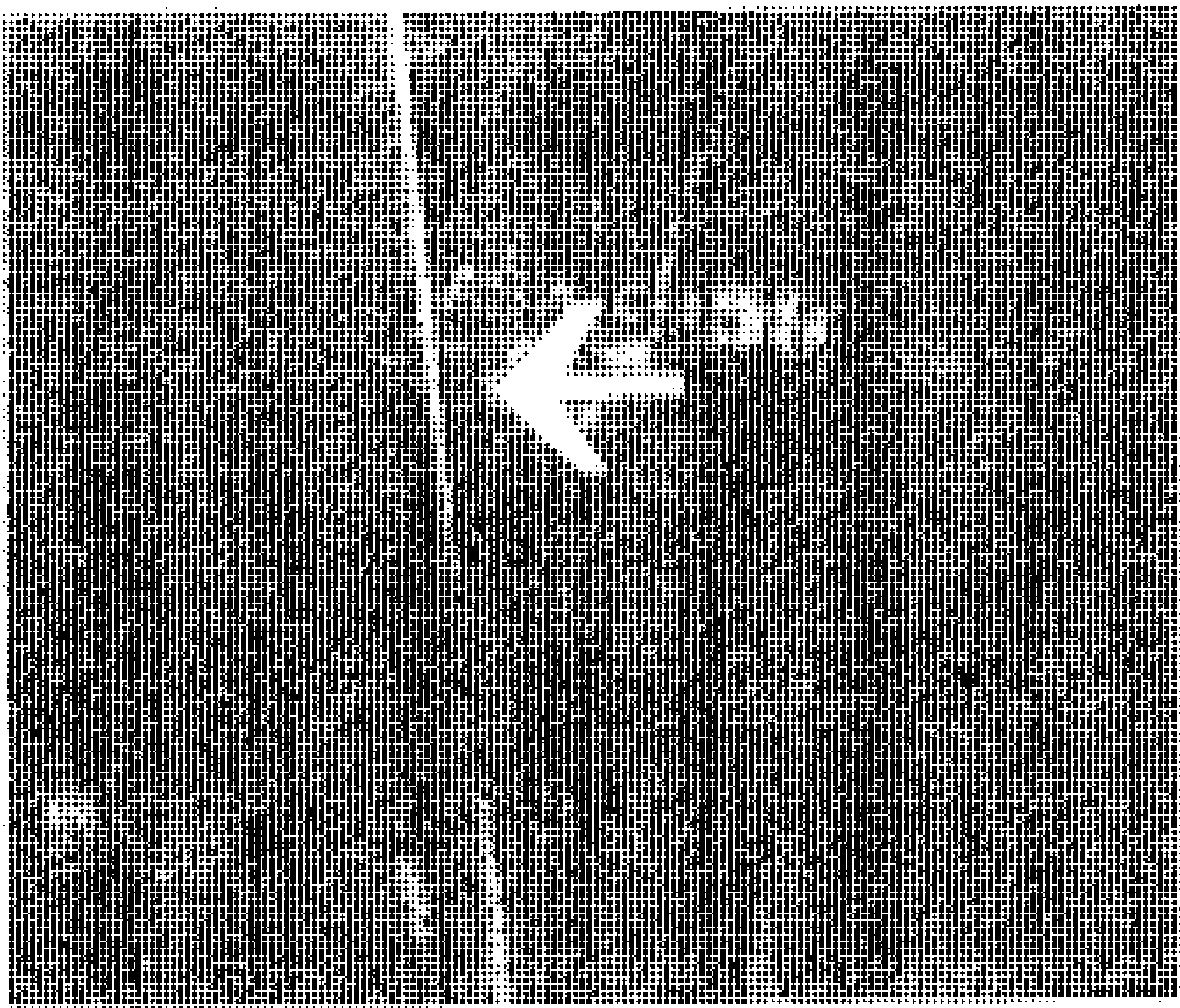
1012696EDR 781-551-0470

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

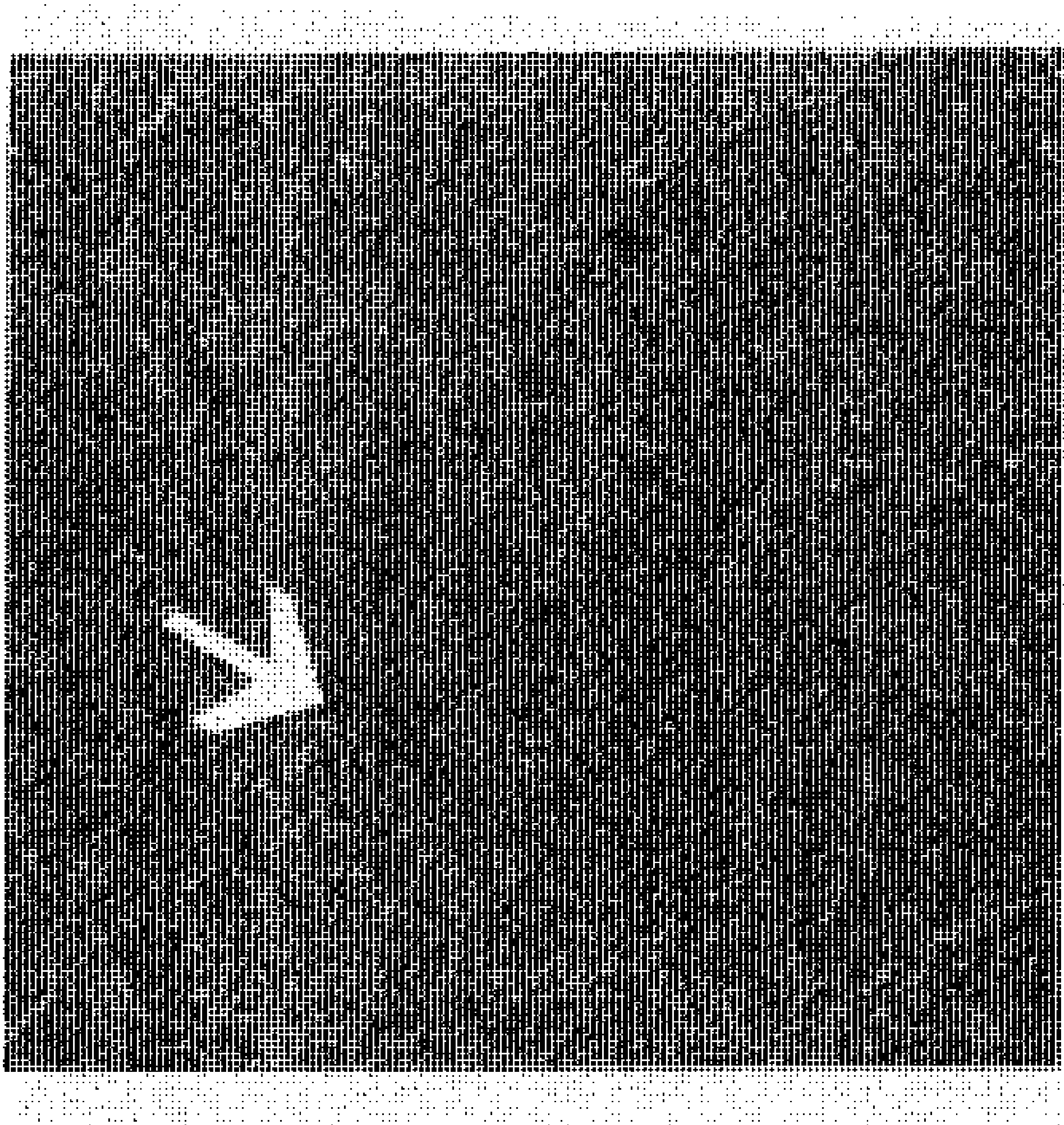
NO COVERAGE

NOTE: The reseller MUST deliver this report in its entirety to its client.

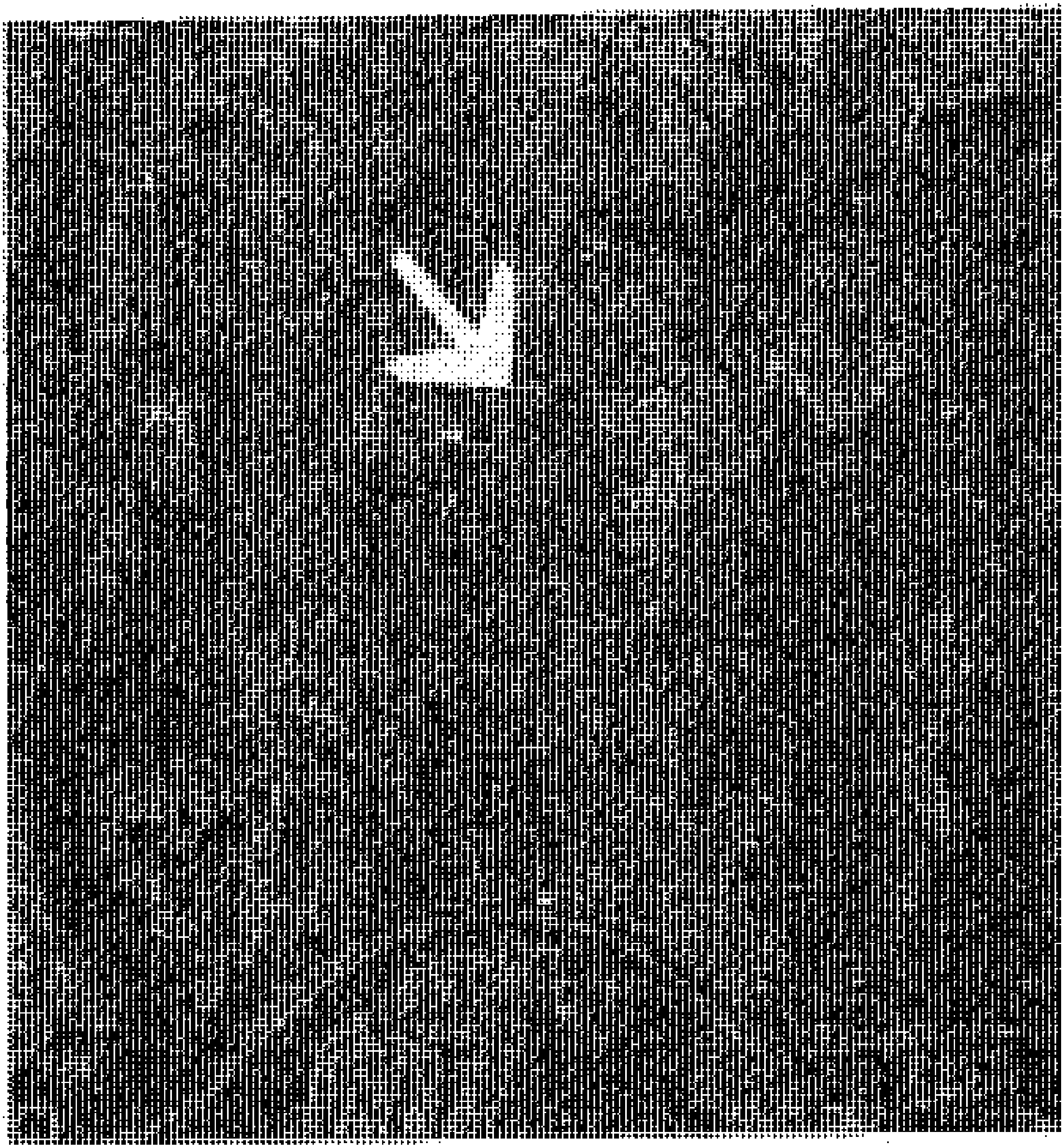
APPENDIX E



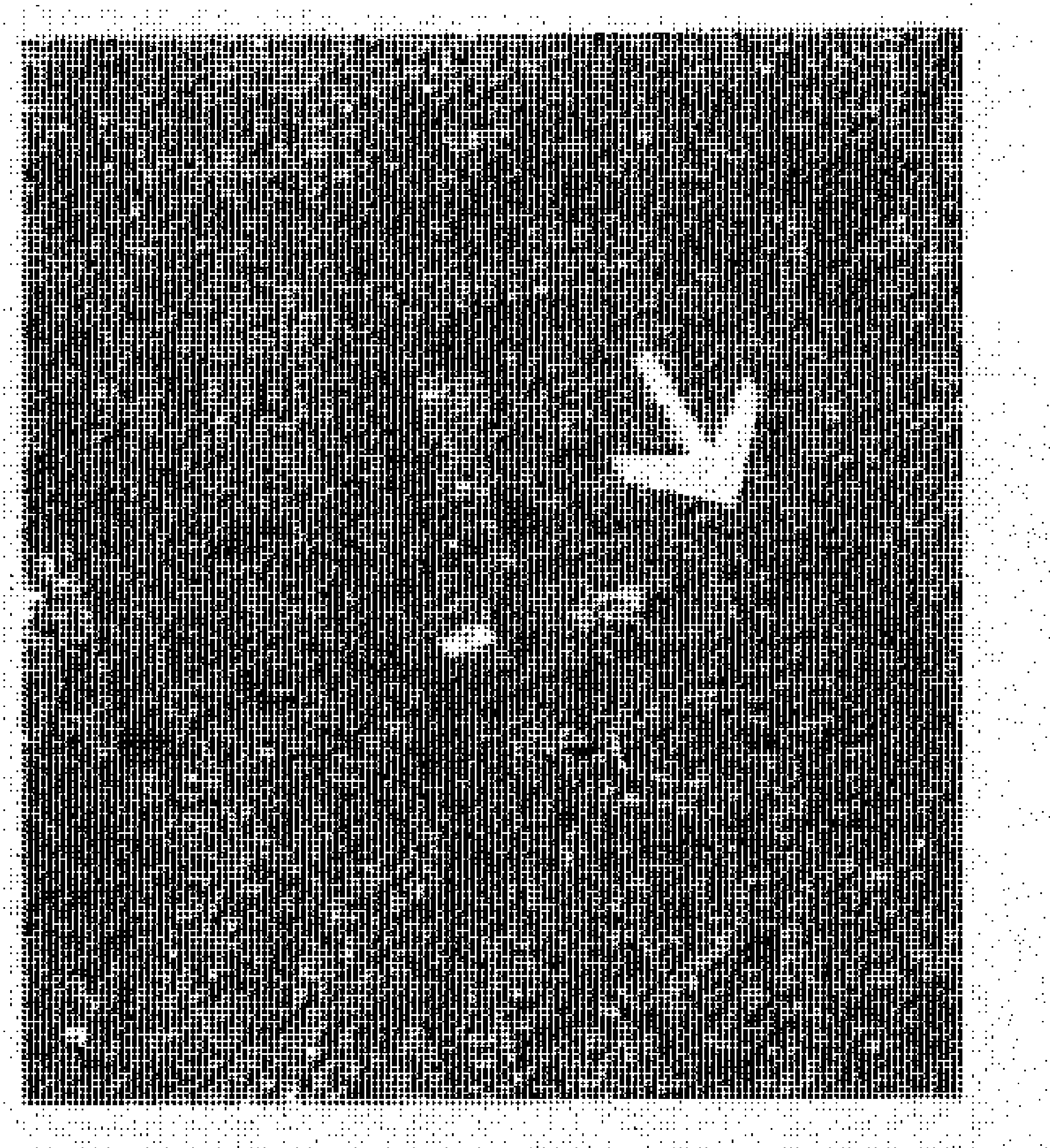
1947 Aerial Photograph



1970 Aerial Photograph

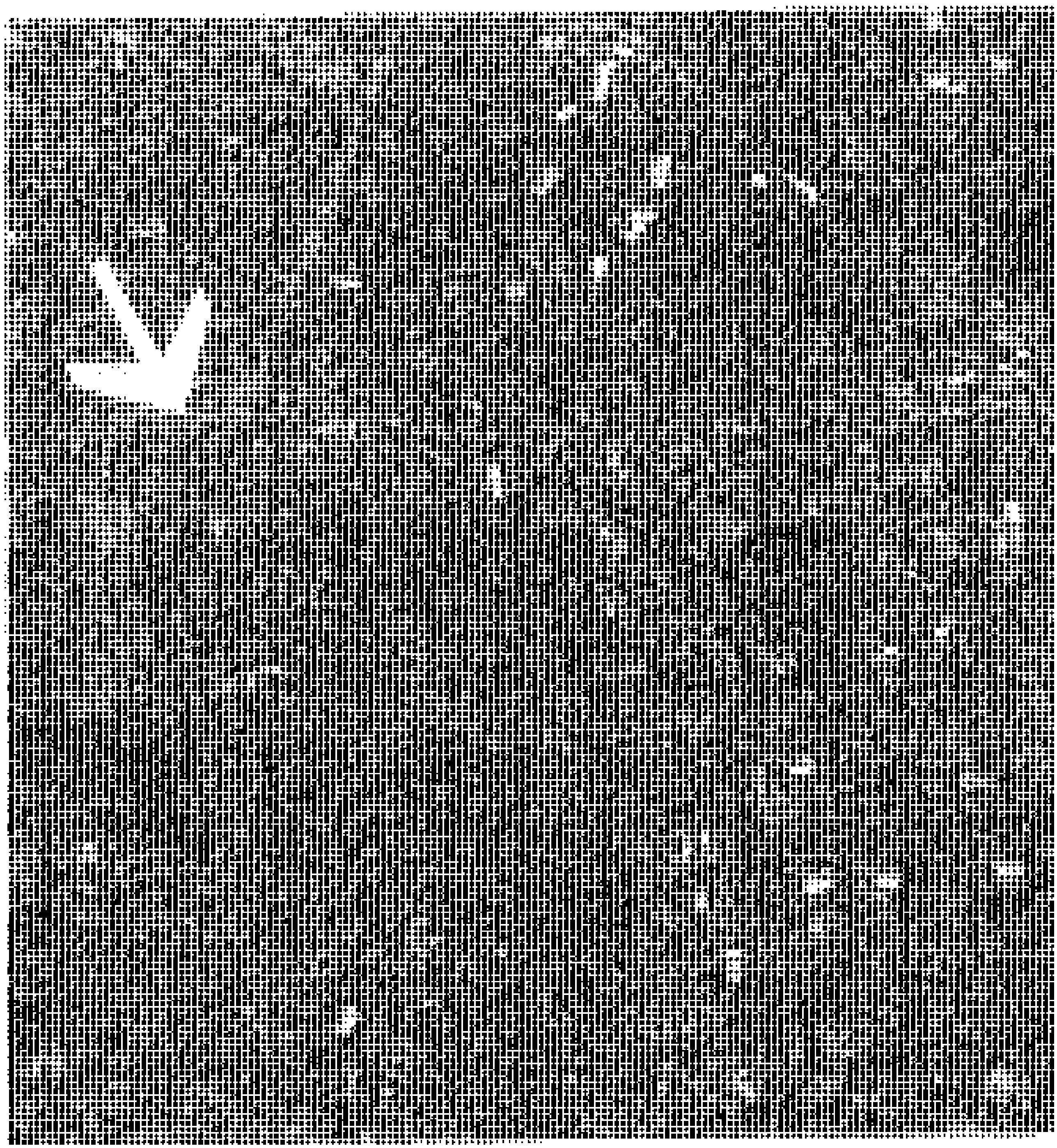


1980 Aerial Photograph



1988 Aerial Photograph

1996 Aerial Photograph



2001 Aerial Photograph

APPENDIX F

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

TARGET PROPERTY:

JERICHO TPKE

HUNTINGTON NY 11743

Job Number: KRI-05

PREPARED FOR:

Freudenthal & Elkowitz Consulting Group, Inc.

368 Veterans Memorial Highway

Commack, NY 11725

07-18-05

Environmental FIRSTSEARCH

Tel: (201) 848-4789 *Fax: (201) 848-4789*

Environmental FirstSearch
Search Summary Report

Target Site: JERICHO TPKE
HUNTINGTON NY 11743

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	05-17-05	1.00	0	0	0	0	0	0	0
CERCLIS	Y	04-14-05	0.50	0	0	0	0	-	0	0
NFRAP	Y	06-23-04	0.25	0	0	0	-	-	0	0
RCRA TSD	Y	02-14-05	1.00	0	0	0	0	0	0	0
RCRA COR	Y	02-14-05	1.00	0	0	0	0	0	0	0
RCRA GEN	Y	02-14-05	0.25	0	0	0	-	-	1	1
RCRA NLR	Y	02-14-05	0.25	0	0	0	-	-	3	3
ERNS	Y	12-31-04	0.25	0	0	0	-	-	6	6
NPDES	Y	01-16-05	0.25	0	0	0	-	-	11	11
FINDS	Y	07-16-98	0.25	0	0	0	-	-	4	4
TRIS	Y	06-08-05	0.25	0	0	0	-	-	0	0
State Sites	Y	06-01-05	1.00	0	0	0	0	0	0	0
Spills-1990	Y	07-12-05	0.50	0	1	1	19	-	94	115
Spills-1980	Y	10-18-00	0.50	0	1	0	1	-	30	32
SWL	Y	01-01-04	0.50	0	0	0	0	-	2	2
Permits	Y	05-01-99	0.35	0	0	0	-	-	44	44
Other	Y	01-01-02	0.25	0	0	0	-	-	0	0
REG UST/AST	Y	01-01-02	0.25	0	0	3	-	-	30	33
Leaking UST	Y	07-12-05	0.50	0	0	0	4	-	11	15
Nuclear Permits	Y	04-30-99	0.50	0	0	0	0	-	0	0
Releases(Air/Water)	Y	12-31-04	0.25	0	0	0	-	-	21	21
HMIRS	Y	03-31-03	0.25	0	0	0	-	-	1	1
NCDB	Y	08-30-04	0.25	0	0	0	-	-	0	0
PADS	Y	12-21-04	0.25	0	0	0	-	-	0	0
Federal Other	Y	05-13-05	0.25	0	0	0	-	-	1	1
Brownfield	Y	03-17-04	0.25	0	0	0	-	-	0	0
Receptors	Y	01-01-95	0.50	0	0	0	0	-	0	0
- TOTALS -				0	2	4	24	0	259	289

Environmental FirstSearch
Site Information Report

Request Date:	07-18-05	**Search Type:**	COORD
Requestor Name:	Stephen Kaplan	**Job Number:**	KRI-05
Standard:	ASTM		

TARGET ADDRESS: JERICHO TPKE
HUNTINGTON NY 11743

Demographics

Sites: 289 **Non-Geocoded:** 259 **Population:** NA

Radon: OF THE 29 HOMES TESTED, THE AVG. PCI/L LEVEL WAS 2.5

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-73.45175	-73:27:6	**Easting:**	630570.847
Latitude:	40.819379	40:49:10	**Northing:**	4519648.486
			Zone:	18

Comment

Comment: HUNTINGTON/WOODBURY HORSE FARM

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
11797	WOODBURY	NY	0.00 –	Y
11803	PLAINVIEW	NY	0.98 SE	N

Services:

	Requested?	Date
Sanborns	Yes	07-18-05
Aerial Photographs	No	
Topographical Maps	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRJ-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
2	SPILLS	ALEX HONG CHEOL NAM RES 9710322/CLOSED 05/07/1998	22 ROUND SWAMP ROAD HUNTINGTON NY 11743	0.48 SE	N/A	1
3	SPILLS	BARKER RESIDENCE 9312849/CLOSED 10/25/1994	1 COLONIAL DRIVE HUNTINGTON NY 11743	0.32 NE	N/A	2
4	SPILLS	CAMHI RESIDENCE 9409070/CLOSED 10/07/1994	6 STAFFORD AVENUE OYSTER BAY NY 11797	0.14 NW	N/A	3
1	SPILLS	COMP IMPORT OF SMITHTOWN 0225274/CLOSED	464 WEST JERICHO TURNPIKE HUNTINGTON NY 11743	0.46 NE	N/A	4
5	SPILLS	DR ASAD RESIDENCE 9712940/CLOSED 03/16/1998	87 EAST ARTISAN AVENUE HUNTINGTON NY 11743	0.39 SE	N/A	5
6	SPILLS	FELDMAN RESIDENCE 0405276/CLOSED	95 EAST ARTISON AVENUE WEST HILLS NY 11743	0.40 SE	N/A	6
7	SPILLS	FRANCIS LARKIN RESIDENCE 9603901/CLOSED 06/21/1996	21 PINE DRIVE OYSTER BAY NY 11797	0.50 NW	N/A	7
2	SPILLS	HONG NAM RESIDENCE 9710393/CLOSED 12/10/1997	22 ROUND SWAMP ROAD HUNTINGTON NY 11743	0.48 SE	N/A	8
8	SPILLS	JOHN MCCAEDEN RESIDENCE 9012740/CLOSED 03/13/1991	2 COLONIAL DRIVE HUNTINGTON NY 11743	0.30 NE	N/A	9
9	SPILLS	LILCO 9113189/CLOSED 03/30/1992	SHADOW LANE & BREA OYSTER BAY NY 11797	0.46 SW	N/A	10
10	SPILLS	MARGLANI RESIDENCE 0200406/CLOSED	39 ORCHARD COURT WOODBURY NY 11797	0.31 SW	N/A	11
11	SPILLS	MORRIS RESIDENCE 9413455/CLOSED 01/11/1995	3 PINE DRIVE OYSTER BAY NY 11797	0.31 NW	N/A	12
11	SPILLS	MORRIS RESIDENCE 9404424/CLOSED 07/01/1994	3 PINE DRIVE OYSTER BAY NY 11797	0.31 NW	N/A	13
12	SPILLS	PEARLMAN EWS RESIDENCE 0110358/CLOSED	14 SHADOW LANE WOODBURY NY 11797	0.45 SW	N/A	14
13	SPILLS	RESIDENCE 0310066/CLOSED	3 WEST MALL DRIVE HUNTINGTON NY 11743	0.49 SE	N/A	15
14	SPILLS	ROBERT LEON RESIDENCE 9411010/CLOSED 11/18/1994	1 SYCAMORE DRIVE OYSTER BAY NY 11797	0.50 NW	N/A	16
15	SPILLS	UNK 9303971/CLOSED 10/27/1993	JERICHO TPKE & RD SWAMP R HUNTINGTON NY 11743	0.35 NE	N/A	17
15	SPILLS	UNK 9503721/CLOSED 08/31/1995	ROUND SWAMP RD/RTE 25 HUNTINGTON NY 11743	0.35 NE	N/A	18
16	SPILLS	WEBER RESIDENCE 9415465/CLOSED 02/27/1995	8 CYPRESS DRIVE OYSTER BAY NY 11797	0.45 NW	N/A	19
15	SPILLS	9708973/CLOSED 06/30/2004	ROUND SWAMP ROAD/JERICHO HUNTINGTON STA NY 11743	0.35 NE	N/A	20
17	SPILLS	9906649/CLOSED 08/25/2000	3 STRATFORD AVENUE OYSTER BAY NY 11797	0.08 NW	N/A	21

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 GEOCODED: 30 NON GEOCODED: 259 SELECTED: 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
18	SPILLS80	HUNTINGTON UTILITIES 8601393/CLOSED	12 WEST MALL DRIVE HUNTINGTON NY 11743	0.49 SE	N/A	22
19	*SPILLS80*	*PROFESSIONAL TREE CARE 8604327/CLOSED*	*AVERY ROAD & RTE 25 WOODBURY NY 11797*	*0.02 NE*	*1*	*23*
20	UST	CONFIDENTIAL NAFM-292/NC FIRE MARSHAL	34 ELM ST OYSTER BAY NY 11797	0.23 NW	N/A	24
21	UST	CONFIDENTIAL NAFM-1113/NC FIRE MARSHAL	9 STAFFORD AVE OYSTER BAY NY 11797	0.21 NW	N/A	25
22	UST	CONFIDENTIAL NAFM-4782/NC FIRE MARSHAL	5 MAGNOLIA LN WOODBURY NY 11797	0.19 NW	N/A	26
2	LUST	ALEX HONG CHEOL NAM RES 9710322/CLOSED 05/07/1998	22 ROUND SWAMP ROAD HUNTINGTON NY 11743	0.48 SE	N/A	27
3	LUST	BARKER RESIDENCE 9312849/CLOSED 10/25/1994	1 COLONIAL DRIVE HUNTINGTON NY 11743	0.32 NE	N/A	28
5	LUST	DR ASAD RESIDENCE 9712940/CLOSED 03/16/1998	87 EAST ARTISAN AVENUE HUNTINGTON NY 11743	0.39 SE	N/A	29
2	LUST	HONG NAM RESIDENCE 9710293/CLOSED 12/18/1997	22 ROUND SWAMP ROAD HUNTINGTON NY 11743	0.48 SE	N/A	30

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	RCRAGN	NYSDOT BIN 1058259 NYR000095802/VGN	S OYSTERBAY RD OVER WOODBURY NY 11797	NON GC	N/A	31
	RCRANLR	BELL ATLANTIC-NY NYP000937540/NLR	WOODBURY RD/ 80 FT S OF HUNTINGTON NY 11743	NON GC	N/A	32
	RCRANLR	HUNTINGTON PARCEL NYD981562549/NLR	LOT 3 WINDSOR CORP PARK HUNTINGTON NY 11743	NON GC	N/A	33
	RCRANLR	NYSDOT BIN 1058259 NYR000095802/NLR	S OYSTERBAY RD OVER WOODBURY NY 11797	NON GC	N/A	34
	ERNS	LIPA 644942/FIXED FACILITY	POLE NO. 9 MILL DAM ROAD HUNTINGTON NY 11743	NON GC	N/A	35
	ERNS	M/V VENTURE 229276/UNKNOWN	HUNTINGTON BAY LONG ISLAND HUNTINGTON NY 11743	NON GC	N/A	36
	ERNS	TOWN OF HUNTINGTON 605955/HIGHWAY RELATED	HARBOR RIDGE ROAD CENTERPORT NY 11743	NON GC	N/A	37
	ERNS	595280/UNKNOWN	MOUTH OF HARBOR ON WEST SID HUNTINGTON NY	NON GC	N/A	38
	ERNS	553861/UNKNOWN	MCKINLEY STREET HUNTINGTON NY 11743	NON GC	N/A	39
	ERNS	591586/UNKNOWN	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	40
	NPDES	SELDEN CHANNEL LAUNDROMAT NY0210595/MINOR	HUNTINGTON NY 11743	NON GC	N/A	41
	NPDES	SUNOCO SER STA - HUNTINGTON NY0225932/MINOR	HUNTINGTON NY 11743	NON GC	N/A	42
	NPDES	NY0237591/MINOR	HUNTINGTON NY 11743	NON GC	N/A	43
	NPDES	NY0226840/MINOR	HUNTINGTON NY 11743	NON GC	N/A	44
	NPDES	NY0227315/MINOR	HUNTINGTON NY 11743	NON GC	N/A	45
	NPDES	NY0209325/MINOR	HUNTINGTON NY 11743	NON GC	N/A	46
	NPDES	NY0222453/MINOR	HUNTINGTON NY 11743	NON GC	N/A	47
	NPDES	NY0145211/MINOR	WOODBURY /T/ NY 11797	NON GC	N/A	48
	NPDES	NY0145027/MINOR	WOODBURY /T/ NY 11797	NON GC	N/A	49
	NPDES	NY0165808/MINOR	WOODBURY /T/ NY 11797	NON GC	N/A	50

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	NPDES	NY0215341/MINOR	WOODBURY /?/ NY 11797	NON GC	N/A	51
	FINDS	HUNTINGTON PARCEL NYD981562549	LOT 3 WINDSOR CORP. PARK HUNTINGTON NY 11743	NON GC	N/A	52
	FINDS	HUNTINGTON RIFLE & PISTOL CLUB NY0002141299	SPAGNOLI RD MELVILLE NY 11743	NON GC	N/A	53
	FINDS	ODGEN-ENVIRONMENTAL SERVICE NYD986979664	HUNTINGTON RRF - TOWN LINE HUNTINGTON NY 11743	NON GC	N/A	54
	FINDS	PHELSON PAINTING CO INC NYD012696563	SOUNDVIEW DR HUNTINGTON NY 11743	NON GC	N/A	55
	SPILLS	ALBERT MILLER 9102386/CLOSED 12/03/1998	RTE 110/NY AVENUE HUNTINGTON NY 11743	NON GC	N/A	56
	SPILLS	AUTO TECH 9805802/CLOSED 11/24/1999	SPRING STREET HUNTINGTON NY 11743	NON GC	N/A	57
	SPILLS	CANCOS TILE CORP 0000400/CLOSED 04/16/2000	RTE 25A MAIN STREET HUNTINGTON NY 11743	NON GC	N/A	58
	SPILLS	COMMERCIAL TRUCK 0311207/ACTIVE	HALLOWVEE ROAD HUNTINGTON NY 11743	NON GC	N/A	59
	SPILLS	EATONS NECK ROAD 9509046/CLOSED 11/27/1995	EAST SIDE OF ROAD HUNTINGTON NY 11743	NON GC	N/A	60
	SPILLS	ELL GREEN SOD FARM 9011259/CLOSED 01/25/1991	LITTLE PLAINS ROAD HUNTINGTON NY 11743	NON GC	N/A	61
	SPILLS	FIDDLERS GREEN DOCK 9904277/CLOSED 07/05/2001	FIDDLERS GREEN DRIVE HUNTINGTON NY 11743	NON GC	N/A	62
	SPILLS	FTRANIERI RESIDENCE 0501877/ACTIVE	196 WARNER ROAD HUNTINGTON NY	NON GC	N/A	63
	SPILLS	GULF HORIZON 0209211/CLOSED	EATONS NECK HUNTINGTON NY 11743	NON GC	N/A	64
	SPILLS	HALE SITE MARINA 9805678/CLOSED 08/07/1998	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	65
	SPILLS	HALESITE NORTH PARK 0111541/CLOSED	EAST SHORE ROAD HALESITE NY 11743	NON GC	N/A	66
	SPILLS	HARBOR MASTERS BUILDING 0225331/ACTIVE	NEW YORK AVENUE HALESITE NY 11743	NON GC	N/A	67
	SPILLS	HARBORSIDE 9225031/CLOSED 02/02/2000	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	68
	SPILLS	HUNTINGTON BAY 9602694/CLOSED 05/28/1996	SHORE DRIVE HUNTINGTON NY 11743	NON GC	N/A	69
	SPILLS	HUNTINGTON COACH 0087203/CLOSED 09/25/2000	PULASKI ROAD HUNTINGTON NY 11743	NON GC	N/A	70

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE HUNTINGTON NY 11743

JOB: KRI-05 HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 GEOCODED: 30 NON GEOCODED: 259 SELECTED: 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	SPILLS	HUNTINGTON HARBOR 9614902/CLOSED 08/14/1997	MILDAM ROAD HUNTINGTON NY 11743	NON GC	N/A	71
	SPILLS	HUNTINGTON HARBOR 9807061/CLOSED 10/07/1998	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	72
	SPILLS	HUNTINGTON HARBOR 9811495/CLOSED 02/04/1999	WEST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	73
	SPILLS	HUNTINGTON HARBOR 0002432/CLOSED 05/30/2000	MILLDAMN ROAD HUNTINGTON NY 11743	NON GC	N/A	74
	SPILLS	HUNTINGTON HARBOR 9914539/CLOSED 03/24/2000	RTE 110 HUNTINGTON NY 11743	NON GC	N/A	75
	SPILLS	HUNTINGTON HARBOR 9806344/CLOSED 09/23/1998	YOUNGS HILL ROAD HUNTINGTON NY 11743	NON GC	N/A	76
	SPILLS	IKO RESIDENCE 0705132/CLOSED	MEADOW POND COURT HUNTINGTON NY 11743	NON GC	N/A	77
	SPILLS	KEYSPAN POWER PLANT 0310919/CLOSED	KEYSPAN POWER PLANT HUNTINGTON NY 11743	NON GC	N/A	78
	SPILLS	KRANZ RESIDENCE 0413667/CLOSED	9 SWALLOW LANE HUNTINGTON NY	NON GC	N/A	79
	SPILLS	LIDC BLDG #66 SEWAGE PLA 9414868/CLOSED 01/28/2004	HALF HOLLOW HILL ROAD HUNTINGTON NY 11743	NON GC	N/A	80
	SPILLS	LILCO 9105374/CLOSED 08/19/1991	EAST SHORE ROAD HALESITE NY 11743	NON GC	N/A	81
	SPILLS	LILCO 9001634/CLOSED 08/02/1990	LLOYD HARBOR WEST NECK NY 11743	NON GC	N/A	82
	SPILLS	LILCO 9006143/CLOSED 09/14/1990	GREEN STREET HUNTINGTON NY 11743	NON GC	N/A	83
	SPILLS	LLOYD HARBOR 0303322/CLOSED	SCHOOL LANE LLOYD HARBOR NY 11743	NON GC	N/A	84
	SPILLS	MILL DAM PARK 0111705/CLOSED	MILL DAM ROAD HUNTINGTON NY	NON GC	N/A	85
	SPILLS	MILL ROAD PUMP STATION 0007322/ACTIVE	MILL ROAD HUNTINGTON NY 11743	NON GC	N/A	86
	SPILLS	NORTHPORT HARBOR 9807601/CLOSED 11/17/1998	MOUTH OF HARBOR HUNTINGTON NY 11743	NON GC	N/A	87
	SPILLS	NYNEX (TELEPHONE TRUCK) 9000482/CLOSED 04/23/1990	DEER PARK AVENUE HUNTINGTON NY 11743	NON GC	N/A	88
	SPILLS	ON ROADWAY 0503033/ACTIVE	35 NEW YORK AVENUE HUNTINGTON NY	NON GC	N/A	89
	SPILLS	PASSASARO RESIDENCE 0550374/ACTIVE	32 HEMLOCK AVENUE HUNTINGTON NY	NON GC	N/A	90

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	SPILLS	RESIDENCE 0500749/ACTIVE	33 KINGSLEY ROAD HUNTINGTON NY	NON GC	N/A	91
	SPILLS	SO END HUNTINGTON HARBOR 9511908/CLOSED 12/21/1995	MILL DAM ROAD HUNTINGTON NY 11743	NON GC	N/A	92
	SPILLS	SOUNDVIEW BOAT RAMP 9610907/CLOSED 11/25/1996	SOUTH LOT HUNTINGTON NY 11743	NON GC	N/A	93
	SPILLS	SOUNDVIEW BOAT RAMP 0200218/CLOSED	ASHROKEN AVENUE HUNTINGTON NY 11743	NON GC	N/A	94
	SPILLS	SOUTH DOCK 9608546/CLOSED 10/15/1996	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	95
	SPILLS	SUFFOLK COUNTY 0002214/CLOSED 01/23/2001	OAKWOOD ROAD HUNTINGTON NY 11743	NON GC	N/A	96
	SPILLS	UNK 9102299/CLOSED 05/29/1991	OYSTER BAY HARBOR HUNTINGTON NY 11743	NON GC	N/A	97
	SPILLS	UNK 9004922/CLOSED 08/03/1990	EAST 12TH STREET HUNTINGTON STA NY 11743	NON GC	N/A	98
	SPILLS	UNK 9310339/CLOSED 02/25/1993	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	99
	SPILLS	UNK 9005429/CLOSED 08/16/1990	HUNTINGTON BAY HUNTINGTON NY 11743	NON GC	N/A	100
	SPILLS	UNK 9404970/CLOSED 10/11/1994	RTE 25A & PRESTON PLACE HUNTINGTON NY 11743	NON GC	N/A	101
	SPILLS	UNK 9406844/CLOSED 08/22/1994	WEST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	102
	SPILLS	UNK 9503018/CLOSED 06/09/1995	ROUND SWAMP ROAD HUNTINGTON NY 11743	NON GC	N/A	103
	SPILLS	UNK 9925381/CLOSED 08/09/2000	FLOWER HILL ROAD HUNTINGTON NY 11743	NON GC	N/A	104
	SPILLS	UNK 8911067/CLOSED 02/23/1990	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	105
	SPILLS	UNK 9205193/CLOSED 08/06/1992	EAST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	106
	SPILLS	UNK 9112872/CLOSED 04/16/1992	HALF HOLLOW ROAD HUNTINGTON NY 11743	NON GC	N/A	107
	SPILLS	UNK 9006223/CLOSED 12/11/1992	NEW YORK AVE & HALESITE HUNTINGTON NY 11743	NON GC	N/A	108
	SPILLS	UNK 8910609/CLOSED 02/14/1990	WEST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	109
	SPILLS	UNK 9405354/CLOSED 08/12/1994	MILL DAM ROAD HUNTINGTON NY 11743	NON GC	N/A	110

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

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	SPILLS	UNK 9005795/CLOSED 08/27/1990	SOUTH WEST SHORE HUNTINGTON NY 11743	NON GC	N/A	111
	SPILLS	UNK 9200617/CLOSED 04/15/1992	SAW MILL ROAD HUNTINGTON NY 11743	NON GC	N/A	112
	SPILLS	UNK 9107978/CLOSED 12/06/1991	MIDDLEFIED ROAD HUNTINGTON NY 11743	NON GC	N/A	113
	SPILLS	UNK CONSTRUCTION CONTRACT 9308060/CLOSED 10/03/1993	DEPOT ROAD HUNTINGTON NY 11743	NON GC	N/A	114
	SPILLS	UNK S/S 9503935/CLOSED 11/10/2003	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	115
	SPILLS	UNKNOWN 0500088/ACTIVE	21 WOODLAND DRIVE HUNTINGTON NY	NON GC	N/A	116
	SPILLS	UNKNOWN 0502858/CLOSED	WOODOAK LANE/OAKWOOD ROAD HUNTINGTON NY	NON GC	N/A	117
	SPILLS	UNKNOWN 0306926/CLOSED	ROUND SWAMP ROAD HUNTINGTON NY 11743	NON GC	N/A	118
	SPILLS	UNKNOWN 0504137/ACTIVE	SANDYHOLLOW ROAD HUNTINGTON NY	NON GC	N/A	119
	SPILLS	UNKNOWN 0502745/CLOSED	RULING ROAD/REPUBLIC HUNTINGTON NY	NON GC	N/A	120
	SPILLS	UNKNOWN 0501088/ACTIVE	ASH PLACE/ GRANDVIEW AVENUE HUNTINGTON NY	NON GC	N/A	121
	SPILLS	UNKNOWN 0501341/ACTIVE	WESTHILLS ROAD/6TH STREET HUNTINGTON NY	NON GC	N/A	122
	SPILLS	UNKNOWN 0502672/CLOSED	LITTLE NECK/SPRIN HOLLOW HUNTINGTON NY	NON GC	N/A	123
	SPILLS	UNKNOWN 0501373/CLOSED	NEW YORK AVENUE / UNION PLA HUNTINGTON NY	NON GC	N/A	124
	SPILLS	VESSEL 0425069/CLOSED	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	125
	SPILLS	0325478/CLOSED	45 CRESTWOOD RD X DEPOT HUNTINGTON NY	NON GC	N/A	126
	SPILLS	9905631/CLOSED 12/30/1999	WEST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	127
	SPILLS	0206926/CLOSED	TOWN LINE ROAD (168-344) HUNTINGTON NY 11743	NON GC	N/A	128
	SPILLS	0225111/CLOSED	WALT WHITMAN RD/RTE 110 HUNTINGTON NY 11743	NON GC	N/A	129
	SPILLS	0109838/CLOSED 02/13/2003	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	130

Environmental FirstSearch
Sites Summary Report

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HUNTINGTON NY 11743

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HUNTINGTON/WOODBURY HORSE FARM

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	SPILLS	0005480/CLOSED 12/11/2000	MELVILLE ROAD HUNTINGTON NY 11743	NON GC	N/A	131
	SPILLS	0002739/CLOSED 06/05/2000	COVE ROAD HUNTINGTON NY 11743	NON GC	N/A	132
	SPILLS	9909413/CLOSED 08/25/2000	MELVILLE ROAD HUNTINGTON NY 11743	NON GC	N/A	133
	SPILLS	9905106/CLOSED 08/04/1999	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	134
	SPILLS	9608743/CLOSED 10/15/1996	COMMACK ROAD HUNTINGTON NY 11743	NON GC	N/A	135
	SPILLS	9714566/CLOSED 03/01/1998	NEW YORK AVENUE HUNTINGTON NY 11743	NON GC	N/A	136
	SPILLS	9806983/CLOSED 12/24/1998	WOODBURY ROAD HUNTINGTON NY 11743	NON GC	N/A	137
	SPILLS	9803266/CLOSED 06/16/1998	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	138
	SPILLS	0104770/CLOSED 08/03/2001	MILL DAM ROAD/BROWN ROAD HUNTINGTON NY 11743	NON GC	N/A	139
	SPILLS	9516276/CLOSED 05/12/1997	LITTLE PLAINS ROAD GREENLAWN NY 11743	NON GC	N/A	140
	SPILLS	COASTAL OIL 9302350/CLOSED 09/02/1994	WOODBURY ROAD WOODBURY NY 11797	NON GC	N/A	141
	SPILLS	LECO 9005049/CLOSED 08/08/1990	SYOSSET WOODBURY ROAD WOODBURY NY 11797	NON GC	N/A	142
	SPILLS	LECO 9505561/CLOSED 10/04/1995	JERICHO TPKE WOODBURY NY 11797	NON GC	N/A	143
	SPILLS	NYS THRUWAY 0302117/CLOSED	I-87 & HARRIMAN TOLL PLAZ WOODBURY NY 11797	NON GC	N/A	144
	SPILLS	POND ON BAKERSTOWN RD. 8910307/CLOSED 06/26/1990	BAKERSTOWN ROAD WOODBURY NY 11797	NON GC	N/A	145
	SPILLS	SYOSSET CENTRAL SCHOOLS 9215700/CLOSED 07/08/1994	WOODBURY & BAYLISS ROAD WOODBURY NY 11797	NON GC	N/A	146
	SPILLS	UNK 9011968/CLOSED 02/19/1991	MANETTO HILL ROAD WOODBURY NY 11797	NON GC	N/A	147
	SPILLS	0004453/CLOSED	19 WINDIMERE DRIVE WOODBURY NY 11797	NON GC	N/A	148
	SPILLS	0307177/CLOSED	960 STATE RT 32 WOODBURY NY 11797	NON GC	N/A	149
	SPILLS80	BAY BLDG CORP 8803007/CLOSED	WOODBURY ROAD HUNTINGTON NY 11743	NON GC	N/A	150

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

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Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	SPILLS80	BAYLIS & BAYLIS 8705887/CLOSED	GRANDVIEW STREET HUNTINGTON NY 11743	NON GC	N/A	151
	SPILLS80	DUKE ROSENBOWER 8806638/CLOSED	WEST NECK ROAD LLOYD NECK NY 11743	NON GC	N/A	152
	SPILLS80	GULF 8705704/CLOSED	BROADWAY HUNTINGTON NY 11743	NON GC	N/A	153
	SPILLS80	KNUTSON 8802452/CLOSED	TOWN N ROAD HUNTINGTON NY 11743	NON GC	N/A	154
	SPILLS80	LEVIN MANAGEMENT CORP 8802425/CLOSED	NY AVE & RTE 110 HUNTINGTON NY 11743	NON GC	N/A	155
	SPILLS80	LILCO 8705131/CLOSED	MILL LANE POLE 42 HUNTINGTON NY 11743	NON GC	N/A	156
	SPILLS80	LILCO 8906636/CLOSED	WEST NECK ROAD WEST NECK NY 11743	NON GC	N/A	157
	SPILLS80	LILCO 8900703/CLOSED	WALL STREET HUNTINGTON NY 11743	NON GC	N/A	158
	SPILLS80	ROBERT RICHARDS 8603003/CLOSED	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	159
	SPILLS80	STEVEN ABELES 8607590/CLOSED	MILL DAM ROAD HUNTINGTON NY 11743	NON GC	N/A	160
	SPILLS80	TARGET ROCK RESIDENCE 8906831/CLOSED	END OF MIDDLE NECK ROAD LLOYD HARBOR NY 11743	NON GC	N/A	161
	SPILLS80	UNK 8701064/CLOSED	WEST ROUGH PATH HUNTINGTON NY 11743	NON GC	N/A	162
	SPILLS80	UNK 8807631/CLOSED	CREEK ROAD HUNTINGTON NY 11743	NON GC	N/A	163
	SPILLS80	UNK 8705062/CLOSED	LARKIN STREET HUNTINGTON NY 11743	NON GC	N/A	164
	SPILLS80	UNK 8803901/CLOSED	WEST SHORE ROAD HUNTINGTON NY 11743	NON GC	N/A	165
	SPILLS80	8300237/UNKNOWN	HUNTINGTON NY 11743	NON GC	N/A	166
	SPILLS80	8201585/UNKNOWN	HUNTINGTON NY 11743	NON GC	N/A	167
	SPILLS80	HIGHLAND MILLS 8905736/CLOSED	PARK AVE. WOODBURY NY 11797	NON GC	N/A	168
	SPILLS80	LILCO 8709876/CLOSED	JERICHO TURNPIKE WOODBURY NY 11797	NON GC	N/A	169
	SPILLS80	LILCO 8905680/CLOSED	KEENE LANE POLE 7595 WOODBURY NY 11797	NON GC	N/A	170

Environmental FirstSearch
Sites Summary Report

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	SPILLS80	MARINI 8706645/CLOSED	7 DIMBERBURG EXT WOODBURY NY 11797	NON GC	N/A	171
	SPILLS80	MOODNA CREEK 8900262/CLOSED	RT. 32 WOODBURY NY 11797	NON GC	N/A	172
	SPILLS80	O&R 8703553/CLOSED	RTE 208 WOODBURY NY 11797	NON GC	N/A	173
	SPILLS80	PLOTKZYK 8910883/CLOSED	PINE HILL RD. WOODBURY NY 11797	NON GC	N/A	174
	SPILLS80	UNK 8706472/CLOSED	VILLAGE LANE WOODBURY NY 11797	NON GC	N/A	175
	SPILLS80	UNK 8806544/CLOSED	SEAFORD OYSTER BAY EXPWY WOODBURY NY 11797	NON GC	N/A	176
	SPILLS80	WOODBURY MANSIONS INC. 8700482/CLOSED	12 GRASS LANE WOODBURY NY 11797	NON GC	N/A	177
	SPILLS80	WOODBURY STREAM 8804366/CLOSED	RT. 32 WOODBURY NY 11797	NON GC	N/A	178
	SPILLS80	E200748/UNKNOWN	WOODBURY NY 11797	NON GC	N/A	179
	SWL	HUNTINGTON SLF (T) 1-52S06/INACTIVE	50 NEW YORK AVE. HALESITE NY 11743	NON GC	N/A	180
	SWL	WATCH HILL SAND & GRAVEL 1-52D02/INACTIVE	16 WHITEWOOD CENTER HUNTINGTON NY 11743	NON GC	N/A	181
	PERMITS	A.B.DICK CO. (BO 221) 1-0077780/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	182
	PERMITS	ALL ASSOCIATES OFFICE BLDG. (C05-2 1-0180289/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	183
	PERMITS	DUNKIN DONUTS (COH-106) 1-0177423/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	184
	PERMITS	FACILITY-DEPOT ROAD-HUNTINGTON (HS 1-0177130/NSIGPCI	HUNTINGTON NY	NON GC	N/A	185
	PERMITS	FOODTOWN SUPERMARKET (C04-93-013) 1-0208591/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	186
	PERMITS	FRIENDLY S-E MAIN ST-HUNTINGTON (H 1-0089842/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	187
	PERMITS	FRIENDLY/LARKFIELD RD/HUNTINGTON(E 1-0091146/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	188
	PERMITS	GENERAL RETAIL (C04-90-042) 1-0198706/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	189
	PERMITS	GREENLAWN FIRE DISTRICT 1-0252255/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	190

Environmental FirstSearch
Sites Summary Report

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	PERMITS	HARDEES OF HUNTINGTON 1322103 1-0192306/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	191
	PERMITS	HIGH SCHOOL (C04-92-018) 1-0237655/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	192
	PERMITS	HMCC IV (ME-281) 1-0198340/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	193
	PERMITS	HOT BAGELS 1-0239119/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	194
	PERMITS	HREN PLAZA (C04-90-052) 1-0222470/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	195
	PERMITS	HUNTINGTON BUS. CAMPUS-PHASE B (M 1-0178942/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	196
	PERMITS	HUNTINGTON GOLDEN COACH (HS-175) 1-0176222/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	197
	PERMITS	HUNTINGTON MEDICAL GROUP (C04-90-0 1-0221899/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	198
	PERMITS	HUNTINGTON SQUARE (COH 104) 1-0173401/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	199
	PERMITS	HUNTINGTON STATION M P O (HS 409) 1-0134317/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	200
	PERMITS	JERICHO SHOPPING CENTER (C04-88-01 1-0222020/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	201
	PERMITS	K & W ENTERPRISES (ME-286) 1-0209261/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	202
	PERMITS	LAUREL CENTER (C04-95-009) 1-0238091/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	203
	PERMITS	M.P.S.REALTY BLDG.(DP-476) 1-0180769/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	204
	PERMITS	MCDONALD S-JERICHO TPK-HUNT (HS 39 1-0065169/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	205
	PERMITS	NAT.WEST.BANK (ME-248) 1-0178331/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	206
	PERMITS	NATIONAL ORGANICS (C04-92-009) 1-0237647/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	207
	PERMITS	NORTHPOINT PLAZA (C04-94-0008) 1-0238651/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	208
	PERMITS	NORWOOD PLAZA (ESH-17) 1-0198404/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	209
	PERMITS	OFFICE BLDG. (ME-256) 1-0180106/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	210

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	PERMITS	ONE CALL CENTER (C04-92-041) 1-0197203/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	211
	PERMITS	PETER S INN (BN 204) 1-0198439/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	212
	PERMITS	PIZZA NOOK (SM 237) 1-0133396/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	213
	PERMITS	SELDEN CHANNEL LAUNDROMAT 1-0210595/NSIGIND	HUNTINGTON NY 11743	NON GC	N/A	214
	PERMITS	TGI FRIDAYS-ROUTE 110-HUNTINGTON(H 1-0196487/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	215
	PERMITS	WE RE ASSOC-BAYLESS RD-HUNTINGTON 1-0101460/NSIGPCI	HUNTINGTON STA NY 11743	NON GC	N/A	216
	PERMITS	YM YWHA OF SUFFOLK (COH-124) 1-0198609/NSIGPCI	HUNTINGTON NY 11743	NON GC	N/A	217
	PERMITS	ACHDUS SUMMER HOMES 3-0247568/NSIGPCI	WOODBURY NY 11797	NON GC	N/A	218
	PERMITS	AMDUR PARK WATER DIST #6 3-0105112/NSIGIND	WOODBURY NY 11797	NON GC	N/A	219
	PERMITS	HIGHLAND LAKE ESTATES 3-0219304/NSIGPCI	WOODBURY NY 11797	NON GC	N/A	220
	PERMITS	HIGHLAND MILLS PLANT 3-0031311/NSIGIND	WOODBURY NY 11797	NON GC	N/A	221
	PERMITS	INTERCHANGE COMMERCE CENTER WWTP 3-0219207/NSIGPCI	WOODBURY NY 11797	NON GC	N/A	222
	PERMITS	NEVIS LABS 3-0099058/NSIGPCI	WOODBURY NY 11797	NON GC	N/A	223
	PERMITS	THEVENET SEWAGE TREATMENT WORKS 3-0098183/NSIGPCI	WOODBURY NY 11797	NON GC	N/A	224
	PERMITS	VALLEY FORGE S.D.(CONSOLIDATED SD 3-0020478/SSIGMON	WOODBURY NY 11797	NON GC	N/A	225
	UST	CASTRO RESIDENCE S-15804	QUAIL HILL RD LLOYD HARBOR NY 11743	NON GC	N/A	226
	UST	CENTER YACHT S-7311	100 WEST SHORE MARINA HUNTINGTON NY 11743	NON GC	N/A	227
	UST	CHANCELLOR PARK OF DIX HILLS S-15363	DEER PARK AVE HUNTINGTON NY 11743	NON GC	N/A	228
	UST	CONSERVATION CONTROL CORP S-8046	CREEK RD HUNTINGTON NY 11743	NON GC	N/A	229
	UST	EAST NORTHPORT ORNAMENTAL S-8460	4053 RTE 25 EAST JERICHO TP HUNTINGTON NY 11743	NON GC	N/A	230

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	UST	FIRESIDE STORES HUNTINGTON S-8656	RTE 25 JERICHO TPKE HUNTINGTON NY 11743	NON GC	N/A	231
	UST	HALESITE S/S INC S-7582	RTE 110 NEW YORK AVE HUNTINGTON NY 11743	NON GC	N/A	232
	UST	HUNTINGTON TOWN SALT STORAGE NYUS SU-12209	OLD EAST NECK RD HUNTINGTON NY 11743	NON GC	N/A	233
	UST	HUNTINGTON WASTE WATER TREATMENT NYUS-SU-15370	5TH AVENUE PUMP STA HUNTINGTON NY 11743	NON GC	N/A	234
	UST	KNOLLS AT NORTHPORT S-7000	BELLEROSE AVE HUNTINGTON NY 11743	NON GC	N/A	235
	UST	NATHAN HALE ADMINISTRATION BLDG S-7930	BAY AVE HUNTINGTON NY 11743	NON GC	N/A	236
	UST	NICK BROS FUEL CORP S4-0026	RTE 110 NEW YORK AVE HALESITE NY 11743	NON GC	N/A	237
	UST	NICK BROS FUEL CORP S-7939	RTE 110 NEW YORK AVE HUNTINGTON NY 11743	NON GC	N/A	238
	UST	PLANT NO. 19 S-16052	MOUNT MISERY RD HUNTINGTON NY 11743	NON GC	N/A	239
	UST	RON GIBBONS SWIMMING POOLS INC S-15715	HIGHVIEW & BROADVIEW HUNTINGTON NY 11743	NON GC	N/A	240
	UST	SCWA HOLLYWOOD PL WELLFIELD S4-0639	HOLLYWOOD PL HUNTINGTON NY 11743	NON GC	N/A	241
	UST	SCWA MAYFAIR DR WELLFIELD S4-0652	WEST MAYFAIR DR HUNTINGTON NY 11743	NON GC	N/A	242
	UST	SOUTH HUNTINGTON WATER DIST S-8016	PO BOX 370 HUNTINGTON NY 11743	NON GC	N/A	243
	UST	SUFFOLK COUNTY POLICE 2ND PRECINCT NYUS-SU-10801	PARK AVE HUNTINGTON NY 11743	NON GC	N/A	244
	UST	TRAFALGAR S-7274	LAKE RD HUNTINGTON NY 11743	NON GC	N/A	245
	UST	ULIANS CONSTRUCTION S-8318	CREEK RD HUNTINGTON NY 11743	NON GC	N/A	246
	UST	CONFIDENTIAL NAFM-2760/NC FIRE MARSHAL	WOODBURY RD WOODBURY NY 11797	NON GC	N/A	247
	UST	CONFIDENTIAL NAFM-430/NC FIRE MARSHAL	CROSSWAYS PARK DR WOODBURY NY 11797	NON GC	N/A	248
	UST	CONFIDENTIAL NAFM-3048/NC FIRE MARSHAL	CYPRESS DR WOODBURY NY 11797	NON GC	N/A	249
	UST	CONFIDENTIAL NAFM 4108/NC FIRE MARSHAL	JERICHO TPKE WOODBURY NY 11797	NON GC	N/A	250

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	UST	CONFIDENTIAL NAFM-3051/NC FIRE MARSHAL	STILLWELL LN WOODBURY NY 11797	NON GC	N/A	251
	UST	JERICHO W.D. WELLS 12&13 N-053072/ACTIVE FACILITY	JERICHO TNPK. WOODBURY NY 11797	NON GC	N/A	252
	UST	SHERWOOD COMMERCIAL BLDG S-7684	1219 35 OLD WALT WHITMAN RD WOODBURY NY 11797	NON GC	N/A	253
	UST	WELLS #12 AND #13 CBS1-000243/ACTIVE FACILITY	OFF CYPRESS DRIVE WOODBURY NY 11797	NON GC	N/A	254
	UST	WOODBURY VILLAGE HOA POOL CBS1-000220/INACTIVE	JERICHO TURNPIKE WOODBURY NY 11797	NON GC	N/A	255
	LUST	DUKE ROSENBOWER 8806638/CLOSED	WEST NECK ROAD LLOYD NECK NY 11743	NON GC	N/A	256
	LUST	FIRANIERI RESIDENCE 0501877/ACTIVE	196 WARNER ROAD HUNTINGTON NY	NON GC	N/A	257
	LUST	KEYSPAN POWER PLANT 0310919/CLOSED	KEYSPAN POWER PLANT HUNTINGTON NY 11743	NON GC	N/A	258
	LUST	KRANZ RESIDENCE 0413667/CLOSED	9 SWALLOW LANE HUNTINGTON NY	NON GC	N/A	259
	LUST	LLOYD HARBOR 0303322/CLOSED	SCHOOL LANE LLOYD HARBOR NY 11743	NON GC	N/A	260
	LUST	PASSASARO RESIDENCE 0550574/ACTIVE	32 HEMLOCK AVENUE HUNTINGTON NY	NON GC	N/A	261
	LUST	RESIDENCE 0500149/ACTIVE	35 KINGSLEY ROAD HUNTINGTON NY	NON GC	N/A	262
	LUST	SUFFOLK COUNTY 0002214/CLOSED 03/23/2001	OAKWOOD ROAD HUNTINGTON NY 11743	NON GC	N/A	263
	LUST	TARGET ROCK RESIDENCE 8906881/CLOSED	END OF MIDDLE NECK ROAD LLOYD HARBOR NY 11743	NON GC	N/A	264
	LUST	UNK 9107978/CLOSED 12/06/1991	MIDDLEFIELD ROAD HUNTINGTON NY 11743	NON GC	N/A	265
	LUST	PLOTCZYK 8900863/CLOSED	PINE HILL RD. WOODBURY NY 11797	NON GC	N/A	266
	RELEASES	1 MILE NORTH NORTH WEST OF THE KEY NRC-644188/VESSEL	HUNTINGTON NY 11743	NON GC	N/A	267
	RELEASES	300 YARDS EAST OF THE TOWN OF HUNT NRC-733461/AIRCRAFT	HUNTINGTON NY	NON GC	N/A	268
	RELEASES	BRITANNIA MARINA NRC-651669/UNKNOWN SHEEN	25A NORTH PORT HARBOR HUNTINGTON NY 11743	NON GC	N/A	269
	RELEASES	CENTERPORT HARBOR NRC-655355/UNKNOWN SHEEN	MOUTH OF THE HARBOR HUNTINGTON NY 11743	NON GC	N/A	270

Environmental FirstSearch
Sites Summary Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

TOTAL: 289 **GEOCODED:** 30 **NON GEOCODED:** 259 **SELECTED:** 1

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.	ID
	RELEASES	HUNTING HARBOR < LONG ISLAND SOUND NRC-588376/UNKNOWN SHEEN	HUNTINGTON NY 11743	NON GC	N/A	271
	RELEASES	HUNTINGTON HARBOR NRC-721795/VESSEL	HUNTINGTON NY	NON GC	N/A	272
	RELEASES	KEY SPAN ENERGY 644935/FIXED FACILITY	MILLDAM ROAD HUNTINGTON NY	NON GC	N/A	273
	RELEASES	LLOYD HARBOR NRC-649563/VESSEL	200 YARDS NORTH OF PIER BOT LLOYD HARBOR NY 11743	NON GC	N/A	274
	RELEASES	M/V VENTURE 229276/MARINE- RELEASED PRO	HUNTINGTON BAY LONG ISLAND HUNTINGTON NY 11743	NON GC	N/A	275
	RELEASES	NORTH PORT HARBOR NRC-573965/VESSEL	HUNTINGTON NY 11743	NON GC	N/A	276
	RELEASES	TIDAL WETLAND NEAR NORTHERN END OF NRC-538537/MOBILE	WATERSIDE AVENUE HUNTINGTON NY	NON GC	N/A	277
	RELEASES	UNKNOWN SHEEN INCIDENT NRC-538158/UNKNOWN SHEEN	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	278
	RELEASES	UNKNOWN SHEEN INCIDENT NRC-571445/UNKNOWN SHEEN	HUNTINGTON HARBOR SOUTHWEST HUNTINGTON NY 11743	NON GC	N/A	279
	RELEASES	UNKNOWN SHEEN INCIDENT NRC-647248/UNKNOWN SHEEN	HUNTINGTON NY 11743	NON GC	N/A	280
	RELEASES	637157/UNKNOWN (NRC)	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	281
	RELEASES	555861/UNKNOWN (NRC)	MCKINLEY STREET HUNTINGTON NY 11743	NON GC	N/A	282
	RELEASES	642017/UNKNOWN (NRC)	EAST SIDE OF HUNTINGTON HUNTINGTON NY 11743	NON GC	N/A	283
	RELEASES	591580/UNKNOWN (NRC)	HUNTINGTON HARBOR HUNTINGTON NY 11743	NON GC	N/A	284
	RELEASES	NRC-587333/FIXED	CENTER PORT HARBOR HUNTINGTON NY 11743	NON GC	N/A	285
	RELEASES	595280/MARINE- RELEASED PRO	MOUTH OF HARBOR ON WEST SID HUNTINGTON NY 11743	NON GC	N/A	286
	RELEASES	604632/MARINE- RELEASED PRO	HUNTINGTON HARBOR AT MOORIN HUNTINGTON NY 11743	NON GC	N/A	287
	HMIRS	YELLOW FREIGHT SYSTEM INC 2002040986/HIGHWAY (FOR HIRE)	CUBA HILL RD HUNTINGTON NY 11743	NON GC	N/A	288
	FEDOTHER	WOODBURY CLEANERS NY1010159/AIRS DATABASE	79-59 JERICHO TPKE WOODBURY NY 11797	NON GC	N/A	289

Environmental FirstSearch
Site Detail Report

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KRI-05
HUNTINGTON/WOODBURY HORSE FARM

STATE SPILLS 80's SITE

SEARCH ID: 23 DIST/DIR: 0.02 NE MAP ID: 19

NAME: PROFESSIONAL TREE CARE
ADDRESS: AVERY ROAD & RTE 25
WOODBURY NY
NASSAU
CONTACT:

REV: 10/18/00
ID1: 8604327
ID2:
STATUS: CLOSED
PHONE:

SPILL DATE: 10/03/86
SPILL TIME: 11:00

DATE REPORTED: 10/06/86
TIME REPORTED: 09:50

MATERIAL SPILLED: GASOLINE
MATERIAL CLASS: PETROLEUM

AMOUNT SPILLED: 5 G
AMOUNT RECOVERED: 0 G

CAUSE OF SPILL: TRAFFIC ACCIDENT
RESOURCE AFFECTED: ON LAND
WATERBODY AFFECTED:
SOURCE OF SPILL: COMMERCIAL VEHICLE
REPORTED BY: LOCAL AGENCY
CALLER REMARKS:
TRUCK ROLLOVER. PLATE 55230 GT.

REGION: 1

UST TRUST? NO

SPILL INVESTIGATOR: O BRIEN JO
SPILL CONTACT:

TELEPHONE:

SPILLER: PROFESSIONAL TREE CARE
ADDRESS: 66 DENTON (?) AVE
ROCKAWAY, NY

TELEPHONE: (516) 593-3485

SPILLER CONTACT:

CALLER:
AGENCY:
TELEPHONE:

NOTIFIER:
AGENCY:
TELEPHONE:

LAST DEC UPDATE: 02/17/99
DOES CLEAN UP MEET STANDARDS? YES
DEC REMARKS:
/ / : OYSTER BAY T CLEANED UP.

CLOSE DATE: 10/06/86
PENALTY RECOMMENDED? NO

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: JERICHO TPKE
HUNTINGTON NY 11743

JOB: KPI-05
HUNTINGTON/WOODBURY HORSE FARM

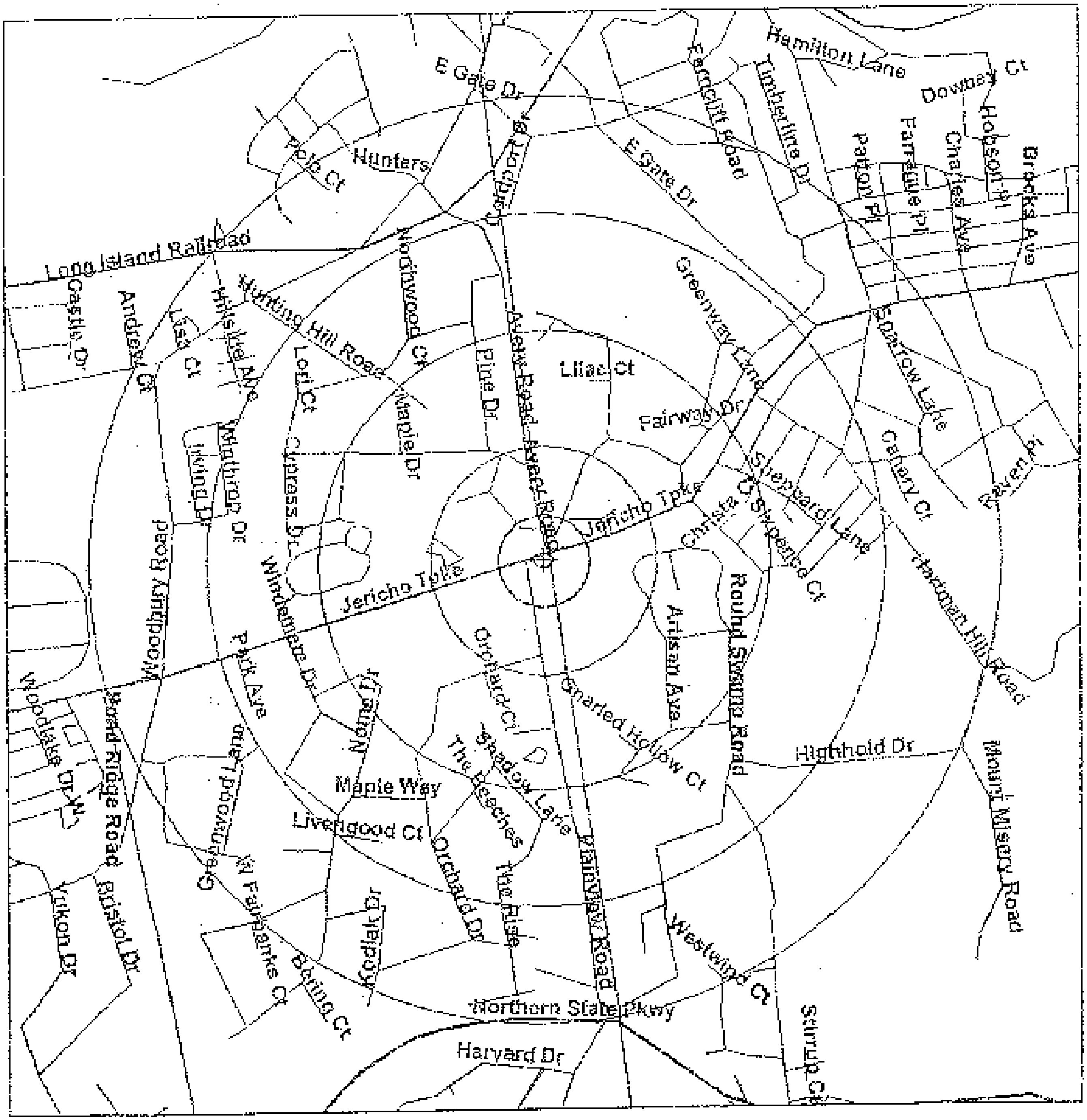
Street Name	Dist/Dir	Street Name	Dist/Dir
Avery Rd	0.02 NE		
Club Ct	0.16 NE		
Elm St	0.21 NW		
Jericho Tpke	0.01 NW		
Magnolia Ln	0.19 NW		
Orchard Dr	0.21 SW		
Plainview Rd	0.04 SW		
Promenade Dr	0.10 NE		
Stafford Ave	0.07 NW		
W Gate Dr	0.02 NE		
WEST Gate Dr	0.02 NE		

Environmental FirstSearch

1 Mile Radius

ASTM: NPL, RCRACOR, STATE, RCRATSD

JERICHO TPKE, HUNTINGTON NY 11743



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.819379 Longitude: -73.45175) ....

Identified Site, Multiple Sites, Receptor ....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste ....

Railroads ....

Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM: Multiple Databases

JERICHO TPKE, HUNTINGTON NY 11743

Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.819379 Longitude: -73.45179) ......

Identified Site, Multiple Sites, Receptor ....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste ....

Railroads ....

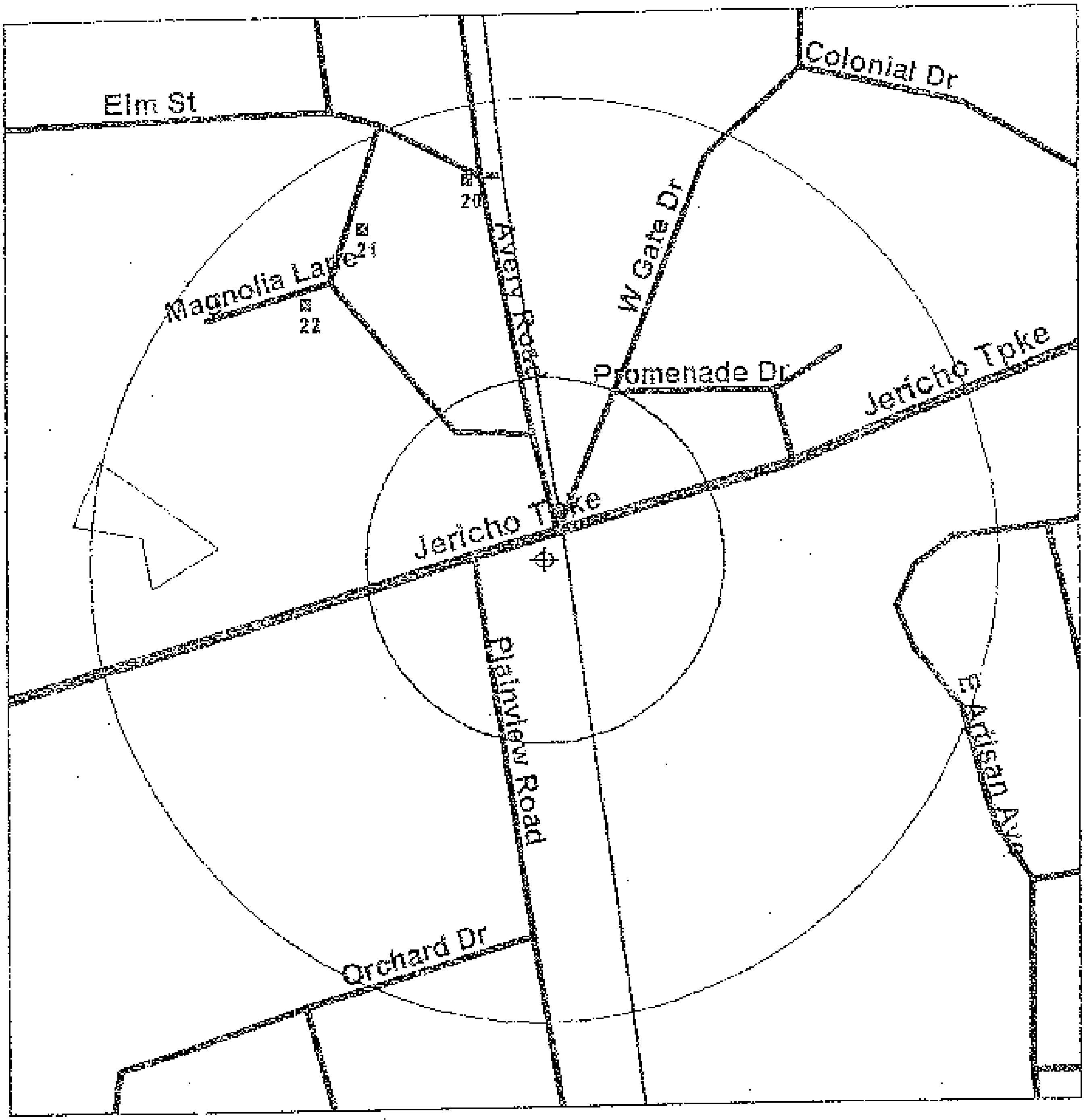
Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM: Multiple Databases

JERICHO TPKE, HUNTINGTON NY 11743



Source: 2002 U.S. Census TIGER Files

Target Site (Latitude: 40.819579 Longitude: -73.45175) ......

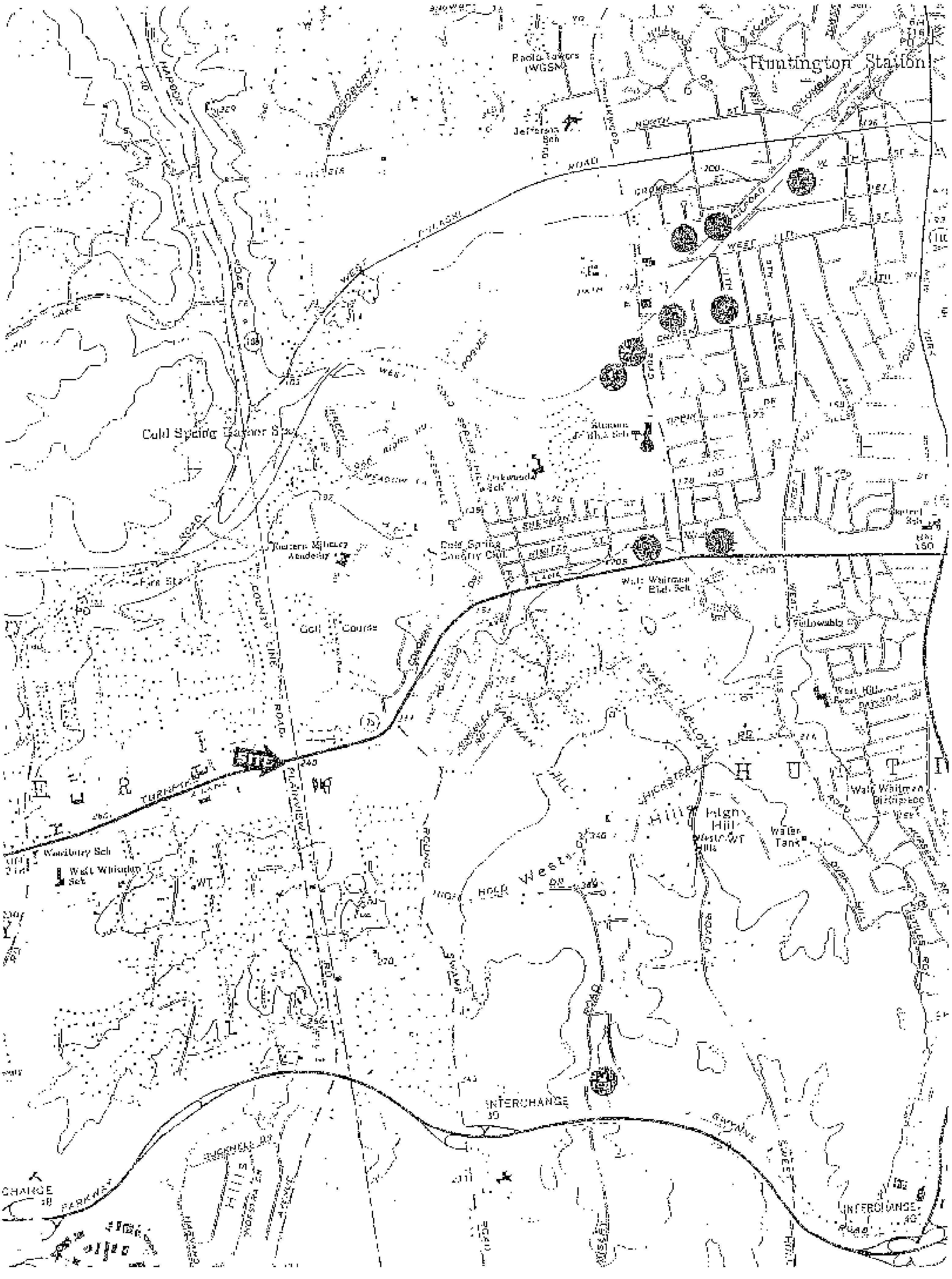
Identified Site, Multiple Sites, Receptor ....

NPL, Brownfield, Solid Waste Landfill (SWL) or Hazardous Waste ....

Railroads ....

Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

APPENDIX G



Huntington Station
Radio Towers (WGSM)
Jefferson Sch
ROAD
Cold Spring Harbor Sta
Golf Course
Fire Sta
Cold Spring Country Club
Walt Whitman Birthplace
High Hill
Water Tank
West Hills
TURNPIKE
PLAINVIEW
Woodbury Sch
INTERCHANGE
PARKWAY
H U N T

Topo: Huntington
Site #: D47

AIRPHOTO INVENTORY OF POTENTIAL HAZARDOUS DUMP SITES in SUFFOLK COUNTY, NEW YORK

SITE DATA SHEET

	Year: 77	Year: 84	Year:
Site Type:		Dumps	
Approximate Size:			
Site Description:	Not present; undisturbed woodland.	Two small private off-the-road dumps; both are screened by woodlands from roads and residences.	
Photo Number:	3261 - 23 - 09	3816 - 25 - 189	
Other Information:			

Site Location: Town Huntington City Nassau Co. Line Street Jericho Turnpike/Plainview Rd.

Field Visit: No____ Yes____ If yes, date of visit ________

APPENDIX H

STANDARD FORM 254

STANDARD FORM (SF) 254
Architect-Engineer Related Services Questionnaire

1. Firm Name / Business Address:

Freudenthal & Elkowitz Consulting Group, Inc.
368 Veterans Memorial Highway
Commack, New York 11725

1a. Submittal is for ☒ Parent Company ☐ Branch or Subsidiary Office

2. Year Present Firm Established: 1988

3. Date Prepared:

4. Specify type of ownership and check below, if applicable:

- Public Corporation ☐
- Small Business X
- Small Disadvantaged Business ☐
- Woman-Owned Business X

5. Name of Parent Company, if any:

N/A

5a. Former Parent Company Name(s), if any, and Year(s) Established:

N/A

6. Names of not more than Two Principals to Contact: Title / Telephone:

Theresa Elkowitz, President - (631) 499-2222

7. Present Offices: City/State/Telephone/Number Personnel Each Office

Commack, New York, 11725

(631) 499-2222

No of Personnel: 15

Total Pers [illegible]

8. Personnel by Discipline: *(List each person only once, by primary function.)*

3	Administrative		Estimators		Soils		Health Experts
	Architects	2	Geologists		Engineers/Technicians		Hazardous Waste
	Chemical Engineers		Hydrologists		Specification Writers		Specialists
	Civil Engineers		Interior Designers		Structural Engineers		Data Processing Experts
	Construction Inspectors		Landscape Architects		Surveyors		CAD/CADD Experts
	Draftsmen		Mechanical Engineers	4	Transportation Engineers		Construction Experts
1	Ecologists		Mining Engineers		Environmentalists		Water Resource Experts
	Economists		Oceanographers		Biologists		Safety Engineers
	Electrical Engineers	5	Planners: Urban/Regional		Laboratory Experts		Technical Field Support
			Sanitary Engineers		Chemical Experts		

TOTAL PERSONNEL 15

Experience Profile Code Numbers for use with questions 10 and 11

001 Acoustics; Noise Abatement
002 Aerial Photogrammetry
003 Agricultural Development; Grain Storage; Farm Mechanization
004 Air Pollution Control
005 Airports; Navaids; Airport Lighting; Airport Fueling
006 Airports; Terminals & Hangars; Freight Handling
007 Arctic Facilities
008 Auditoriums & Theaters
009 Automation; Controls; Instrumentation
010 Barracks; Dormitories
011 Bridges
012 Cemeteries (Planning & Relocation)
013 Chemical Processing & Storage
014 Churches; Chapels
015 Codes; Standards; Ordinances
016 Cold Storage; Refrigeration; Fast Freeze
017 Commercial Buildings (low rise); Shopping Centers
018 Communication Systems; TV; Microwave
019 Computer Facilities; Computer Service
020 Conservation and Resource Management
021 Construction Management
022 Corrosion Control; Cathodic Protection; Electrolysis
023 Cost Estimating
024 Dams (Concrete; Arch)
025 Dams (Earth; Rock); Dikes; Levees
026 Desalinization (Process & Facilities)
027 Dining Halls; Clubs; Restaurants
028 Ecological & Archeological Investigations
029 Educational Facilities; Classrooms
030 Electronics
031 Elevators; Escalators; People-Movers
032 Energy Conservation; New Energy Sources
033 Environmental Impact Studies; Assessments or Statements
034 Fallout Shelters; Blast-Resistant Design
035 Field Houses; Gyms; Stadiums
036 Fire Protection
037 Fisheries; Fish Ladders
038 Forestry & Forest Products
039 Garages; Vehicle Maintenance Facilities; Parking Decks
040 Gas Systems (Propane; Natural; Etc.)
041 Graphic Design
042 Harbors; Jetties; Piers; Ship Terminal Facilities
043 Heating; Ventilation; Air Conditioning
044 Health Systems Planning
045 Highrise; Air-Rights-Type Building
046 Highways; Streets; Airfield; Paving; Parking Lots.
047 Historical Preservation
048 Hospital & Medical Facilities
049 Hotels; Motels
050 Housing (Residential, Multi-Family; Apartments; Condominiums)
051 Hydraulics & Pneumatics
052 Industrial Buildings; Manufacturing Plants
053 Industrial Processes; Quality Control
054 Industrial Waste Treatment
055 Interior Design; Space Planning
056 Irrigation; Drainage
057 Judicial and Courtroom Facilities
058 Laboratories; Medical Research Facilities
059 Landscape Architecture
060 Libraries; Museums; Galleries
061 Lighting (Interiors; Display; Theater; Etc.)
062 Lighting (Exteriors; Streets; Memorials; Athletic Fields; Etc.)
063 Materials Handling Systems; Conveyors; Sorters
064 Metallurgy
065 Microclimatology; Tropical Engineering
066 Military Design Standards
067 Mining & Mineralogy
068 Missile Facilities (Silos; Fuels; Transport)
069 Modular Systems Design; Pre-Fabricated Structures or Components
070 Naval Architecture; Off-Shore Platforms
071 Nuclear Facilities; Nuclear Shielding
072 Office Buildings; Industrial Parks
073 Oceanographic Engineering
074 Ordnance; Munitions; Special Weapons
075 Petroleum Exploration; Refining
076 Petroleum and Fuel (Storage and Distribution)
077 Pipelines (Cross-Country - Liquid & Gas)
078 Planning (Community, Regional, Areawide and State)
079 Planning (Site, Installation, and Project)
080 Plumbing & Piping Design
081 Pneumatic Structures; Air-Support Buildings
082 Postal Facilities
083 Power Generation, Transmission, Distribution
084 Prisons & Correctional Facilities
085 Product, Machine & Equipment Design
086 Radar; Sonar; Radio & Radar Telescopes
087 Railroad; Rapid Transit
088 Recreation Facilities (Parks; Marinas; Etc.)
089 Rehabilitation (Buildings; Structures; Facilities)
090 Resource Recovery; Recycling
091 Radio Frequency Systems & Shielding
092 Rivers; Canals; Waterways; Flood Control
093 Safety Engineering; Accident Studies; OSHA Studies
094 Security Systems; Intruder & Smoke Detection
095 Seismic Designs & Studies
096 Sewage Collection; Treatment; and Disposal
097 Soils & Geologic Studies; Foundations
098 Solar Energy Utilization
099 Solid Wastes; Incineration; Landfill
100 Special Environments; Clean Rooms; Etc.
101 Structural Design; Special Structures
102 Surveying; Platting; Mapping; Flood Plain Studies
103 Swimming Pools
104 Stormwater Handling & Facilities
105 Telephone Systems (Rural; Mobile; Intercom; Etc.)
106 Testing & Inspection Services (Phase I)
107 Traffic & Transportation Engineering
108 Towers (Self-Supporting & Guyed Systems)
109 Tunnels & Subways
110 Urban Renewals; Community Development
111 Utilities (Gas & Steam)
112 Value Analysis; Life-Cycle Costing
113 Warehouses & Depots
114 Water Resources; Hydrology; Groundwater
115 Water Supply; Treatment; and Distribution
116 Wind Tunnels; Research/Testing Facilities Design
117 Zoning; Land Use Studies
201 ______________
202 ______________
203 ______________
204 ______________
205 ______________
206 ______________
207 ______________

9. Summary of Professional Services Fees Received: *(Insert Index Number)*

Last 5 Years (most recent year first)

	2001	2000	1999	1998	1997
Direct federal contract work, including overseas		0	0	0	0
All other domestic work	4	4	4	4	4
All other foreign work*	0	0	0	0	0

*Firms interested in foreign work, but without such experience, check here: ☐

Ranges of Professional Services Fees

Index

1. Less than $100,000
2. $100,000 to $250,000
3. $250,000 to $1 million
4. $500,000 to 2 million
5. $1 million to $2 million
6. $2 million to $5 million
7. $5 million to $10 million
8. $10 million or greater

10. Profile of Firm's Project Experience, Last 5 Years

Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in Thousands)	Profile Code	Number of Projects	Total Gross Fees (in Thousands)
1) 028	47	141	11)			21)		
2) 033	35	1029	12)			22)		
3) 076	20	100	13)			23)		
4) 106	429	1626	14)			24)		
5) 110	12	200	15)			25)		
6) 114	40	175	16)			26)		
7) 117	18	54	17)			27)		
8)			18)			28)		
9)			19)			29)		
10)			20)			30)		

11. Project Examples, Last 5 Years

Profile Code	"P", "C" "JV", or "IE",	Project Name and Location	Owner Name and Address	Cost of Work (In Thousands)	Completion Date (Actual or Estimated)
028 033	C	Proposed Cellular Monopole Site Ecological Investigation and Environmental Report Lakeview, New York	Howard Pachman, Esq. Pachman, Pachman & Brown 366 Veterans Mem'l Hwy Commack, NY 11725	10	1997

Profile Code	"P", "C" "JV", or "IE".	Project Name and Location	Owner Name and Address	Cost of Work (In Thousands)	Completion Date (Actual or Estimated)
028	C	Lakeview Homes Wetland Investigation Patchogue, New York	David Sero, Esq. Sero & Sero Properties 48 S. Service Road Melville, NY 11747	5	1996
028 033	C	The Sikh Forum, inc. Environmental impact Statement Glen Cove, New York	The Sikh Forum, Inc. c/o Peter Mineo, Esq. Forchelli, Curto, Schwartz et al. 330 Old Country Road Mineola, NY 11501	20	1997
033 078 110 117	C	Glen Cove Creek Rezoning and Redevelopment Environmental Impact Statement Glen Cove, New York	Anthony Maurino, Esq. City of Glen Cove City Hall Glen Cove, NY 11542	73	1999
028 033 106	C	Nassau County Property Rezoning Environmental Impact Statement Plainview, New York	Robert Marinello Land Design Assoc., P.C. 91 Green Street Huntington, NY 11743	80	1996
033	C	Serota Plaza Environmental Impact Statement Riverhead, New York	Nathan L. Serota Serota Organization 70 East Sunrise Hwy Valley Stream, NY 11581	35	1997
033	C	Kensico Water Pollution Control Program Environmental Impact Statement Westchester, New York	NYC Dept. of Env. Protection c/o Nick Vereert Roy F. Weston of NY 130 West 30th Street New York, NY 10001	150	1995
033	C	Fresh Kills Landfill Environmental Impact Statement Staten Island, New York	NYC Dept. of Sanitation c/o Nick Vereert Roy F. Weston of NY 130 West 30th Street New York, NY 10001	150	1995
028 033	C	South Shore Shopping Park Environmental Impact Statement Holbrook, New York	Nathan L. Serota Serota Organization 70 East Sunrise Hwy Valley Stream, NY 11581	30	1997

Profile Code	"P", "C" "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (In Thousands)	Completion Date (Actual or Estimated)
033 078 117	C	Incorporated Village of Lake Success Planning, Zoning and Environmental Review Lockheed Martin Property Lake Success, New York	Village of Lake Success c/o Peter Mineo, Esq. Forchelli, Curto, Schwartz etal. 330 Old Country Road Mineola, New York	80	2000
028 033	C	Mexpoint, Inc. Wetland Investigation and Permitting Environmental Impact Statement Kings Point, New York	Mexpoint, Inc. c/o Kenneth Auerbach, Esq. Farrell, Fritz, et al. EAB Plaza Uniondale, NY 11556	100	2000
033	C	Sisters of St. Dominic Health Care Center Environmental Impact Statement N. Amityville, New York	George Rice, Esq. Bennett, Rice & Schure 255 Merrick Road Rockville Centre, NY 11571	20	1998
033	C	Commack Properties Redevelopment Environmental Impact Statement Commack, New York	Roger Smith Burton, Behrendt & Smith 475 Main Street Patchogue, NY 11772	55	1996
028 033	C	Nassau County Boy Scout Camp Ecological Investigation and Environmental Assessment Riverhead, New York	Nassau County Boy Scouts c/o Andrew Cangemi, Esq. Siegel, Fenchel & Peddy 777 Zeckendorf	10	1996
033 106	C	Gleam Street Asphalt Plant Environmental Assessment and Noise Evaluation West Babylon, New York	Cassata Enterprises c/o Leonard Genova, Esq. One Huntington Quadrangle Suite One - North Four Melville, NY 11747	25	1997
028 078 110 117	C	Local Waterfront Revitalization Program, Subdivision Regulations and General Environmental and Planning Services Manorhaven, New York	James Bradley, Esq. Village Attorney Inc. Village of Manorhaven c/o Humes & Wagner 147 Forest Avenue	65	1999
033 078 100 117	C	Roosevelt Raceway Redevelopment Environmental Impact Statement Phase I and Phase II Environmental Site Assessments Westbury, New York	Gary Davis Edward J. Minskoff Equities 1325 Ave. of the Americas New York, NY 10019	150	1997

Profile Code	"P", "C" "JV", or "IE".	Project Name and Location	Owner Name and Address	Cost of Work (In Thousands)	Completion Date (Actual or Estimated)
033 070	C	Watersedge at Sands Point Zoning and Planning Services Sands Point, New York	Mayor Leonard Wurzel Inc. Village of Sands Point P.O. Box 188 Port Washington, NY 11050	15	1997
033 110	C	Suffolk County Water Authority Water Supply Interconnection and Water Main Extension Environmental Impact Statement East Hampton, New York	E. J. Rosavitch, P.E. Suffolk County Water Auth. 4060 Sunrise Highway Oakdale, New York 11769	40	1997
028 033 114 117	C	Timber Ridge at Stony Brook Environmental Impact Statement Stony Brook, New York	Donald Eversoll Klein & Eversoll 631 Commack Road Commack, New York 11725	50	2000
033 078 106	C	Phase I and II Environmental Site Assessment and Market Study South Oaks Amityville, New York	Robert Murphy Catholic Health Systems One Huntington Quadrangle Melville, New York 11747	60	1999
106	C	Commack Arena Phase I and Phase II Environmental Site Assessments and Remediation Management Commack, New York	Gene Berry Smithtown Ventures, LLC 145 South Fairfax Ave Fourth Floor Los Angeles, CA 90036	70	1997
106	C	Computer Color Graphics Phase II Environmental Site Assessment and Remediation Management, and On-going Regulatory Compliance Farmingdale, New York	Computer Color Graphics c/o E. Weisbein, Esq. Garden City Center 100 Quentin Rsvlt. Blvd Garden City, NY 11530	30	2000
106	C	Parker Jewish Institute for Health Care and Rehabilitation Phase I and II Environmental Site Assessments, UIC Remediation Management New Hyde Park, New York	Louis DiGiovanni Parker Jewish Institute for Health Care & Rehabilitation 271-11 76th Avenue New Hyde Park, N.Y.	75	1999
106	C	Abandoned Boat Yard Phase I Environmental Site Assessment Freeport, New York	Michael Solomon, Esq. Village Attorney Inc. Village of Freeport 46 N. Ocean Avenue Freeport, NY 11520	3	1996

Profile Code	"P", "C" "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (in Thousands)	Completion Date (Actual or Estimated)
106 033	C	Memorial Sloan-Kettering Cancer Center Phase I and Phase II Environmental Site Assessments and Environmental Assessment, Remediation Management Commack, New York	James Harden Memorial Sloan-Kettering Cancer Center 1275 York Avenue New York, New York 10021	20	1999
110	C	Affordable Housing Grant Preparation and General Planning/Environmental Services Nassau and Suffolk Counties, New York	Jim Morgo, President L. I. Housing Ptnrshp, Inc. 180 Oser Avenue Hauppauge, NY 11788	100	On Retainer
114	C	Groundwater Investigations - El Paso Gas (Tenneco) Stations 229, 237 and 241 Northwestern New York State	Lori Clarke Eco-Systems, Inc. 6475 Van Buren Street Second Floor Daphne, AL 36526	20	1998
106 114	C	International Computer Components Phase II Environmental Site Assessment and Remediation Management	Fred Grossman ICC 105 Maxess Road Melville, New York 11747	35	1997
114	C	PS 24 Remediation and Expert Testimony/Litigation Support Brooklyn, New York	James Nuccio Roy F. Weston of NY 130 West 30th Street New York, NY 10001	10	1997

12. The foregoing is a statement of facts

Signature: ______________________ Typed Name and Title: Theresa Elkowitz, President

Date:

STANDARD FORM 255

STANDARD FORM (SF) 255 Architect-Engineer Related Services for Specific Project	1. Project Name/Location For Which Firm is Filing:	2a. Commerce Business Daily Announcement Date, if any:	2b. Agency Identification Number, if any:

3. Firm (or Joint-Venture) Name & Address	3a. Name Title & Telephone Number of Principal to Contact
Freudenthal & Elkowitz Consulting Group, Inc. 368 Veterans Memorial Highway Commack, New York 11725	Theresa Elkowitz, President (631) 499-2222
	3b. Address of office to perform work, if different from Item 3

4. Personnel by Discipline: (list each person only once, by primary function.) Enter proposed consultant personnel <u>to be utilized</u> on this project on line (A) and in-house personnel on line (B).

(A)	(B)		(A)	(B)		(A)	(B)		(A)	(B)	
3		Administration			Estimators			Sanitary Engineers			Chemical Experts
		Architects	2		Geologists			Soils Engineers			Health Experts
		Chemical Engineers			Hydrologists			Specification Writers			Hazardous Waste Specialists
		Civil Engineers			Interior Designers			Structural Engineers			Data Processing Experts
		Construction Inspectors			Landscape Architects			Surveyors			CAD/CADD Experts
		Draftsmen			Mechanical Engineers			Transportation Engineers			Construction Experts
		Ecologists			Mining Engineers	4		Environmentalists			Water Resources
1		Economists			Oceanographers			Biologists			Safety Engineers
		Electrical Engineers	5		Planners: Urban/Regional			Laboratory Experts			Technical Field Support
											TOTAL: 15

8. If respondent is not a joint-venture, list outside Consultants/Associates anticipated for this project (Attach SF 254 Consultants/Associates listed, if not already on file with the contracting office).

Name & Address	Specialty	Worked with Prime before (Yes or No)
1)		
2)		
3)		
4)		
5)		
6)		
7)		

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Theresa Elkowitz, Principal

b. Project Assignment:
Environmental Planning /Project Manager

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 13 With Other Firms 5

e. Education: Degree(s)/Year/Specialization
M.S. Policy Analysis and Public Management (Urban Planning) 1985
B.A., Liberal Arts, Economics Specialization, 1985

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

Theresa Elkowitz is the president of Freudenthal & Elkowitz Consulting Group, Inc. (F&E), an environmental and planning consulting firm. She is well-versed in the State Environmental Quality Review (SEQR) process and has prepared numerous Environmental Assessment Forms (EAFs); Draft and Final Environmental Impact Statements (DEIS and FEIS); planning and zoning studies, visual assessments; environmental assessments and associated evaluations. Not only has she worked with public and private clients on the administration of the SEQR, but she also serves as Chairperson of the Suffolk County Council on Environmental Quality (CEQ). The CEQ is responsible for recommending SEQR determinations, holding public hearings and administration of the environmental review process for actions proposed by the County of Suffolk.

Ms. Elkowitz provides expert testimony and affidavits to various Town and Village Boards, Planning Boards and Zoning Boards of Appeals on planning, zoning and environmental matters and has provided testimony and affidavits in court cases. Ms. Elkowitz has also served as Municipal Planner and/or provided consulting planning and/or environmental services to the Incorporated Villages of Lake Success, Manorhaven, Great Neck Estates, Old Brookville, Brookville and Sands Point and the Town of Babylon and City of Glen Cove.

In addition, to ensure compliance with SEQR, Ms. Elkowitz provides environmental consulting services to various school districts including, but not limited to: Cold Spring Harbor, East Quogue, Half Hollow Hills, Jericho, Lindenhurst, Three Village, Plainview-Old Bethpage, Rocky Point, East Williston, Eastport-South Manor, Westhampton Beach, Harborfields, Patchogue-Medford, Port Washington, East Moriches, Smithtown, Bay Shore, Kings Park, Commack, Oyster Bay-East Norwich, Bellmore-Merrick, Seaford and Wantagh and to various public libraries including, but not limited to: Manhasset, East Islip and Hauppauge.

Prior to forming F&E, Ms. Elkowitz spent several years managing environmental projects for a consulting engineering firm. She has beer involved in many diverse projects including the preparation of Draft anu Final Environmental Impact Statements (EISs), Local Waterfront Revitalization Programs, wetland evaluations, water use and conservation plans, municipal and private planning studies, grant applications, as well as solid waste management plans and Part 360 permit applications.

Representative projects/documents which Ms. Elkowitz has supervised, prepared and/or had a significant preparatory role include, but are not limited to:

- DEIS and related SEQR/CEQR Documentation for Kensico Water Pollution Control Program for New York City Department of Environmental Protection;
- DEIS and related SEQR/CEQR Documentation for Fresh Kills Landfill for New York City Department of Sanitation;
- EAFs, DEISs, Determinations of Significance and Notices for various School Districts;
- DEIS for Rezoning of 147+ acre Nassau County Property for Nassau County;
- DEIS and FEIS for Rezoning of 170+ acre Roosevelt Raceway for property owner;
- Various Planning, Zoning, Environmental and Visual Assessments for Public Utility Communications Facilities and other Wireless Carriers including SEQRA and NEPA Compliance;
- DEIS and FEIS for development of 18 hole golf course and multi-family apartments in the Town of Brookhaven; and
- LWRP and environmental and planning tasks for Incorporated Village of Manorhaven including drafting of subdivision regulations;

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Richard J. Baldwin, Vice President, Environmental Services

b. Project Assignment:
Senior Hydrogeologist

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 2 With Other Firms 14

e. Education: Degree(s)/Year/Specialization: Graduate Course Work, State Jose State University, 1986-1988, BA Geology, San Francisco State University, 1982. Princeton Groundwater Hydrogeology and Pollution course, Env. Law and Regulations Course, U.C. Berkeley Extension, NGWA MODFLOW and MODPATH Modeling Course, NGWA Visual MODFLOW Modeling

f. Active Registration: Year First Registered/Discipline
1994/Certified Professional Geologist #9158
1994/Pennsylvania Professional Geologist #PG-000552-G

g. Other Experience and Qualifications relevant to the proposed project

Mr. Baldwin has more than sixteen years of experience in the fields of environmental consulting, hydrogeology and geology with particular experience in conducting and supervising environmental investigations and remedial actions at industrial, private, Federal and publicly-owned facilities and sites. For the last several years, Mr. Baldwin's work has focused primarily on sites and facilities located in the Long Island, New York City and Upstate New York areas. He has extensive knowledge and experience pertaining to Long Island's federally-designated sole-source drinking water aquifer system.

Mr. Baldwin works closely with the U.S. Environmental Protection Agency (EPA), New York State Department of Environmental Conservation (NYSDEC) Region 1, Region 3 and Central Office, New York State Department of Health (NYSDOH), Suffolk County Department of Health Services (SCDHS) and Nassau County Department of Health (NCDOH). His projects include supervising and performing Remedial Investigations/Feasibility Studies (RI/FSs), Interim Remedial Actions (IRMs), and implementation of selected remedies at NYSDEC Class 2 and 2a Inactive Hazardous Waste Disposal sites. Other work, conducted with the NYSDEC, includes evaluating and implementing large-scale ground-water and soil treatment systems to remediate MTBE.

He also has extensive experience in conducting other types of environmental work ranging from NYSDEC spill sites to remediating buried medical waste at a Long Island psychiatric center. Mr. Baldwin has extensive experience providing expert testimony/meeting presentation services in various venues. He has provided same in support of work being conducted in the Village of Greenport, Village of Lake Success, New Hyde Park, Dutchess County Supreme Court, South Farmingdale, Bayshore, Wassaic, Central Islip, Plainview and Amityville, New York. Before moving to the East Coast in 1993, Mr. Baldwin worked in the environmental industry in California. His work in the environmental industry consisted primarily of conducting large-scale environmental investigations at United States military and Department of Energy facilities.

Mr. Baldwin also has extensive experience in the New York State Environmental Quality Review Act (SEQRA) and New York City Environmental Quality Review (CEQR) Act. Specific projects conducted within the Watershed Area and/or CEQR-related projects managed by Mr. Baldwin include:

- Preparing an Environmental Assessment Statement (EAS) for infrastructure development for the Hillview Reservoir complex located in Yonkers, New York. The work is being conducted for the New York City Office of Environmental Protection (OEPA);
- Conducting Phase II soil and groundwater environmental site assessment (ESA) and potential stormwater impact analysis for a proposed waste-transfer facility located in Somers, New York. The purpose of the ESA was to ensure that the proposed project was in accordance with the Town of Somer's Groundwater Protection Plan and to ensure that site-related stormwater did not impact the nearby New York City Department of Environmental Protection (NYCDEP) reservoir;
- Prepared an EAS for a proposed expansion of a cathedral and religious-use day school in Staten Island, New York;
- Preparing an EAS for the proposed development of a recreational marina in Arverne, New York;
- Preparing an EAS for proposed development of religious-use facilities located in Brooklyn, New York; and
- Conducted/supervised several Phase II ESA including groundwater impact analysis in the Watershed area, specifically near Mahopac, Brewster and Carmel.

7. Brief Resume of Key Persons, Specialists, and individual consultants anticipated for this project.

a. Name & Title:
Ginny Watral, Vice President, Environmental Planning

b. Project Assignment:
Project Manager

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 3 With Other Firms 4

e. Education: Degree(s)/Year/Specialization
Bachelor of Science/Master of Public Administration, College of Management, Long Island University, C. W. Post Campus, Brookville, New York. Accelerated degree program, Magna cum Laude, September, 1995.

f. Active Registration: Year First Registered/Discipline
Associate in Arts, Liberal Arts and Sciences, Suffolk County Community College, Selden, New York, With Highest Distinction, May, 1995.

g. Other Experience and Qualifications relevant to the proposed project

Mrs. Watral has comprehensive and diverse experience in overall planning and redevelopment of numerous parcels within various municipalities on Long Island. Specifically, this includes community development; waterfront revitalization; preparation of grant applications for commercial and residential projects; planning, zoning and visual impact assessments for public utility communication facilities; preparation of environmental assessment forms and municipal planning.

Prior to joining F&E, Mrs. Watral worked for the Long Island Housing Partnership and the City of Glen Cove. Among her responsibilities were preparing environmental assessments for community development projects for the Town of Babylon, in accordance with the State Environmental Review Quality Act (SEQRA) and the National Environmental Policy Act (NEPA) and monitoring regulatory compliance of federal, state and other public and private funding sources.

Mrs. Watral has provided expert testimony relative to the planning and environmental impacts of public utility communications facilities and development projects throughout Long Island. Representative projects in which Mrs. Watral has been instrumental include but are not limited to:

- Preparation and submission of planning and zoning analyses and neighborhood character studies, including expert testimony, in the Incorporated Villages of Great Neck Plaza, Cedarhurst, Valley Stream, Mineola, Garden City and New Hyde Park and the Towns of Hempstead, Oyster Bay, Huntington, Brookhaven and Islip;

- Environmental Assessment Forms for projects including residential land divisions, public utility communications facilities, hospitals and senior citizens developments, in the Towns of Hempstead, North Hempstead, Oyster Bay, Brookhaven and Huntington;

- Preparation, submission and presentation of documentation supporting land divisions and various applications;
- Preparation, submission and presentation at public hearings, in the Town of Babylon, of Comprehensive Annual Performance Evaluation Report for the Community Development Block Grant and HOME Investment Partnership Programs to the United States Department of Housing and Urban Development;

- Preparation and submission of the Five-Year Consolidated Plan, including presentations at public hearings, for the Town of Babylon; and

- Compilation of information for planning, zoning and visual impact assessments for over fifty public utility communication facilities.

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Orland J. Blanchard, Ph.D.

b. Project Assignment:
Ecologist

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 10 With Other Firms 15+

e. Education: Degree(s)/Year/Specialization
Ph.D., Botany, 1976
A.B., Biology, 1966

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

Dr. Blanchard is a broadly trained and respected field biologist with an extensive knowledge of the biota of the Northeast and with a range of expertise in wetlands evaluation, botanical and invertebrate inventory and the study of rare and endangered plants and animals.

Prior to establishing himself on Long Island in 1980, Dr. Blanchard lived and studied in Massachusetts, upstate New York and Indiana. Teaching and field research have taken him throughout the United States and to the West Indies, Mexico, Central America, and East Africa.

Dr. Blanchard has been active as a consultant and contractee since 1984, working directly or indirectly for such clients as the City of New York, the State Department of Transportation, the State Department of Environmental Conservation, the New York Natural Heritage Program and The Nature Conservancy. This work has included freshwater wetlands flagging and classification, botanical inventories, insect inventories, rare insect surveys, tiger salamander searches, and studies of the ecology of the federally endangered sandplain gerardia.

Dr. Blanchard has been associated with Freudenthal & Elkowitz Consulting Group, Inc. since 1989, and representative projects for which Dr. Blanchard has performed ecological investigations include:

- NYSDEC Wetland delineation and ecological assessment for 20+ acre proposed residential subdivision in Brookhaven;
- Ecological impact assessments as part of environmental impact statements prepared by Freudenthal & Elkowitz Consulting Group, Inc. throughout Long Island;
- NYSDEC and USACOE wetland delineation and ecological assessment for 23+ acre proposed residential development in Kings Point; and
- Ecological investigation for proposed 22+ acre commercial center in Stony Brook.

Dr. Blanchard is a recognized field biologist on Long Island. Dr. Blanchard is a past President (1988-89) of the Long Island Botanical Society; and Chairman of a committee that is preparing an atlas of the plants of Long Island; a past member of the Board of Trustees of The Nature Conservancy and past Chairman of the Board's Stewardship Committee; and member of the Natural History Advisory Board of the Friends of Long Island Heritage. He has recently been named to the Advisory Committee of the New York Flora Association. At the present time he is collaborating with a fellow botanist on a comparative study of the grasslands of Long Island.

In his academic capacities, Dr. Blanchard has taught graduate courses in Ecology, Entomology and Vascular Plants of Long Island, and as Director of the Graduate Environmental Studies Program at C.W. Post he has established numerous contacts in the environmental community on the Island.

7. Brief Resume of Key Persons, Specialists, and individual consultants anticipated for this project.

a. Name & Title:
Gail A. Pesner, Project Manager

b. Project Assignment:
Project Manager

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 9 With Other Firms 7

e. Education: Degree(s)/Year/Specialization
Master of Regional Planning 1987/Land Use and Environmental Planning
B.S., Urban and Regional Studies/1985

f. Active Registration: Year First Registered/Discipline
American Institute for Certified Planners (AICP) - Since 1990

g. Other Experience and Qualifications relevant to the proposed project

Mrs. Pesner has a thorough knowledge of the New York State Environmental Quality Review Act (SEQRA). Ms. Pesner reviews and prepares SEQRA documentation including environmental impact statements for both private and municipal clients. She also conducts visual impact assessments as well as senior citizen housing needs analyses. She develops local ordinances; master plans; and performs land use and zoning analyses. She also prepares zoning, land use and site analysis maps, and undertakes subdivision and site plan reviews. Additionally, Ms. Pesner prepares New York State Department of Environmental Conservation and U.S. Army Corps of Engineers permit applications.

Mrs. Pesner has provided expert planning and environmental services for the Town of Hempstead, Town of North Castle, Town of Somers, Village of Lake Success, Village of Woodsburgh, Village of Sands Point and Village of Old Westbury. In addition, she has provided expert planning and environmental testimony in the Villages of Northport and Munsey Park.

She is involved in preparing environmental impact statements (EISs) and environmental assessments for projects including senior citizen developments, school facilities, recreational facilities, retail centers, mixed use projects, medical/professional offices, industrial facilities, religious institutions and residential developments.

She also prepares all phases of SEQR documentation and planning, zoning and visual impact assessments for major wireless communication carriers throughout Nassau, Suffolk and Westchester Counties. Furthermore, Mrs. Pesner has undertaken neighborhood character studies for private clients within the Towns of Huntington, Islip, Southold and Brookhaven. She has also prepared several market and need studies for senior citizen developments in both Nassau and Suffolk Counties.

Projects in which Mrs. Pesner has had major participation include:

- EIS and related SEQR/CEQR Documentation for Kensico Water Pollution Control Program for New York City Department of Environmental Protection;
- EIS for Rezoning and Development of 150±-acre Nassau County Property for Nassau County;
- EIS for Rezoning and Development of 170±- acre for Roosevelt Raceway for Town of Hempstead;
- EAFs and EIS, for Additions, Renovations and New Construction for 10 school districts with Nassau and Suffolk Counties;
- Expanded Part III EAF for the Rezoning and Development of a 136±-acre Golf Course in the Town of Brookhaven;
- EIS for the Redevelopment of the 35±-acre Commack Arena Site in the Town of Smithtown;
- EIS for the Rezoning and Development of a Shopping Plaza in the Town of Riverhead;
- Expanded Part III EAF for the Development of a Yeshiva in the Village of Lawrence;
- EIS for the development of a Sikh Temple in the City of Glen Cove;
- EIS for the Development of a Condominium Development in the C.., of Glen Cove;
- EIS for the Suffolk County Water Authority Montauk Infrastructure Expansion in the Town of East Hampton;
- Expanded Part III EAF for the Development of Proposed Wells for the Water Authority of Great Neck North in the Town of North Hempstead;
- EIS for a 114±-acre Single-Family Home and Open Space Development in the Town of Southampton;

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

Gail A. Peaner, Project Manager (Continued)

- EIS for the redevelopment of a 114±-acre property with a mansion, private golf course and associated facilities in the Village of Old Westbury;
- Three-Town Senior Citizen Housing Unit Market Study for a Non-Profit Organization;
- EIS for the Rezoning and Development of a 136±-acre property for a Mixed Use Development in the Town of Islip; and
- EIS for the Rezoning and Development of a Senior Citizen Residential Development in the Town of Southampton.

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Luc Derrendinger, Ph.D., Project Hydrogeologist

b. Project Assignment:
Project Hydrogeologist

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 2   With Other Firms 0

e. Education: Degree(s)/Year/Specialization
Ph.D., Environmental Geochemistry, University of California at Berkeley, May 1997
B.S., Earth Sciences, Ecole Nationale de Geologie, France 1992

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

As an project hydrogeologist at Freudenthal and Elkowitz Consulting Group, Inc., Dr. Derrendinger performs a variety of tasks. His primary responsibilities include the preparation of environmental site assessments, site screenings and property audits. He conducts site inspections of various properties including vacant land, developed residential sites, industrial and commercial facilities. Dr. Derrendinger also conducts record searches and database analyses of various cognizant agency files. He then uses this information to provide conclusions and recommendations regarding the environmental integrity of sites under study. Additional responsibilities include the compilation of the physical-chemical properties of pesticides for which their environmental fate is being assessed, using state-of-the-art screening software.

Representative projects in which Dr. Derrendinger has been involved include:

- Phase I Environmental Assessment of vacant land, commercial and residential properties in the counties of Suffolk and Nassau as well as the borough of Manhattan, New York.
- Phase II soil, sediment and groundwater sampling of commercial property.
- Laboratory research on the aggregation and deposition characteristics of natural colloidal minerals using light-scattering methods.
- Laboratory research on the formation of uranyl-phosphate minerals, their X-Ray characterization and eventual degradation by microorganisms.
- Environmental risk screening using the first-tier pesticide screening algorithm WIN-PST in concordance with pesticides and soils data compiled from representative regulatory agencies.

Dr. Derrendinger also performs various environmental and planning research tasks in support of the environmental impact statements and related studies prepared by the firm.

7. Brief Resume of Key Persons, Specialists, and individual consultants anticipated for this project.

a. Name & Title:
Kim A. Gennaro, M.S., Project Manager

b. Project Assignment:
Project Manager

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 4 With Other Firms 4

e. Education: Degree(s)/Year/Specialization
M.S., Environmental Science and Management, Long Island University, June 2001
B.S., Environmental Planning and Design, Rutger Unversity, Cook College, June 1994

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

Ms. Gennaro has a working knowledge of the New York State Environmental Quality Review Act (SEQRA). Ms. Gennaro reviews and prepares SEQRA documentation including environmental impact statements for private clients and public schools. She performs land use and zoning analyses; site analyses; and undertakes subdivision and site plan reviews.

Additionally, Ms. Gennaro is knowledgeable of the State and Federal wetlands regulations and prepares New York State Department of Environmental Conservation and U.S. Army Corps. of Engineers permit applications and jurisdiction inquiries.

She is involved in preparing environmental impact statements (EISs) and environmental assessments for projects including hospitals, airport improvements, senior citizen and retirement communities, school facilities, recreational facilities, retail centers, mixed-use projects, medical/professional offices, residential subdivisions, and Planned Development Districts. Furthermore, Ms. Gennaro has undertaken neighborhood character studies for private clients within the Towns of Huntington, Islip and Brookhaven.

Ms. Gennaro also prepares all phases of SEQRA documentation for public school and library construction projects. She is knowledgeable of both State Education Department (SED) and Dormitory Authority for the State of New York (DASNY) protocols.

She also prepares all phases of SEQR documentation and planning, zoning and visual impact assessments for major wireless communication carriers throughout Nassau and Suffolk Counties.

Projects in which Ms. Gennaro has had major participation include:

- EIS for the Good Samaritan Hospital Medical Center – Emergency Room Facility – in the Town of Islip, Suffolk County;
- EIS for Proposed 44-lot Cluster Subdivision in the Town of East Fishkill, Dutchess County;
- EIS for the Proposed Change of Zone for the Mixed-Use and Maritime Planned Development District in the Town of Southampton, Suffolk County;
- EIS and related SEQR Documentation for North Shore - Long Island Jewish Health System Long Island Master Plan, Incubator Laboratory Expansion and Glen Cove Emergency Room Expansion;
- EIS for Proposed Affordable Housing Development in the Town of Huntington, Suffolk County;
- EAFs, EISs and all SEQR-documentation for Additions, Renovations and New Construction for over 40 school districts and public libraries in Nassau, Suffolk, Westchester and Rockland Counties;
- EIS for the Proposed Change of Zone and Implementation of Airport Master Plan for P[illegible] Airport in the Town of Brookhaven, Suffolk County;
- Expanded Part III - EAF for the Proposed Change of Zone for a Mixed-Use Development in the Town of Riverhead, Suffolk County;
- Extensive Environmental Assessment of Proposed Development of a Retail/Office complex and 160-Unit Retirement Community in the Town of Riverhead, Suffolk County;
- Supplemental Environmental Analysis for a 123± acre golf course in the Town of Southampton, Suffolk County;
- EIS for the Change of Zone and Development of a 135-bed Convalescent Home and Complementary Use on a 10± acre site in the Town of Smithtown, Suffolk County;
- EIS for the Development of a Supermarket in the City of Glen Cove, Suffolk County;
- EIS with Detailed Soil Analysis for a 35-lot Residential Subdivision and Horse Farm on a 114± acre parcel in the Town of Southampton, Suffolk County;
- Expanded Part III-EAF for the Development of an Assisted Living Facility in the Town of Brookhaven, Suffolk County;
- EIS for a Residential Subdivision in the Village of Head of the Harbor, Suffolk County;
- Expanded Part III-EAF for the Change of Zone and Development of a 96-unit Planned Retirement Community in the Town of Brookhaven, Suffolk County;
- Expanded Part III-EAF for the Development of an 150-unit Multi-family Condominium Development in the Town of Brookhaven, Suffolk County;
- Market Analysis for Senior Citizen Apartments in the Town of Southampton, Suffolk County; and
- Environmental Assessment for the Expansion of an Existing Restaurant in the Republic Airport, Town of Babylon, Suffolk County;

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Stephen Kaplan, Project Manager

b. Project Assignment:
Project Manager

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 3 With Other Firms 8

e. Education: Degree(s)/Year/Specialization
BA, Economics, State University of New York at Geneseo, 1992
Certified Asbestos Inspector, 2001

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

In his capacity as a Project Manager, Mr. Kaplan performs and manages Phase I and Phase II ESAs and coordination and remediation projects with various regulatory agencies.

He has performed over 100 Phase I/Phase II Environmental Assessments for proposed cellular communications facilities; residential, commercial and industrial properties; health care facilities; and vacant land. Mr. Kaplan interacts with various clients including lending institutions, attorney and land acquisition personnel.

Site specific Phase II ESA proposals and scopes of work documents are designed and implemented by Mr. Kaplan to investigate potential environmental concerns and quantify recognized environmental conditions. Based upon Phase II ESA data, Mr. Kaplan coordinates with clients and/or clients' legal counsel regarding activities which may include: regulatory notification, hazardous material removal and/or remediation, or no further action. Detailed summary reports are prepared for the client demonstrating the completed scope of work with supporting documentation of on-site activities, manifests, analytical data and regulatory approval of a complete environmental evaluation for property.

Representative projects in which Mr. Kaplan has had significant participation include:

- Phase I Environmental Assessments for proposed cellular communications facilities;
- Phase I Environmental Assessments for proposed acquisitions of open space by Suffolk County;
- Phase I/Phase II Environmental Assessments for acquisition of commercial and waterfront properties by municipalities;
- Phase I/II Environmental Assessments for commercial property credit extensions and preforeclosures for Fleet Bank and HSBC Bank USA; and
- Phase I Environmental Assessments for institutional facilities seeking HUD financing.

7. Brief Resume of Key Persons, Specialists, and Individual consultants anticipated for this project.

a. Name & Title:
Matthew Trieber

b. Project Assignment:
Environmental Technician

c. Name of Firm with which associated:
Freudenthal & Elkowitz Consulting Group, Inc.

d. Years Experience: With This Firm 2 With Other Firms 0

e. Education: Degree(s)/Year/Specialization
B.A., Earth and Space Sciences, State University of New York at Stony Brook, 2002

f. Active Registration: Year First Registered/Discipline

g. Other Experience and Qualifications relevant to the proposed project

As an environmental technician at Freudenthal and Elkowitz Consulting Group, Inc., Mr. Trieber performs a variety of tasks. His primary responsibilities include the preparation of environmental site assessments, site screenings and property audits. He conducts site inspections of various properties including vacant land, developed residential sites, industrial and commercial facilities. Mr. Trieber also conducts record searches and database analyses of various cognizant agency files. He then uses this information to provide conclusions and recommendations regarding the environmental integrity of sites under study.

Representative projects in which Mr. Trieber has been involved include:

- Multiple Phase I Environmental Assessments of vacant, commercial and residential properties in Suffolk and Nassau Counties.

- Phase II soil sampling of industrial property in Ronkonkoma.

Mr. Trieber also performs various environmental and planning research tasks in support of the environmental impact statements and related studies prepared by the firm.

8. Work by Firm or Joint Venture Members which Best Illustrates Current Qualifications Relevant to this project (List not more than 10 Projects)

A.	Project Name & Location	B. Nature of Firm's Responsibility	C. Owner's Name & Address	D. Comp. Date (actual or Estimated)	E. Estimated Cost in Thousands Entire project	Estimated Cost in Thousands Work for which firm was/is responsible
(1)	Nassau County Property Rezoning, Plainview, New York	Preparation of ecology, subsurface conditions, water consumption, air resources and noise sections of EIS for rezoning of government property	Land Design Associates, P.C. 91 Green Street Huntington, New York 11743	1995	200	80
(2)	Glen Cove Creek Rezoning and Redevelopment Environmental Impact Statement, Glen Cove, New York	Rezoning and Redevelopment of 100 acres Environmental Impact Statement	Anthony Maurino, Esq. City of Glen Cove City Hall Glen Cove, New York 11542	1999	73	73
(3)	Suffolk County Water Authority East Hampton, New York	Environmental Impact Statement for water supply integration and water main extension to ensure water quality	Suffolk County Water Authority 4060 Sunrise Highway Oakdale, New York 11769	1997	40	40
(4)	Local Waterfront Revitalization Program, Subdivision Regulations and Planning Studies Manorhaven, New York	Preparation of Local Waterfront Revitalization Program, Community interaction, subdivision regulations and general services	Inc. Village of Manorhaven 33 Manorhaven Boulevard Manorhaven, New York 11050	1999	25	25
(5)	Phase I and Phase II Environmental Site Assessments and Environmental Report, Remediation Management, Commack, New York	Preparation of Phase I and Phase II Environmental Site Assessments and Environmental Assessment for proposed cancer treatment facility	James Hanley Memorial Sloan-Kettering Cancer Center 1275 York Avenue New York, New York 10021	1999	20	20
(6)	Mexpoint, Inc. Kings Point, New York	EIS, USACOE Permit, NYSDEC Permit and CZM Compliance for coastal development	Mexpoint, Inc. 50 Charles Lindbergh Blvd. Uniondale, New York	2000	250	100
(7)	Photocircuits Glen Cove, New York	EIS for Industrial Expansion	Photocircuits Corp. c/o Forchelli, Curto, Schwartz 330 Old Country Road Mineola, New York 11501	1998	500	40
(8)	Parker Jewish Institute for Health Care & Rehabilitation, New Hyde Park, New York	Phase I and II Environmental Site Assessments for facility expansion, USEPA UIC Remediation Management	Louis DiGiovanni Parker Jewish Institute for Health Care and Rehabilitation 271-11 76th Avenue New Hyde Park, New York 11040	1999	75	100
(9)	Timber Ridge at Stony Brook Stony Brook, New York	DEIS and FEIS for Residential Subdivision	Donald Eversoll Klein & Eversoll 631 Commack Road Commack, New York 11725	2000	50	50
(10)	Fresh Kills Landfill DEIS Staten Island, New York	Preparation of Land Use & Zoning; Historic Resources; Visual Quality and Socio-economic sections of DEIS and SEQR/CEQR guidance	NYC Dept. of Sanitation c/o N. Verasit, Roy F. Weston of NY 130 West 30th Street New York, New York 10001	1996	500	150

9. All work by firms or joint-venture members currently being performed directly for Federal Agencies.

a. Project Name & Location	b. Nature of Firm's Responsibility	c. Agency (Responsible Office) Name & Address Project Manager & Telephone No.	d. Percent complete	e. Estimated Cost (in thousands) Entire Project	Work for which Firm is/was responsible

10. Use this space to provide any additional information or description of resources (including any computer design capabilities) supporting your firm's qualifications for the proposed project.

Freudenthal & Elkowitz Consulting Group, Inc. (hereinafter F&E), a certified women's business enterprise, is a multi-faceted environmental and planning consulting firm with broad experience in environmental analysis and the New York State Environmental Quality Review (SEQR) process. In addition to preparing EISs, the firm also prepares Phase I and Phase II environmental site assessments, planning and zoning studies, land use analyses, water use and conservation plans, groundwater investigations, environmental permit applications and oversees remediation projects. It also serves to facilitate public participation for various projects. A description of the firm's recent projects that deal with the environmental review process and technical analyses are described below.

Kensico Water Pollution Control Program - As a primary subconsultant, F&E assisted in the preparation of the DEIS and related SEQR/CEQR documentation.

Fresh Kills Landfill - As a primary subconsultant, F&E assisted in the preparation of the DEIS for continued landfilling and related SEQR/CEQR documentation. The firm also performed specialized environmental studies.

Roosevelt Raceway Redevelopment - In accordance with SEQR, F&E prepared a full environmental assessment form for the redevelopment of a 172.8 acre former racetrack. The firm also prepared Phase I and Phase II environmental site assessments and oversaw remediation efforts. F&E prepared sections of the Generic EIS including, but not limited to: geology, water resources, land use, zoning and community services.

Plainview Property Rezoning - F&E participated with a team of consultants on the rezoning and redevelopment of over 100 acres of government property owned by Nassau County. This firm was specifically responsible for DEIS sections on water resources, air quality, noise, solid waste, ecology and subsurface conditions. A Phase I Environmental Site Assessment was also prepared.

Mexpoint, Inc. Subdivision - F&E prepared an EIS for the subdivision and development of a 21 acre parcel in the Incorporated Village of Kings Point. F&E was also responsible for wetland delineations of NYSDEC tidal and freshwater wetlands and USACOE freshwater wetlands.

Suffolk County Water Authority - The firm prepared an EIS for the extension of public water and the integration of water supply infrastructure to address water quality problems in Montauk.

Brookhaven Commons - In accordance with SEQR, F&E prepared an EIS for the development of a commercial center in Suffolk County. Major issues included land use and zoning, traffic, noise and air quality.

New York City Solid Waste Management Plan (SWMP) - F&E participated in the preparation of the EIS for the SWMP in accordance with SEQR and the New York City Environmental Quality Review Process. Specific responsibilities included the assessment of odor impacts for various facilities.

Commack Properties Redevelopment - The firm prepared the EIS for a major redevelopment of a former recreational site to a retail use.

Incorporated Village of Manorhaven - F&E serves as the Village Planner and has participated in many tasks including, but not limited to: preparation of the Local Waterfront Revitalization Program and accompanying GEIS; review of rezoning matters; environmental site assessments; subdivision regulations; and zoning and planning studies.

Expert Testimony and Litigation Support - Senior F&E personnel have provided expert testimony, affidavits and litigation support on various matters relating to SEQR and subsurface investigations and assessments.

Environmental Site Assessments - F&E has prepared numerous Phase I Environmental Site Assessments for vacant land and developed residential, commercial and industrial properties. These assessments include site inspections, review of cognizant agency records, review of relevant groundwater and soil studies, etc. In addition the firm has conducted Phase II studies which have included both soil and groundwater investigations. F&E has also provided oversight of remediation and coordination of same with appropriate regulatory agencies.

Suffolk County Council on Environmental Quality (CEQ) - F&E President, Theresa Elkowitz, serves as the Chairperson of CEQ. The CEQ is responsible for performing technical environmental reviews on County-initiated actions. This includes determining the classification of actions and making recommendations to the Suffolk County Legislature regarding a determination of significance. In the event a positive declaration is issued, the CEQ is responsible for scoping and review of the EIS and publication of notices, filings, etc.

11. The foregoing is a statement of facts.

Signature: ____________________ Typed Name and Title: ____________________ Date:

Appendix B-2

Site Investigation Report
GZA, June 2006

GZA
GeoEnvironmental
of New York

Engineers and
Scientists

June 30, 2006
File No. 41.0161517.00

Ms. Elysa Goldman
Project Manager
Triangle Equities Development Company, LLC
30-56 Whitestone Expressway
Whitestone, New York 11354

440 Ninth Avenue
New York
New York
10001
212-594-8140
FAX 212-279-8180
www.gza.net

Re: **Site Investigation Report**
1130 West Jericho Turnpike
Huntington, New York

Dear Ms. Goldman:

In accordance with our proposal dated May 15, 2006, GZA GeoEnvironmental of New York (GZA) is pleased to provide this *Site Investigation Report* for the property located at 1130 West Jericho Turnpike, Huntington, New York (Site). This report and the work described herein are subject to the limitations contained in **Appendix A**.

We trust that this information satisfies your present needs. Should you need any additional information, please do not hesitate to call us at (212) 594-8140.

Very truly yours,

GZA GEOENVIRONMENTAL OF NEW YORK

Meredith K. Hayes
Project Scientist

David Winslow, Ph.D, P.G.
Senior Project Manger

Douglas S. Roy, P.E.
Associate Principal

Attachment: Report (2 copies)

TABLE OF CONTENTS

1.0 INTRODUCTION

In accordance with our proposal dated May 15, 2006, GZA GeoEnvironmental of New York (GZA) is pleased to provide this *Site Investigation Report* (SIR) on the results of the focused subsurface investigation conducted at 1130 West Jericho Turnpike, Huntington, New York (Site) for Triangle Equities Development Company, LLC (Triangle). The purpose of this study was to identify subsurface environmental issues that could have a significant impact on the potential redevelopment of the property and present our opinions regarding soil contamination and remedial actions that may be required to redevelop the Site. The testing program was completed in general accordance with the standards of practice described in the New York State Department of Environmental Conservation (NYSDEC) *Division of Environmental Remediation Draft Technical Guidance for Site Investigation* (DER-10) and standard industry practices. This report and the work described herein are subject to the limitations contained in **Appendix A.**

2.0 SITE BACKGROUND INFORMATION

2.1 SITE LOCATION

The Site is divided by the border of Nassau and Suffolk Counties and is therefore located in two hamlets and two townships. The property is commonly referred to by the street address 1130 West Jericho Turnpike, Huntington, New York (**Figure 1 – Site Location Plan**). The western portion of the Site is located in the hamlet of Woodbury, township of Oyster Bay, Nassau County, New York. The eastern portion of the Site is located in the hamlet of Huntington, township of Huntington, Suffolk County, New York. The property is located on the southeast corner of West Jericho Turnpike and Plainview road and is located in a developed suburban area characterized by commercial and residential properties.

2.2 SITE DESCRIPTION

The Site is approximately 19-acres in size. A compilation map prepared by Fauser Associates, P.C. dated May 24, 2005 depicts 11 structures: a concrete building, metal barn, horse stable, framed structure, wood workshop, wood shed, two wood stalls, two concrete plats, and one mobile home. Based on GZA's observations during the Site investigation, the Site layout is generally consistent with the previous observations.

The majority of the Site is currently used as a horse farm. Various corrals and stables are located throughout the northern portion of the property. Two wood carving businesses are also located on the Site and most of the operations are unenclosed; however, trailers and sheds are used to store tools and supplies. A barbeque stand was previously located on the northern portion of the Site, off West Jericho Turnpike, with a mobile trailer for cooking purposes and an outdoor eating area (**Figure 2**). The majority of the southern portion of the Site (parcel A and B) is wooded, with small areas cleared for horse and motorcycle trails and a dirt road that leads from the northern portion of the Site to the entrance on Plainview Avenue. Large mounds composed of manure are present on parts of the southern portion of the Site.

3.0 ENVIRONMENTAL SETTING

The following subsections provide information regarding the general physiographic, hydrologic, and soil conditions in the area of the Site.

3.1 REGIONAL GEOLOGY

The Site is located in Nassau and Suffolk Counties, which is part of the Long Island Hydrogeologic System. In a roughly north-south cross section, the geology can be characterized as a wedge-shaped layer of Cretaceous and Pleistocene unconsolidated sediments, thickening to the south-southeast. Several impermeable clay layers are found within this sediment package, generally creating three distinct aquifers. The Lloyd Aquifer is bounded by unfractured bedrock and the confining Raritan Clay. The Magothy-Jameco aquifer is bounded by the Raritan and Gardiners Clays. The water in the upper glacial aquifer is expected to be unconfined at an elevation of approximately 70 feet above mean sea level (MSL) but may be locally confined between beds of clay and silt. Potable water is primarily withdrawn from the deepest of these aquifers and is the sole source of drinking water for Nassau County.

3.2 SITE SOIL CONDITIONS

According to the *Soil Survey of Suffolk County, New York* and the Soil *Survey of Nassau County, New York*, the soil on the Site is mapped as Montauk silt loam. The Montauk Series consists of an about 11 inch thick surface layer of brown to dark brown fine sandy loam. The subsoil is yellowish brown, fine sandy loam to a depth of about 27 inches. The lower part is a dark brown to reddish brown sandy loam with a gravel content of about five to ten percent to a depth of approximately 40 inches. The substratum, to a depth of about 60 inches, is reddish brown to dark brown loamy sand that is firm and brittle.

3.3 SITE GROUNDWATER CONDITIONS

The elevation of the Site area is approximately 240 to 280 feet above MSL. The topography generally slopes to the south and the general groundwater flow is expected to be predominantly northerly . However, localized groundwater gradients in the vicinity of the Site may vary due to heterogeneous subsurface conditions or anthropogenic effects.

4.0 PREVIOUS ENVIRONMENTAL REPORTS

GZA reviewed a *Phase I Environmental Site Assessment* (ESA) prepared by Freudenthal & Elkowitz Consulting Group, Inc. (F&E) and dated August 2005. The following recognized environmental concerns and potential environmental concerns were noted in the ESA:

- Historic aerial photography indicated that portions of the subject property were cleared and used for agricultural purposes as early as 1947. Therefore, a pesticides may have been historically applied to the Site;
- An out-of-service 550-gallon underground storage tank (UST) was reportedly located south of the concrete building;
- One in-service aboveground storage tank (AST) was located on the outside of the northwest corner of the concrete building;
- An out-of-service AST was located on the Site, south of the concrete building;
- Evidence of historic dumping was reported on the southwestern portion of the subject property;
- Non-hazardous debris (tires, abandoned vehicles, and discarded construction materials) and mounding of manure and crushed asphalt was observed at the Site;
- An out-of-service potable well was reportedly located in the interior northeastern corner of the concrete building.
- Lead-based paint and asbestos-containing materials may potentially be located within the concrete building and/or roofing materials of the on-Site buildings.

Based upon the above, F&E recommended the following:

- Surficial soil sampling to ascertain the presence, if any, of residual pesticides that may have been applied during the past use of the Site for agricultural purposes;
- Investigation of the subsurface conditions around the location of the out-of-service 550 gallon UST; and
- Investigation of the area of historic dumping on the southwestern portion of the Site.

In addition, GZA noted that a septic system was formerly located north of the concrete building and an in-use septic system is located to the north of the horse stable.

5.0 SITE INVESTIGATION ACTIVITIES

5.1 SAMPLE COLLECTION

Based on the environmental concerns noted above, GZA performed a limited subsurface investigation to further asses any potential environmental impacts resulting from the historical usage of the Site. Under GZA supervision, Brookside Environmental, Inc. (Brookside) performed all drilling and test pit services on the Site. Brookside attempted a total of seven Geoprobe soil borings (designated B-1 to B-7) and seven test pits (designated TP-1 to TP-7). The boring and test pit locations were selected to assess any potential soil contamination resulting from the following recognized and potential environmental concerns noted in F&E Phase I ESA:

- The former septic system (B-1 and TP-1);
- Surficial exterior staining in the vicinity of the concrete building (B-2);
- One out-of-service 550-gallon UST (B-2 to B-5);

- One out-of-service AST (TP-2)
- Empty drums , reportedly re-used to store horse feed (TP-3)
- One in-service AST (B-6);
- The current septic system (B-7);
- Current areas of dumping and debris (TP-4);
- Areas of historical dumping (TP-5 to TP-7).

Each Geoprobe boring was advanced using the direct push technique, which drove a string of rods into the ground with a driving point at the base. Soil samples were obtained at continuous four foot intervals with a two inch inner diameter four foot long macrocore. All borings were advanced to a terminal depth of 16 feet below ground surface (bgs), except for B-2 which was advanced to 12 feet bgs due to refusal. Borings were backfilled with the soil drill cuttings upon completion.

Six test pits were excavated to a depth of approximately six to eight feet below ground surface. The test pit in the area of the reported former septic system (TP-1) could not be excavated due to the presence of subsurface utilities. However, boring B-1 was advanced within 10 feet of this area. Test pits were backfilled upon completion.

5.2 FIELD SCREENING AND OBSERVATIONS

During the soil investigation, a PID with a 10.6 electron volt lamp was used to screen soil samples for evidence of contamination. The PID was held adjacent to the soil core after the macrocore was opened and cut in half longitudinally. The PID was calibrated to measure relative concentrations of VOCs referenced to a 100 part per million (ppm) isobutylene in air standard. All soil cores were also visually inspected for the presence of any petroleum-like odors or staining. Based on the PID screening results and the visual inspection of the soil cores, no contamination was evident in any of the soil borings. However, test pits TP-2, TP-5, TP-6, and TP-7 exhibited elevated PID screening results. TP-2 was excavated within a few feet of an out-of-service AST observed to the south of the concrete building. Soils from one to three feet bgs had PID results from 0.6 to 34.3 ppm and a petroleum-like odor was noted. Test pits TP-5 to TP-7 were excavated in the southwestern portion of the Site, in the area of reported current and historic dumping. Tires and other non-hazardous debris were observed in this area during GZA's Site investigation. PID screening results from 65 to greater than 900 ppm were noted in the surface soils in the area of TP-5, TP-6, and TP-7 and a petroleum-like odor was noted. Detailed soil descriptions, PID screening results, and all related field screening comments were recorded on soil boring logs (**Appendix B**).

5.3 ANALYTICAL TESTING

Since no evidence of contamination was observed in any of the soil borings, one soil sample from each boring was collected from various intervals to characterize the subsurface soils. One soil sample was also collected from each test pit, except TP-3, from the depth exhibiting the highest level of contamination or the deepest interval encountered. All soil samples were analyzed for Spill Technology and Remediation

Series (STARS) analyte list VOCs and SVOCS in accordance with United States Environmental Protection Agency (USEPA) methods 8260 and 8270, respectively. In addition, the samples collected from boring B-2 and test pit TP-2 were analyzed for poly-chlorinated biphenyls (PCBs) and Resource Conservation and Recovery Act (RCRA) metals. Samples B-2 and TP-4 were also analyzed for pesticides.

All samples were kept on ice and sent to AmeriSci Boston, a New York State certified laboratory, under proper chain of custody procedures.

5.4 SOIL ANALYTICAL RESULTS

VOCs and SVOCs were detected in samples B-2, B-4, B-6, and TP-2. However, only one compound, benzo(b)fluoranthene, was detected above NYSDEC Recommended Soil Cleanup Objectives (RSCOs). This sample was collected from the top one foot in the area used as an outdoor wood workshop. Minor surface staining was observed from the use and storage of farm equipment. Analytical results for PCBs and pesticides indicated no detectable concentrations above NYSDEC RSCOs. In addition, one metal, arsenic, was detected at 11.3 ppm above applicable standards but below average eastern USA background values. See **Table 1** for a summary of the analytical results and **Appendix** C for a copy of the complete analytical data report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

GZA, on behalf of Triangle, completed a Site investigation for the property located at 1130 West Jericho Turnpike, Huntington, New York. The purpose of this investigation was to investigate recognized and potential environmental concerns noted in F&E's 2005 Phase I ESA.

The Site is approximately 19-acres in size and the majority of the Site is currently used as a horse farm. Various corrals and stables are located throughout the northern portion of the property. Two wood carving businesses are also located on the Site and most of the operations are unenclosed. However, trailers and sheds are used to store tools and supplies. A barbeque stand was previously located on the northern portion of the Site, off West Jericho Turnpike, with a mobile trailer for cooking purposes and an outdoor eating area (**Figure 2**). The majority of the southern portion of the Site (parcel A and B) is wooded with small areas cleared for horse trails and a dirt road that leads from the northern portion of the Site to the entrance on Plainview Avenue.

This Site investigation included the advancement of seven soil borings to 12 to 16 feet bgs; the excavation of seven test pits to six to eight feet bgs; and the laboratory analyses of soil samples. Soils were also screened with a PID and assessed for any petroleum-like odors or staining.

All soil samples were analyzed for Spill Technology and Remediation Series (STARS) analyte list VOCs and SVOCS in accordance with United States Environmental Protection Agency (USEPA) methods 8260 and 8270, respectively. In addition, the samples collected from boring B-2 and test pit TP-2 were analyzed for poly-chlorinated biphenyls (PCBs) and Resource Conservation and Recovery Act (RCRA) metals. Samples B-2 and TP-4 were also analyzed for pesticides.

Soils in the southwestern portion of the Site, in the area of reported historic dumping, exhibited elevated PID readings and petroleum-like odors and staining. However, only one compound, benzo(b)fluoranthene, was detected above NYSDEC RSCOs.

Based upon the above study, GZA recommends the following:

- The soils exhibiting any petroleum-like odors or staining in the southwestern portion of the Site will need to be addressed during any redevelopment of the Site. Although no exceedences of applicable standards were noted, if soils in these areas are to be disturbed, they will need to be handled in accordance with all applicable regulations. During excavation, soils exhibiting any petroleum-like odor should be segregated and disposed of at a licensed facility. Based on observations made during the excavation of test pits TP-5, TP-6, and TP-7, GZA estimates the area of soils exhibiting petroleum-like odors to be approximately 80 feet by 20 feet and extend to a depth of approximately 6 feet bgs (~400 cubic yards of soil). This area is estimated to be between TP-5, TP-6, and TP-7, however, the exact horizontal and vertical extent has not been delineated.

TABLES

Table 1
Summary Soil Analytical Results
1130 West Jericho Turnpike
Huntington, New York

Sample ID	NYSDEC	Eastern USA	B-1 (15-16')	B-2 (0-1')	B-3 (4-5')	B-4 (8-9')	B-5 (8-9')	B-6 (1-2')
Sampling Date	Soil Cleanup	Background	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006	6/9/2006
Matrix	Objectives	Values	soil	soil	soil	soil	soil	soil
Units	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
VOLATILE ORGANIC COMPOUNDS								
Total Confident Conc. VOC	10	NC	ND	ND	ND	ND	ND	ND
SEMIVOLATILE ORGANIC COMPOUNDS								
Phenanthrene	50	NC	ND	1.2	ND	ND	ND	ND
Fluoranthene	50	NC	ND	1.3	ND	ND	ND	ND
Pyrene	50	NC	ND	3.1	ND	1.6	ND	0.32
bis(2-ethylhexyl)phthalate	50	NC	ND	ND	ND	1.5	ND	ND
Benzo(b)fluoranthene	0.224 or MDL	NC	ND	1.2	ND	ND	ND	0.21
Total Confident Conc. SVOC	500	NC	ND	ND	ND	ND	ND	ND
METALS								
Arsenic	7.5 or SB	3-12	NA	0.815	NA	NA	NA	NA
Barium	300 or SB	0-1.75	NA	21.3	NA	NA	NA	NA
Chromium	50	1.5-40	NA	6.46	NA	NA	NA	NA
Lead	*	*	NA	27.3	NA	NA	NA	NA
Mercury	0.1	0.001-0.2	NA	0.0969	NA	NA	NA	NA
Pesticides								
Aldrin	0.041	NC	NA	0.00273	NA	NA	NA	NA
Dieldrin	0.044	NC	NA	0.0274	NA	NA	NA	NA
4,4'-DDD	2.9	NC	NA	0.00683	NA	NA	NA	NA
4,4'-DDE	2.1	NC	NA	0.0114	NA	NA	NA	NA
4,4'-DDT	2.1	NC	NA	0.00515	NA	NA	NA	NA
PCBs								
Total PCBs	10	NC	NA	ND	NA	NA	NA	NA

Notes:
* Background levels for lead vary widely. Average background levels in metropolitan or suburban areas near highways are much higher and typically range from 200-500 ppm. The USEPA's Interim Lead Hazard Guidance (July 1994) establishes a residential screening level of 400 ppm.

1. MDL- Method detection limit.
2. NA- Not analyzed
3. NC- No criteria.
4. ND- Not detected.
5. Only detected parameters are summarized in this table. Refer to laboratory data reports for complete analytical results.

Exceeds Standard

Table 1
Summary Soil Analytical Results
1130 West Jericho Turnpike
Huntington, New York

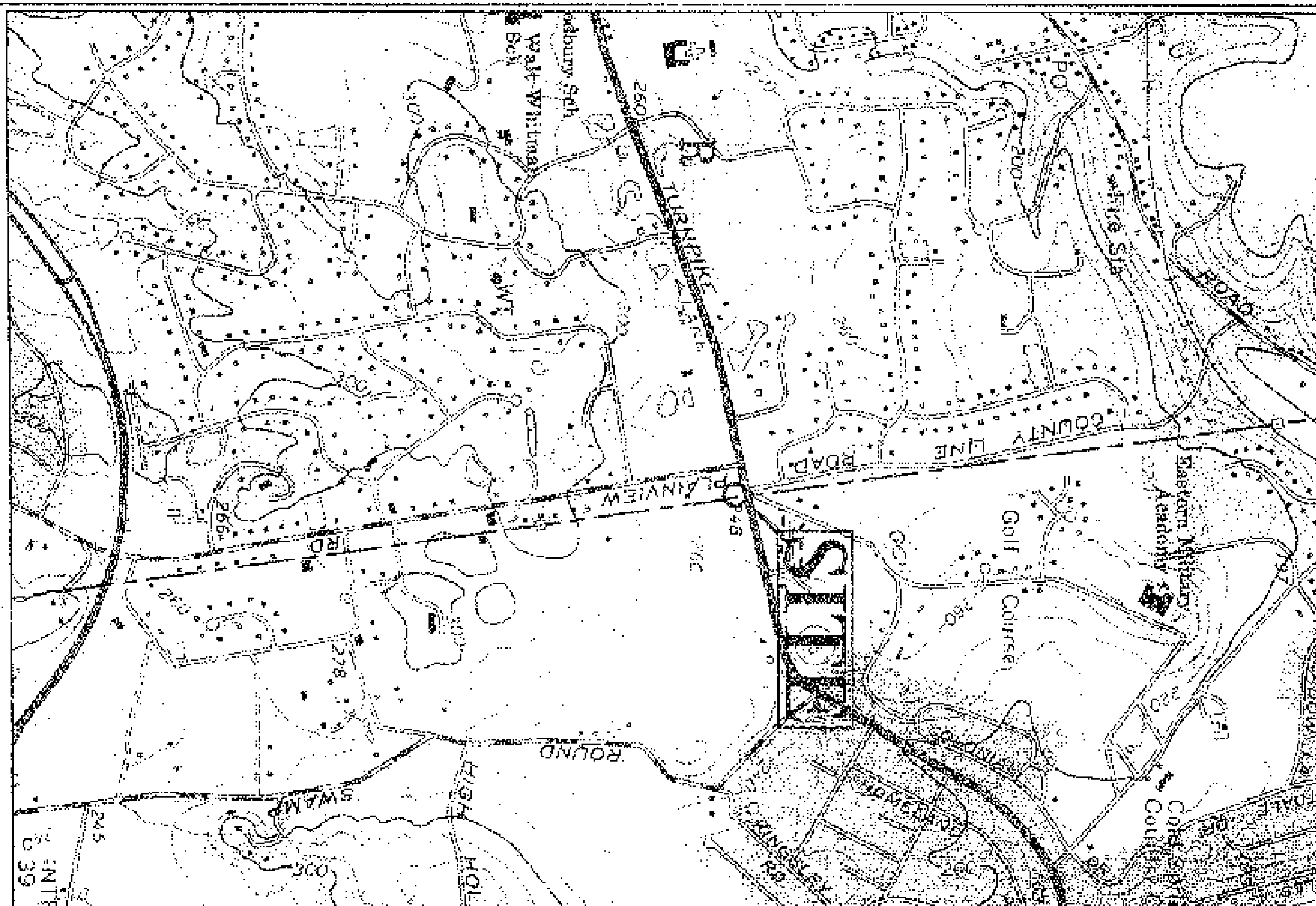
Sample ID Sampling Date Matrix Units	NYSDEC Soil Cleanup Objectives (mg/kg)	Eastern USA Background Values (mg/kg)	B-7 (5-7') 6/9/2006 soil mg/kg	TP-2 (1-3') 6/9/2006 soil mg/kg	TP-4 (0-1') 6/9/2006 soil mg/kg	TP-5 (3-4') 6/9/2006 soil mg/kg	TP-6 (8-9') 6/9/2006 soil mg/kg	TP-7 (5-6') 6/9/2006 soil mg/kg
VOLATILE ORGANIC COMPOUNDS								
Total Confident Conc. VOC	10	NC	ND	ND	NA	ND	ND	ND
SEMIVOLATILE ORGANIC COMPOUNDS								
Phenanthrene	50	NC	ND	ND	NA	ND	ND	ND
Fluoranthene	50	NC	ND	ND	NA	ND	ND	ND
Pyrene	50	NC	ND	0.33	NA	ND	ND	ND
bis(2-ethylhexyl)phthalate	50	NC	ND	ND	NA	ND	ND	ND
Benzo(b)fluoranthene	0.224 or MDL	NC	ND	ND	NA	ND	ND	ND
Total Confident Conc. SVOC	500	NC	ND	ND	NA	ND	ND	ND
METALS								
Arsenic	7.5 or SB	3-12	NA	11.3	NA	NA	NA	NA
Barium	300 or SB	0-1.75	NA	31.6	NA	NA	NA	NA
Chromium	50	1.5-40	NA	22.8	NA	NA	NA	NA
Lead	*	*	NA	13.6	NA	NA	NA	NA
Mercury	0.1	0.001-0.2	NA	ND	NA	NA	NA	NA
Pesticides								
Aldrin	0.041	NC	NA	NA	ND	NA	NA	NA
Dieldrin	0.044	NC	NA	NA	ND	NA	NA	NA
4,4'-DDD	2.9	NC	NA	NA	ND	NA	NA	NA
4,4'-DDE	2.1	NC	NA	NA	ND	NA	NA	NA
4,4'-DDT	2.1	NC	NA	NA	ND	NA	NA	NA
PCBs								
Total PCBs	10	NC	NA	ND	NA	NA	NA	NA

Notes:
* Background levels for lead vary widely. Average background levels in metropolitan or suburban areas near highways are much higher and typically range from 200-500 ppm. The USEPA's Interim Lead Hazard Guidance (July 1994) establishes a residential screening level of 400 ppm.

1. MDL - Method detection limit.
2. NA- Not analyzed
3. NC- No criteria.
4. ND- Not detected.
5. Only detected parameters are summarized in this table. Refer to laboratory data reports for complete analytical results.

Exceeds Standard

FIGURES



NEW YORK

ACKNOWLEDGEMENT:
FIGURE BASED ON U.S. GEOLOGICAL SURVEY, HUNTINGTON QUADRANGLE (7.5 MINUTE SERIES TOPOGRAPHIC MAP), DATED 1979

REV. NO.	DESCRIPTION	BY	DATE

1130 WEST JERICHO TURNPIKE

HUNTINGTON, NEW YORK

SITE LOCUS MAP

NOT TO SCALE

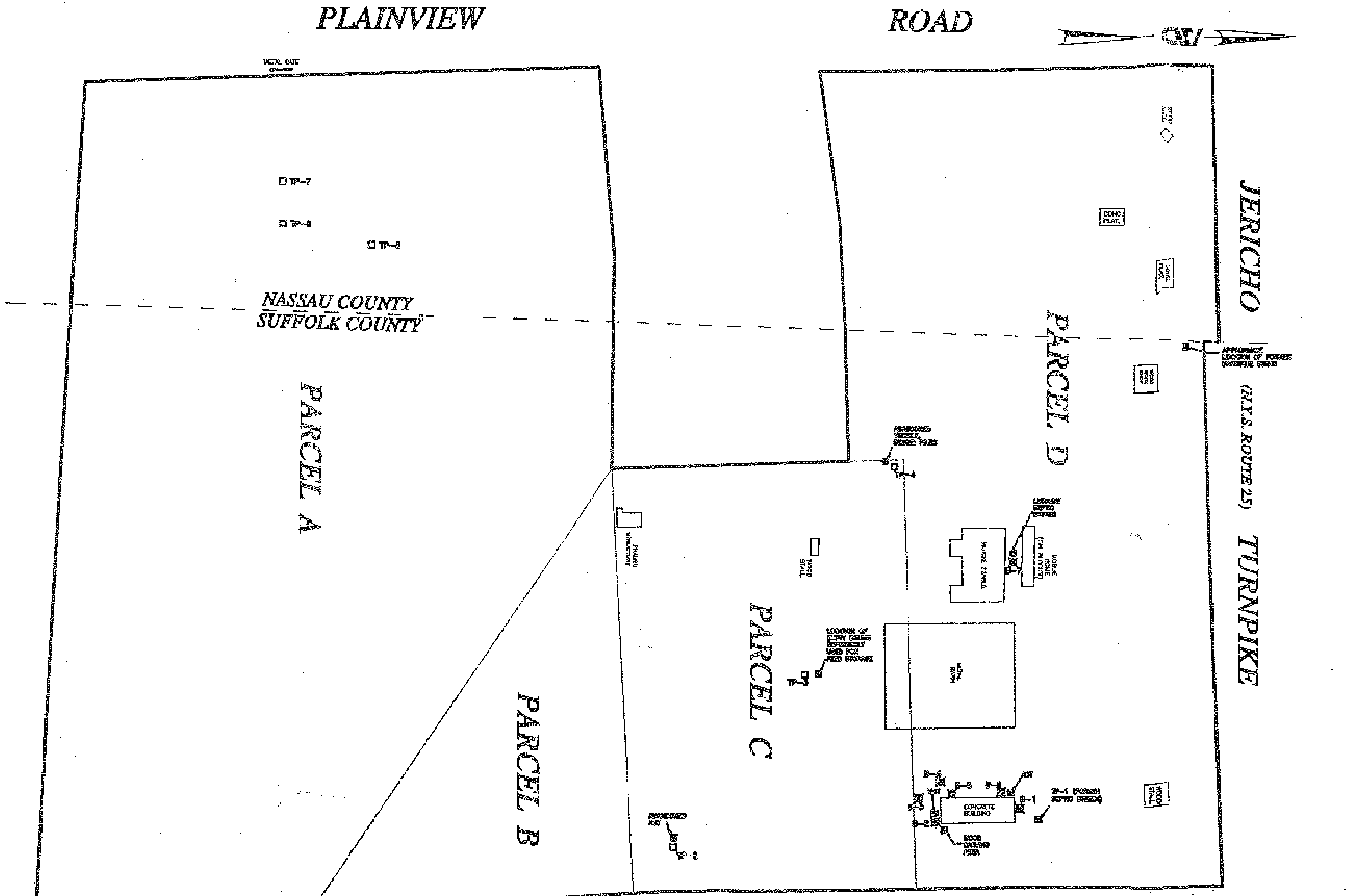
PROJ MGR: DW
DESIGNED BY: MH
REVIEWED BY: DW

OPERATOR: MH
DATE: 6/27/2006

GZA
GeoEnvironmental of New York
Engineers and Scientists
440 Ninth Avenue, 18th Floor
New York, New York 10001
(212) 594-8140
(212) 279-8180

JOB NO.
41.0161521.00

FIGURE NO.
1



NOTES:

1. BASED ON COMPILATION MAP PREPARED BY FAUSER ASSOCIATES, P.C. DATED MAY 24, 2005

2. LOCATIONS OF BORINGS AND TEST PITS WERE DETERMINED BY FIELD TAPE MEASUREMENTS AND SHOULD BE CONSIDERED APPROXIMATE

LEGEND

GZA BORINGS

GZA TEST PITS

REV. NO.	DESCRIPTION	BY	DATE

PROJECT MGR: DW
DESIGNED BY: MH
REVIEWED BY: MH
DRAWN BY: GJP
DATE: 6/23/2006

GZA GeoEnvironmental of New York
Engineers and Scientists
440 Ninth Avenue, 18th Floor
New York, New York 10001
(212) 594-8140
(212) 279-8180

1 in = 100 ft

0 50' 100' 200'

1130 WEST JERICHO TURNPIKE
HUNTINGTON, NEW YORK

SITE INVESTIGATION REPORT

JOB NO. 41.0161517.00

FIGURE NO. 1

APPENDIX A

LIMITATIONS

GEOHYDROLOGICAL LIMITATIONS

1. The conclusions and recommendations submitted in this report are based in part upon the data obtained from a limited number of water samples from widely spaced sampling locations. The nature and extent of variations between these locations may not become evident until further investigation. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the recommendations of this report.

2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

3. Water level readings have been made in the borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

4. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, GZA GeoEnvironmental of New York (GZANY) has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

5. Chemical analyses have been performed for specific parameters during the course of this study, as detailed in the text. It must be noted that additional constituents not searched for during the current study may be present in soil and groundwater at the site.

6. The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZANY, and the conclusions and recommendations presented therein modified accordingly.

7. It is recommended that this firm be retained to provide further engineering services during design, implementation, and/or construction of any remedial measures, if necessary. This is to observe compliance with the concepts and recommendations contained herein and to allow design changes in the event that subsurface conditions differ from those anticipated.

APPENDIX B

SOIL BORING LOGS AND TEST PIT LOGS

GZA GEOENVIRONMENTAL OF NEW YORK
[illegible]
ENGINEERS AND SCIENTISTS

[illegible]

BORING CO.	Brookside	BORING LOCATION	See Boring Location Plan
FOREMAN	Drew Edgar	GROUND SURFACE ELEV.	DATUM
GZA ENGINEER	Meredith Nayes	DATE START 6/9/06	DATE END 6/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH (FT)	SAMPLE NO.	PEN/REC (IN)	DEPTH (FT)	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	REMARK
		48/48	0-2	Brown fine to coarse SAND, little Silt.	SAND		0 ppm	
2	1		2-4	Brown SILTY CLAY, trace fine Gravel.				
4		48/48	4-6	Brown SILT (trace organic material).			0 ppm	
6	2		6-8	Brown SILTY CLAY, trace fine Gravel.				
8		48/48	8-10	Fine SAND and SILT, trace fine Gravel.	SILT/CLAY		0 ppm	
10	3		10-12	Gray CLAYEY SILT				
12		48/48	12-14	Brown fine to medium SAND, trace Silt			0 ppm	
14	4		14-16	Gray fine to medium SAND, trace Silt.	SAND			1.
16								2.

REMARKS:

1. Sample collected from 15-16'.
2. End of boring at 16'.

NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. [illegible]

GZA GEOENVIRONMENTAL OF NEW YORK

[illegible]

ENGINEERS AND SCIENTISTS

BORING CO.	Brookside
FOREMAN	Drew Edgar
GZA ENGINEER	Meredith Hayes
BORING LOCATION	See Boring Location Plan
GROUND SURFACE ELEV.	
DATUM	
DATE START	6/9/06
DATE END	6/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH	SAMPLE NO.	PEN/REC	DEPTH	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	[illegible]
		48/48	0-2	Gray to black fine to coarse SAND, trace Silt.			3.5 ppm	1.
2	1		2-4	Brown CLAYEY SILT (little concrete @ 3').				
4	2	48/48	4-8	Brown SILT (concrete at bottom of core).	SILT and SAND		0.7 ppm	
6								
8	3	48/48	8-12	Brown fine SAND, some SILT (some concrete and gravel).			0 ppm	
10								
12	4							2.
14								
16								

REMARKS:

1. Sample collected from 0-4'.
2. End of boring at 12'.

NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA

GZA GEOENVIRONMENTAL OF NEW YORK [illegible]

ENGINEERS AND SCIENTISTS

[illegible]

BORING CO.	Brookside	BORING LOCATION	See Boring Location Plan
FOREMAN	Drew Edgar	GROUND SURFACE ELEV.	DATUM
GZA ENGINEER	Meredith Hayes	DATE START 6/9/06	DATE END 6/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH (FT)	SAMPLE NO.	RECOVERY	DEPTH (FT)	SAMPLE DESCRIPTION (BURMISTER CLASSIFICATION)	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	
		48/48	0-2	Gray to black fine to coarse SAND, trace Silt.	SAND		0 ppm	
2	1		2-4	Brown SILT, trace fine Gravel.	SILT			
4		48/48	4-6	Brown fine to medium SAND, little Silt (little concrete and gravel).			0 ppm	1.
6	2							
8		48/48	8-12	Brown fine to medium SAND, some Silt (little concrete and gravel).	SAND		0 ppm	
10	3							
12		48/48	12-16	Brown fine to medium SAND, some Silt, trace fine Gravel.			0 ppm	
14	4							
16								2.

REMARKS:

1. Sample collected from 4-6'.
2. End of boring at 16'.

NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA

BORING NO. [illegible]

GZA GEOENVIRONMENTAL OF NEW YORK [illegible]
ENGINEERS AND SCIENTISTS [illegible]

BORING CO.	Brookside	BORING LOCATION	See Boring Location Plan
FOREMAN	Drew Edgar	GROUND SURFACE ELEV.	DATUM
GZA ENGINEER	Meredith Hayes	DATE START 6/9/08	DATE END 6/9/08

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

[illegible]	SAMPLE [illegible]	[illegible]	[illegible]	[illegible]	STRATUM DESCRIPTION [illegible]	[illegible]	FIELD TESTING [illegible]	[illegible]
		48/48	0-3.5	Gray fine to medium SAND, little fine Gravel (little concrete)			0 ppm	
2	1							
4			3.5-4	Gray SILT				
		48/48	4-8	Brown SILT, trace fine Gravel.			0 ppm	
6	2							
8		48/48	8-12	Brown SILT, trace fine Gravel.	SILT and SAND		0 ppm	1.
10	3							
12		48/48	12-12.5	Black fine to medium SAND, some Silt.			0 ppm	
			12.5-16	Brown SILT, trace fine Gravel.				
14	4							
16								2.

REMARKS:

1. Sample collected from 8-9'
2. End of boring at 16'.

NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. [illegible]

GZA GEOENVIRONMENTAL OF NEW YORK

[illegible]

ENGINEERS AND SCIENTISTS

BORING CO.	Brookside	BORING LOCATION	See Boring Location Plan
FOREMAN	Drew Edger	GROUND SURFACE ELEV.	DATUM
GZA ENGINEER	Meredith Hayes	DATE START 6/9/06	DATE END 6/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH	SAMPLE NO.	[illegible]	[illegible]	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	[illegible]
2 4	1	48/24	0-4	Gray fine to medium SAND changing to brown fine SAND some Silt			0 ppm	
6 8	2	48/48	4-8	Brown SILT, little fine to medium Gravel.			0 ppm	
10 12	3	48/48	8-12	Brown SILT, little fine to medium Gravel.	SILT		0 ppm	1.
14 16	4	48/48	12-16	Brown SILT, little fine to medium Gravel.			0 ppm	2.

REMARKS:

1. Sample collected from 8-9'.
2.

NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL OF NEW YORK

ENGINEERS AND SCIENTISTS

PROJECT	[illegible]
REPORT OF BORING	[illegible]
FILE NO.	[illegible]
CHECKED BY	[illegible]

BORING CO.	Brookside	BORING LOCATION	See Boring Location Plan
FOREMAN	Drew Edgar	GROUND SURFACE ELEV.	
		DATUM	
GZA ENGINEER	Meredith Hayes	DATE START	6/9/06
		DATE END	6/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH (FT)	SAMPLE NO.	PEN/REC (IN)	DEPTH (FT)	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	REMARK
	1	48/42	0-4	Black fine to medium SAND, little fine Gravel, trace Silt, changing to brown Clayey Silt.			0 ppm	1.
2								
4	2	48/40	4-8	Brown fine SAND, some Silt.			0 ppm	
6								
8	3	48/46	8-12	Brown fine SAND, some Silt.	SAND		0 ppm	
10								
12	4	48/48	12-16	Brown fine SAND, some Silt.			0 ppm	
14								
16								2.

REMARKS:

1. Sample collected from 1-2'.
2. End of boring at 16'.

NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

GZA GEOENVIRONMENTAL OF NEW YORK

ENGINEERS AND SCIENTISTS

BORING CO. Brookside — BORING LOCATION See Boring Location Plan

FOREMAN Drew Edgar — GROUND SURFACE ELEV. ______ DATUM ______

GZA ENGINEER Meredith Hayes — DATE START 8/9/06 — DATE END 8/9/06

SAMPLER: Geoprobe™ - 2" diameter, 48-inch long, clear acetate liner, installed with a hydraulic hammer.

DEPTH (FT.)	SAMPLE NO.	PEN./REC.	DEPTH (FT)	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R
	1	48/42	0-4	Gray fine to medium SAND, little Silt changing to brown Clayey Silt.			0 ppm	
2								
4	2	48/24	4-8	Brown fine to medium SAND, little Silt, trace fine Gravel.			0 ppm	
6								1.
8	3	48/46	8-12	Brown fine to medium SAND, little Silt, trace fine Gravel.	SAND		0 ppm	
10								
12	4	48/36	12-16	Brown fine to medium SAND, little Silt, trace fine Gravel.			0 ppm	
14								
16								2.

REMARKS:

1. Sample collected from 6-7'.
2. End of boring at 16'.

NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK
[illegible] AVENUE, [illegible] FLOOR, NEW YORK, NY [illegible]
ENGINEERS AND SCIENTISTS

[illegible]

EXCAVATION EQUIPMENT

GZA ENGINEER:	Meredith Hayes	CONTRACTOR:	Brookside Environmental				
		OPERATOR:	Bob White			GROUND ELEV.:	
WEATHER:	sunny, 70's	MAKE:		MODEL:	304 CR	TIME STARTED:	0915
		CAPACITY:	cu. yd.	REACH:		TIME COMPLETED:	1000

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-1'	Brown fine to medium SAND, some Silt, some fine to medium Gravel (0.2-34.3 ppm).	E		
-2-	1-2'	Gray SILTY CLAY.	E		
-3-	2-8'	Brown fine to medium SAND, some Silt, some fine to medium Gravel.	E		
-4-			E		
-5-			E		
-6-			E		
-7-			E		
-8-			E		1
-9-		end of test pit @8'			
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

1. Sample taken at 8'.

TEST PIT PLAN — LEGEND: BOULDER SIZE RANGE CLASSIFICATION — COUNT LETTER DESIGNATION — PROPORTIONS USED: TRACE (TR) 0-10%, LITTLE (LI) 10-20%, SOME (SO) 20-35%, AND 35-50% — EXCAVATION EFFORT: E EASY, M MODERATE, D DIFFICULT — OBSERVED GROUNDWATER LEVEL — VOLUME

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK
ENGINEERS AND SCIENTISTS

EXCAVATION EQUIPMENT

GZA ENGINEER: Meredith Hayes
WEATHER: sunny, 70's
CONTRACTOR: Brookside Environmental
OPERATOR: Bob White
MAKE:
CAPACITY: cu. yd.
MODEL: 304 CR
REACH:
GROUND ELEV.:
TIME STARTED: 1020
TIME COMPLETED: 1040

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-2'	Brown fine to medium SAND and Silt, little fine to medium gravel (organic material).	E		
-2-			E		
-3-	2-8'	Brown fine to medium SAND, some Silt, little fine to medium gravel.	E		
-4-			E		
-5-			E		
-6-			E		
-7-			E		
-8-			E		
-9-		end of test pit @ 8'			
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

TEST PIT PLAN — NORTH
LEGEND: BOULDER — COUNT; SIZE RANGE CLASSIFICATION — LETTER DESIGNATION; OR LARGER
PROPORTIONS USED: TRACE (TR) 0-10%; LITTLE (LI) 10-20%; SOME (SO) 20-35%; AND 35-50%
EXCAVATION EFFORT: E — EASY; M — MODERATE; D — DIFFICULT; OBSERVED GROUNDWATER LEVEL

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK
ENGINEERS AND SCIENTISTS

EXCAVATION EQUIPMENT

GZA ENGINEER: Meredith Hayes
CONTRACTOR: Brookside Environmental
OPERATOR: Bob White
WEATHER: sunny, 70's
MAKE:
MODEL: 304 CR
CAPACITY: cu. yd.
REACH:
GROUND ELEV.:
TIME STARTED: 1100
TIME COMPLETED: 1130

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-1.5'	Brown fine to medium SAND, some Silt, little fine Gravel.	E		1.
-2-	1.5-8'	Brown fine to medium SAND, some Silt, trace fine Gravel (some organic matter).	E		
-3-			E		
-4-			E		
-5-			E		
-6-			E		
-7-			E		
-8-			E		
-9-		end of test pit @ 8'			
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

1. Sample taken at 0-1'

TEST PIT PLAN LEGEND BOULDER SIZE RANGE CLASSIFICATION PROPORTIONS USED EXCAVATION EFFORT MODERATE DIFFICULT OBSERVED GROUNDWATER LEVEL

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK

ENGINEERS AND SCIENTISTS

GZA ENGINEER: Meredith Hayes

WEATHER: sunny, 70's

EXCAVATION EQUIPMENT

CONTRACTOR: Brookside Environmental

OPERATOR: Bob White

MAKE:

CAPACITY: cu. yd.

MODEL: 304 CR

REACH:

GROUND ELEV.:

TIME STARTED: 0815

TIME COMPLETED: 1000

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-2'	Black fine to medium SAND, some Silt, trace fine Gravel (petroleum-like odor, tires, 2.3 ppm)	E		1.
-2-			E		
-3-	2-6'	Brown fine to medium SAND, some Silt, trace fine Gravel (some organic matter, 0.8 ppm).	E		2.
-4-			E		
-5-			E		
-6-			E		
-7-		end of test pit @ 6'	E		
-8-			E		
-9-					
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

1. Surface staining observed, possibly from leaking farm equipment, surface soils > 900 ppm.
2. Sample taken at 3'.

TEST PIT PLAN

LEGEND

BOULDER SIZE RANGE CLASSIFICATION

COUNT LETTER DESIGNATION

PROPORTIONS USED

EXCAVATION EFFORT

MODERATE

DIFFICULT

OBSERVED GROUNDWATER LEVEL

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK
ENGINEERS AND SCIENTISTS

EXCAVATION EQUIPMENT

GZA ENGINEER:	Meredith Heyes	CONTRACTOR:	Brookside Environmental		
		OPERATOR:	Bob White	GROUND ELEV.:	
WEATHER:	sunny, 70's	MAKE:	MODEL: 304 CR	TIME STARTED:	0815
		CAPACITY:	cu yd. REACH:	TIME COMPLETED:	1000

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-7'	Black fine to medium SAND, some Silt, little fine Gravel (petroleum like odor, 0-250 ppm).	E		
-2-			E		
-3-			E		
-4-			E		
-5-			E		
-6-			E		
-7-			E		
-8-	7-8'	Brown fine to medium SAND, little Silt, trace fine Gravel (1.7 ppm).	E		1
-9-		end of test pit @8'			
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

1. Sample taken at 8'.

PLAN — LEGEND — BOULDER — SIZE RANGE — CLASSIFICATION — COUNT — LETTER DESIGNATION — PROPORTIONS USED — TRACE — LITTLE — SOME — AND — EXCAVATION EFFORT — E EASY — M MODERATE — D DIFFICULT — OBSERVED GROUNDWATER LEVEL

TEST PIT FIELD LOG

GZA GEOENVIRONMENTAL OF NEW YORK
[illegible] AVENUE, [illegible] FLOOR NEW YORK, NY [illegible]
ENGINEERS AND SCIENTISTS

EXCAVATION EQUIPMENT

GZA ENGINEER:	Meredith Hayes	CONTRACTOR:	Brookside Environmental				
		OPERATOR:	Bob White			GROUND ELEV.:	
WEATHER:	sunny, 70's	MAKE:		MODEL:	304 CR	TIME STARTED:	0915
		CAPACITY:	cu. yd.	REACH:		TIME COMPLETED:	1000

DEPTH		SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK NO.
-1-	0-8'	Brown fine to medium SAND, some Silt, little fine to medium Gravel (black soils with petroleum-like odor intermixed, 1.8-2.5 ppm).	E		
-2-			E		
-3-			E		
-4-			E		
-5-			E		
-6-			E		
-7-		end of test pit @ 8'	E		
-8-			E		1
-9-					
-10-					
-11-					
-12-					
-13-					
-14-					

REMARKS:

1. Sample taken at 8'.

TEST PIT PLAN	LEGEND: BOULDER COUNT		PROPORTIONS USED		EXCAVATION EFFORT	
	SIZE RANGE CLASSIFICATION	LETTER DESIGNATION	TRACE (TR)	0-10%	E	EASY
	6"-18"	A	LITTLE (LI)	10-20%	M	MODERATE
	18"-36"	B	SOME (SO)	20-35%	D	DIFFICULT
VOLUME: [illegible] cu. yd.	36" OR LARGER	C	AND	35-50%		OBSERVED GROUNDWATER LEVEL

APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

Please Reply To:

AMERI SCI

AmeriSci Boston
Eight School Street
Weymouth, MA 02189
TEL:(781)337-9334 FAX:(781)337-7642

FACSIMILE TELECOPY TRANSMISSION

To: Ms. Meredith Hayes
GZA GeoEnvironmental, Inc.

AmeriSci Job# 0606-00175
Subject: DOUGAL FARM

Fax # 212-279-8180

mhayes@gza.com

Date: Thursday, June 22, 2006
Time: 3:53:03PM

Comments:

This report consists of 38 pages, including:

Cover Page (Facsimile Telecopy Transmission)	1	pages
Laboratory Report	34	pages
Chain of Custody Record	1	pages
Air bill	1	pages
Sample Receiving Form	1	pages
Miscellaneous	0	pages

AmeriSci Boston
Eight School Street
Weymouth, MA 02189
781-337-9334

Laboratory Report

Report Date 06/22/2006
Workorder No. 0606-00175

Customer: GZA GeoEnvironmental, Inc.
440 9th Avenue
18th Floor
New York, NY 10001

Attention: Ms. Meredith Hayes

Subject: DOUGAL FARM

Sample: 001 B-1 (15-16')
Collection Date: 06/09/2006 **Time:** 8:45:00AM **Received Date:** 06/13/2006 **Time:** 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Chloromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Bromomethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Chloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Acrolein	EPA 8260B	ND	ug/Kg	82	MVP	06/15/2006 / 15:44	
Acetone	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Iodomethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
Methylene Chloride	EPA 8260B	ND	ug/Kg	33	MVP	06/15/2006 / 15:44	
Acrylonitrile	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Chloroform	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Bromochloromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	

Certifications: MA: MA063 NY:10982 CT: PH0119 RI:A45 NJ: 59744
ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 001 B-1 (15-16')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Benzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Trichloroethylene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Toluene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Dibromomethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
2-Hexanone	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 15:44	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Chlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Ethylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
M & P XYLENE	EPA 8260B	ND	ug/Kg	16	MVP	06/15/2006 / 15:44	
O-XYLENE	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Styrene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Bromoform	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Bromobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

Sample: 001 S-1 (15-16')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
Naphthalene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.2	MVP	06/15/2006 / 15:44	
DIBROMOFLUOROMETHANE (SURR)		95.6	%		MVP	06/15/2006 / 15:44	
TOLUENE-D8 (SURROGATE)		105	%		MVP	06/15/2006 / 15:44	
4-BROMOFLUOROBENZENE (SURR)		101	%		MVP	06/15/2006 / 15:44	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	360	NAC	06/21/2006 / 21:46	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 001 B-1 (15-16')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 001 B-1 (15-16')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 21:46	
2-FLUOROPHENOL (SURR)		73.5	%		NAC	06/21/2006 / 21:46	
PHENOL-D5 (SURR)		82.1	%		NAC	06/21/2006 / 21:46	
NITROBENZENE-D5 (SURR)		77.5	%		NAC	06/21/2006 / 21:46	
2-FLUOROBIPHENYL (SURR)		77.1	%		NAC	06/21/2006 / 21:46	
2,4,6-TRIBROMOPHENOL (SURR)		75.7	%		NAC	06/21/2006 / 21:46	
TERPHENYL-D14 (SURR)		84.6	%		NAC	06/21/2006 / 21:46	
Percent Solids		90.8	%		TLL	06/15/2006 / 7:58	

Sample: 002 B-2 (0-1)
Collection Date: 06/09/2006 Time: 9:05:00AM Received Date: 06/13/2006 Time: 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Chloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Bromomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Chloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	

AMERISCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Acrolein	EPA 8260B	ND	ug/Kg	98	MVP	06/15/2006 / 13:28	
Acetone	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Iodomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
Methylene Chloride	EPA 8260B	ND	ug/Kg	39	MVP	06/15/2006 / 13:28	
Acrylonitrile	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
2-Butanone (MEK)	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Chloroform	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Bromochloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Benzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Trichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Toluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Dibromomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
2-Hexanone	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 13:28	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Chlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Ethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
M & P XYLENE	EPA 8260B	ND	ug/Kg	20	MVP	06/15/2006 / 13:28	
O-XYLENE	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Styrene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Bromoform	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Bromobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
Naphthalene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 13:28	
DIBROMOFLUOROMETHANE (SURR)		101	%		MVP	06/15/2006 / 13:28	
TOLUENE-D8 (SURROGATE)		98.9	%		MVP	06/15/2006 / 13:28	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
4-BROMOFLUOROBENZENE (SURR)		87.0	%		MVP	06/15/2006 / 13:26	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Phenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Hexachloroethane	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	1900	NAC	06/22/2006 / 6:49	
Nitrobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Isophorone	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Naphthalene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Chloroaniline	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Acenaphthylene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Acenapthene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Dibenzofuran	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Fluorene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Phenanthrene	EPA 8270C	4200	ug/Kg	960	NAC	06/22/2006 / 6:49	
Anthracene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Carbazole	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	
Fluoranthene	EPA 8270C	1300	ug/Kg	960	NAC	06/22/2006 / 6:49	
Benzidine	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Pyrene	EPA 8270C	3100	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Chrysene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Benzo(b)fluoranthene	EPA 8270C	1200	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	960	NAC	06/22/2006 / 6:49	I

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-FLUOROPHENOL (SURR)		76.6	%		NAC	06/22/2006 / 6:49	
PHENOL-D5 (SURR)		83.7	%		NAC	06/22/2006 / 6:49	
NITROBENZENE-D5 (SURR)		75.2	%		NAC	06/22/2006 / 6:49	
2-FLUOROBIPHENYL (SURR)		79.5	%		NAC	06/22/2006 / 6:49	
2,4,6-TRIBROMOPHENOL (SURR)		48.8	%		NAC	06/22/2006 / 6:49	
TERPHENYL-D14 (SURR)		197	%		NAC	06/22/2006 / 6:49	G2
RCRA 8 Metals							
Arsenic	6010B, SW-846	0.815	mg/Kg	0.649	TDJ	06/15/2006 / 13:54	
Barium	6010B, SW-846	21.3	mg/Kg	1.9	TDJ	06/15/2006 / 13:54	
Cadmium	6010B, SW-846	ND	mg/Kg	0.195	TDJ	06/15/2006 / 13:54	
Chromium	6010B, SW-846	6.46	mg/Kg	0.649	TDJ	06/15/2006 / 13:54	
Lead	6010B, SW-846	27.3	mg/Kg	1.95	TDJ	06/15/2006 / 13:54	
Mercury	SW-846; 7471A	0.0989	mg/Kg	0.0422	PJS	06/15/2006 / 13:16	
Selenium	6010B, SW-846	ND	mg/Kg	2.60	JS	06/20/2006 / 17:09	RL5
Silver	6010B, SW-846	ND	mg/Kg	0.32	TDJ	06/15/2006 / 13:54	
PCB 8082-SOIL/SOLID							
PCB-1016	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1221	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1232	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1242	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1248	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1254	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1260	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1262	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
PCB-1268	EPA 8082	ND	ug/Kg	38.7	NAC	06/19/2006 / 13:09	
TCMX (SURROGATE)		76.8	%		NAC	06/19/2006 / 13:09	
DCB (SURROGATE)		103	%		NAC	06/19/2006 / 13:09	
Pesticides							
alpha-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
beta-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
gamma-BHC (Lindane)	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
delta-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Heptachlor	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Heptachlor Epoxide	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

AMERI SCI

Sample: 002 B-2 (0-1)
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Aldrin	EPA 8081A	2.73	ug/Kg	2	NAC	06/21/2006 / 11:55	R10
Dieldrin	EPA 8081A	27.4	ug/Kg	2	NAC	06/21/2006 / 11:55	
Endrin	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
4,4'-DDD	EPA 8081A	6.63	ug/Kg	2	NAC	06/21/2006 / 11:55	
4,4'-DDE	EPA 8081A	11.4	ug/Kg	2	NAC	06/21/2006 / 11:55	
4,4'-DDT	EPA 8081A	5.15	ug/Kg	2	NAC	06/21/2006 / 11:55	R10
Endosulfan I	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Endosulfan II	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Endosulfan Sulfate	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Endrin Aldehyde	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Methoxychlor	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Endrin Ketone	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 11:55	
Chlordane	EPA 8081A	ND	ug/Kg	38.7	NAC	06/21/2006 / 11:55	
Toxaphene	EPA 8081A	ND	ug/Kg	38.7	NAC	06/21/2006 / 11:55	
TCMX (SURROGATE)		92.9	%		NAC	06/21/2006 / 11:55	
DCB (SURROGATE)		103	%		NAC	06/21/2006 / 11:55	
Percent Solids		85.6	%		TLL	06/15/2006 / 7:58	
Flame/ICP Solid Digestion	EPA 3050B	55.5556			TLL	06/15/2006 / 15:35	
PCB OIL/SOIL EXTRACTIONS		30.20			TLL	06/19/2006 / 14:22	

Sample: 003 B-3 (4-5')
Collection Date: 06/09/2006 **Time:** 9:45:00AM **Received Date:** 06/13/2006 **Time:** 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Chloromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Bromomethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Chloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Acrolein	EPA 8260B	ND	ug/Kg	83	MVP	06/15/2006 / 13:59	
Acetone	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 003 B-3 (4-5')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Iodomethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
Methylene Chloride	EPA 8260B	ND	ug/Kg	33	MVP	06/15/2006 / 13:59	
Acrylonitrile	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Chloroform	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Bromochloromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Benzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Trichloroethylene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Toluene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Dibromomethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
2-Hexanone	EPA 8260B	ND	ug/Kg	41	MVP	06/15/2006 / 13:59	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	

Certifications: MA: MA009 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

Sample: 003 B-3 (4-5')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Chlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Ethylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
M & P XYLENE	EPA 8260B	ND	ug/Kg	17	MVP	06/15/2006 / 13:59	
O-XYLENE	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Styrene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Bromoform	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Bromobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
Naphthalene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.3	MVP	06/15/2006 / 13:59	
DIBROMOFLUOROMETHANE (SURR)		97.0	%		MVP	06/15/2006 / 13:59	
TOLUENE-D8 (SURROGATE)		104	%		MVP	06/15/2006 / 13:59	
4-BROMOFLUOROBENZENE (SURR)		98.9	%		MVP	06/15/2006 / 13:59	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 003 B-3 (4-5')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	360	NAC	06/21/2006 / 22:23	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	

AMERISCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 003 B-3 (4-5')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:23	
2-FLUOROPHENOL (SURR)		78.4	%		NAC	06/21/2006 / 22:23	
PHENOL-D5 (SURR)		83.3	%		NAC	06/21/2006 / 22:23	
NITROBENZENE-D5 (SURR)		76.7	%		NAC	06/21/2006 / 22:23	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL = Practical Quantitation Limit

AMERISCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 003 B-3 (4-5')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-FLUOROBIPHENYL (SURR)		77.0	%		NAC	06/21/2006 / 22:23	
2,4,6-TRIBROMOPHENOL (SURR)		60.8	%		NAC	06/21/2006 / 22:23	
TERPHENYL-D14 (SURR)		83.9	%		NAC	06/21/2006 / 22:23	
Percent Solids		90.2	%		TLL	06/15/2006 / 7:58	

Sample: 004 B-4 (8-9')
Collection Date: 06/09/2006 Time: 10:15:00AM Received Date: 06/13/2006 Time: 10:18:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Chloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Bromomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Chloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Acrolein	EPA 8260B	ND	ug/Kg	98	MVP	06/15/2006 / 14:31	
Acetone	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Iodomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
Methylene Chloride	EPA 8260B	ND	ug/Kg	39	MVP	06/15/2006 / 14:31	
Acrylonitrile	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Chloroform	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Bromochloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	

Customer: GZA GeoEnvironmental, Inc.

AMERISCI

Workorder No. 0606-00175

Sample: 004 B-4 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Benzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Trichloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Toluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Dibromomethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
2-Hexanone	EPA 8260B	ND	ug/Kg	49	MVP	06/15/2006 / 14:31	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Chlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Ethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
M & P XYLENE	EPA 8260B	ND	ug/Kg	20	MVP	06/15/2006 / 14:31	
O-XYLENE	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Styrene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Bromoform	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
n-Propylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
Bromobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

Sample: 004 B-4 (6-8')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
n-Butylbenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
Naphthalene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.8	MVP	06/15/2006 / 14:31	I
DIBROMOFLUOROMETHANE (SURR)		103	%		MVP	06/15/2006 / 14:31	
TOLUENE-D8 (SURROGATE)		86.2	%		MVP	06/15/2006 / 14:31	
4-BROMOFLUOROBENZENE (SURR)		65.6	%		MVP	06/15/2006 / 14:31	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Phenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Hexachloroethane	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	2000	NAC	06/22/2006 / 7:25	
Nitrobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Isophorone	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 004 B-4 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Naphthalene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Acenaphthylene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Acenapthene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Dibenzofuran	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Fluorene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Phenanthrene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Anthracene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Carbazole	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	

Certifications: MA: MA069 NY: 10982 CT: PH0119 RI: A45 NJ: 59744

ND = Not Detected PQL = Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 004 B-4 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Fluoranthene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	
Benzidine	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Pyrene	EPA 8270C	1600	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Chrysene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
bis(2-Ethylhexyl)phthalate	EPA 8270C	1500	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	970	NAC	06/22/2006 / 7:25	I
2-FLUOROPHENOL (SURR)		103	%		NAC	06/22/2006 / 7:25	
PHENOL-D5 (SURR)		107	%		NAC	06/22/2006 / 7:25	
NITROBENZENE-D5 (SURR)		101	%		NAC	06/22/2006 / 7:25	
2-FLUOROBIPHENYL (SURR)		109	%		NAC	06/22/2006 / 7:25	
2,4,6-TRIBROMOPHENOL (SURR)		92.2	%		NAC	06/22/2006 / 7:25	
TERPHENYL-D14 (SURR)		337	%		NAC	06/22/2006 / 7:25	G2
Percent Solids		83.1	%		TLL	06/15/2006 / 7:58	

Sample: 005 B-5 (8-9')
Collection Date: 06/09/2006 **Time:** 10:35:00AM **Received Date:** 06/13/2006 **Time:** 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Chloromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Bromomethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 005 B-5 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Chloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Acrolein	EPA 8260B	ND	ug/Kg	85	MVP	06/15/2006 / 16:47	
Acetone	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Iodomethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
Methylene Chloride	EPA 8260B	ND	ug/Kg	34	MVP	06/15/2006 / 16:47	
Acrylonitrile	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Chloroform	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Bromochloromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Benzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Trichloroethylene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Toluene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Dibromomethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 005 B-5 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-Hexanone	EPA 8260B	ND	ug/Kg	43	MVP	06/15/2006 / 16:47	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Chlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Ethylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
M & P XYLENE	EPA 8260B	ND	ug/Kg	17	MVP	06/15/2006 / 16:47	
O-XYLENE	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Styrene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Bromoform	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Bromobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
Naphthalene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.5	MVP	06/15/2006 / 16:47	
DIBROMOFLUOROMETHANE (SURR)		100	%		MVP	06/15/2006 / 16:47	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 005 B-5 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
TOLUENE-D8 (SURROGATE)		96.4	%		MVP	06/15/2006 / 16:47	
4-BROMOFLUOROBENZENE (SURR)		88.8	%		MVP	06/15/2006 / 16:47	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	360	NAC	06/21/2006 / 22:59	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	

Customer: GZA GeoEnvironmental, Inc.

AmeriSci

Workorder No. 0606-00175

Sample: 005 B-5 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	

Certifications: MA: MA069 NY:10902 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL = Practical Quantitation Limit

Sample: 005 B-5 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 22:59	
2-FLUOROPHENOL (SURR)		77.3	%		NAC	06/21/2006 / 22:59	
PHENOL-D5 (SURR)		83.4	%		NAC	06/21/2006 / 22:59	
NITROBENZENE-D5 (SURR)		76.5	%		NAC	06/21/2006 / 22:59	
2-FLUOROBIPHENYL (SURR)		77.5	%		NAC	06/21/2006 / 22:59	
2,4,6-TRIBROMOPHENOL (SURR)		64.3	%		NAC	06/21/2006 / 22:59	
TERPHENYL-D14 (SURR)		87.3	%		NAC	06/21/2006 / 22:59	
Percent Solids		91.1	%		TLL	06/15/2006 / 7:58	

Sample: 006 B-6 (1-2')
Collection Date: 06/09/2006 **Time:** 11:15:00AM **Received Date:** 06/13/2006 **Time:** 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Chloromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Bromomethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Chloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Acrolein	EPA 8260B	ND	ug/Kg	84	MVP	06/15/2006 / 18:32	
Acetone	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Iodomethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
Methylene Chloride	EPA 8260B	ND	ug/Kg	34	MVP	06/15/2006 / 18:32	
Acrylonitrile	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 006 B-6 (1-2')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Chloroform	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Bromochloromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Benzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Trichloroethylene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Toluene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Dibromomethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
2-Hexanone	EPA 8260B	ND	ug/Kg	42	MVP	06/15/2006 / 18:32	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Chlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Ethylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
M & P XYLENE	EPA 8260B	ND	ug/Kg	17	MVP	06/15/2006 / 18:32	
O-XYLENE	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Styrene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Bromoform	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 006 B-6 (1-2')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Bromobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
Naphthalene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	8.4	MVP	06/15/2006 / 18:32	
DIBROMOFLUOROMETHANE (SURR)		97.7	%		MVP	06/15/2006 / 18:32	
TOLUENE-D8 (SURROGATE)		97.3	%		MVP	06/15/2006 / 18:32	
4-BROMOFLUOROBENZENE (SURR)		92.6	%		MVP	06/15/2006 / 18:32	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	350	NAC	06/22/2006 / 6:12	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 006 B-6 (1-2')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	

Sample: 006 B-6 (1-2')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Pyrene	EPA 8270C	320	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Benzo(b)fluoranthene	EPA 8270C	240	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 6:12	I
2-FLUOROPHENOL (SURR)		63.2	%		NAC	06/22/2006 / 6:12	
PHENOL-D5 (SURR)		66.6	%		NAC	06/22/2006 / 6:12	
NITROBENZENE-D5 (SURR)		62.3	%		NAC	06/22/2006 / 6:12	
2-FLUOROBIPHENYL (SURR)		65.7	%		NAC	06/22/2006 / 6:12	
2,4,6-TRIBROMOPHENOL (SURR)		62.7	%		NAC	06/22/2006 / 6:12	
TERPHENYL-D14 (SURR)		142	%		NAC	06/22/2006 / 6:12	G2
Percent Solids		92.1	%		TLL	06/15/2006 / 7:55	

Sample: 007 B-7 (6-7')
Collection Date: 06/09/2006 **Time:** 12:00:00PM **Received Date:** 06/13/2006 **Time:** 10:10:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 007 B-7 (6-7')
(Continued)

Parameter	Method	Result	Units	PQL	Tech	Analysis Date/Time	Qual
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Chloromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Bromomethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Chloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Acrolein	EPA 8260B	ND	ug/Kg	91	MVP	06/15/2006 / 17:50	
Acetone	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Iodomethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
Methylene Chloride	EPA 8260B	ND	ug/Kg	36	MVP	06/15/2006 / 17:50	
Acrylonitrile	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Chloroform	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Bromochloromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Benzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Trichloroethylene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Toluene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 007 B-7 (6-7')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Bromodichloromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Dibromomethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
2-Hexanone	EPA 8260B	ND	ug/Kg	45	MVP	06/15/2006 / 17:50	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Chlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Ethylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
M & P XYLENE	EPA 8260B	ND	ug/Kg	18	MVP	06/15/2006 / 17:50	
O-XYLENE	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Styrene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Bromoform	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Bromobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 007 B-7 (6-7')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
Naphthalene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.1	MVP	06/15/2006 / 17:50	
DIBROMOFLUOROMETHANE (SURR)		96.8	%		MVP	06/15/2006 / 17:50	
TOLUENE-D8 (SURROGATE)		107	%		MVP	06/15/2006 / 17:50	
4-BROMOFLUOROBENZENE (SURR)		103	%		MVP	06/15/2006 / 17:50	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	360	NAC	06/22/2006 / 12:11	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 007 B-7 (6-7')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
henanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
nthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
arbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
i-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
uoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
enzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
yrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
utyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
nzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
rysene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
eno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00175

Sample: 007 B-7 (6-7')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/22/2006 / 12:11	
2-FLUOROPHENOL (SURR)		82.3	%		NAC	06/22/2006 / 12:11	
PHENOL-D5 (SURR)		90.1	%		NAC	06/22/2006 / 12:11	
NITROBENZENE-D5 (SURR)		76.7	%		NAC	06/22/2006 / 12:11	
2-FLUOROBIPHENYL (SURR)		80.3	%		NAC	06/22/2006 / 12:11	
2,4,6-TRIBROMOPHENOL (SURR)		84.8	%		NAC	06/22/2006 / 12:11	
TERPHENYL-D14 (SURR)		91.9	%		NAC	06/22/2006 / 12:11	
Percent Solids		90.5	%		YLL	06/15/2006 / 7:58	

G2 Surrogate recovery was above acceptance limits.
I Internal Standard recovery was outside of method limits. Matrix interference was confirmed by reanalysis.
R10 The RPD between the primary and confirmatory analysis exceeded 40%. Per method 8000B, the lower value was reported due to apparent chromatographic problems.
RL5 Reporting limit raised due to high single peak analyte.

To the best of my knowledge this report is true and accurate.

Authorized By: Robert A. Bell Date: 6-22-06

Robert Bell, Environmental Laboratory Manager

NOTE: All solid results are reported on a dry weight basis unless otherwise noted.

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERISCI BOSTON
www.amerisci.com

CHAIN OF CUSTODY RECORD

AMERISCI BOSTON
8 School Street - Weymouth, MA 02189
888.724.5221 Toll Free
781.337.9334 Phone - 781.337.7642 Fax

DUE DATE: ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☒ 5 DAY ☐ 7 DAY ☐ 10 DAY

DATA PACKAGE: 0606-175

PAGE 1 OF 1

TEMP UPON RECEIPT: 1.2°C

P.O.#

COMPANY: GZA GeoEnvironmental

ADDRESS: 440 Ninth Ave 18th Fl NY NY 10001

PHONE: 212-594-8140 FAX 1: 212-279-8180 FAX 2:

CLIENT CONTACT: Meredith Hayes EMAIL: mhayes@gza.com

PROJECT NAME: Dougal Farm PROJECT NUMBER: 41.0161477.00 PROJECT STATE: 6/9/06

MATRIX: A-WATER S-SOIL/SOLIDS SL-SLUDGE OIL-OIL CH-CHIPS WI-WIPES C-CASSETTES W-WASTE O-OTHER

CONTAINER: P-PLASTIC G-GLASS V-VOA

											VOCs	SVOCs	RCRA metals	PCBs	Pesticides	Notes
1	B-1 (15-16')	S	4oz	G	3	6/9/06	0845	MH-4	G	4C	X	X				
2	B-2 (0-1')	|	|	|	|	|	0905	|	|	|	X	X	X	X	X	
3	B-3 (4-5')	|	|	|	|	|	0945	|	|	|	X	X				
4	B-4 (8-9')	|	|	|	|	|	1015	|	|	|	X	X				
5	B-5 (8-9')	|	|	|	|	|	1035	|	|	|	X	X				
6	B-6 (1-2')	|	|	|	|	|	1115	|	|	|	X	X				
7	B-7 (6-7')	|	|	|	|	|	1130	|	|	|	X	X				

SAMPLED BY: (PRINT) [signature] (SIGN) Meredith Hayes DATE: 6/12/06 TIME: 1500

RECEIVED BY: (PRINT) UPS tracking # (SIGN) 1Z07R97V0107319481 DATE: TIME:

RELINQUISHED BY: (PRINT) (SIGN) DATE: TIME:

RECEIVED BY: (PRINT) (SIGN) DATE: TIME:

RELINQUISHED BY: (PRINT) (SIGN) DATE: TIME:

RECEIVED FOR LABORATORY BY: (PRINT) Martin Powers (SIGN) [signature] DATE: 6/13/06 TIME:

UPS Internet Shipping: View/Print Label

1. **Print the label(s):** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. **Fold the printed label at the dotted line.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**
   Customers without a Daily Pickup
   - Schedule a same day or future day Pickup to have a UPS driver pickup all of your Internet Shipping packages.
   - Hand the package to any UPS driver in your area.
   - Take your package to The UPS Store™, Customer Center or Authorized Shipping Outlet.
   - Drop off your Air Shipments including Worldwide Express SM at one of our 50,000 UPS locations.

   Customers with a Daily Pickup
   - Your driver will pickup your shipment(s) as usual.

FOLD HERE

MEREDITH HAYES
212 594-8140
GZA GEOENVIRONMENTAL
440 9TH AVENUE
NEW YORK NY 10001

20 LBS 1 OF 1

DWT: 10,17,13

SHIP TO:
RECEIVING
781 337 9334
AMERISCI BOSTON
8 SCHOOL STREET
WEYMOUTH MA 02189-2921

MA 024 9-02

UPS NEXT DAY AIR 1

TRACKING #: 1Z 07R 97V 01 9731 9461

BILLING: P/P

Reference# 1: 161519.00TASK 0300

AmeriSci Boston

SCI-SOP-1003

Sample Receiving Form

CLIENT: G-ZA - NY	WORKORDER: 0606-175
CLIENT'S JOB: Dougal Farm	RECEIVED BY: MP
RECEIVED DATE: 6/13/06	SHIPPING METHOD: UPS
TEMP UPON RECEIPT: 1.2°C	

"No" responses must be explained in the comment section below.

Checklist	YES	NO	NA
Were custody seals on shipping container(s) intact? Check "NA" if no seals, or if containers were hand delivered.			X
Were Chain of Custody Forms included with the samples?	X		
Were Chain of Custody Forms properly filled out (ink, signed, etc.)	X		
Were all containers received in good condition (Check for breakage/ leaks)?	X		
Were all containers labeled with required information (Sample Id, date, signed, analysis, preservation)?	X		
Were the correct containers used for the tests indicated?	X		
Were proper preservation techniques indicated?	X		
Were samples received within holding times? If "NO" nonconformance form is required.	X		
Were all VOA bottles checked for the presence of air bubbles? If bubbles were found please note in the comment section.			X
Were samples in direct contact with wet ice? If "NO" check one: ☐ Blue Ice ☐ No Ice	X		
Is sample temperature recorded ? If "NO" check one: ☐ Unable to record ☐ Temp taken near samples	X		
Were pHs of samples checked and recorded on the COC forms?			X
Did the laboratory accept samples?	X		
Will samples be subcontracted? If "yes" list subcontractor and tests in specified sections below.		X	

Subcontractor:	Date Sent Out:
Analyses Sent:	

Login Technician: MP	Login Review:
Comments:	

Please Reply To:

AMERI SCI

AmeriSci Boston
Eight School Street
Weymouth, MA 02189
TEL:(781)337-9334 FAX:(781)337-7642

FACSIMILE TELECOPY TRANSMISSION

To: Ms. Meredith Hayes
GZA GeoEnvironmental, Inc.

AmeriSci Job# 0606-00191
Subject: DOUGAL FARM: SOIL 6/13/06

Fax # 212-279-8180

mhayes@gza.com

Date: Thursday, June 22, 2006
Time: 3:56:16PM

Comments:

This report consists of 25 pages, including:

Cover Page (Facsimile Telecopy Transmission)	1	pages
Laboratory Report	21	pages
Chain of Custody Record	1	pages
Air bill	1	pages
Sample Receiving Form	1	pages
Miscellaneous	0	pages

AmeriSci Boston
Eight School Street
Weymouth, MA 02189
781-337-9334

AMERISCI

Laboratory Report

Report Date 06/22/2006
Workorder No. 0606-00191

Customer: GZA GeoEnvironmental, Inc.
440 9th Avenue
18th Floor
New York, NY 10001

Attention: Ms. Meredith Hayes

Subject: DOUGAL FARM: SOIL 6/13/06

Sample: 001 TP-2 (1-3')
Collection Date: 06/13/2006 Time: 9:15:00AM **Received Date:** 06/14/2006 Time: 10:20:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Chloromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Bromomethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Chloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Acrolein	EPA 8260B	ND	ug/Kg	90	MVP	06/21/2006 / 13:07	
Acetone	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Iodomethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
Methylene Chloride	EPA 8260B	ND	ug/Kg	36	MVP	06/21/2006 / 13:07	
Acrylonitrile	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
2-Butanone (MEK)	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Chloroform	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Bromochloromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 001 TP-2 (1-3')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Benzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Trichloroethylene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Toluene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Dibromomethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
2-Hexanone	EPA 8260B	ND	ug/Kg	45	MVP	06/21/2006 / 13:07	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Chlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Ethylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
M & P XYLENE	EPA 8260B	ND	ug/Kg	18	MVP	06/21/2006 / 13:07	
O-XYLENE	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Styrene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Bromoform	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Bromobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERISCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 001 TP-2 (1-3')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
Naphthalene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.0	MVP	06/21/2006 / 13:07	
DIBROMOFLUOROMETHANE (SURR)		102	%		MVP	06/21/2006 / 13:07	
TOLUENE-D8 (SURROGATE)		102	%		MVP	06/21/2006 / 13:07	
4-BROMOFLUOROBENZENE (SURR)		106	%		MVP	06/21/2006 / 13:07	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	360	NAC	06/21/2006 / 23:35	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 001 TP-2 (1-3')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Chloroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 001 TP-2 (1-3')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Pyrene	EPA 8270C	330	ug/Kg	180	NAC	06/21/2006 / 23:35	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 23:35	
2-FLUOROPHENOL (SURR)		75.8	%		NAC	06/21/2006 / 23:35	
PHENOL-D5 (SURR)		82.1	%		NAC	06/21/2006 / 23:35	
NITROBENZENE-D5 (SURR)		71.4	%		NAC	06/21/2006 / 23:35	
2-FLUOROBIPHENYL (SURR)		75.6	%		NAC	06/21/2006 / 23:35	
2,4,6-TRIBROMOPHENOL (SURR)		79.0	%		NAC	06/21/2006 / 23:35	
TERPHENYL-D14 (SURR)		61.9	%		NAC	06/21/2006 / 23:35	
RCRA 8 Metals							
Arsenic	6010B, SW-846	11.3	mg/Kg	1.06	TDJ	06/15/2006 / 13:54	
Barium	6010B, SW-846	31.6	mg/Kg	3.2	TDJ	06/15/2006 / 13:54	
Cadmium	6010B, SW-846	ND	mg/Kg	0.318	TDJ	06/15/2006 / 13:54	
Chromium	6010B, SW-846	22.8	mg/Kg	1.06	TDJ	06/15/2006 / 13:54	
Lead	6010B, SW-846	13.6	mg/Kg	3.18	TDJ	06/15/2006 / 13:54	
Mercury	SW-846; 7471A	ND	mg/Kg	0.0327	PJS	06/21/2006 / 17:06	
Selenium	6010B, SW-846	ND	mg/Kg	2.12	TDJ	06/15/2006 / 13:54	
Silver	6010B, SW-846	ND	mg/Kg	0.53	TDJ	06/15/2006 / 13:54	
PCB 8082-SOIL/SOLID							
PCB-1016	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1221	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1232	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 001 TP-2 (1-3')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
PCB-1242	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1248	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1254	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1260	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1262	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
PCB-1268	EPA 8082	ND	ug/Kg	36.2	NAC	06/19/2006 / 13:09	
TCMX (SURROGATE)		80.4	%		NAC	06/19/2006 / 13:09	
DCB (SURROGATE)		100	%		NAC	06/19/2006 / 13:09	
Percent Solids		91.7	%		TLL	06/16/2006 / 9:21	
Flame/ICP Solid Digestion	EPA 3050B	97.0874			TLL	06/15/2006 / 15:35	
PCB OIL/SOIL EXTRACTIONS		30.13			TLL	06/19/2006 / 14:22	

Sample: 002 TP-4 (0-1')
Collection Date: 06/13/2006 Time: 11:00:00AM Received Date: 06/14/2006 Time: 10:20:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Pesticides							
alpha-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
beta-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
gamma-BHC (Lindane)	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
delta-BHC	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Heptachlor	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Heptachlor Epoxide	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Aldrin	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Dieldrin	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endrin	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
4,4'-DDD	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
4,4'-DDE	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
4,4'-DDT	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endosulfan I	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endosulfan II	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endosulfan Sulfate	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endrin Aldehyde	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 002 TP-4 (0-1')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Methoxychlor	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Endrin Ketone	EPA 8081A	ND	ug/Kg	2	NAC	06/21/2006 / 16:00	
Chlordane	EPA 8081A	ND	ug/Kg	41.9	NAC	06/21/2006 / 16:00	
Toxaphene	EPA 8081A	ND	ug/Kg	41.9	NAC	06/21/2006 / 16:00	
TCMX (SURROGATE)		100	%		NAC	06/21/2006 / 16:00	
DCB (SURROGATE)		87.2	%		NAC	06/21/2006 / 16:00	
Percent Solids		75.9	%		TLL	06/16/2006 / 9:21	

Sample: 003 TP-5 (3-4')
Collection Date: 06/13/2006 **Time:** 12:00:00PM **Received Date:** 06/14/2006 **Time:** 10:20:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Chloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Bromomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Chloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Acrolein	EPA 8260B	ND	ug/Kg	110	MVP	06/21/2006 / 16:34	
Acetone	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Iodomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
Methylene Chloride	EPA 8260B	ND	ug/Kg	44	MVP	06/21/2006 / 16:34	
Acrylonitrile	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	

AMERISCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 003 TP-5 (3-4')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Chloroform	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Bromochloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Benzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Trichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Toluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Dibromomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
2-Hexanone	EPA 8260B	ND	ug/Kg	55	MVP	06/21/2006 / 16:34	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Chlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Ethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
M & P XYLENE	EPA 8260B	ND	ug/Kg	22	MVP	06/21/2006 / 16:34	
O-XYLENE	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Styrene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Bromoform	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 003 TP-5 (3-4')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Bromobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
Naphthalene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 16:34	
DIBROMOFLUOROMETHANE (SURR)		99.9	%		MVP	06/21/2006 / 16:34	
TOLUENE-D8 (SURROGATE)		94.0	%		MVP	06/21/2006 / 16:34	
4-BROMOFLUOROBENZENE (SURR)		95.0	%		MVP	06/21/2006 / 16:34	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Phenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Hexachloroethane	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	410	NAC	06/22/2006 / 12:47	
Nitrobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 003 TP-5 (3-4')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Isophorone	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Naphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Acenaphthylene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Acenapthene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Dibenzofuran	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Fluorene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	

Certifications: MA: MA069 NY:10952 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

Customer: GZA GeoEnvironmental, Inc.

AMERI SCI

Workorder No. 0606-00191

Sample: 003 TP-5 (3-4')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Phenanthrene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Carbazole	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzidine	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Chrysene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	200	NAC	06/22/2006 / 12:47	
2-FLUOROPHENOL (SURR)		76.3	%		NAC	06/22/2006 / 12:47	
PHENOL-D5 (SURR)		84.2	%		NAC	06/22/2006 / 12:47	
NITROBENZENE-D5 (SURR)		70.0	%		NAC	06/22/2006 / 12:47	
2-FLUOROBIPHENYL (SURR)		69.6	%		NAC	06/22/2006 / 12:47	
2,4,6-TRIBROMOPHENOL (SURR)		77.8	%		NAC	06/22/2006 / 12:47	
TERPHENYL-D14 (SURR)		57.8	%		NAC	06/22/2006 / 12:47	
Percent Solids		81.9	%		TLL	06/16/2006 / 9:21	

Sample: 004 TP-6 (8-9')
Collection Date: 06/13/2006 **Time:** 12:20:00PM **Received Date:** 06/14/2006 **Time:** 10:20:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	9.2	MVF	06/21/2006 / 14:10	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No: 0606-00191

Sample: 004 TP-6 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Vinyl Chloride	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Chloromethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Bromomethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Chloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Trichlorofluoromethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Acrolein	EPA 8260B	ND	ug/Kg	92	MVP	06/21/2006 / 14:10	
Acetone	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
1,1-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Iodomethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Carbon Disulfide	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
Methylene Chloride	EPA 8260B	ND	ug/Kg	37	MVP	06/21/2006 / 14:10	
Acrylonitrile	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
Methyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
trans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1-Dichloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Chloroform	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Bromochloromethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Benzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Trichloroethylene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Toluene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 004 TP-6 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Dibromomethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
2-Hexanone	EPA 8260B	ND	ug/Kg	46	MVP	06/21/2006 / 14:10	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Chlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Ethylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
M & P XYLENE	EPA 8260B	ND	ug/Kg	18	MVP	06/21/2006 / 14:10	
O-XYLENE	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Styrene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Bromoform	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Bromobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 004 TP-6 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Naphthalene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	9.2	MVP	06/21/2006 / 14:10	
DIBROMOFLUOROMETHANE (SURR)		97.1	%		MVP	06/21/2006 / 14:10	
TOLUENE-D8 (SURROGATE)		101	%		MVP	06/21/2006 / 14:10	
4-BROMOFLUOROBENZENE (SURR)		101	%		MVP	06/21/2006 / 14:10	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Hexachloroethane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	370	NAC	06/21/2006 / 20:34	
Nitrobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Isophorone	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

AMERI SCI

Sample: 004 TP-6 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Acenaphthylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Acenapthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Dibenzofuran	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Fluorene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Phenanthrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Carbazole	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Benzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
3,3'-Dichlorbenzidine	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Chrysene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 004 TP-6 (8-9')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	180	NAC	06/21/2006 / 20:34	
2-FLUOROPHENOL (SURR)		80.1	%		NAC	06/21/2006 / 20:34	
PHENOL-D5 (SURR)		87.6	%		NAC	06/21/2006 / 20:34	
NITROBENZENE-D5 (SURR)		74.7	%		NAC	06/21/2006 / 20:34	
2-FLUOROBIPHENYL (SURR)		74.8	%		NAC	06/21/2006 / 20:34	
2,4,6-TRIBROMOPHENOL (SURR)		85.5	%		NAC	06/21/2006 / 20:34	
TERPHENYL-D14 (SURR)		62.9	%		NAC	06/21/2006 / 20:34	
Percent Solids		90.2	%		TLL	06/16/2006 / 9:21	

Sample: 005 TP-7 (5-6')
Collection Date: 06/13/2006 **Time:** 12:40:00PM **Received Date:** 06/14/2006 **Time:** 10:20:00AM
Matrix: SOIL

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Volatile Organics							
Dichlorodifluoromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Vinyl Chloride	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Chloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Bromomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Chloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
richlorofluoromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
crolein	EPA 8260B	ND	ug/Kg	110	MVP	06/21/2006 / 17:05	
cetone	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
1-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
odomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
arbon Disulfide	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
ethylene Chloride	EPA 8260B	ND	ug/Kg	43	MVP	06/21/2006 / 17:05	
crylonitrile	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
ethyl-Tert-Butyl-Ether	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
ans-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1-Dichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	

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Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 005 TP-7 (5-6')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
2-Butanone-(MEK)	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
Vinyl Acetate	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
2,2-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
cis-1,2-Dichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Chloroform	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Bromochloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,1,1-Trichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,1-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Carbon Tetrachloride	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Benzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2-Dichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Trichloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
4-Methyl-2-Pentanone (MIBK)	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
2-Chloroethyl vinyl ether	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
cis-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Toluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
trans-1,3-Dichloropropene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Bromodichloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Dibromomethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,1,2-Trichloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2-Dibromoethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
2-Hexanone	EPA 8260B	ND	ug/Kg	54	MVP	06/21/2006 / 17:05	
1,3-Dichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Tetrachloroethylene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Dibromochloromethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Chlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Ethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
M & P XYLENE	EPA 8260B	ND	ug/Kg	21	MVP	06/21/2006 / 17:05	
O-XYLENE	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Styrene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Bromoform	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Isopropylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	

Customer: GZA GeoEnvironmental, Inc.

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Workorder No. 0606-00191

Sample: 005 TP-7 (5-6')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2,3-Trichloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
n-Propylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Bromobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
2-Chlorotoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,3,5-Trimethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
4-Chlorotoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
tert-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2,4-Trimethylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
sec-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
4-Isopropyltoluene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,3-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,4-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
n-Butylbenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2-Dichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2-Dibromo-3-Chloropropane	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2,4-Trichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Hexachlorobutadiene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
Naphthalene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
1,2,3-Trichlorobenzene	EPA 8260B	ND	ug/Kg	11	MVP	06/21/2006 / 17:05	
DIBROMOFLUOROMETHANE (SURR)		95.6	%		MVP	06/21/2006 / 17:05	
TOLUENE-D8 (SURROGATE)		100	%		MVP	06/21/2006 / 17:05	
4-BROMOFLUOROBENZENE (SURR)		102	%		MVP	06/21/2006 / 17:05	
B/NA Extractables Soil							
bis(2-Chloroethyl)ether	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
N-Nitrosodimethylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Phenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Chlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
1,3-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
1,4-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
1,2-Dichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,2'-oxybis(1-Chloropropane	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Methyl Phenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	

Sample: 005 TP-7 (5-6')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
Hexachloroethane	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
N-Nitroso-di-n-propylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
3&4-Methyl Phenol	EPA 8270C	ND	ug/Kg	400	NAC	06/21/2006 / 21:10	
Nitrobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Isophorone	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Nitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4-Dimethylphenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
bis(2-Chloroethoxy)methane	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4-Dichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
1,2,4-Trichlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Naphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Chloroanaline	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Hexachlorobutadiene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Chloro-3-methylphenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Methyl Naphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Hexachlorocyclopentadiene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4,6-Trichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4,5-Trichlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Chloronaphthalene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Acenaphthylene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Dimethyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,6-Dinitrotoluene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Acenapthene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
3-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4-Dinitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2,4-Dinitrotoluene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Dibenzofuran	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Nitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Fluorene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Chlorophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Diethyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Nitroaniline	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-Methyl-4,6-dinitrophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	

AMERI SCI

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

Sample: 005 TP-7 (5-6')
(Continued)

Parameter	Method	Results	Units	PQL	Tech	Analysis Date/Time	Qual
N-Nitrosodiphenylamine	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
4-Bromophenyl Phenyl Ether	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Hexachlorobenzene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Pentachlorophenol	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Phenanthrene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Carbazole	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Di-n-butylphthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzidine	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Butyl Benzyl Phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
3,3'-Dichlorobenzidine	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzo(a)anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Chrysene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
bis(2-Ethylhexyl)phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Di-n-octyl phthalate	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Indeno (1,2,3-cd)Pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzo(b)fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzo(k)fluoranthene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzo(a)pyrene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Dibenzo(a,h)Anthracene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
Benzo (g,h,i) perylene	EPA 8270C	ND	ug/Kg	200	NAC	06/21/2006 / 21:10	
2-FLUOROPHENOL (SURR)		80.6	%		NAC	06/21/2006 / 21:10	
PHENOL-D5 (SURR)		86.1	%		NAC	06/21/2006 / 21:10	
NITROBENZENE-D5 (SURR)		73.3	%		NAC	06/21/2006 / 21:10	
2-FLUOROBIPHENYL (SURR)		75.6	%		NAC	06/21/2006 / 21:10	
2,4,6-TRIBROMOPHENOL (SURR)		81.2	%		NAC	06/21/2006 / 21:10	
TERPHENYL-D14 (SURR)		60.5	%		NAC	06/21/2006 / 21:10	
Percent Solids		83.2	%		TLL	06/16/2006 / 9:21	

Customer: GZA GeoEnvironmental, Inc.

Workorder No. 0606-00191

To the best of my knowledge this report is true and accurate.

Authorized By: Robert Bell, Environmental Laboratory Manager Date: 6-22-06

NOTE: All solid results are reported on a dry weight basis unless otherwise noted.

Certifications: MA: MA069 NY:10982 CT: PH0119 RI:A45 NJ: 59744

ND = Not Detected PQL= Practical Quantitation Limit

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DUE DATE: ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☒ 5 DAY ☐ 7 DAY ☐ 10 DAY

DATA PACKAGE: results only

PAGE 1 OF 1

TEMP UPON RECEIPT: 2.2 °C

P.O.# ______

COMPANY: GZA GeoEnvironmental ~~Inc~~

ADDRESS: 440 Ninth Ave

PHONE: 212-594-8140 FAX 1: 212-279-8180 FAX 2:

CLIENT CONTACT: Meredith Hayes EMAIL: mhayes@gza.com

PROJECT NAME: Duval Farm PROJECT NUMBER: 41.0161514.00 PROJECT STATE: 6/9/06

MATRIX: A-WATER S-SOIL/SOLIDS SL-SLUDGE OIL-OIL CH-CHIPS WI-WIPES C-CASSETTES W-WASTE O-OTHER

CONTAINER: P-PLASTIC G-GLASS V-VOA

0606-194

										VOCs	SVOCs	RCRA metals	PCBs	Pesticides		Notes
1	TP-2 (1-3')	soil	4oz G	2	6/13/06	0915	MH	G	4°C	X	X	X	X			
2	TP-4 (0-1')					1140								X		Pesticides only
3	TP-5 (3-4')					1200				X	X					
4	TP-6 (8-9')					1220				X	X					
5	TP-7 (5-6')					1240				X	X					

SAMPLED BY: (PRINT) Meredith Hayes
(SIGN) M Hayes
DATE: 6/13/06
TIME: 1500
RECEIVED BY: (PRINT) Fed Ex
(SIGN)
DATE: 6/13/06
TIME: 1500

RELINQUISHED BY: (PRINT)
(SIGN)
DATE:
TIME:
RECEIVED BY: (PRINT)
(SIGN)
DATE:
TIME:

RELINQUISHED BY: (PRINT)
(SIGN)
DATE:
TIME:
RECEIVED FOR LABORATORY BY: (PRINT) Marty Porter
(SIGN)
DATE: 6/14/06
TIME: 10:20

fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx. US Airbill Express

FedEx Tracking Number 8560 4342 5745

Recipient Copy

1 From

Date 6/13/06 [redacted]

Sender's Name Meredith [illegible] Phone 216 594 8140

Company GZA GeoEnvironmental

Address [illegible]

City New York State NY ZIP [illegible]

2 Your Internal Billing Reference

3 To

Recipient's Name [illegible] Phone 781 [illegible] 4234

Company [illegible]

Recipient's Address [illegible] School St.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City [illegible] State MA ZIP 02189

8560 4342 5745

4a Express Package Service — Packages up to 150 lbs.

- [X] FedEx Priority Overnight
- [ ] FedEx Standard Overnight
- [ ] FedEx First Overnight
- [ ] FedEx 2Day
- [ ] FedEx Express Saver

4b Express Freight Service — Packages over 150 lbs.

- [ ] FedEx 1Day Freight
- [ ] FedEx 2Day Freight
- [ ] FedEx 3Day Freight

5 Packaging

- [ ] FedEx Envelope
- [ ] FedEx Pak
- [ ] FedEx Box
- [ ] FedEx Tube
- [ ] Other

6 Special Handling

- [ ] SATURDAY Delivery
- [ ] HOLD Weekday at FedEx Location
- [ ] HOLD Saturday at FedEx Location

Does this shipment contain dangerous goods?

- [ ] No
- [ ] Yes As per attached Shipper's Declaration
- [ ] Yes Shipper's Declaration not required
- [ ] Dry Ice
- [ ] Cargo Aircraft Only

7 Payment Bill to:

- [X] Sender
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages 1 | Total Weight 16 | Total Declared Value $ 0 .00 | Total Charges

8 NEW Residential Delivery Signature Options

- [ ] No Signature Required
- [ ] Direct Signature
- [ ] Indirect Signature

520

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AmeriSci Boston

SCI-SOP-1003

Sample Receiving Form

CLIENT:	GZA-NYC	WORKORDER:	0606-191
CLIENTS JOB:	41.0161517.00	RECEIVED BY:	MP
RECEIVED DATE:	6/14/06	SHIPPING METHOD:	FedEx
TEMP UPON RECEIPT:	2,2 °C		

"No" responses must be explained in the comment section below.

Checklist	YES	NO	NA
Were custody seals on shipping container(s) intact? Check "NA" if no seals, or if containers were hand delivered.			X
Were Chain of Custody Forms included with the samples?	X		
Were Chain of Custody Forms properly filled out (ink, signed, etc.)	X		
Were all containers received in good condition (Check for breakage/ leaks)?	X		
Were all containers labeled with required information (Sample Id, date, signed, analysis, preservation)?	X		
Were the correct containers used for the tests indicated?	X		
Were proper preservation techniques indicated?	X		
Were samples received within holding times? If "NO" nonconformance form is required.	X		
Were all VOA bottles checked for the presence of air bubbles? If bubbles were found please note in the comment section.			✓
Were samples in direct contact with wet ice? If "NO" check one: ☐ Blue Ice ☐ No Ice	✓		
Is sample temperature recorded ? If "NO" check one: ☐ Unable to record ☐ Temp taken near samples	✓		
Were pHs of samples checked and recorded on the COC forms?			✓
Did the laboratory accept samples?	X		
Will samples be subcontracted? If "yes" list subcontractor and tests in specified sections below.		X	

Subcontractor:	Date Sent Out:
Analyses Sent:	

Login Technician: MP	Login Review:
Comments:	

h:\users\sci\lab\form\login\samplereceivingform.doc

Appendix B-3

Limited Phase II Site Assesement
Nelson Pope & Voorhis
June 2008

Limited Phase II
Environmental Site Assessment

Shire Estates at Woodbury

Woodbury, New York

NP&V Job# 03469

June 9, 2008

Limited Phase II

Environmental Site Assessment

Shire Estates at Woodbury

THIS DOCUMENT CONTAINS 9 PAGES OF TEXT

COPIES AND CIRCULATION OF THIS REPORT ARE AS FOLLOWS:

Two (2) copies to client

One (1) copy retained in NP&V files

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Triangle Equities
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Whitestone, New York 11354

Prepared By:

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(631) 427-5665

Long Island Analytical Laboratories
110 Colin Avenue
Holbrook, New York 11741

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

Limited Phase II

Environmental Site Assessment

Shire Estates at Woodbury

CONTENTS

Limited Phase II

Environmental Site Assessment

Shire Estates at Woodbury

1.0 INTRODUCTION AND PURPOSE

Nelson, Pope & Voorhis, LLC (NP&V) has been contracted to prepare a Limited Phase II Environmental Site Assessment (ESA) for the subject property. This report is intended to assess potential environmental impacts which may have resulted from past and present property uses as requested by Craig Turner of the Town of Huntington Department of Planning & Environment in his letter dated January 24, 2008. The results and conclusions of this report will be included in a Draft Environmental Impact Statement which will be prepared for a proposed senior aged retirement community.

The subject property is utilized as a horse farm and for a wood carving business. The horse farm portion of the property is known as Indian Head Ranch and provides a variety of services related to the boarding and sale of horses as well as riding instruction. Various corrals and stables are located throughout the northern portion of the property and sheds are used to store tools and supplies. The majority of the southern portion of the site is wooded, with small areas cleared for horse and motorcycle trails and a dirt road that leads from the northern portion of the site to the entrance on Plainview Avenue. The wood carving business is located in the northwestern corner of the property and specializes in the creation of wood sculptures available for retail sale. The subject property contains eleven structures: a concrete building, metal barn, horse stable, framed structure, wood workshop, wood shed, two wood walls, two concrete plats, and one mobile home. There is a small wetland feature located immediately adjoining the northeast corner of the subject site which has been considered in the design of the project.

Sampling was conducted in key locations on the property corresponding to potential impact areas. These areas include: a vehicle storage area, two (2) chemical storage areas, an area covered with crushed asphalt, a wetland in-flow area and the portion of the property occupied by a woodcarving business.

The protocol used to direct this investigation is based upon the following documents: 1) the NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 & 375-6. The following sections detail the subject property and surrounding area characteristics, sampling program, quality assurance protocol, laboratory analysis methodology and laboratory results.

2.0 SAMPLING AND ANALYSIS PROGRAM (SAP)

2.1 SOIL SAMPLING

Seven (7) soil samples were collected from various locations throughout the property which included a vehicle storage area, two (2) chemical storage areas, an area covered with crushed asphalt, a wetland in-flow area and the portion of the property occupied by a woodcarving business. **Figure 1**, which is provided in a separate section immediately following the text of this document, illustrates the location of each of the samples collected. All of the samples were collected from the top zero to six (0-6) inches of the soil using a stainless steel hand auger.

2.2 LABORATORY SAMPLE LOCATION AND FREQUENCY

The soil samples collected from the site were containerized and labeled for identification purposes. The labels were coded to correspond to the location from which the samples were secured. **Table 1** provides an index of how the samples were coded during labeling.

TABLE 1

SAMPLE IDENTIFICATION

SAMPLE LOCATION	SAMPLE ID CODE
Sample collected from the wetland in-flow located in the northeastern corner of the property.	WT-1
Sample collected from the vehicle storage area located along the eastern property boundary.	VS-1
Sample collected from the chemical storage area located along the eastern property boundary.	CS-1
Sample collected from the chemical storage area located adjacent to the western site entrance.	CS-2
Sample collected from the area covered by crushed asphalt located in the central portion of the property.	CA-1
Sample collected from the southeastern corner of the portion of the property utilized by the wood carving business.	WC-1
Sample collected from the northwestern corner of the portion of the property utilized by the wood carving business.	WC-2

3.0 LABORATORY ANALYSIS

3.1 ANALYTICAL TEST METHODS

All of the soil samples were transported to a New York State Certified Commercial Laboratory and were analyzed for the presence of volatile and semi-volatile organic compounds based on USEPA Test Method 8260 and USEPA Test Method 8270, respectively as well as 8 RCRA metals.

3.2 ANALYTICAL RESULTS

Review of the laboratory analytical results revealed that no volatile organic compounds were detected in any of the soil samples collected. However, several semi-volatile organic compounds and metals were found to be present. Of the semi-volatile compounds detected, none were found to exceed their respective NYSDEC Part 375 soil cleanup objectives for either unrestricted or residential uses. All of the metals were also found to be below their respective NYSDEC Part 375 soil cleanup objectives for unrestricted and residential uses except for the detection of lead in sample WT-1 (the wetland in-flow area). Lead was detected in this sample at a concentration of 102 milligrams per kilogram (mg/kg) which exceeds the NYSDEC Part 375 soil cleanup objectives for unrestricted use of 63 mg/kg. However, this detection is below the NYSDEC Part 375 soil cleanup objectives for residential use of 400 mg/kg. Lead is commonly found in runoff and extensive runoff from Route 25 enters the wetland. This area is proposed to remain as natural buffer area under the proposed development plan. A summary of the analytical results for the compounds detected is provided in **Table 2**.

TABLE 2

DIRT FLOOR SOIL SAMPLE ANALYTICAL RESULTS

Constituents	WT-1	VS-1	CS-1	CS-2	CA-1	WC-1	WC-2	NYSDEC Part 375 Unrestricted	NYSDEC Part 375 Residential
Volatiles	None Detected								
Semi-Volatiles	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Benzoic Acid	ND	ND	918	191	854	ND	ND	NS	NS
Naphthalene	ND	ND	ND	ND	ND	72	ND	12,000	100,000
2-Methylnaphthalene	ND	ND	ND	ND	ND	199	ND	NS	NS
Diethylphthalate	ND	ND	45	ND	ND	ND	ND	NS	NS
Phenanthrene	125	ND	45	101	ND	80	42	100,000	100,000
Flouranthene	277	184	93	226	60	194	86	100,000	100,000
Pyrene	245	218	81	194	53	194	67	100,000	100,000
Butylbenzylphthalate	ND	ND	ND	63	ND	ND	ND	NS	NS
Benzo-a-Anthracene	132	97	ND	101	ND	94	ND	1,000	1,000
Chrysene	155	147	56	123	ND	121	40	1,000	1,000
Benzo-b-Flouranthene	199	166	71	166	48	165	49	1,000	1,000
Benzo-k-Flouranthene	99	ND	ND	69	ND	50	ND	800	1,000
Benzo-a-Pyrene	132	117	42	106	ND	109	ND	1,000	1,000
Indeno(1,2,3-c,d)Pyrene	116	90	ND	103	ND	107	ND	500	500
Benzo-g,h,i-Perylene	124	108	43	104	ND	99	ND	100,000	100,000
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	13	1.71	3.53	2.37	2.34	2.32	3.44	13	16
Barium	36.6	16.8	12.2	26.4	25.3	25.8	13.4	350	350
Chromium	26.2	5.54	6.53	7.93	6.05	6.10	6.70	30[1]	36[1]
Mercury	0.108	0.045	0.033	0.048	0.048	0.040	0.079	0.18	0.81
Lead	**102**	11.6	52.1	54.4	20	31.5	10.8	63	400

Notes: NYSDEC Part 375 soil cleanup objectives are for unrestricted use.
ND - Not Detected; NS – No Standard established
ug/kg – micrograms per kilogram; mg/kg – milligrams per kilogram
Shaded and Bold - denotes exceedance of NYSDEC Unrestricted Use soil cleanup objective.
1 - According to the soil cleanup objective footnotes for Tables 375-6.8(a) and 375-6.8(b), the soil cleanup objective for hexavalent and trivalent chromium is considered to be met if the analysis for total species of this contaminant (total chromium) is below the specific soil cleanup objective. The soil cleanup objectives established for trivalent chromium have been applied for comparison with the levels detected.

4.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES (QA/QC)

This sampling protocol was conducted in accordance with USEPA accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, Sampling and Sampling Procedures for Hazardous Material Waste Streams, USEPA, Cincinnati, Ohio EPA- 600\280-018) and ASTM Material Sampling Procedures. All samples were collected by or under the auspices of USEPA trained personnel having completed the course Sampling of Hazardous Materials, offered by the Office of Emergency and Remedial Response.

Separate QA/QC measures were implemented for each of the instruments used in the Sampling and Analysis Program. Sampling instruments included a stainless steel hand auger and sample vessels.

Prior to arrival on the site and between sample locations, the probes sections were decontaminated by washing with a detergent (alconox/liquinox) and potable water solution with distilled water rinse. The organic vapor analyzer was calibrated prior to sampling using a span gas of known concentration. All sample vessels were "level A" certified decontaminated containers. Samples were placed into vessels consistent with the analytical parameters. After acquisition, samples were preserved in the field. All containerized samples were refrigerated to 4^{o} C during transport.

A sample represents physical evidence; therefore, an essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of-custody procedures were followed.

Sample Identification

Sample identification was executed by use of a sample tag, logbook and manifest. Documentation provides the following:

1. Project Code
2. Sample Laboratory Number
3. Sample Preservation
4. Instrument Used for Source Soil Grabs
5. Composite Medium Used for Source Soil Grabs
6. Date Sample was Secured from Source Soil
7. Time Sample was Secured from Source Soil
8. Person Who Secured Sample from Source Soil

Chain-of-Custody Procedures

Due to the evidential nature of samples, possession was traceable from the time the samples were collected until they were received by the testing laboratory. A sample was considered under custody if:

It was in a person's possession, or
It was in a person's view, after being in possession, or
It was in a person's possession and they were to lock it up, or
It is in a designated secure area.

When transferring custody, the individuals relinquishing and receiving signed, dated and noted the time on the Chain-of- Custody Form.

Laboratory Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody records. Pertinent information as to shipment, pick-up, courier, etc. was entered in the "remarks" section. The custodian then entered the sample tag data into a bound logbook which was arranged by project code and station number.

The laboratory custodian used the sample tag number or assigned an unique laboratory number to each sample tag and assured that all samples were transferred to the proper analyst or stored in the appropriate source area.

The custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples from the time they were received until the sample was exhausted or returned to the custodian.

All identifying data sheets and laboratory records were retained as part of the permanent site record. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.

5.0 SUMMARY AND CONCLUSION

This investigation was completed to address issues raised in a prior Phase I ESA prepared by Nelson, Pope & Voorhis, LLC. A sampling and analysis program was designed to determine if past or present on-site activities have impacted the environmental quality of soils on the subject property. This sampling was conducted at the request of the Town of Huntington Department of Planning & Environment in a letter dated January 24, 2008. The sampling and analysis plan consisted of soil quality testing using analytical test methods consistent with expected parameters and agency soil cleanup objectives. The following presents an evaluation of the results of this investigation.

1. Review of the laboratory analytical results revealed that no volatile organic compounds were detected in any of the samples collected. However, several semi-volatile organic compounds and metals were found to be present. Of the semi-volatile compounds detected, none found to exceed their respective NYSDEC Part 375 soil cleanup objectives for either unrestricted or residential uses. All of the metals were also found to be below their respective NYSDEC Part 375 soil cleanup objectives for unrestricted or residential uses except for the detection of lead in sample WT-1 (the wetland in-flow area). Lead was detected in this sample at a concentration of 102 milligrams per kilogram (mg/kg) which exceeds the NYSDEC Part 375 soil cleanup objectives for unrestricted use of 63 mg/kg. However, this detection is below the NYSDEC Part 375 soil cleanup objectives for residential use of 400 mg/kg. Lead is commonly found in runoff and extensive runoff from Route 25 enters the wetland. This area is proposed to remain as natural buffer area under the proposed development plan. Based on these results and the proposed future property use for residential purposes with areas of protected open space no further investigation or action is recommended.

The subject property has been evaluated consistent with the findings of a Phase I ESA, and in accordance with standard practice for the industry. This Limited Phase II ESA addresses only the specific areas of the site requested for further analysis and can only provide conclusions regarding the soil quality in those specific areas tested. The Limited Phase II ESA report is limited to the evaluation of on-site conditions at the time of completion of the field sampling program.

Date of Completion

Charles J. Voorhis, CEP, AICP
Project Manager

6.0 REFERENCES

New York State Department of Environmental Conservation (NYSDEC), 1992, Sampling Guidelines and Protocols, Technology Background and Quality Control/Quality Assurance for NYSDEC Spill Response Program, NYSDEC, Albany, New York.

New York State Department of Environmental Conservation (NYSDEC), 2006, 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 & 375-6, NYSDEC, Albany, New York.

FIGURES

FIGURE 1
SAMPLE LOCATION MAP

Source: NYSGIS Orthoimagery Program, 2004
Scale: 1' = 100'

NORTH

Kensington Estates, Woodbury

Phase II ESA

APPENDICES

APPENDIX A

LABORATORY DATA SHEETS

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

May 22, 2008

Nelson, Pope & Voorhis
Eric Arnesen
572 Walt Whitman Road
Melville, New York 11747

Re: Kennsington

Dear Mr. Arnesen:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on May 19, 2008. Long Island Analytical Laboratories analyzed the samples on May 21, 2008 for the following:

CLIENT ID	ANALYSIS
WT-1	EPA 8260, EPA 8270, Total (8) Metals
VS-1	EPA 8260, EPA 8270, Total (8) Metals
CS-1	EPA 8260, EPA 8270, Total (8) Metals
CS-2	EPA 8260, EPA 8270, Total (8) Metals
CA-1	EPA 8260, EPA 8270, Total (8) Metals
WC-1	EPA 8260, EPA 8270, Total (8) Metals
WC-2	EPA 8260, EPA 8270, Total (8) Metals

Samples received at 2°C.

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted above. Report shall not be reproduced except in full, without the written approval of the laboratory. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

110 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WT-1)
Date received: 5/19/08	Laboratory ID: 1157693
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit

Calculated on a wet weight basis

110 Colin Drive · Holbrook, New York 11741
Phone (631) 472-3400 · Fax (631) 472-8505 · Email: LIAL@liatinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WT-1)
Date received: 5/19/08	Laboratory ID: 1157693
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WT-1)
Date received: 5/19/08	Laboratory ID: 1157693
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<40	
PHENOL	108-95-2	40 ug/kg	<40	
ANILINE	62-53-3	40 ug/kg	<40	
2-CHLOROPHENOL	95-57-8	40 ug/kg	<40	
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<40	
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<40	
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<40	
BENZYL ALCOHOL	100-51-6	40 ug/kg	<40	
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<40	
2-METHYLPHENOL	95-48-7	40 ug/kg	<40	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<40	
HEXACHLOROETHANE	67-72-1	40 ug/kg	<40	
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<40	
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<40	
NITROBENZENE	98-95-3	40 ug/kg	<40	
ISOPHORONE	78-59-1	40 ug/kg	<40	
2-NITROPHENOL	88-75-5	40 ug/kg	<40	
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<40	
BENZOIC ACID	65-85-8	40 ug/kg	<40	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<40	
2,4-DICHLOROPHENOL	102-83-2	40 ug/kg	<40	
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<40	
NAPHTHALENE	91-20-3	40 ug/kg	<40	
4-CHLOROANILINE	106-47-8	40 ug/kg	<40	
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<40	
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<40	
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<40	
HEXACHLOROCYCLOPENTADIENE	77-47-4	66 ug/kg	<66	
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<40	
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<40	
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<40	
2-NITROANILINE	88-74-4	40 ug/kg	<40	
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<40	
ACENAPHTHYLENE	208-96-8	40 ug/kg	<40	
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<40	
3-NITROANILINE	99-09-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WT-1)
Date received: 5/19/08	Laboratory ID: 1157693
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<40	
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<40	
DIBENZOFURAN	132-64-9	40 ug/kg	<40	
4-NITROPHENOL	100-02-7	40 ug/kg	<40	
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<40	
FLUORENE	86-73-7	40 ug/kg	<40	
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<40	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<40	
4-NITROANILINE	100-01-6	40 ug/kg	<40	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<40	
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<40	
AZOBENZENE	103-33-3	40 ug/kg	<40	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<40	
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<40	
PENTACHLORPHENOL	87-86-5	40 ug/kg	<40	
PHENANTHRENE	85-01-8	40 ug/kg	125	
ANTHRACENE	120-12-7	40 ug/kg	<40	
CARBAZOLE	86-74-8	40 ug/kg	<40	
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	277	
PYRENE	129-00-0	40 ug/kg	245	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<40	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	132	
CHRYSENE	218-01-9	40 ug/kg	155	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<40	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<40	
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	199	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	73	
BENZO-a-PYRENE	50-32-8	40 ug/kg	132	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	116	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<40	
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	124	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
110 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WT-1)
Date received: 5/19/08	Laboratory ID: 1157693
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	13.0	
BARIUM, Ba	3.33 mg/kg	5/20/08	36.6	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	26.2	
MERCURY, Hg*	0.020 mg/kg	5/20/08	0.108	
LEAD, Pb	1.65 mg/kg	5/20/08	102	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (VS-1)
Date received: 5/19/08	Laboratory ID: 1157694
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (VS-1)
Date received: 5/19/08	Laboratory ID: 1157694
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (VS-1)
Date received: 5/19/08	Laboratory ID: 1157694
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<80	C
PHENOL	108-95-2	40 ug/kg	<80	C
ANILINE	62-53-3	40 ug/kg	<80	C
2-CHLOROPHENOL	95-57-8	40 ug/kg	<80	C
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<80	C
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<80	C
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<80	C
BENZYL ALCOHOL	100-51-6	40 ug/kg	<80	C
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<80	C
2-METHYLPHENOL	95-48-7	40 ug/kg	<80	C
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<80	C
HEXACHLOROETHANE	67-72-1	40 ug/kg	<80	C
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<80	C
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<80	C
NITROBENZENE	98-95-3	40 ug/kg	<80	C
ISOPHORONE	78-59-1	40 ug/kg	<80	C
2-NITROPHENOL	88-75-5	40 ug/kg	<80	C
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<80	C
BENZOIC ACID	65-85-0	40 ug/kg	<80	C
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<80	C
2,4-DICHLOROPHENOL	120-83-2	40 ug/kg	<80	C
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<80	C
NAPHTHALENE	91-20-3	40 ug/kg	<80	C
4-CHLOROANILINE	106-47-8	40 ug/kg	<80	C
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<80	C
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<80	C
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<80	C
HEXACHLOROCYCLOPENTADIENE	77-47-4	68 ug/kg	<80	C
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<80	C
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<80	C
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<80	C
2-NITROANILINE	88-74-4	40 ug/kg	<80	C
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<80	C
ACENAPHTHYLENE	208-96-8	40 ug/kg	<80	C
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<80	C
3-NITROANILINE	99-09-2	40 ug/kg	<80	C

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (VS-1)
Date received: 5/19/08	Laboratory ID: 1157694
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<80	C
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<80	C
DIBENZOFURAN	132-64-9	40 ug/kg	<80	C
4-NITROPHENOL	100-02-7	40 ug/kg	<80	C
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<80	C
FLUORENE	86-73-7	40 ug/kg	<80	C
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<80	C
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<80	C
4-NITROANILINE	100-01-6	40 ug/kg	<80	C
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<80	C
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<80	C
AZOBENZENE	103-33-3	40 ug/kg	<80	C
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<80	C
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<80	C
PENTACHLORPHENOL	87-86-5	40 ug/kg	<80	C
PHENANTHRENE	85-01-8	40 ug/kg	<80	C
ANTHRACENE	120-12-7	40 ug/kg	<80	C
CARBAZOLE	86-74-8	40 ug/kg	<80	C
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	184	
PYRENE	129-00-0	40 ug/kg	218	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<80	C
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	97	
CHRYSENE	218-01-9	40 ug/kg	147	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<80	C
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<80	C
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	166	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	<80	C
BENZO-a-PYRENE	50-32-8	40 ug/kg	117	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	90	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<80	C
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	108	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (VS-1)
Date received: 5/19/08	Laboratory ID: 1157694
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	1.71	
BARIUM, Ba	3.33 mg/kg	5/20/08	16.8	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	5.54	
MERCURY, Hg•	0.020 mg/kg	5/20/08	0.045	
LEAD, Pb	1.65 mg/kg	5/20/08	11.6	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
•Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-1)
Date received: 5/19/08	Laboratory ID: 1157695
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-1)
Date received: 5/19/08	Laboratory ID: 1157695
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-1)
Date received: 5/19/08	Laboratory ID: 1157695
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<40	
PHENOL	108-95-2	40 ug/kg	<40	
ANILINE	62-53-3	40 ug/kg	<40	
2-CHLOROPHENOL	95-57-8	40 ug/kg	<40	
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<40	
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<40	
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<40	
BENZYL ALCOHOL	100-51-6	40 ug/kg	<40	
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<40	
2-METHYLPHENOL	95-48-7	40 ug/kg	<40	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<40	
HEXACHLOROETHANE	67-72-1	40 ug/kg	<40	
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<40	
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<40	
NITROBENZENE	98-95-3	40 ug/kg	<40	
ISOPHORONE	78-59-1	40 ug/kg	<40	
2-NITROPHENOL	88-75-5	40 ug/kg	<40	
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<40	
BENZOIC ACID	65-85-8	40 ug/kg	918	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<40	
2,4-DICHLOROPHENOL	102-83-2	40 ug/kg	<40	
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<40	
NAPHTHALENE	91-20-3	40 ug/kg	<40	
4-CHLOROANILINE	106-47-8	40 ug/kg	<40	
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<40	
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<40	
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<40	
HEXACHLOROCYCLOPENTADIENE	77-47-4	86 ug/kg	<86	
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<40	
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<40	
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<40	
2-NITROANILINE	88-74-4	40 ug/kg	<40	
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<40	
ACENAPHTHYLENE	208-96-8	40 ug/kg	<40	
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<40	
3-NITROANILINE	99-09-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-1)
Date received: 5/19/08	Laboratory ID: 1157695
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<40	
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<40	
DIBENZOFURAN	132-64-9	40 ug/kg	<40	
4-NITROPHENOL	100-02-7	40 ug/kg	<40	
2,4-DINTROTOLUENE	121-14 2	40 ug/kg	<40	
FLUORENE	86-73-7	40 ug/kg	<40	
DIETHYLPHTHALATE	84-66-2	40 ug/kg	45	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<40	
4-NITROANILINE	100-01-6	40 ug/kg	<40	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<40	
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<40	
AZOBENZENE	103-33-3	40 ug/kg	<40	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<40	
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<40	
PENTACHLORPHENOL	87-86-5	40 ug/kg	<40	
PHENANTHRENE	85-01-8	40 ug/kg	45	
ANTHRACENE	120-12-7	40 ug/kg	<40	
CARBAZOLE	86-74-8	40 ug/kg	<40	
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	93	
PYRENE	129-00-0	40 ug/kg	81	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<40	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	<40	
CHRYSENE	218-01-9	40 ug/kg	56	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<40	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<40	
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	71	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	<40	
BENZO-a-PYRENE	50-32-8	40 ug/kg	42	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	<40	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<40	
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	43	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-1)
Date received: 5/19/08	Laboratory ID: 1157695
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	3.53	
BARIUM, Ba	3.33 mg/kg	5/20/08	12.2	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	6.53	
MERCURY, Hg*	0.020 mg/kg	5/20/08	0.033	
LEAD, Pb	1.65 mg/kg	5/20/08	52.1	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-2)
Date received: 5/19/08	Laboratory ID: 1157698
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-2)
Date received: 5/19/08	Laboratory ID: 1157696
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	75-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-2)
Date received: 5/19/08	Laboratory ID: 1157696
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<60	C
PHENOL	108-95-2	40 ug/kg	<60	C
ANILINE	62-53-3	40 ug/kg	<60	C
2-CHLOROPHENOL	95-57-8	40 ug/kg	<60	C
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<60	C
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<60	C
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<60	C
BENZYL ALCOHOL	100-51-6	40 ug/kg	<60	C
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<60	C
2-METHYLPHENOL	95-48-7	40 ug/kg	<60	C
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<60	C
HEXACHLOROETHANE	67-72-1	40 ug/kg	<60	C
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<60	C
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<60	C
NITROBENZENE	98-95-3	40 ug/kg	<60	C
ISOPHORONE	78-59-1	40 ug/kg	<60	C
2-NITROPHENOL	88-75-5	40 ug/kg	<60	C
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<60	C
BENZOIC ACID	65-60-8	40 ug/kg	191	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<60	C
2,4-DICHLOROPHENOL	102-83-2	40 ug/kg	<60	C
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<60	C
NAPHTHALENE	91-20-3	40 ug/kg	<60	C
4-CHLOROANILINE	106-47-8	40 ug/kg	<60	C
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<60	C
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<60	C
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<60	C
HEXACHLOROCYCLOPENTADIENE	77-47-4	66 ug/kg	<60	C
2,4,5-TRICHLOROPHENOL	88-06-2	40 ug/kg	<60	C
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<60	C
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<60	C
2-NITROANILINE	88-74-4	40 ug/kg	<60	C
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<60	C
ACENAPHTHYLENE	208-96-8	40 ug/kg	<60	C
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<60	C
3-NITROANILINE	99-09-2	40 ug/kg	<60	C

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

LONG ISLAND ANALYTICAL LABORATORIES INC.
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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-2)
Date received: 5/19/08	Laboratory ID: 1157696
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<60	C
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<60	C
DIBENZOFURAN	132-64-9	40 ug/kg	<60	C
4-NITROPHENOL	100-02-7	40 ug/kg	<60	C
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<60	C
FLUORENE	86-73-7	40 ug/kg	<60	C
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<60	C
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<60	C
4-NITROANILINE	100-01-6	40 ug/kg	<60	C
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<60	C
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<60	C
AZOBENZENE	103-33-3	40 ug/kg	<60	C
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<60	C
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<60	C
PENTACHLORPHENOL	87-86-5	40 ug/kg	<60	C
PHENANTHRENE	85-01-8	40 ug/kg	101	
ANTHRACENE	120-12-7	40 ug/kg	<60	C
CARBAZOLE	86-74-8	40 ug/kg	<60	C
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	226	
PYRENE	129-00-0	40 ug/kg	194	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	63	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	101	
CHRYSENE	218-01-9	40 ug/kg	123	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<60	C
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<60	C
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	166	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	69	
BENZO-a-PYRENE	50-32-8	40 ug/kg	106	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	103	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<60	C
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	104	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CS-2)
Date received: 5/19/08	Laboratory ID: 1157896
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	2.37	
BARIUM, Ba	3.33 mg/kg	5/20/08	26.4	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	7.93	
MERCURY, Hg•	0.020 mg/kg	5/20/08	0.048	
LEAD, Pb	1.65 mg/kg	5/20/08	54.4	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit
Performed by EPA Method 6010B
•Method. EPA 7471A

Calculated on a wet weight basis

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CA-1)
Date received: 5/19/08	Laboratory ID: 1157697
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CA-1)
Date received: 5/19/08	Laboratory ID: 1157697
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CA-1)
Date received: 5/19/08	Laboratory ID: 1157697
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<40	
PHENOL	108-95-2	40 ug/kg	<40	
ANILINE	62-53-3	40 ug/kg	<40	
2-CHLOROPHENOL	95-57-8	40 ug/kg	<40	
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<40	
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<40	
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<40	
BENZYL ALCOHOL	100-51-6	40 ug/kg	<40	
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<40	
2-METHYLPHENOL	95-48-7	40 ug/kg	<40	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<40	
HEXACHLOROETHANE	67-72-1	40 ug/kg	<40	
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<40	
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<40	
NITROBENZENE	98-95-3	40 ug/kg	<40	
ISOPHORONE	78-59-1	40 ug/kg	<40	
2-NITROPHENOL	88-75-5	40 ug/kg	<40	
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<40	
BENZOIC ACID	65-85-0	40 ug/kg	854	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<40	
2,4-DICHLOROPHENOL	120-83-2	40 ug/kg	<40	
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<40	
NAPHTHALENE	91-20-3	40 ug/kg	<40	
4-CHLOROANILINE	106-47-8	40 ug/kg	<40	
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<40	
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<40	
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<40	
HEXACHLOROCYCLOPENTADIENE	77-47-4	66 ug/kg	<66	
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<40	
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<40	
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<40	
2-NITROANILINE	88-74-4	40 ug/kg	<40	
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<40	
ACENAPHTHYLENE	208-96-8	40 ug/kg	<40	
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<40	
3-NITROANILINE	99-09-2	40 ug/kg	<40	

MDL = Minimum Detection Limit

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CA-1)
Date received: 5/19/08	Laboratory ID: 1157697
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<40	
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<40	
DIBENZOFURAN	132-64-9	40 ug/kg	<40	
4-NITROPHENOL	100-02-7	40 ug/kg	<40	
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<40	
FLUORENE	86-73-7	40 ug/kg	<40	
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<40	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<40	
4-NITROANILINE	100-01-6	40 ug/kg	<40	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<40	
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<40	
AZOBENZENE	103-33-3	40 ug/kg	<40	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<40	
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<40	
PENTACHLORPHENOL	87-86-5	40 ug/kg	<40	
PHENANTHRENE	85-01-8	40 ug/kg	<40	
ANTHRACENE	120-12-7	40 ug/kg	<40	
CARBAZOLE	86-74-8	40 ug/kg	<40	
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	60	
PYRENE	129-00-0	40 ug/kg	53	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<40	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	<40	
CHRYSENE	218-01-9	40 ug/kg	<40	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<40	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<40	
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	48	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	<40	
BENZO-a-PYRENE	50-32-8	40 ug/kg	<40	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	<40	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<40	
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (CA-1)
Date received: 5/19/08	Laboratory ID: 1157697
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	2.34	
BARIUM, Ba	3.33 mg/kg	5/20/08	25.3	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	6.05	
MERCURY, Hg*	0.020 mg/kg	5/20/08	0.048	
LEAD, Pb	1.65 mg/kg	5/20/08	20.0	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-1)
Date received: 5/19/08	Laboratory ID: 1157698
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-1)
Date received: 5/19/08	Laboratory ID: 1157698
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-1)
Date received: 5/19/08	Laboratory ID: 1157698
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<40	
PHENOL	108-95-2	40 ug/kg	<40	
ANILINE	62-53-3	40 ug/kg	<40	
2-CHLOROPHENOL	95-57-8	40 ug/kg	<40	
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<40	
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<40	
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<40	
BENZYL ALCOHOL	100-51-6	40 ug/kg	<40	
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<40	
2-METHYLPHENOL	95-48-7	40 ug/kg	<40	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<40	
HEXACHLOROETHANE	67-72-1	40 ug/kg	<40	
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<40	
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<40	
NITROBENZENE	98-95-3	40 ug/kg	<40	
ISOPHORONE	78-59-1	40 ug/kg	<40	
2-NITROPHENOL	88-75-5	40 ug/kg	<40	
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<40	
BENZOIC ACID	65-85-8	40 ug/kg	<40	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<40	
2,4-DICHLOROPHENOL	102-83-2	40 ug/kg	<40	
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<40	
NAPHTHALENE	91-20-3	40 ug/kg	72	
4-CHLOROANILINE	106-47-8	40 ug/kg	<40	
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<40	
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<40	
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	199	
HEXACHLOROCYCLOPENTADIENE	77-47-4	66 ug/kg	<66	
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<40	
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<40	
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<40	
2-NITROANILINE	88-74-4	40 ug/kg	<40	
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<40	
ACENAPHTHYLENE	208-96-8	40 ug/kg	<40	
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<40	
3-NITROANILINE	99-09-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-1)
Date received: 5/19/08	Laboratory ID: 1157608
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<40	
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<40	
DIBENZOFURAN	132-64-9	40 ug/kg	<40	
4-NITROPHENOL	100-02-7	40 ug/kg	<40	
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<40	
FLUORENE	86-73-7	40 ug/kg	<40	
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<40	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<40	
4-NITROANILINE	100-01-6	40 ug/kg	<40	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<40	
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<40	
AZOBENZENE	103-33-3	40 ug/kg	<40	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<40	
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<40	
PENTACHLORPHENOL	87-86-5	40 ug/kg	<40	
PHENANTHRENE	85-01-8	40 ug/kg	80	
ANTHRACENE	120-12-7	40 ug/kg	<40	
CARBAZOLE	86-74-8	40 ug/kg	<40	
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	194	
PYRENE	129-00-0	40 ug/kg	194	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<40	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	94	
CHRYSENE	218-01-9	40 ug/kg	121	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<40	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
Di-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<40	
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	165	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	50	
BENZO-a-PYRENE	50-32-8	40 ug/kg	109	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	107	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<40	
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	99	

MDL = Minimum Detection Limit

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-1)
Date received: 5/19/08	Laboratory ID: 1157698
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	2.32	
BARIUM, Ba	3.33 mg/kg	5/20/08	25.8	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	6.10	
MERCURY, Hg•	0.020 mg/kg	5/20/08	0.040	
LEAD, Pb	1.65 mg/kg	5/20/08	31.5	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
•Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

110 Colin Drive · Holbrook, New York 11741
Phone (631) 472-3400 · Fax (631) 472-8505 · Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-2)
Date received: 5/19/08	Laboratory ID: 1157699
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
DICHLORODIFLUOROMETHANE	75-71-8	5 ug/kg	<5	
CHLOROMETHANE	74-87-3	5 ug/kg	<5	
VINYL CHLORIDE	75-01-4	5 ug/kg	<5	
BROMOMETHANE	74-83-9	5 ug/kg	<5	
CHLOROETHANE	75-00-3	5 ug/kg	<5	
TRICHLOROFLUOROMETHANE	75-69-4	5 ug/kg	<5	
1,1-DICHLOROETHENE	75-35-4	5 ug/kg	<5	
METHYLENE CHLORIDE	75-09-2	5 ug/kg	<5	
trans-1,2-DICHLOROETHENE	156-60-5	5 ug/kg	<5	
1,1-DICHLOROETHANE	75-34-3	5 ug/kg	<5	
2,2-DICHLOROPROPANE	594-20-7	5 ug/kg	<5	
cis-1,2-DICHLOROETHENE	156-59-2	5 ug/kg	<5	
BROMOCHLOROMETHANE	74-97-5	5 ug/kg	<5	
CHLOROFORM	67-66-3	5 ug/kg	<5	
1,1,1-TRICHLOROETHANE	71-55-6	5 ug/kg	<5	
CARBON TETRACHLORIDE	56-23-5	5 ug/kg	<5	
1,1-DICHLOROPROPENE	563-58-6	5 ug/kg	<5	
BENZENE	71-43-2	5 ug/kg	<5	
1,2-DICHLOROETHANE	107-06-2	5 ug/kg	<5	
TRICHLOROETHENE	79-01-6	5 ug/kg	<5	
1,2-DICHLOROPROPANE	78-87-5	5 ug/kg	<5	
DIBROMOMETHANE	74-95-3	5 ug/kg	<5	
BROMODICHLOROMETHANE	75-27-4	5 ug/kg	<5	
cis-1,3-DICHLOROPROPENE	10061-01-5	5 ug/kg	<5	
TOLUENE	108-88-3	5 ug/kg	<5	
trans-1,3-DICHLOROPROPENE	10061-02-6	5 ug/kg	<5	
1,1,2-TRICHLOROETHANE	79-00-5	5 ug/kg	<5	
TETRACHLOROETHYLENE	127-18-4	5 ug/kg	<5	
1,3-DICHLOROPROPANE	142-28-9	5 ug/kg	<5	
DIBROMOCHLOROMETHANE	124-48-1	5 ug/kg	<5	
1,2-DIBROMOETHANE	106-93-4	5 ug/kg	<5	
CHLOROBENZENE	108-90-7	5 ug/kg	<5	
1,1,1,2-TETRACHLOROETHANE	630-20-6	5 ug/kg	<5	
ETHYLBENZENE	100-41-4	5 ug/kg	<5	
STYRENE	100-42-5	5 ug/kg	<5	
BROMOFORM	75-25-2	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

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Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-2)
Date received: 5/19/08	Laboratory ID: 1157699
Date extracted: 5/19/08	Matrix: Soil
Date analyzed: 5/19/08	ELAP #: 11693

EPA METHOD 8260

PARAMETER	CAS No.	MDL	RESULTS ug/kg	FLAG
ISOPROPYLBENZENE	98-82-8	5 ug/kg	<5	
BROMOBENZENE	108-86-1	5 ug/kg	<5	
1,1,2,2-TETRACHLOROETHANE	79-34-5	5 ug/kg	<5	
1,2,3-TRICHLOROPROPANE	96-18-4	5 ug/kg	<5	
n-PROPYLBENZENE	103-65-1	5 ug/kg	<5	
2-CHLOROTOLUENE	95-49-8	5 ug/kg	<5	
4-CHLOROTOLUENE	106-43-4	5 ug/kg	<5	
1,3,5-TRIMETHYLBENZENE	108-67-8	5 ug/kg	<5	
tert-BUTYLBENZENE	98-06-6	5 ug/kg	<5	
1,2,4-TRIMETHYLBENZENE	95-63-6	5 ug/kg	<5	
sec-BUTYLBENZENE	135-98-8	5 ug/kg	<5	
1,3-DICHLOROBENZENE	541-73-1	5 ug/kg	<5	
P-ISOPROPYLTOLUENE	99-87-6	5 ug/kg	<5	
1,4-DICHLOROBENZENE	106-46-7	5 ug/kg	<5	
1,2-DICHLOROBENZENE	95-50-1	5 ug/kg	<5	
n-BUTYLBENZENE	104-51-8	5 ug/kg	<5	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5 ug/kg	<5	
1,2,4-TRICHLOROBENZENE	120-82-1	5 ug/kg	<5	
HEXACHLOROBUTADIENE	87-68-3	5 ug/kg	<5	
NAPHTHALENE	91-20-3	5 ug/kg	<5	
1,2,3-TRICHLOROBENZENE	87-61-6	5 ug/kg	<5	
2-CHLOROETHYLVINYL ETHER	110-75-8	5 ug/kg	<5	
ACETONE	67-64-1	50 ug/kg	<50	
METHYL ETHYL KETONE	78-93-3	10 ug/kg	<10	
METHYL ISOBUTYL KETONE	108-10-1	5 ug/kg	<5	
p & m-XYLENES	1330-20-7	10 ug/kg	<10	
o-XYLENE	1330-20-7	5 ug/kg	<5	
CARBON DISULFIDE	751-15-0	5 ug/kg	<5	
MTBE	1634-04-4	5 ug/kg	<5	
VINYL ACETATE	108-05-4	5 ug/kg	<5	
2-HEXANONE	591-78-6	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi-Laboratory Director

110 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-2)
Date received: 5/19/08	Laboratory ID: 1157690
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	40 ug/kg	<40	
PHENOL	108-95 2	40 ug/kg	<40	
ANILINE	62-53-3	40 ug/kg	<40	
2-CHLOROPHENOL	95-57-8	40 ug/kg	<40	
Bis(2-CHLOROETHYL)ETHER	111-44-4	40 ug/kg	<40	
1,3-DICHLOROBENZENE	541-73-1	40 ug/kg	<40	
1,4-DICHLOROBENZENE	106-46-7	40 ug/kg	<40	
BENZYL ALCOHOL	100-51-6	40 ug/kg	<40	
1,2-DICHLOROBENZENE	95-50-1	40 ug/kg	<40	
2-METHYLPHENOL	95-48-7	40 ug/kg	<40	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	40 ug/kg	<40	
HEXACHLOROETHANE	67-72-1	40 ug/kg	<40	
3+4-METHYLPHENOL	15831-10-4	40 ug/kg	<40	
N-NITROSODI-n-PROPYL AMINE	621-64-7	40 ug/kg	<40	
NITROBENZENE	98-95-3	40 ug/kg	<40	
ISOPHORONE	78-59-1	40 ug/kg	<40	
2-NITROPHENOL	88-75-5	40 ug/kg	<40	
2,4-DIMETHYLPHENOL	105-67-9	40 ug/kg	<40	
BENZOIC ACID	65-80-8	40 ug/kg	<40	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	40 ug/kg	<40	
2,4-DICHLOROPHENOL	102-83-2	40 ug/kg	<40	
1,2,4-TRICHLOROBENZENE	120-82-1	40 ug/kg	<40	
NAPHTHALENE	91-20-3	40 ug/kg	<40	
4-CHLOROANILINE	106-47-8	40 ug/kg	<40	
HEXACHLOROBUTADIENE	87-68-3	40 ug/kg	<40	
4-CHLORO-3-METHYLPHENOL	59-50-7	40 ug/kg	<40	
2-METHYLNAPHTHALENE	91-57-6	40 ug/kg	<40	
HEXACHLOROCYCLOPENTADIENE	77-47-4	66 ug/kg	<66	
2,4,6-TRICHLOROPHENOL	88-06-2	40 ug/kg	<40	
2,4,5-TRICHLOROPHENOL	95-95-4	40 ug/kg	<40	
2-CHLORONAPHTHALENE	91-58-7	40 ug/kg	<40	
2-NITROANILINE	88-74-4	40 ug/kg	<40	
DIMETHYLPHTHALATE	131-11-3	40 ug/kg	<40	
ACENAPHTHYLENE	208-96-8	40 ug/kg	<40	
2,6-DINITROTOLUENE	606-20-2	40 ug/kg	<40	
3-NITROANILINE	99-09-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-2)
Date received: 5/19/08	Laboratory ID: 1157699
Date extracted: 5/21/08	Matrix: Soil
Date analyzed: 5/21/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	40 ug/kg	<40	
2,4-DINITROPHENOL	51-28-5	40 ug/kg	<40	
DIBENZOFURAN	132-64-9	40 ug/kg	<40	
4-NITROPHENOL	100-02-7	40 ug/kg	<40	
2,4-DINTROTOLUENE	121-14-2	40 ug/kg	<40	
FLUORENE	86-73-7	40 ug/kg	<40	
DIETHYLPHTHALATE	84-66-2	40 ug/kg	<40	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	40 ug/kg	<40	
4-NITROANILINE	100-01-6	40 ug/kg	<40	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	40 ug/kg	<40	
N-NITROSODIPHENYLAMINE	86-30-6	40 ug/kg	<40	
AZOBENZENE	103-33-3	40 ug/kg	<40	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	40 ug/kg	<40	
HEXACHLOROBENZENE	118-74-1	40 ug/kg	<40	
PENTACHLORPHENOL	87-86-5	40 ug/kg	<40	
PHENANTHRENE	85-01-8	40 ug/kg	42	
ANTHRACENE	120-12-7	40 ug/kg	<40	
CARBAZOLE	86-74-8	40 ug/kg	<40	
Di-n-BUTYLPHTHALATE	84-74-2	500 ug/kg	<500	
FLUORANTHENE	206-44-0	40 ug/kg	86	
PYRENE	129-00-0	40 ug/kg	67	
BUTYLBENZYLPHTHALATE	85-68-7	40 ug/kg	<40	
BENZO-a-ANTHRACENE	56-55-3	40 ug/kg	<40	
CHRYSENE	218-01-9	40 ug/kg	40	
3,3-DICHLOROBENZIDINE	91-94-1	40 ug/kg	<40	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	500 ug/kg	<500	
DI-n-OCTYLPHTHALATE	117-84-0	40 ug/kg	<40	
BENZO-b-FLUOROANTHENE	205-99-2	40 ug/kg	49	
BENZO-k- FLUOROANTHENE	207-08-9	40 ug/kg	<40	
BENZO-a-PYRENE	50-32-8	40 ug/kg	<40	
INDENO(1,2,3-c,d)PYRENE	193-39-5	40 ug/kg	<40	
DIBENZO-a,h-ANTHRACENE	53-70-3	40 ug/kg	<40	
BENZO-g,h,i-PERYLENE	191-24-2	40 ug/kg	<40	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope & Voorhis	Client ID: Kennsington (WC-2)
Date received: 5/19/08	Laboratory ID: 1157699
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

Parameter	MDL	Date Analyzed	Results mg/kg	Flag
SILVER, Ag	1.65 mg/kg	5/20/08	<1.65	
ARSENIC, As	1.65 mg/kg	5/20/08	3.44	
BARIUM, Ba	3.33 mg/kg	5/20/08	13.4	
CADMIUM, Cd	1.00 mg/kg	5/20/08	<1.00	
CHROMIUM, Cr	1.65 mg/kg	5/20/08	6.70	
MERCURY, Hg*	0.020 mg/kg	5/20/08	0.079	
LEAD, Pb	1.65 mg/kg	5/20/08	10.8	
SELENIUM, Se	1.65 mg/kg	5/20/08	<1.65	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS: [illegible] 572 [illegible] Rd. Melville NY 11747

CONTACT: Eric [illegible]
PHONE: 427-5[illegible]
FAX:

PROJECT LOCATION: [illegible]

SAMPLER (SIGNATURE): [signature] DATE: 5/19/03 TIME: 1[illegible]
SAMPLER NAME (PRINT): DATE: TIME:

SAMPLE(S) SEALED: YES / NO
CORRECT CONTAINER(S): YES / NO

LABORATORY CHAIN ID # (FOR LAB USE ONLY)

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

SAMPLES RECEIVED AT: 7°C

ANALYSIS REQUIRED: 8260, 8270, 8082 [illegible]

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	DATE	TIME	PRES.	SAMPLE # LOCATION		8260	8270	8082 [illegible]	# OF CONTAINERS
1. 1157693	S	G	—	—	5/19	[illegible]	ice	[illegible]	(1106 AM)	X	X	X	2
2. 1157694	|	|	|	|	|		|	VS-1	1117 AM	X	X	X	|
3. 1157695	|	|	|	|	|		|	CS-1	1123 AM	X	X	X	|
4. 1157696	|	|	|	|	|		|	CS-2	1153 AM	X	X	X	|
5. 1157697	|	|	|	|	|		|	CA-1	1132 AM	X	X	X	|
6. 1157698	|	|	|	|	|		|	WC-1	1214 AM	X	X	X	|
7. 1157699	[illegible]	[illegible]	[illegible]	↓			↓	WC-2	1201 AM	X	X	X	↓
8.													
9.													
10.													
11.													
12.													
13.													
14.													

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_2O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☒ NORMAL ☐ STAT BY / /

COMMENTS / INSTRUCTIONS: * – [illegible] JARS For Sample, [illegible]

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	DATE 5/19/03 TIME 5:10 PM	Eric [illegible]	[signature]	DATE TIME	
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN: [signature]	DATE 5-19-0[illegible] TIME 5:10 PM	PRINTED NAME

5428

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

LONG ISLAND ANALYTICAL LABORATORIES, INC.
DATA REPORTING FLAGS

For reporting results, the following "Flags" are used:

A: Time not supplied by client, may have exceeded holding time
B: Holding time exceeded, results cannot be used for regulatory purposes
C: Minimum detection limit raised due to matrix interference
D: Minimum detection limit raised due to target compound interference
E: Minimum detection limit raised due to non target compound interference
F: Minimum detection limit raised due to insufficient sample volume
G: Sample received in incorrect container
H: Sample not preserved, corrected upon receipt
I: Dilution Water does not meet QC Criteria
J: Estimated concentration, exceeds calibration range
K: Target compound found in blank
L: Subcontractor ELAP #11398
M: Subcontractor ELAP #10320
N: Subcontractor NVLAP #102047.0
O: Subcontractor AIHA #103005
P: Subcontractor A2LA 2004-01
Q: Subcontractor ELAP #11026
R: Subcontractor ELAP #10155
S: Subcontractor ELAP #11591
T: Subcontractor CTC
U: Subcontractor ELAP #11685
V: QC affected by matrix
W: Subcontractor ELAP #10248
X: QC does not meet acceptance criteria
Y: Sample container received with head space
Z: Insufficient sample volume received
AA: Preliminary results, cannot be used for regulatory purposes.
BB: Spike recovery does not meet QC criteria due to high target concentration
CC: Data reported below the lower limit of quantitation and should be considered to have an increased quantitative uncertainty.
DD: Sampling information not supplied and/or sample not taken by qualified technician, therefore verifiability of the report is limited to results only. Report cannot be used for regulatory purposes.
EE: Subcontractor ELAP : #11777
FF: Unable to verify that the wipe samples submitted conform to ASTM E1792 or specifications issued by the EPA.
GG: Level found exceeds the maximum contaminant level (MCL) as set by local, state or federal agencies.
HH: Subcontractor ELAP #10750
II: Subcontractor ELAP #10145

Appendix B-4

Pesticide Report
Nelson Pope & Voorhis
December 12, 2008

Pesticide Report

Kensington Estates

Huntington, New York

NP&V Job No. 03469

December 12, 2008

Pesticide Report

Kensington Estates

Huntington, New York

THIS DOCUMENT CONTAINS 8 PAGES OF TEXT

Prepared For:

Elysa Goldman
Triangle Equities
30-56 Whitestone Expressway
Whitestone, New York 11354

Prepared By:

Mr. Charles J. Voorhis, CEP, AICP
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747
(631) 427-5665

Long Island Analytical Laboratories, Inc.
110 Colin Drive
Holbrook, New York 11741

NELSON POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

Pesticide Report

Kensington Estates

CONTENTS

Pesticide Report

Kensington Estates

1.0 INTRODUCTION AND PURPOSE

Nelson, Pope & Voorhis, LLC (NP&V) has been contracted to prepare a Pesticide Report for the subject property based on a request from the Town of Oyster Bay. Specifically, the DEIS review letter from the Town of Oyster Bay indicated the previous pesticide sampling conducted on the subject property did not adequately determine if pesticides were present. The review letter indicated further that additional sampling should be conducted over the entire property, except for the southeast portion which had always been wooded. This report is intended to determine the concentration of pesticides and metals in site soils based on the Town's review letter and because these substances were widely used for weed and pest control in Long Island agricultural practice.

The proposed project is located on the Nassau-Suffolk border in the Hamlet of West Hills, Town of Huntington and the Hamlet of Woodbury, Town of Oyster Bay at 1130 West Jericho Turnpike which is located on the southeast intersection of Jericho Turnpike and Plainville Road. Currently, the site is used as a horse farm and a wood carving business. **Figure 1** provides a location map depicting the subject property and the area surrounding the property.

The sampling program was designed and completed by NP&V. Laboratory analytical data was prepared by Long Island Analytical Laboratories, Inc. The protocol used to direct this investigation was based upon the guidance offered by the New York State Department of Health Bureau of Toxic Substance Assessment to the local health department in particular, with general consideration of sampling and analysis protocol as documented in USEPA Soil Screening Guidance - Soil Screening Levels and/or the Suffolk County Department of Health Services SOP 9-95 Pumpout and Soil Cleanup Criteria. The following sections detail the subject property and surrounding area characteristics, sampling program, protocol and quality assurance, lab analysis and results.

A total of twelve (12) soil samples (retrieved from the 0-3 inch and 3-6 inch intervals at each location) from six (6) locations were collected at the subject property. The six (6) samples collected from a depth of 0-3 inches were analyzed for the presence of pesticides and metals due to the suspected past use of the property as farmland. These six (6) samples revealed that there were elevated concentrations of several analyzed constituents but only arsenic in the two (2) of the samples were found to exceed their respective action levels and/or ingestion-dermal soil screening levels. As a result, the soil samples from the 3-6 inch intervals for each of these samples were analyzed for arsenic. The following sections of this report outline the sampling measures taken and provide a map illustrating the location of the samples collected. Appropriate recommendations are provided in Section 5.0.

2.0 SAMPLING AND ANALYSIS PROGRAM (SAP)

2.1 SAMPLE COLLECTION

A total of twelve (12) soil samples were collected from six (6) locations at the subject property on December 3, 2008. The soil samples were collected from depths of 0-3 and 3-6 inches below grade. The 0-3 inch samples were analyzed for the presence of pesticides and metals, while the 3-6 inch samples were held pending the results of the 0-3 inch samples. The depths of the soil samples were selected to provide a profile of the soil located on the subject property. The sampling scheme employed was consistent with guidance available from the New York State Department of Health (NYSDOH) and the Suffolk County Department of Health Services (SCDHS).

A stainless steel hand auger decontaminated between uses (see Section 4.0), was used to extract all of the soil samples from the subject property. **Figure 1** provides a map that identifies the various locations from which the soil samples were collected. The topography of the subject property is undulating.

2.2 SAMPLING PROGRAM RATIONALE

The NYSDOH provides guidance for such soil sampling through SCDHS. Soil samples were collected in accordance with the recommendations of the NYSDOH, noted as follows:

- samples were collected at depths of 0-3 and 3-6 inches.
- samples were directed toward those areas likely to have accumulated the highest contaminant levels.
- samples were analyzed for pesticides and metals.

In order to obtain vertical profile of the presence of arsenic, all of the samples were analyzed. Laboratory analysis results are discussed in Section 3.0. Since the proposed property will be used for a residential subdivision, the concentration of lead and arsenic is an important issue.

In accordance with NYSDOH recommendations, the sampling and analysis program was intended to determine:

- if site activities had caused degradation of soil quality on site;
- if a soils management plan (SMP) is appropriate given the concentration of contaminants and the intended use of the site.

The following section provides the laboratory analysis for the site samples, including test methods and analytical results.

3.0 LABORATORY ANALYSIS

3.1 ANALYTICAL TEST METHODS

The soil samples were transported to a New York State Certified Commercial ELAP Laboratory for analysis. Selection of the analytical test methods for the soil samples was based on the NYSDOH recommended soil sampling parameters for agricultural soils on Long Island. Analysis of the soil samples consisted of pesticides via USEPA Test Method 8081 and metals via SOP 9-95 analytical protocols.

3.2 ANALYTICAL RESULTS

The laboratory results revealed that all of the 0-3 inch samples analyzed exhibited elevated concentrations of several of the analyzed constituents. However, only arsenic in the samples identified as Pest-1 and Pest-3 were found to exceeded their respective regulatory standards identified in the USEPA Soil Screening Guidance - Soil Screening Levels as imposed by SCDHS. As a result, the 3-6 inch samples from the locations identified as Pest-1 and Pest-3 were analyzed for arsenic only. The results of the 3-6 inch analysis revealed that only the sample collected from Pest-1 exceeded the USEPA Soil Screening Guidance - Soil Screening Level established for arsenic. **Table 1** identifies those constituents which exhibited elevated concentrations and the regulatory standards. The original laboratory analysis sheets as provided by Long Island Analytical Laboratories, Inc. are presented in **Appendix A** of this document.

TABLE 1
PESTICIDE RESULTS

Constituents	Pest-1 (0-3)	Pest-1 (3-6)	Pest-2 (0-3)	Pest-3 (0-3)	Pest-3 (3-6)	Pest-4 (0-3)	Pest-5 (0-3	Pest-6 (0-3)	USEPA SSL
Pesticides	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
Chlordane	ND	NA	ND	ND	NA	17	635	121	2,000
4,4'-DDD	ND	NA	ND	ND	NA	ND	7	ND	3,000
4,4'-DDE	9	NA	61	ND	NA	10	12	ND	2,000
4,4'-DDT	5	NA	24	ND	NA	10	20	9	2,000
Dieldrin	ND	NA	ND	ND	NA	ND	5	9	40
Metals	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Arsenic	**5.75**	**4.79**	3.72	**4.34**	3.74	2.58	2.44	3.10	4*
Chromium	8.19	NA	7.84	6.31	NA	7.54	8.21	12.8	230
Copper	9.28	NA	9.30	6.91	NA	16.5	13.5	27.7	NS
Mercury	ND	NA	0.107	0.113	NA	0.139	0.031	ND	23
Nickel	4.07	NA	4.12	3.68	NA	4.36	6.32	9.15	1,600
Lead	24.4	NA	15.6	16.1	NA	39.9	41.1	69.2	NS

ND = Not Detected NA = Not Analyzed SB = Soil Background
Bold indicates the constituent exceeds the USEPA/SCDHS Guidelines standards.
*Guidance value set by SCDHS.

4.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES (QA/QC)

Sampling protocol was conducted in accordance with USEPA accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, Sampling and Sampling Procedures for Hazardous Material Waste Streams, USEPA, Cincinnati, Ohio EPA- 600\280-018) and ASTM Material Sampling Procedures. All samples were collected by or under the auspices of USEPA trained personnel having completed the course Sampling of Hazardous Materials, offered by the Office of Emergency and Remedial Response. Separate QA/QC measures were implemented for each of the instruments used in soil-gas and soil sampling.

Separate QA/QC measures were implemented for each of the instruments used in the Sampling and Analysis Program. Sampling instruments included a stainless steel hand auger and sample vessels.

Prior to arrival on the subject property and between sample locations, the hand auger was decontaminated by washing with a detergent (alconox/liquinox) and potable water solution with distilled water rinse. All sample vessels were "level A" certified decontaminated containers. Samples were placed into vessels consistent with the analytical parameters. After acquisition, samples were preserved in the field. All containerized samples were refrigerated to 4° C during transport.

A sample represents physical evidence, therefore, an essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of-custody procedures were followed.

Sample Identification
Sample identification was executed by use of a sample tag, logbook and manifest. Documentation provides the following:

1. Project Code
2. Sample Laboratory Number
3. Sample Preservation
4. Instrument Used for Source Soil Grabs
5. Composite Medium Used for Source Soil Grabs
6. Date Sample was Secured from Source Soil
7. Time Sample was Secured from Source Soil
8. Person Who Secured Sample from Source Soil

Chain-of-Custody Procedures
Due to the evidential nature of samples, possession was traceable from the time the samples were collected until they were received by the testing laboratory. A sample was considered under custody if:

It was in a person's possession, or
It was in a person's view, after being in possession, or
It was in a person's possession and they were to lock it up, or
It is in a designated secure area.

When transferring custody, the individuals relinquishing and receiving signed, dated and noted the time of the Chain-of- Custody Form.

Laboratory Custody Procedures
A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody records. Pertinent information as to shipment, pick-up, courier, etc. was entered in the "remarks" section. The custodian then entered the sample tag data into a bound logbook which was arranged by project code and station number.

The laboratory custodian used the sample tag number or assigned an unique laboratory number to each sample tag and assured that all samples were transferred to the proper analyst or stored in the appropriate source area.

The custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples from the time they were received until the sample was exhausted or returned to the custodian.

All identifying data sheets and laboratory records were retained as part of the permanent site record. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.

5.0 SUMMARY AND CONCLUSION

This investigation was completed in order to determine if certain pesticide related compounds were present in the soils of the subject property. A sampling and analysis program (SAP) was designed to determine the concentrations of pesticides and metals in the soil in accordance with recommendations of the NYSDOH. The SAP consisted of collection of discrete soil samples at depths of 0-3 and 3-6 inches in the suspected former farm field area of the property. Laboratory analysis of the soil samples was performed using analytical test methods consistent with expected parameters and NYSDOH guidance. The following presents an evaluation of the results of this investigation.

1. The laboratory results revealed that all of the 0-3 inch samples analyzed exhibited elevated concentrations of several of the analyzed constituents. However, only arsenic in the samples identified as Pest-1 and Pest-3 was found to exceed its regulatory guidance value. As a result, the 3-6 inch samples from the locations identified as Pest-1 and Pest-3 were analyzed for arsenic only. The results of the 3-6 inch analysis revealed that only the sample collected from Pest-1 exceeded the USEPA Soil Screening Guidance - Soil Screening Level established for arsenic. Therefore, a Soil Management Plan (SMP) should be implemented for the portions of which exceed the regulatory guidance value. In order to implement the SMP, additional soil sampling in the area of Pest-1 and Pest-3 is recommended in order to identify the vertical and horizontal extent of the elevated concentrations.

In summary, representative soils on the subject property were sampled and analyzed for the presence of pesticides and metals. As a result of this investigation, further action in the form of additional sampling and soil management is recommended for the subject property in the vicinity of Pest-1 and Pest-3 as the analyzed constituents exhibited elevated concentrations.

Date of Completion

Charles J. Voorhis, CEP, AICP
NELSON, POPE & VOORHIS, LLC

6.0 REFERENCES

New York State Department of Environmental Conservation (NYSDEC), 1992, Sampling Guidelines and Protocols, Technology Background and Quality Control/Quality Assurance for NYSDEC Spill Response Program, NYSDEC, Albany, New York.

USEPA, Office of Solid Waste and Emergency Response, 1996, Publication 9355.4-23, Soil Screening Guidance User's Guide, Washington, D.C.

FIGURES

NELSON POPE & VOORHIS LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1
SAMPLE LOCATION MAP

Source: NYSGIS Orthoimagery Program, 2007
Scale: 1" = 200'

NORTH

Kensington Estates, Woodbury

Pesticide Report

APPENDICES

APPENDIX A

LONG ISLAND ANALYTICAL LABORATORIES, INC.

LABORATORY DATA SHEETS

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

NYSDOH ELAP 11693
USEPA NY01273
CTDOH PH-0284
AIHA 164456
NJDEP NY012
PADEP 68-2943

LIAL #1169456

December 10, 2008

Nelson, Pope & Voorhis
Eric Arnesen
572 Walt Whitman Road
Melville, New York 11747

Re: Triangle [illegible]

Dear Mr. Arnesen:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on December 3, 2008. Long Island Analytical Laboratories analyzed the samples on December 9, 2008 for the following:

CLIENT ID	ANALYSIS
Pest-1 (0-3)	EPA 8081 and SCDH Metals Analysis
Pest-2 (0-3)	EPA 8081 and SCDH Metals Analysis
Pest-3 (0-3)	EPA 8081 and SCDH Metals Analysis
Pest-4 (0-3)	EPA 8081 and SCDH Metals Analysis
Pest-5 (0-3)	EPA 8081 and SCDH Metals Analysis
Pest-6 (0-3)	EPA 8081 and SCDH Metals Analysis

Samples received at 2.1°C.

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted with the appropriate flag. Report shall not be reproduced except in full, without the written approval of the laboratory. Results relate only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-1 (0-3))
Date received: 12/3/08	Laboratory ID: 1168458
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	<15	
4,4'-DDD	72-54-8	5 ug/kg	<5	
4,4'-DDE	72-55-9	5 ug/kg	9	
4,4'-DDT	50-29-3	5 ug/kg	5	
Dieldrin	60-57-1	5 ug/kg	<5	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33212-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-1 (0-3))
Date received: 12/3/08	Laboratory ID: 1168456
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	1.93 mg/kg	12/9/08	<1.93	
ARSENIC, As	1.93 mg/kg	12/9/08	5.75	
BERYLLIUM, Be	1.93 mg/kg	12/9/08	<1.93	
CADMIUM, Cd	1.16 mg/kg	12/9/08	<1.16	
CHROMIUM, Cr	1.93 mg/kg	12/9/08	8.19	
COPPER, Cu	1.93 mg/kg	12/9/08	9.28	
MERCURY, Hg•	0.020 mg/kg	12/9/08	<0.020	
NICKEL, Ni	1.93 mg/kg	12/9/08	4.07	
LEAD, Pb	1.93 mg/kg	12/9/08	24.4	

MDL = Minimum Detection Limit

Calculated on a dry weight basis

Performed by EPA Method 6010B

•Method: EPA 7471A

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-2 (0-3))
Date received: 12/3/08	Laboratory ID: 1168457
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	<15	
4,4'- DDD	72-54-8	5 ug/kg	<5	
4,4'-DDE	72-55-9	5 ug/kg	61	
4,4'-DDT	50-29-3	5 ug/kg	24	
Dieldrin	60-57-1	5 ug/kg	<5	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33212-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-2 (0-3))
Date received: 12/3/08	Laboratory ID: 1168457
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	2.04 mg/kg	12/9/08	<2.04	
ARSENIC, As	2.04 mg/kg	12/9/08	3.72	
BERYLLIUM, Be	2.04 mg/kg	12/9/08	<2.04	
CADMIUM, Cd	1.22 mg/kg	12/9/08	<1.22	
CHROMIUM, Cr	2.04 mg/kg	12/9/08	7.84	
COPPER, Cu	2.04 mg/kg	12/9/08	9.30	
MERCURY, Hg•	0.020 mg/kg	12/9/08	0.107	
NICKEL, Ni	2.04 mg/kg	12/9/08	4.12	
LEAD, Pb	2.04 mg/kg	12/9/08	15.6	

MDL = Minimum Detection Limit
Performed by EPA Method 6010B
•Method: EPA 7471A

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-3 (D-3))
Date received: 12/3/08	Laboratory ID: 1168158
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	<15	
4,4'-DDD	72-54-8	5 ug/kg	<5	
4,4'-DDE	72-55-9	5 ug/kg	<5	
4,4'-DDT	50-29-3	5 ug/kg	<5	
Dieldrin	60-57-1	5 ug/kg	<5	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33213-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-3 (0-3))
Date received: 12/3/08	Laboratory ID: 1158458
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	1.98 mg/kg	12/9/08	<1.96	
ARSENIC, As	1.96 mg/kg	12/9/08	4.34	
BERYLLIUM, Be	1.90 mg/kg	12/9/08	<1.96	
CADMIUM, Cd	1.18 mg/kg	12/9/08	<1.18	
CHROMIUM, Cr	1.96 mg/kg	12/9/08	6.31	
COPPER, Cu	1.96 mg/kg	12/9/08	6.91	
MERCURY, Hg*	0.020 mg/kg	12/9/08	0.113	
NICKEL, Ni	1.96 mg/kg	12/9/08	3.68	
LEAD, Pb	1.96 mg/kg	12/9/08	16.1	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-4 (0-3))
Date received: 12/3/08	Laboratory ID: 1108459
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	17	
4,4'- DDD	72-54-8	5 ug/kg	<5	
4,4'-DDE	72-55-9	5 ug/kg	10	
4,4'-DDT	50-29-3	5 ug/kg	10	
Dieldrin	60-57-1	5 ug/kg	<5	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33212-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIALAB@aol.com

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Post-4 (0-3))
Date received: 12/3/08	Laboratory ID: 1168459
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	2.29 mg/kg	12/9/08	<2.29	
ARSENIC, As	2.29 mg/kg	12/9/08	2.58	
BERYLLIUM, Be	2.29 mg/kg	12/9/08	<2.29	
CADMIUM, Cd	1.38 mg/kg	12/9/08	<1.38	
CHROMIUM, Cr	2.29 mg/kg	12/9/08	7.54	
COPPER, Cu	2.29 mg/kg	12/9/08	16.5	
MERCURY, Hg*	0.020 mg/kg	12/9/08	0.139	
NICKEL, Ni	2.29 mg/kg	12/9/08	4.36	
LEAD, Pb	2.29 mg/kg	12/9/08	39.9	

MDL = Minimum Detection Limit
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-5 (0-3))
Date received: 12/3/08	Laboratory ID: 1168450
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	835	
4,4'-DDD	72-54-8	5 ug/kg	7	
4,4'-DDE	72-55-9	5 ug/kg	12	
4,4'-DDT	50-29-3	5 ug/kg	20	
Dieldrin	60-57-1	5 ug/kg	5	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33212-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-5 (0-3'))
Date received: 12/3/08	Laboratory ID: 1168460
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	1.92 mg/kg	12/9/08	<1.92	
ARSENIC, As	1.92 mg/kg	12/9/08	2.44	
BERYLLIUM, Be	1.92 mg/kg	12/9/08	<1.92	
CADMIUM, Cd	1.15 mg/kg	12/9/08	<1.15	
CHROMIUM, Cr	1.92 mg/kg	12/9/08	8.21	
COPPER, Cu	1.92 mg/kg	12/9/08	13.5	
MERCURY, Hg*	0.020 mg/kg	12/9/08	0.031	
NICKEL, Ni	1.92 mg/kg	12/9/08	6.32	
LEAD, Pb	1.92 mg/kg	12/9/08	41.1	

MDL = Minimum Detection Limit
Performed by: EPA Method 6010B
*Method: EPA 7471A

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Pest-6 (0-3))
Date received: 12/3/08	Laboratory ID: 1168461
Date extracted: 12/5/08	Matrix: Soil
Date analyzed: 12/5/08	ELAP #: 11693

PESTICIDES EPA METHOD 8081

COMPOUND	CAS No.	MDL	RESULTS ug/kg	Flag
Aldrin	309-00-2	5 ug/kg	<5	
α - BHC	319-84-6	5 ug/kg	<5	
β - BHC	319-85-7	5 ug/kg	<5	
δ - BHC	319-86-8	5 ug/kg	<5	
γ - BHC (Lindane)	58-89-9	5 ug/kg	<5	
Chlordane	12789-03-6	15 ug/kg	121	
4,4'- DDD	72-54-8	5 ug/kg	<5	
4,4'-DDE	72-55-9	5 ug/kg	<5	
4,4'-DDT	50-29-3	5 ug/kg	9	
Dieldrin	60-57-1	5 ug/kg	9	
Endosulfan I	959-98-8	5 ug/kg	<5	
Endosulfan II	33212-65-9	5 ug/kg	<5	
Endosulfan sulfate	1031-07-8	5 ug/kg	<5	
Endrin	72-20-8	5 ug/kg	<5	
Endrin aldehyde	7421-93-4	5 ug/kg	<5	
Heptachlor	76-44-8	5 ug/kg	<5	
Heptachlor epoxide	1024-57-3	5 ug/kg	<5	
4,4'-Methoxychlor	72-43-5	5 ug/kg	<5	
Toxaphene	8001-35-2	200 ug/kg	<200	
Endrin ketone	53494-70-5	5 ug/kg	<5	

MDL = Minimum Detection Limit.

Calculated on a wet weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Nelson, Pope, & Voorhis	Client ID: Triangle (Test-6 {0-3})
Date received: 12/3/08	Laboratory ID: 1168461
Date analyzed: See Below	Matrix: Soil

METALS ANALYSIS

PARAMETER	MDL	DATE ANALYZED	RESULTS mg/kg	FLAG
SILVER, Ag	1.98 mg/kg	12/9/08	<1.98	
ARSENIC, As	1.98 mg/kg	12/9/08	3.10	
BERYLLIUM, Be	1.98 mg/kg	12/9/08	<1.98	
CADMIUM, Cd	1.19 mg/kg	12/9/08	<1.19	
CHROMIUM, Cr	1.98 mg/kg	12/9/08	12.8	
COPPER, Cu	1.98 mg/kg	12/9/08	27.7	
MERCURY, Hg*	0.020 mg/kg	12/9/08	<0.020	
NICKEL, Ni	1.98 mg/kg	12/9/08	9.15	
LEAD, Pb	1.98 mg/kg	12/9/08	69.2	

MDL = Minimum Detection Limit
Performed by EPA Method 6010B
*Method: EPA 7471A

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

LONG
ISLAND
ANALYTICAL
LABORATORIES INC.

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

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LONG ISLAND ANALYTICAL LABORATORIES, INC.
DATA REPORTING FLAGS

For reporting results, the following "Flags" are used:

A: Time not supplied by client, may have exceeded holding time
B: Holding time exceeded, results cannot be used for regulatory purposes
C: Minimum detection limit raised due to matrix interference
D: Minimum detection limit raised due to target compound interference
E: Minimum detection limit raised due to non-target compound interference
F: Minimum detection limit raised due to insufficient sample volume
G: Sample received in incorrect container
H: Sample not preserved, corrected upon receipt
I: Dilution Water does not meet QC Criteria
J: Estimated concentration, exceeds calibration range
K: Target compound found in blank
L: Subcontractor ELAP #11398
M: Subcontractor ELAP #10320
N: Subcontractor NVLAP #102047-0
O: Subcontractor AIHA #103005
P: Subcontractor A2LA 2004.01
Q: Subcontractor ELAP #11026
R: Subcontractor ELAP #10155
S: Subcontractor ELAP #11501
T: Subcontractor CTC
U: Subcontractor ELAP #11685
V: QC affected by matrix
W: Subcontractor ELAP #10248
X: QC does not meet acceptance criteria
Y: Sample container received with head space
Z: Insufficient sample volume received
AA: Preliminary results, cannot be used for regulatory purposes.
BB: Spike recovery does not meet QC criteria due to high target concentration
CC: Data reported below the lower limit of quantitation and should be considered to have an increased quantitative uncertainty.
DD: Sampling information not supplied and/or sample not taken by qualified technician, therefore verifiability of the report is limited to results only. Report cannot be used for regulatory purposes.
EE: Subcontractor ELAP : #11777
FF: Unable to verify that the wipe samples submitted conform to ASTM E1792 or specifications issued by the EPA.
GG: Level found exceeds the maximum contaminant level (MCL) as set by local, state or federal agencies.
HH: Subcontractor ELAP #10750
II: Subcontractor ELAP #10145
JJ: Subcontractor ELAP #11638

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

0041941

CLIENT NAME/ADDRESS	CONTACT	SAMPLER (SIGNATURE)	DATE	TIME	CUSTODY SEALED	
NPV 572 WALT WHITMAN RD [illegible] NY [illegible]	CONTACT: Eric [illegible] PHONE: [illegible] FAX:	[signature]	[illegible]	[illegible]	YES / NO	
		SAMPLER NAME (PRINT): Eric [illegible]	DATE	TIME	CORRECT CONTAINER(S): YES / NO	

PROJECT LOCATION: [illegible]

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms.

SAMPLES RECEIVED AT: 2.1 °C

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	#	RES. CHLORINE	PRES	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED	[illegible]		# OF CONTAINERS
1. 1168456	S	G	-	-	[illegible]	12/4/08	1002	Post-1 0-3	X	X		1
2. 1168457							1005	Post-2 0-3	X	X		1
3. 1168458							1013	Post-3 0-3	X	X		1
4. 1168459							1021	Post-4 0-3	X	X		1
5. 1168460							1101	Post-5 0-3	X	X		1
6. 1168461							1114	Post-6 0-3	X	X		1
7.												
8.	S	G	-	-	[illegible]	12/4/08	1003	Post-1 3-6	X	X		1
9.							1008	Post-2 3-6	X	X	HOLD	1
10.							1014	Post-3 3-6	X	X	3-6	1
11.							1022	Post-4 3-6	X	X		1
12.							1102	Post-5 3-6	X	X	[illegible]	1
13.							1115	Post-6 3-6	X	X		1
14.												

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM=BULK MATERIAL; O=OIL; WW=WASTE WATER

TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON

PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $Na_2S_2O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: X NORMAL ☐ STAT BY: / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	DATE [illegible] TIME 1000	Eric [illegible]	[signature]	DATE TIME	
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN: [signature]	DATE [illegible] TIME [illegible]	PRINTED NAME

LONG ISLAND ANALYTICAL LABORATORIES INC.

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# [illegible]
NJDEP# NY012
PADEP# [illegible]

"[illegible]"

LIAL #1168839

December 15, 2008

Nelson, Pope & Voorhis
Eric Arnesen
572 Walt Whitman Road
Melville, New York 11747

Re: Triangle

Dear Mr. Arnesen:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) resubmitted on December 10, 2008. Long Island Analytical Laboratories analyzed the samples on December 12, 2008 for the following:

CLIENT ID	ANALYSIS
Pest -1 (3-6)	Total Arsenic Analysis
Pest -3 (3-6)	Total Arsenic Analysis

Samples were originally received at 2.1°C on December 3, 2008.

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted with the appropriate flag. Report shall not be reproduced except in full, without the written approval of the laboratory. Results relate only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope, & Voorhis	Client ID: Triangle
Date received: 12/3/08*	Laboratory ID: See Below
Date analyzed: 12/12/08	Matrix: Soil

ARSENIC ANALYSIS

Lab ID	Client ID	MDL	Results mg/kg	Flag
1168839	Pest -1 (3-6)	2.03 mg/kg	4.79	
1168841	Pest -3 (3-6)	1.98 mg/kg	3.74	

MDL = Minimum Detection Limit.
Performed by EPA Method 6010B
* Sample was resubmitted on December 10, 2008.

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

D041941

CLIENT NAME/ADDRESS	CONTACT:	SAMPLER (SIGNATURE)	DATE	TIME	SAMPLES SEALED
[illegible]	PHONE: [illegible]	[illegible]	[illegible]	[illegible]	YES / NO
	FAX:	SAMPLER NAME (PRINT)	DATE	TIME	SAMPLES INTACT
		[illegible]			YES / NO

PROJECT LOCATION: [illegible]

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard Terms.

SAMPLES RECEIVED AT [illegible] °C

LABORATORY ID # (for Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSES REQUIRED			# CONTAINERS
1. [illegible]	S	G			[illegible]	[illegible]	[illegible]	[illegible]	X	X		1
2. [illegible]							[illegible]	[illegible]	X	X		1
3. [illegible]							[illegible]	[illegible]	X	X		1
4. [illegible]							[illegible]	[illegible]	X	X		1
5. [illegible]							[illegible]	[illegible]	X	X		1
6. [illegible]							[illegible]	[illegible]	X	X		1
7.												
8. 1168839	S	G			[illegible]	[illegible]	[illegible]	[illegible]	X	X	X	
9. ~~1168840~~							[illegible]	[illegible]			X	
10. 1168841							[illegible]	[illegible]	X	X	X	
11. ~~[illegible]~~								[illegible]	X	X	X	
12. ~~[illegible]~~								[illegible]			X	
13. ~~[illegible]~~							[illegible]	[illegible]	X			
14.												

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE;
PC=PAINT CHIPS; BM=BULK MATERIAL; O=OIL; WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE (2) HCL (3) H_2SO_4 (4) NAOH (5) $NA_2S_2O_3$ (6) HNO_3 (7) OTHER

TURNAROUND REQUIRED: X NORMAL STAT
BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
[illegible]	DATE [illegible] TIME [illegible]	[illegible]	[illegible]	DATE TIME	
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN [illegible]	DATE [illegible] TIME [illegible]	PRINTED NAME

WHITE - OFFICE / CANARY - LAB / PINK - SAMPLE CUSTODIAN / GOLDENROD - CLIENT   NYSDOH ELAP# 11693   USEPA# NY01273   AIHA# 164456   CTDOH# PH0284

APPENDIX C

SONIR COMPUTER MODEL DOCUMENTS

Appendix C-1

Model User's Guide

SONIR MODEL USER'S GUIDE

Simulation of Nitrogen in Recharge (SONIR)
Nelson, Pope & Voorhis, LLC Microcomputer Model

INTRODUCTION

SONIR is a microcomputer model developed by Charles J. Voorhis, CEP, AICP for use by Nelson, Pope & Voorhis, LLC in order to simulate the hydrologic water budget of a site and determine total nitrogen and nitrogen present in recharge in connection with land use projects. The model was developed on the Microsoft Excel Spreadsheet (trademark of Microsoft Products) for IBM (trademark of International Business Machines, Inc.) or compatible Personal Computers capable of running Excel.

Nitrogen has been identified as a source of contamination primarily from sanitary discharge and lawn fertilization. Nitrogen is of concern as a drinking water contaminant, and there is an established health limit of 10 milligrams per liter (mg/l) in drinking water. Nitrogen is also of concern in surface water, as it is a nutrient that when present in high concentrations can cause algal blooms, resulting in biological oxygen demand as algae is biologically decomposed. Depleted oxygen in surface waters causes conditions unfavorable to fish species and can result in extremely undesirable aesthetic impacts, primarily related to odors. Accordingly, it is necessary to understand the concentration of nitrogen recharge as related to a proposed site development.

Utilizing a mass-balance concept, and applying known hydrologic facts and basic assumptions, it is possible to predict the concentration of nitrogen in recharge to the shallow aquifer underlying a given site. This prediction can in turn be used to determine impacts and significance of impacts in consideration of hydrogeologic factors. Similar techniques have been used to simulate nitrogen in recharge as published by the New York State Water Resources Institute, Center for Environmental Research at Cornell University, Ithaca, New York (**Hughes and Pacenka, 1985**). SONIR is intended to provide a more versatile model based upon the BURBS Mass-Balance concept. SONIR allows for use of the model to predict nitrogen impact from many sources including sewage treatment plants, and further allows for determination of a wider variety site recharge components under the hydrologic water budget section. SONIR has more versatility in the input of information, and also provides a printout of each step performed by the model, in order for regulatory agencies and review entities to understand how values are derived.

This text describes in detail the definition of terms, supported by referenced information regarding input of data for the simulation. The concept of determining the concentration of nitrogen in recharge involves a predication of the weight of nitrogen introduced to the site, as compared to the quantity of recharge resulting from precipitation and wastewater water discharge. Losses due to evapotranspiration and runoff must be accounted for in the simulation. The values and relationship associated with these parameters determines the quantity of recharge that enters the site. The prediction is generally annualized due to the availability of average annual hydrologic data; however, data input can be determined on a seasonal basis if information is available.

The model includes four (4) data sheets identified as follows:

* Data Input Field - Sheet 1
* Site Recharge Computations - Sheet 2
* Site Nitrogen Budget - Sheet 3
* Nitrogen in Recharge Output Field - Sheet 4

All information required by the model is input in Sheet 1 - Data Input Field. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data which is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates, degradation and losses, and final recharge. Users must apply caution in arriving at assumptions in order to ensure justifiable results.

SITE RECHARGE COMPUTATIONS

Overview

SONIR utilizes the basic hydrologic equation for determining the quantity of recharge anticipated by subtracting recharge losses from total precipitation. The quantity of recharge resulting from a given site is determined using the hydrologic budget equation **(Koszalka, 1984; p. 19):**

$$R = P - (E + Q)$$

where:
R = recharge
P = precipitation
E = evapotranspiration
Q = overland runoff

The quantity of recharge must be determined for each type of land use existing on a site, in order to determine the resultant site recharge. Surfaces commonly considered include: impervious surfaces; turfed areas; and natural areas; however, SONIR allows for a variety of land cover types to be considered in the model. In addition, site recharge occurs as a result of irrigation and wastewater discharge. In cases where water is imported to a site via a public water system, this quantity of recharge must be considered as additional water recharged on site. SONIR allows for all of these recharge components to be included in the simulation. Many sites have fresh surface water in the form of lakes and ponds. Precipitation falls upon these surfaces; however, such features generally act as a mechanism for water loss as a result of evaporation. SONIR includes a Water Area Loss component in determining the site Hydrologic Water Budget and in computing recharge nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the hydrologic water budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Area of Site* - The total area of the site (in acres) that is capable of recharging precipitation is entered in this data cell. For sites that include tidal wetlands, the area that is inundated by tidal waters should be excluded, as recharge from these areas should not be considered in the context of nitrogen simulation. For sites that include surface water, the area can be included, provided evaporative water loss from surface water is considered by entering the acreage of surface water in Data Cell 15 noted below.

2. *Precipitation Rate* - Precipitation in the form of rainfall and snowmelt is determined using long-term recorded values from local weather stations. Cornell University maintains the Northeast Regional Climate Center, from which long-term precipitation data for Long Island weather stations is available. Monthly precipitation averages are published for the period 1951-1980 in Thornthwaite and Mather's Climatic Water Budget Method **(Snowden and Pacenka, 1985).** A tabulation of monthly and annual precipitation averages excerpted from this reference is included in the table cited for Evapotranspiration values. Data entry is in inches.

3. *Acreage of Lawn* - The total area of lawn (in acres) is entered in this Data Cell. This area includes all lawn area whether it is irrigated, fertilized or unmaintained. If there is no lawn area, a value of zero (0) is entered.

4. *Fraction of Land in Lawn* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Lawn by dividing the lawn area by total area.

5. *Evapotranspiration from Lawn* - Evapotranspiration is the natural water loss attributed to evaporation and plant utilization. Rainwater that is evaporated and transpired by plants is returned to the atmosphere as vapor. There are various methods for determining evapotranspiration, including direct measure and calculation. A commonly recognized method is the Thornthwaite and Mather Climatic Water Budget Method. Evapotranspiration rates for various locations on Long Island have been determined by the U.S. Geological Survey, as documented in: "Ground-Water-Recharge Rates in Nassau and Suffolk Counties, New York" **(Peterson, 1987; p. 10).** The following general rates as a percent of total precipitation are excerpted from that reference:

Location	Soil Type	Vegetation	ET (in)	ET (%)
Bridgehampton	sandy loam	shallow root	21.2	46.6
	silt loam	shallow root	21.4	47.2
LaGuardia	sand	shallow root	24.2	52.9
	clay loam	shallow root	25.4	55.5
	sandy loam	moderate root	26.2	57.2
JFK Airport	sand	shallow root	22.5	53.8
	clay loam	shallow root	23.9	57.3
	sandy loam	moderate root	25.0	60.0
Mineola	sand	shallow root	22.4	47.8
	sand-silt	shallow root	23.8	51.0
	sandy loam	moderate root	25.1	53.7
	sandy loam	orchards	25.5	54.5
Patchogue	fine sand	mature forest	25.5	53.5
Riverhead	sandy loam	shallow root	22.4	49.3
		orchards	24.8	54.7
Setauket	sandy loam	mature forest	26.8	57.9
Upton	silt loam	deep root	23.9	48.4
	sandy loam	moderate root	23.0	46.5

6. *Runoff from Lawn* - Runoff is the quantity of water that travels overland during a precipitation event. Soil infiltration capacity is the critical factor in determining runoff; however, factors such as slope and vegetation also determine runoff characteristics to a lesser extent on Long Island because of soil conditions. Less urbanized areas of Long Island with characteristically dry soils with groundcover will have a low runoff percentage as a function of total precipitation, as compared to the more urbanized portions of western Long Island. Peterson **(1984; p. 14)** estimates runoff as a percent of total precipitation for Nassau County (2.1 percent); Suffolk County (0.7 percent), and Long Island in general (1.0 percent). If an average precipitation rate of 45 inches per year is assumed, runoff will vary from 0.31 to 0.94 inches. Lawn areas would be expected to be in the lower end of the range. Judgements of higher and lower runoff can be made on a site-specific basis depending upon slope and groundcover types.

7. *Acreage of Impervious* - The total area of impervious surface (in acres) is entered in this Data Cell. This area includes paved driveways, parking areas, roofs, roads, etc. If there are no impervious surfaces, a value of zero (0) is entered.

8. *Fraction of Land Impervious* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Impervious by dividing the impervious area by total area.

9. *Evaporation from Impervious* - Impervious surfaces will allow water to evaporate, particularly during summer months. There is no vegetation; therefore there is no

transpiration by plants. Evaporation from Impervious is estimated to be approximately 10 percent of total precipitation **(Hughes and Porter, 1983; p. 10).** This value accounts for evaporation from parking lots and other surfaces during summer months, averaged over the entire year. This indicates that recharge/runoff would comprise the remaining 90 percent of precipitation. This assumption coincides with most drainage computations required by Code Subdivision Regulations for determined leaching pool capacity.

10. *Runoff from Impervious* - The approximation of Evaporation from Impervious would indicate that recharge/runoff would comprise the remaining 90 percent of precipitation, as there are no other losses from impervious surfaces. In consideration of paved areas, runoff is not transported off the site or to surface water as a loss. Runoff is diverted to leaching pools and allowed to re-enter the hydrologic system beneath a given site. Therefore, in terms of site recharge computations, the value for Runoff from Impervious is zero (0).

11. *Acreage of Unvegetated* - The total acreage of unvegetated area is entered in this Data Cell. This area includes sand, barren soils, and porous drives and trails. If there is no unvegetated area, a value of zero (0) is used.

12. *Fraction of Land Unvegetated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Unvegetated by dividing the unvegetated area by total area.

13. *Evapotranspiration from Unvegetated* - Evapotranspiration from Unvegetated areas is determined in the same manner as described for Data Cell 5 above.

14. *Runoff from Unvegetated* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to unvegetated areas on a site-specific basis. Runoff in the middle to the higher end of the range (0.7 to 2.1 percent of precipitation) is expected due to lack of groundcover vegetation.

15. *Acreage of Water* - SONIR considers evaporation from surface water in the computation of site recharge. Surface water, particularly groundwater fed lakes and ponds are a source of water loss in the water budget. The quantity of fresh surface water (in acres) is entered in this Data Cell.

16. *Fraction of Land in Water* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Water on the site by dividing the water area by total area.

17. *Evaporation from Water* - Surface water features will cause evaporation of water in excess of normal evapotranspiration as documented by **Warren et al, 1968,** Hydrology of Brookhaven National Laboratory and Vicinity Suffolk County, New York. It is estimated that the upper limit of evaporation from a large free-water surface is approximately 30.00 inches per year **(Warren et al, 1968; p. 26).** This value is entered in Data Cell 17 as the most accurate approximation.

18. *Makeup Water* - SONIR allows for consideration of the impact of man-made lakes on site recharge. Lakes are generally lined with an impermeable material. Evaporation occurs from the surface of the lake at a rate of 30.00 inches per year. In order to maintain a constant water level, an on-site well is generally installed to provide make-up water to the lake or pond. The quantity of make-up water is equivalent to the quantity of evaporation, given the fact that the function of the well is to replace water that is evaporated. Therefore, for cases where make-up water is used to maintain a constant water level, a value of 30.00 inches per year is entered in Data Cell 18.

19. *Acreage of Natural* - The total quantity of natural area (in acres) is entered in this Data Cell. This area includes naturally vegetated areas such as woodland, meadow, etc. If there is no natural area, a value of zero (0) is entered.

20. *Fraction of Land Natural* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Natural by dividing the natural area by total area.

21. *Evapotranspiration from Natural* - Evapotranspiration from Natural areas is determined in the same manner as described for Data Cell 5 above.

22. *Runoff from Natural* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to natural areas on a site specific basis. Generally lower values in the range of 0.7 percent of precipitation are expected due to groundcover and canopy vegetation.

23. *Acreage of Other Area* - This is a general category which can be used to include additional groundcover types in the simulation. Acreage of Other Area is entered (in acres). This Data Cell can be used to include site recharge considerations from a portion of the site that has different hydrologic properties, such as a moist hardwood forest or vegetated freshwater wetland, where evapotranspiration would be high and runoff would be extremely low.

24. *Fraction of Land in Other Area* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land in Other Area by dividing the land in other area by total area.

25. *Evapotranspiration from Other Area* - Evapotranspiration from Other areas is determined in the same manner as described for Data Cell 5 above. Value can be varied depending upon the hydrologic properties of the groundcover type.

26. *Runoff from Other Area* - The runoff coefficients noted in the discussion for Data Cell 6 above, are applied to Other Areas on a site-specific basis. Value can be varied depending upon the hydrologic properties of the groundcover type.

27. *Acreage of Land Irrigated* - Imported water for irrigation purposes is an additional site recharge component not considered in any of the Data Cells above. The quantity of land irrigated on a given site is entered in this Data Cell (in acres).

28. *Fraction of Land Irrigated* - No entry need be made in this Data Cell. SONIR will compute the Fraction of Land Irrigated by dividing the Land Irrigated area by total area.

29. *Irrigation Rate* - The rate of irrigation must be entered in this Data Cell (in inches). Hughes and Porter **(1983; p. 19)** have indicated that lawn irrigation is estimated to be about 5.5 inches per year. This value is entered in Data Cell 29 as the most accurate approximation.

30. *Number of Dwellings* - The number of dwellings is entered in this Data Cell in order to allow for computation of wastewater disposal from residential use. Wastewater imported to a site, or even withdrawn from on-site wells and recharged through sanitary effluent is an additional recharge component that must be considered. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, as the wastewater flow will include recharge and nitrogen components.

31. *Water Use per Dwelling* - The water use should correspond to the total site non-irrigation water use, divided by the number of units.

32. *Wastewater Design Flow* - No entry need be made in this Data Cell. SONIR will compute the Wastewater Design Flow by multiplying the Number of Dwellings by the Water Use per Dwelling.

33. *Commercial/STP Design Flow* - SONIR permits the consideration of recharge from commercial projects, denitrification systems and sewage treatment plants. The Commercial/STP Design Flow is entered in this Data Cell as per County Health Department or engineering design standards.

Site Recharge Computations - Sheet 2

Once data entry is complete for Site Recharge Parameters, SONIR will complete a series of detailed Water Budget computations for the overall site. The following describes the computations that are performed by the model:

A. *Lawn Area Recharge* - Lawn Area Recharge is determined by use of the basic Hydrologic Budget Equation [R = P - (E + Q)] as defined previously. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Lawn Area to determine the component of Lawn Area Recharge in overall site recharge.

B. *Impervious Area Recharge* - Impervious area recharge is also determined using the Hydrologic Budget Equation; however, the value for runoff is zero (0) due to the fact that runoff is controlled by conveyance to on site leaching facilities or is allowed to runoff into depressions where runoff is recharged on site.

C. *Unvegetated Area Recharge* - Unvegetated Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Unvegetated Area to determine the component of Unvegetated Area Recharge in overall site recharge.

D. *Water Area Loss* - The Hydrologic Budget Equation is modified to consider Water Area Loss. This is particularly useful in water quantity stressed areas of Long Island. If runoff (Q) is considered be zero (0), then lake storage/recharge without make-up water would be Precipitation minus Evaporation (P - E). The resultant quantity of lake storage/recharge is then reduced by the amount of make-up water (M). The final quantity of loss is then multiplied by that portion of the site occupied by water to determine the component of water loss as related to the overall site water budget.

E. *Natural Area Recharge* - Natural Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Natural Area to determine the component of Natural Area Recharge in overall site recharge.

F. *Other Area Recharge* - Other Area Recharge is determined by use of the basic Hydrologic Budget Equation. The quantity of recharge determined by this method is then multiplied by that portion of the site occupied by Other Area to determine the component of Other Area Recharge in overall site recharge.

G. *Irrigation Recharge* - Irrigation recharge is an additional recharge component artificially added on sites where irrigation occurs. This quantity is determined in the same manner as the Hydrologic Water Budget except that the irrigation rate (in inches) is substituted for precipitation. The resultant recharge is multiplied by the area of the site that is irrigated, in order to determine the Irrigation Recharge in overall site recharge.

H. *Wastewater Recharge* - Wastewater is also a recharge component artificially added to a site. SONIR annualizes the wastewater design flow and assumes it is applied over the entire by multiplying Wastewater Design Flow by the Area of the Site, resulting in a per foot measure of wastewater over the site. This is converted to inches to be included in overall site recharge.

Once the eight (8) series of Site Recharge Computations are complete, SONIR totals each individual component to determine Total Site Recharge. The sum of these recharge contributions, is that quantity of water that is expected to enter the site on an annual basis due to precipitation, after the development is completed. This value is important in determining the concentration of nitrogen in recharge, and is important as a means of determining hydrologic impacts of a project in terms of changes to site recharge.

SITE NITROGEN BUDGET

Overview

The total nitrogen released on a given site must be determined in order to provide a means of simulating nitrogen in recharge. Nitrogen sources include: sanitary nitrogen; fertilizer nitrogen; pet waste nitrogen; precipitation nitrogen; and water supply nitrogen (wastewater and irrigation). The total of these quantities represents total site nitrogen.

Data Input - Sheet 1

The following provides a discussion of data sources and assumptions associated with the nitrogen budget, corresponding to the Data Input Field in Sheet 1 of SONIR:

1. *Persons per Dwelling* - The number of persons per dwelling is a demographic multiplier used in the determination of human population of a site. Based on multipliers listed in "The New Practitioner's Guide to Fiscal Impact Analysis", **(Rutgers, 1985)**, the average number of residents is calculated at 0.00/unit (Existing Conditions), and will be 4.1/unit (Proposed Conditions).

2. *Nitrogen per Person per Year* - Annual nitrogen per person is a function of nitrogen bearing waste in wastewater. For residential land use the population of the development is determined and the nitrogen generated is assumed to be 10 pounds per capita per year **(Hughes and Porter, 1983; p. 8).**

3. *Sanitary Nitrogen Leaching Rate* - For normal residential systems, Porter and Hughes report that 50 percent of the nitrogen entering the system is converted to gaseous nitrogen and the remainder leaches into the soil **(Porter and Hughes, 1983; p. 14).**

4. *Area of Land Fertilized 1* - The area of land fertilized is input in Data Cell 4. This value may correspond to the Acreage of Lawn and/or the Acreage of Land Irrigated, but is not necessarily the same value. This entry should be determined on a site-specific basis.

5. *Fertilizer Application Rate 1* - Fertilizer nitrogen is determined by a fertilizer application rate over a specified area of the site. The fertilizer application rates vary depending upon the type of use. The following table indicates the rate of fertilization as a function of use as excerpted from the Non-Point Source Management Handbook **(Koppelman, 1984; Chapter 5, p.6):**

Residential (contract)	1.5 lbs/1000 sq ft
Residential (unmanaged)	2.3 lbs/1000 sq ft
Commercial	3.5 lbs/1000 sq ft
Golf Course	3.5 lbs/1000 sq ft
Sod Farms	4.0 lbs/1000 sq ft
Recreational Lands	0.2 lbs/1000 sq ft

A commercial landscaping firm has been interviewed to determine trends in commercial fertilizer application. Various fertilizer formulations are used including 10-6-4, 16-4-8 and 20-10-5 (nitrogen-phosphate-potash) depending upon season. Heavier nitrogen application rates are generally used in the spring. Fertilizer used is 50 percent organic nitrogen. This is applied in a dry form approximately 2-3 times per year, and a 50-pound bag is applied over approximately 16,000 square feet. Based on this rate if 20- 10-5 nitrogen were applied in the spring, and 16-4-8 were applied during summer and fall, this would result in an application rate of 1.5-2.1 pounds per 1000 square feet. The high of this range is a conservative value based on three applications of relatively high nitrogen fertilizer, which will be used for nitrogen in recharge simulation.

In addition, it is noted that the Non-Point Source Management Handbook indicates that application rates as low as 1.0 lb/1000 sq ft can be achieved with proper fertilizer management control.

6. *Fertilizer Nitrogen Leaching Rate 1* - Nitrogen applied as fertilizer is subject to plant uptake (20 to 80%; 50% on average) and storage in thatch and soils (36 to 47%), thereby reducing the total amount of nitrogen leached. The percentage of plant uptake and storage are based on studies cited in the LIRPB's Special Groundwater Protection Area Plan. Based on those studies, a conservative nitrogen leaching rate of 14% has been applied in the model.

7. *Area of Land Fertilized 2* - More than one fertilizer nitrogen input is provided in order allow consideration of mixed use and/or golf course projects where land is fertilized at different rates.

8. *Fertilizer Application Rate 2* - Fertilizer Application Rates for this entry can be determined based upon Data Cell 5 above.

9. *Fertilizer Nitrogen Leaching Rate 2* - Fertilizer Nitrogen Leaching Rates can be determined based upon Data Cell 6 above.

10. *Pet Waste Application Rate* - Pet Waste Nitrogen results from the exerction of domestic pets in the outside environment. There is relatively little definitive information concerning this nitrogen source; however, several references were located and are analyzed herein. The 208 Study provides a table of nitrogen concentration in manure for various animals, not including dogs or cats. Total nitrogen values in the range of 0.30-0.43 lbs/day/1000 lbs live weight are reported for cattle, sheep and horses **(Koppelman,**

1978; Animal Waste report p. 3). It is assumed that dogs constitute the major source of animal waste that would be present in the yards of residential developments. Cat waste would be significantly less due to the lesser live weight of cats and the fact that many cat owners dispose of cat waste in solid waste by using an indoor litter box. If an average of 0.35 lbs of nitrogen is assumed for dogs, and an average of 25 pounds live weight is assumed per dog, then the total annual nitrogen per pet would be 3.19 lbs/year. The only other reference located that approximates nitrogen in pet waste is Land Use and Ground-Water Quality in the Pine Barrens of Southampton **(Hughes and Porter, 1983; p. 10).** This reference assumed an application rate of 6.5 lbs/acre of nitrogen. Pet waste was assumed to be deposited evenly over all turf. This assumption was not correlated to population density or pet density, but only to turfed acreage. In comparison of the two values, the per pet value corresponds to approximately 2 turfed acres. For the purpose of this model, the value of 3.19 lbs/pet/year is considered to be the most justifiable value for pet waste and is entered in this Data Cell.

11. *Pet Waste Nitrogen Leaching Rate* - Pet waste is also subject to a leaching rate factor whereby, 50 percent of the nitrogen applied to the ground is removed as a gas.

12. *Area of Land Irrigated* - No entry need be made in this Data Cell. This value is the same as Data Cell 27 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.

13. *Irrigation Rate* - No entry need be made in this Data Cell. This value is the same as Data Cell 29 of the Site Recharge Parameters and SONIR will transfer the data entry to this Cell.

14. *Irrigation Nitrogen Leaching Rate* - Hughes and Porter **(1983; p. 10)** states "plant uptake and gaseous losses are assumed to remove 85% of the nitrogen entering in precipitation". Irrigation nitrogen would be expected to be subject to the same losses; therefore, a leaching rate of 15% is entered in this Data Cell.

15 *Nitrogen in Precipitation* - Groundwater nitrogen is partially derived from rainwater. Nitrate-nitrogen concentrations in precipitation have been reported to be on the order of 1-2 mg/l in Nassau and Suffolk Counties **(SCDHS, 1987; p. 6-4).**

16. *Precipitation Nitrogen Leaching Rate* - As indicated above, a nitrogen leaching rate of 15% is applied to precipitation nitrogen.

17. *Nitrogen in Water Supply* - The concentration of Nitrogen in Water Supply determines the quantity of nitrogen that enters the site as a result of irrigation nitrogen and wastewater flow. Local water supply data should be utilized if available, otherwise a value of between 1 and 2 mg/l could be utilized.

18. *Nitrogen in Commercial/STP Flow* - This data entry allows SONIR to compute the quantity of nitrogen resulting from commercial discharge, denitrification systems and/or sewage treatment plants. Total nitrogen in community wastewater is identified as having a total nitrogen concentration of 20 mg/l in weak effluent; 40 mg/l in medium strength effluent, and 85 mg/l in strong effluent **(Metcalf & Eddy, Inc, 1991).** It is recommended that a value of 40 mg/l be used for total nitrogen concentration in commercial sanitary systems. Properly functioning denitrification systems and sewage treatment plants are capable of reducing total nitrogen to less than 10 mg/l in accordance with discharge limitations. A value of 10 mg/l can be entered in this data cell for such systems. The SONIR model computes the number of pounds of nitrogen in sanitary discharge as a function of concentration. The absolute nitrogen is utilized in the model; however, it must recognized that from the discharge point, nitrogen is nitrified through conversion of ammonia to nitrate in the leaching area beneath the discharge point. Further natural transformation in the form of denitrification occurs as a result of bacteria. This causes release of nitrogen gas and may account for further reduction of 50 percent or more subsequent to discharge **(Canter and Knox, 1979; pp. 77-78; Hughes and Porter, 1983; p. 14).** As a result SONIR is conservative in predicting the concentration of nitrogen in recharge, and when natural denitrification of sanitary effluent is considered, actual concentration would be less.

Site Nitrogen Budget - Sheet 2

Once data entry is complete for Nitrogen Budget Parameters, SONIR will complete a series of detailed computations to determine the individual component of nitrogen from each source and the total nitrogen for the overall site and use. The following describes the computations that are performed by the model:

A. *Sanitary Nitrogen - Residential* - SONIR establishes the site population using the number of units on the site, and the demographic multiplier. The nitrogen load factor is then applied and reduced by the leaching rate, resulting in the total residential nitrogen component. If the project is for a commercial use or utilizes a denitrification system, the number of dwellings should not be entered in the Data Entry Field, in which case the total nitrogen from this source will be zero (0).

B. *Pet Waste Nitrogen* - The pet waste nitrogen was determined on a per pet basis; however, the number of pets for a given residential project must be determined. In order to correlate the number of pets to human population, a ratio was determined using information contained in the 208 Study, wherein it was estimated that there is 1 dog per 5 residents in suburban areas and 1 dog per 7 residents in urban areas **(Koppelman, 1978; Animal Waste Report, pp. 6).** This results in an average number of dogs based upon of 17 percent of the human population. Accordingly, this multiplier is used based upon the population of a land use project in order to estimate the nitrogen waste from pets. The pet waste nitrogen is subject to reduction as a function of the leaching rate, leading to the total pet waste nitrogen in pounds.

C. *Sanitary Nitrogen (Commercial/STP)* - SONIR utilizes the Commercial/STP Flow that is converted to liters and multiplied by the nitrogen concentration in waste. This provides a weight of nitrogen in milligrams, which is converted to pounds for the total nitrogen from this component.

D. *Water Supply Nitrogen* - SONIR utilizes the residential wastewater design flow to compute the weight of nitrogen contributed from the water supply. The method of calculation is the same as Sanitary Nitrogen (Commercial/STP). For commercial projects, this value is accounted for in the Commercial/STP Flow.

E. *Fertilizer Nitrogen 1* - This calculation utilizes data entry from the Area of Land Fertilized 1, in the Data Input Field, to determine the weight of fertilizer nitrogen applied to the area. The area is multiplied by the application rate and reduced by the leaching rate documented previously to arrive at total weight.

F. *Fertilizer Nitrogen 2* - If fertilization rates vary, the Area of Land Fertilized 2, is utilized to determine nitrogen from this source.

G. *Precipitation Nitrogen* - Nitrogen in precipitation is considered by determining the liters of Natural Recharge entering the site, multiplied by the concentration of nitrogen in precipitation. SONIR uses the sum of natural recharge components from the Site Recharge Computations to establish the natural recharge. A precipitation nitrogen leaching rate of 15% is utilized as referenced above.

H. *Irrigation Nitrogen* - Although a very small component, the Irrigation Nitrogen is determined using the Irrigation Recharge R(irr) computed in the Site Recharge Computations, over the irrigated area of the site to produce a volume of irrigation recharge. The Irrigation Recharge value is used in order to account for reduction of recharge due to evapotranspiration, since this component is only intended to determine nitrogen leaching into soil as a result of irrigation nitrogen in the water supply. This value is converted to liters and multiplied by the concentration of nitrogen in irrigation water supply. The Irrigation Nitrogen Leaching Rate (expected to the same as for precipitation) is applied to the weight to determine the total nitrogen from this source.

Once the eight (8) series of Site Nitrogen Budget computations are complete, SONIR totals each individual component to determine the Total Site Nitrogen. This value is used in determining the weight per volume ratio of nitrogen in recharge as computed in Sheet 4 of the SONIR model.

FINAL COMPUTATIONS AND SUMMARY

SONIR utilizes data generated in Sheets 2 and 3 of the model to compute a mass/volume ratio for nitrogen in recharge. Nitrogen in recharge is converted from pounds to milligrams in order to provide units compatible for mass/volume concentration. Likewise, the quantity of site recharge is applied over the site in order to determine an overall volume number for site recharge. This is then converted to liters. The final computation divides the total weight of nitrogen in milligrams, by the total volume of recharge in liters, to arrive at the Nitrogen in Recharge ratio in milligrams per liter (mg/l). This concentration represents the Final Concentration of Nitrogen in Recharge, which is highlighted on Sheet 4.

Sheet 4 also provides a site recharge summary in order to compare recharge between natural conditions, a proposed project and/or alternatives. Total Site Recharge is presented in both inches, and as a volume in cubic feet/year, gallons/year and million gallons/year (MGY).

The final field summarizes the Conversions Used in SONIR. Conversions are standard conversion multipliers as found in standard engineering references.

SONIR is a valuable tool allowing for versatile determination of site recharge as determined from many components of site recharge. SONIR determines the weight of nitrogen applied to a site from a variety of sources as well. SONIR is a fully referenced model utilizing basic hydrologic and engineering principals, in a simulation of nitrogen in recharge. Input data should be carefully justified in order to achieve best results. SONIR can be used effectively in comparing land use alternatives and relative impact upon groundwater due to nitrogen. By running the model for Existing Conditions, Proposed Project conditions and/or alternative land uses comparison of impacts can be made for consideration in land use decision-making. Questions, comments or suggestions concerning this model should be addressed to Nelson, Pope & Voorhis, LLC, 572 Walt Whitman Road, Melville, New York 11747.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

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Appendix C-2

SONIR Model Results
Existing Conditions and Proposed Project

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Existing Conditions SHEET 1

A	Site Recharge Parameters	Value	Units
1	Area of Site	18.65	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	0.00	acres
4	Fraction of Land in Lawn	0.000	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.90	inches
7	Acreage of Impervious	0.52	acres
8	Fraction of Land Impervious	0.028	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	7.97	acres
12	Fraction of Land Unvegetated	0.427	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	2.1	inches
15	Acreage of Water	0.00	acres
16	Fraction of Site in Water	0.000	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	10.16	acres
20	Fraction of Land Natural	0.545	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	0.00	acres
28	Fraction of Land Irrigated	0.000	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	0	units
31	Water Use per Dwelling	0	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial /STP Design Flow	175	gal/day

B	Nitrogen Budget Parameters	Value	Units
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	0.00	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	156.95	lbs/horse
11	Pet Waste Nitrogen Leaching Rate	2%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	1.20	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	Comments
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS | Existing Conditions | **SHEET 2**

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	0.00	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.028	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	6.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	36.54	inches
6	R(I) = R(i) x A	1.02	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.427	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.00	inches
5	R(u) = P - (E + Q)	20.42	inches
6	R(U) = R(u) x A	8.73	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	12.82	inches
7	R(W) = R(w) x A	0.00	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.545	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.32	inches
6	R(N) = R(n) x A	9.98	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.000	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evaptranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.00	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	175	gal/day
2	WDF = Wastewater Design Flow	8,540	cu ft/yr
3	A = Area of Site	812,394	sq ft
4	R(ww) = WDF/A	0.01	feet
5	R(WW) = Wastewater Recharge	0.13	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	19.91	inches

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET — Existing Conditions — SHEET 3

A	Sanitary Nitrogen-Residential	Value	Units
1	Number of Dwellings	0	units
2	Persons per Dwelling	0.00	capita
3	P = Population	0.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs

B	Pet Waste Nitrogen	Value	Units
1	AR = Application Rate	156.95	lbs/pet
2	Human Population	0	capita
3	# of Horses	70	pets
4	N(p) = AR x pets	10986.50	lbs
5	LR = Leaching Rate	2%	percent
6	N(P) = N(p) x LR	219.73	lbs
7	N(P) = Pet Waste Nitrogen	219.73	lbs

C	Sanitary Nitrogen (Commercial/STP)		
1	CF = Commercial/STP Flow	175	gal/day
2	CF = Commercial/STP Flow	241,767	liters/yr
3	N = Nitrogen in Commercial	40.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	4,835,338	milligrams
6	N(S) = Sanitary Nitrogen	10.66	lbs

D	Water Supply Nitrogen (other than wastewater, if applicable)		
1	WDF = Wastewater Design Flow	175	gal/day
2	WDF = Wastewater Design Flow	241,767	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	241,767	milligrams
5	N(WW) = Wastewater Nitrogen	0.53	lbs

E	Fertilizer Nitrogen 1		
1	A = Area of Land Fertilized 1	0	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	0.00	lbs
5	N(F1) = Fertilizer Nitrogen	0.00	lbs

F	Fertilizer Nitrogen 2		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	Precipitation Nitrogen		
1	R(n) = Natural Recharge (feet)	1.65	feet
2	A = Area of Site (sq ft)	812,394	sq ft
3	R(N) = R(n) x A	1,339,177	cu ft
4	R(N) = Natural Recharge (liters)	37,923,505	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	5,688,826	milligrams
8	N(ppt) = Precipitation Nitrogen	12.54	lbs

H	Irrigation Nitrogen		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(irr) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.02	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	243.49	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Kensington Estates
Existing Conditions

FINAL COMPUTATIONS

SHEET 4

A	Nitrogen in Recharge	Value	Units
1	N = Total Nitrogen (lbs)	243.49	lbs
2	N = Total Nitrogen (milligrams)	110,545,231	milligrams
3	R(T) = Total Recharge (inches)	19.91	inches
4	R(T) = Total Recharge (feet)	1.66	feet
5	A = Area of Site	812,304	sq ft
6	R = R(T) x A	1,347,718	cu ft
7	R = Site Recharge Volume	38,167,360	liters
9	NR = N/R	2.90	mg/l

FINAL CONCENTRATION OF
NITROGEN IN RECHARGE

2.90

B	Site Recharge Summary	Value	Units
1	R(T) = Total Site Recharge	19.91	inches/yr
2	R = Site Recharge Volume	1,347,718	cu feet
3	R = Site Recharge Volume	10,081,628	gallon
4	R = Site Recharge Volume	10.08	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Proposed Conditions SHEET 1

A	Site Recharge Parameters	Value	Units
1	Area of Site	18.63	acres
2	Precipitation Rate	43.83	inches
3	Acreage of Lawn	7.16	acres
4	Fraction of Land in Lawn	0.384	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.99	inches
7	Acreage of Impervious	6.25	acres
8	Fraction of Land Impervious	0.335	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	[illegible]	inches
15	Acreage of Water	1.90	acres
16	Fraction of Site in Water	0.102	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	3.34	acres
20	Fraction of Land Natural	0.179	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	7.16	acres
28	Fraction of Land Irrigated	0.384	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	0	units
31	Water Use per Dwelling	0	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	Nitrogen Budget Parameters	Value	Units
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	7.16	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	3.00	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	Comments
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3 a.) is for residential wastewater and 3 b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Proposed Conditions **SHEET 2**

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.384	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	6.80	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.335	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	38.54	inches
6	R(I) = R(i) x A	12.92	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	1.90	inches
5	R(u) = P - (E + Q)	18.52	inches
6	R(U) = R(u) x A	0.00	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.102	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = (P - (E+Q)) - M	12.82	inches
7	R(W) = R(w) x A	1.31	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.179	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.00	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.52	inches
6	R(N) = R(n) x A	3.28	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.384	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.57	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	cu ft/yr
3	A = Area of Site	812,394	sq ft
4	R(ww) = WDF/A	0.00	feet
5	R(WW) = Wastewater Recharge	0.00	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**24.88**	inches

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

Proposed Conditions SHEET 3

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	0	units
2	Persons per Dwelling	0.00	capita
3	P = Population	0.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	3.19	lbs/pet
2	Human Population	0	capita
3	Pets = 17 percent of capita	0	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50%	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	40.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	0	milligrams
6	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen (other than wastewater, if applicable)*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	0	milligrams
5	N(WW) = Wastewater Nitrogen	0.00	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	311,890	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	100.43	lbs
5	N(F1) = Fertilizer Nitrogen	100.43	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	2.03	feet
2	A = Area of Site (sq ft)	812,396	sq ft
3	R(N) = R(n) x A	1,645,468	cu ft
4	R(N) = Natural Recharge (liters)	46,599,657	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	6,989,949	milligrams
8	N(ppt) = Precipitation Nitrogen	15.41	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(in) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.02	lbs

Total Site Nitrogen		
N =	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**115.66**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Kensington Estates
Proposed Conditions

FINAL COMPUTATIONS

SHEET 4

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	115.86	lbs
2	N = Total Nitrogen (milligrams)	52,602,306	milligrams
3	R(T) = Total Recharge (inches)	24.88	inches
4	R(T) = Total Recharge (feet)	2.07	feet
5	A = Area of Site	812,394	sq ft
6	R = R(T) x A	1,684,237	cu ft
7	S = Site Recharge Volume	47,697,592	liters
9	NR = N/R	1.10	mg/l

FINAL CONCENTRATION OF
NITROGEN IN RECHARGE

1.10

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	24.88	inches/yr
2	R = Site Recharge Volume	1,684,237	cu ft/yr
3	R = Site Recharge Volume	12,598,969	gal/yr
4	R = Site Recharge Volume	12.60	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

Appendix C-3

SONIR Model Results
Alternatives

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Alternative 2- 55 of Right SHEET 1

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	18.65	acres
2	Precipitation Rate	42.62	inches
3	Acreage of Lawn	7.29	acres
4	Fraction of Land in Lawn	0.391	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.00	inches
7	Acreage of Impervious	4.22	acres
8	Fraction of Land Impervious	0.226	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	[illegible]	inches
15	Acreage of Water	1.00	acres
16	Fraction of Site in Water	0.054	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	6.14	acres
20	Fraction of Land Natural	0.329	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	7.29	acres
28	Fraction of Land Irrigated	0.391	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	15	units
31	Water Use per Dwelling	300	gal/day
32	Wastewater Design Flow	4,500	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	3.07	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	7.29	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	34%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	0.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	35%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	35%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3 a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS — Alternative 2- As Of Right — SHEET 2

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.391	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	6.93	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.226	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	1.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	38.54	inches
6	R(I) = R(i) x A	8.72	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	1.00	inches
5	R(u) = P - (E + Q)	19.42	inches
6	R(U) = R(u) x A	0.00	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.054	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = (P - (E+Q)) - M	12.82	inches
7	R(W) = R(w) x A	0.69	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.329	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.32	inches
6	R(N) = R(n) x A	6.03	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.391	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.58	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	4,500	gal/day
2	WDF = Wastewater Design Flow	219,602	cu ft/yr
3	A = Area of Site	812,394	sq ft
4	R(ww) = WDF/A	0.27	feet
5	R(WW) = Wastewater Recharge	3.24	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) - R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**26.19**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET Alternative 2-As of Right **SHEET 3**

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	15	units
2	Persons per Dwelling	3.67	capita
3	P = Population	55.05	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	275.25	lbs
7	N(S) = Sanitary Nitrogen	275.25	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	3.19	lbs/pet
2	Human Population	55	capita
3	Pets = 17 percent of capita	9	pets
4	N(p) = AR x pets	29.85	lbs
5	LR = Leaching Rate	50%	percent
6	N(P) = N(p) x LR	14.93	lbs
7	N(P) = Pet Waste Nitrogen	14.93	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	40.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	0	milligrams
6	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen (other than wastewater, if applicable)*		
1	WDF = Wastewater Design Flow	4,500	gal/day
2	WDF = Wastewater Design Flow	6,216,863	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	6,216,863	milligrams
5	N(WW) = Wastewater Nitrogen	13.71	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	317,592	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	102.25	lbs
5	N(F1) = Fertilizer Nitrogen	102.25	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.86	feet
2	A = Area of Site (sq ft)	813,394	sq ft
3	R(N) = R(n) x A	1,514,154	cu ft
4	R(N) = Natural Recharge (liters)	42,880,850	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	6,432,128	milligrams
8	N(ppt) = Precipitation Nitrogen	14.18	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(irr) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.02	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	420.34	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Kensington Estates
Alternative 2- As of Right

FINAL COMPUTATIONS SHEET 4

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	420.79	lbs
2	N = Total Nitrogen (milligrams)	190,835,507	milligrams
3	R(T) = Total Recharge (inches)	26.19	inches
4	R(T) = Total Recharge (feet)	2.18	feet
5	A = Area of Site	812,394	sq ft
6	R = R(T) x A	1,773,229	cu ft
7	R = Site Recharge Volume	50,217,856	liters
9	NR = N/R	3.80	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

3.80

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	26.19	inches/yr
2	R = Site Recharge Volume	1,773,229	cu ft/yr
3	R = Site Recharge Volume	13,264,678	gal/yr
4	R = Site Recharge Volume	13.26	MG/yr

Conversions used in SONIR

Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Alternative 4- Alternate Access SHEET 1

A	*Site Recharge Parameters*	*Value*	*Units*
1	Area of Site	18.65	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	7.16	acres
4	Fraction of Land in Lawn	0.384	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.90	inches
7	Acreage of Impervious	6.27	acres
8	Fraction of Land Impervious	0.336	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.30	inches
14	Runoff from Unvegetated	2.1	inches
15	Acreage of Water	1.90	acres
16	Fraction of Site in Water	0.102	fraction
17	Evaporation from Water	10.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	3.32	acres
20	Fraction of Land Natural	0.178	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.50	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	7.16	acres
28	Fraction of Land Irrigated	0.384	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	0	units
31	Water Use per Dwelling	0	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial/STP Design Flow	0	gal/day

B	*Nitrogen Budget Parameters*	*Value*	*Units*
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	7.16	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.50	mg/l
16	Precipitation Nitrogen Leaching Rate	13%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	*Comments*
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS

Alternative 4 - Alternate Access SHEET 2

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.384	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	6.80	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.336	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	38.54	inches
6	R(I) = R(i) x A	12.95	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotransperation Rate	22.40	inches
4	Q = Runoff Rate	1.90	inches
5	R(u) = P - (E + Q)	18.52	inches
6	R(U) = R(u) x A	0.00	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.102	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = (P - (E+Q)) - M	12.82	inches
7	R(W) = R(w) x A	1.31	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.178	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.32	inches
6	R(N) = R(n) x A	3.26	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.384	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.57	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	cu ft/yr
3	A = Area of Site	812,394	sq ft
4	R(ww) = WDF/A	0.00	feet
5	R(WW) = Wastewater Recharge	0.00	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**24.90**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET — Alternative 4 - Alternate Access — **SHEET 3**

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	0	units
2	Persons per Dwelling	0.00	capita
3	P = Population	0.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	3.19	lbs/pet
2	Human Population	0	capita
3	Pets = 12 percent of capita	0	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50%	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	40.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	0	milligrams
6	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen (other than wastewater, if applicable)*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	0	milligrams
5	N(WW) = Wastewater Nitrogen	0.00	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	311,890	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	100.43	lbs
5	N(F1) = Fertilizer Nitrogen	100.43	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	2.03	feet
2	A = Area of Site (sq ft)	812,394	sq ft
3	R(N) = R(n) x A	1,646,936	cu ft
4	R(N) = Natural Recharge (liters)	46,641,230	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	6,996,184	milligrams
8	N(ppt) = Precipitation Nitrogen	15.43	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(irr) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.02	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**115.88**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Kensington Estates
Alternative 4: Alternate Access

FINAL COMPUTATIONS

SHEET 4

A	*Nitrogen In Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	115.98	lbs
2	N = Total Nitrogen (milligrams)	52,608,549	milligrams
3	R(T) = Total Recharge (inches)	24.90	inches
4	R(T) = Total Recharge (feet)	2.07	feet
5	A = Area of Site	812,394	sq ft
6	R = R(T) x A	1,685,705	cu ft
7	R = Site Recharge Volume	47,739,165	liters
9	NR = N/R	1.10	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

1.10

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	24.90	inches/yr
2	R = Site Recharge Volume	1,685,705	cu ft/yr
3	R = Site Recharge Volume	12,609,950	gal/yr
4	R = Site Recharge Volume	12.61	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Alternative 5- Cluster A SHEET 1

A	Site Recharge Parameters	Value	Units
1	Area of Site	18.65	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	6.59	acres
4	Fraction of Land in Lawn	0.353	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.90	inches
7	Acreage of Impervious	5.49	acres
8	Fraction of Land Impervious	0.294	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	2.1	inches
15	Acreage of Water	0.74	acres
16	Fraction of Site in Water	0.040	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	5.83	acres
20	Fraction of Land Natural	0.313	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	6.59	acres
28	Fraction of Land Irrigated	0.353	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	0	units
31	Water Use per Dwelling	0	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	Nitrogen Budget Parameters	Value	Units
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	6.59	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	10%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.19	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	Comments
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS Alternative 6 – Cluster A **SHEET 2**

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.353	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	6.26	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.294	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	38.54	inches
6	R(I) = R(i) x A	11.33	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.74	inches
5	R(u) = P - (E + Q)	19.68	inches
6	R(U) = R(u) x A	0.00	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.040	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	12.82	inches
7	R(W) = R(w) x A	0.51	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.313	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.32	inches
6	R(N) = R(n) x A	5.73	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.353	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.53	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	cu ft/yr
3	A = Area of Site	812,394	sq ft
4	R(ww) = WDF/A	0.00	feet
5	R(WW) = Wastewater Recharge	0.00	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**24.47**	**inches**

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET Alternative 5 - Option A SHEET 3

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	0	units
2	Persons per Dwelling	0.00	capita
3	P = Population	0.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	3.19	lbs/pet
2	Human Population	0	capita
3	Pets = 17 percent of capita	0	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50%	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	10.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	0	milligrams
6	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen* (other than wastewater, if applicable)		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	0	milligrams
5	N(WW) = Wastewater Nitrogen	0.00	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	287,060	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	92.43	lbs
5	N(F1) = Fertilizer Nitrogen	92.43	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.99	feet
2	A = Area of Site (sq ft)	812,394	sq ft
3	R(N) = R(n) x A	1,614,086	cu ft
4	R(N) = Natural Recharge (liters)	45,710,916	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	6,856,637	milligrams
8	N(ppt) = Precipitation Nitrogen	15.12	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(irr) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.92	lbs

Total Site Nitrogen		
N=	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**107.88**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

[illegible] Estates
Alternative [illegible]

FINAL COMPUTATIONS — SHEET 4

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	107.58	lbs
2	N = Total Nitrogen (milligrams)	48,839,122	milligrams
3	R(T) = Total Recharge (inches)	24.37	inches
4	R(T) = Total Recharge (feet)	2.03	feet
5	A = Area of Site	812,394	sq ft
6	R = R(T) x A	1,649,769	cu ft
7	R = Site Recharge Volume	46,721,446	liters
9	NR = N/R	1.05	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

1.05

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	24.37	inches/yr
2	R = Site Recharge Volume	1,649,769	cu ft/yr
3	R = Site Recharge Volume	12,341,127	gal/yr
4	R = Site Recharge Volume	12.34	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT Kensington Estates

DATA INPUT FIELD Alternate 6 - Cluster B SHEET 3

A	Site Recharge Parameters	Value	Units
1	Area of Site	18.65	acres
2	Precipitation Rate	42.82	inches
3	Acreage of Lawn	6.87	acres
4	Fraction of Land in Lawn	0.368	fraction
5	Evapotranspiration from Lawn	24.20	inches
6	Runoff from Lawn	0.90	inches
7	Acreage of Impervious	3.89	acres
8	Fraction of Land Impervious	0.209	fraction
9	Evaporation from Impervious	4.28	inches
10	Runoff from Impervious	0.00	inches
11	Acreage of Unvegetated	0.00	acres
12	Fraction of Land Unvegetated	0.000	fraction
13	Evapotrans. from Unvegetated	24.20	inches
14	Runoff from Unvegetated	2.1	inches
15	Acreage of Water	0.68	acres
16	Fraction of Site in Water	0.036	fraction
17	Evaporation from Water	30.00	inches
18	Makeup Water (if applicable)	0.00	inches
19	Acreage of Natural Area	7.21	acres
20	Fraction of Land Natural	0.387	fraction
21	Evapotrans. from Natural Area	24.20	inches
22	Runoff from Natural Area	0.30	inches
23	Acreage of Other Area	0.00	acres
24	Fraction of Land Other Area	0.000	fraction
25	Evapotrans. from Other Area	0.00	inches
26	Runoff from Other Area	0.00	inches
27	Acreage of Land Irrigated	6.87	acres
28	Fraction of Land Irrigated	0.368	fraction
29	Irrigation Rate	5.50	inches
30	Number of Dwellings	0	units
31	Water Use per Dwelling	0	gal/day
32	Wastewater Design Flow	0	gal/day
33	Commercial /STP Design Flow	0	gal/day

B	Nitrogen Budget Parameters	Value	Units
1	Persons per Dwelling	0.00	persons
2	Nitrogen per Person per Year	10.0	lbs
3	a. Sanitary Nitrogen Leaching Rate	50%	percent
3	b. Sanitary Nitrogen Leaching Rate	0%	percent
4	Area of Land Fertilized 1	6.87	acres
5	Fertilizer Application Rate 1	2.30	lbs/1000 sq ft
6	Fertilizer Nitrogen Leaching Rate 1	14%	percent
7	Area of Land Fertilized 2	0.00	acres
8	Fertilizer Application Rate 2	0.00	lbs/1000 sq ft
9	Fertilizer Nitrogen Leaching Rate 2	0%	percent
10	Pet Waste Application Rate	3.39	lbs/pet
11	Pet Waste Nitrogen Leaching Rate	50%	percent
12	Area of Land Irrigated	0.45	acres
13	Irrigation Rate	5.50	inches
14	Irrigation Nitrogen Leaching Rate	15%	percent
15	Nitrogen in Precipitation	1.00	mg/l
16	Precipitation Nitrogen Leaching Rate	15%	percent
17	Nitrogen in Water Supply	1.00	mg/l
18	Nitrogen in Commercial/STP Flow	40.00	mg/l

C	Comments
1)	Please refer to user manual for data input instructions.
2)	Sanitary Nitrogen Leaching Rate 3.a.) is for residential wastewater and 3.b.) is for commercial or STP which varies from 50 percent for conventional systems to 10 percent for STP effluent discharge.

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE RECHARGE COMPUTATIONS Alternative Cluster B **SHEET 2**

A	*Lawn Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Lawn	0.368	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.90	inches
5	R(l) = P - (E + Q)	17.72	inches
6	R(L) = R(l) x A	6.53	inches

B	*Impervious Area Recharge*	*Value*	*Units*
1	A = Fraction of Land in Impervious	0.209	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	4.28	inches
4	Q = Runoff Rate	0.00	inches
5	R(i) = P - (E + Q)	38.54	inches
6	R(I) = R(i) x A	8.04	inches

C	*Unvegetated Area Recharge*		
1	A = Fraction of Land Unveg.	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	22.40	inches
4	Q = Runoff Rate	0.68	inches
5	R(u) = P - (E + Q)	19.74	inches
6	R(U) = R(u) x A	0.00	inches

D	*Water Area Loss*		
1	A = Fraction of Site in Water	0.036	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evaporation Rate	30.00	inches
4	Q = Runoff Rate	0.00	inches
5	M = Makeup Water	0.00	inches
6	R(w) = {P - (E+Q)} - M	12.82	inches
7	R(W) = R(w) x A	0.47	inches

E	*Natural Area Recharge*		
1	A = Fraction of Land in Natural	0.387	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	24.20	inches
4	Q = Runoff Rate	0.30	inches
5	R(n) = P - (E + Q)	18.32	inches
6	R(N) = R(n) x A	7.08	inches

F	*Other Area Recharge*		
1	A = Fraction of Land in Other	0.000	fraction
2	P = Precipitation Rate	42.82	inches
3	E = Evapotranspiration Rate	0.00	inches
4	Q = Runoff Rate	0.00	inches
5	R(o) = P - (E + Q)	42.82	inches
6	R(O) = R(o) x A	0.00	inches

G	*Irrigation Recharge*		
1	A = Fraction of Land Irrigated	0.368	fraction
2	I = Irrigation Rate	5.50	inches
3	E = Evapotranspiration Rate	3.11	inches
4	Q = Runoff Rate	0.90	inches
5	R(irr) = I - (E + Q)	1.49	inches
6	R(IRR) = R(irr) x A	0.55	inches

H	*Wastewater Recharge*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	cu ft/yr
3	A = Area of Site	832,394	sq ft
4	R(ww) = WDF/A	0.00	feet
5	R(WW) = Wastewater Recharge	0.00	inches

Total Site Recharge		
R(T) =	R(L) + R(I) + R(U) + R(W) + R(N) + R(O) + R(IRR) + R(WW)	
R(T) =	**22.67**	inches

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

SITE NITROGEN BUDGET

[illegible] SHEET 3

A	*Sanitary Nitrogen-Residential*	*Value*	*Units*
1	Number of Dwellings	0	units
2	Persons per Dwelling	0.00	capita
3	P = Population	0.00	capita
4	N = Nitrogen per person	10	lbs
5	LR = Leaching Rate	50%	percent
6	N(S) = P x N x LR	0.00	lbs
7	N(S) = Sanitary Nitrogen	0.00	lbs

B	*Pet Waste Nitrogen*	*Value*	*Units*
1	AR = Application Rate	3.19	lbs/pet
2	Human Population	0	capita
3	Pets = 17 percent of capita	0	pets
4	N(p) = AR x pets	0.00	lbs
5	LR = Leaching Rate	50%	percent
6	N(P) = N(p) x LR	0.00	lbs
7	N(P) = Pet Waste Nitrogen	0.00	lbs

C	*Sanitary Nitrogen (Commercial/STP)*		
1	CF = Commercial/STP Flow	0	gal/day
2	CF = Commercial/STP Flow	0	liters/yr
3	N = Nitrogen in Commercial	40.00	mg/l
4	LR = Leaching Rate	50%	percent
5	N(S) = CF x N x LR	0	milligrams
6	N(S) = Sanitary Nitrogen	0.00	lbs

D	*Water Supply Nitrogen (other than wastewater, if applicable)*		
1	WDF = Wastewater Design Flow	0	gal/day
2	WDF = Wastewater Design Flow	0	liters/yr
3	N = Nitrogen in Water Supply	1.00	mg/l
4	N(WW) = WDF x N	0	milligrams
5	N(WW) = Wastewater Nitrogen	0.00	lbs

E	*Fertilizer Nitrogen 1*		
1	A = Area of Land Fertilized 1	299,257	sq ft
2	AR = Application Rate	2.30	lbs/1000 sf
3	LR = Leaching Rate	14%	percent
4	N(F1) = A x AR x LR	96.36	lbs
5	N(F1) = Fertilizer Nitrogen	96.36	lbs

F	*Fertilizer Nitrogen 2*		
1	A = Area of Land Fertilized 2	0	sq ft
2	AR = Application Rate	0.00	lbs/1000 sf
3	LR = Leaching Rate	0%	percent
4	N(F2) = A x AR x LR	0.00	lbs
5	N(F2) = Fertilizer Nitrogen	0.00	lbs

G	*Precipitation Nitrogen*		
1	R(n) = Natural Recharge (feet)	1.84	feet
2	A = Area of Site (sq ft)	812,394	sq ft
3	R(N) = R(n) x A	1,497,236	cu ft
4	R(N) = Natural Recharge (liters)	42,401,733	liters
5	N = Nitrogen in Precipitation	1.00	mg/l
6	LR = Leaching Rate	15%	percent
7	N(ppt) = R(N) x N x LR	6,360,260	milligrams
8	N(ppt) = Precipitation Nitrogen	14.02	lbs

H	*Irrigation Nitrogen*		
1	R = Irrigation Recharge (inches)	1.49	inches
2	R = Irrigation Rate (feet)	0.12	feet
3	A = Area of Land Irrigated	19,602	sq ft
4	R(I) = R(irr) x A	2,437	cu ft
5	R(I) = Site Precipitation (liters)	69,004	liters
6	N = Nitrogen in Water Supply	1.00	mg/l
7	LR = Leaching Rate	15%	percent
8	N(irr) = R(I) x N x LR	10,351	milligrams
9	N(irr) = Irrigation Nitrogen	0.02	lbs

Total Site Nitrogen		
N =	N(S) + N(P) + N(WW) + N(F1) + N(F2) + N(ppt) + N(irr)	
N=	**110.41**	lbs

SIMULATION OF NITROGEN IN RECHARGE (SONIR)

NELSON, POPE & VOORHIS, LLC MICROCOMPUTER MODEL

NAME OF PROJECT

Kensington Estates
Alternate 6 – Cluster B

FINAL COMPUTATIONS

SHEET 4

A	*Nitrogen in Recharge*	*Value*	*Units*
1	N = Total Nitrogen (lbs)	110.51	lbs
2	N = Total Nitrogen (milligrams)	50,125,239	milligrams
3	R(T) = Total Recharge (inches)	22.67	inches
4	R(T) = Total Recharge (feet)	1.89	feet
5	A = Area of Site	812,394	sq ft
6	R = R(T) x A	1,534,435	cu ft
7	R = Site Recharge Volume	43,455,199	liters
9	NR = N/R	1.15	mg/l

FINAL CONCENTRATION OF NITROGEN IN RECHARGE

1.15

B	*Site Recharge Summary*	*Value*	*Units*
1	R(T) = Total Site Recharge	22.67	inches/yr
2	R = Site Recharge Volume	1,534,435	cu ft/yr
3	R = Site Recharge Volume	11,478,372	gal/yr
4	R = Site Recharge Volume	11.48	MG/yr

Conversions used in SONIR
Acres x 43,560 = Square Feet
Cubic Feet x 7.48052 = Gallons
Cubic Feet x 28.32 = Liters
Days x 365 = Years
Feet x 12 = Inches
Gallons x 0.1337 = Cubic Feet
Gallons x 3.785 = Liters
Grams / 1,000 = Milligrams
Grams x 0.002205 = Pounds
Milligrams / 1,000 = Grams

Appendix C-4

Off-site Wetland Watershed Analysis

OFF-SITE WETLAND WATERSHED ANALYSIS

Watershed Contributing Area Coverages

Area Captured On Proposed Site (not contributing to Wetlands/ Recharge Basin)	Existing Conditions	Proposed Conditions
1/2 Ac. Res.	14.64	12.79
1 Ac. Res.	2	1
Forest	20.32	1.45
Impervious	3.86	3.34
Bare Soil	6.38	0
Area Captured On Proposed Site (not contributing to wetland/ recharge basin)	0	28.62
Total Contributing Area to Onsite Wetland/ Recharge Basin	47.2	18.58

Stormwater Runoff Calculations

	Existing				Proposed		
P (Rainfall), in				P (Rainfall), in			
1-year	2.5			1-year	2.5		
2-year	3.5			2-year	3.5		
10-year	5			10-year	5		
100-year	7.5			100-year	7.5		
Weighted CN	67			CN =	74		
	Coverage	CN	Product of CN x Area		Coverage	CN	Product of CN x Area
1/2 Ac. Res.	14.64	70	1024.80	1/2 Ac. Res.	12.79	70	895.30
1 Ac. Res.	2.00	68	136.00	1 Ac. Res.	1.00	68	68.00
Forest	20.32	55	1117.60	Forest	1.45	55	79.75
Impervious	3.86	100	386.00	Impervious	3.34	100	334.00
Bare Soil	6.380	82	523.16	Bare Soil	0.00	82	0.00
Area Captured on Proposed Site	0.000	0	0.00	Area Captured on Proposed Site	28.62	0	0.00
S =	4.93			S =	6.95		
Runoff, Ac-Ft				Runoff, Ac-Ft			
1-year	1.4			1-year	0.24		
2-year	3.34			2-year	0.76		
10-year	7.09			10-year	1.91		
100-year	14.59			100-year	4.43		

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APPENDIX D

WETLAND DELINEATION FIELD SHEETS

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): S. da Silva Date: 5/1/08
Project/Site: Kensington Estates State: NY County: Suffolk
Applicant/Owner: Triangle Equities Plant Community #/Name: 1W (Wetland)
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
Yes ____ No ✓ (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed?
Yes ✓ No ____ (If yes, explain on back) Recharge basin

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1. Swamp Loosestrife	OBL	H	11.		
2. Silver Maple	FACW	T	12.		
3.			13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FACW, and/or FAC 100%
Is the hydrophytic vegetation criterion met? Yes ✓ No ____
Rationale: Hydrophytes in standing water + mucky soils.

SOILS

Series/phase: Montauk Silt Loam Subgroup:[2]
Is the soil on the hydric soils list? Yes ____ No ✓ Undetermined ____
Is the soil a Histosol? Yes ✓ No ____ Histic epipedon present? Yes ____ No ____
Is the soil: Mottled? Yes ____ No ✓ Gleyed? Yes ____ No ✓
Matrix Color: 7.5YR 2.5/1 (0-18+") Mottle Colors: —
Other hydric soil indicators: Inundated, saturated soil
Is the hydric soil criterion met? Yes ✓ No ____
Rationale: saturated soil

HYDROLOGY

Is the ground surface inundated? Yes ✓ No ____ Surface water depth: 2"
Is the soil saturated? Yes ✓ No ____
Depth to free-standing water in pit/soil probe hole: 0"
List other field evidence of surface inundation or soil saturation. surface water

Is the wetland hydrology criterion met? Yes ✓ No ____
Rationale: hydrology present

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ✓ No ____
Rationale for jurisdictional decision: all 3 parameters met

[1] This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2] Classification according to "Soil Taxonomy."

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): S. da Silva Date: 5/1/08
Project/Site: Kensington Estates State: ____ County: Suffolk
Applicant/Owner: Triangle Equities Plant Community #/Name: 2 W (wetland)
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
Yes ____ No ✓ (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed?
Yes ✓ No ____ (If yes, explain on back) Recharge basin

VEGETATION

	Dominant Plant Species	Indicator Status	Stratum		Dominant Plant Species	Indicator Status	Stratum
1.	Jewelweed	FACW	H	11.			
2.	Silver Maple	FACW	T	12.			
3.	Pennsylvania Smartweed	FACW	H	13.			
4.	Sedges (Carex)	FACW	H	14.			
5.	Bitter Dock	FACU-	H	15.			
6.				16.			
7.				17.			
8.				18.			
9.				19.			
10.				20.			

Percent of dominant species that are OBL, FACW, and/or FAC 80%
Is the hydrophytic vegetation criterion met? Yes ✓ No ____
Rationale: ≥ 50% dominance FACW vegetation

SOILS

Series/phase: Montauk Silt Loam Subgroup:[2] ____
Is the soil on the hydric soils list? Yes ____ No ✓ Undetermined ____
Is the soil a Histosol? Yes ____ No ✓ Histic epipedon present? Yes ____ No ✓
Is the soil: Mottled? Yes ____ No ✓ Gleyed? Yes ____ No ✓
Matrix Color: 7.5YR 2.5/1 Mottle Colors: –
Other hydric soil indicators: ____
Is the hydric soil criterion met? Yes ✓ No ____
Rationale: matrix color

HYDROLOGY

Is the ground surface inundated? Yes ____ No ✓ Surface water depth: –
Is the soil saturated? Yes ____ No ✓
Depth to free-standing water in pit/soil probe hole: 23"
List other field evidence of surface inundation or soil saturation.
Water stained leaves
Is the wetland hydrology criterion met? Yes ✓ No ____
Rationale: Appears to frequently flood from overland flow into depression

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ✓ No ____
Rationale for jurisdictional decision: All 3 parameters met

[1] This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2] Classification according to "Soil Taxonomy."

DATA FORM
ROUTINE ONSITE DETERMINATION METHOD[1]

Field Investigator(s): S. da Silva Date: 5/11/08
Project/Site: Kensington Estates State: NY County: Suffolk
Applicant/Owner: Triangle Equities Plant Community #/Name: 1 U (upland)
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.

Do normal environmental conditions exist at the plant community?
Yes ____ No ✓ (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed?
Yes ✓ No ____ (If yes, explain on back) Recharge basin

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1. Norway Maple	UPL	T	11.		
2. Garlic Mustard	FACU-	H	12.		
3. Mugwort	UPL	H	13.		
4. Grape	FACU	H	14.		
5. Poison Ivy	FAC	H	15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FACW, and/or FAC 20%
Is the hydrophytic vegetation criterion met? Yes ____ No ✓
Rationale: < 50% FAC

SOILS

Series/phase: Montauk Silt Loam Subgroup:[2]
Is the soil on the hydric soils list? Yes ____ No ✓ Undetermined ____
Is the soil a Histosol? Yes ____ No ✓ Histic epipedon present? Yes ____ No ✓
Is the soil: Mottled? Yes ____ No ✓ Gleyed? Yes ____ No ✓
Matrix Color: 7.5 YR 2.5/2 Mottle Colors: --
Other hydric soil indicators:
Is the hydric soil criterion met? Yes ____ No ✓
Rationale: matrix color

HYDROLOGY

Is the ground surface inundated? Yes ____ No ✓ Surface water depth:
Is the soil saturated? Yes ____ No ✓
Depth to free-standing water in pit/soil probe hole: --
List other field evidence of surface inundation or soil saturation.
N/A
Is the wetland hydrology criterion met? Yes ____ No ✓
Rationale: no indicator

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ____ No ✓
Rationale for jurisdictional decision: No parameters met

[1] This data form can be used for the Hydric Soil Assessment Procedure and the Plant Community Assessment Procedure.
[2] Classification according to "Soil Taxonomy."

APPENDIX E

ECOLOGY-RELATED DOCUMENTS

Appendix E-1

NYSDEC Breeding Bird Survey

NYSDEC Breeding Bird Atlas
Atlas Block 6251B
2000-2005

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
American Crow	*Corvus brachyrhynchos*	FY	5/29/2000	Game Species
Canada Goose	*Branta canadensis*	NE	4/25/2001	Game Species
Mallard	*Anas platyrhynchos*	FL	6/26/2001	Game Species
Northern Bobwhite	*Colinus virginianus*	T2	6/26/2001	Game Species
American Goldfinch	*Carduelis tristis*	S2	6/30/2000	Protected
American Redstart	*Setophaga ruticilla*	T2	6/7/2001	Protected
American Robin	*Turdus migratorius*	FY	5/29/2000	Protected
Baltimore Oriole	*Icterus galbula*	FY	6/30/2000	Protected
Barn Swallow	*Hirundo rustica*	ON	6/4/2000	Protected
Black-and-white Warbler	*Mniotilta varia*	T2	6/7/2001	Protected
Black-capped Chickadee	*Poecile atricapillus*	FL	6/4/2000	Protected
Blue Jay	*Cyanocitta cristata*	FL	6/16/2000	Protected
Blue-gray Gnatcatcher	*Polioptila caerulea*	FL	6/4/2000	Protected
Blue-winged Warbler	*Vermivora pinus*	FY	6/7/2001	Protected
Brown Thrasher	*Toxostoma rufum*	FY	6/4/2000	Protected
Brown-headed Cowbird	*Molothrus ater*	FL	6/26/2001	Protected
Carolina Wren	*Thryothorus ludovicianus*	S2	6/30/2000	Protected
Cedar Waxwing	*Bombycilla cedrorum*	P2	6/15/2003	Protected
Chestnut-sided Warbler	*Dendroica pensylvanica*	T2	6/7/2001	Protected
Chipping Sparrow	*Spizella passerina*	NY	6/4/2000	Protected
Common Grackle	*Quiscalus quiscula*	FY	6/26/2000	Protected
Common Yellowthroat	*Geothlypis trichas*	FY	6/7/2001	Protected
Downy Woodpecker	*Picoides pubescens*	FL	6/26/2001	Protected
Eastern Kingbird	*Tyrannus tyrannus*	D2	6/16/2000	Protected
Eastern Screech-Owl	*Megascops asio*	X1	1/2/2003	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	FY	6/16/2000	Protected
Eastern Wood-Pewee	*Contopus virens*	X1	6/26/2000	Protected
Field Sparrow	*Spizella pusilla*	X1	6/9/2002	Protected
Gray Catbird	*Dumetella carolinensis*	FY	6/4/2000	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	P2	6/26/2000	Protected
Great Horned Owl	*Bubo virginianus*	T2	1/12/2002	Protected
Hairy Woodpecker	*Picoides villosus*	P2	6/4/2000	Protected
House Finch	*Carpodacus mexicanus*	P2	6/7/2001	Protected
House Wren	*Troglodytes aedon*	ON	6/4/2000	Protected
Killdeer	*Charadrius vociferus*	DD	6/26/2001	Protected
Mourning Dove	*Zenaida macroura*	FL	6/26/2001	Protected
Northern Cardinal	*Cardinalis cardinalis*	FY	6/26/2000	Protected
Northern Flicker	*Colaptes auratus*	FY	6/26/2001	Protected
Northern Mockingbird	*Mimus polyglottos*	NE	6/26/2001	Protected
Orchard Oriole	*Icterus spurius*	T2	6/7/2001	Protected
Ovenbird	*Seiurus aurocapilla*	FL	6/26/2001	Protected
Pine Warbler	*Dendroica pinus*	T2	5/16/2001	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	FY	6/4/2000	Protected
Red-eyed Vireo	*Vireo olivaceus*	FY	6/7/2001	Protected
Red-tailed Hawk	*Buteo jamaicensis*	P2	6/16/2000	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FY	6/26/2001	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S2	6/30/2000	Protected
Savannah Sparrow	*Passerculus sandwichensis*	FY	6/24/2001	Protected
Scarlet Tanager	*Piranga olivacea*	S2	6/26/2000	Protected

Song Sparrow	*Melospiza melodia*	S2	6/16/2000	Protected
Tufted Titmouse	*Baeolophus bicolor*	FL	6/30/2000	Protected
Veery	*Catharus fuscescens*	X1	6/26/2000	Protected
Warbling Vireo	*Vireo gilvus*	T2	6/15/2001	Protected
White-breasted Nuthatch	*Sitta carolinensis*	S2	6/26/2000	Protected
White-eyed Vireo	*Vireo griseus*	T2	6/26/2001	Protected
Willow Flycatcher	*Empidonax traillii*	T2	6/26/2001	Protected
Wood Thrush	*Hylocichla mustelina*	S2	6/26/2000	Protected
Yellow Warbler	*Dendroica petechia*	FY	6/7/2001	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	T2	6/6/2001	Protected
European Starling	*Sturnus vulgaris*	FY	5/25/2000	Unprotected
House Sparrow	*Passer domesticus*	ON	6/4/2000	Unprotected
Rock Pigeon	*Columba livia*	P2	6/26/2001	Unprotected

Current Date: 9/21/07

Source: http://www.dec.ny.gov/cfmx/extapps/bba/

Appendix E-2

Projection of Wildlife Ecological Response (POWER)
Model Results

PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)

NELSON, POPE & VOORHIS, LLC, MICROCOMPUTER MODEL

SPECIES LIST

INTRODUCTION

This appendix has been included to present the results of a computer model used to investigate the various wildlife species which can be expected to be found on the site considering the habitats established. This model was developed by and for the use of Nelson, Pope & Voorhis, LLC using available information and references for the various species. The model utilizes Excel spreadsheets to identify wildlife species commonly found in various Long Island habitats, based upon thorough research of available literature. The habitat investigated consisted of Coastal Oak-hickory forest (moist oak woodland). Some of the species listed in this model would not be expected on the property given the surrounding development, but are present in similar habitats.

The first column identifies the common name of the species, presented with the main common name in alphabetical order (for example: red-tailed hawk would come before blue jay). The scientific name of particular species is in the second column. The third column shows the legal status of the species, of which there are three possible entries (Endangered, Threatened, Special Concern). The fourth column indicates the seasons during which the species might be expected to be present and the fifth column, of particular importance to the environmental setting, contains information on frequency of the species in the habitat (abundant, common, rare and non expected); the species activity in the habitat (nesting, hunting and resting). References are provided with the reference list provided at the end of the appendix. The printout contained in this appendix, coupled with the discussions provided in the main body of the report, provides significant information of the wildlife found, or expected to be found on site.

Moist oak Forest Species - Inventory and Characteristics

Common Name	Scientific Name	Status	Found During Winter	Spring	Summer	Fall	Frequency/ Habitat Use	Reference
Birds	**Birds**							
black capped chickadee	*Parus atricapillus*	none	X	X	X	X	A / N,F	4 11
brown creeper	*Certhia familiaris*	none		X	X	Early	C / N,F	4 9
American crow	*Corvus brachyrhynchos*	none	X	X	X	X	A / N,H	4 11
black-billed cuckoo	*Coccyzus erythropthalmus*	none		Late	X		R / N,F	4 11
yellow-billed cuckoo	*Coccyzus americanus*	none		Late	X		R / N,F	4 12
common flicker	*Colaptus auratus*	none	X	X	X	X	C / N,F	4 14
Acadian flycatcher	*Empidonax virescens*	none		Late	X		R / N,F	4 15
great-crested flycatcher	*Myiarchus crinitus*	none		Late	X		C / N,F	4 15
blue-grey gnatcatcher	*Polioptila caerulea*	none		X	X		R / N,F	4 7
common grackle	*Quiscalus quiscula*	none	X	X	X	X	C / N,F	4 6
rose-breasted grosbeak	*Pheucticus ludovicianus*	none		Late	X	Early	C / N,F	4 20
broad-winged hawk	*Buteo platypterus*	none		X	X		R / N,H	4 16
Cooper's hawk	*Accipiter cooperii*	special concern		X	X		N / N,H	4 17
red-tailed hawk	*Buteo jamaicensis*	none	X	X	X	X	C / N,H	4 16
sharp-shinned hawk	*Accipiter striatus*	special concern	X	X	X	X	N / N,F	4 16
blue jay	*Cyanocitta cristata*	none	X	X	X	X	A / N,F	4 10
Northern (dark-eyed) junco	*Junco hyemalis*	none		X	X	Early	N / N,F	4 21
golden-crowned kinglet	*Regulus satrapa*	none	X	X		X	R / N,H	4 7
ruby-crowned kinglet	*Regulus calendula*	none	X	X		X	R / N,H	4 7
white-breasted nuthatch	*Sitta carolinensis*	none	X	X	X	X	A / N,F	4 9
northern oriole	*Icterus galbula*	none		Late	X		C / N,F	4 6
common screech owl	*Otus asio*	none	X	X	X	X	C / N	4 17
great-horned owl	*Bubo virginianus*	none	X	X	X	X	C / N,H	4 17
long-eared owl	*Asio otus*	none	X	X	X	X	C / N,H	4 17
American robin	*Turdus migratorius*	none		X	X	Early	A / N,F	4 7
yellow-bellied sapsucker	*Sphyrapicus varius*	none		Late	X	Early	C / N,F	14
European starling	*Sturnus vulgaris*	none	X	X	X	X	C / N,F	4 23
scarlet tanager	*Piranga olivacea*	none		X	X		C / N,F	4
brown thrasher	*Toxostoma rufum*	none		X	X	Early	R / N,F	4 9
hermit thrush	*Catharus guttatus*	none	X	X	X	X	C / N,F	4 7
wood thrush	*Hylocichla mustelina*	none		X	X	Early	C / N,F	4 7

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			Winter	Spring	Summer	Fall		
tufted titmouse	*Parus bicolor*	none	X	X	X	X	C / N,F	4 11
veery	*Catharus fuscescens*	none		Late	X		C / N,F	4 7
red-eyed vireo	*Vireo olivaceus*	none		Late	X		C / N,F	4 23
yellow throated vireo	*Vireo flavifrons*	none		Late	X		C / N,F	4 23
blue-winged warbler	*Vermivora pinus*	none		Late	X		R / N,F	4 14
cedar waxwing	*Bombycilla cedrorum*	none		X	X	Early	C / N,F	4 23 32
Eastern wood-peewee	*Contopus virens*	none		X	X		C / N,F	4 15
American woodcock	*Philhela minor*	none		X	X	X	C / N,F	4 30
downy woodpecker	*Picoides pubescens*	none	X	X	X	X	A / N,F	4 14
hairy woodpecker	*Picoides villosus*	none	X	X	X	X	C / N,F	4 14
red-bellied woodpecker	*Melanerpes carolinus*	none	X	X	X	X	C / N,F	4 14
house wren	*Troglodytes aedon*	none		Late	X	Early	R / N,F	4 9
Mammals								
big-brown bat	*Eptesicus fuscus*	none	X	X	X	X	C / N,F	1 29
hoary bat	*Lasiurus borealis*	none			Late	Early	C / N,F	45
Keen's bat	*Myotis keenii*	none			X	Early	R / N	1 29
little-brown bat	*Myotis lucifugus*	none	X	X	X	X	C / N,F	1 29
red bat	*Lasiurus borealis*	none		Late	X	Early	C / N,F	1 29
Eastern pipistrelle	*Pipistrellus subflavus*	none		X	X	Early	R / N,F	1 29
silver-haired bat	*Lasionycteris noctivagans*	none			X		R / N,F	1 29
Eastern chipmunk	*Tamis striatus*	none	X	X	X	X	C / N,F	1 29
Eastern cottontail	*Sylvilagus floridanus*	none	X	X	X	X	C / N,F	1 29
white-tailed deer	*Odocoileus virginianus*	none	X	X	X	X	C / N,F	1 25 29
red fox	*Vulpes vulpes*	none	X	X	X	X	C / H	1 29
Eastern mole	*Scalopus aquaticus*	none	X	X	X	X	R / N,F	1 29
meadow-jumping mouse	*Zapus hudsonicus*	none	X	X	X	X	R / N,F	1 29
white-footed mouse	*Peromyscus leucopus*	none	X	X	X	X	C / N,F	1 29
Virginia opossum	*Didelphis virginiana*	none	X	X	X	X	C / N,F	1 29
racoon	*Procyon lotor*	none	X	X	X	X	C / N,F	1 29
masked shrew	*Sorex cinereus*	none	X	X	X	X	C / N,F	1 29
short-tailed shrew	*Blarina breuicauda*	none	X	X	X	X	A / N,F	1 29
striped skunk	*Mephitis mephitis*	none	X	X	X	X	N / N,F	1 29
Eastern gray squirrel	*Sciurus carolinensis*	none	X	X	X	X	A / N,F	1 29
southern-flying squirrel	*Glaucimys volans*	none	X	X	X	X	C / N,F	1 29

Common Name	Scientific Name	Status	Found During				Frequency/ Habitat Use	Reference
			Winter	Spring	Summer	Fall		
meadow vole	*Microtus pennsylvanicus*	none	X	X	X	X	R / N,F	29 45
pine vole	*Microtus pinetorum*	none	X	X	X	X	C / N,F	1 29
long-tailed weasel	*Mustela frenata*	none	X	X	X	X	R / N,H	1 29
Herptiles								
common gray treefrog	*Hyla versicolor*	none	X	X	X	X	C / N,F	33 37
wood frog	*Rana sylvatica*	none	X	X	X	X	R / N,F	33 37
red-spotted newt	*Notophthalmus viridescens*	none	X	X	X	X	C / F	36 38
spring peeper	*Hyla crucifer*	none	X	X	X	X	C / N,F	33 35 38
red-backed salamander	*Plethodon cinerus cinerus*	none	X	X	X	X	C / N,F	34 36
spotted salamander	*Ambystoma maculatum*	none	X	X	X	X	R / N,F	34 36 38
marbled salamander	*Ambystoma opacum*	special concern	X	X	X	X	R / N,F	34 36 38
Eastern garter snake	*Thamnophis sirtalis*	none	X	X	X	X	C / N,F	38 40
eastern milk snake	*Lampropeltis d. triangulum*	none	X	X	X	X	C / N,F	38 39
Northern brown snake	*Storeria dekayi*	none	X	X	X	X	C / N,H	38
Northern ringneck snake	*Diadophis punctatus*	none	X	X	X	X	C / N,H	38

KEY:

Frequency:	Activity:
A- abundant	N- nesting
C- common	H- hunting
R- rare	R- resting
N- not expected	F- foraging

REFERENCES FOR WILDLIFE MATRIX

Refer.	Publication
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PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)

NELSON, POPE & VOORHIS, LLC, MICROCOMPUTER MODEL

SPECIES ADAPTABILITY

This portion of the appendix has been included to present the results of a computer program to identify "Species Adaptability." This list is another component of the program developed for use by Nelson, Pope & Voorhis, LLC and used for the preparation of the inventory Species List portion of **Appendix,** however, in this application the "Adaptability" of the observed and expected species are shown. The "adaptability" as indicated in the table, refers to whether an individual species may potentially benefit from (+) a habitat change from natural to urban/suburban setting; or, be impacted (-), or remain constant (=), as a result of this change. These values are not intended to represent the dynamics of actual species on the subject site under post-development conditions. The column entitled "Comments" provides relevant information which was obtained from the literature, as regards special habits of the particular species, such as adaptability, nesting, food, etc. This column is particularly important in assessing the potential impacts to the species as a result of the proposed project. The preceding text considers the site specific aspects of the proposed development in regard to individual species. This portion of the appendix is included to provide the reader with the benefit of what the literature which was consulted in connection with the Habitat Suitability Model suggests, in terms of generalized species dynamics resulting from land use. References are those used in the previous Species List.

Moist Oak Forest Species - Adaptability and Comments

Common Name	Scientific Name	Adapt.	Comments	References
Birds				
black capped chickadee	Parus atricapillus	=	abundant around parks, urban and suburban areas	4 11
brown creeper	Certhia familiaris	-	prefers predominantly deciduous wooded areas	4 9
American crow	Corvus brachyrhynchos	=	extremely adaptable; omnivorous	4 11
black-billed cuckoo	Coccyzus erythropthalmus	-	avoids human activities	4 11
yellow-billed cuckoo	Coccyzus americanus	-	avoids heavy urban areas; prefers wooded open or edges for nests	4 12
common flicker	Colaptus auratus	=	abundant around parks, suburban and urban areas	4 14
Acadian flycatcher	Empidonax virescens	-	prefers cool, damp, mature hardwood forests	4 15
great-crested flycatcher	Myiarchus crinitus	-	prefers deciduous forests and deciduous open woodland	4 15
blue-grey gnatcatcher	Polioptila caerulea	=	prefers dense foliated trees along water ways	4 7
common grackle	Quiscalus quiscula	=	adapts well to urban and suburban habitats	4 6
rose-breasted grosbeak	Pheucticus ludovicianus	=	mainly found on north shore	4 20
broad-winged hawk	Buteo platypterus	-	avoids humans; nests only in dense forests; prefers to be near water	4 16
Cooper's hawk	Accipiter cooperii	-	needs extensive woodland	4 17
red-tailed hawk	Buteo jamaicensis	-	needs 100 foot radius undisturbed area for nest	4 16
sharp-shinned hawk	Accipiter striatus	-	avoids humans; nests in heavily forested areas	4 16
blue jay	Cyanocitta cristatte	=	extremely adaptable to human activity and other stresses	4 10
Northern (dark-eyed) junco	Junco hyemalis	-	prefers forested area with elevation >300 meters; no LI atlas record	4 21
golden-crowned kinglet	Regulus satrapa	-	prefers spruce vegetation; no atlas sightings on Long Island	4 7
ruby-crowned kinglet	Regulus calendula	-	occurs as non-breeding species; present during migration	4 7
white-breasted nuthatch	Sitta carolinensis	=	abundant in parks, urban and suburban areas	4 9
northern oriole	Icterus galbula	=	prefers deciduous woodland and shade trees	4 6
common screech owl	Otus asio	=	nocturnal; nests in hollow trees, abandoned buildings, nest boxes	4 17
great-horned owl	Bubo virginianus	-	nocturnal; rare in wooded areas of less than 20 acres	4 17
long-eared owl	Asio otus	-	nocturnal; prefers dense forested areas near water	4 17
American robin	Turdus migratorius	=	very adaptable; abundant in parks; nests in man-made structures	4 7
yellow-bellied sapsucker	Sphyrapicus varius	=	nests in tree cavity; found in parks, yards and gardens	14
European starling	Sturnus vulgaris	+	extremely adaptable to human activity; considered a pest	4 23
scarlet tanager	Piranga olivacea	-	rare in wooded area of less than 50 acres; affected by fragmentation	4
brown thrasher	Toxostoma rufum	=	common in parks, suburban areas, wooded edges, dry open areas	4 9
hermit thrush	Catharus guttatus	=	not common on Long Island; when present, prefers pine barrens	4 7
wood thrush	Hylocichla mustelina	=	prefers vacant wood (trees >40 feet); may adapt of wooded suburban	4 7

Common Name	Scientific Name	Adapt.	Comments	References
tufted titmouse	Parus bicolor	=	common in suburban areas	4 11
veery	Catharus fuscescens	-	prefers damp forest with undergrowth; affected by fragmentation	4 7
red-eyed vireo	Vireo olivaceus	=	found in parks, suburban areas w/shade trees, and undergrowth	4 23
yellow throated vireo	Vireo flavifrons	-	sensitive to fragmentation and urbanization	4 23
blue-winged warbler	Vermivora pinus	-	primarily abandoned and overgrown field, and thickets	4 14
cedar waxwing	Bombycilla cedrorum	+	prefers open woodlands, orchards and residential areas	4 23 32
Eastern wood-peewee	Contopus virens	=	prefers suburban areas, parks and villages with shade trees	4 15
American woodcock	Philhela minor	-	prefers moist woodland and thicket near open fields	4 30
downy woodpecker	Picoides pubescens	=	found in parks and suburban areas	4 14
hairy woodpecker	Picoides villosus	=	found mainly in deciduous forests	4 14
red-bellied woodpecker	Melanerpes carolinus	=	prefers forest openings; mostly found on Long Island north shore	4 14
house wren	Troglodytes aedon	=	found in suburban areas and gardens; nests in crevices of buildings	4 9
Mammals				
big-brown bat	Eptesicus fuscus	+	roosts in structures; found throughout LI; hunts over water	1 29
hoary bat	Lasiurus borealis	=	roosts in trees, sometimes found in parks	45
Keen's bat	Myotis keenii	+	roosts in buildings, crevices and bark; more common on eastern LI	1 29
little-brown bat	Myotis lucifugus	+	roosts in buildings and man made structures; hunts over water	1 29
red bat	Lasiurus borealis	-	feeds in marsh area; nests within 1000 yards of marsh in trees	1 29
Eastern pipistrelle	Pipistrellus subflavus	-	found near water in open woods, also found in buildings	1 29
silver-haired bat	Lasionycteris noctivagans	-	prefers wooded areas near water, primarily during summer months	1 29
Eastern chipmunk	Tamis striatus	=	prefers open woods, thickets, and rocky areas	1 29
Eastern cottontail	Sylvilagus floridanus	=	will adapt to suburban areas, if there is sufficient cover	1 29
white-tailed deer	Odocoileus virginianus	-	requires range of one-half square mile	1 25 29
red fox	Vulpes vulpes	-	builds den in wooded areas with loose-sandy soil and good drainage	1 29
Eastern mole	Scalopus aquaticus	=	tunnels underground	1 29
meadow-jumping mouse	Zapus hudsonicus	=	found around water in pine barrens; prefers open areas with grasses	1 29
white-footed mouse	Peromyscus leucopus	=	common to most all habitats; does not adapt well to human activity	1 29
Virginia opossum	Didelphis virginiana	=	common in suburban areas, woods, marsh and coastal areas	1 29
racoon	Procyon lotor	+	nocturnal; very adaptive; found in urban and forest areas	1 29
masked shrew	Sorex cinereus	=	tunnels underground; common in wood and wet habitats	1 29
short-tailed shrew	Blarina breuicauda	=	tunnels underground; abundant in a variety of habitats	1 29
striped skunk	Mephitis mephitis	=	prefers mixed wood & brush within 2 miles of water; not expected on LI	1 29
Eastern gray squirrel	Sciurus carolinensis	=	found in parks, urban and suburban areas; very adaptable	1 29
southern-flying squirrel	Glaucimys volans	-	common in deep mixed, deciduous and coniferous woods	1 29
meadow vole	Microtus pennsylvanicus	=	tunnels underground; prefers open woodland	29 45

Common Name	Scientific Name	Adapt	Comments	References
pine vole	Microtus pinetorum	--	tunnels underground; prefers sandy soil in woods and field; can swim	1 29
long-tailed weasel	Mustela frenata	-	prefers dense wood, but may appear in all land habitats near water	1 29
Herptiles				
common gray treefrog	Hyla versicolor	-	prefer mossy trees near ponds	33 37
wood frog	Rana sylvatica	-	prefers leafy pools and transient pools in wooded areas	33 37
red-spotted newt	Notophthalmus viridescens	-	prefers shallow ponds in wooded areas; open moist woods	36 38
spring peeper	Hyla crucifer	=	prefers pools/marsh near woodland; found high in trees in summer	33 35 38
red-backed salamander	Plethodon cinerus cinerus	-	terrestrial, prevelent in moist situations	34 36
spotted salamander	Ambystoma maculatum	-	will breed in pond or vernal ponds in late March, early April	34 36 38
marbled salamander	Ambystoma opacum	=	moist to sandy areas; lays eggs in fall in low spots wet by rain	34 36 38
Eastern garter snake	Thamnophis sirtalis	=	occupies a variety of habitats	38 40
eastern milk snake	Lampropeltis d. triangulum	=	occupies a variety of habitats	38 39
Northern brown snake	Storeria dekayi	=	prefers fresh marsh, moist woods, but, adapts to urban environment	38
Northern ringneck snake	Diadophis punctatus	=	prefers secluded moist areas under logs/stones; can adapt to suburb	38

Appendix E-3

NYS Natural Heritage Program Correspondence

#03469

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925
Website: www.dec.state.ny.us

Alexander B. Grannis
Commissioner

September 10, 2007

RECEIVED
SEP 12 2007
NELSON & POPE

Ashley Marciszyn
Nelson Pope & Voorhis
572 Walt Whitman Road
Melville, NY 11747

Dear Ms. Marciszyn:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to an Environmental Assessment for the proposed Zone Change - purpose of Residential Development, 18.6 Acres, Project 03469, site as indicated on the map you provided, located in the Town of Huntington, Suffolk County; and Town of Oyster Bay, Nassau County.

> We have no records of <u>known</u> occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Tara Seoane

Tara Seoane, Information Services
New York Natural Heritage Program

cc: Reg. 1, Wildlife Mgr.

APPENDIX F

TRANSPORTATION

Appendix F-1

Traffic Impact Study
Nelson & Pope
April 2008

NELSON POPE & VOORHIS, LLC

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APPENDIX

PURPOSE OF REPORT

Nelson & Pope has investigated the potential traffic impacts associated with the proposed application to construct 77 age-restricted condominiums and 3 single-family homes at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The site is located in both Nassau and Suffolk Counties. A portion of the subject property is located on a parcel of land designated as District 0400, Section 226 Block 01 Lot 01 on the Suffolk County Tax Maps and the other portion of the subject property is located on a parcel of land designated as Section 13, Block D, Lots 114 & 115 on the Nassau County Tax Maps. The portion of the site in Oyster Bay is presently zoned R1-1A One-Family Residence and is proposed to be rezoned to RMF-10 Multi-Family Residence. The portion of the site in Huntington is presently zoned R-40 Residence and is proposed to be rezoned to R-RM Retirement Community.

Three alternative site access plans will be evaluated for the proposed development. The following is a brief description of each site access plan:

Plan A (Main Plan): Under Plan A, access to the site will be provided via one full movement driveway on Plainview Road. 77 age restricted condominium units and 3 single family homes will be constructed on site under this plan.

Plan B (Alternative Plan): Under Plan B, access to the site will be provided via one full movement driveway on Jericho Turnpike. 75 age restricted condominium units and 3 single family homes will be constructed on site under this plan.

Plan C (Alternative Plan): Under Plan C, access to the site will be provided via one full movement driveway on Plainview Road and a right turns out only driveway on Jericho Turnpike. 77 age restricted condominiums units and 3 single family homes will be constructed on site under this plan.

Figure 1 shows a map of the area and Figure 2 shows the location of the site.

This report summarizes the results of a detailed investigation of the traffic impacts of the proposed residential development by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the proposed residential development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network.

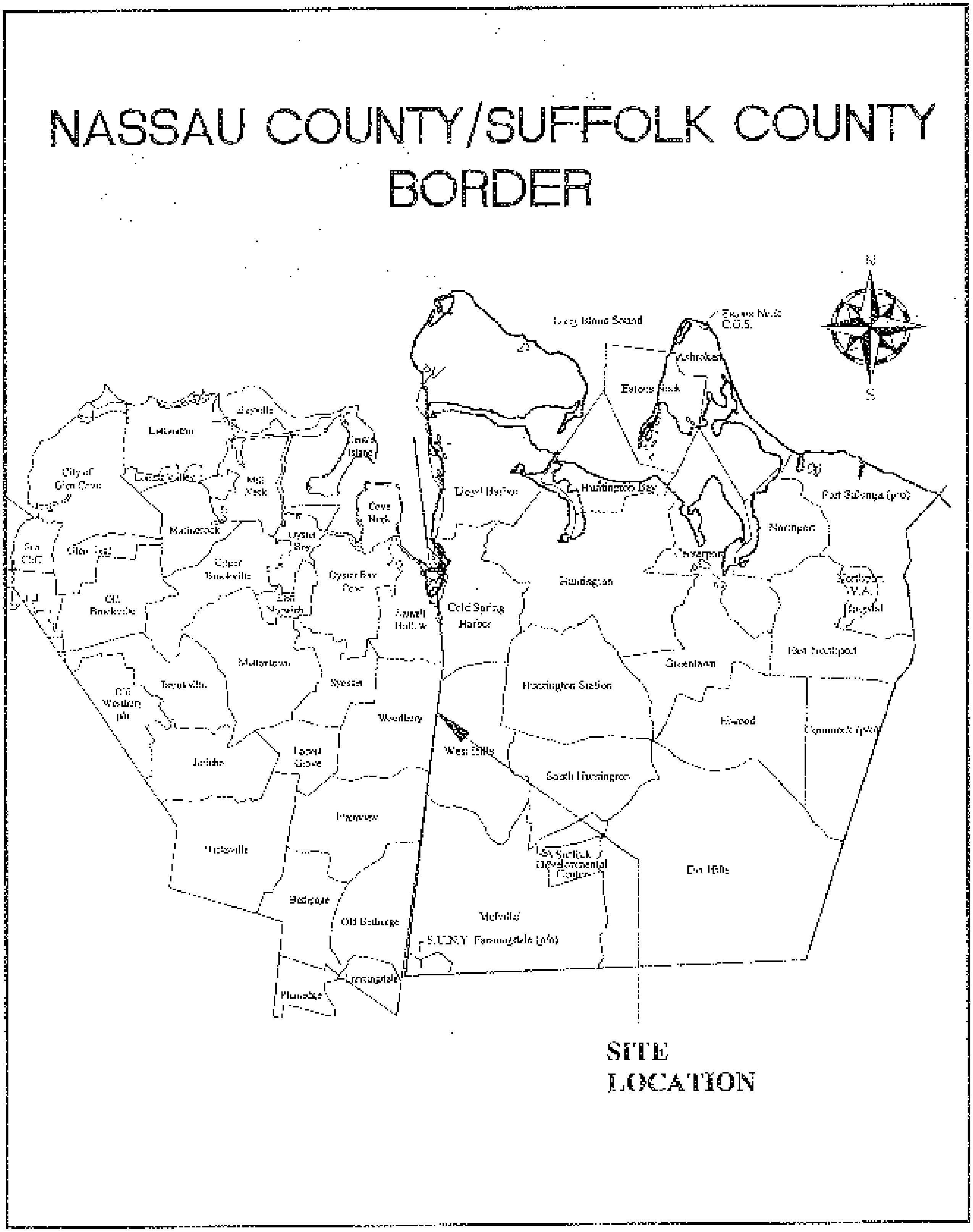
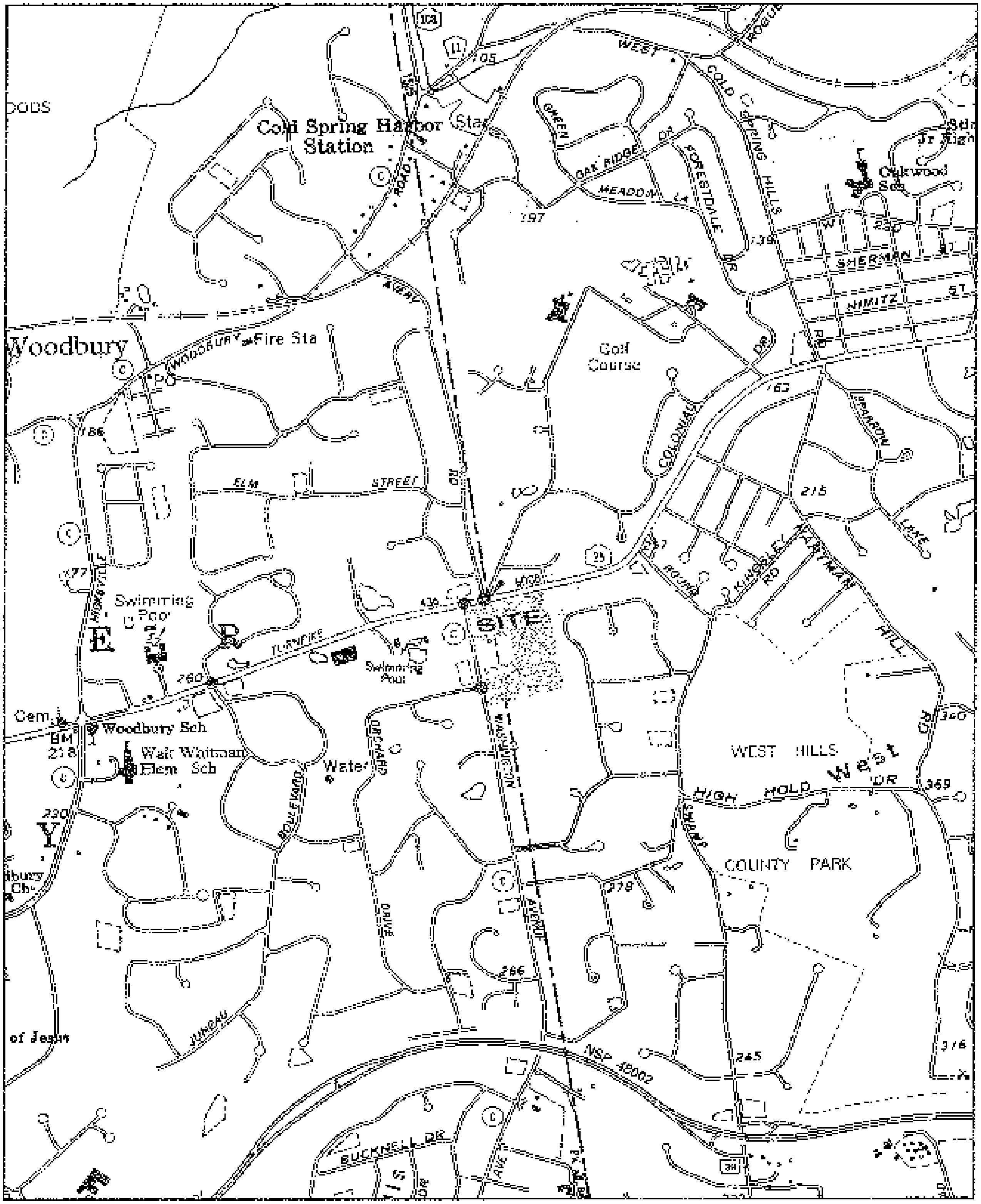


Figure 1: Area Map



SOURCE: USGS HUNTINGTON 1991

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic impacts associated with the proposed residential development and identifies appropriate mitigation, if necessary. In executing the scope of work, the following steps were undertaken:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing, signal timings, phasing and cycle lengths.

- Turning movement volume counts were conducted during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods on a typical weekday and during the Saturday midday (11:00 AM – 2:00 PM) peak period at the following study intersections.

  - Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive
  - Jericho Turnpike (NYS Route 25) at Plainview Road
  - Jericho Turnpike (NYS Route 25) at Juneau Boulevard
  - Plainview Road at Orchard Drive

- Hourly traffic volumes collected on Jericho Turnpike (NYS Route 25) were obtained from the New York State Department of Transportation (NYSDOT).

- An annual growth factor, obtained from the NYSDOT, was applied to the existing traffic volumes to estimate the increase in background traffic that would occur in 2010.

- As requested by the Towns of Huntington and Oyster Bay, a No Build analyses that will only consider background growth through the assumed build year for the subject application was conducted.

- The Towns of Huntington and Oyster Bay Planning Departments were contacted to obtain information on other planned developments that may impact traffic flow in the study area.

- Estimates of traffic that would be generated by the proposed residential development were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Seventh Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.

- In this traffic study, three site access plans will be analyzed. The following is a description of these site access plans:

- Site Access Plan A – Under Plan A, access to the site will be provided via a full movement driveway on Plainview Road.
- Site Access Plan B – Under Plan B, access to the site will be provided via a full access driveway on Jericho Turnpike, east of Plainview Road.
- Site Access Plan C – Under Plan C, access to the site will be provided via a full movement driveway on Plainview Road and a right turns out only driveway on Jericho Turnpike.

- As part of this traffic study, four build scenarios will be analyzed for each of the three Site Access Plans mentioned above. The following is a brief description of the four build scenarios:
  - The first build scenario will add to the No Build condition only Kensington Estates Traffic. The analyses of this scenario will identify the impacts that will be created on the roadway network, if only Kensington Estates is built.
  - The second build scenario will add to the No Build condition, traffic from the proposed Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments. The analyses of this scenario will identify the traffic impacts that will be created on the roadway network, if all these proposed projects are built.
  - The third build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 40 residential zoning. These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 40 residential) are built.
  - The fourth build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 20 residential zoning. These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 20 residential) are built.

EXISTING CONDITION

Land Use

As previously discussed, the site is located at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The portion of the site in Oyster Bay is presently zoned R1-1A and the portion of the site in Huntington is presently zoned R-40. The Woodbury Country Club is located on the property west of the site, on the opposite side of Plainview Road. The Cold Spring Country Club, Oheka Castle, and surrounding residences are located on the north side of Jericho Turnpike. Residential properties abut the site along the south and east property lines.

Roadway Conditions

Jericho Turnpike (NYS Route 25) is a major east-west arterial under the jurisdiction of the New York State Department of Transportation. The roadway extends across a significant portion of Nassau and Suffolk Counties. In the vicinity near the site it has a cross-section consisting of two lanes in each direction with left turn lanes at key intersections. The land uses along Jericho Turnpike (NYS Route 25) are predominantly commercial. The posted speed limit in the vicinity of the site is 50 miles per hour.

Plainview Road is a north-south collector road connecting Jericho Turnpike, Northern State Parkway and the Long Island Expressway. The cross section provides one lane in each direction in the vicinity of the site. The horizontal alignment is straight and the vertical alignment is flat. The land uses along Plainview Road are a mix of residential uses and vacant parcels. The posted speed limit in the vicinity of the site is 35 miles per hour.

Juneau Boulevard is a north-south local roadway intersecting Jericho Turnpike directly opposite Windermere Way, an entrance to a gated community on the north side of Jericho Turnpike. The cross section provides one lane in each direction. The land uses along Juneau Boulevard are typically residential uses.

Jericho Turnpike at Plainview Road and at Avery Road/West Gate Drive- The intersections of Jericho Turnpike at Plainview Road and Jericho Turnpike at Avery Road/West Gate Drive are approximately 140 feet apart as measured between stop lines. The distance between the two intersections provides back to back left turn lanes for vehicles making left turns onto Plainview Road and Avery Road/West Gate Drive from Jericho Turnpike. Plainview Road and Avery Road are north/south roadways that intersect Jericho Turnpike at right angles (T-intersection) and West Gate Drive is a southwest roadway that intersects Jericho Turnpike at an acute angle. West Gate Drive and Avery Road intersect Jericho Turnpike at the same point. The eastbound Jericho Turnpike approach at Plainview Road provides one through lane and one shared through/right turn lane and the westbound Jericho Turnpike approach at Plainview Road provides one lane for left turn movements and two through lanes. The northbound Plainview Road approach provides one lane for left turn/right turn movements. The eastbound Jericho Turnpike approach at Avery Road/West Gate Drive provides one lane for left turn movements and two through lanes. The westbound Jericho Turnpike approach at Avery Road/West Gate Drive provides one lane for through movements and one lane for shared through/right turn movements. The southbound Avery Road and southwest bound West Gate Drive approaches provide one lane for left turn/right turn movements. These two intersections are controlled by two traffic signals operating under the same controller with a 120 second cycle length and three phases.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
Jericho Turnpike (NYS Route 25) at Plainview Road	EB WB NB	T-TR L-2T LR	3-phase traffic signal
Jericho Turnpike (NYS Route 25) at Avery Road (S)/West Gate Drive (SW)	EB WB SB SWB	L-2T T-TR LR LR	3-Phase traffic signal
Jericho Turnpike (NYS Route 25) Juneau Boulevard	EB WB NB SB	L/T-TR L/T-TR LTR LTR	2-Phase traffic signal
Plainview Road at Orchard Drive	EB NB SB	LR LT TR	Stop Control on Eastbound Orchard Drive

** L = Left turn lane; T = through lane; R = Right turn lane*

Traffic Volume Data

Turning movement volumes were collected at the following study intersections on Thursday, November 2, 2006 during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods and on Saturday, July 29, 2006 during the Saturday midday (11 AM-2PM) peak period:

- Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive

- Jericho Turnpike (NYS Route 25) at Plainview Road
- Plainview Road at Orchard Drive

Additional turning movement counts were collected at the intersection of Jericho Turnpike and Juneau Boulevard on Wednesday, May 2, 2007 during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods and on Saturday, May 5, 2007 during the Saturday midday (11 AM-2PM) peak period. The volume data was tabulated to identify the peak hours at each of the intersections. The existing intersection peak hour volumes are shown on Figures 3, 4, 5 and detailed data in Appendix A.

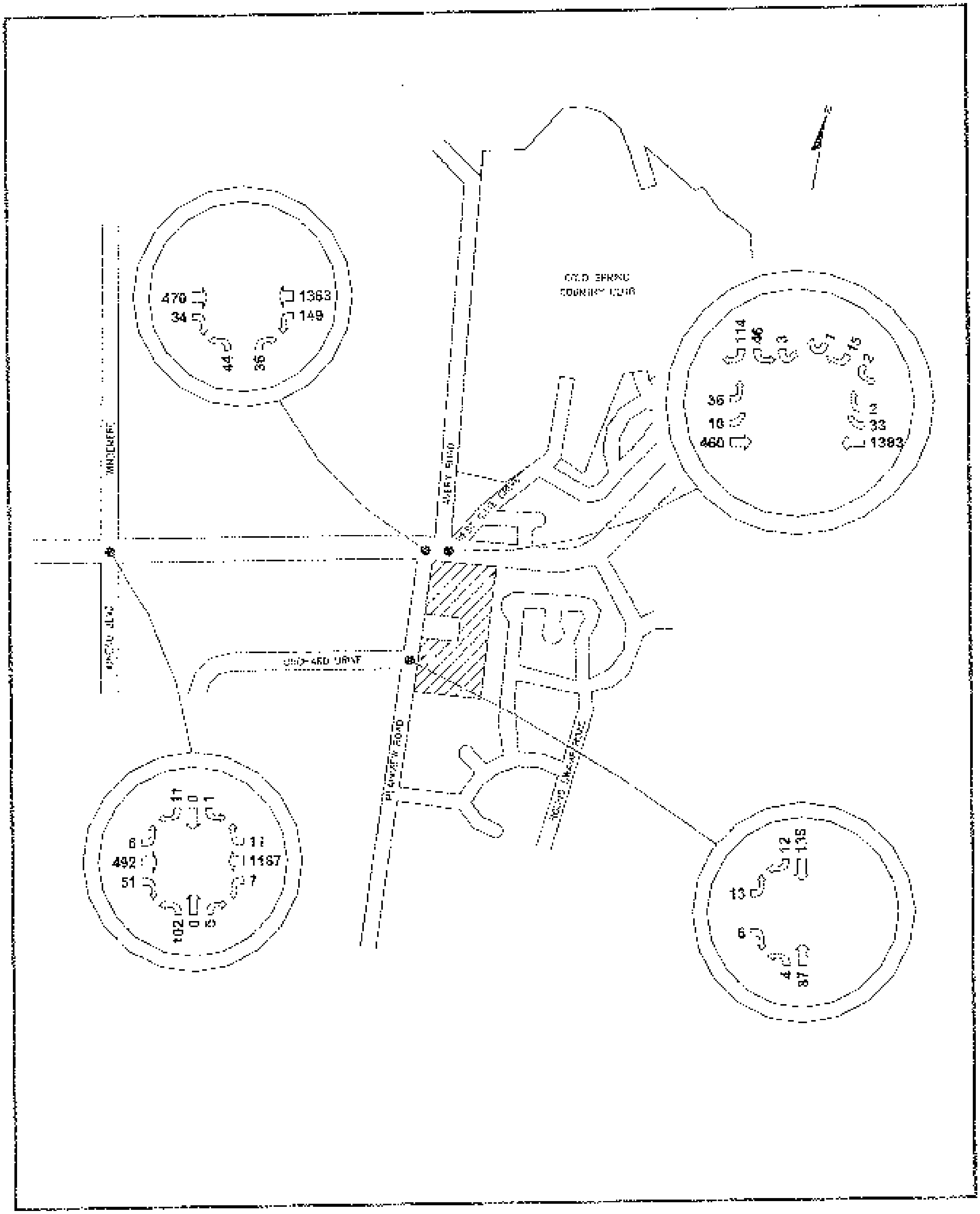


Figure 3: Existing AM Peak Hour Traffic Volumes

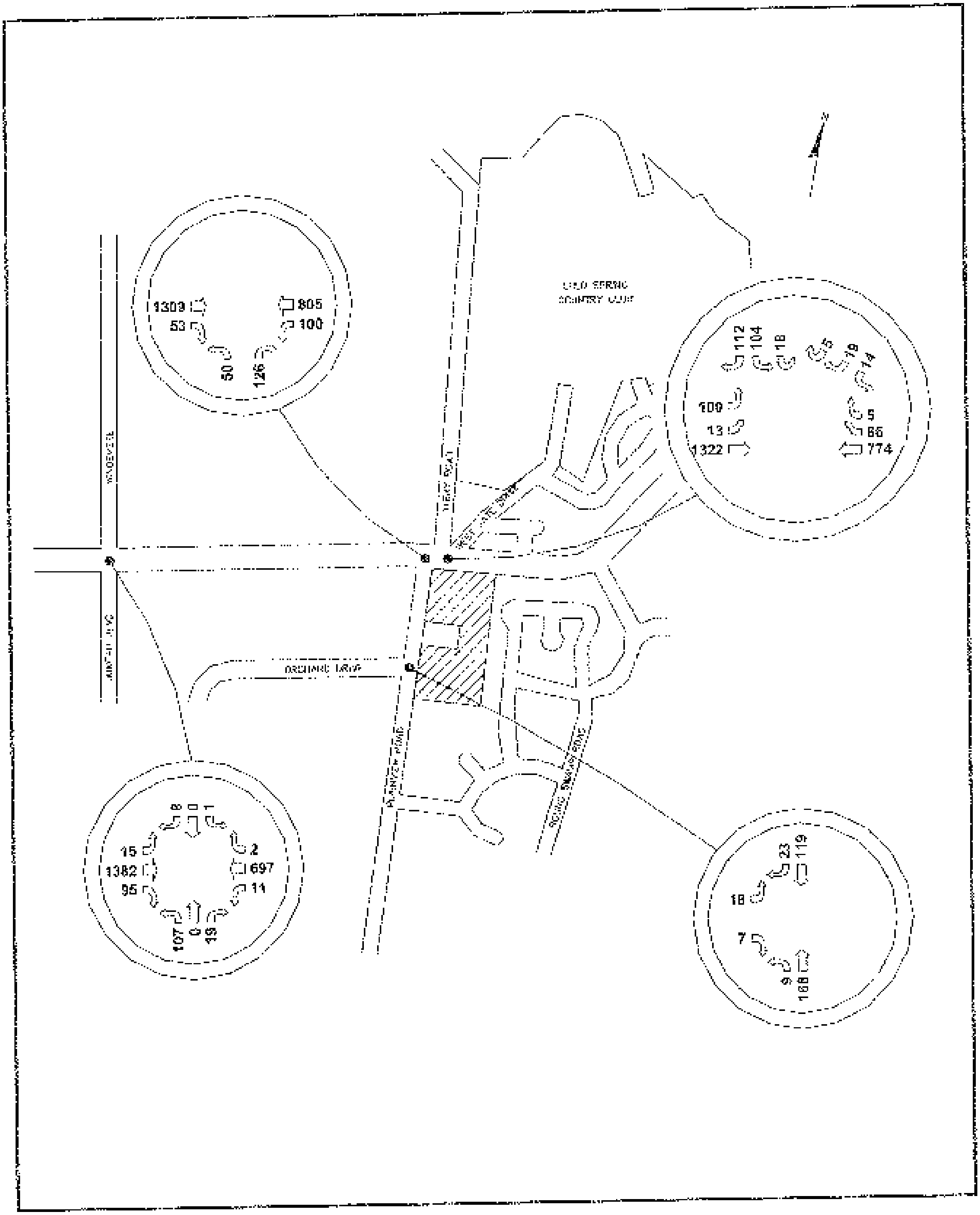


Figure 4: Existing PM Peak Hour Traffic Volumes

NELSON & POPE

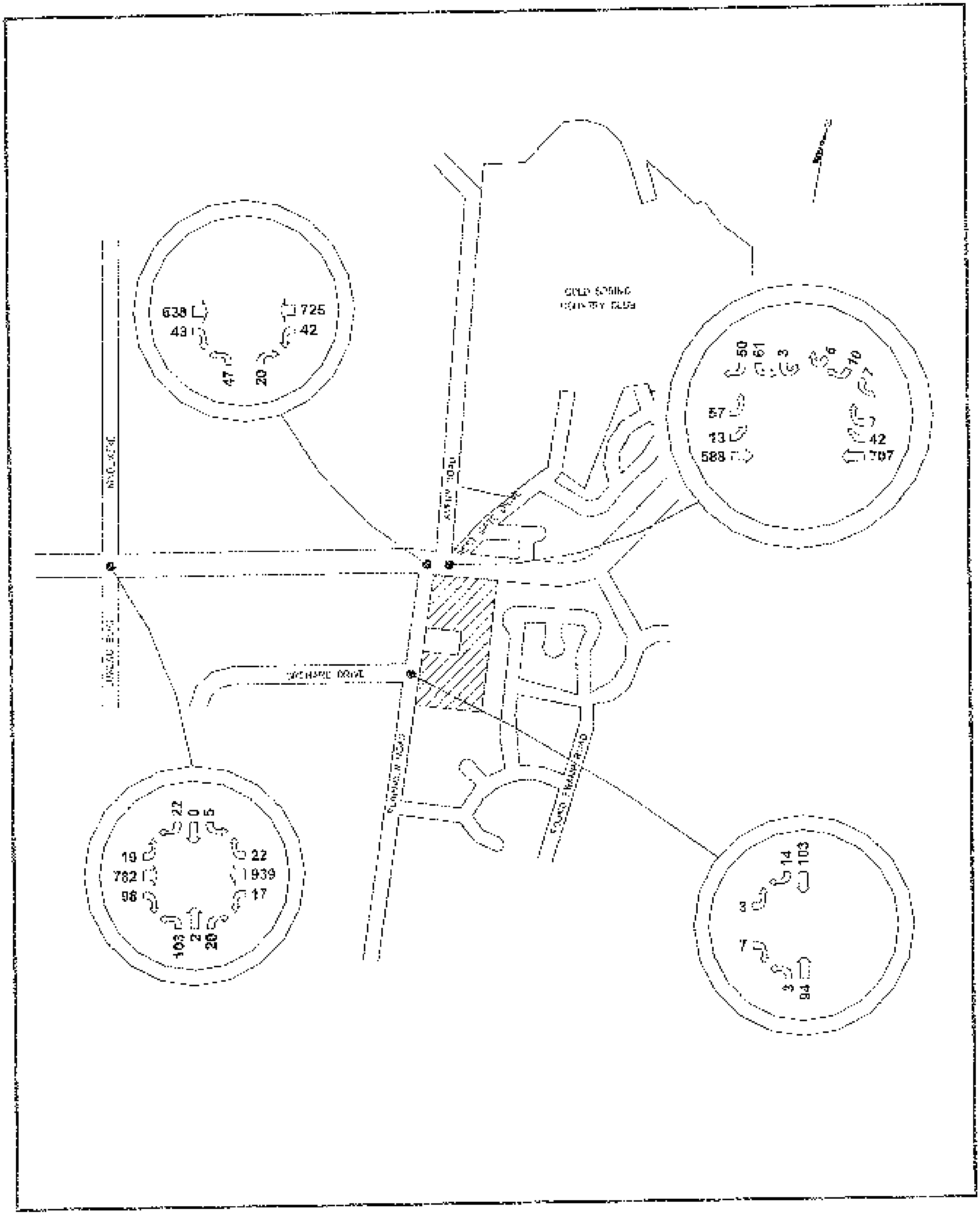


Figure 5: Existing Saturday Peak Hour Traffic Volumes

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the NYSDOT. The most recent data available was from January 2001 to December 2003 (3 year period). The data was reviewed and summarized in the following tables.

Table 2: Accident Summary by Severity

Location	Accident Severity			
	Fatality	Injury	Property Damage	TOTAL
Jericho Turnpike (NYS 25) at Plainview Rd/Avery Rd/West Gate Drive	-	8	12	20
Plainview Road from Jericho Turnpike (NYS 25) to Cedar Grove Lane	-	-	-	0
West Gate Drive from Jericho Turnpike (NYS 25) to Colonial Drive	-	-	1	1
West Gate Drive at Colonial Drive	-	1	-	1
Avery Road between Jericho Turnpike (NYS 25) and Stafford Avenue	-	-	-	0
Avery Road at Stafford Avenue	-	-	1	1
West of Jericho Turnpike (NYS 25) at Juneau Boulevard	-	3	1	4
Jericho Turnpike (NYS 25) at Juneau Boulevard	-	-	2	2
Jericho Turnpike (NYS 25) from Juneau Boulevard to Plainview Road	-	9	8	17
Total	0 0%	21 46%	25 54%	46 100%

Table 2 indicates a total of 46 accidents occurred at or in the vicinity of study intersections during the analysis period. The majority of accidents, 54%, involved property damage only. There were no fatal accidents experienced in the vicinity of the site within the time period studied. The locations that experienced the greatest number of accidents were the intersections of Jericho Turnpike (NYS Route 25) at Plainview Road/Avery Road/West Gate Drive and Jericho Turnpike between Juneau and Plainview Road with a total of 20 and 17 accidents respectively.

Table 3: Accident Summary by Type of Collision

Location	Right Angle	Rear End	Head On	Left Turn	Right Turn	Fixed Object	Ped/ Bicycle	Side-Swipe	Over-Taking	Non-Reportable	Other/ Unknown	Total
	Accident Type											
Jericho Turnpike (NYS 25) at Plainview Rd/Avery Rd/West Gate Dr	4	2	-	1	1	1	-	-	-	6	5	20
Plainview Road from Jericho Turnpike (NYS 25) to Cedar Grove La	-	-	-	-	-	-	-	-	-	-	-	0
West Gate Drive from Jericho Turnpike (NYS 25) to Colonial Drive	-	-	-	-	-	-	-	-	-	-	1	1
West Gate Drive at Colonial Drive	-	-	-	-	-	1	-	-	-	-	-	1
Avery Road between Jericho Turnpike (NYS 25) and Stafford Ave	-	-	-	-	-	-	-	-	-	-	-	0
Avery Road at Stafford Avenue	-	-	-	-	-	-	-	-	-	-	1	1
West of Jericho Turnpike (NYS 25) at Juneau Boulevard	1	2	-	-	-	1	-	-	-	-	-	4
Jericho Turnpike (NYS 25) at Juneau Boulevard	1	-	-	-	-	-	-	-	-	-	1	2
Jericho Turnpike (NYS 25) from Juneau Boulevard to Plainview Road	4	5	-	1	1	3	-	-	-	-	3	17
Total	10 *22%*	9 *20%*	0 *0%*	2 *4%*	2 *4%*	6 *13%*	0 *0%*	0 *0%*	0 *0%*	6 *13%*	11 *24%*	46 *100%*

A review of Table 3 indicates that a plurality of the reportable accidents (22% and 20%) involved a right-angle collision and a rear-end collision, respectively. Most of the rear-end accidents occurred on Jericho Turnpike between Juneau Boulevard and Plainview Road and an equal number of right angle accidents (4 each) occurred at the intersection of Jericho Turnpike at Avery Road/West Gate Drive and on Jericho Turnpike between Juneau Boulevard and Plainview Road.

During the three-year study period a total of 20 accidents occurred at the intersection of Jericho Turnpike (NYS Route 25) and Plainview Road/Avery Road/West Gate Drive and a total of 17 accident occurred on Jericho Turnpike between Juneau Boulevard and Plainview Road. Accident rates were calculated for the intersection and roadway segment and compared to the statewide average. The accident rate at the intersection of Jericho Turnpike at Plainview Road/Avery Road/West Gate Drive was 0.41 accidents per million entering vehicles, which is higher than the statewide average accident rate of 0.26 accidents per million entering vehicles. The accident rate for Jericho Turnpike between Juneau Boulevard and Plainview Road was 1.08 accidents per million vehicle-miles, which is lower than statewide average accident rate of 1.28 accidents per million vehicle-miles.

LEVEL OF SERVICE DESCRIPTION

Level of service and capacity analyses were performed using *SYNCHRO Version 6* Software. *SYNCHRO*, in conjunction with *SimTraffic*, is a software package that allows for an interactive analysis of a single intersection or a network of intersections and can also be used for modeling and optimizing traffic signal timings. The *SimTraffic* component provides simulations of operations with animation features. *SYNCHRO* implements the Intersection Capacity Utilization (ICU) 2003 method for determining intersection capacity. This method compares the current volume to the intersections ultimate capacity. *SYNCHRO* also implements the methods of the *2000 Highway Capacity Manual (HCM)* for Urban Streets, Signalized intersections, and unsignalized intersections for determining intersection capacity analyses. The *HCM* contains procedures and methodologies for estimating capacity and determining level of service for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's level of service (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The level of service definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix E.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The level of service of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/decoration delay that is caused by the signalized intersection.

The flow at a two-way stop controlled (TWSC) intersection is gauged in terms of LOS and capacity. The capacity of a controlled leg is based on the distribution of gaps in the major street traffic, driver judgment in selecting a gap, and the follow-up time required by each driver in a queue. The LOS for a TWSC intersection is determined by the control-delay, and is defined for each movement rather than for the overall intersection. As with signalized intersections, HCS quantifies only the average control-delay, which is a function of the approach and the degree of saturation for any particular minor movement.

EXISTING CONDITION ANALYSIS

The peak hour traffic volumes depicted in Figures 3, 4 and 5 were used to determine the existing capacity and LOS of the study intersections. Table 4 contains the LOS summary for the Existing Condition calculated through the SYNCHRO software described previously. The detailed analysis worksheets are in Appendix F.

Table 4: Existing Condition LOS Summary

Location (Signalized Intersections)	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Jericho Turnpike at Plainview Road	A	6.8	C	24.8	A	8.8
Jericho Turnpike at Avery /West Gate Drive	B	19.2	B	14.7	B	12.4
Jericho Turnpike at Juneau Blvd/Windermere Way	A	7.6	A	8.3	A	7.9

Location (Unsignalized Intersections)	Approach	Movmnt.	AM Peak Hour			PM Peak Hour			Saturday Midday Peak Hour		
			LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Orchard Drive at Plainview Road	NB	LT	A	0.4	0.00	A	0.4	0.01	A	0.3	0.00
	EB	LR	A	9.8	0.03	B	10.4	0.06	A	9.4	0.03

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Jericho Turnpike and Plainview Road

The signalized intersection of Jericho Turnpike and Plainview Road currently operates at LOS A, C and A during the weekday AM, weekday PM and Saturday midday peak hours respectively.

Jericho Turnpike and Avery Road/West Gate Drive

The signalized intersection of Jericho Turnpike and Avery Road/West Gate Drive currently operates at LOS B during the weekday AM, weekday PM and Saturday midday peak hours.

Jericho Turnpike and Juneau Boulevard/Windermere Way

The signalized intersection of Jericho Turnpike and Juneau Boulevard/Windermere Way currently operates at LOS A during the weekday AM, weekday PM and Saturday midday peak hours.

Plainview Road and Orchard Drive

Orchard Drive intersects Plainview Road to form a stop-controlled T-intersection. Currently, the northbound Plainview Road left turn movement operates at LOS A during the weekday AM, weekday PM and Saturday midday peak hours. The eastbound Orchard Drive stop-controlled approach operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the weekday PM peak hour.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the assumed future build year (2010) without the construction of the proposed project. For the purpose of determining the cumulative traffic impacts anticipated to be created by proposed projects in the study area, the No Build Condition traffic volumes will consider only background growth through the assumed build year for the subject application.

Traffic Growth

Annual growth factors of 1% and 0.6% were obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 study (LITP2000) for the Towns of Huntington and Oyster Bay respectively. The higher of the two growth factors was utilized to perform a more conservative analysis. The existing traffic volumes were increased by this factor (1%) for a period of 4 years to the traffic volumes obtained in 2006 and for a period 3 years to the traffic volumes obtained in 2007 to generate the 2010 No Build Volumes. The No Build Condition volumes are illustrated in Figures 6, 7 and 8.

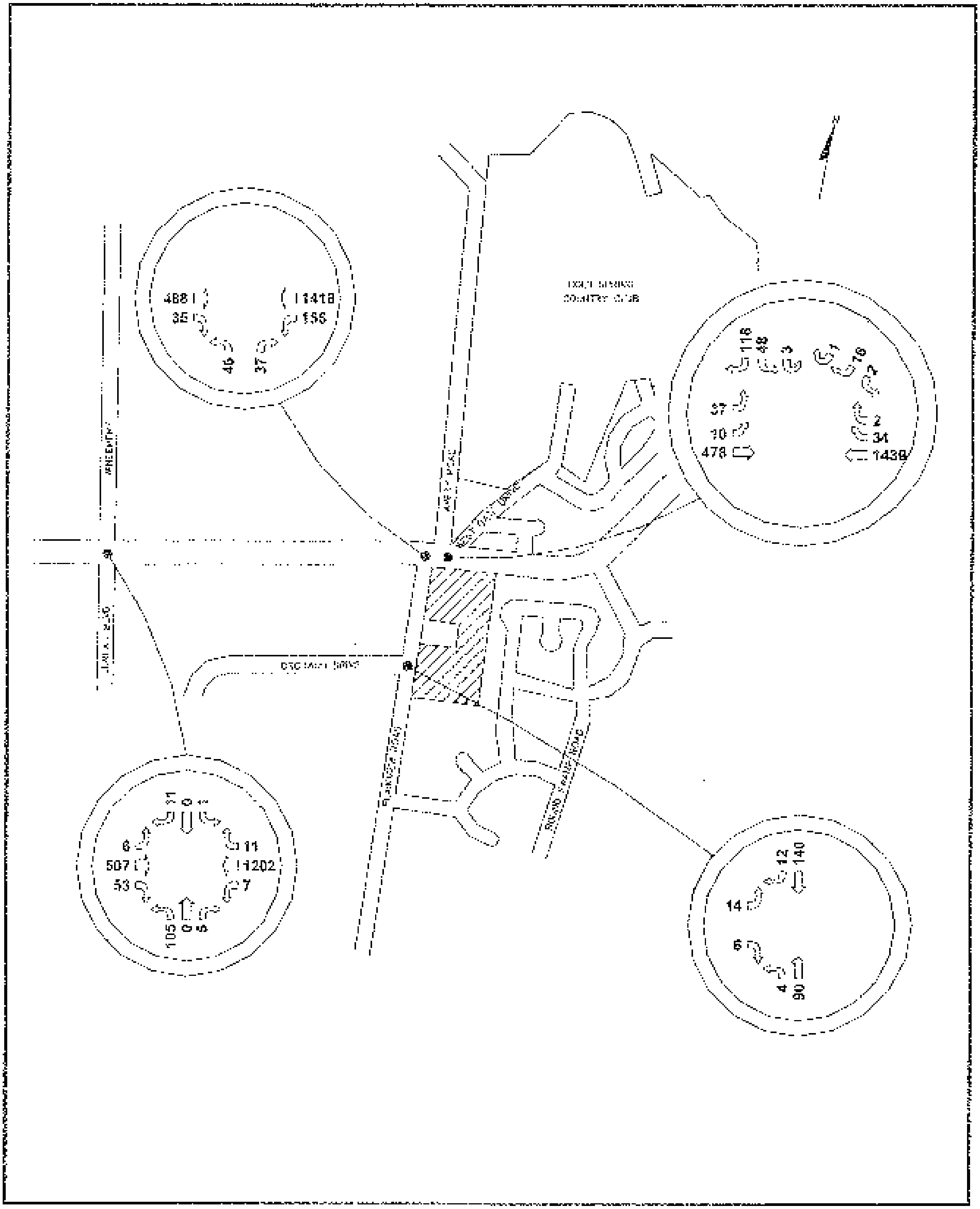


Figure 6: 2010 No Build AM Traffic Volumes

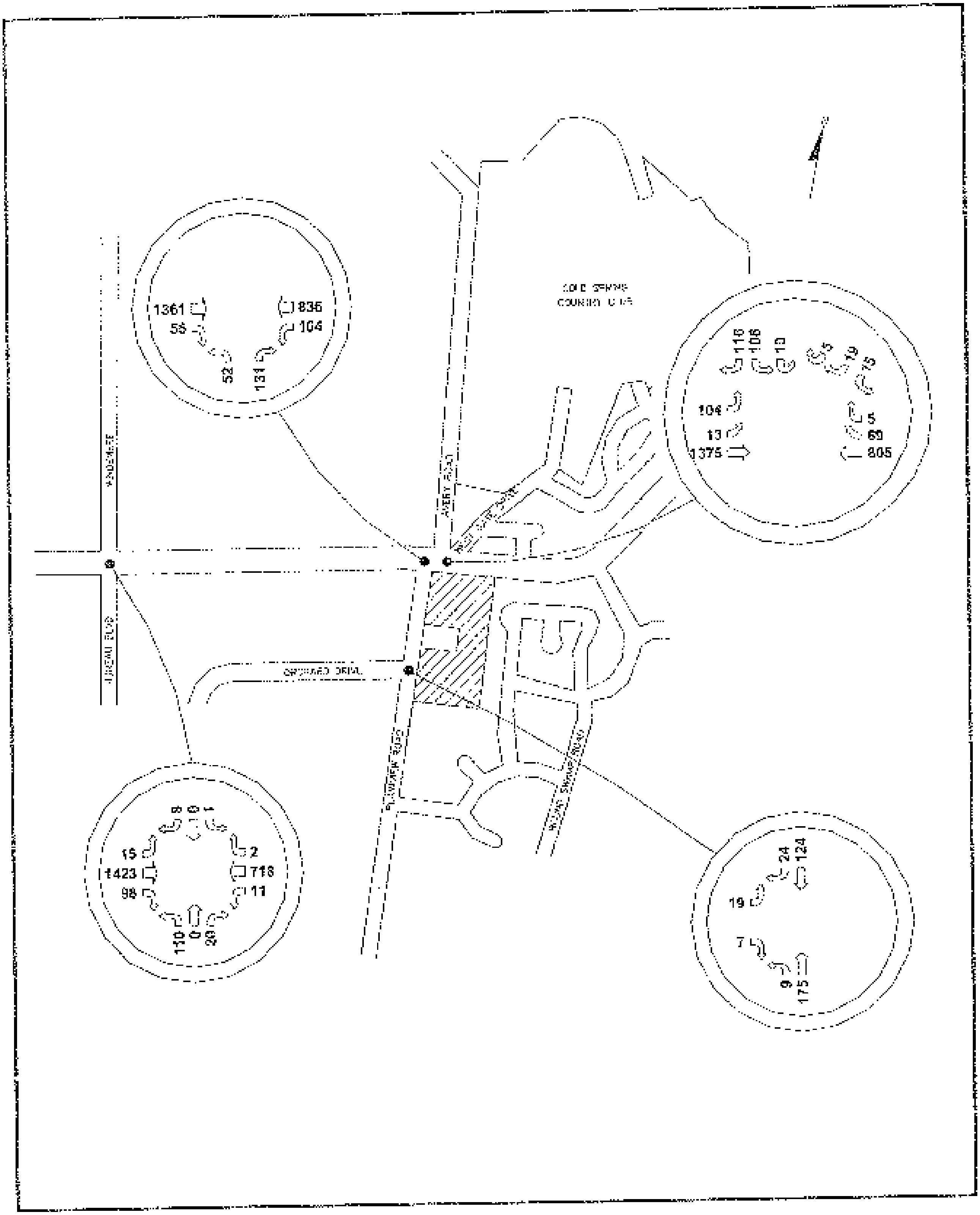


Figure 7: 2010 No Build PM Traffic Volumes

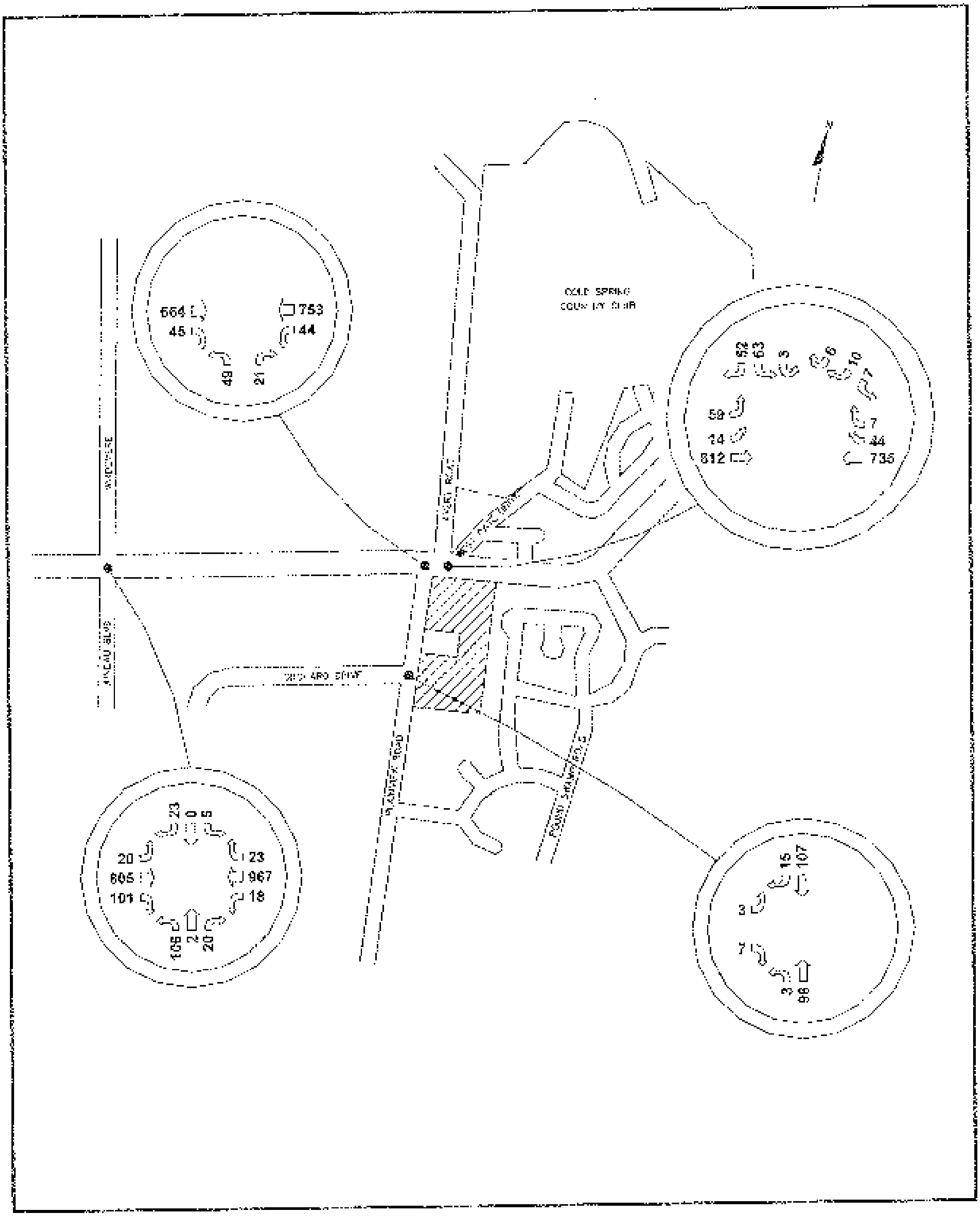


Figure 8: 2010 No Build Saturday Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

Three alternative site access plans will be evaluated for the proposed development. The following is a brief description of each site access plan:

Plan A (Main Plan): Under Plan A, access to the site will be provided via one full movement driveway on Plainview Road. 77 age restricted condominiums units and 3 single family homes will be constructed on the site under this plan.

Plan B (Alternative Plan): Under Plan B, access to the site will be provided via one full movement driveway on Jericho Turnpike. 75 age restricted condominiums units and 3 single family homes will be constructed on the site under this plan.

Plan C (Alternative Plan): Under Plan C, access to the site will be provided via one full movement driveway on Plainview Road and a right turns out only driveway on Jericho Turnpike. 77 age restricted condominiums units and 3 single family homes will be constructed on the site under this plan.

Trip Generation

In order to identify the impacts the proposed residential development will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume to be generated during the peak hours and to estimate the directional distribution of that site traffic when entering and exiting the subject property. The proposed residential development will contain 77 age-restricted residential condominium units and 3 single family homes under Plans A and C and will contain 75 age-restricted residential condominium units and 3 single family homes under Plan B. The trip generation estimates for the proposed residential development were prepared utilizing data found under Land Use Code 251-Senoir Housing Detached and Land Use Code 210-Single-Family Detached Housing within the Institute of Transportation Engineers' publication, *Trip Generation, Seventh Edition* (descriptions of Land Use Codes 251 and 210 are included in appendix C). This publication sets forth trip generation data obtained by traffic counts conducted at research sites throughout the country. A summary of the trip generation is shown in Table 5 below and in Appendix C as well. From the review of the trip generation worksheets in Appendix C, it can be seen that, the difference between the trips generated by a 75 unit age restricted residential development and a 77 unit age restricted residential development is insignificant. However, to perform conservative analyses, the trips generated by the 77 units were utilized in this study. It is anticipated that, the proposed residential development will generate 34 trips during the AM peak hour (11 entering, 23 exiting), 46 trips during the

PM peak hour (28 entering, 18 exiting) and 55 trips during the Saturday midday peak hour (32 entering, 23 exiting).

Table 5: Trip Generation

Time Period	Distribution	77 Senior Housing Detached units - ITE LUC 251	3 Single Family Homes -- ITE LUC 210	Total
AM Peak Hour	Enter	8	3	11
	Exit	14	9	23
	Total	**22**	**12**	**34**
PM Peak Hour	Enter	25	3	28
	Exit	16	2	18
	Total	**41**	**5**	**46**
Saturday Midday Peak Hour	Enter	25	7	32
	Exit	16	7	23
	Total	**41**	**14**	**55**

Source: Trip Generation, 7th Edition, published by ITE

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. It should be noted that, only traffic volume figures for Plan A (Main Plan) will be presented in this report. Figures 9 and 10 present the trip distribution for the age-restricted condominiums and the single family homes respectively. Figures 11, 12 and 13 depict the site generated volumes for the AM, PM and Saturday midday peak hours.

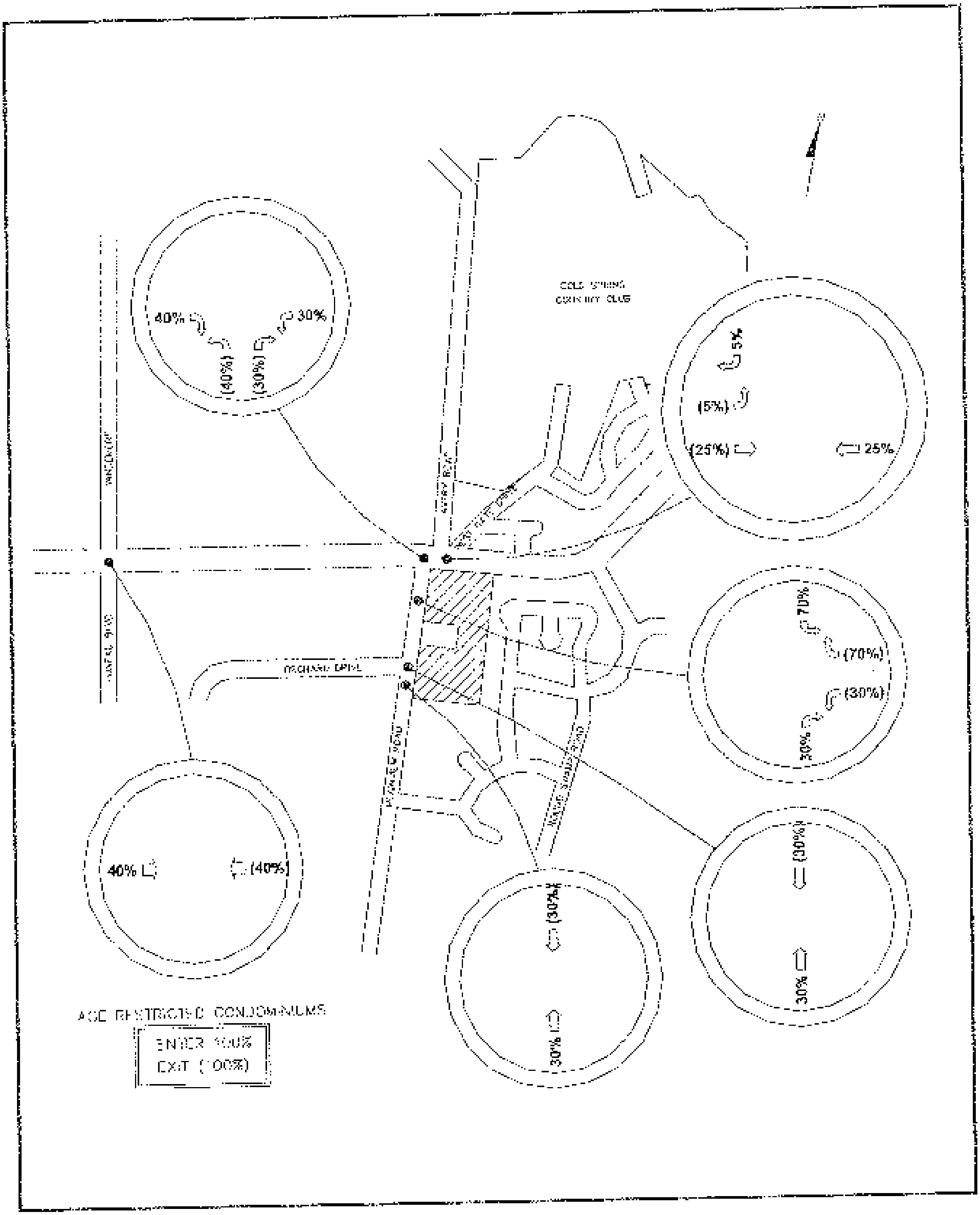


Figure 9: Site Generated Trip Distribution – Age Restricted Condomisiums

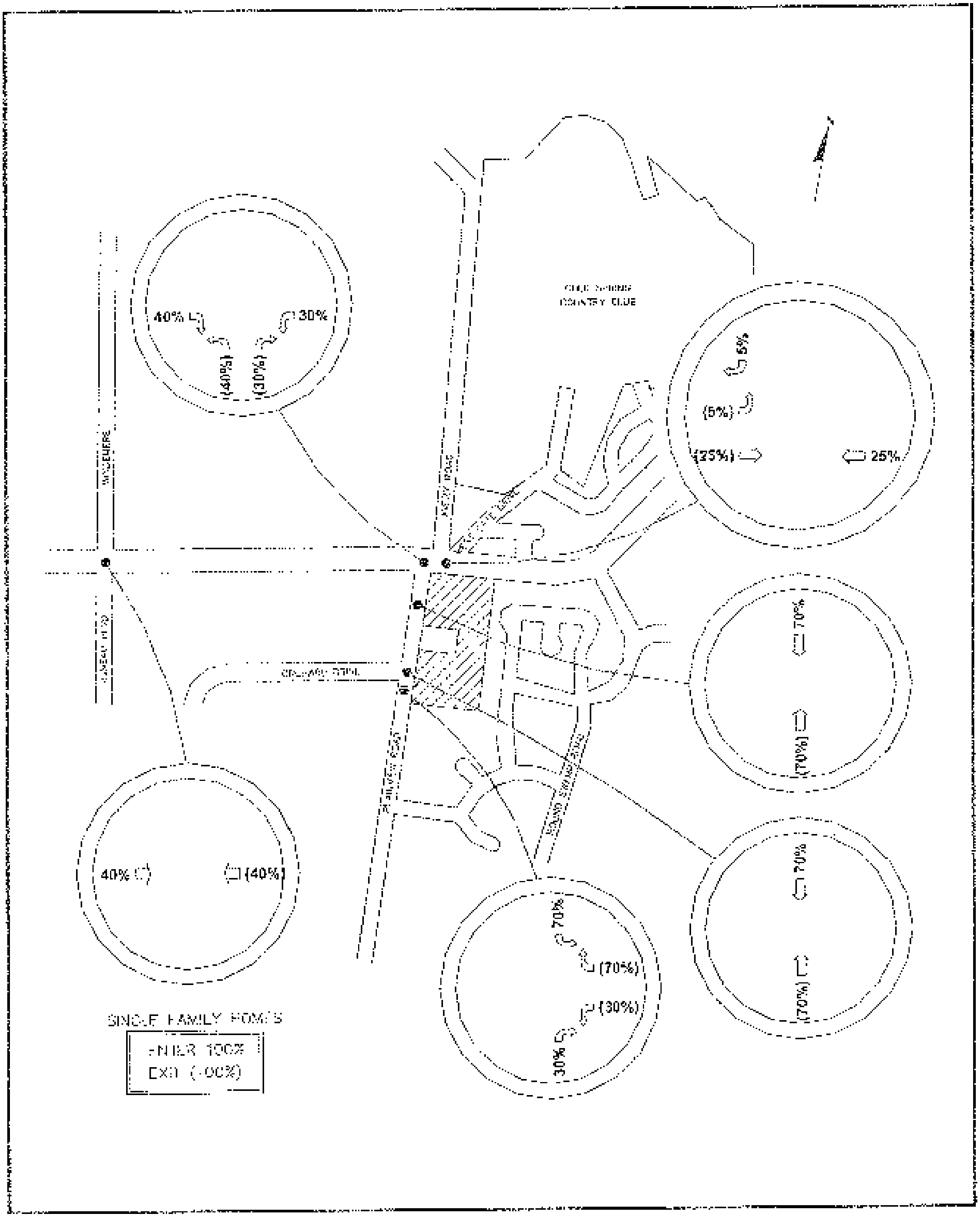


Figure 10: Site Generated Trip Distribution – Single Family Homes

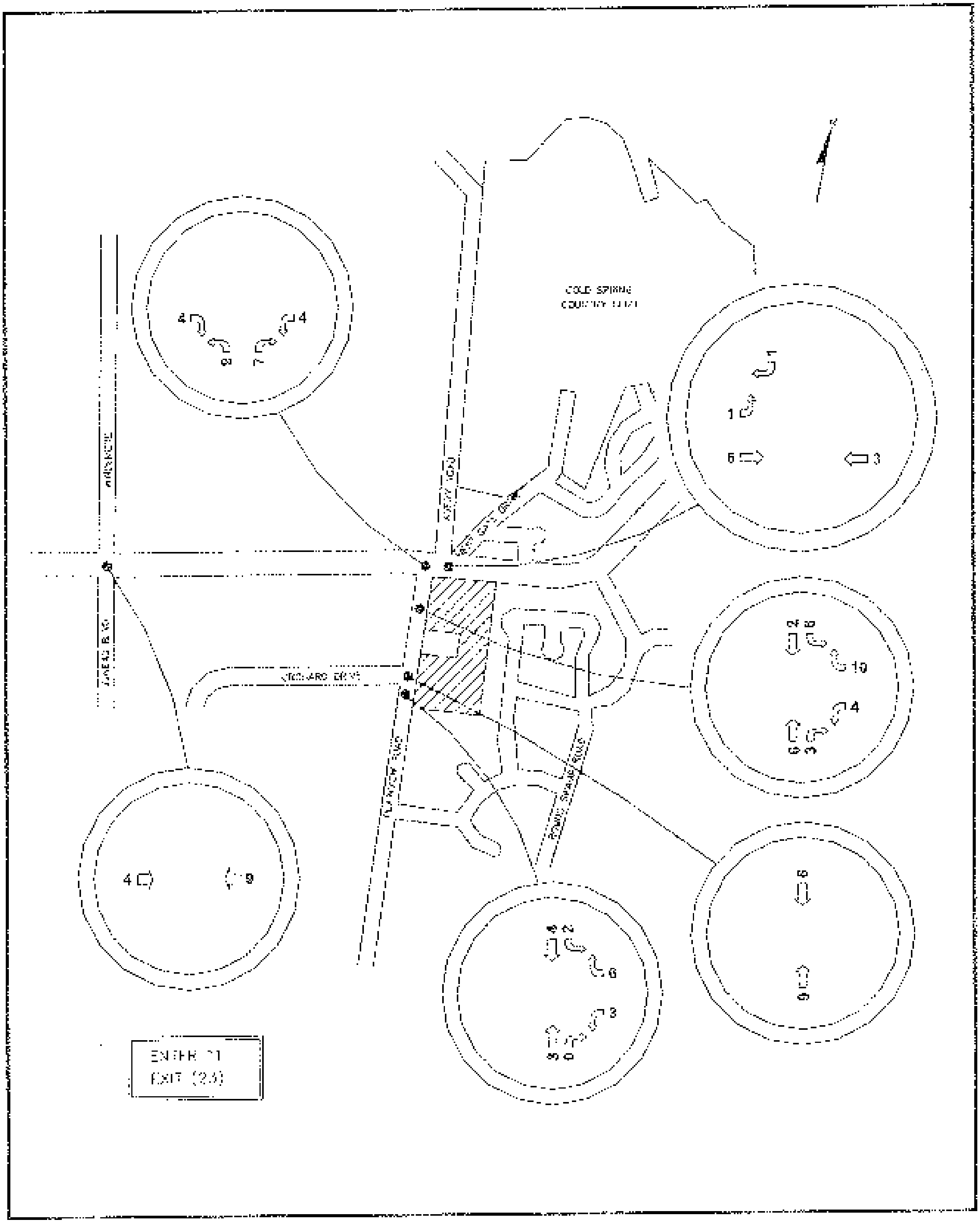


Figure 11: Site Generated AM Traffic Volumes

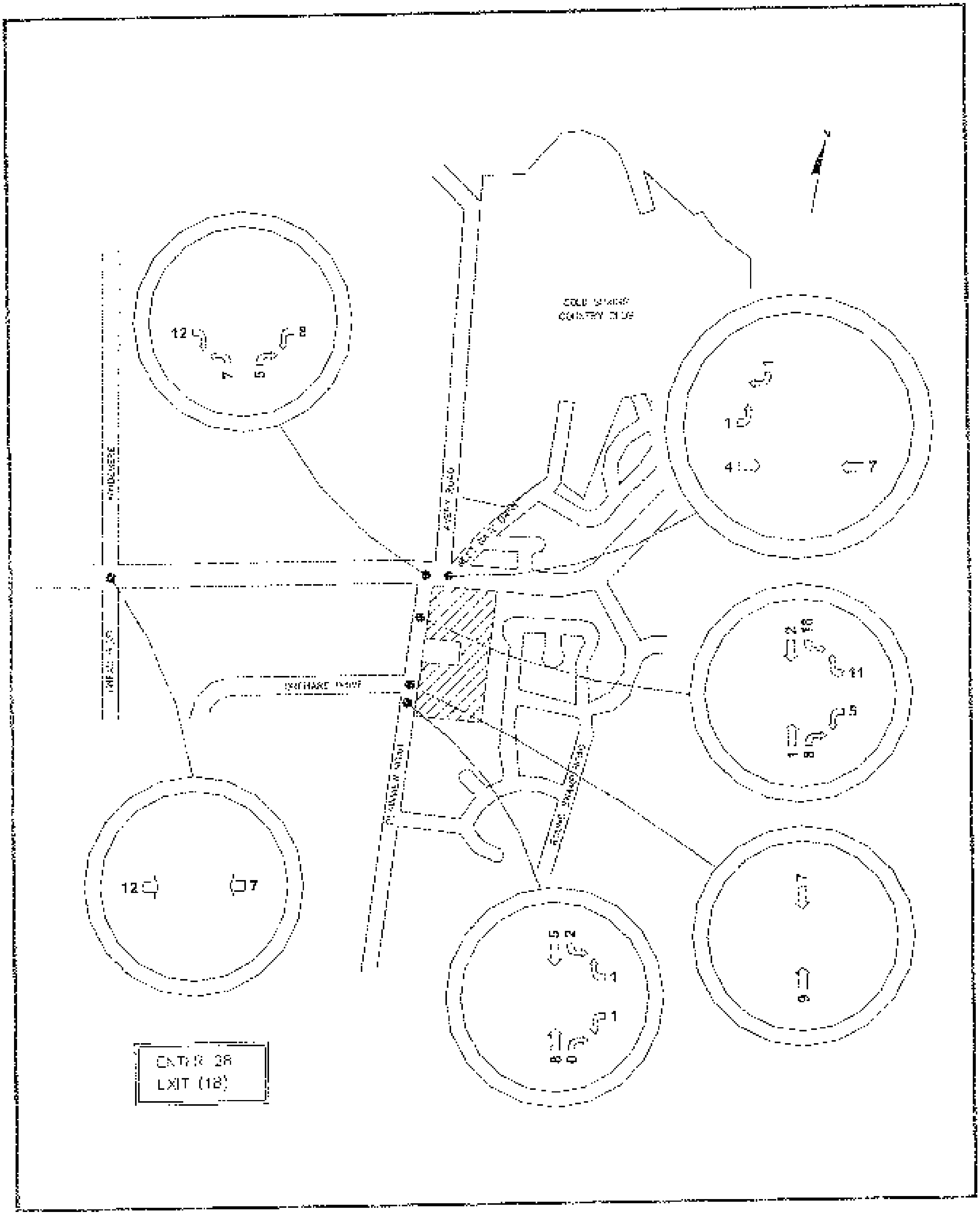


Figure 12: Site Generated PM Traffic Volumes

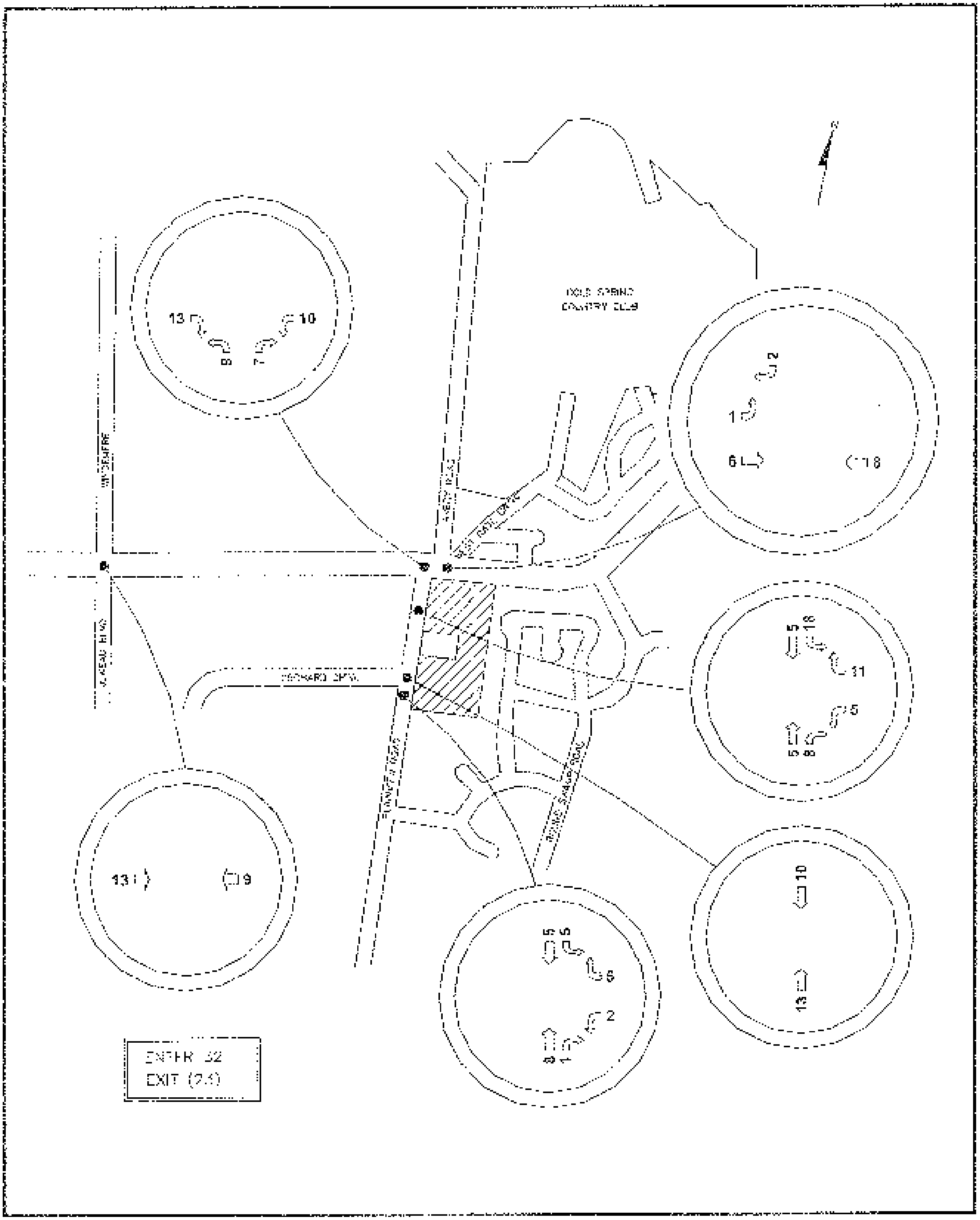


Figure 13: Site Generated Saturday Traffic Volumes

BUILD CONDITION

The Build Condition represents traffic conditions expected at the study intersections in the assumed future build year (2010) with the construction of the proposed project. In this traffic study four separate Build Scenarios were analyzed for each Plan. The following is a brief description of the four build scenarios:

Build Scenario 1 Condition - This condition represents the analyses of the study intersections in 2010 assuming only the proposed project (Kensington Estates) will be built in the study area. The 2010 Build Scenario 1 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed project (Kensington Estates) to the 2010 No Build traffic volumes (Ambient volumes). The 2010 Build Scenario 1 Condition analyses when compared to the 2015 No Build condition analyses will identify impacts that will be created by the proposed Kensington Estate development if, no other planned projects is built. Figures 14, 15 and 16 represent the 2010 Build Volumes under Scenario 1.

Build Scenario 2 Condition - This condition represents the analyses of the study intersections in 2010 assuming the proposed project (Kensington Estates) and other planned projects (Votypka, Woodbury Country Club and The Preserve) are built in the study area. The 2010 Build Scenario 2 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed Keesington Estates, Votypka, Woodbury Country Club and The Preserve developments to the 2010 No Build traffic volumes. The 2010 Build Scenario 2 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments. Figures 17, 18 and 19 represent the 2010 Build Volumes under Scenario 2.

Build Scenario 3 Condition - In addition to the above mentioned projects under Scenario 2, the Town of Huntington requested the consideration of the development of Cold Spring Country Club, alternatively evaluating both residential zoning yields (R-20 and R-40). The Scenario 3 Build condition represents the analyses of the study intersections in 2010 assuming all the proposed project under Scenario 2 and Cold Spring County Club developed at R-40 zoning are built. The 2010 Build Scenario 3 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed developments under Scenario 2 and Cold Spring Country Club developed at R-40 to the 2010 No Build traffic volumes. The 2010 Build Scenario 3 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the projects developed under Scenario 3. Figures 20, 21 and 22 represent the 2010 Build Volumes under Scenario 3.

Build Scenario 4 Condition – The Scenario 4 Build condition represents the analyses of the study intersections in 2010 assuming all the proposed project under Scenario 2 and Cold Spring County Club developed at R-20 zoning are built. The 2010 Build Scenario 4 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed developments under Scenario 2 and Cold Spring Country Club developed at R-20 to the 2010 No Build traffic volumes. The 2010 Build Scenario 4 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the projects developed under Scenario 4. Figures 23, 24 and 25 represent the 2010 Build Volumes under Scenario 4.

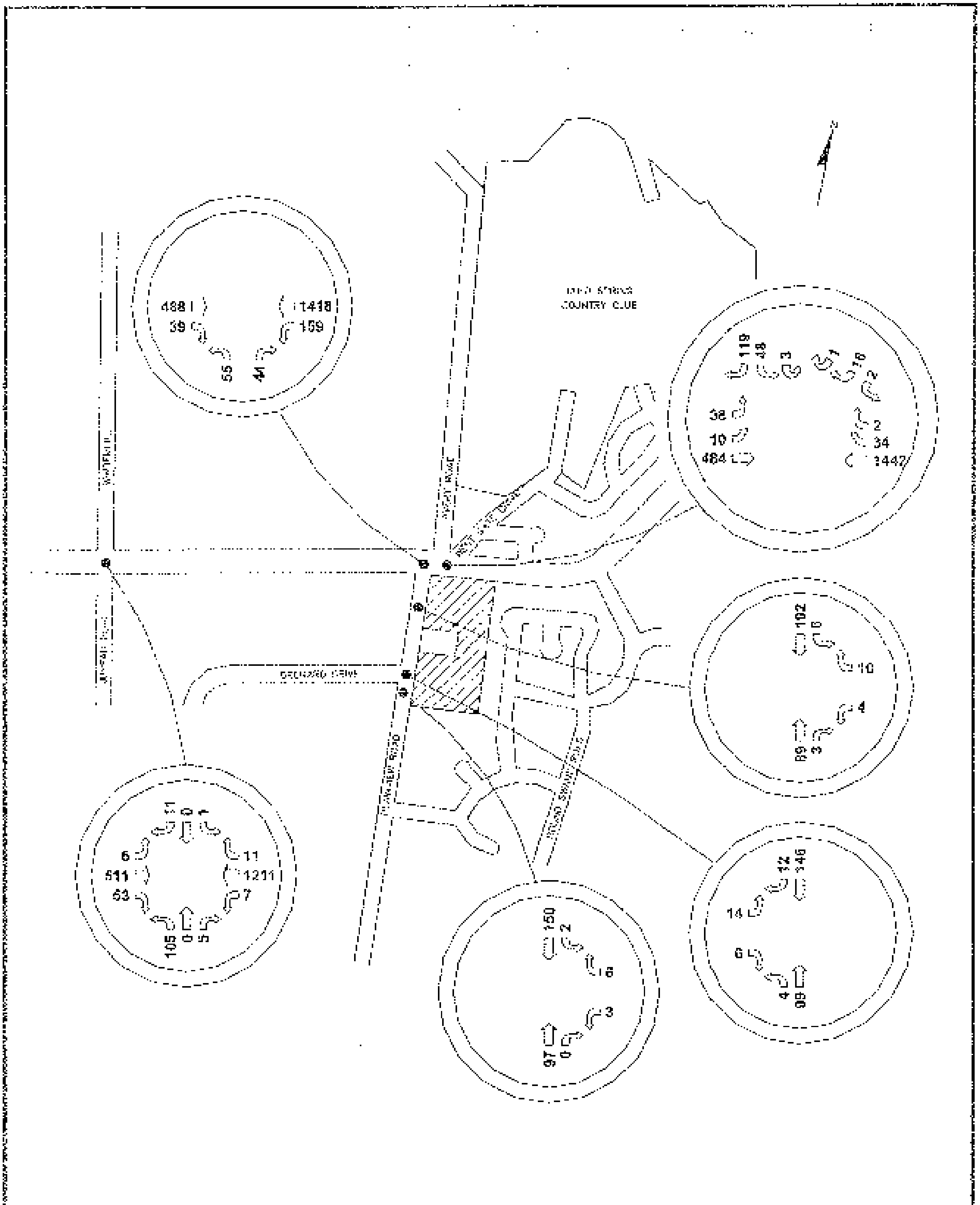


Figure 14: 2010 Build – Plan A, Scenario 1 AM Traffic Volumes

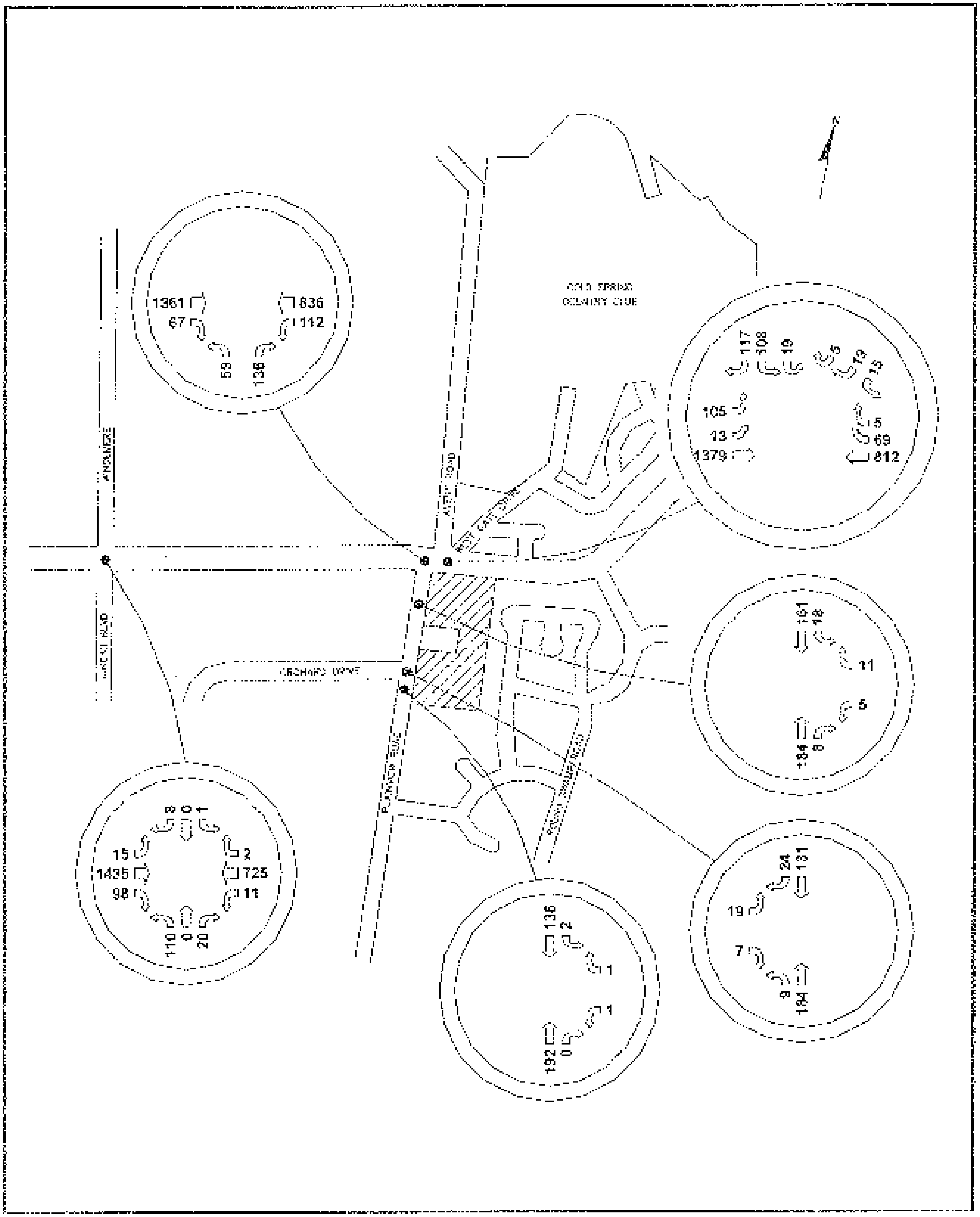


Figure 15: 2010 Build – Plan A, Scenario I PM Traffic Volumes

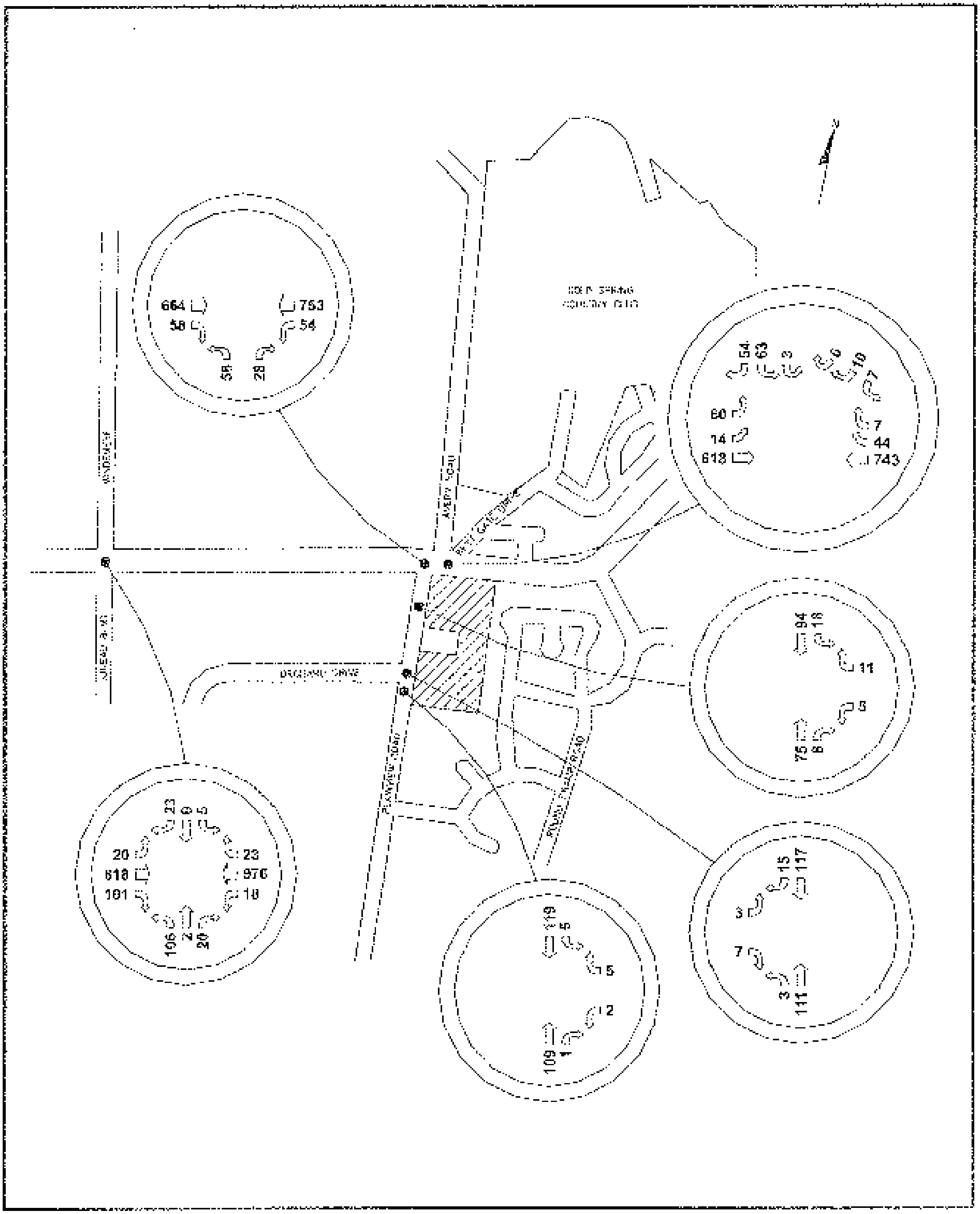


Figure 16: 2010 Build – Plan A, Scenario 1 Saturday Traffic Volumes

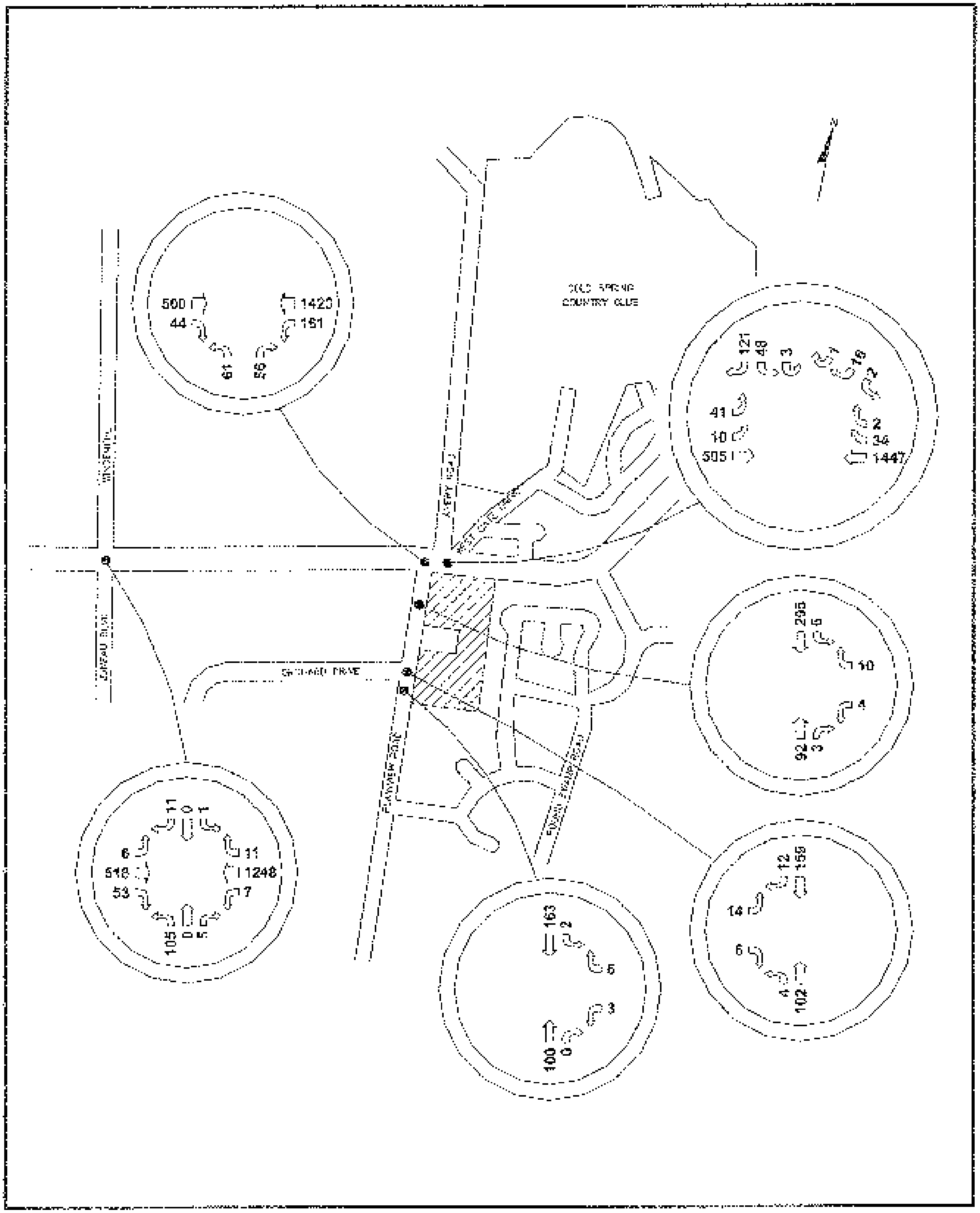


Figure 17: 2010 Build – Plan A, Scenario 2 AM Traffic Volumes

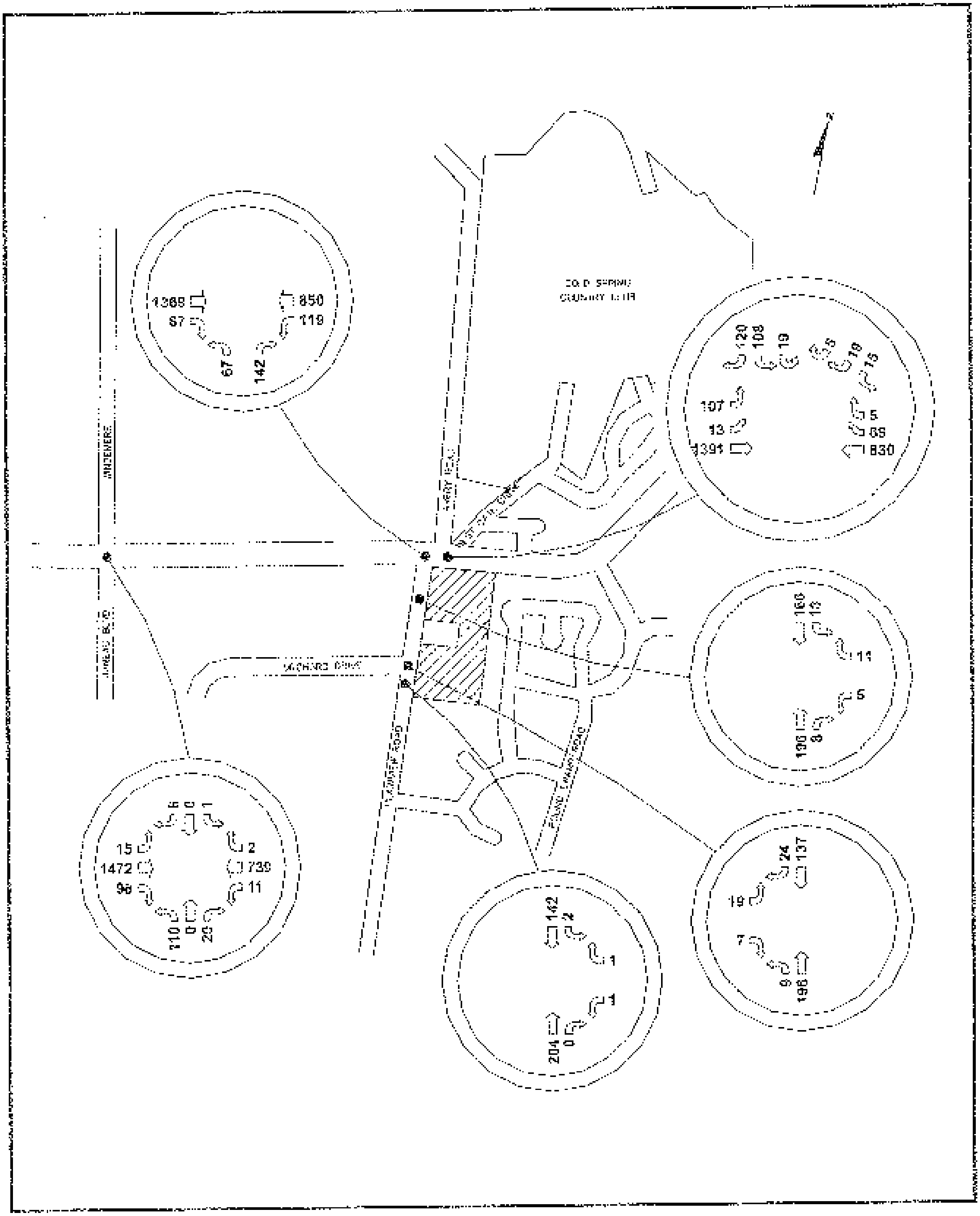


Figure 18: 2010 Build – Plan A, Scenario 2 PM Traffic Volumes

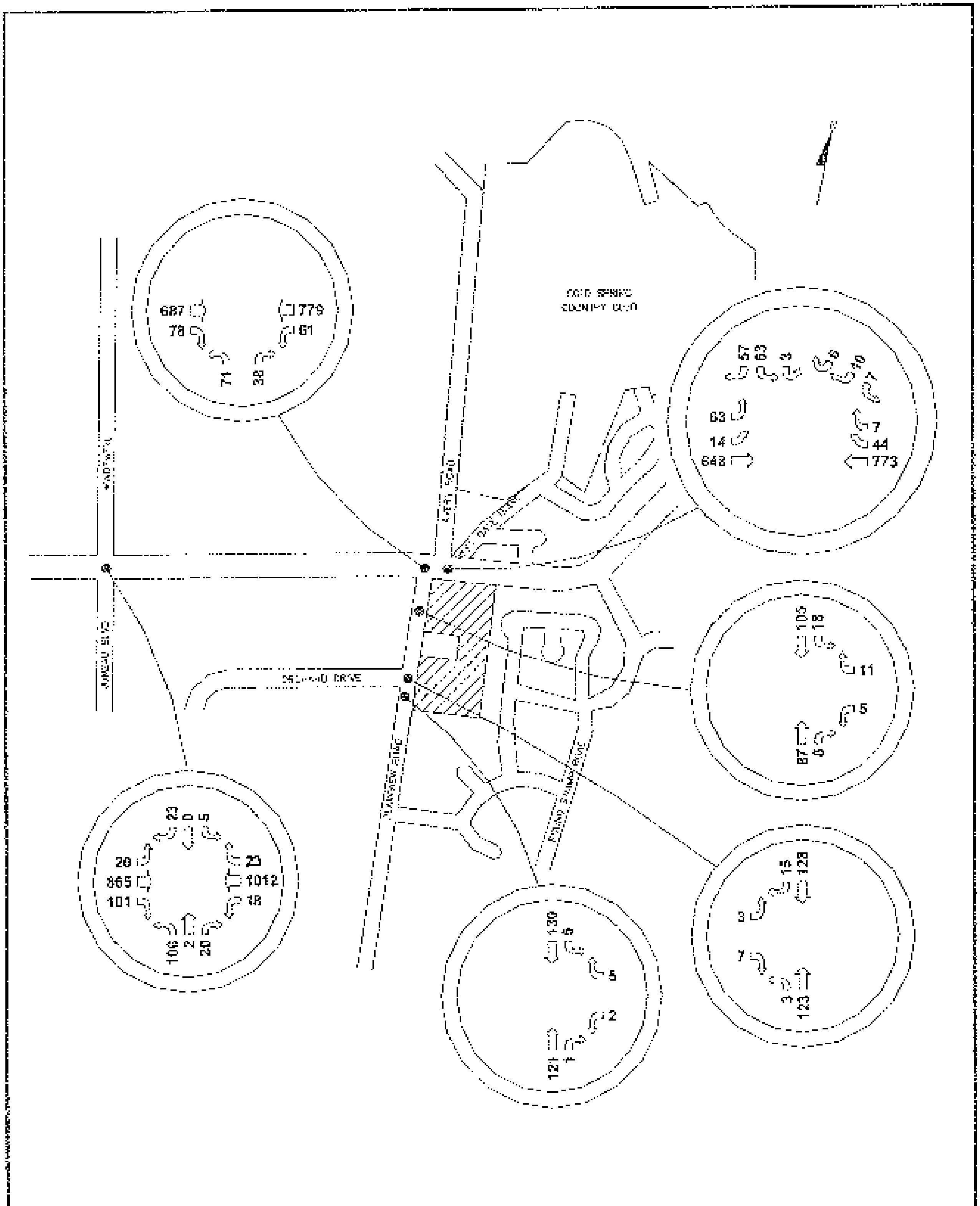


Figure 19: 2010 Build – Plan A, Scenario 2 Saturday Traffic Volumes

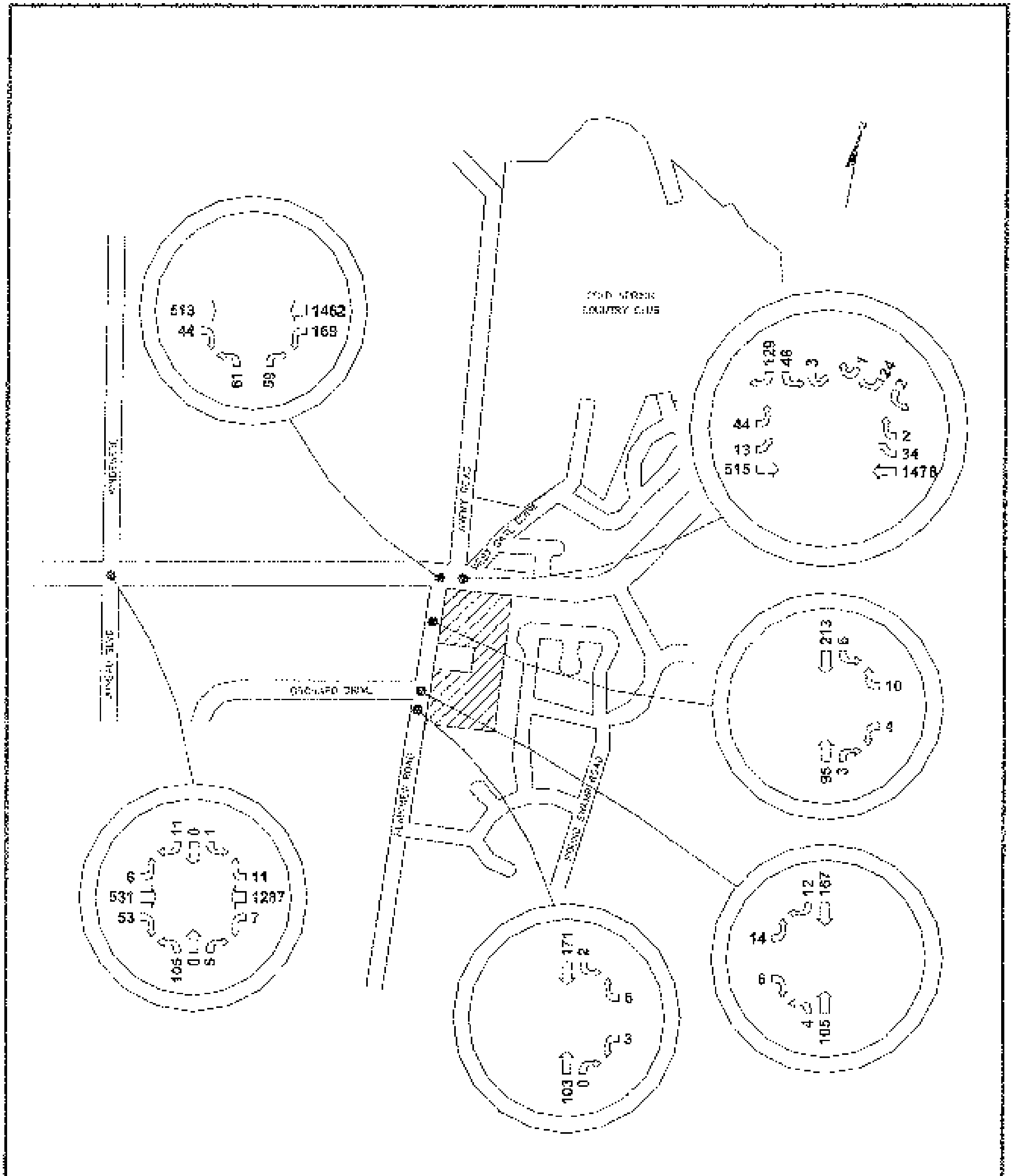


Figure 20: 2010 Build – Plan A, Scenario 3 AM Traffic Volumes

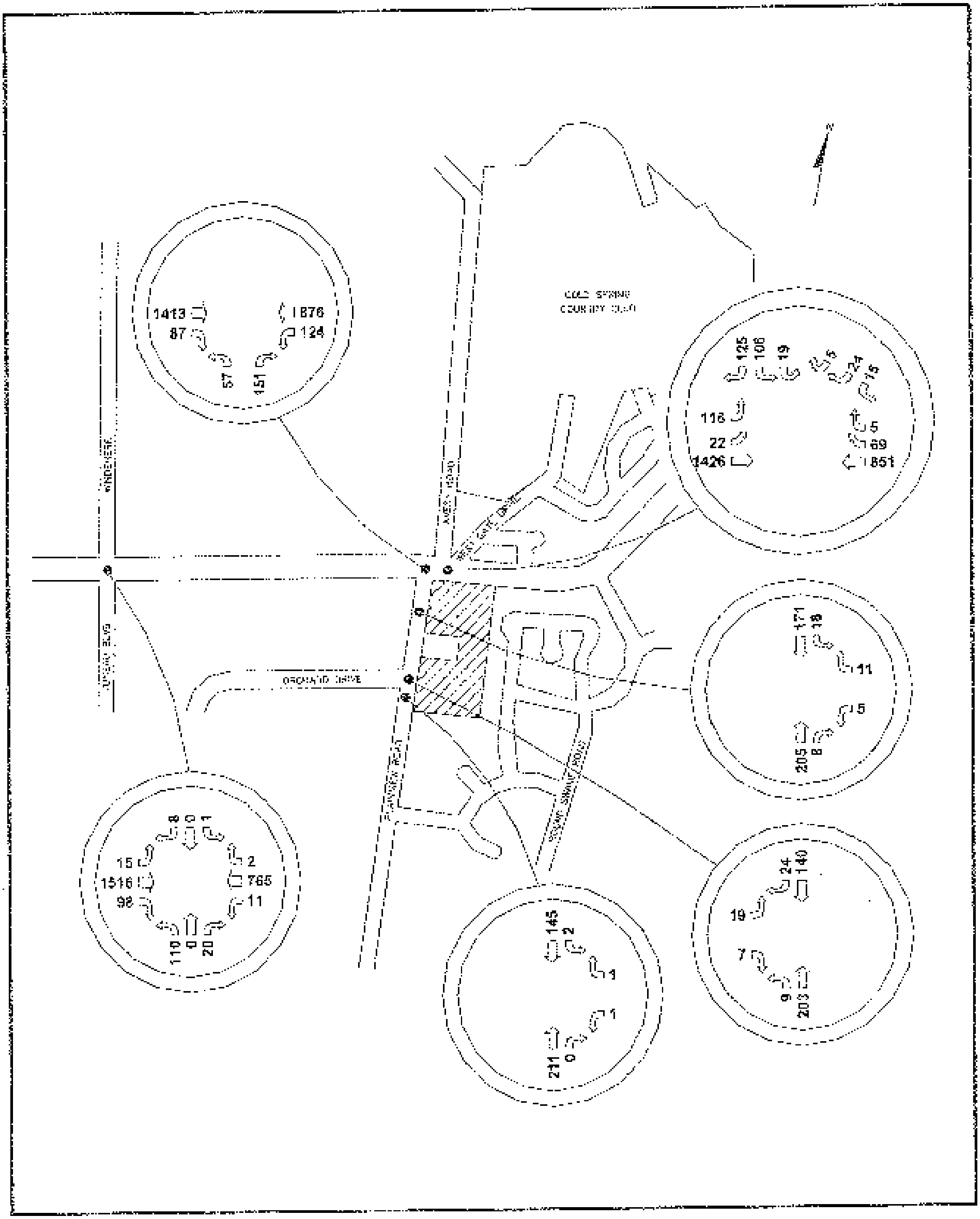


Figure 21: 2010 Build – Plan A, Scenario 3 PM Traffic Volumes

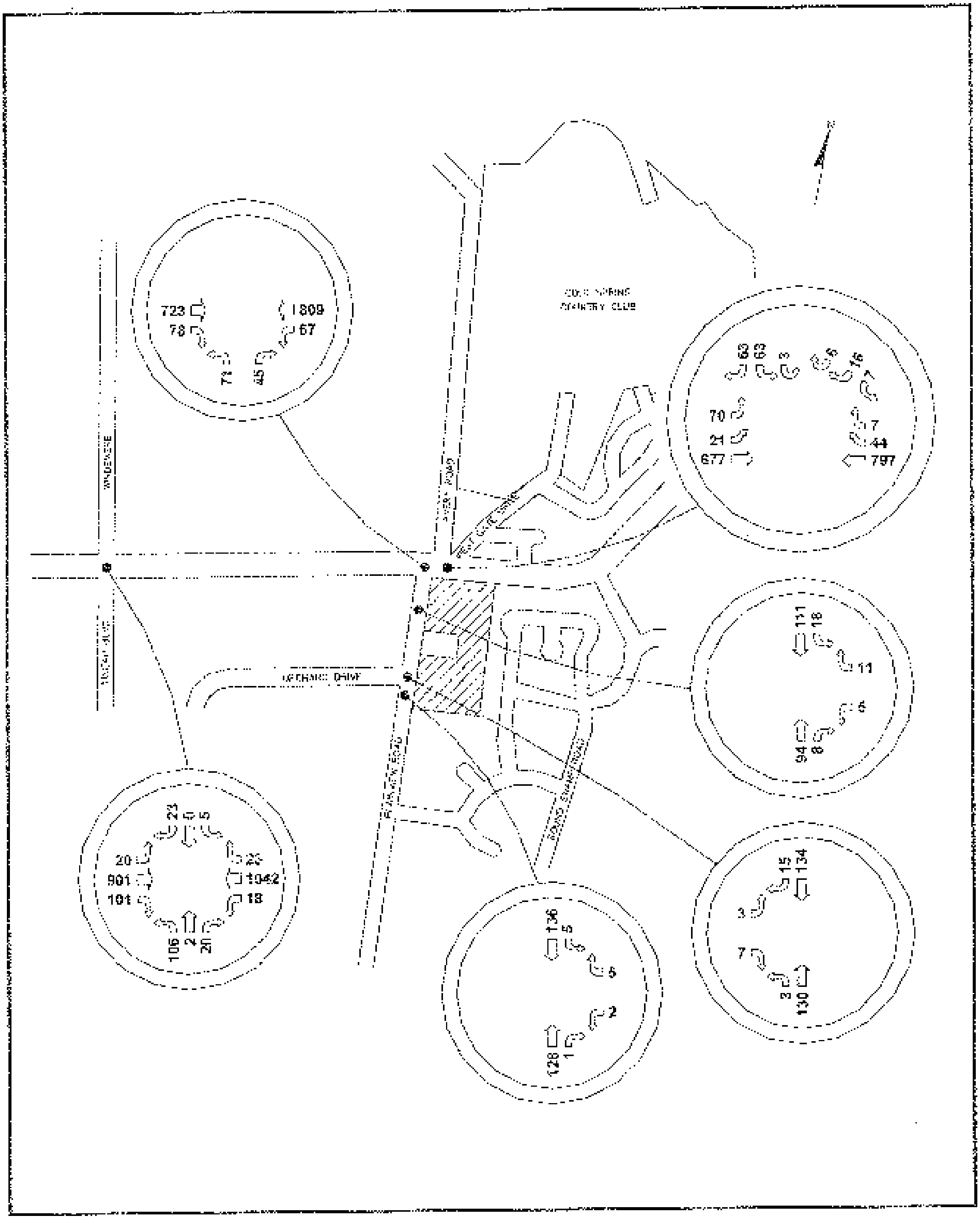


Figure 22: 2010 Build – Plan A, Scenario 3 Saturday Traffic Volumes

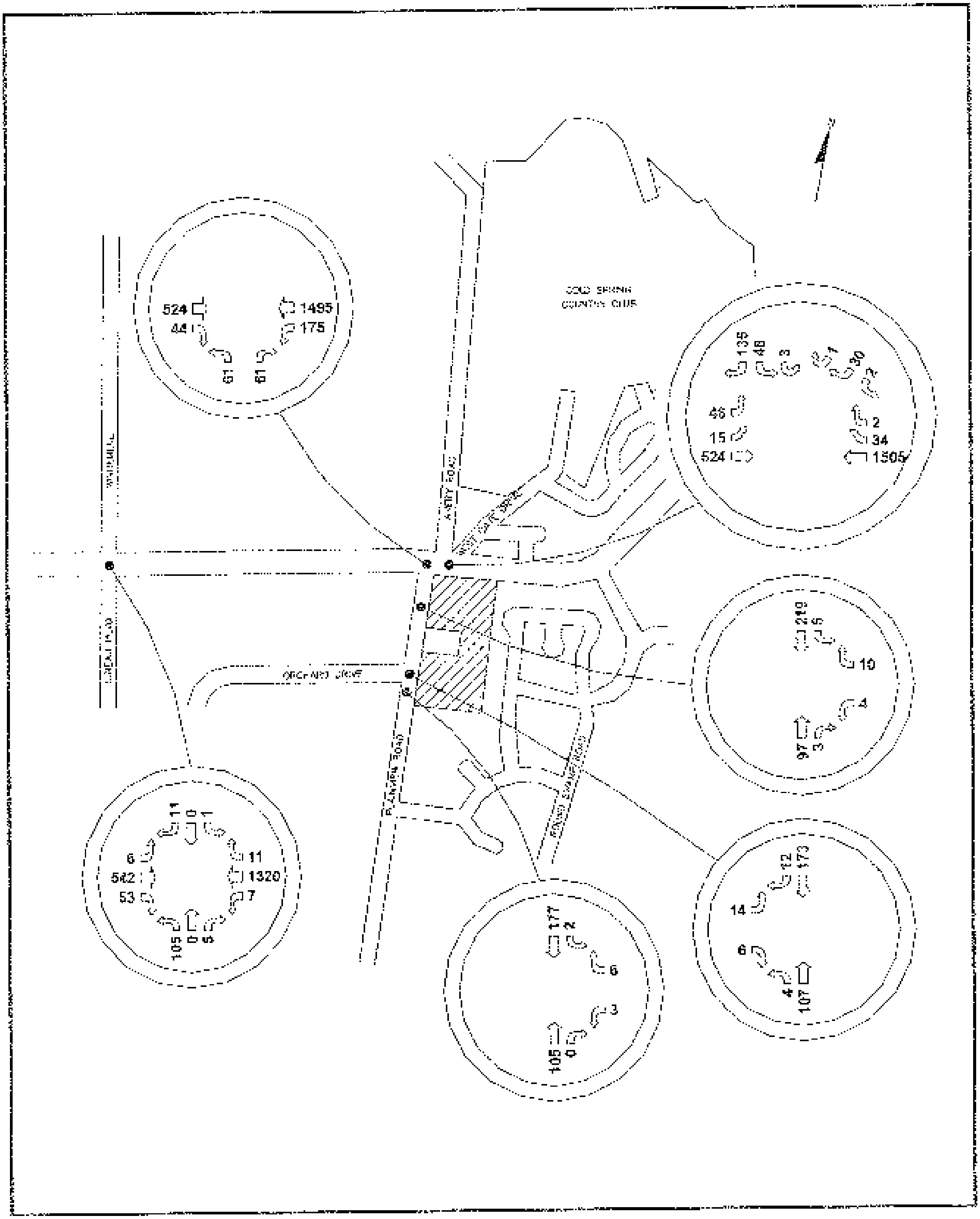


Figure 23: 2010 Build – Plan A, Scenario 4 AM Traffic Volumes

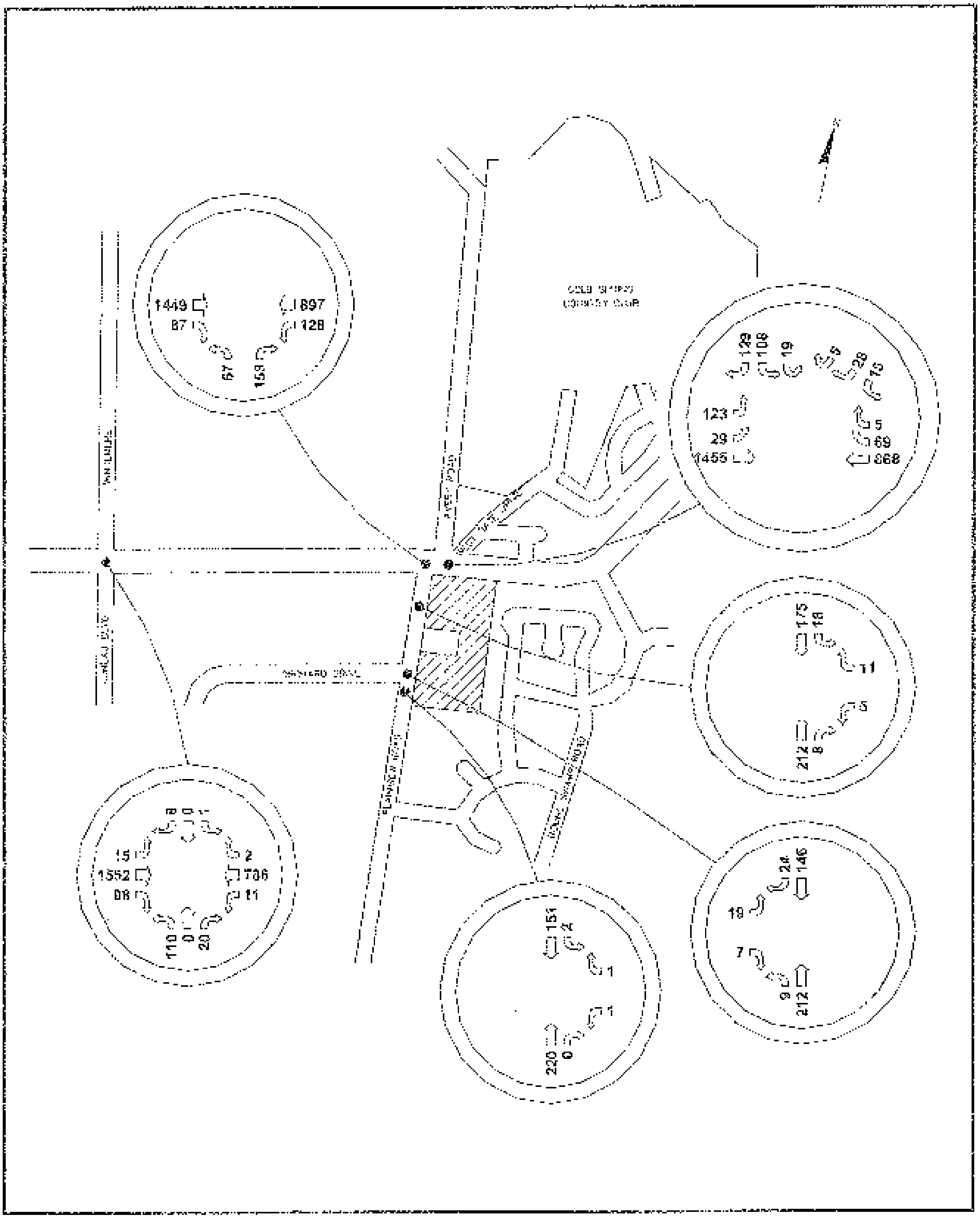


Figure 24: 2010 Build – Plan A, Scenario 4 PM Traffic Volumes

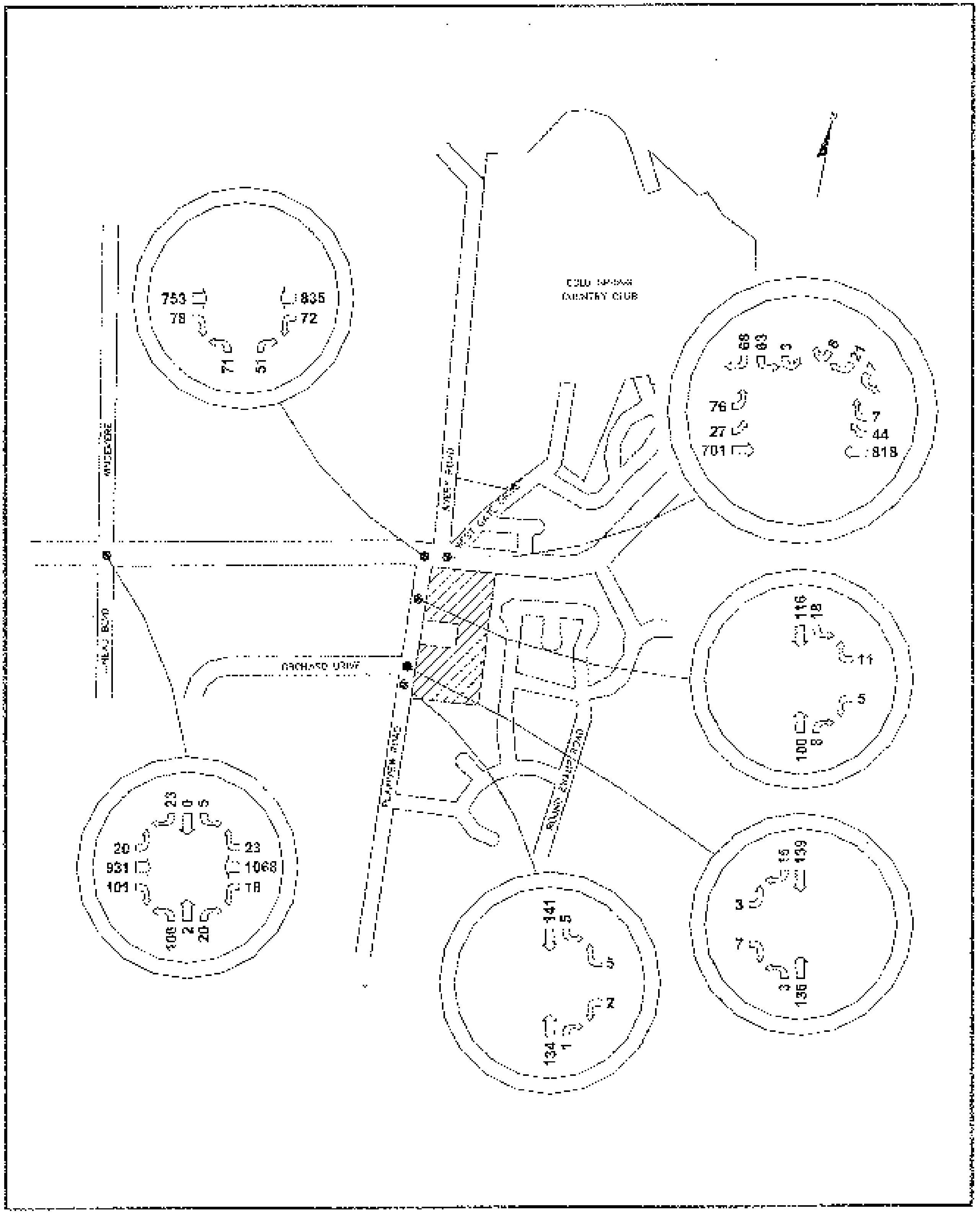


Figure 25: 2010 Build – Plan A, Scenario 4 Saturday Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2000)*, published by the *Transportation Research Board*. *SYNCHRO* and *SimTraffic* were used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix E. The following tables illustrates the LOS summaries at the study intersections for Plans A, B and C under the four build scenarios.

Table 6: Level of Service Summary For Plan A (Signalized Intersections)

Signalized Intersections	Condition	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
Jericho Turnpike (NYS Route 25) at Plainview Road	Existing	A	6.8	C	24.8	A	8.8
	No Build	A	7.4	C	27.2	A	9.0
	Build Scenario 1	A	7.7	C	28.4	A	9.5
	Build Scenario 2	A	8.3	C	30.7	B	10.3
	Build Scenario 3	A	8.6	D	36.0	B	11.1
	Build Scenario 4	A	9.0	D	39.6	B	11.6
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive	Existing	B	19.2	B	14.7	B	12.4
	No Build	C	21.4	B	15.3	B	12.5
	Build Scenario 1	C	21.6	B	16.1	B	12.7
	Build Scenario 2	C	21.7	B	16.8	B	12.8
	Build Scenario 3	C	22.9	B	18.9	B	13.8
	Build Scenario 4	C	23.8	C	21.7	B	14.2
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/Windermere Way	Existing	A	7.6	A	8.3	A	7.9
	No Build	A	7.7	A	8.7	A	7.9
	Build Scenario 1	A	7.7	A	8.7	A	7.8
	Build Scenario 2	A	7.7	A	8.7	A	7.8
	Build Scenario 3	A	7.7	A	8.7	A	7.8
	Build Scenario 4	A	7.7	A	8.8	A	7.7

Table 7: Level of Service Summary for Plan A (Unsignalized intersections)

Location (Unsignalized Intersections)	Approach Movmnt.		AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Plainview Road and Orchard Drive	Existing	NB-LT	A	0.4	A	0.4	A	0.3
		EB-LR	A	9.8	B	10.4	A	9.4
	No Build	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	A	9.9	B	10.6	A	9.4
	Build Scenario 1	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.0	B	10.7	A	9.5
	Build Scenario 2	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.1	B	10.8	A	9.6
	Build Scenario 3	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.2	B	10.9	A	9.7
	Build Scenario 4	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.3	B	11.0	A	9.7
Plainview Road and Site Driveway	Build Scenario 1	SB-LT	A	0.3	A	0.9	A	1.3
		WB-LR	A	9.3	B	10.0	A	9.1
	Build Scenario 2	SB-LT	A	0.2	A	0.9	A	1.2
		WB-LR	A	9.3	B	10.1	A	9.2
	Build Scenario 3	SB-LT	A	0.2	A	0.9	A	1.1
		WB-LR	A	9.4	B	10.2	A	9.3
	Build Scenario 4	SB-LT	A	0.2	A	0.8	A	1.1
		WB-LR	A	9.4	B	10.3	A	9.3

Notes - LOS = Level of Service, Delay = seconds/vehicle

Table 8: Level of Service Summary for Plan B (Signalized intersections)

Signalized Intersections	Condition	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
Jericho Turnpike (NYS Route 25) at Plainview Road	Existing	A	6.8	C	24.8	A	8.8
	No Build	A	7.4	C	27.2	A	9.0
	Build Scenario 1	A	7.5	C	28.0	A	9.2
	Build Scenario 2	A	8.0	C	30.4	B	10.0
	Build Scenario 3	A	8.4	D	35.6	B	10.8
	Build Scenario 4	A	8.8	D	39.2	B	11.4
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive	Existing	B	19.2	B	14.7	B	12.4
	No Build	C	21.4	B	15.5	B	12.5
	Build Scenario 1	C	21.5	B	15.8	B	12.5
	Build Scenario 2	C	21.7	B	16.8	B	12.6
	Build Scenario 3	C	22.9	B	19.0	B	13.6
	Build Scenario 4	C	23.8	C	22.1	B	14.1
Jericho Turnpike (NYS Route25) at Juneau Boulevard/Windermere Way	Existing	A	7.6	A	8.3	A	7.9
	No Build	A	7.7	A	8.7	A	7.9
	Build Scenario 1	A	7.7	A	8.7	A	7.9
	Build Scenario 2	A	7.7	A	8.7	A	7.8
	Build Scenario 3	A	7.7	A	8.7	A	7.8
	Build Scenario 4	A	7.7	A	8.8	A	7.7

Table 9: Level of Service Summary for Plan B (Unsignalized intersections)

Location (Unsignalized Intersections)	Approach Movmnt.		AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Plainview Road and Orchard Drive	Existing	NB-LT	A	0.4	A	0.4	A	0.3
		EB-LR	A	9.8	B	10.4	A	9.4
	No Build	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	A	9.9	B	10.6	A	9.4
	Build Scenario 1	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.0	B	10.6	A	9.5
	Build Scenario 2	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.1	B	10.8	A	9.6
	Build Scenario 3	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.2	B	10.9	A	9.6
	Build Scenario 4	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.2	B	11.0	A	9.7
Jericho Turnpike and Site Driveway	Build Scenario 1	NB-L	D	34.5	F	272.2	D	26.5
		NB-R	A	9.7	B	11.5	B	10.3
		WB-L	A	8.6	C	17.6	A	9.3
	Build Scenario 2	NB-L	E	35.8	F	302.4	D	28.4
		NB-R	A	9.8	B	11.5	B	10.4
		WB-L	A	8.7	C	17.9	A	9.4
	Build Scenario 3	NB-L	E	37.4	F	392.2	D	30.2
		NB-R	A	9.8	B	11.3	B	10.4
		WB-L	A	8.7	C	18.9	A	9.5
	Build Scenario 4	NB-L	E	38.8	F	493.3	D	32.0
		NB-R	A	9.8	B	11.2	B	10.5
		WB-L	A	8.7	C	19.9	A	9.6

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 10: Level of Service Summary for Plan C (Signalized intersections)

Signalized Intersections	Condition	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
Jericho Turnpike (NYS Route 25) at Plainview Road	Existing	A	6.8	C	24.8	A	8.8
	No Build	A	7.4	C	27.2	A	9.0
	Build Scenario 1	A	7.6	C	28.3	A	9.3
	Build Scenario 2	A	8.2	C	30.5	B	10.2
	Build Scenario 3	A	8.5	D	35.4	B	11.0
	Build Scenario 4	A	8.9	D	39.1	B	11.5
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive	Exising	B	19.2	B	14.7	B	12.4
	No Build	C	21.4	B	15.5	B	12.5
	Build Scenario 1	C	21.6	B	15.7	B	12.6
	Build Scenario 2	C	21.7	B	16.7	B	12.7
	Build Scenario 3	C	22.9	B	18.6	B	13.7
	Build Scenario 4	C	23.8	C	21.5	B	14.2
Jericho Turnpike (NYS Route25) at Juneau Boulevard/Windermere Way	Existing	A	7.6	A	8.3	A	7.9
	No Build	A	7.7	A	8.7	A	7.9
	Build Scenario 1	A	7.7	A	8.7	A	7.9
	Build Scenario 2	A	7.7	A	8.7	A	7.8
	Build Scenario 3	A	7.7	A	8.7	A	7.8
	Build Scenario 4	A	7.7	A	8.8	A	7.7

Table 11: Level of Service Summary for Plan C (Unsignalized intersections)

Location (Unsignalized Intersections)	Approach Movmnt.		AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Plainview Road and Orchard Drive	Existing	NB-LT	A	0.4	A	0.4	A	0.3
		EB-LR	A	9.8	B	10.4	A	9.4
	No Build	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	A	9.9	B	10.6	A	9.4
	Build Scenario 1	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.0	B	10.7	A	9.5
	Build Scenario 2	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.1	B	10.8	A	9.6
	Build Scenario 3	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.2	B	10.9	A	9.7
	Build Scenario 4	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.3	B	11.0	A	9.7
Plainview Road and Site Driveway	Build Scenario 1	SB-LT	A	0.3	A	0.9	A	1.3
		WB-LR	A	9.5	B	10.2	A	9.2
	Build Scenario 2	SB-LT	A	0.2	A	0.9	A	1.2
		WB-LR	A	9.5	B	10.3	A	9.3
	Build Scenario 3	SB-LT	A	0.2	A	0.9	A	1.1
		WB-LR	A	9.6	B	10.4	A	9.4
	Build Scenario 4	SB-LT	A	0.2	A	0.8	A	1.1
		WB-LR	A	9.6	B	10.5	A	9.4
Jericho Turnpike and Site Driveway	Build Scenario 1	NB-RT	A	9.7	B	11.5	B	10.2
	Build Scenario 2	NB-RT	A	9.7	B	11.5	B	10.3
	Build Scenario 3	NB-RT	A	9.8	B	11.4	B	10.4
	Build Scenario 4	NB-RT	A	9.8	B	11.2	B	10.4

Notes: LOS – Level of Service, Delay – seconds/vehicle0

Jericho Turnpike and Plainview Road (Plans A, B and C)

During the No Build Condition, the signalized intersection of Jericho Turnpike and Plainview Road operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS C during the weekday PM peak hour. After the completion of the projects under Scenarios 1 and 2, the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods. However with the construction of the Cold Spring Harbor residential development (scenarios 3 and 4), the LOS at the intersection will change from LOS C to D during the PM peak hour and from LOS A to B during the Saturday midday peak hour.

Jericho Turnpike and Avery Road/West Gate Drive(Plans A, B and C)

During the No Build Condition, the signalized intersection of Jericho Turnpike and Avery Road/West Gate Drive operates at LOS C during the weekday AM peak hour and at LOS B during the weekday PM and Saturday midday peak hours. After the completion of the projects, under Scenarios 1, 2 and 3 the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods. However with the construction of the Cold Spring Harbor residential development under Scenario 4, the LOS at the intersection will change from LOS B to C during the PM peak hour.

Jericho Turnpike and Juneau Boulevard/Windermere Way (Plans A, B and C)

During the No Build Condition, the signalized intersection of Jericho Turnpike and Juneau Boulevard/Windermere Way operates at LOS A during the analyzed peak periods. After the completion of the projects, the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods.

Plainview Road and Orchard Drive (Plans A, B and C)

During the No Build Condition, the northbound left turn movement at the stop-controlled intersection of Plainview Road and Orchard Drive will operate at LOS A during the weekday AM, weekday PM and Saturday midday peak hours. The eastbound Orchard Drive approach operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the PM peak hour. After the completion of the project, the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods, except for the eastbound approach that change from LOS A to LOS B during the AM peak hour.

Site Driveway at Plainview Road (Plans A and C)

The results of the analyses show that, the proposed site access along Plainview Road will function well. More specifically, the southbound Plainview Road left turn movement will operate at LOS A during the weekday AM, PM and Saturday midday peak hours. The westbound Site Driveway approach will operate at LOS B or better during the weekday AM, PM and Saturday midday peak hours.

Site Driveway at Jericho Turnpike (Plan B)

The results of the analyses show that, the proposed full movement site access along Jericho Turnpike will function well except for the northbound left turn movement that operate at LOS E and F during the weekday AM and PM peak hours.

Right turns out only Site Driveway at Jericho Turnpike (Plan C)

The results of the analyses show that, the proposed rights out only site access along Jericho Turnpike will function well during all the analyzed peak periods.

COMPARISON OF PROPOSED PLANS

It can be seen from the review of the levels of service tables for Plans A, B, C that, the levels of service at the study intersections are similar for each of the alternative plans. The similarity of the levels of service may be attributed to the fact that, the traffic generated by the proposed development is not significantly high; therefore redistributing this site traffic to the study intersection from plan to plan will not significantly impact the operation of the study intersections.

QUEUE ANALYSES

Queue analyses were conducted to analyze the stacking capacity of the left turn lanes on Jericho Turnpike at Plainview Road/Avery Road/West Gate Drive under existing, No Build and cumulative build-out conditions as requested by the Town of Oyster Bay Department of Environmental Resources. As previously mentioned, the intersections of Jericho Turnpike at Plainview Road and Jericho Turnpike at Avery Road/West Gate Drive are approximately 140 feet apart as measured between stop lines. The distance between the two intersections provides back to back left turn lanes for vehicles making left turns onto Plainview Road and Avery Road/West Gate Drive from Jericho Turnpike.

The estimates of vehicle queuing distances at the eastbound left turn lane onto Avery Road Road/West Gate Drive and the westbound left turn lane onto Plainview Road during the peak hours were taken from the capacity analysis worksheets presented in the appendix. These queuing estimates are based on the traffic signal operation and estimated volumes. The following tables summarize the results of the queue analyses.

Table 12: Queue Analyses (Plan A)

Approach	Time Period	Estimated Average Queue Length (ft)					
		Existing	No Build	Build Scenario 1	Build Scenario 2	Build Scenario 3	Build Scenario 4
Eastbound Left turn lane onto Avery Road/West Gate Drive	AM	2	6	6	7	9	11
	PM	14	14	29	29	31	35
	Saturday	0	0	0	1	1	3
Westbound Left turn Lane onto Plain View Road	AM	49	51	51	53	61	65
	PM	48	51	58	65	70	72
	Saturday	11	13	13	16	18	23

Table 13: Queue Analyses (Plan B)

Approach	Time Period	Estimated Average Queue Length (ft)					
		Existing	No Build	Build Scenario 1	Build Scenario 2	Build Scenario 3	Build Scenario 4
Eastbound Left turn lane onto Avery Road/West Gate Drive	AM	2	6	6	7	9	11
	PM	14	14	14	29	31	30
	Saturday	0	0	0	0	0	5
Westbound Left turn Lane onto Plain View Road	AM	49	51	51	52	58	64
	PM	48	51	53	59	65	68
	Saturday	11	13	13	13	16	18

Table 14: Queue Analyses (Plan C)

Approach	Time Period	Estimated Average Queue Length (ft)					
		Existing	No Build	Build Scenario 1	Build Scenario 2	Build Scenario 3	Build Scenario 4
Eastbound Left turn lane onto Avery Road/West Gate Drive	AM	2	6	6	7	9	11
	PM	14	14	14	29	31	35
	Saturday	0	0	0	1	1	3
Westbound Left turn Lane onto Plain View Road	AM	49	51	51	53	61	65
	PM	48	51	59	66	71	73
	Saturday	11	13	13	16	18	22

A review of the tables above reveals that, the Jericho Turnpike left turn storage length provided between Plainview Road and Avery Road will be adequate to accommodate the average left turn queues that will be created by the traffic from the proposed project under all the analyzed plans and scenarios without disrupting the traffic flow on Jericho Turnpike.

CONCLUSION

Nelson & Pope has investigated the potential traffic impacts associated with the proposed application to construct 77 age-restricted housing units and 3 single family homes at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The site is located in both Nassau and Suffolk Counties. The following is a summary of this investigation and the findings thereof:

1. The following intersections were included in this study:

   - Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive
   - Jericho Turnpike (NYS Route 25) at Plainview Road
   - Jericho Turnpike (NYS Route 25) at Juneau Boulevard/Windermere Way
   - Plainview Road at Orchard Drive

2. Existing volumes were counted in July and November 2006 and in May 2007 during the weekday AM, PM and Saturday midday peak hours. Future No Build traffic volumes were determined by applying a 1.0% NYSDOT annual growth factor to the existing traffic volumes. The site-generated traffic was estimated and distributed to the study intersections and then added to the No Build traffic volumes to generate the future Build traffic volumes.

3. The proposed age-restricted residential development is projected to generate 34 trips during the AM peak hour (11 entering, 23 exiting), 46 trips during the PM peak hour (28 entering, 18 exiting) and 55 trips during the Saturday midday peak hour (32 entering and 23 exiting).

4. Three alternative site access plans were evaluated for the proposed development. The following is a brief description of each site access plan:

   - ***Plan A (Main Plan)***: Under Plan A, access to the site was provided via one full movement driveway on Plainview Road. 77 age restricted condominium units and 3 single family homes will be constructed on site under this plan.

   - ***Plan B (Alternative Plan)***: Under Plan B, access to the site was provided via one full movement driveway on Jericho Turnpike. 75 age restricted condominium units and 3 single family homes will be constructed on site under this plan.

   - ***Plan C (Alternative Plan)***: Under Plan C, access to the site was provided via one full movement driveway on Plainview Road and a right turns out only driveway on Jericho Turnpike. 77 age restricted condominiums units and 3 single family homes will be constructed on site under this plan.

5. As requested by the Towns of Huntington and Oyster Bay, four (4) build scenarios were analyzed for each of the three access plans.

6. After the completion of the project, the intersection of Jericho Turnpike (NYS Route 25) at Plainview Road will continue to operate at No Build LOS A during the AM peak hour. During the PM peak hour the intersection will continue to operate at No Build LOS C under scenarios 1 and 2 and will slightly degrade to LOS D under Scenario 3 and 4 with an increase in delay of 5.3 seconds and 8.9 seconds respectively. During the Saturday midday peak hour, the intersection will continue to operate at No Build LOS A under scenario 1 and will slightly degrade to LOS B under Scenarios 2, 3 and 4 with less than 3 seconds increase in delay.

7. After the completion of the project, the intersection of Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive will continue to operate at No Build LOS C, B and B during the weekday AM, PM and Saturday midday peak hours respectively under scenarios 1, 2 and 3 and will degrade to a level of service C during the PM peak hour under scenario 4.

8. After the completion of the project, the intersection of Jericho Turnpike (NYS Route 25) at Juneau Boulevard/Windermere Way will continue to operate at No Build LOS A during the weekday AM, PM and Saturday midday peak hours under scenarios 1, 2, 3 and 4.

9. After the completion of the project, the southbound Plainview Road left turn movement at the intersection of Plainview Road and Site Driveway will operate at LOS A during the weekday AM, PM and Saturday midday peak hours. The westbound Site Driveway approach will operate at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the weekday PM peak hour.

10. The westbound left turn at the full movement driveway on Jericho Turnpike proposed under Plan B will operate at LOS A during the weekday AM and Saturday midday peak hours and at LOS C during the weekday PM peak hours. The northbound site driveway left turn movement onto Jericho turn pike will operate at LOS E, F and D during the weekday AM, PM and Saturday midday peak hours. The northbound site driveway right turn movement will operate at LOS A, B and B during the weekday AM, PM and Saturday midday peak hours.

Based on our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of

Nelson & Pope that the construction of the proposed age-restricted residential development will not create significant impacts on the adjacent street network.

KENSINGTON ESTATES
TOWNS OF HUNTINGTON AND OYSTER BAY

APPENDIX

August 2007
Revised April 2008

N & P JOB NO. 03469

Appendix A: Existing Traffic Volume

TURNING MOVEMENT DATA

INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD

DATE COLLECTED: 11/02/06 THURSDAY

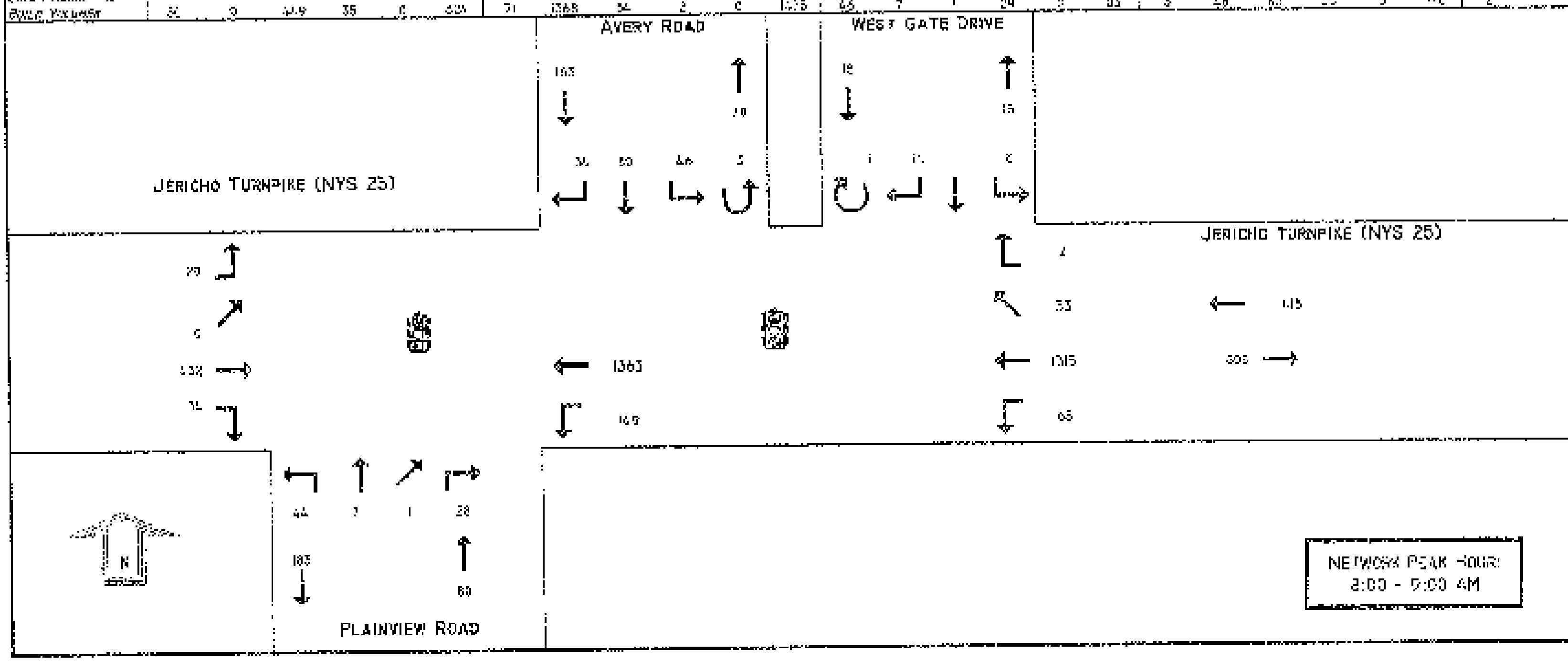
PROJECT TITLE: TRIANGLE COUNTIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND LEFT	EB FAR LEFT	EB THRU	EB RIGHT	EB RTOR	EB TOTAL	WESTBOUND LEFT	WB THRU	WB FAR RIGHT	WB RIGHT	WB RTOR	WB TOTAL
7:00 AM	3	27	51	6	0	87	1	213	11	0	0	260
7:15 AM	9	12	49	1	0	71	8	263	21	0	0	297
7:30 AM	[illegible]	7	64	4	0	85	4	328	15	0	0	381
7:45 AM	7		94	6	0	105	6	274	10	0	0	300
8:00 AM	7	5	100	13	0	129	13	333	4	2	[illegible]	352
8:15 AM	3	[illegible]	98	6	[illegible]	108	21	311	6	0	0	330
8:30 AM	10	1	170	9	0	[illegible]	20	357	11	0	0	390
8:45 AM	9	1	113	6	0	128	14	314	17	0	0	346
NETWORK PEAK HOUR: 8:00 - 9:00 AM												
PEAK HOUR VOLUMES	29	9	432	34	0	504	60	1315	53	2	0	1418
PEAK HOUR FACTOR						0.87						0.92
SEASONAL ADJUSTMENT FACTOR = 1.000												
ADJUSTED VOLUMES	29	9	432	34	0	504	56	1316	52	2	0	1419
GROWTH FACTOR	1.040											
2010 AMBIENT NO BUILD VOLUMES	30	9	449	35	0	525	71	1368	54	2	0	1495

START TIME	NORTHBOUND LEFT	NB THRU	NB R THRU	NB RIGHT	NB RTOR	NB TOTAL	SOUTHBOUND (AVERY RD) LEFT 1	LEFT 2	THRU	RIGHT	RTOR	TOTAL
7:00 AM	15	4	1	1	0	22	1	4	7	4	0	16
7:15 AM	3	2	0	7	0	12	[illegible]	4	9	8	0	21
7:30 AM	24	7	0	5	0	37	2	7	7	5	0	21
7:45 AM	16	4	0	2	0	27	3	4	12	1	0	24
8:00 AM	9	3	2	4	0	17	0	7	29	7	0	43
8:15 AM	10	1	0	10	0	21	0	7	[illegible]	5	0	25
8:30 AM	15	7	0	7	0	22	2	16	17	12	0	47
8:45 AM	12	3	1	8	0	25	1	20	5	[illegible]	0	43
NETWORK PEAK HOUR: 8:00 - 9:00 AM												
PEAK HOUR VOLUMES	44	7	1	26	0	80	3	46	50	34	0	163
PEAK HOUR FACTOR						0.91						0.83
ADJUSTED VOLUMES	44	7	1	28	0	80	3	46	80	34	0	163
2010 AMBIENT NO BUILD VOLUMES	46	7	1	29	0	83	3	48	83	35	0	170

START TIME	SOUTHBOUND (WEST GATE DRIVE) LEFT	THRU	RIGHT	RIGHT 2	RTOR	TOTAL	TOTAL	CUM. HOURLY
7:00 AM	1	1	2	0	0	4	369	
7:15 AM	2	0	2	0	0	4	415	
7:30 AM	1	1	4	0	0	6	520	
7:45 AM	2		3	0	0	6	472	1795
8:00 AM	0	4	3	0	0	3	531	1958
8:15 AM	0		8	1	0	10	507	2045
8:30 AM	2	0	2	0	0	4	615	2125
8:45 AM	0	0	1	0	0	1	532	2185
NETWORK PEAK HOUR: 8:00 - 9:00 AM								
PEAK HOUR VOLUMES	2	1	14	1	0	18		
PEAK HOUR FACTOR						0.60		
ADJUSTED VOLUMES	2	1	14	1	0	18	2185	
2010 AMBIENT NO BUILD VOLUMES	2		15	1	0	19		



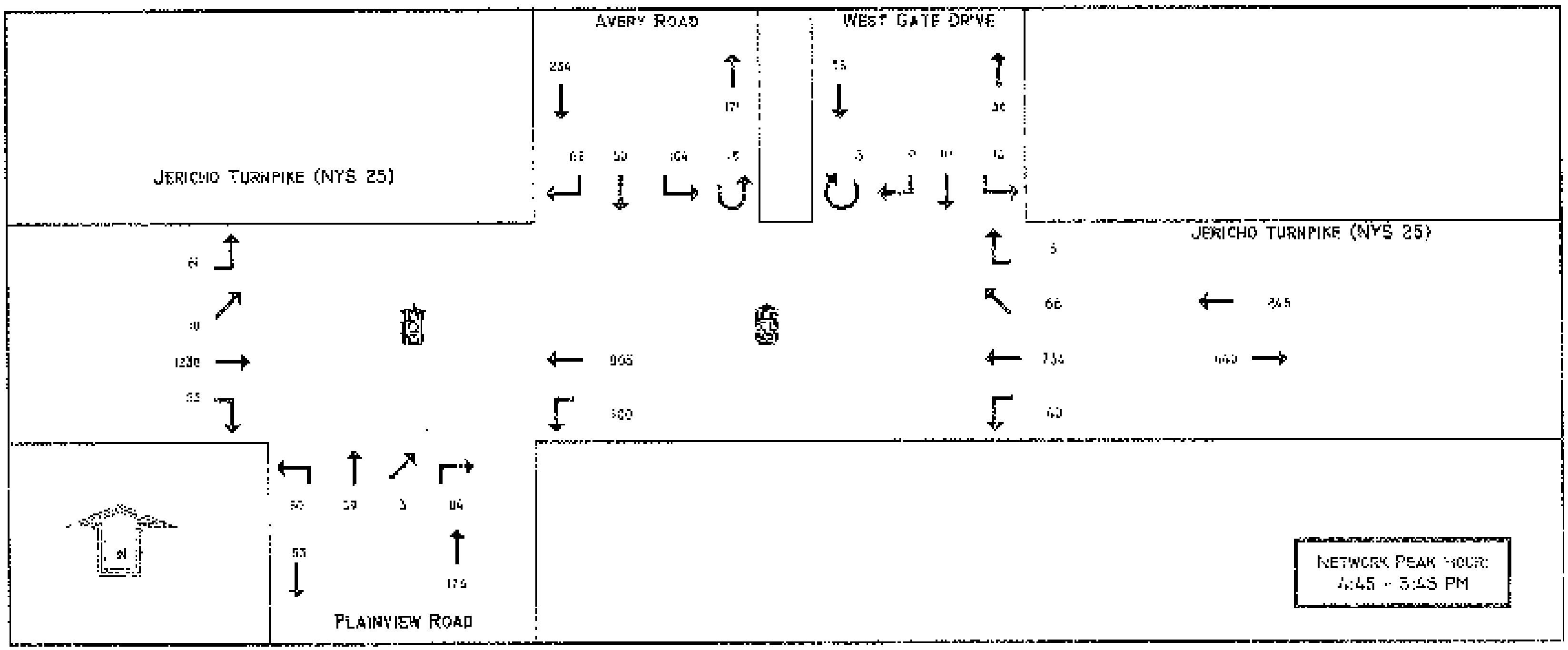
INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD
DATE COLLECTED: 11/02/06 THURSDAY

PROJECT TITLE: TRIANGLE EQUITIES
JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	Eastbound Left	Eastbound Fan Left	Eastbound Thru	Eastbound Right	Eastbound RTOR	Eastbound Total	Westbound Left	Westbound Thru	Westbound Fan Right	Westbound Right	Westbound RTOR	Westbound Total
4:00 PM	5	1	208	7	0	235	0	6	13	1	0	135
4:15 PM	3	0	156	1	0	160	0	65	2	2	0	155
4:30 PM	2	1	27	5	0	155	13	175	1	5	0	203
4:45 PM	1	7	155	6	0	174	7	209	17	2	0	234
5:00 PM	15	6	393	20	0	429	13	132	18	2	0	152
5:15 PM	14	2	359	13	0	418	12	192	24	0	0	234
5:30 PM	24	6	29-	4	0	34-	7	177	10	1	0	195
5:45 PM	17	2	27	1	0	31	5	145	9	1	0	153
NETWORK PEAK HOUR: 4:45 - 5:45 PM												
PEAK HOUR VOLUMES	61	10	235	53	0	1302	60	734	65	5	0	845
PEAK HOUR FACTOR						0.79						0.90
SEASONAL ADJUSTMENT FACTOR = 1.050												
ADJUSTED VOLUMES	61	10	1235	53	0	1362	60	734	66	5	0	845
GROWTH FACTOR	1.040											
2010 AMBIENT NB BUILD VOLUMES	63	10	1255	55	0	1416	62	763	69	5	0	879

START TIME	Northbound Left	Northbound Thru	Northbound R Thru	Northbound Right	Northbound RTOR	Northbound Total	Southbound (Avery Rd) Left 1	Southbound (Avery Rd) Left 2	Southbound (Avery Rd) Thru	Southbound (Avery Rd) R-S-T	Southbound (Avery Rd) RTOR	Southbound (Avery Rd) Total
4:00 PM	4	2	1	15	0	20	2	17	3	10	0	32
4:15 PM	20	2	2	17	0	40	6	25	5	2	0	39
4:30 PM	34	11	5	22	0	50	5	20	20	13	0	53
4:45 PM	11	10	1	24	6	46	9	45	10	20	0	84
5:00 PM	15	5	0	17	0	40	1	25	9	15	0	58
5:15 PM	9	13	4	20	0	42	7	19	13	17	0	56
5:30 PM	12	7	2	25	3	45	1	20	8	7	0	36
5:45 PM	1	0	1	34	5	45	2	30	5	2	0	45
NETWORK PEAK HOUR: 4:45 - 5:45 PM												
PEAK HOUR VOLUMES	50	39	4	84	6	176	18	104	50	62	0	234
PEAK HOUR FACTOR						0.67						0.72
SEASONAL ADJUSTMENT FACTOR = 1.050												
ADJUSTED VOLUMES	50	39	7	84	0	176	10	104	50	62	0	234
GROWTH FACTOR												
2010 AMBIENT NB BUILD VOLUMES	52	41	6	52	6	183	15	98	52	64	0	243

START TIME	Southbound (West Gate Drive) Left	Southbound (West Gate Drive) Thru	Southbound (West Gate Drive) Right 1	Southbound (West Gate Drive) Right 2	Southbound (West Gate Drive) RTOR	Southbound (West Gate Drive) Total	TOTAL	CUM. HOURLY
4:00 PM	0	0	0	2	0	7	683	
4:15 PM	7	3	0	0	0	10	454	
4:30 PM	5	3	1	0	0	7	463	
4:45 PM		3	2	1	0	5	544	1923
5:00 PM	2	1	2	1	0	5	727	2165
5:15 PM	7	2	1	0	0	10	750	2436
5:30 PM	2	4	0	0	0	12	652	2055
5:45 PM		1	1	0	0	3	541	2650
NETWORK PEAK HOUR: 4:45 - 5:45 PM								
PEAK HOUR VOLUMES	14	10	9	5	0	38		
PEAK HOUR FACTOR						0.79		
SEASONAL ADJUSTMENT FACTOR = 1.050								
ADJUSTED VOLUMES	14	10	9	5	0	38	2655	
GROWTH FACTOR								
2010 AMBIENT NB BUILD VOLUMES	10	10	9	5	0	40		



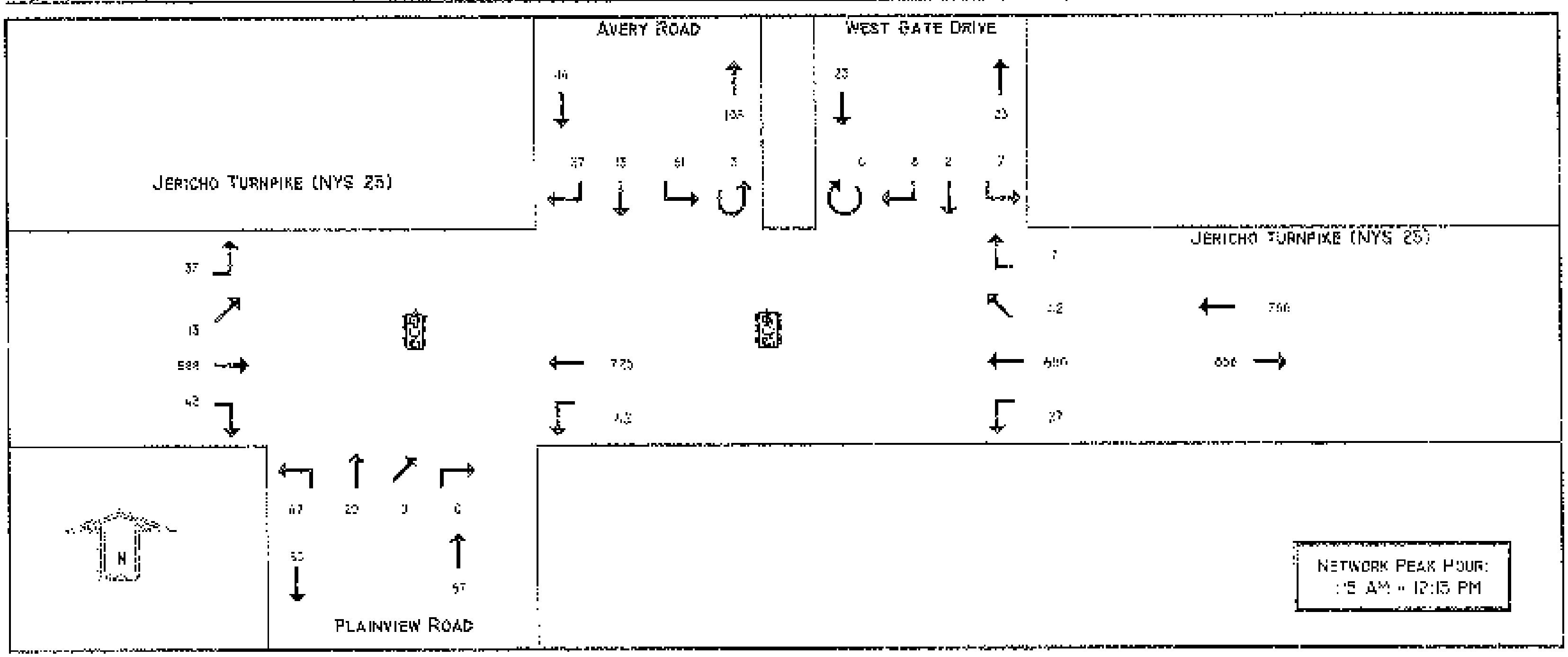
INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD

DATE COLLECTED: 07/29/06 SATURDAY

PROJECT TITLE: TRIANGLE FACILITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND (AVERY RD)						SOUTHBOUND (WEST GATE DRIVE)						TOTAL	CUM. HOURLY
	LEFT	FAR LEFT	THRU	RIGHT	RTOR	TOTAL	LEFT	THRU	FAR RIGHT	RIGHT	RTOR	TOTAL	LEFT	THRU	U-TURN	SINK	RTOR	TOTAL	LEFT 1	LEFT 2	THRU	RIGHT	RTOR	TOTAL	LEFT	THRU	RIGHT 1	RIGHT 2	RTOR	TOTAL		
11:00 AM	9	3	150	6	0	165	1	157	4	4	0	166	7	2	2	2	0	15	0	5	2	11	0	25	5		7	1	0	13	402	
11:15 AM	7	5	133	6	0	146	5	142	3	2	0	152	14	6	0	0	0	20	1	15	4	6	0	27	1	1	1	3	0	6	355	
11:30 AM	9	4	156	17	0	187	10	163	5	1	0	180	4	8	0	0	0	12	2	7	4	16	0	29	3	0	1	0	0	4	479	
11:45 AM	14	3	132	8	0	155	6	171	7	3	0	189	18	5	0	0	0	23	0	14	1	5	0	20	3		1	3	0	7	402	1617
12:00 PM	10	6	155	12	0	183	5	170	12	1	0	196	9	3	0	0	0	12	0	24	4	12	0	40	0	0	2	2	0	4	425	1642
12:15 PM	7	1	131	9	0	148	6	165	14	3	0	189	10	2	0	0	0	12	0	9	2	4	0	15	2	0	1	0	0	3	371	1677
12:30 PM	5	1	131	15	0	152	6	153	4	1	0	201	15	5	0	0	0	20	2	21	4	11	0	45	2	0	4	2	0	5	419	1614
12:45 PM	6	0	129	13	0	148	4	152	13	0	0	169	17	4	0	0	0	21	2	5	9	5	0	32	1	0	2	0	0	3	403	1615
1:00 PM	7	3	161	5	0	180	1	137	6	0	0	156	5	2	0	0	0	7	6	12	5	5	0	31	2	0	1	0	0	3	387	1577
1:15 PM	0	3	155	5	0	173	5	155	9	1	0	171	13	2	0	0	0	15	3	17	3	6	0	29	2	0	2	0	0	4	393	1579
1:30 PM	11	5	147	7	0	170	3	155	1	9	0	169	9	1	0	0	0	10	1	23	4	6	0	32	0	0	2	0	0	2	385	1565
1:45 PM	8	0	170	5	0	195	4	160	11	1	0	179	7	4	0	0	0	11	0	6	2	5	0	14	2	0	2	1	0	5	402	1555
NETWORK PEAK HOUR: 11:15 AM - 12:15 PM																																
PEAK HOUR VOLUMES	37	13	586	43	0	681	27	680	42	7	0	756	47	20	0	0	0	67	3	61	13	37	0	114	7	2	8	6	0	23		
PEAK HOUR FACTOR						0.9[illegible]						0.95						0.73						0.77						0.72		
SEASONAL ADJUSTMENT FACTOR = 1.000																																
ADJUSTED VOLUMES	37	13	586	43	0	681	27	680	42	7	0	756	47	20	0	0	0	67	3	61	13	37	0	114	7	2	8	6	0	23	1641	
GROWTH FACTOR	1.040																															
2010 AMBIENT NO BUILD VOLUMES	38	14	612	45	0	708	28	707	44	7	0	786	49	21	0	0	0	70	3	63	14	38	0	119	7	2	8	6	0	24		



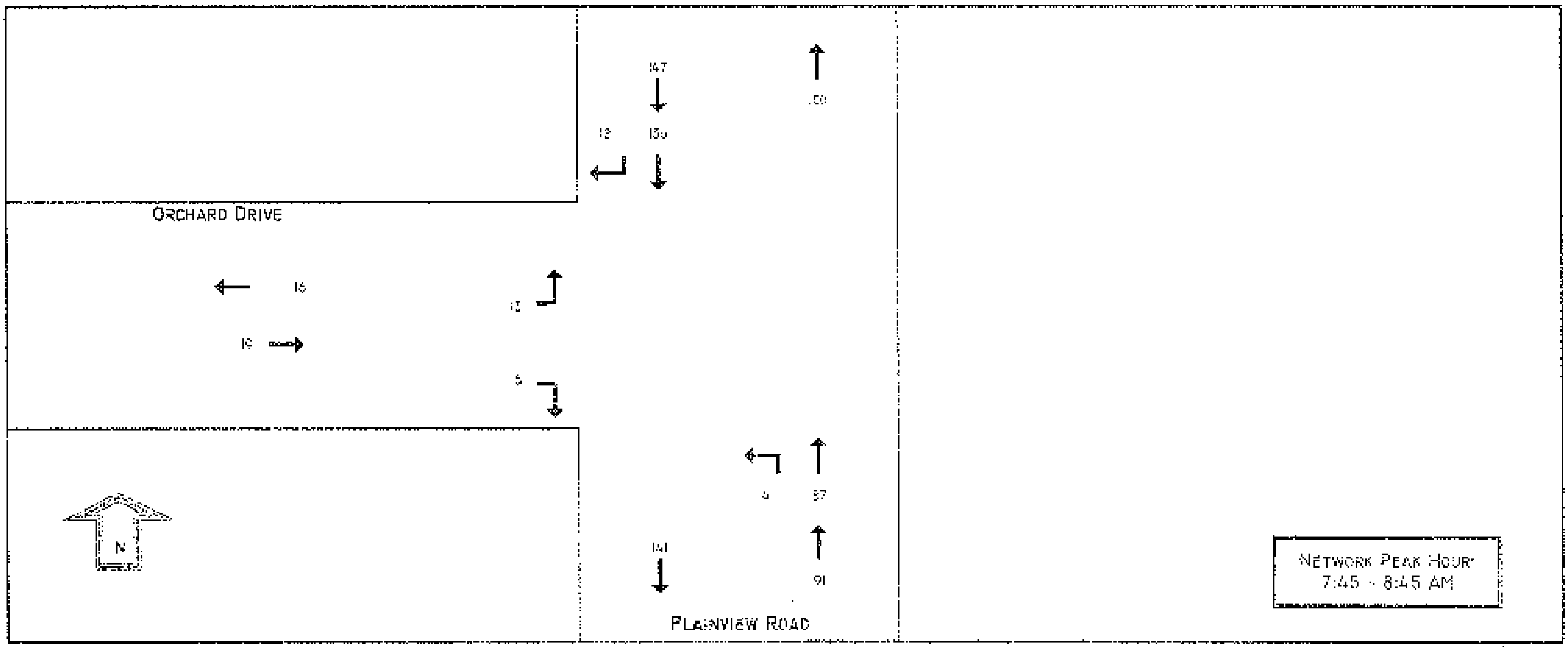
INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD

DATE COLLECTED: 11/02/06 THURSDAY

PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	25	0	0	25	0	0	24	1	0	25	55	
7:15 AM	0	3	0	2	0	5	0	0	0	0	0	0	0	0	16	0	0	16	0	0	26	3	0	29	45	
7:30 AM	0	2	0	1	0	3	0	0	0	0	0	0	0	1	23	0	0	24	0	0	28	0	0	28	55	
7:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	26	0	0	26	0	0	36	3	0	39	69	226
8:00 AM	0	2	0	4	0	6	0	0	0	0	0	0	0	2	13	0	0	15	0	0	29	3	0	32	53	224
8:15 AM	0	3	0	0	0	5	0	0	0	0	0	0	0	0	24	0	0	24	0	0	35	4	0	39	68	247
8:30 AM	0	2	0	2	0	4	0	0	0	0	0	0	0	2	22	0	0	24	0	0	35	2	0	37	65	257
8:45 AM	0	2	0	2	0	[illegible]	0	0	0	0	0	0	0	1	27	0	0	28	0	0	32	2	0	34	64	250
NETWORK PEAK HOUR: 7:45 - 8:45 AM																										
PEAK HOUR VOLUMES	0	13	0	6	0	19	0	0	0	0	0	0	0	4	87	0	0	91	0	0	135	12	0	147		
PEAK HOUR FACTOR						0.79												0.91						0.94		
SEASONAL ADJUSTMENT FACTOR = 1.000																										
ADJUSTED VOLUMES	0	13	0	6	0	19	0	0	0	0	0	0	0	4	87	0	0	91	0	0	135	12	0	147	257	
GROWTH FACTOR 1.040																										
2010 AMBIENT NO BUILD VOLUMES	0	14	0	6	0	20	0	0	0	0	0	0	0	4	90	0	0	95	0	0	140	12	0	153	267	



TURNING MOVEMENT DATA

NELSON & POPE

INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD

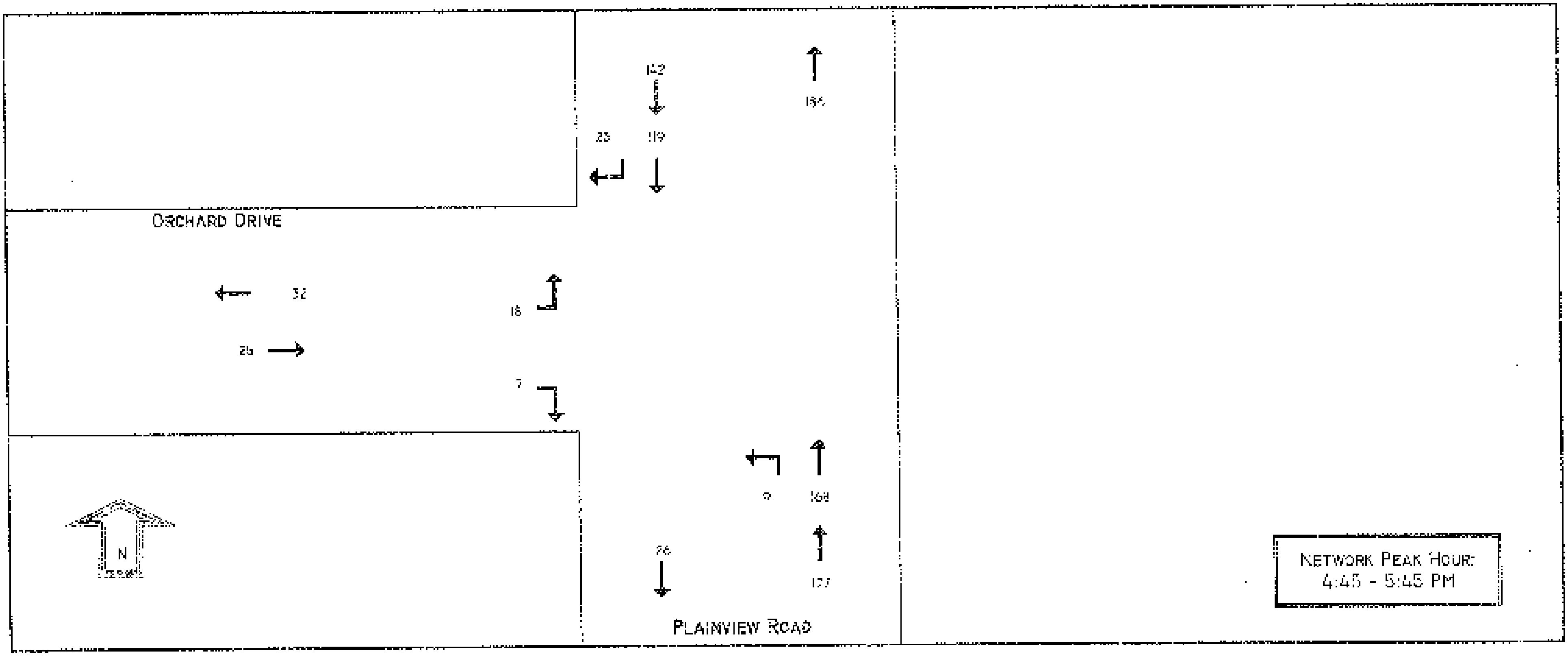
PROJECT TITLE: TRAINGLE EQUITIES

DATE COLLECTED: 11/02/06 THURSDAY

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	EASTBOUND RTOR	EASTBOUND TOTAL	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	WESTBOUND RTOR	WESTBOUND TOTAL
4:00 PM	0	7	0	1	0	8	0	0	0	0	0	0
4:15 PM	0	7	0	3	0	10	0	0	0	0	0	0
4:30 PM	0	15	0	1	0	16	0	0	0	0	0	0
4:45 PM	0	5	0	0	0	10	0	0	0	0	0	0
5:00 PM	0	4	0		0	4	0	0	0	0	0	0
5:15 PM	0	2	0	3	0	5	0	0	0	0	0	0
5:30 PM	0	3	0	3	0	6	0	0	0	0	0	0
5:45 PM	0	2	0	2	0	4	0	0	0	0	0	0
NETWORK PEAK HOUR: 4:45 - 5:45 PM												
PEAK HOUR VOLUMES	0	18	0	7	0	25	0	0	0	0	0	0
PEAK HOUR FACTOR						0.63						
SEASONAL ADJUSTMENT FACTOR = 1.000												
ADJUSTED VOLUMES	0	18	0	7	0	25	0	0	0	0	0	0
GROWTH FACTOR 1.040												
2010 AMBIENT NO BUILD VOLUMES	0	19	0	7	0	26	0	0	0	0	0	0

START TIME	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	NORTHBOUND RTOR	NORTHBOUND TOTAL	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	SOUTHBOUND RTOR	SOUTHBOUND TOTAL	TOTAL	CUM. HOURLY
4:00 PM	0	0	26	0	0	26	0	0	21	3	0	24	58	
4:15 PM	0	1	34	0	0	35	0	0	29	5	0	34	79	
4:30 PM	0	1	33	0	0	34	0	0	24	3	0	27	77	
4:45 PM	0	4	41	0	0	45	0	0	27	6	0	33	88	302
5:00 PM	0	1	45	0	0	46	0	0	28	12	0	40	90	334
5:15 PM	0	0	37	0	0	37	0	0	36	3	0	39	81	336
5:30 PM	0	4	45	0	0	49	0	0	23	7	0	30	85	344
5:45 PM	0	2	35	0	0	37	0	0	22	3	0	25	66	322
NETWORK PEAK HOUR: 4:45 - 5:45 PM														
PEAK HOUR VOLUMES	0	9	168	0	0	177	0	0	119	23	0	142		
PEAK HOUR FACTOR						0.90						0.89		
SEASONAL ADJUSTMENT FACTOR = 1.000														
ADJUSTED VOLUMES	0	9	168	0	0	177	0	0	119	23	0	142	344	
GROWTH FACTOR 1.040														
2010 AMBIENT NO BUILD VOLUMES	0	9	175	0	0	184	0	0	124	24	0	148	358	



S:\2003\03469\TRAFFIC\Traffic_Data\NovemberCounts.xls

TURNING MOVEMENT DATA

NELSON & POPE

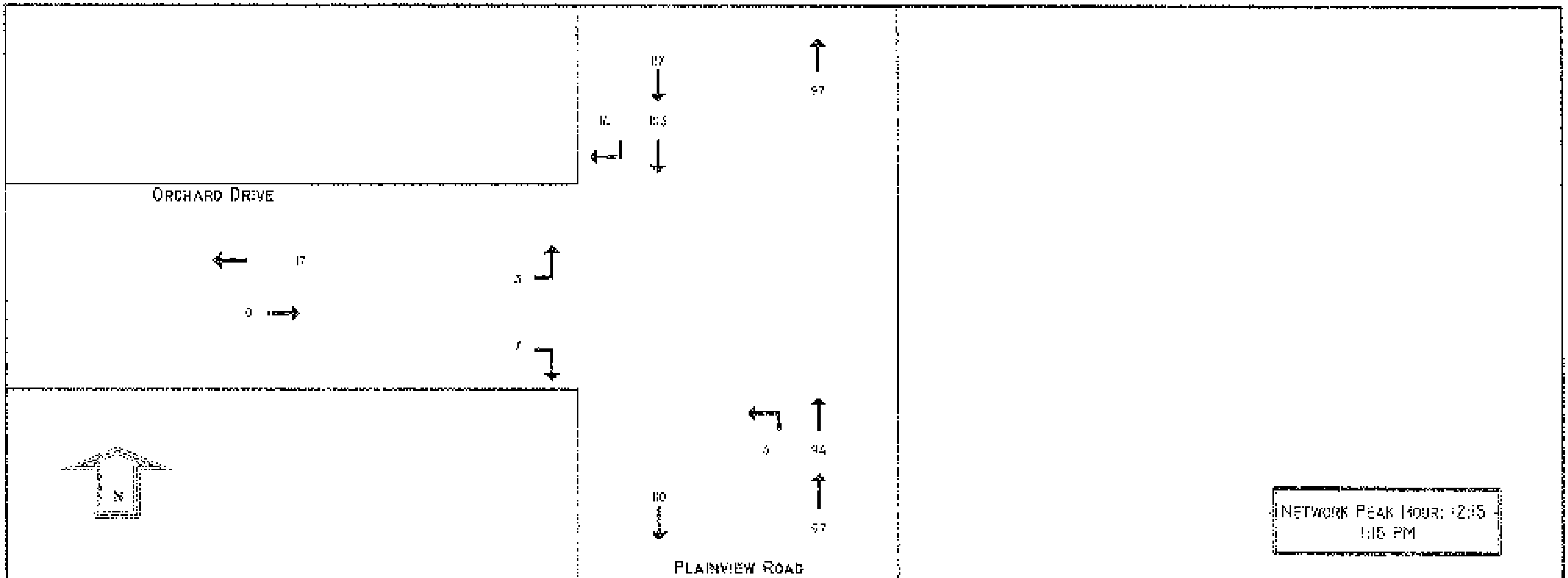
INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD

DATE COLLECTED: 07/29/06 SATURDAY

PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	EASTBOUND RTOR	EASTBOUND TOTAL	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	WESTBOUND RTOR	WESTBOUND TOTAL	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	NORTHBOUND RTOR	NORTHBOUND TOTAL	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	SOUTHBOUND RTOR	SOUTHBOUND TOTAL	TOTAL	CUM. HOURLY
11:00 AM	0	3	0	2	0	5	0	0	0	0	0	0	0	2	20	0	0	22	0	0	20	[illegible]	0	21	43	
11:15 AM	0	5	0	1	0	7	0	0	0	0	0	0	0	1	24	0	0	25	0	0	21	2	0	23	55	
11:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	17	0	0	17	0	0	27	0	0	27	49	
11:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	29	0	0	29	0	0	24	3	0	27	59	211
12:00 PM	0	3	0	1	0	4	0	0	0	0	0	0	0	1	14	0	0	15	0	0	19	[illegible]	0	20	39	232
12:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	22	0	0	23	0	0	18	6	0	24	48	195
12:30 PM	0	2	0	5	0	7	0	0	0	0	0	0	0	1	27	0	0	28	0	0	31	4	0	35	66	207
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	30	0	0	29	2	0	31	61	214
1:00 PM	0	[illegible]	0	1	0	2	0	0	0	0	0	0	0	[illegible]	19	0	0	20	0	0	25	2	0	27	49	224
1:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	[illegible]	23	0	0	24	0	0	18	2	0	20	46	222
1:30 PM	0	2	0	2	0	4	0	0	0	0	0	0	0	0	24	0	0	24	0	0	24	5	0	29	57	213
1:45 PM	0	5	0	1	0	6	0	0	0	0	0	0	0	0	22	0	0	22	0	0	15	4	0	19	47	199
NETWORK PEAK HOUR: 12:15 - 1:15 PM																										
PEAK HOUR VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	94	0	0	97	0	0	103	14	0	117		
PEAK HOUR FACTOR						0.36												0.81						0.84		
SEASONAL ADJUSTMENT FACTOR =		1.000																								
ADJUSTED VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	94	0	0	97	0	0	103	14	0	117	224	
GROWTH FACTOR	1.040																									
2010 AMBIENT NO BUILD VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	98	0	0	101	0	0	107	15	0	122		



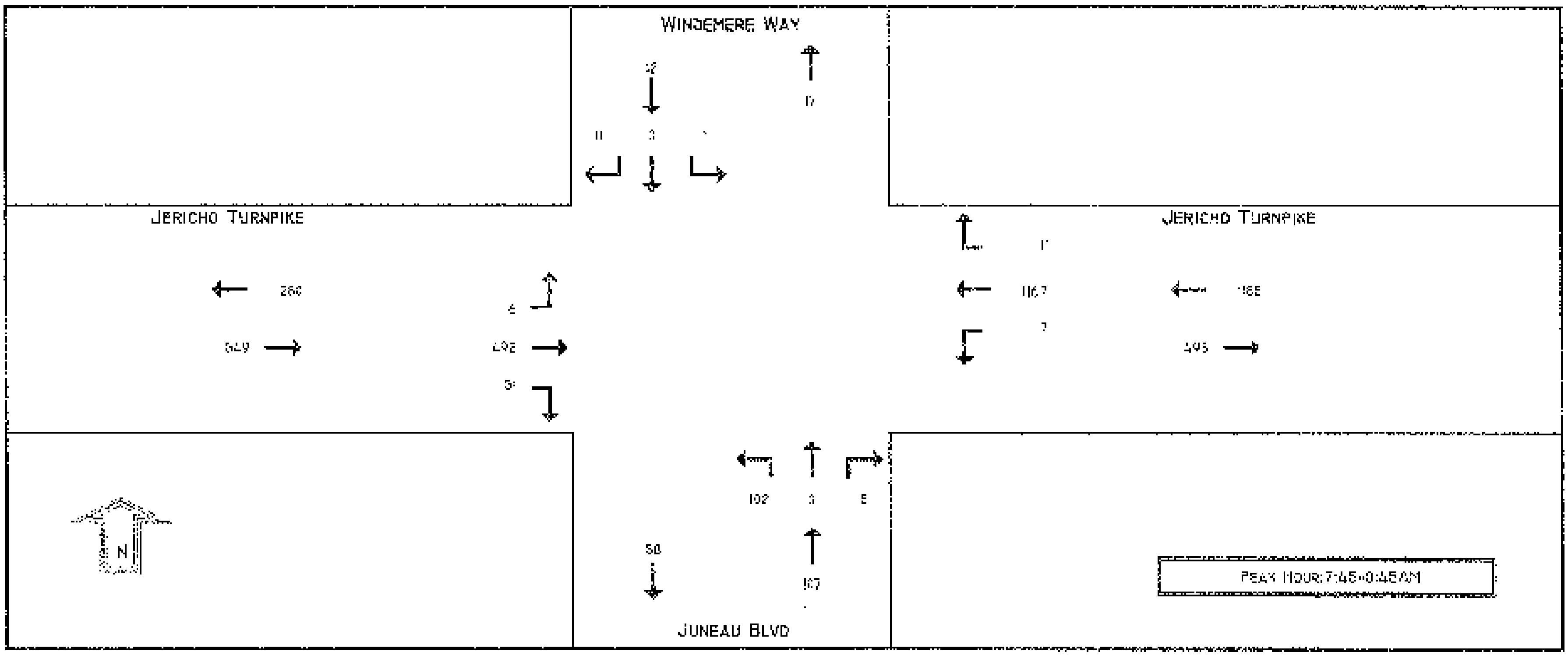
INTERSECTION: JERICHO TURNPIKE @ JUNEAU BLVD

DATE COLLECTED: 5/02/07 AM

PROJECT TITLE: SHIRE ESTATES

JURISDICTION: TOWN OF OYESTER BAY

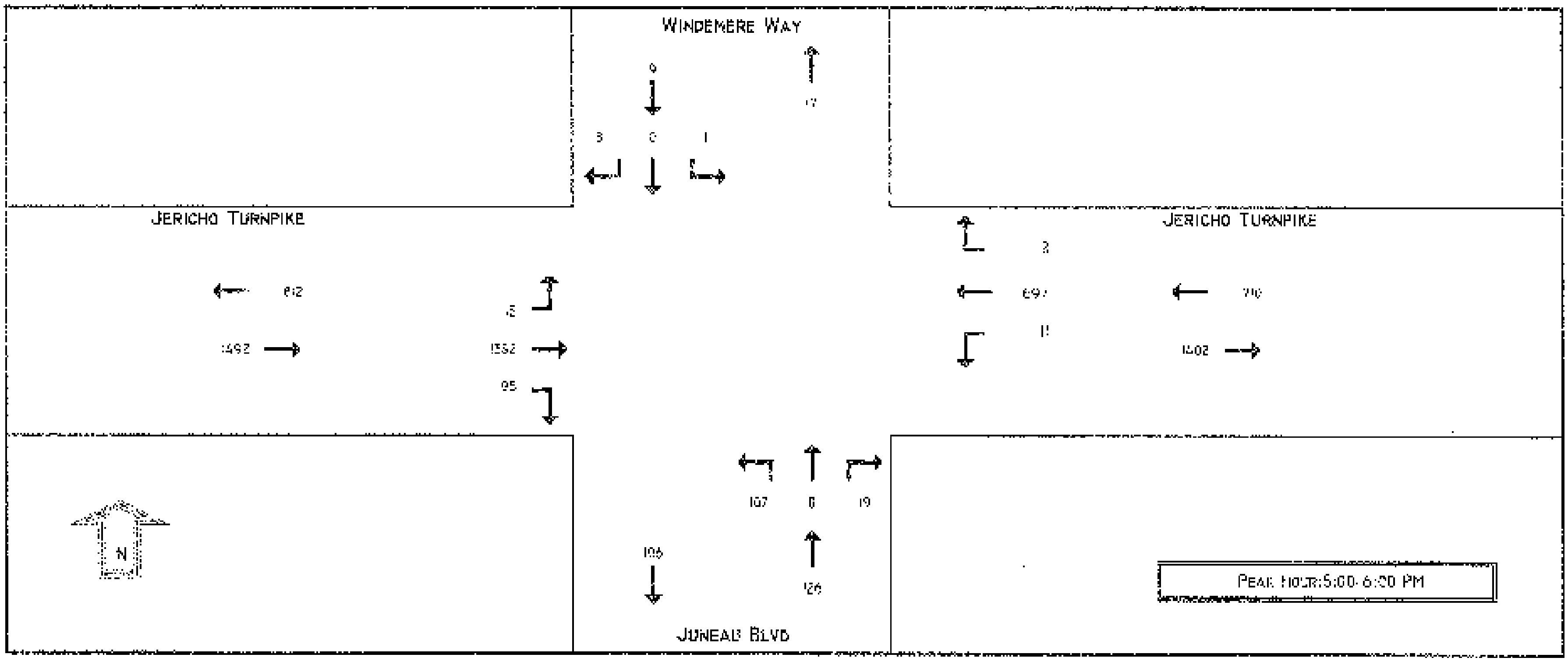
START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	1	76	8	0	85	0	1	215	1	0	216	0	35	0	0	0	35	0	0	0	2	2	4	337	
7:15 AM	0	1	90	15	0	106	0	1	218	0	0	219	0	38	0	2	0	40	0	0	0		3	4	363	
7:30 AM	0	5	105	[illegible]	0	[illegible]	0	0	310	2	0	312	0	33	0	0	0	33	0	1	0	3	2	6	470	
7:45 AM	0	3	125	12	0	140	0	1	311	0	0	312	0	12	0	0	0	[illegible]	0	0	0	1	3	4	474	1644
8:00 AM	0	3	[illegible]	15	0	[illegible]	0	1	251	0	0	252	0	25	0	0	0	25	0	0	0	0		1	422	1729
8:15 AM	0	2	118	[illegible]	0	[illegible]	0	2	205	1	0	[illegible]	0	27	0	2	0	29	0	1	0	1	0	2	464	1832
8:30 AM	0	1	130	10	0	[illegible]	0	3	209	4	0	[illegible]	0	32	0	2	1	35	0	0	0	3	2	5	493	1853
8:45 AM	0	3	[illegible]	20	0	[illegible]	0	1	256	1	0	258	0	23	0	2	0	25	0	0	0	1		2	433	[illegible]
PEAK HOUR 7:45-8:45AM	0	6	492	51	0	549	0	7	1167	11	0	1185	0	102	0	4	1	107	0	1	0	5	6	12	1830	
PHF						0.97						0.96						0.79						0.60		
SEASONAL ADJUSTMENT FACTOR 1.1	0	6	492	51	0	549	0	7	1167	11	0	1185	0	102	0	[illegible]	1	107	0		0	5	6	12		
2010 AMBIENT NO BUILD = 1.03 *ROW 20	0	6	507	53	0	565	0	7	1202	11	0	1221	0	105	0	4	1	110	0		0	5	6	12		



INTERSECTION: JERICHO TURNPIKE @ JUNEAU BLVD
DATE COLLECTED: 5/02/07 PM

PROJECT TITLE: SHIRE ESTATES
JURISDICTION: TOWN OF OYSTER BAY

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	5	296	22	2	325	0	6	182	2	0	190	0	31	0	3	0	34	0	0	1	2	3	6	555	
4:15 PM	0	4	250	23	0	277	0	4	145	0	0	149	0	14	0	2		16	0	0	0	0	0	0	442	
4:30 PM	0	2	311	25	0	338	0	1	116	0	0	117	0	20	0	5	0	25	0	0	0	2	2	4	514	
4:45 PM	0	2	283	27	0	312	0	4	125	1	0	130	0	15	0	4	0	19	0	0	0	3	1	4	471	1982
5:00 PM	0	4	342	24	1	371	0	3	169	0	0	172	0	32	0	7	0	39	0	1	0	0	0	1	583	2010
5:15 PM	0	6	340	27	1	374	0	3	177	1	0	181	0	19	0	3	0	22	0	0	0	2	0	2	579	2147
5:30 PM	0	4	338	14	0	360	0	4	191	1	0	196	0	30	0	6		37	0	0	0	2	2	4	597	2230
5:45 PM	0	1	359	26	1	387	0	1	160	0	0	161	0	26	0	2	0	28	0	0	0	1	1	2	578	2337
PEAK HOUR 5:00-6:00 PM	0	15	1382	92	3	1492	0	11	697	2	0	710	0	107	0	18	1	126	0	1	0	5	3	9	2337	
PHF						0.96						0.91						0.81						0.56		
SEASONAL ADJUSTMENT FACTOR = 1	0	15	1382	92	3	1492	0	11	697	2	0	710	0	107	0	18	1	126	0	1	0	5	3	9		
2010 AMBIENT NO BUILD = 1.03 (GROW 2%)	0	16	1425	93	3	1537	0	11	718	2	0	731	0	110	0	19	1	130	0	1	0	5	3	9		



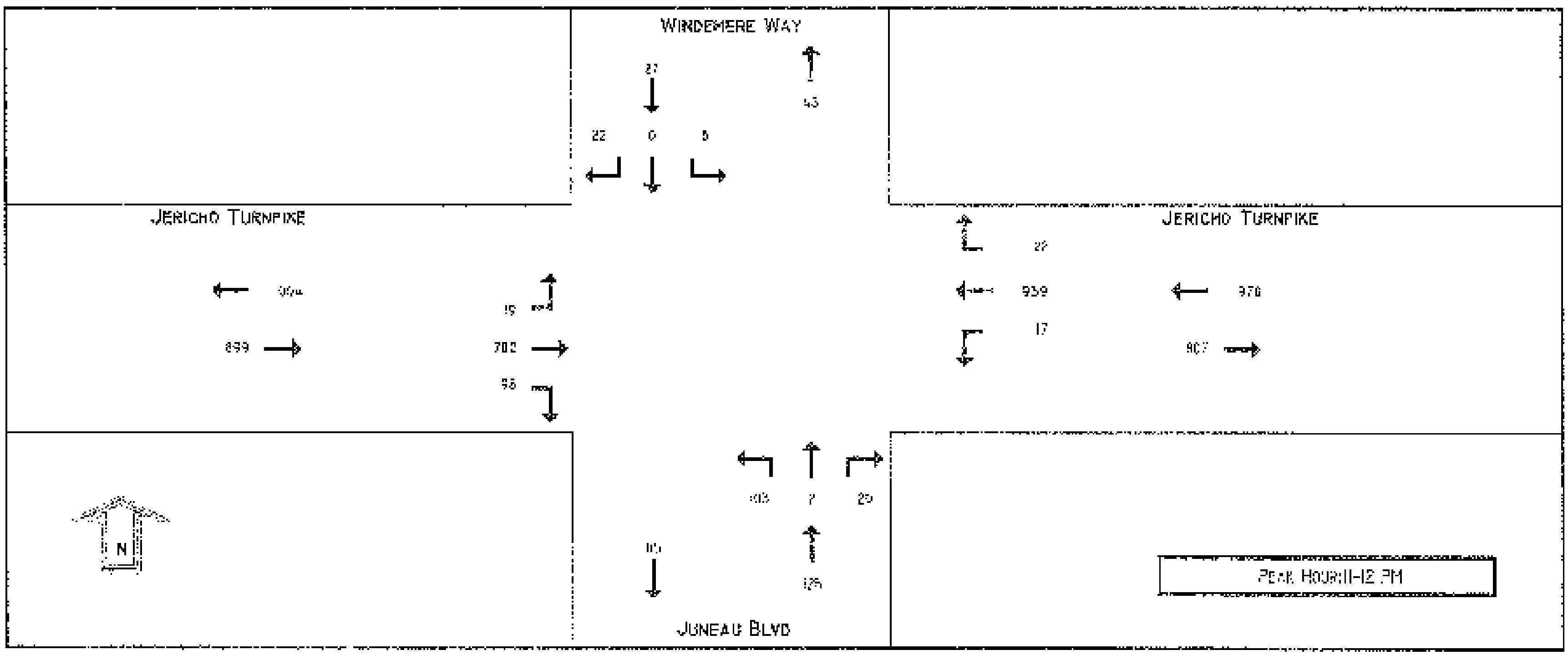
Intersection: Jericho Turnpike @ Juneau Blvd

Project Title: Shire Estates

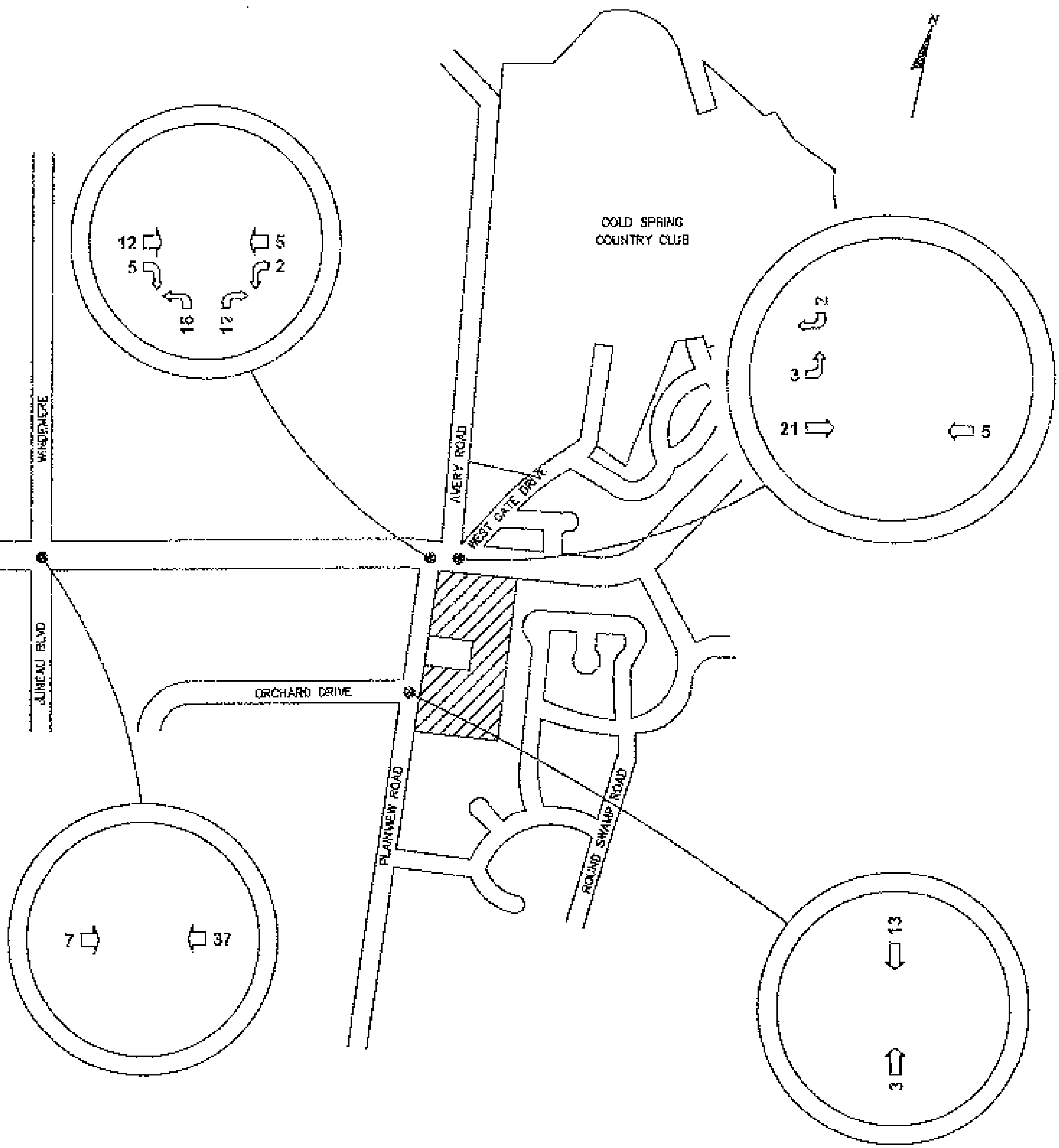
Date Collected: 5/05/07 SAT

Jurisdiction: Town of Oyster Bay

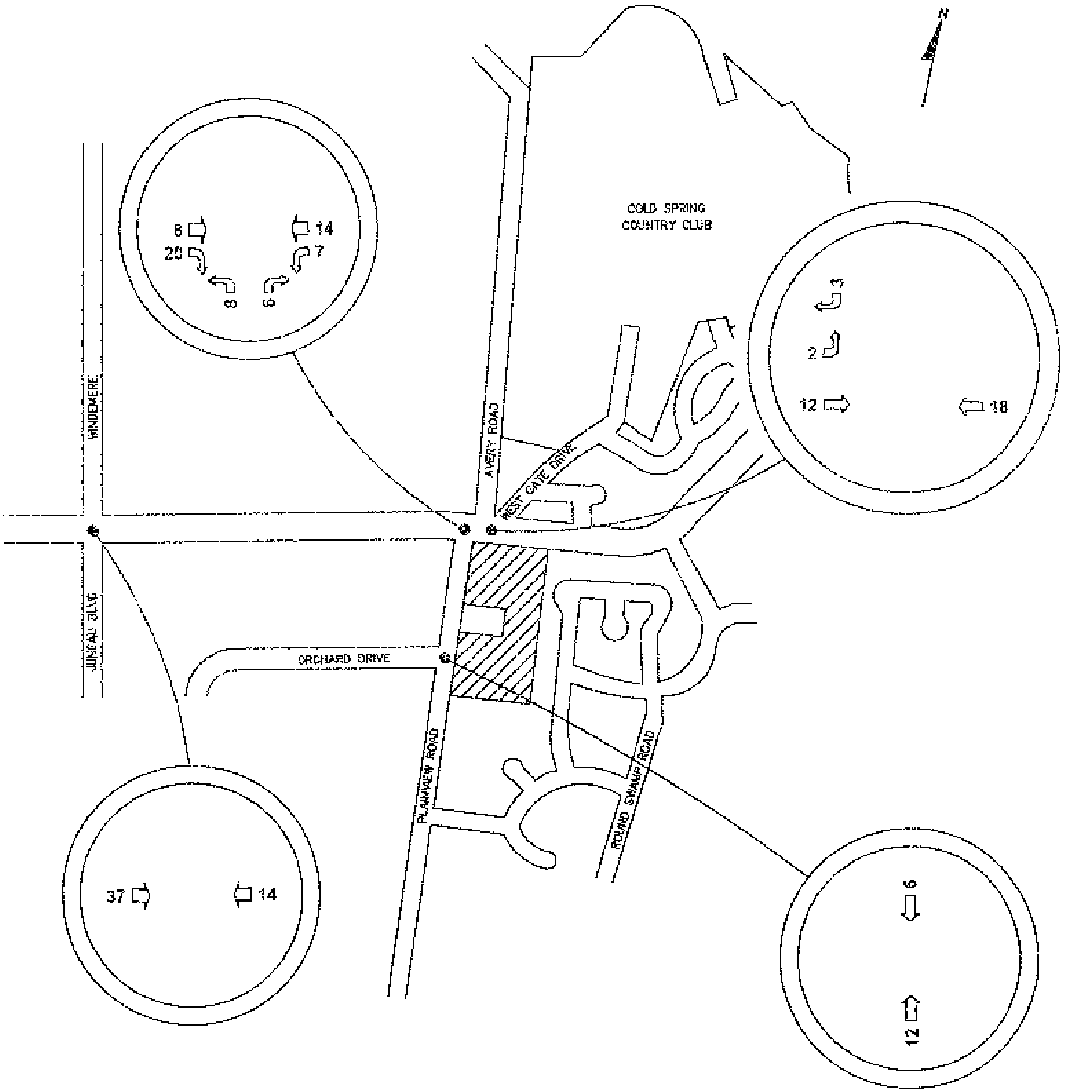
Start Time	Eastbound						Westbound						Northbound						Southbound						Total	Cum. Hourly
	U-Turn	Left	Thru	Right	RTOR	Total	U-Turn	Left	Thru	Right	RTOR	Total	U-Turn	Left	Thru	Right	RTOR	Total	U-Turn	Left	Thru	Right	RTOR	Total		
11:00 AM	0	5	215	29	0	251	0	7	226	7	0	240	0	26	1	4	2	33	0	2	0	5	0	7	526	
11:15 AM	0	4	181	22	0	207	0	4	238	5	0	247	0	23	1	4	0	30	0	2	0	4	0	6	437	
11:30 AM	0	5	194	24	0	225	0	3	234	5	0	242	0	35	0	2	3	40	0	1	0	5	0	6	511	
11:45 AM	0	5	189	24	1	218	0	3	248	6	0	257	0	19	0	3	0	22	0	0	0	5	0	5	505	2029
12:00 PM	0	4	186	18	0	210	0	4	211	5	0	220	0	29	0	4	2	35	0	0	0	6	0	6	471	1974
12:15 PM	0	4	174	22	0	200	0	6	194	1	0	201	0	23	1	1	2	27	0	0	0	1	0	1	441	1920
12:30 PM	0	4	207	20	0	231	0	5	213	6	0	224	0	16	0	4	3	23	0	0	0	1	0	1	479	1896
12:45 PM	0	4	187	28	0	219	0	3	204	1	0	208	0	28	0	3	1	32	0	0	0	3	0	3	454	1855
1:00 PM	0	6	218	26	0	250	0	6	214	7	0	227	0	24	0	4	2	30	0	0	0	3	0	3	502	1886
1:15 PM	0	6	225	24	0	256	0	2	195	4	0	201	0	22	0	4	5	31	0	1	0	4	2	7	456	1940
1:30 PM	0	3	214	21	0	238	0	4	190	4	0	198	0	20	1	8	2	31	0	3	0	5	0	8	475	1936
1:45 PM	0	3	193	26	0	222	0	3	186	4	0	193	0	25	0	4	5	34	0	0	0	2	0	2	452	1926
Peak Hour 11-12 PM	0	19	762	97		899	0	17	939	22	0	978	0	103	2	15	5	125	0	5	0	22	0	27	1928	
PHF						0.90						0.95						0.75						0.84		
Seasonal Adjustment Factor =	0	19	762	97		899	0	17	939	22	0	978	0	103	2	15	5	125	0	5	0	22	0	27		
2010 Ambient No Build + 1.0% Grow 20	0	20	835	100		956	0	18	967	23	0	1007	0	106	2	15	5	129	0	5	0	23	0	28		



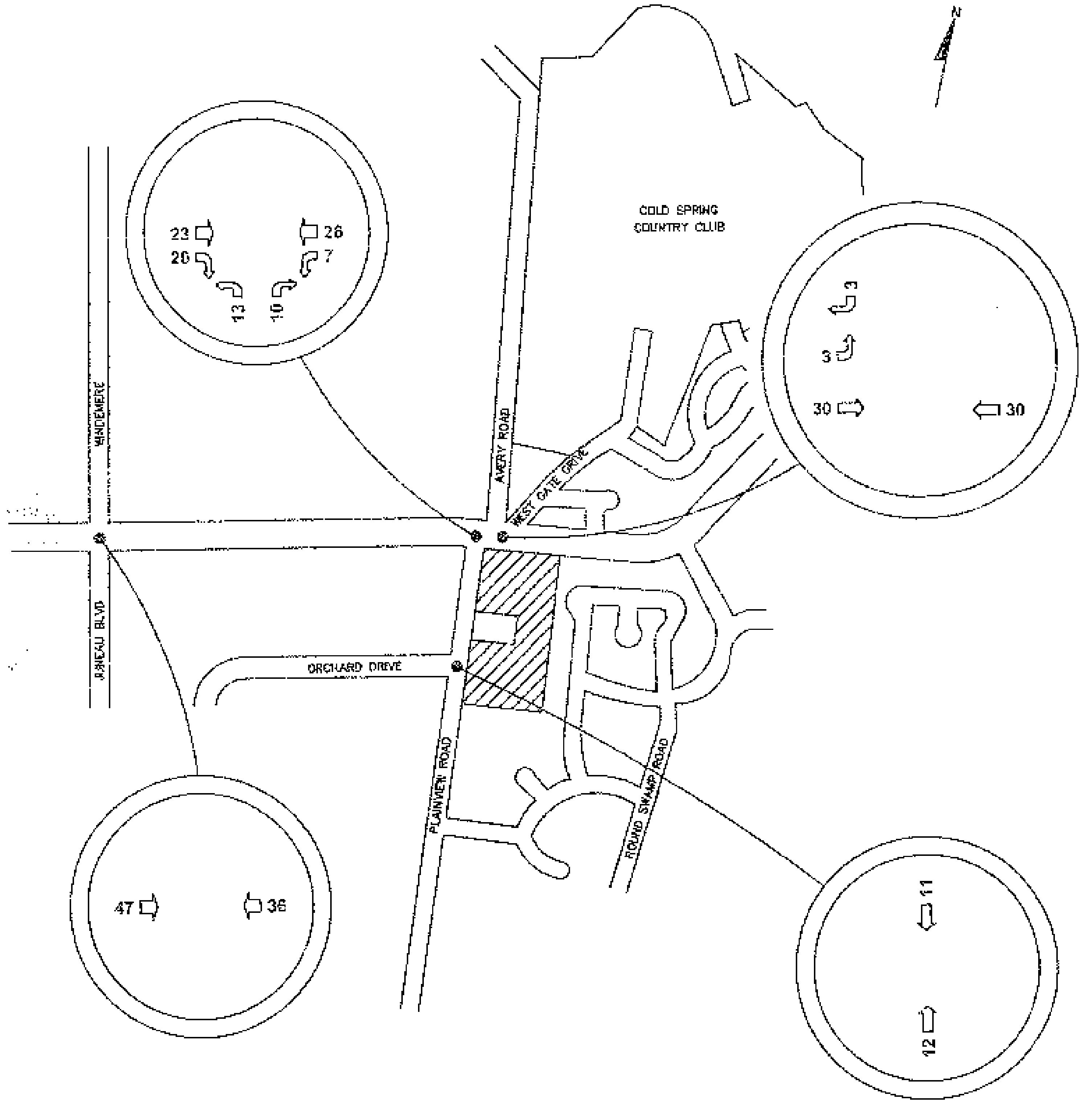
Appendix B: Other Planned Projects Trip Assignment



OTHER PLANNED PROJECTS - AM TRAFFIC VOLUMES



OTHER PLANNED PROJECTS - PM TRAFFIC VOLUMES



OTHER PLANNED PROJECTS - SATURDAYTRAFFIC VOLUMES

Appendix C: Trip Generation

Land Use: 251
Senior Adult Housing—Detached

Description

Senior adult housing consists of detached independent living developments, including retirement communities, age-restricted housing and active adult communities. These developments may include amenities such as golf courses, swimming pools, 24-hour security, transportation and common recreational facilities. However, they generally lack centralized dining and on-site health facilities. Detached senior adult housing communities may or may not be gated. Residents in these communities are typically active (requiring little to no medical supervision). The percentage of retired residents varies by development. Senior adult housing—attached (Land Use 252), congregate care facility (Land Use 253) and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use, as it contains a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip generation rates for detached senior adult housing. Factors such as average age of residents, development location and size, affluence of residents, employment status and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks and recreational activities.

The peak hour of the generator typically did not coincide with the peak hour of the adjacent street traffic. The a.m. peak hour of the generator typically ranged from 10:00 a.m.–12:00 p.m. and the p.m. peak hour of the generator typically ranged from 1:00 p.m.–6:00 p.m.

The sites were surveyed in the 1980s, 1990s and 2000s in California, Florida, New Jersey and Canada.

Source Numbers

221, 289, 398, 421, 500, 550

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents have a high correlation with average weekday vehicle trip ends. The use of these variables is limited, however, because the numbers of vehicles and residents was often difficult to obtain or predict. The number of dwelling units is generally used as the independent variable of choice because it is usually readily available, easy to project and has a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations and ages. Consequently, there was a wide variation in trips generated within this category. As expected, dwelling units that were larger in size, more expensive, or farther away from the central business district (CBD) had a higher rate of trip generation per unit than those smaller in size, less expensive, or closer to the CBD. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses, because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas and other trip attractors than other residential land uses; and they generally had fewer alternate modes of transportation available, because they were typically not as concentrated as other residential land uses.

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed from the late 1960s to the 2000s throughout the United States and Canada.

Source Numbers

1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 26, 34, 35, 36, 38, 40, 71, 72, 84, 91, 98, 100, 105, 108, 110, 114, 117, 119, 157, 167, 177, 187, 192, 207, 211, 246, 275, 283, 293, 300, 319, 320, 357, 384, 435, 550, 552, 579

Summary of Trip Generation Calculation
For 77 Dwelling Units of Elderly Housing - Detached
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	5.63	0.00	1.00	434
7-9 AM Peak Hour Enter	0.11	0.00	1.00	8
7-9 AM Peak Hour Exit	0.18	0.00	1.00	14
7-9 AM Peak Hour Total	0.29	0.00	1.00	22
4-6 PM Peak Hour Enter	0.32	0.00	1.00	25
4-6 PM Peak Hour Exit	0.21	0.00	1.00	16
4-6 PM Peak Hour Total	0.53	0.00	1.00	41
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .85LN(X) + 2.38, R^2 = 0.98
7-9 AM Peak Hr. Total:	LN(T) = .86LN(X) + -.63 R^2 = 0.95 , 0.38 Enter, 0.62 Exit
4-6 PM Peak Hr. Total:	LN(T) = .72LN(X) + .68 R^2 = 0.88 , 0.61 Enter, 0.39 Exit
AM Gen Pk Hr. Total:	0 R^2 = 0 , 0 Enter, 0 Exit
PM Gen Pk Hr. Total:	0 R^2 = 0 , 0 Enter, 0 Exit
Sat. 2-Way Volume:	0, R^2 = 0
Sat. Pk Hr. Total:	0 R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	0, R^2 = 0
Sun. Pk Hr. Total:	0 R^2 = 0 , 0 Enter, 0 Exit

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Summary of Trip Generation Calculation
For 75 Dwelling Units of Elderly Housing - Detached
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	5.65	0.00	1.00	424
7-9 AM Peak Hour Enter	0.11	0.00	1.00	8
7-9 AM Peak Hour Exit	0.18	0.00	1.00	14
7-9 AM Peak Hour Total	0.29	0.00	1.00	22
4-6 PM Peak Hour Enter	0.33	0.00	1.00	24
4-6 PM Peak Hour Exit	0.21	0.00	1.00	16
4-6 PM Peak Hour Total	0.53	0.00	1.00	40
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
The above rates were calculated from these equations:

```
24-Hr. 2-Way Volume:     LN(T) = .85LN(X) + 2.38, R^2 = 0.98
7-9 AM Peak Hr. Total:   LN(T) = .86LN(X) + -.63
                         R^2 = 0.96 , 0.38 Enter, 0.62 Exit
4-6 PM Peak Hr. Total:   LN(T) = .72LN(X) + .58
                         R^2 = 0.89 , 0.61 Enter, 0.39 Exit
AM Gen Pk Hr. Total:     0
                         R^2 = 0 , 0 Enter, 0 Exit
PM Gen Pk Hr. Total:     0
                         R^2 = 0 , 0 Enter, 0 Exit
Sat. 2-Way Volume:       0, R^2 = 0
Sat. Pk Hr. Total:       0
                         R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:       0, R^2 = 0
Sun. Pk Hr. Total:       0
                         R^2 = 0 , 0 Enter, 0 Exit
```

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Summary of Trip Generation Calculation
For 3 Dwelling Units of Single Family Detached Housing
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	13.76	0.00	1.00	41
7-9 AM Peak Hour Enter	0.96	0.00	1.00	3
7-9 AM Peak Hour Exit	2.88	0.00	1.00	9
7-9 AM Peak Hour Total	3.84	0.00	1.00	12
4-6 PM Peak Hour Enter	0.96	0.00	1.00	3
4-6 PM Peak Hour Exit	0.56	0.00	1.00	2
4-6 PM Peak Hour Total	1.52	0.00	1.00	5
Saturday 2-Way Volume	12.99	0.00	1.00	39
Saturday Peak Hour Enter	2.45	0.00	1.00	7
Saturday Peak Hour Exit	2.09	0.00	1.00	6
Saturday Peak Hour Total	4.53	0.00	1.00	14

Note: A zero indicates no data available.
The above rates were calculated from these equations:

```
24-Hr. 2-Way Volume:    LN(T) = .92LN(X) + 2.71, R^2 = 0.96
7-9 AM Peak Hr. Total:  T = .7(X) + 9.43
                        R^2 = 0.89 , 0.25 Enter, 0.75 Exit
4-6 PM Peak Hr. Total:  LN(T) = .9LN(X) + .53
                        R^2 = 0.91 , 0.63 Enter, 0.37 Exit
AM Gen Pk Hr. Total:    T = .7(X) + 12.05
                        R^2 = 0.89 , 0.26 Enter, 0.74 Exit
PM Gen Pk Hr. Total:    LN(T) = .89LN(X) + .61
                        R^2 = 0.91 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume:      LN(T) = .94LN(X) + 2.63, R^2 = 0.93
Sat. Pk Hr. Total:      T = .89(X) + 10.93
                        R^2 = 0.9 , 0.54 Enter, 0.46 Exit
Sun. 2-Way Volume:      T = 8.83(X) + -9.76, R^2 = 0.94
Sun. Pk Hr. Total:      LN(T) = .89LN(X) + .44
                        R^2 = 0.88 , 0.53 Enter, 0.47 Exit
```

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Appendix D: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	≤ 10.0 seconds per vehicle
Level of Service B	> 10.0 and ≤ 20.0 seconds per vehicle
Level of Service C	> 20.0 and ≤ 35.0 seconds per vehicle
Level of Service D	> 35.0 and ≤ 55.0 seconds per vehicle
Level of Service E	> 55.0 and ≤ 80.0 seconds per vehicle
Level of Service F	> 80.0 seconds per vehicle

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume-to-capacity ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	≤ 10 seconds per vehicle
Level of Service B	> 10 and ≤ 15 seconds per vehicle
Level of Service C	> 15 and ≤ 25 seconds per vehicle
Level of Service D	> 25 and ≤ 35 seconds per vehicle
Level of Service E	> 35 and ≤ 50 seconds per vehicle
Level of Service F	> 50 seconds per vehicle

Appendix E: Capacity Analysis/Level of Service Worksheets & Summary Tables

Detailed SYNCHRO LOS Summary - Weekday AM Peak Hour Analysis

			Existing Condition			2010 No Build Condition			Plan A: 2010 Build Scenario 1 Condition			Plan A: 2010 Build Scenario 2 Condition			Plan A: 2010 Build Scenario 3 Condition			Plan A: 2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.26	11.7	B	0.28	11.5	B	0.28	13.2	B	0.29	13.3	B	0.30	13.8	B	0.31	14.0	B
	WB	L	0.31	12.8	B	0.34	14.0	B	0.35	13.9	B	0.36	14.8	B	0.39	16.5	B	0.41	17.8	B
		T	0.60	2.0	A	0.64	2.3	A	0.64	2.3	A	0.65	2.4	A	0.67	2.7	A	0.69	3.0	A
	NB	LR	0.30	39.0	D	0.28	36.2	D	0.33	37.5	D	0.30	38.9	D	0.40	38.5	D	0.40	38.2	D
		Intersection	-	6.8	A	-	7.4	A	-	7.7	A	-	8.3	A	-	8.6	A	-	9.0	A
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.31	18.6	B	0.32	20.0	C	0.33	20.5	C	0.35	21.4	C	0.39	23.0	C	0.42	25.7	C
		T	0.20	2.3	A	0.20	2.4	A	0.22	2.7	A	0.23	3.2	A	0.24	3.3	A	0.24	3.4	A
	WB	TR	0.69	18.9	B	0.75	23.3	C	0.77	22.4	C	0.75	22.6	C	0.78	23.9	C	0.79	24.8	C
	Avery-SB	LR	0.69	57.7	E	0.70	57.7	E	0.70	57.2	E	0.70	57.8	E	0.73	58.5	E	0.73	58.8	E
	West Gate-SB	LR	0.21	57.9	E	0.22	58.3	E	0.23	58.3	E	0.22	58.3	E	0.30	60.9	E	0.37	63.7	E
		Intersection	-	19.2	B	-	21.4	C	-	21.6	C	-	21.7	C	-	22.9	C	-	23.8	C
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.02	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.8	A	0.03	2.8	A	0.03	2.8	A
		TR	0.21	2.7	A	0.22	2.7	A	0.22	2.7	A	0.22	2.8	A	0.22	2.8	A	0.23	2.8	A
	WB	L	0.01	2.4	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A
		TR	0.45	4.0	A	0.46	4.1	A	0.46	4.2	A	0.48	4.3	A	0.49	4.4	A	0.51	4.5	A
	NB	LTR	0.70	71.1	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E
	SB	LTR	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C
		Intersection	-	7.6	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.8	A	0.03	9.9	A	0.03	10.0	B	0.03	10.1	B	0.04	10.2	B	0.04	10.5	B
	NB	LT	0.00	0.4	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A
Plainview Road at Site Driveway	WB	LR		N/A			N/A		0.02	9.3	A	0.02	9.3	A	0.02	9.4	A	0.02	9.4	A
	SB	LT							0.00	0.3	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A

Detailed SYNCHRO LOS Summary - Weekday PM Peak Hour Analysis

									Plan A											
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Move.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.89	31.5	C	0.92	35.4	D	0.93	36.5	D	0.93	39.5	D	0.99	48.3	D	1.01	54.0	D
	WB	L	0.68	62.6	E	0.71	64.3	E	0.76	69.5	E	0.81	75.8	E	0.85	80.9	F	0.87	84.4	F
		T	0.40	3.8	A	0.42	3.8	A	0.42	3.8	A	0.43	3.7	A	0.44	3.9	A	0.45	4.1	A
	NB	LR	0.49	38.5	D	0.51	38.9	D	0.54	39.8	D	0.58	41.0	D	0.60	41.5	D	0.61	42.0	D
		Intersection	-	24.8	C	-	27.2	C	-	28.4	C	-	30.7	C	-	35.0	D	-	39.6	D
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.46	7.7	A	0.50	9.0	A	0.51	15.7	B	0.53	16.3	B	0.63	19.3	B	0.71	24.2	C
		T	0.74	4.4	A	0.77	5.4	A	0.77	5.7	A	0.78	6.8	A	0.80	9.9	A	0.82	14.2	B
	WB	TR	0.47	18.0	B	0.49	18.4	B	0.49	18.5	B	0.50	18.7	B	0.52	19.0	B	0.53	19.3	B
	Avery-SB	LR	0.77	59.5	E	0.79	60.3	E	0.75	60.5	E	0.79	60.8	E	0.80	61.4	E	0.81	61.8	E
	West Gte-SB	LR	0.47	69.0	E	0.49	70.2	E	0.49	70.4	E	0.50	70.7	E	0.55	74.4	E	0.59	77.2	E
		Intersection		14.7	B	-	15.5	B	-	16.1	B	-	16.8	B	-	18.9	B	-	21.7	C
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.02	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A
		TR	0.57	5.1	A	0.58	5.2	A	0.59	5.3	A	0.60	5.5	A	0.62	5.7	A	0.65	5.9	A
	WB	L	0.06	3.4	A	0.07	3.5	A	0.07	3.5	A	0.07	3.6	A	0.08	3.8	A	0.08	4.0	A
		TR	0.27	3.2	A	0.27	3.2	A	0.28	3.2	A	0.28	3.3	A	0.29	3.3	A	0.30	3.3	A
	NB	LTR	0.77	75.0	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E
	SB	LTR	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C
		Intersection	-	8.3	A	-	8.7	A	-	8.7	A	-	8.7	A	-	8.7	A	-	8.8	A
Plainview Road at Orchard Drive	EB	LR	0.06	10.4	B	0.06	10.6	B	0.06	10.7	B	0.06	10.8	B	0.06	10.9	B	0.06	11.0	B
	NB	LT	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A
Plainview Road at Site Driveway	WB	LR		N/A			N/A		0.02	10.0	B	0.02	10.1	B	0.02	10.2	B	0.02	10.3	B
	SB	LT							0.01	0.9	A	0.01	0.9	A	0.01	0.9	A	0.01	0.9	A

Detailed SYNCHRO LOS Summary - Saturday Midday Peak Hour Analysis

									Plan A											
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.34	12.3	B	0.35	12.6	B	0.36	12.7	B	0.38	12.1	B	0.42	14.7	B	0.44	15.3	B
	WB	L	0.10	9.2	A	0.11	11.4	B	0.14	9.5	A	0.17	10.4	B	0.20	11.9	B	0.23	13.4	B
		T	0.30	1.7	A	0.32	1.6	A	0.32	1.6	A	0.33	1.7	A	0.36	2.0	A	0.37	2.2	A
	NB	LR	0.26	38.2	D	0.27	38.1	D	0.33	39.5	D	0.42	41.5	D	0.40	39.0	D	0.41	38.9	D
		Intersection	-	8.8	A	-	9.0	A	-	9.5	A	-	10.3	B	-	11.1	B	-	11.6	B
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.19	1.5	A	0.21	3.8	A	0.21	1.9	A	0.23	2.3	A	0.29	4.2	A	0.34	5.3	A
		T	0.25	0.7	A	0.26	0.7	A	0.27	0.9	A	0.28	1.0	A	0.30	1.2	A	0.32	1.3	A
	WB	TR	0.35	12.6	B	0.37	13.0	B	0.36	13.1	B	0.39	13.4	B	0.42	14.0	B	0.43	15.3	B
	Avery-SB	LR	0.59	58.1	E	0.60	58.1	E	0.61	58.2	E	0.51	58.1	E	0.63	58.4	E	0.64	58.4	E
	West Gate-SB	LR	0.26	56.1	E	0.26	56.1	E	0.26	56.1	E	0.76	56.7	E	0.31	57.7	E	0.36	59.0	E
		Intersection	-	12.4	B	-	12.5	B	-	12.7	B	-	12.8	B		13.8	B		14.2	B
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.06	2.9	A	0.06	3.0	A	0.06	3.0	A	0.06	3.0	A	0.07	3.0	A	0.07	3.3	A
		TR	0.34	3.3	A	0.33	3.4	A	0.35	3.4	A	0.37	3.5	A	0.39	3.6	A	0.40	3.7	A
	WB	L	0.04	2.8	A	0.05	2.8	A	0.05	2.8	A	0.05	2.9	A	0.06	2.9	A	0.06	2.9	A
		TR	0.37	3.6	A	0.38	3.7	A	0.38	3.7	A	0.39	3.8	A	0.41	3.8	A	0.42	3.9	A
	NB	LTR	0.74	71.9	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E
	SB	LTR	0.13	21.7	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C
		Intersection		7.9	A	-	7.9	A	-	7.9	A	-	7.8	A	-	7.8	A	-	7.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.4	A	0.03	9.4	A	0.03	9.5	A	0.05	9.6	A	0.03	9.7	A	0.04	9.7	A
	NB	LT	0.00	0.3	A	0.00	0.2	A	0.00	0.3	A	0.00	0.2	A	0.00	0.3	A	0.00	0.2	A
Plainview Road at Site Driveway	WB	LR	N/A			N/A			0.02	9.1	A	0.02	9.2	A	0.02	9.3	A	0.02	9.3	A
	SB	LT							0.01	1.3	A	0.01	1.2	A	0.01	1.3	A	0.01	1.1	A

Detailed SYNCHRO LOS Summary - Weekday AM Peak Hour Analysis

									Plan B									
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.26	11.7	B	0.28	13.4	B	0.28	12.3	B	0.29	13.3	B	0.32	13.8	B	0.31	14.0	B
	WB	L	0.31	13.8	B	0.34	14.0	B	0.35	14.0	B	0.36	14.4	B	0.39	16.2	B	0.41	17.6	B
		T	0.60	2.0	A	0.64	2.5	A	0.64	2.3	A	0.65	2.4	A	0.67	2.7	A	0.69	3.0	A
	NB	LR	0.30	39.6	D	0.28	36.7	D	0.31	36.9	D	0.37	38.2	D	0.37	37.8	D	0.37	37.6	D
		Intersection	-	6.8	A	-	7.4	A	-	7.5	A	-	8.0	A	-	8.4	A	-	8.8	A
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.31	18.6	B	0.32	20.0	C	0.32	20.0	B	0.34	21.2	C	0.38	25.0	C	0.43	25.4	C
		T	0.20	2.3	A	0.22	2.4	A	0.22	2.5	A	0.25	3.0	A	0.24	3.2	A	0.24	3.2	A
	WB	TR	0.69	18.9	B	0.75	22.3	C	0.75	22.5	C	0.76	22.7	C	0.78	24.0	C	0.80	25.0	C
	Avery-SB	LR	0.69	57.7	E	0.70	57.7	E	0.70	57.7	E	0.70	57.8	E	0.72	58.6	E	0.73	58.7	E
	West Gte-SB	LR	0.21	57.9	E	0.22	58.3	E	0.22	58.3	E	0.22	58.3	E	0.30	60.3	E	0.37	63.6	E
		Intersection	-	19.2	B	-	21.4	C	-	21.5	C	-	21.7	C	-	22.9	C	-	23.8	C
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.02	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.8	A	0.03	2.8	A	0.03	2.8	A
		TR	0.21	2.7	A	0.22	2.7	A	0.22	2.8	A	0.22	2.8	A	0.23	2.8	A	0.23	2.8	A
	WB	L	0.01	2.4	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A
		TR	0.45	4.0	A	0.46	4.1	A	0.47	4.2	A	0.48	4.3	A	0.49	4.4	A	0.51	4.5	A
	NB	LTR	0.70	71.1	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E
	SB	LTR	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C
		Intersection	-	7.6	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.8	A	0.03	9.9	A	0.03	10.0	A	0.03	10.1	B	0.04	10.2	B	0.04	10.2	B
	NB	LT	0.00	0.4	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A
Jericho Turnpike (NYS 25) at Site Driveway	WB	L		N/A			N/A		0.00	8.6	A	0.00	8.7	A	0.00	8.7	A	0.00	8.7	A
	NB	L							0.08	34.5	D	0.08	35.8	E	0.09	37.4	E	0.09	38.8	E
		R							0.01	9.7	A	0.01	9.8	A	0.01	9.8	A	0.01	9.8	A

Detailed SYNCHRO LOS Summary - Weekday PM Peak Hour Analysis

									Plan B									
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.89	31.5	C	0.92	35.4	D	0.93	36.6	D	0.96	39.0	D	0.99	48.3	D	1.03	54.0	D
	WB	L	0.68	62.6	E	0.71	64.3	E	0.72	65.8	E	0.78	70.7	E	0.81	75.4	E	0.84	79.5	E
		T	0.40	3.6	A	0.43	3.8	A	0.42	2.8	A	0.43	3.8	A	0.44	3.9	A	0.46	4.1	A
	NB	LR	0.49	33.5	D	0.51	38.9	D	0.52	39.1	D	0.53	40.2	D	0.57	40.7	D	0.59	41.1	D
		Intersection	-	24.9	C	-	27.2	C	-	28.5	C	-	30.4	C	-	35.6	D	-	39.2	D
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.46	7.7	A	0.50	9.0	A	0.53	9.2	A	0.57	16.6	B	0.62	19.6	B	0.71	22.3	C
		T	0.74	4.4	A	0.77	5.4	A	0.78	5.8	A	0.78	6.9	A	0.82	10.0	A	0.82	15.1	B
	WB	TR	0.47	18.0	B	0.49	18.4	B	0.50	18.3	B	0.51	18.7	B	0.52	19.1	B	0.53	19.6	B
	Avery-SB	LR	0.77	58.5	E	0.79	60.3	E	0.79	60.9	E	0.79	60.8	E	0.80	61.5	E	0.81	61.8	E
	West Gte-SB	LR	0.47	69.0	E	0.49	70.2	E	0.49	70.3	E	0.50	70.7	E	0.55	74.4	E	0.59	77.2	E
		Intersection	-	14.7	B	-	15.5	B	-	15.8	B	-	16.8	B	-	19.0	B	-	22.1	C
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.03	2.7	A	0.03	3.1	A	0.05	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A
		TR	0.57	5.3	A	0.59	5.3	A	0.59	5.5	A	0.60	5.5	A	0.62	5.7	A	0.64	5.9	A
	WB	L	0.06	3.4	A	0.07	3.5	A	0.07	3.5	A	0.07	3.6	A	0.08	3.8	A	0.08	4.0	A
		TR	0.27	3.2	A	0.27	3.2	A	0.28	3.2	A	0.28	3.3	A	0.29	3.3	A	0.30	3.4	A
	NB	LTR	0.77	75.0	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E
	SB	LTR	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C
		Intersection	-	8.5	A	-	8.3	A	-	8.7	A	-	8.7	A	-	8.7	A	-	8.8	A
Plainview Road at Orchard Drive	EB	LR	0.06	10.4	B	0.06	10.6	B	0.06	10.6	B	0.06	10.8	B	0.06	10.9	B	0.06	11.0	B
	NB	LT	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A
Jericho Turnpike (NYS 25) at Site Driveway	WB	L	N/A			N/A			0.03	17.6	C	0.03	17.9	C	0.03	18.9	C	0.03	19.9	C
	NB	L							0.53	272.2	F	0.56	302.4	F	0.67	392.2	F	0.79	493.1	F
		R							0.01	11.3	B	0.01	11.5	B	0.01	11.3	B	0.01	11.2	B

Detailed SYNCHRO LOS Summary - Saturday Midday Peak Hour Analysis

									Plan B											
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.34	12.3	B	0.35	12.6	B	0.36	12.7	B	0.38	13.1	B	0.42	14.8	B	0.44	15.4	B
	WB	L	0.10	9.2	A	0.11	11.4	B	0.13	9.8	A	0.15	9.6	A	0.19	11.4	B	0.21	13.1	B
		T	0.30	1.7	A	0.32	1.6	A	0.32	1.7	A	0.33	1.6	A	0.36	2.0	A	0.37	2.3	A
	NB	LR	0.26	38.2	D	0.27	38.1	D	0.32	38.7	D	0.39	40.8	D	0.37	38.4	D	0.38	38.1	D
	Intersection		-	8.8	A	-	9.0	A	-	9.2	A	-	10.0	A	-	10.8	B	-	11.4	B
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.19	1.5	A	0.21	1.8	A	0.21	1.9	A	0.23	2.2	A	0.29	3.8	A	0.34	5.9	A
		T	0.25	0.7	A	0.26	0.7	A	0.27	0.7	A	0.28	1.0	A	0.31	1.3	A	0.32	1.2	A
	WB	TR	0.35	12.6	B	0.37	13.0	B	0.38	13.1	B	0.39	13.4	B	0.42	15.0	B	0.44	15.6	B
	Avery-SB	LR	0.59	58.1	E	0.60	58.1	E	0.60	58.1	E	0.61	58.2	E	0.62	58.3	E	0.64	58.5	E
	West Gte-SB	LR	0.26	56.1	E	0.26	56.1	E	0.26	56.1	E	0.25	56.1	E	0.31	57.6	E	0.36	58.9	E
	Intersection		-	12.4	B	-	12.5	B	-	12.5	B	-	12.6	B	-	13.6	B	-	14.1	B
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.06	2.9	A	0.06	3.0	A	0.06	3.0	A	0.07	3.0	A	0.07	3.0	A	0.07	3.1	A
		TR	0.34	3.3	A	0.35	3.4	A	0.36	3.4	A	0.37	3.5	A	0.39	3.6	A	0.40	3.7	A
	WB	L	0.04	2.8	A	0.05	2.8	A	0.05	2.8	A	0.05	2.9	A	0.06	2.9	A	0.06	2.9	A
		TR	0.37	3.6	A	0.38	3.7	A	0.38	3.7	A	0.40	3.8	A	0.41	3.8	A	0.42	3.9	A
	NB	LTR	0.74	71.9	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E
	SB	LTR	0.13	21.7	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C
	Intersection		-	7.9	A	-	7.9	A	-	7.9	A	-	7.8	A	-	7.8	A	-	7.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.4	A	0.03	9.4	A	0.03	9.3	A	0.03	9.6	A	0.03	9.6	A	0.03	9.7	A
	NB	LT	0.00	0.3	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A
Jericho Turnpike (NYS 25) at Site Driveway	WB	L	N/A			N/A			0.01	9.3	A	0.01	9.4	A	0.01	9.5	A	0.01	9.6	A
	NB	L							0.07	26.5	D	0.07	28.4	D	0.06	30.2	D	0.08	33.0	D
		R							0.01	10.3	B	0.01	10.4	B	0.01	10.4	B	0.01	10.5	B

Detailed SYNCHRO LOS Summary - Weekday AM Peak Hour Analysis

									Plan C												
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition			
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.26	11.7	B	0.28	13.3	B	0.28	14.2	B	0.30	13.3	B	0.30	13.8	B	0.33	14.0	B	
	WB	L	0.31	12.8	B	0.34	14.0	B	0.35	13.9	B	0.36	14.8	B	0.39	15.5	B	0.41	17.8	B	
		T	0.50	2.0	A	0.64	2.3	A	0.64	2.3	A	0.65	2.4	A	0.67	2.7	A	0.69	3.0	A	
	NB	LR	0.30	39.0	D	0.28	36.2	D	0.52	37.3	D	0.38	33.5	D	0.38	38.1	D	0.38	37.8	D	
	Intersection		-	6.8	A	-	7.4	A	-	7.6	A	-	8.2	A	-	8.5	A	-	9.9	A	
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.31	18.6	B	0.32	20.0	C	0.33	20.5	C	0.35	21.4	C	0.39	23.3	C	0.42	25.7	C	
		T	0.20	2.3	A	0.22	2.4	A	0.23	2.5	A	0.23	2.0	A	0.24	3.1	A	0.24	3.2	A	
	WB	TR	0.69	16.9	B	0.75	22.3	C	0.75	22.4	C	0.75	22.6	C	0.78	23.5	C	0.79	24.8	C	
	Avery-SB	LR	0.69	57.7	E	0.70	57.7	E	0.70	57.8	E	0.70	57.8	E	0.72	58.5	E	0.73	58.8	E	
	West Gte-SB	LR	0.21	57.9	E	0.22	58.3	E	0.22	58.3	E	0.22	58.5	E	0.30	60.9	E	0.37	63.7	E	
	Intersection		-	19.2	B	-	21.4	C	-	21.6	C	-	21.7	C	-	22.3	C	-	23.8	C	
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.02	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.8	A	0.03	2.8	A	0.03	2.8	A	
		TR	0.21	2.7	A	0.22	2.7	A	0.22	2.7	A	0.22	2.8	A	0.22	2.8	A	0.23	2.8	A	
	WB	L	0.01	2.4	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	
		TR	0.45	4.0	A	0.46	4.1	A	0.46	4.2	A	0.48	4.3	A	0.49	4.4	A	0.51	4.5	A	
	NB	LTR	0.70	71.1	E	0.71	72.3	E	0.71	72.4	E	0.71	72.3	E	0.71	72.3	E	0.71	72.3	E	
	SB	LTR	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	0.06	23.1	C	
	Intersection		-	7.6	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A	
Plainview Road at Orchard Drive	EB	LR	0.03	9.6	A	0.03	9.9	A	0.03	10.0	B	0.03	10.1	B	0.04	10.2	B	0.04	10.7	B	
	NB	LT	0.00	0.4	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.10	0.3	A	0.00	0.3	A	
Plainview Road at Site Driveway	WB	L	N/A			N/A			0.01	9.5	A	0.01	9.5	A	0.01	9.5	A	0.01	9.6	A	
	SB	R							0.00	0.3	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	
Jericho Turnpike (NYS 25) at Site Driveway	NB	R	N/A			N/A			0.01	9.7	A	0.01	9.7	A	0.01	9.8	A	0.01	9.9	A	

Detailed SYNCHRO LOS Summary - Weekday PM Peak Hour Analysis

			Existing Condition			2010 No Build Condition			Plan C: 2010 Build Scenario 1 Condition			Plan C: 2010 Build Scenario 2 Condition			Plan C: 2010 Build Scenario 3 Condition			Plan C: 2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.80	31.5	C	0.92	55.4	D	0.92	56.4	D	0.95	39.5	D	0.99	47.3	D	1.01	55.1	D
	WB	L	0.68	62.6	E	0.71	64.3	E	0.77	70.6	E	0.82	76.5	E	0.86	81.7	F	0.88	85.6	F
		T	0.40	3.8	A	0.42	3.6	A	0.42	3.7	A	0.43	3.7	A	0.44	3.9	A	0.45	4.0	A
	NB	LR	0.49	38.5	D	0.51	38.9	D	0.53	39.5	D	0.57	40.6	D	0.59	41.2	D	0.60	41.6	D
	Intersection		-	24.8	C	-	27.2	C	-	28.3	C	-	30.5	C	-	35.4	D	-	39.1	D
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.46	7.7	A	0.50	9.0	A	0.51	9.3	A	0.53	16.5	B	0.63	19.5	B	0.71	24.3	C
		T	0.74	4.4	A	0.77	5.4	A	0.77	5.6	A	0.77	6.5	A	0.80	9.3	A	0.82	15.7	B
	WB	TR	0.47	18.0	B	0.49	18.4	B	0.49	18.5	B	0.50	18.7	B	0.52	19.1	B	0.53	19.4	B
	Avery-SB	LR	0.77	59.5	E	0.79	60.5	E	0.79	60.5	E	0.79	60.5	E	0.80	61.4	E	0.81	61.8	E
	West Gate-NB	LR	0.47	69.0	E	0.49	70.2	E	0.49	70.4	E	0.50	70.7	E	0.55	74.4	E	0.59	77.2	E
	Intersection		-	14.7	B	-	15.5	B	-	15.7	B	-	16.7	B	-	18.6	B	-	21.5	C
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A
		TR	0.57	5.1	A	0.59	5.3	A	0.59	5.3	A	0.60	5.5	A	0.62	5.7	A	0.63	5.9	A
	WB	L	0.06	3.4	A	0.07	3.5	A	0.07	3.5	A	0.07	3.6	A	0.08	3.8	A	0.08	4.0	A
		TR	0.27	3.2	A	0.27	3.2	A	0.28	3.2	A	0.28	3.3	A	0.29	3.3	A	0.30	3.3	A
	NB	LTR	0.77	75.0	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E	0.79	77.7	E
	SB	LTR	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C
	Intersection		-	8.3	A	-	8.7	A	-	8.7	A	-	8.7	A	-	8.7	A	-	8.8	A
Plainview Road at Orchard Drive	EB	LR	0.06	10.4	B	0.06	10.6	B	0.06	10.7	B	0.06	10.8	B	0.06	10.9	B	0.06	11.0	B
	NB	LT	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A
Plainview Road at Site Driveway	WB	L	N/A			N/A			0.02	10.2	B	0.02	10.3	B	0.02	10.4	B	0.02	10.5	B
	SB	R							0.01	0.9	A	0.01	0.9	A	0.01	0.9	A	0.01	0.8	A
Jericho Turnpike (NYS 25) at Site Driveway	NB	R	N/A			N/A			0.01	11.5	B	0.01	11.5	B	0.01	11.4	B	0.01	11.2	B

Detailed SYNCHRO LOS Summary - Saturday Midday Peak Hour Analysis

			Existing Condition			2010 No Build Condition			Plan C: 2010 Build Scenario 1 Condition			Plan C: 2010 Build Scenario 2 Condition			Plan C: 2010 Build Scenario 3 Condition			Plan C: 2010 Build Scenario 4 Condition		
Intersection	Approach	Move.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Vel.	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.34	12.3	B	0.35	12.5	B	0.36	12.7	B	0.38	13.1	B	0.42	14.7	B	0.44	15.3	B
	WB	L	0.10	9.7	A	0.11	11.4	B	0.14	9.5	A	0.17	10.4	B	0.20	11.9	B	0.23	15.4	B
		T	0.30	1.7	A	0.32	1.6	A	0.32	1.6	A	0.33	1.6	A	0.36	2.0	A	0.37	2.1	A
	NB	LR	0.26	38.2	D	0.27	38.1	D	0.32	39.2	D	0.40	41.3	D	0.38	38.7	D	0.39	38.5	D
		Intersection	-	8.8	A	-	9.0	A	-	9.3	A	-	10.2	B	-	11.0	B	-	11.5	B
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.19	1.5	A	0.21	1.8	A	0.21	1.9	A	0.23	2.3	A	0.29	3.9	A	0.34	5.3	A
		T	0.25	0.7	A	0.26	0.7	A	0.26	0.8	A	0.28	0.9	A	0.30	1.1	A	0.32	1.2	A
	WB	TR	0.35	12.6	B	0.37	13.4	B	0.38	13.1	B	0.39	13.4	B	0.42	15.0	B	0.43	15.5	B
	Avery-SB	LR	0.59	58.1	E	0.60	58.1	E	0.60	58.1	E	0.61	58.2	E	0.63	58.3	E	0.64	58.3	E
	West Gte-SB	LR	0.26	56.1	E	0.26	56.1	E	0.26	56.1	E	0.26	56.1	E	0.31	57.6	E	0.36	58.9	E
		Intersection	-	12.4	B	-	12.5	B	-	12.6	B	-	12.9	B	-	13.7	B	-	14.2	B
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.06	2.9	A	0.06	3.0	A	0.05	3.0	A	0.06	3.0	A	0.07	3.0	A	0.07	3.3	A
		TR	0.34	3.3	A	0.35	3.4	A	0.35	3.4	A	0.37	3.5	A	0.39	3.6	A	0.40	3.7	A
	WB	L	0.04	7.3	A	0.05	7.8	A	0.05	2.8	A	0.05	2.9	A	0.06	2.9	A	0.06	2.9	A
		TR	0.37	3.6	A	0.38	3.7	A	0.38	3.7	A	0.39	3.6	A	0.41	3.8	A	0.42	3.9	A
	NB	LTR	0.74	71.9	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E	0.75	71.7	E
	SB	LTR	0.13	21.3	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.6	C	0.14	21.4	C
		Intersection	-	7.9	A	-	7.9	A	-	7.9	A	-	7.8	A	-	7.8	A	-	7.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.4	A	0.03	9.4	A	0.03	9.5	A	0.03	9.6	A	0.03	9.7	A	0.04	9.7	A
	NB	LT	0.00	0.3	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A
Plainview Road at Site Driveway	WB	L	N/A			N/A			0.02	9.2	A	0.02	9.3	A	0.02	9.4	A	0.02	9.4	A
	SB	R							0.01	1.3	A	0.01	1.2	A	0.01	1.1	A	0.01	1.1	A
Jericho Turnpike (NYS 25) at Site Driveway	NB	R	N/A			N/A			0.01	10.2	B	0.01	10.3	B	0.01	10.4	B	0.01	10.4	B

BUILD CONDITIONS (PLAN A)

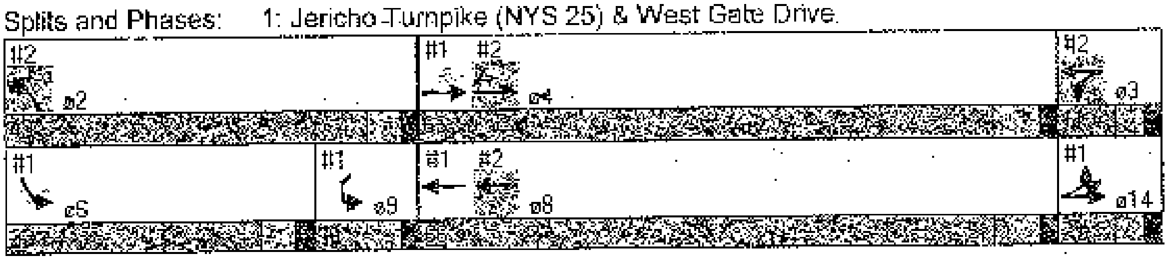
Scenario 1

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	38	10	484	1442	48	2			
Lane Group Flow (vph)	0	54	544	1590	227	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.3	83.3	72.3	21.2	8.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.18	0.07			
v/c Ratio		0.33	0.22	0.75	0.70	0.22			
Control Delay		20.5	2.6	22.4	57.8	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		20.5	2.7	22.4	57.8	58.3			
LOS		C	A	C	E	E			
Approach Delay			4.3	22.4	57.8	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		6	22	497	167	16			
Queue Length 95th (ft)		24	27	663	191	42			
Internal Link Dist (ft)			473	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2455	2123	426	102			
Starvation Cap Reductn		0	1031	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.33	0.38	0.75	0.53	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive.

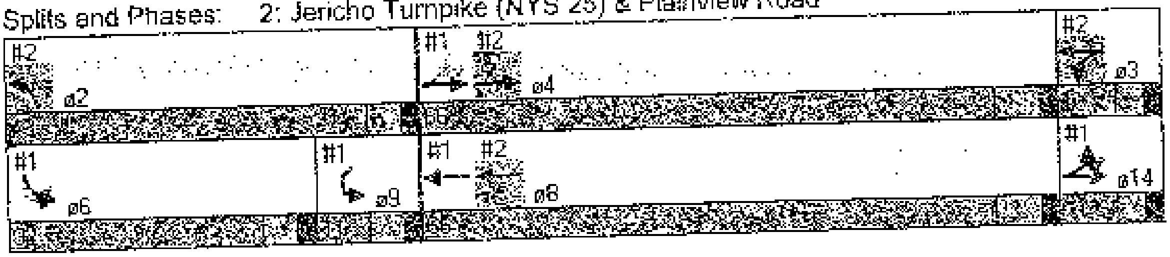


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	488	159	1418	55				
Lane Group Flow (vph)	592	171	1525	132				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.3	79.3	83.3	28.7				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.28	0.35	0.64	0.33				
Control Delay	13.2	13.4	2.0	37.5				
Queue Delay	0.0	0.5	0.3	0.0				
Total Delay	13.2	13.9	2.3	37.5				
LOS	B	B	A	D				
Approach Delay	13.2		3.6	37.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	120	51	35	80				
Queue Length 95th (ft)	170	m70	40	103				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2112	486	2373	535				
Starvation Cap Reductn	0	101	315	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.28	0.44	0.74	0.25				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.7 — Intersection LOS: A
Intersection Capacity Utilization 51.6% — ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

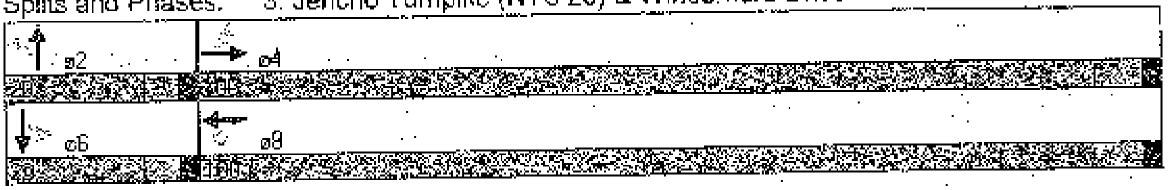


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	6	511	7	1211	105	0	1	0
Lane Group Flow (vph)	7	613	8	1328	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.46		0.71		0.06
Control Delay	2.7	2.7	2.6	4.2		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.6	4.2		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.2		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	45	1	140		87		1
Queue Length 95th (ft)	4	60	4	169		#157		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	265	2831	663	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.46		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	99	146	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	122	155	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	294	162	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	162	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	695	883	1410			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	127	168
Volume Left	18	5	0
Volume Right	8	0	13
cSH	742	1410	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.0	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	10	89	3	6	192
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	11	97	3	7	209
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	320	98			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	98			100	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	670	958			1493	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	100	215
Volume Left	4	0	7
Volume Right	11	3	0
cSH	853	1700	1493
Volume to Capacity	0.02	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.3	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	0.3
Approach LOS	A		

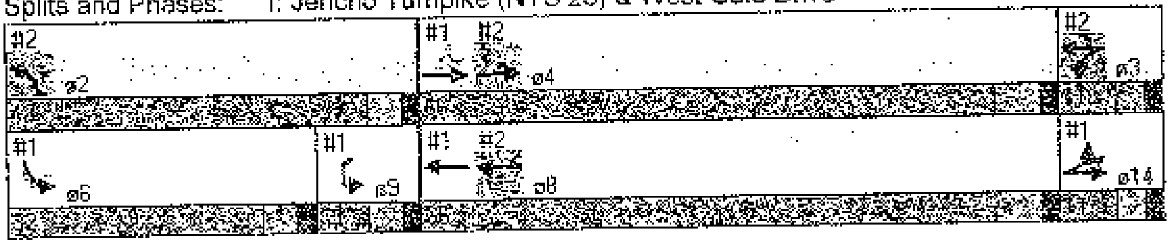
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations		↰	↑↑	↑↑↱	↰↰	↰↱			
Volume (vph)	105	13	1379	812	109	15			
Lane Group Flow (vph)	0	152	1768	963	298	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.9	77.9	66.9	24.2	8.1			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.51	0.77	0.49	0.79	0.49			
Control Delay		15.6	3.4	18.5	60.5	70.4			
Queue Delay		0.0	2.3	0.0	0.0	0.0			
Total Delay		15.7	5.7	18.5	60.5	70.4			
LOS		B	A	B	E	E			
Approach Delay			6.5	18.5	60.5	70.4			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		29	60	253	218	39			
Queue Length 95th (ft)		m31	47	312	277	69			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		297	2297	1949	436	106			
Starvation Cap Reductn		2	381	0	0	0			
Spillback Cap Reductn		0	0	6	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.52	0.92	0.50	0.68	0.49			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



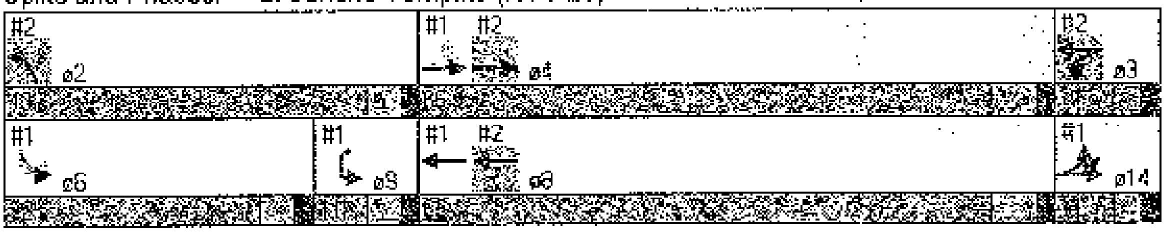
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1361	112	836	59				
Lane Group Flow (vph)	1831	122	929	247				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.9	73.9	77.9	34.1				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.93	0.76	0.42	0.54				
Control Delay	36.2	69.9	3.6	39.8				
Queue Delay	0.4	0.0	0.1	0.0				
Total Delay	36.5	69.9	3.8	39.8				
LOS	D	E	A	D				
Approach Delay	36.5		11.4	39.8				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~735	68	52	152				
Queue Length 95th (ft)	644	m#123	60	198				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1961	160	2220	522				
Starvation Cap Reductn	0	0	424	0				
Spillback Cap Reductn	14	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.94	0.76	0.52	0.47				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 28.4 Intersection LOS: C
Intersection Capacity Utilization 87.6% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

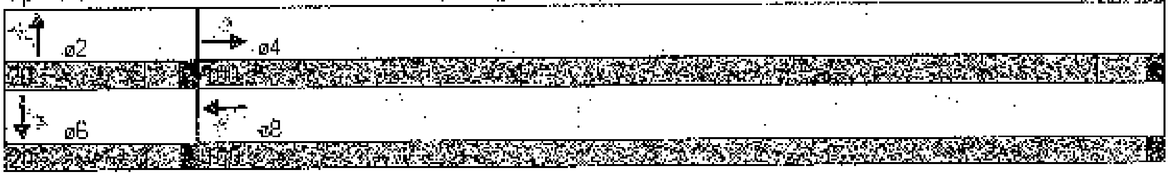


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↑↱	↰	↑↑↱		✣		✣
Volume (vph)	15	1435	11	725	110	0	1	0
Lane Group Flow (vph)	16	1667	12	790	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.28		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	206	2	66		103		1
Queue Length 95th (ft)	6	248	6	84		#206		17
Internal Link Dist (ft)		534		2948		220		238
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	494	2826	171	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	184	131	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	204	142	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	380	155	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	380	155	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	618	890	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	214	168
Volume Left	30	10	0
Volume Right	11	0	26
cSH	673	1409	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.7	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	184	8	18	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	200	9	20	175
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	418	204			209	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418	204			209	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	583	836			1362	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	209	195
Volume Left	5	0	20
Volume Right	12	9	0
cSH	736	1700	1362
Volume to Capacity	0.02	0.12	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.0	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	60	14	618	743	63	7			
Lane Group Flow (vph)	0	81	679	827	156	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.5	86.5	75.5	16.5	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.21	0.27	0.38	0.61	0.26			
Control Delay		1.9	0.8	13.1	58.2	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		1.9	0.9	13.1	58.2	56.1			
LOS		A	A	B	E	E			
Approach Delay			1.0	13.1	58.2	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	6	169	136	24			
Queue Length 95th (ft)		17	8	255	149	44			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		382	2551	2204	437	124			
Starvation Cap Reductn		0	813	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.21	0.39	0.38	0.36	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15

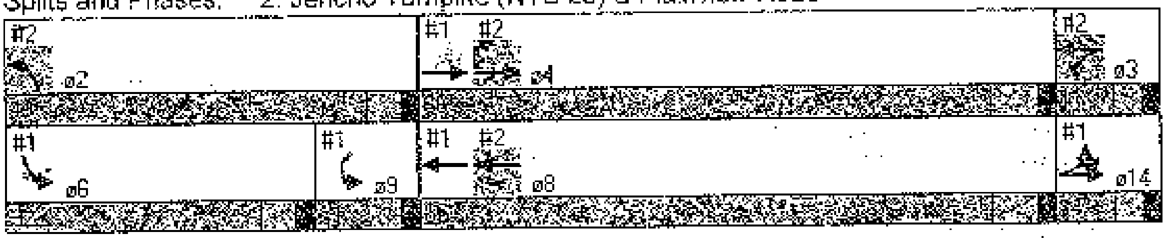
Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑	↰	↑↑	↰↱				
Volume (vph)	664	54	753	58				
Lane Group Flow (vph)	794	56	784	117				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.5	82.5	86.5	25.5				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.36	0.14	0.32	0.33				
Control Delay	12.7	9.5	1.5	39.5				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	12.7	9.5	1.6	39.5				
LOS	B	A	A	D				
Approach Delay	12.7		2.2	39.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	158	13	21	74				
Queue Length 95th (ft)	240	m24	25	90				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2204	397	2466	541				
Starvation Cap Reductn	0	0	622	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.36	0.14	0.43	0.22				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 9.5 Intersection LOS: A
Intersection Capacity Utilization 43.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

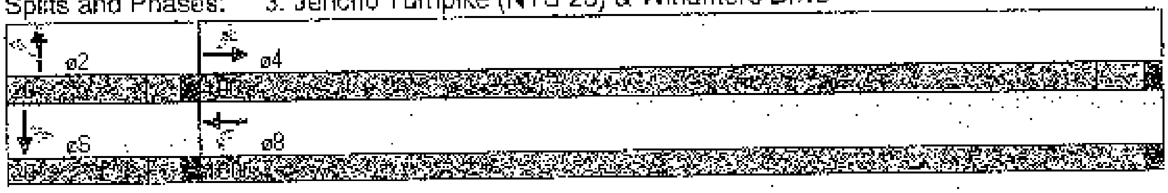


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	818	18	976	106	2	5	0
Lane Group Flow (vph)	22	999	20	1086	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.35	0.05	0.38		0.75		0.14
Control Delay	3.0	3.4	2.8	3.7		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.4	2.8	3.7		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.4		3.7		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	87	3	102		99		3
Queue Length 95th (ft)	8	108	8	126		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	353	2815	390	2849		497		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.35	0.05	0.38		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 48.2% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	111	117	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	137	139	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				873		
pX, platoon unblocked						
vC, conflicting volume	293	148	157			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293	148	157			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	696	899	1423			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	141	157
Volume Left	8	4	0
Volume Right	19	0	18
cSH	827	1423	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.5	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	75	8	18	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	82	9	20	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	227	86			90	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227	86			90	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	751	973			1505	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	90	122
Volume Left	5	0	20
Volume Right	12	9	0
cSH	891	1700	1505
Volume to Capacity	0.02	0.05	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	9.1	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	9.1	0.0	1.3
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

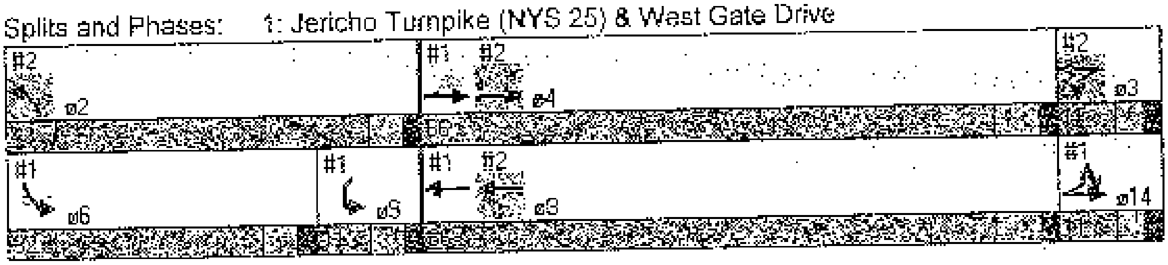
Scenario 2

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations		↰	↑↑	↑↑↱	↰↱	↰↱			
Volume (vph)	41	10	505	1447	48	2			
Lane Group Flow (vph)	0	57	567	1595	229	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.2	83.2	72.2	21.3	8.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.18	0.07			
v/c Ratio		0.35	0.23	0.75	0.70	0.22			
Control Delay		21.4	3.0	22.6	57.8	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		21.4	3.2	22.6	57.8	55.3			
LOS		C	A	C	E	E			
Approach Delay			4.8	22.6	57.8	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		7	27	501	169	15			
Queue Length 95th (ft)		27	34	667	193	42			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2452	2120	426	102			
Starvation Cap Reductn		0	1012	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.35	0.39	0.75	0.54	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø5	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	500	161	1423	61				
Lane Group Flow (vph)	611	173	1530	156				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	5	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.2	79.2	83.2	28.8				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.29	0.36	0.65	0.39				
Control Delay	13.3	14.2	2.0	38.9				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	13.3	14.8	2.4	38.9				
LOS	B	B	A	D				
Approach Delay	13.3		3.6	38.9				
Approach LOS	B		A	D				
Queue Length 50th (ft)	121	53	36	96				
Queue Length 95th (ft)	175	m73	40	120				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2407	475	2371	534				
Starvation Cap Reductn	0	95	318	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.29	0.46	0.75	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 8.3 Intersection LOS: A
Intersection Capacity Utilization 52.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

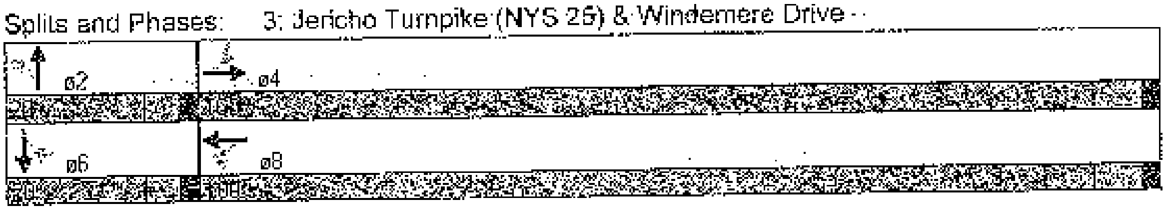
Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	6	518	7	1248	105	0	1	0
Lane Group Flow (vph)	7	621	8	1369	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.48		0.71		0.06
Control Delay	2.8	2.8	2.6	4.3		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.3		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.3		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	146		87		1
Queue Length 95th (ft)	4	61	4	177		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	253	2830	599	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.48		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 64.3% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	102	159	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	126	169	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	311	176	182			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311	176	182			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	679	868	1393			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	131	182
Volume Left	18	5	0
Volume Right	8	0	13
cSH	726	1393	1700
Volume to Capacity	0.03	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.1	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	10	92	3	6	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	11	100	3	7	223
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	338	102			103	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338	102			103	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	655	954			1489	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	103	229
Volume Left	4	0	7
Volume Right	11	3	0
cSH	844	1700	1489
Volume to Capacity	0.02	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.3	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	195	137	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	217	149	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	399	162	175			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399	162	175			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	603	883	1401			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	227	175
Volume Left	30	10	0
Volume Right	11	0	26
cSH	659	1401	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.8	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	196	8	18	166
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	213	9	20	180
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	437	217			222	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	437	217			222	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	568	822			1347	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	222	200
Volume Left	5	0	20
Volume Right	12	9	0
cSH	722	1700	1347
Volume to Capacity	0.02	0.13	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.1	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.1	0.0	0.9
Approach LOS	B		

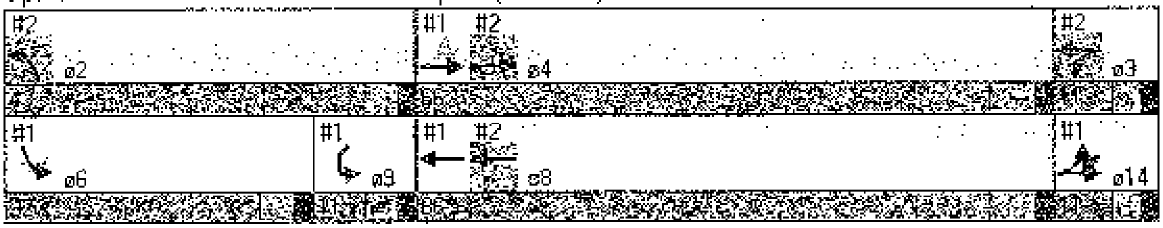
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations			↑↑	↑↱					
Volume (vph)	107	13	1391	830	108	15			
Lane Group Flow (vph)	0	154	1783	982	301	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.8	77.8	66.8	24.3	8.1			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.53	0.78	0.50	0.79	0.50			
Control Delay		16.3	3.5	18.7	60.8	70.7			
Queue Delay		0.0	3.2	0.0	0.0	0.0			
Total Delay		16.3	6.8	18.7	60.8	70.7			
LOS		B	A	B	E	E			
Approach Delay			7.5	18.7	60.8	70.7			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		29	53	259	221	39			
Queue Length 95th (ft)		m32	50	320	280	69			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		291	2295	1947	456	105			
Starvation Cap Reductn		0	403	0	0	0			
Spillback Cap Reductn		0	0	4	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.53	0.94	0.51	0.69	0.50			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



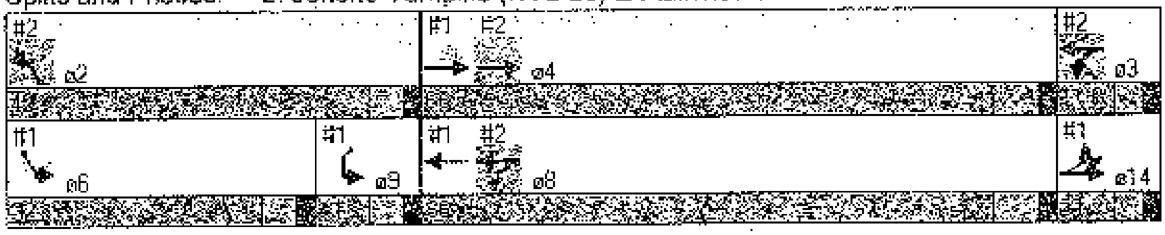
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑↱	↰	↑↑	Y				
Volume (vph)	1869	119	850	67				
Lane Group Flow (vph)	1867	129	944	265				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.8	73.8	77.8	34.2				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.95	0.81	0.43	0.58				
Control Delay	39.0	75.8	3.6	41.0				
Queue Delay	0.7	0.0	0.2	0.0				
Total Delay	39.8	75.8	3.7	41.0				
LOS	D	E	A	D				
Approach Delay	39.8		12.4	41.0				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~812	65	51	165				
Queue Length 95th (ft)	668	m#138	59	212				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1956	169	2218	523				
Starvation Cap Reductn	0	0	419	0				
Spillback Cap Reductn	17	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.96	0.81	0.52	0.51				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 69.7% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

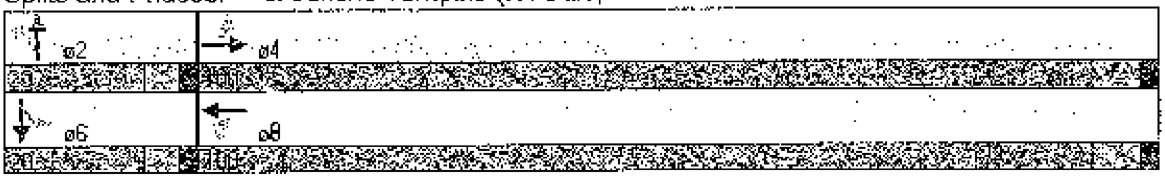


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1472	11	739	110	0	1	0
Lane Group Flow (vph)	16	1707	12	805	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.60	0.07	0.28		0.79		0.05
Control Delay	2.7	5.5	3.6	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.5	3.6	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.5		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	215	2	68		103		1
Queue Length 95th (ft)	6	260	6	85		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	485	2829	161	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.60	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 54.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

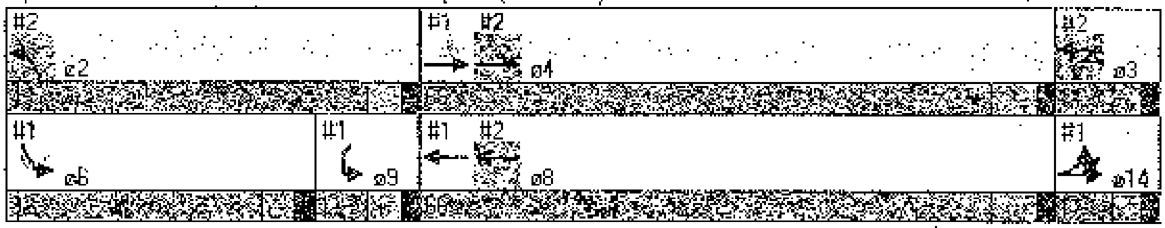


Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL2	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	63	14	648	773	63	7			
Lane Group Flow (vph)	0	84	712	858	160	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.2	86.2	75.2	16.8	9.6			
Actuated g/C Ratio		0.68	0.72	0.63	0.14	0.08			
v/c Ratio		0.23	0.28	0.39	0.61	0.26			
Control Delay		2.3	0.9	13.4	58.1	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		2.3	1.0	13.4	58.1	56.1			
LOS		A	A	B	E	E			
Approach Delay			1.2	13.4	58.1	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		1	9	179	118	24			
Queue Length 95th (ft)		19	11	269	161	44			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		366	2543	2199	437	124			
Starvation Cap Reductn		0	759	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.23	0.40	0.39	0.37	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.8 Intersection LOS: B
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

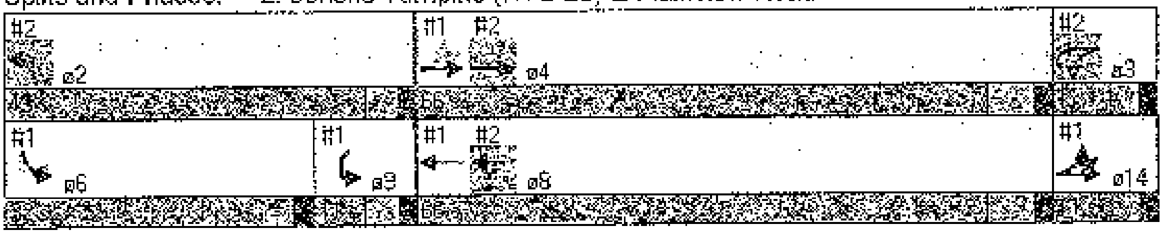
Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
	→	↙	←	↖				
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	687	61	779	71				
Lane Group Flow (vph)	841	64	811	149				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.2	82.2	86.2	25.8				
Actuated g/C Ratio	0.63	0.68	0.72	0.22				
v/c Ratio	0.38	0.17	0.33	0.42				
Control Delay	13.1	10.4	1.6	41.6				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	13.1	10.4	1.7	41.6				
LOS	B	B	A	D				
Approach Delay	13.1		2.3	41.6				
Approach LOS	B		A	D				
Queue Length 50th (ft)	171	16	22	95				
Queue Length 95th (ft)	258	m28	26	111				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2191	374	2458	540				
Starvation Cap Reductn	0	0	570	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.38	0.17	0.43	0.28				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 10.3 Intersection LOS: B
Intersection Capacity Utilization 44.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	20	865	18	1012	106	2	5	0
Lane Group Flow (vph)	22	1050	20	1125	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.37	0.05	0.39		0.75		0.14
Control Delay	3.0	3.5	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.5	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.5		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	94	3	107		99		3
Queue Length 95th (ft)	8	116	8	132		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	339	2818	369	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.37	0.05	0.39		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 49.2% — ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	123	128	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	152	152	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	321	161	170			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321	161	170			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	671	884	1407			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	156	170
Volume Left	8	4	0
Volume Right	19	0	18
cSH	807	1407	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	87	8	18	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	95	9	20	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	252	99			103	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	252	99			103	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	727	957			1489	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	103	134
Volume Left	5	0	20
Volume Right	12	9	0
cSH	871	1700	1489
Volume to Capacity	0.02	0.06	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.2	0.0	1.2
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	1.2
Approach LOS	A		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		

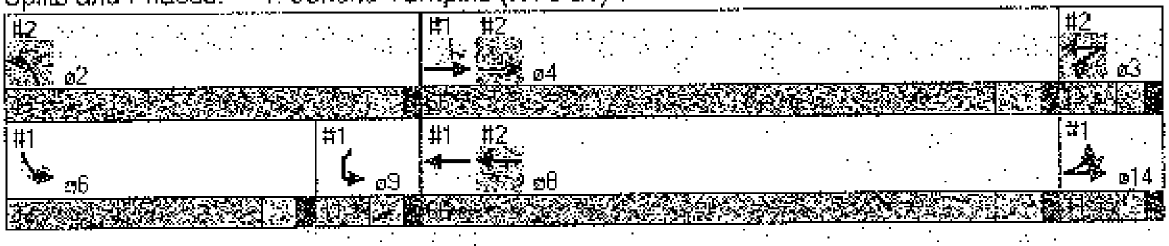
Scenario 3

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL2	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	44	13	515	1478	48	2			
Lane Group Flow (vph)	0	64	579	1628	240	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.4	82.4	71.4	21.8	8.4			
Actuated g/C Ratio		0.65	0.69	0.60	0.18	0.07			
v/c Ratio		0.39	0.24	0.78	0.73	0.30			
Control Delay		23.3	3.2	23.9	58.5	60.9			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		23.3	3.3	23.9	58.5	60.9			
LOS		C	A	C	E	E			
Approach Delay			5.3	23.9	58.5	60.9			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		9	29	538	176	24			
Queue Length 95th (ft)		26	36	694	202	55			
Internal Link Dist (ft)			173	476	364	275			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2431	2098	426	106			
Starvation Cap Reductn		0	966	0	0	0			
Spillback Cap Reductn		0	0	2	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.39	0.40	0.78	0.66	0.30			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EB1L and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

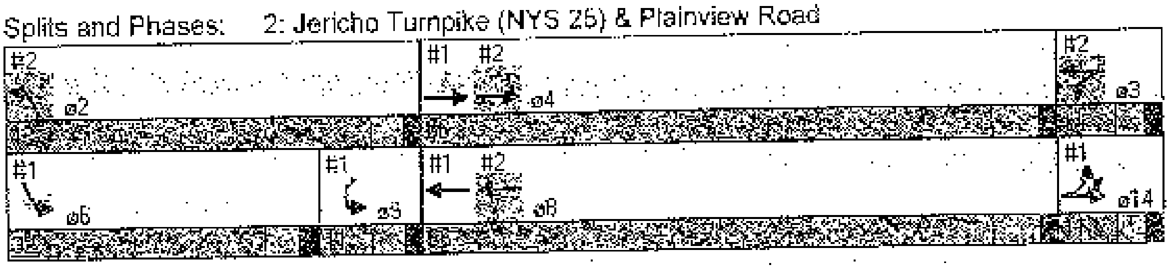


Lane Group	EBT	WBL	WBT	NEL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	513	169	1462	61				
Lane Group Flow (vph)	625	182	1572	160				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.4	78.4	82.4	29.6				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.30	0.39	0.67	0.40				
Control Delay	13.8	16.1	2.2	38.5				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	13.8	16.6	2.7	38.5				
LOS	B	B	A	D				
Approach Delay	13.8		4.1	38.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	132	61	40	97				
Queue Length 95th (ft)	180	m80	44	123				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2086	464	2350	532				
Starvation Cap Reductn	0	88	310	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.30	0.48	0.77	0.30				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 8.6 — Intersection LOS: A
Intersection Capacity Utilization 54.1% — ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Timings
3: Jericho Turnpike (NYS 25) & Windemere Drive

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	531	7	1278	105	0	1	0
Lane Group Flow (vph)	7	635	8	1401	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.49		0.71		0.06
Control Delay	2.8	2.8	2.6	4.4		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.4		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.3		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	47	1	152		87		1
Queue Length 95th (ft)	4	62	4	184		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	242	2830	590	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.49		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 55.1% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	105	167	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	130	178	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	324	184	190			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324	184	190			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	668	858	1383			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	135	190
Volume Left	18	5	0
Volume Right	8	0	13
cSH	716	1383	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	10	95	3	6	213
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	11	103	3	7	232
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	349	105			107	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	349	105			107	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	645	950			1484	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	107	238
Volume Left	4	0	7
Volume Right	11	3	0
cSH	837	1700	1484
Volume to Capacity	0.02	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.4	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	0.2
Approach LOS	A		

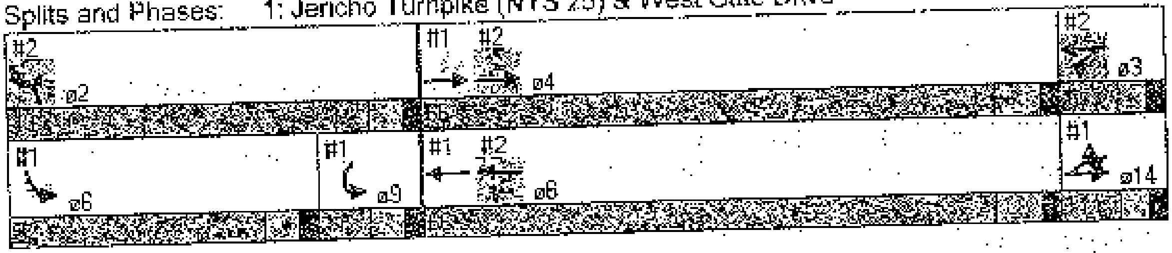
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBR	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	116	22	1426	851	108	15			
Lane Group Flow (vph)	0	177	1828	1005	307	59			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.5	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.5	77.5	66.5	24.6	8.2			
Actuated g/C Ratio		0.61	0.65	0.55	0.20	0.07			
v/c Ratio		0.63	0.80	0.52	0.80	0.55			
Control Delay		19.3	3.9	19.0	61.4	74.4			
Queue Delay		0.0	6.0	0.0	0.0	0.0			
Total Delay		19.3	9.9	19.0	61.4	74.4			
LOS		B	A	B	E	E			
Approach Delay			10.7	19.0	61.4	74.4			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		31	55	267	225	48			
Queue Length 95th (ft)		m33	52	331	286	#82			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		283	2287	1939	435	107			
Starvation Cap Reductn		0	412	0	0	0			
Spillback Cap Reductn		0	0	8	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.63	0.97	0.52	0.71	0.55			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 67.5% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



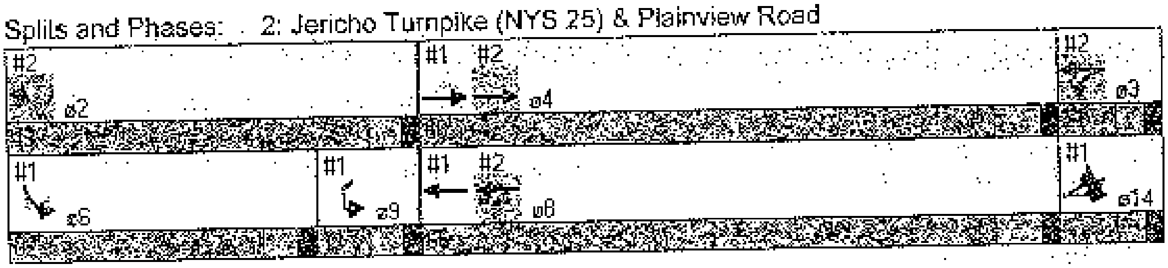
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	1413	124	876	67				
Lane Group Flow (vph)	1924	135	973	276				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.5	73.5	77.5	34.5				
Actuated g/C Ratio	0.55	0.61	0.65	0.29				
v/c Ratio	0.99	0.85	0.44	0.60				
Control Delay	45.5	80.9	3.7	41.5				
Queue Delay	2.8	0.0	0.2	0.0				
Total Delay	48.3	80.9	3.9	41.5				
LOS	D	F	A	D				
Approach Delay	48.3		13.3	41.5				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~862	70	55	174				
Queue Length 95th (ft)	707	m#150	64	222				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1948	159	2210	523				
Starvation Cap Reductn	0	0	420	0				
Spillback Cap Reductn	26	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.00	0.85	0.54	0.53				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 36.0   Intersection LOS: D
Intersection Capacity Utilization 71.7%   ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1516	11	765	110	0	1	0
Lane Group Flow (vph)	16	1755	12	834	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	6.0	6.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.62	0.08	0.29		0.79		0.05
Control Delay	2.7	5.7	3.8	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.7	3.8	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.7		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	228	2	71		103		1
Queue Length 95th (ft)	6	275	6	90		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	471	2829	151	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.62	0.08	0.29		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	203	140	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	226	152	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	411	165	178			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	411	165	178			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	593	879	1398			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	236	178
Volume Left	30	10	0
Volume Right	11	0	26
cSH	650	1398	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	205	8	18	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	223	9	20	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	452	227			232	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	452	227			232	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	557	812			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	232	205
Volume Left	5	0	20
Volume Right	12	9	0
cSH	710	1700	1336
Volume to Capacity	0.02	0.14	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.2	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.2	0.0	0.9
Approach LOS	B		

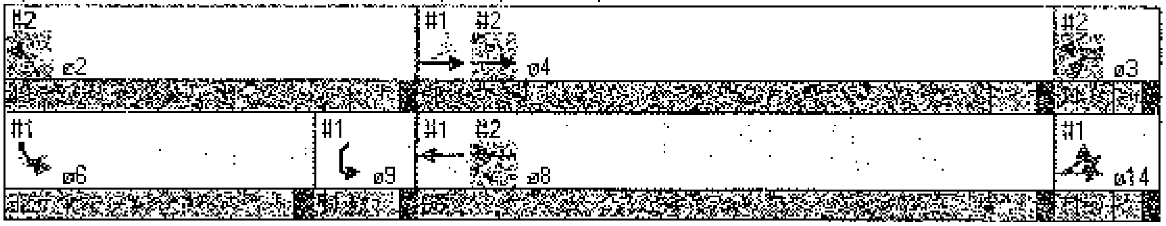
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWR	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	70	21	577	797	63	7			
Lane Group Flow (vph)	0	100	744	883	168	40			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.1	83.1	72.1	17.2	9.9			
Actuated g/C Ratio		0.66	0.69	0.60	0.14	0.08			
v/c Ratio		0.29	0.30	0.42	0.63	0.31			
Control Delay		4.2	1.1	15.0	58.4	57.7			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		4.2	1.2	15.0	58.4	57.7			
LOS		A	A	B	E	E			
Approach Delay			1.6	15.0	58.4	57.7			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		4	11	191	124	30			
Queue Length 95th (ft)		38	13	279	157	62			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		345	2451	2107	435	127			
Starvation Cap Reductn		4	687	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.29	0.42	0.42	0.39	0.31			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 13.8 Intersection LOS: B
Intersection Capacity Utilization 55.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

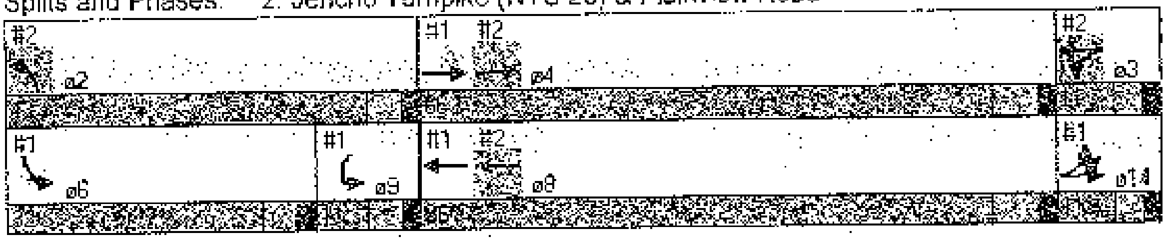


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	723	67	809	71				
Lane Group Flow (vph)	881	70	843	159				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.1	79.1	83.1	28.9				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.42	0.20	0.36	0.40				
Control Delay	14.7	11.9	1.9	39.0				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	14.7	11.9	2.0	39.0				
LOS	B	B	A	D				
Approach Delay	14.7		2.8	39.0				
Approach LOS	B		A	D				
Queue Length 50th (ft)	187	18	26	101				
Queue Length 95th (ft)	274	m30	32	118				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2100	346	2369	538				
Starvation Cap Reductn	0	0	513	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.42	0.20	0.45	0.30				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 45.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

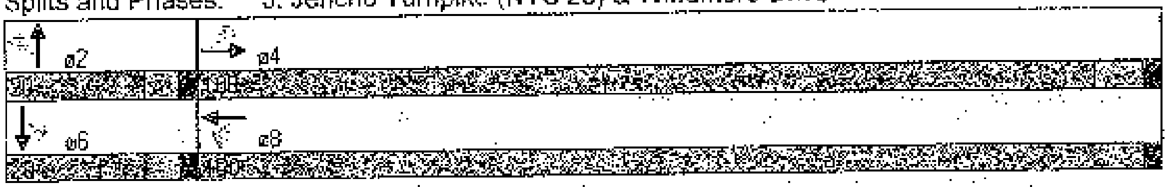


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✢		✢
Volume (vph)	20	901	18	1042	106	2	5	0
Lane Group Flow (vph)	22	1089	20	1158	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.39	0.06	0.41		0.75		0.14
Control Delay	3.0	3.6	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.6	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.6		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	100	3	112		99		5
Queue Length 95th (ft)	8	122	8	137		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	325	2820	353	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.39	0.06	0.41		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	130	134	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	160	160	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	336	168	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	336	168	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	657	876	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	164	177
Volume Left	8	4	0
Volume Right	19	0	18
cSH	796	1399	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	94	8	18	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	102	9	20	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	266	107			111	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	266	107			111	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	713	948			1479	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	111	140
Volume Left	5	0	20
Volume Right	12	9	0
cSH	859	1700	1479
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.3	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	1.1
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		

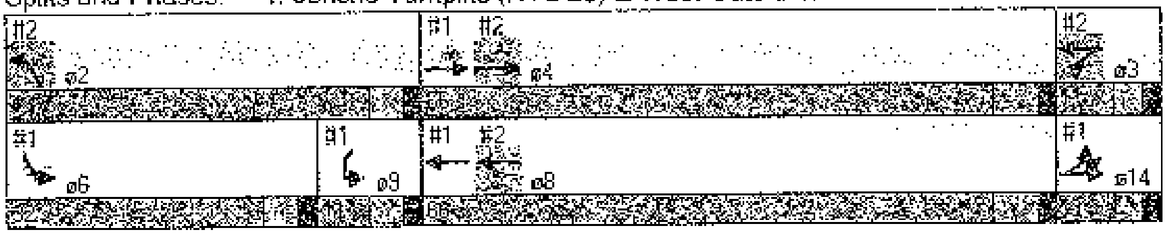
Scenario 4

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	46	45	524	1505	48	2			
Lane Group Flow (vph)	0	69	589	1657	248	39			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.0	82.0	71.0	22.2	8.4			
Actuated g/C Ratio		0.65	0.68	0.59	0.18	0.07			
v/c Ratio		0.42	0.24	0.79	0.73	0.37			
Control Delay		25.7	3.2	24.8	58.8	63.7			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		25.7	3.4	24.8	58.8	63.7			
LOS		C	A	C	E	E			
Approach Delay			5.7	24.8	58.8	63.7			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		31	30	568	182	29			
Queue Length 95th (ft)		31	37	#718	209	63			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		163	2419	2086	425	106			
Starvation Cap Reductn		0	933	0	0	0			
Spillback Cap Reductn		0	0	7	20	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.42	0.40	0.80	0.58	0.37			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

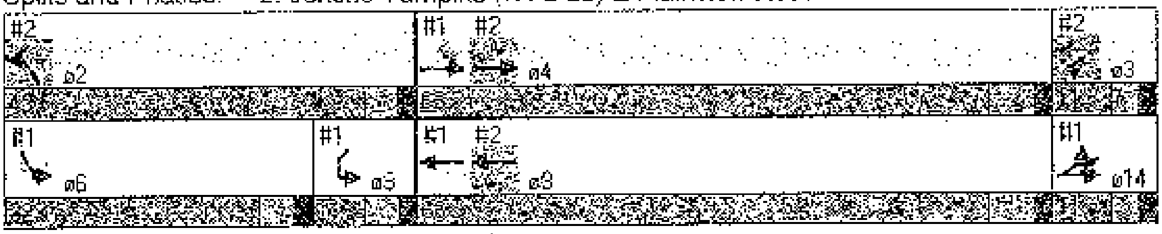


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	524	175	1495	61				
Lane Group Flow (vph)	638	186	1606	162				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.0	78.0	82.0	30.0				
Actuated g/C Ratio	0.59	0.65	0.68	0.25				
v/c Ratio	0.31	0.41	0.69	0.40				
Control Delay	14.0	17.2	2.5	38.2				
Queue Delay	0.0	0.6	0.5	0.0				
Total Delay	14.0	17.8	3.0	38.2				
LOS	B	B	A	D				
Approach Delay	14.0		4.6	38.2				
Approach LOS	B		A	D				
Queue Length 50th (ft)	139	65	44	86				
Queue Length 95th (ft)	184	m84	47	124				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2074	454	2338	532				
Starvation Cap Reductn	0	82	307	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.31	0.51	0.79	0.30				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 55.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

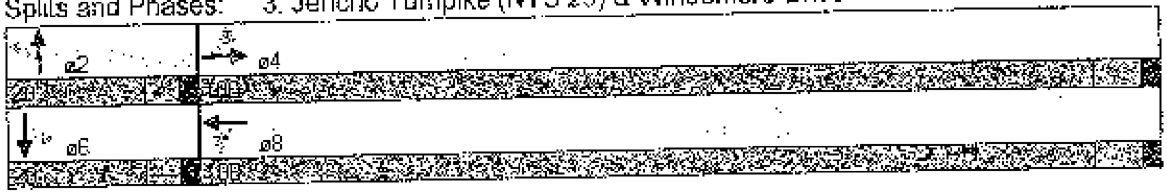


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↑↱	↰	↑↑↱		✢		✢
Volume (vph)	6	542	7	1320	105	0	1	0
Lane Group Flow (vph)	7	647	8	1447	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.23	0.01	0.51		0.71		0.06
Control Delay	2.8	2.8	2.6	4.5		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.5	4.5		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.5		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	48	1	161		87		1
Queue Length 95th (ft)	4	63	4	194		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	229	2833	681	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.23	0.01	0.51		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 — Intersection LOS: A
Intersection Capacity Utilization 56.3% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	107	173	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	132	184	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	332	190	197			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	190	197			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	660	851	1376			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	137	197
Volume Left	18	5	0
Volume Right	8	0	13
cSH	708	1376	1700
Volume to Capacity	0.04	0.00	0.12
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.3	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	10	97	3	6	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	11	105	3	7	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	358	107			109	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358	107			109	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	638	947			1482	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	109	245
Volume Left	4	0	7
Volume Right	11	3	0
cSH	832	1700	1482
Volume to Capacity	0.02	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.4	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	0.2
Approach LOS	A		

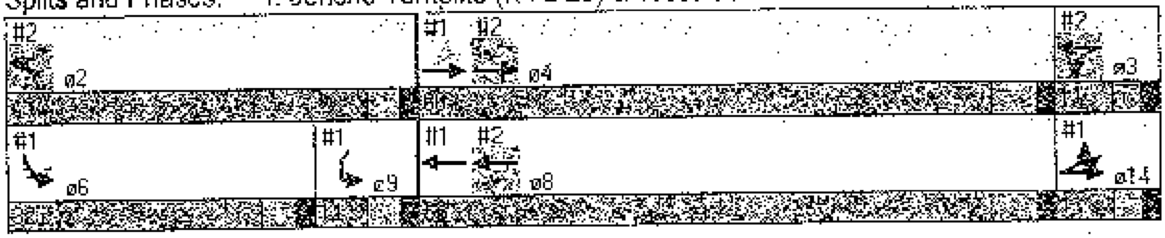
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	123	29	1455	868	108	15			
Lane Group Flow (vph)	0	195	1865	1023	312	64			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.3	77.3	66.3	24.8	8.3			
Actuated g/C Ratio		0.61	0.64	0.55	0.21	0.07			
v/c Ratio		0.71	0.82	0.53	0.81	0.59			
Control Delay		24.2	4.1	19.3	61.8	77.2			
Queue Delay		0.0	10.1	0.0	0.0	0.0			
Total Delay		24.2	14.2	19.3	61.8	77.2			
LOS		C	B	B	E	E			
Approach Delay			15.3	19.3	61.8	77.8			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		35	55	274	228	49			
Queue Length 95th (ft)		m35	52	338	291	#91			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		275	2280	1932	435	108			
Starvation Cap Reductn		0	413	0	0	0			
Spillback Cap Reductn		0	0	11	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.71	1.00	0.53	0.72	0.59			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 68.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



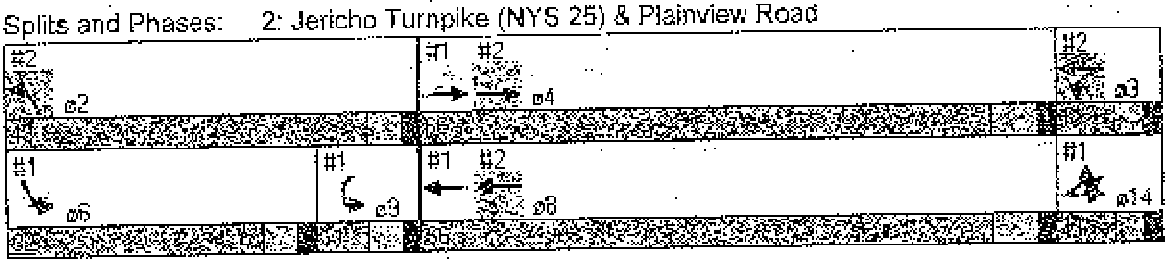
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑↱	↰	↑↑	⋎				
Volume (vph)	1449	128	897	67				
Lane Group Flow (vph)	1970	139	997	285				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.3	73.3	77.3	34.7				
Actuated g/C Ratio	0.55	0.61	0.64	0.29				
v/c Ratio	1.01	0.87	0.45	0.61				
Control Delay	52.4	84.4	3.9	42.0				
Queue Delay	1.6	0.0	0.2	0.0				
Total Delay	54.0	84.4	4.1	42.0				
LOS	D	F	A	D				
Approach Delay	54.0		13.9	42.0				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~904	72	59	180				
Queue Length 95th (ft)	#797	m#153	68	229				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1941	159	2204	522				
Starvation Cap Reductn	0	0	420	0				
Spillback Cap Reductn	10	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.02	0.87	0.56	0.55				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 39.6 Intersection LOS: D
Intersection Capacity Utilization 73.4% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

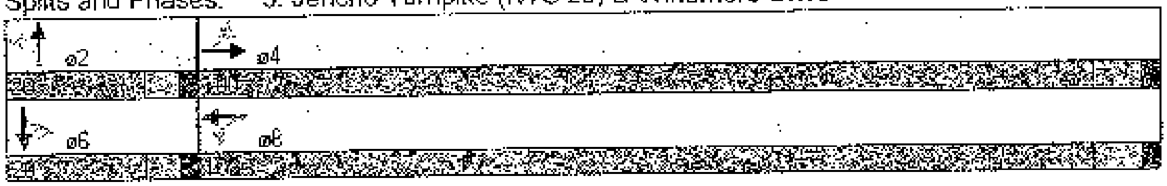


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1552	11	786	110	0	1	0
Lane Group Flow (vph)	16	1794	12	856	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.63	0.08	0.30		0.79		0.05
Control Delay	2.7	5.9	4.0	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.9	4.0	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.8		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	238	2	74		103		1
Queue Length 95th (ft)	6	288	6	92		#206		17
Internal Link Dist (ft)		634		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	460	2828	142	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.63	0.08	0.30		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.8 Intersection LOS: A
Intersection Capacity Utilization 66.7% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	212	146	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	236	159	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	427	172	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427	172	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	580	872	1390			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	246	185
Volume Left	30	10	0
Volume Right	11	0	26
cSH	637	1390	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	213	8	18	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	232	9	20	190
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	465	236			240	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	465	236			240	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	547	803			1326	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	240	210
Volume Left	5	0	20
Volume Right	12	9	0
cSH	701	1700	1326
Volume to Capacity	0.02	0.14	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.3	0.0	0.8
Lane LOS	B		A
Approach Delay (s)	10.3	0.0	0.8
Approach LOS	B		

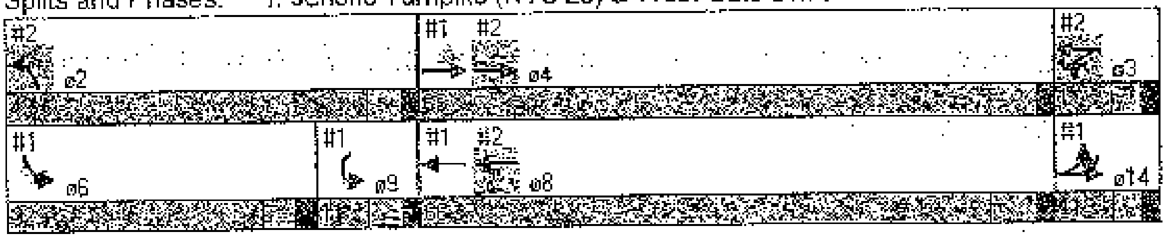
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	76	27	701	818	63	7			
Lane Group Flow (vph)	0	114	770	905	174	47			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.4	82.4	71.4	17.6	10.2			
Actuated g/C Ratio		0.65	0.69	0.60	0.15	0.08			
v/c Ratio		0.34	0.32	0.43	0.64	0.36			
Control Delay		5.3	1.2	15.5	58.4	59.0			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		5.3	1.3	15.5	58.4	59.0			
LOS		A	A	B	E	E			
Approach Delay			1.8	15.5	58.4	59.0			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		3	11	202	129	35			
Queue Length 95th (ft)		31	13	287	162	59			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		333	2431	2088	435	131			
Starvation Cap Reductn		0	628	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.34	0.43	0.43	0.40	0.36			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 55.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

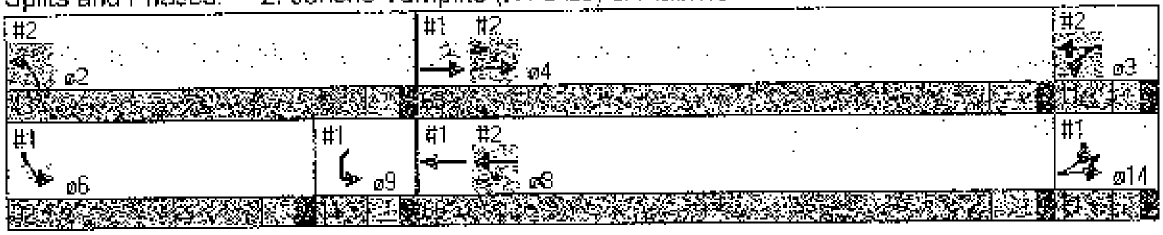


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	753	72	835	71				
Lane Group Flow (vph)	913	75	870	167				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.4	78.4	82.4	29.6				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.44	0.23	0.37	0.41				
Control Delay	15.3	15.4	2.1	38.9				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	15.3	15.4	2.2	38.9				
LOS	B	B	A	D				
Approach Delay	15.3		3.2	38.9				
Approach LOS	B		A	D				
Queue Length 50th (ft)	201	23	30	105				
Queue Length 95th (ft)	288	m38	35	123				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2083	330	2350	536				
Starvation Cap Reductn	0	0	457	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.44	0.23	0.46	0.31				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 46.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	20	931	18	1068	106	2	5	0
Lane Group Flow (vph)	22	1122	20	1186	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.40	0.06	0.42		0.75		0.14
Control Delay	3.1	3.7	2.9	3.9		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.1	3.7	2.9	3.9		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.7		3.9		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	104	3	116		99		3
Queue Length 95th (ft)	9	128	8	142		#193		32
Internal Link Dist (ft)		495		2042		270		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	314	2820	339	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.40	0.06	0.42		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 50.8% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	136	139	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	168	165	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	350	174	183			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350	174	183			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	646	869	1392			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	172	183
Volume Left	8	4	0
Volume Right	19	0	18
cSH	787	1392	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	11	100	8	18	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	12	109	9	20	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	278	113			117	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	278	113			117	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	702	940			1471	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	117	146
Volume Left	5	0	20
Volume Right	12	9	0
cSH	850	1700	1471
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.3	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	1.1
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

BUILD CONDITIONS (PLAN B)

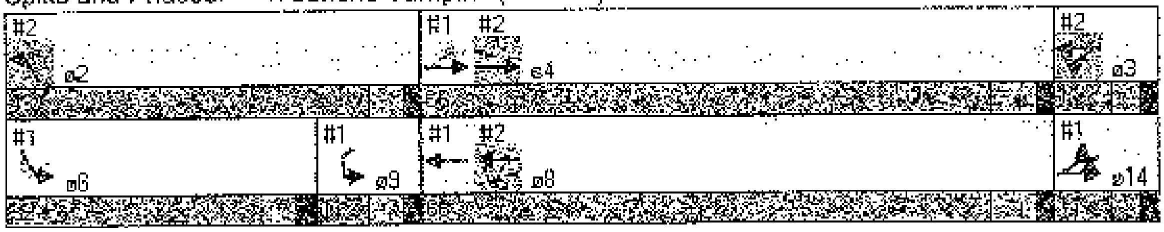
Scenario 1

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	37	10	486	1449	48	2			
Lane Group Flow (vph)	0	53	546	1598	225	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.4	83.4	72.4	21.1	8.0			
Actuated g/C Ratio		0.66	0.70	0.60	0.18	0.07			
v/c Ratio		0.32	0.22	0.75	0.70	0.22			
Control Delay		20.0	2.3	22.5	57.7	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		20.0	2.5	22.5	57.7	58.3			
LOS		B	A	C	E	E			
Approach Delay			4.0	22.5	57.7	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		6	20	501	166	16			
Queue Length 95th (ft)		24	24	669	189	42			
Internal Link Dist (ft)			173	348	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		165	2459	2126	427	102			
Starvation Cap Reductn		0	1020	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.32	0.38	0.75	0.53	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.5 Intersection LOS: C
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15

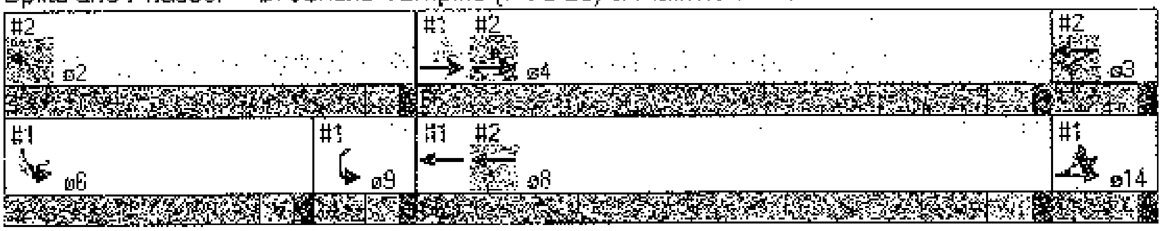
Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	493	157	1426	50				
Lane Group Flow (vph)	594	169	1533	120				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.4	79.4	83.4	28.6				
Actuated g/C Ratio	0.60	0.66	0.70	0.24				
v/c Ratio	0.28	0.35	0.64	0.31				
Control Delay	13.2	13.5	2.0	36.9				
Queue Delay	0.0	0.5	0.3	0.0				
Total Delay	13.2	14.0	2.3	36.9				
LOS	B	B	A	D				
Approach Delay	13.2		3.5	36.9				
Approach LOS	B		A	D				
Queue Length 50th (ft)	120	51	36	72				
Queue Length 95th (ft)	171	m70	40	95				
Internal Link Dist (ft)	2936		173	892				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2117	485	2377	535				
Starvation Cap Reductn	0	102	314	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.28	0.44	0.74	0.22				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 51.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

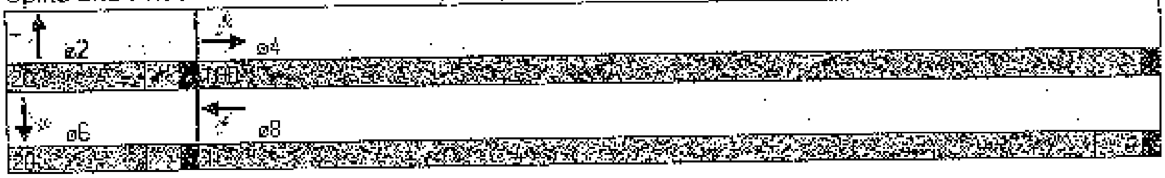


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	513	7	1214	105	0	12	0
Lane Group Flow (vph)	7	616	8	1332	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.47		0.71		0.06
Control Delay	2.7	2.8	2.6	4.2		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.8	2.6	4.2		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.2		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	140		87		1
Queue Length 95th (ft)	4	60	4	170		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	264	2831	602	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.47		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.4% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	97	143	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	120	152	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	288	159	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	288	159	165			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	700	887	1413			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	125	165
Volume Left	18	5	0
Volume Right	8	0	13
cSH	747	1413	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.0	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	10.0	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	530	6	3	1476	10	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	576	7	3	1604	11	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			583		1388	291
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			503		1354	196
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		92	99
cM capacity (veh/h)			1001		133	770

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	384	199	3	802	802	11	4
Volume Left	0	0	3	0	0	11	0
Volume Right	0	7	0	0	0	0	4
cSH	1700	1700	1001	1700	1700	133	770
Volume to Capacity	0.23	0.12	0.00	0.47	0.47	0.08	0.01
Queue Length 95th (ft)	0	0	0	0	0	7	0
Control Delay (s)	0.0	0.0	8.6	0.0	0.0	34.5	9.7
Lane LOS			A			D	A
Approach Delay (s)	0.0		0.0			27.4	
Approach LOS						D	

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	104	13	1391	816	109	15			
Lane Group Flow (vph)	0	150	1783	968	297	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.9	77.9	66.9	24.2	8.2			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.51	0.78	0.50	0.79	0.49			
Control Delay		9.2	3.5	18.5	60.5	70.3			
Queue Delay		0.0	2.3	0.0	0.0	0.0			
Total Delay		9.2	5.8	18.5	60.5	70.3			
LOS		A	A	B	E	E			
Approach Delay			6.1	18.5	60.5	70.3			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		14	49	254	216	39			
Queue Length 95th (ft)		m15	46	314	277	69			
Internal Link Dist (ft)			173	342	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		296	2297	1948	436	106			
Starvation Cap Reductn		1	368	0	0	0			
Spillback Cap Reductn		0	0	5	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.51	0.92	0.50	0.68	0.49			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 15.8 — Intersection LOS: B
Intersection Capacity Utilization 66.0% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

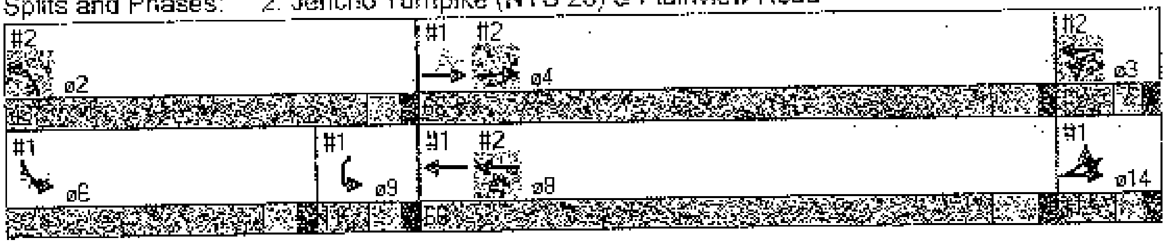
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑	↰	↑↑	Y				
Volume (vph)	1375	107	844	53				
Lane Group Flow (vph)	1835	116	938	235				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.9	73.9	77.9	34.1				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.93	0.72	0.42	0.52				
Control Delay	36.3	65.8	3.6	39.1				
Queue Delay	0.4	0.0	0.1	0.0				
Total Delay	36.6	65.8	3.8	39.1				
LOS	D	E	A	D				
Approach Delay	36.6		10.6	39.1				
Approach LOS	D		B	D				
Queue Length 50th (ft)	741	53	52	144				
Queue Length 95th (ft)	646	m#108	60	188				
Internal Link Dist (ft)	2948		173	896				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1964	160	2221	521				
Starvation Cap Reductn	0	0	420	0				
Spillback Cap Reductn	14	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.94	0.73	0.52	0.45				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 28.0 Intersection LOS: C
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

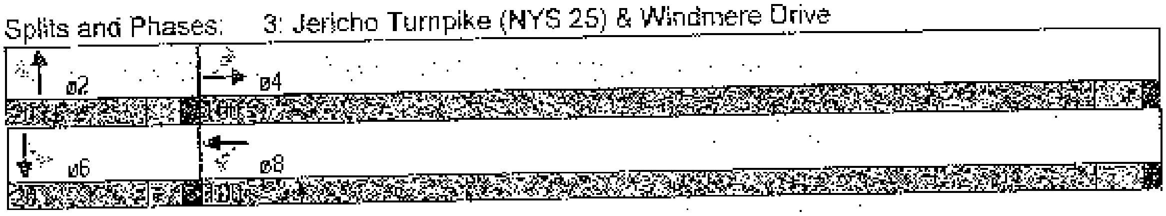


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1438	11	727	110	0	1	0
Lane Group Flow (vph)	16	1670	12	792	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.28		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	206	2	67		103		[illegible]
Queue Length 95th (ft)	6	249	6	84		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	493	2826	170	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 53.5% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	178	128	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	198	139	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	370	152	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	370	152	165			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	626	894	1413			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	208	165
Volume Left	30	10	0
Volume Right	11	0	26
cSH	681	1413	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.6	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
	→	↘	↙	←	↖	↗
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1498	17	8	880	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1628	18	9	957	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	422					
pX, platoon unblocked			0.63		0.63	0.63
vC, conflicting volume			1647		2133	823
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1443		2210	144
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		48	99
cM capacity (veh/h)			295		23	656

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	1086	561	9	478	478	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	295	1700	1700	23	556
Volume to Capacity	0.64	0.33	0.03	0.28	0.28	0.52	0.01
Queue Length 95th (ft)	0	0	2	0	0	38	1
Control Delay (s)	0.0	0.0	17.6	0.0	0.0	272.2	11.5
Lane LOS			C			F	B
Approach Delay (s)	0.0		0.2			190.8	
Approach LOS						F	

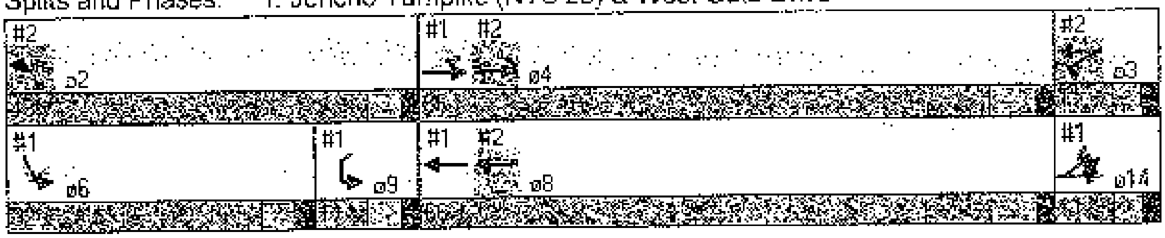
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations		↰	↑↑	↑↱	↰↱	↰			
Volume (vph)	59	14	630	747	64	7			
Lane Group Flow (vph)	0	80	692	832	155	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.6	86.6	75.6	16.4	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.21	0.27	0.38	0.60	0.26			
Control Delay		1.9	0.6	13.1	58.1	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		1.9	0.7	13.1	58.1	56.1			
LOS		A	A	B	E	E			
Approach Delay			0.9	13.1	58.1	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	5	170	145	24			
Queue Length 95th (ft)		17	6	257	148	44			
Internal Link Dist (ft)			373	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		380	2553	2208	438	124			
Starvation Cap Reductn		0	786	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.21	0.39	0.38	0.35	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 12.5 Intersection LOS: B
Intersection Capacity Utilization 54.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

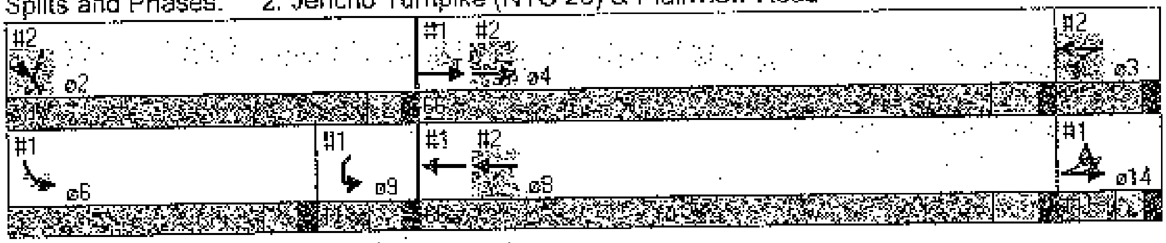


Lane Group	→ EBT	↙ WBL	← WBT	↖ NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	578	48	761	52				
Lane Group Flow (vph)	798	50	793	105				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.6	82.6	86.6	25.4				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.36	0.13	0.32	0.30				
Control Delay	12.7	9.8	1.5	38.7				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	12.7	9.8	1.7	38.7				
LOS	B	A	A	D				
Approach Delay	12.7		2.1	38.7				
Approach LOS	B		A	D				
Queue Length 50th (ft)	159	13	22	66				
Queue Length 95th (ft)	242	m24	26	83				
Internal Link Dist (ft)	2942		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2210	395	2460	541				
Starvation Cap Reductn	0	0	610	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.36	0.13	0.43	0.19				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 9.2 | Intersection LOS: A
Intersection Capacity Utilization 42.7% | ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

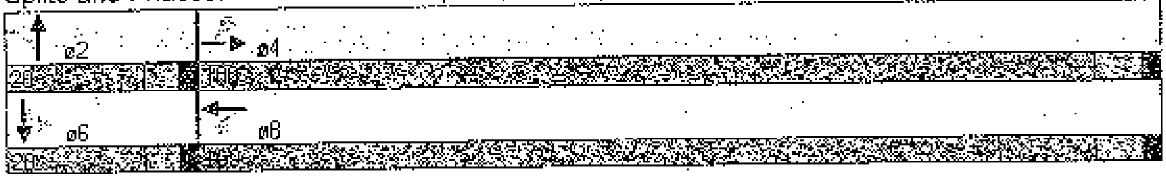


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↑↱	↰	↑↑↱		✥		✥
Volume (vph)	20	822	18	978	106	2	5	0
Lane Group Flow (vph)	22	1003	20	1088	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.36	0.05	0.38		0.75		0.14
Control Delay	3.0	3.4	2.8	3.7		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.4	2.8	3.7		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.4		3.7		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	87	3	102		99		3
Queue Length 95th (ft)	8	109	8	126		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	353	2818	390	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.36	0.05	0.38		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 48.3% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	105	114	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	130	136	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				973		
pX, platoon unblocked						
vC, conflicting volume	282	145	154			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	282	145	154			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	707	903	1427			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	133	154
Volume Left	8	4	0
Volume Right	19	0	18
cSH	833	1427	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.5	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	684	17	8	788	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	743	18	9	857	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			762		1198	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			671		1139	262
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	99
cM capacity (veh/h)			853		179	686

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	496	266	9	428	428	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	853	1700	1700	179	686
Volume to Capacity	0.29	0.16	0.01	0.25	0.25	0.07	0.01
Queue Length 95th (ft)	0	0	1	0	0	5	1
Control Delay (s)	0.0	0.0	9.3	0.0	0.0	26.5	10.3
Lane LOS			A			D	B
Approach Delay (s)	0.0		0.1			21.4	
Approach LOS						C	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

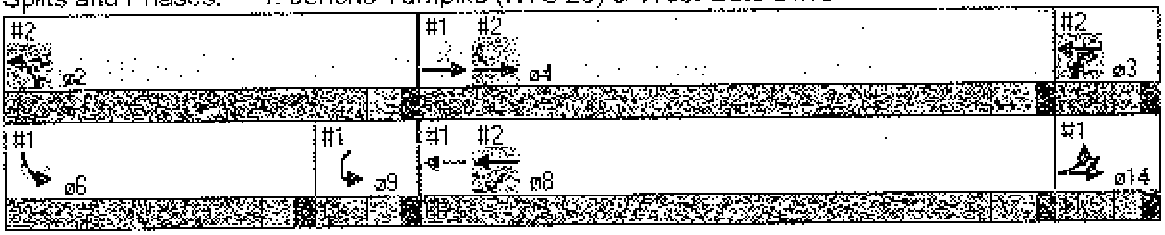
Scenario 2

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL2	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	40	10	507	1454	48	2			
Lane Group Flow (vph)	0	56	570	1603	228	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.2	83.2	72.2	21.3	8.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.18	0.07			
v/c Ratio		0.34	0.23	0.76	0.70	0.22			
Control Delay		21.2	2.9	22.7	57.8	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		21.2	3.0	22.7	57.8	58.3			
LOS		C	A	C	E	E			
Approach Delay			4.6	22.7	57.8	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		7	26	506	168	16			
Queue Length 95th (ft)		26	32	674	192	42			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2453	2121	426	102			
Starvation Cap Reductn		0	999	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.34	0.39	0.76	0.54	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 65.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

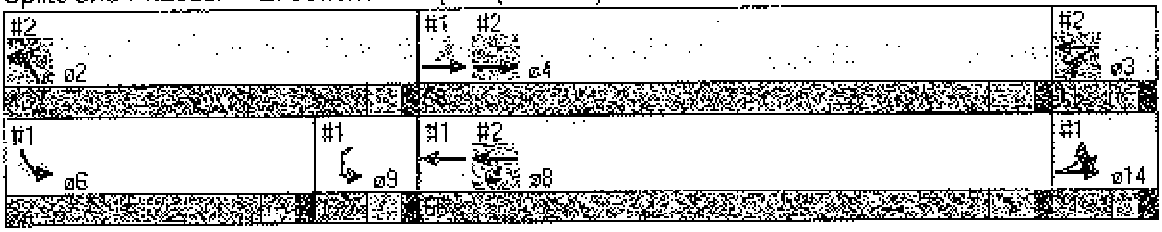


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	505	159	1431	56				
Lane Group Flow (vph)	613	171	1539	144				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.2	79.2	83.2	28.8				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.29	0.36	0.65	0.37				
Control Delay	13.3	13.9	2.0	38.2				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	13.3	14.4	2.4	38.2				
LOS	B	B	A	D				
Approach Delay	13.3		3.6	38.2				
Approach LOS	B		A	D				
Queue Length 50th (ft)	125	52	36	68				
Queue Length 95th (ft)	176	m70	41	111				
Internal Link Dist (ft)	2935		179	892				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2110	474	2372	534				
Starvation Cap Reductn	0	94	316	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.29	0.45	0.75	0.27				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 8.0 Intersection LOS: A
Intersection Capacity Utilization 52.5% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	520	7	1251	105	0	1	0
Lane Group Flow (vph)	7	623	8	1372	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.48		0.71		0.06
Control Delay	2.8	2.8	2.6	4.3		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.3		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.3		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	147		87		1
Queue Length 95th (ft)	4	61	4	178		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	253	2830	597	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.48		0.66		0.06

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 118.7

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

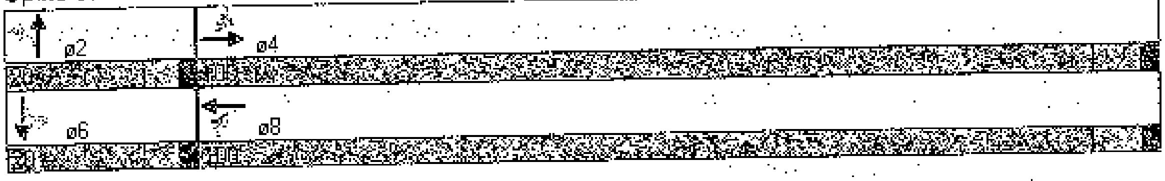
Intersection Signal Delay: 7.7 Intersection LOS: A

Intersection Capacity Utilization 54.4% ICU Level of Service A

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	100	156	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	123	166	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	308	172	179			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	306	172	179			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	684	871	1397			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	128	179
Volume Left	18	5	0
Volume Right	8	0	13
cSH	731	1397	1700
Volume to Capacity	0.03	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.1	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	551	6	3	1481	10	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	599	7	3	1610	11	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			605		1414	303
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			521		1376	201
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	99
cM capacity (veh/h)			982		128	761

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	399	206	3	805	805	11	4
Volume Left	0	0	3	0	0	11	0
Volume Right	0	7	0	0	0	0	4
cSH	1700	1700	982	1700	1700	128	761
Volume to Capacity	0.23	0.12	0.00	0.47	0.47	0.09	0.01
Queue Length 95th (ft)	0	0	0	0	0	7	0
Control Delay (s)	0.0	0.0	8.7	0.0	0.0	35.6	9.8
Lane LOS			A			E	A
Approach Delay (s)	0.0		0.0			28.4	
Approach LOS						D	

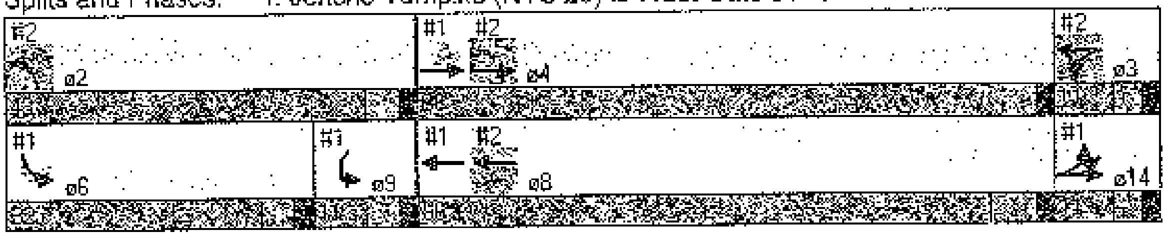
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SBR	ø2	ø3	ø4
Lane Configurations			↑↑	↑↑					
Volume (vph)	106	13	1403	834	109	45			
Lane Group Flow (vph)	0	153	1799	988	301	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.8	77.8	66.8	24.3	8.1			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.53	0.78	0.51	0.79	0.50			
Control Delay		16.6	3.6	18.7	60.8	70.7			
Queue Delay		0.0	3.3	0.0	0.0	0.0			
Total Delay		16.6	6.9	18.7	60.8	70.7			
LOS		B	A	B	E	E			
Approach Delay			7.6	18.7	60.8	70.7			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		29	52	262	221	39			
Queue Length 95th (ft)		m31	49	323	280	69			
Internal Link Dist (ft)			173	342	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		289	2295	1947	436	105			
Starvation Cap Reductn		0	389	0	0	0			
Spillback Cap Reductn		0	0	51	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.53	0.94	0.51	0.69	0.50			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑↱	↰	↑↑	↰↱				
Volume (vph)	1383	114	858	61				
Lane Group Flow (vph)	1870	124	953	253				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.8	73.8	77.8	34.2				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.96	0.78	0.43	0.55				
Control Delay	39.2	70.7	3.6	40.2				
Queue Delay	0.7	0.0	0.2	0.0				
Total Delay	39.9	70.7	3.8	40.2				
LOS	D	E	A	D				
Approach Delay	39.9		11.5	40.2				
Approach LOS	D		B	D				
Queue Length 50th (ft)	614	59	53	156				
Queue Length 95th (ft)	670	m#125	61	202				
Internal Link Dist (ft)	2948		173	896				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1958	159	2218	522				
Starvation Cap Reductn	0	0	422	0				
Spillback Cap Reductn	17	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.96	0.78	0.53	0.48				

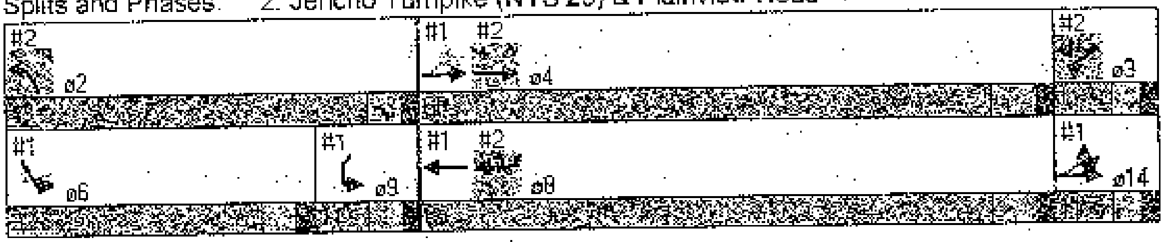
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 30.4 Intersection LOS: C
Intersection Capacity Utilization 68.9% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

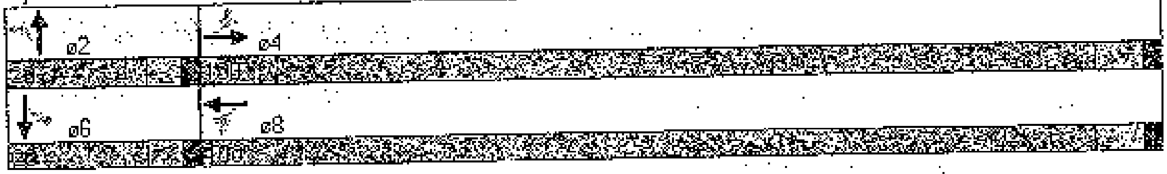


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1475	11	741	110	0	1	9
Lane Group Flow (vph)	16	1710	12	807	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.60	0.07	0.28		0.79		0.05
Control Delay	2.7	5.5	3.6	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.5	3.6	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.5		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	216	2	68		108		1
Queue Length 95th (ft)	6	261	6	86		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	485	2829	161	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.60	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	190	134	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	211	146	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	390	159	172			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	390	159	172			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	610	887	1405			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	221	172
Volume Left	30	10	0
Volume Right	11	0	26
cSH	666	1405	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.8	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1510	17	8	898	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1641	18	9	976	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	422					
pX, platoon unblocked			0.63		0.63	0.63
vC, conflicting volume			1660		2156	830
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1456		2249	131
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		44	99
cM capacity (veh/h)			288		21	560

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	1094	566	9	488	488	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	288	1700	1700	21	560
Volume to Capacity	0.64	0.33	0.03	0.29	0.29	0.56	0.01
Queue Length 95th (ft)	0	0	2	0	0	40	1
Control Delay (s)	0.0	0.0	17.9	0.0	0.0	302.4	11.5
Lane LOS			C			F	B
Approach Delay (s)	0.0		0.2			211.5	
Approach LOS						F	

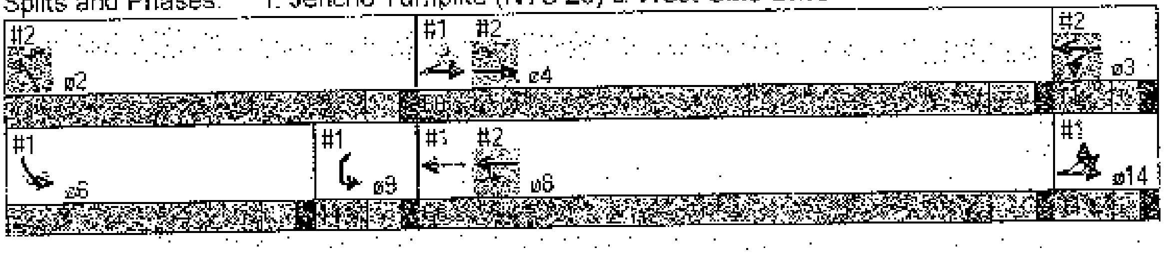
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	62	14	660	777	64	7			
Lane Group Flow (vph)	0	83	725	863	158	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.4	86.4	75.4	16.6	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.23	0.28	0.39	0.61	0.26			
Control Delay		2.2	0.9	13.4	58.2	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		2.2	1.0	13.4	58.2	56.1			
LOS		A	A	B	E	E			
Approach Delay			1.1	13.4	58.2	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	8	180	117	32			
Queue Length 95th (ft)		19	10	270	150	44			
Internal Link Dist (ft)			173	2343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		365	2547	2203	437	124			
Starvation Cap Reductn		0	738	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.23	0.40	0.39	0.36	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 54.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

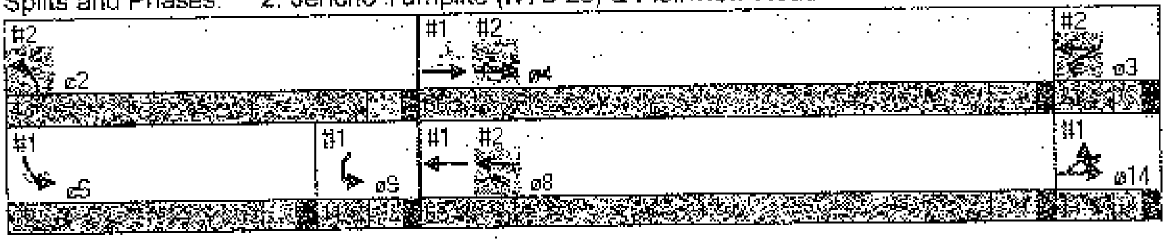


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	701	55	787	65				
Lane Group Flow (vph)	845	57	820	137				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.4	82.4	86.4	25.6				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.38	0.15	0.33	0.39				
Control Delay	13.1	9.6	1.6	40.8				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	13.1	9.6	1.7	40.8				
LOS	B	A	A	D				
Approach Delay	13.1		2.2	40.8				
Approach LOS	B		A	D				
Queue Length 50th (ft)	172	13	22	87				
Queue Length 95th (ft)	260	m24	26	103				
Internal Link Dist (ft)	2942		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2199	373	2462	540				
Starvation Cap Reductn	0	0	559	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.38	0.15	0.43	0.25				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 10.0 Intersection LOS: A
Intersection Capacity Utilization 44.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

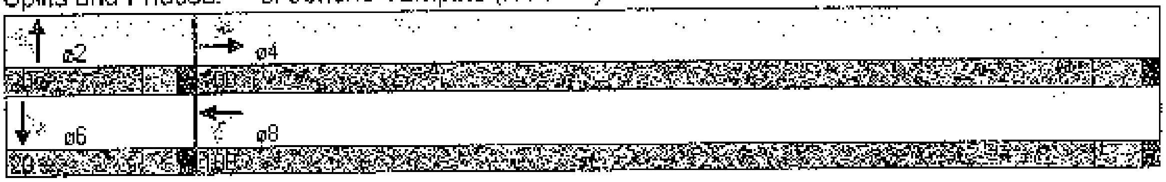


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↑↱	↰	↑↑↱		✥		✥
Volume (vph)	20	869	18	1014	106	2	5	0
Lane Group Flow (vph)	22	1055	20	1127	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.37	0.05	0.40		0.75		0.14
Control Delay	3.0	3.5	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.5	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.5		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	94	3	107		99		3
Queue Length 95th (ft)	8	117	8	132		#193		32
Internal Link Dist (ft)		495		2042		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	337	2818	366	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.37	0.05	0.40		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 49.3% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	117	125	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	144	149	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	310	158	167			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310	158	167			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	681	888	1411			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	148	167
Volume Left	8	4	0
Volume Right	19	0	18
cSH	814	1411	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	714	17	8	818	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	776	18	9	889	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			795		1247	397
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			699		1187	270
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	99
cM capacity (veh/h)			828		166	675

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	517	277	9	445	445	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	828	1700	1700	166	675
Volume to Capacity	0.30	0.16	0.01	0.26	0.26	0.07	0.01
Queue Length 95th (ft)	0	0	1	0	0	6	1
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	28.4	10.4
Lane LOS			A			D	B
Approach Delay (s)	0.0		0.1			22.7	
Approach LOS						C	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

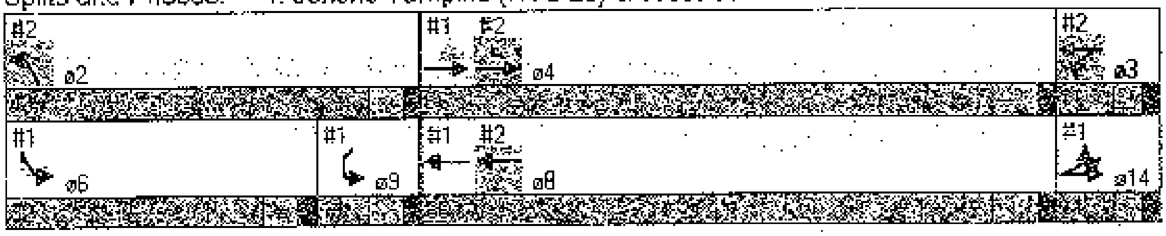
Scenario 3

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWR	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	43	13	517	1485	48	2			
Lane Group Flow (vph)	0	63	581	1637	239	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.5	82.5	71.5	21.7	8.4			
Actuated g/C Ratio		0.65	0.69	0.60	0.18	0.07			
v/c Ratio		0.38	0.24	0.78	0.72	0.30			
Control Delay		23.0	3.0	24.0	58.6	60.9			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		23.0	3.2	24.0	58.6	60.9			
LOS		C	A	C	E	E			
Approach Delay			5.1	24.0	58.6	60.9			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		9	27	543	176	24			
Queue Length 95th (ft)		26	33	701	201	55			
Internal Link Dist (ft)			179	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2433	2100	426	106			
Starvation Cap Reductn		0	958	0	0	0			
Spillback Cap Reductn		0	0	4	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.38	0.39	0.78	0.56	0.30			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 70.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

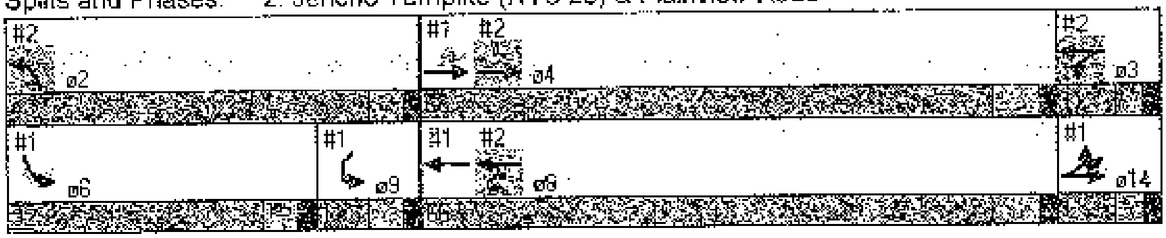


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
	→	↙	←	↖				
Lane Configurations	↑↑↱	↰	↑↑	↖↗				
Volume (vph)	518	167	1470	56				
Lane Group Flow (vph)	628	180	1581	148				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.5	78.5	82.5	29.5				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.30	0.39	0.67	0.37				
Control Delay	13.8	15.6	2.3	37.8				
Queue Delay	0.0	0.6	0.4	0.0				
Total Delay	13.8	16.2	2.7	37.8				
LOS	B	B	A	D				
Approach Delay	13.8		4.1	37.8				
Approach LOS	B		A	D				
Queue Length 50th (ft)	133	58	42	89				
Queue Length 95th (ft)	181	m75	45	115				
Internal Link Dist (ft)	2935		173	892				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2089	462	2351	532				
Starvation Cap Reductn	0	87	312	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.30	0.48	0.78	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 8.4 Intersection LOS: A
Intersection Capacity Utilization 53.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

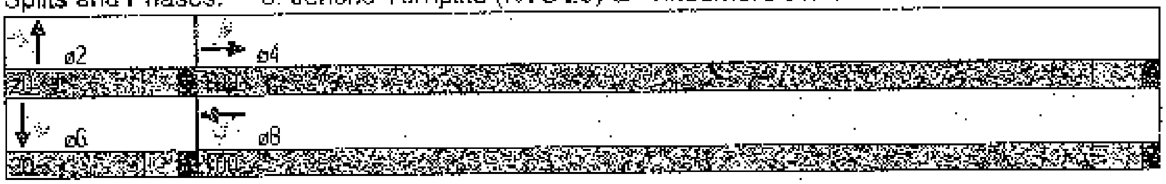


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	533	7	1290	105	0	1	0
Lane Group Flow (vph)	7	637	8	1414	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.23	0.01	0.49		0.71		0.06
Control Delay	2.8	2.8	2.6	4.4		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.4		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.4		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	155		87		1
Queue Length 95th (ft)	4	62	4	187		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	239	2830	589	2862		161		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.23	0.01	0.49		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 | Intersection LOS: A
Intersection Capacity Utilization 55.5% | ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	103	164	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	127	174	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	318	181	187			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318	181	187			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	673	862	1387			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	132	187
Volume Left	18	5	0
Volume Right	8	0	13
cSH	720	1387	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	561	6	3	1512	10	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	610	7	3	1643	11	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			616		1441	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			529		1406	201
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	99
cM capacity (veh/h)			973		122	758

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	407	210	3	822	822	11	4
Volume Left	0	0	3	0	0	11	0
Volume Right	0	7	0	0	0	0	4
cSH	1700	1700	973	1700	1700	122	758
Volume to Capacity	0.24	0.12	0.00	0.48	0.48	0.09	0.01
Queue Length 95th (ft)	0	0	0	0	0	7	0
Control Delay (s)	0.0	0.0	8.7	0.0	0.0	37.4	9.8
Lane LOS			A			E	A
Approach Delay (s)	0.0		0.0			29.5	
Approach LOS						D	

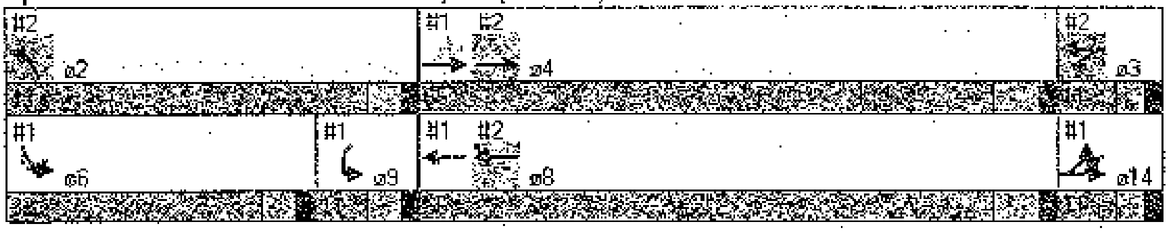
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBU	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	115	22	1438	855	109	15			
Lane Group Flow (vph)	0	175	1844	1010	307	59			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.6	77.6	66.6	24.6	8.2			
Actuated g/C Ratio		0.61	0.65	0.56	0.20	0.07			
v/c Ratio		0.62	0.81	0.52	0.80	0.55			
Control Delay		19.6	4.0	19.1	61.5	74.4			
Queue Delay		0.0	6.0	0.0	0.0	0.0			
Total Delay		19.6	10.0	19.1	61.5	74.4			
LOS		B	A	B	E	E			
Approach Delay			10.6	19.1	61.5	74.4			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		31	64	270	225	45			
Queue Length 95th (ft)		m32	51	332	288	#82			
Internal Link Dist (ft)			173	342	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		281	2287	1940	435	107			
Starvation Cap Reductn		0	397	0	0	0			
Spillback Cap Reductn		0	0	9	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.62	0.98	0.52	0.71	0.65			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



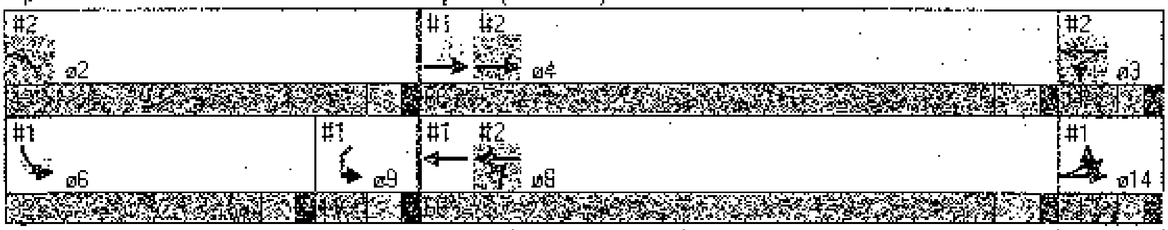
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	1427	119	884	61				
Lane Group Flow (vph)	1926	129	982	264				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.6	73.6	77.6	34.4				
Actuated g/C Ratio	0.56	0.61	0.65	0.29				
v/c Ratio	0.99	0.81	0.44	0.57				
Control Delay	45.5	75.4	3.6	40.7				
Queue Delay	2.8	0.0	0.2	0.0				
Total Delay	48.3	75.4	3.9	40.7				
LOS	D	E	A	D				
Approach Delay	48.3		12.2	40.7				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~863	65	56	165				
Queue Length 95th (ft)	707	m#137	65	211				
Internal Link Dist (ft)	2948		173	896				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1950	159	2211	522				
Starvation Cap Reductn	0	0	414	0				
Spillback Cap Reductn	26	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.00	0.81	0.55	0.51				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 35.6 Intersection LOS: D
Intersection Capacity Utilization 76.9% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

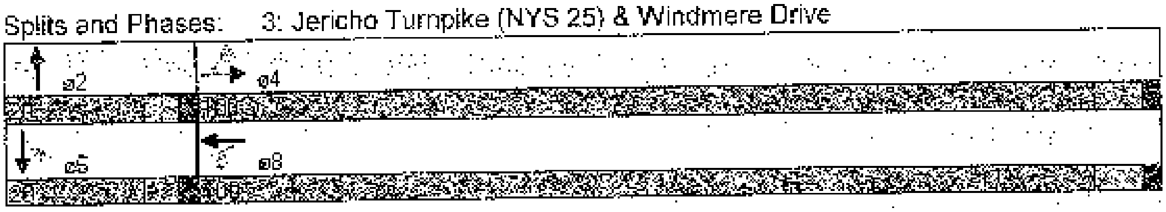


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1519	11	767	110	0	1	0
Lane Group Flow (vph)	16	1758	12	836	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.62	0.08	0.29		0.79		0.05
Control Delay	2.7	5.7	3.8	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.7	3.8	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.7		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	228	2	72		103		
Queue Length 95th (ft)	6	276	6	90		#206		17
Internal Link Dist (ft)		534		2948		229		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	469	2829	151	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.62	0.08	0.29		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 65.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	199	139	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	221	151	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	405	164	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	405	164	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	597	880	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	231	177
Volume Left	30	10	0
Volume Right	11	0	26
cSH	654	1399	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1545	17	8	919	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1679	18	9	999	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	422					
pX, platoon unblocked			0.60		0.60	0.60
vC, conflicting volume			1698		2205	849
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1499		2341	90
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		33	99
cM capacity (veh/h)			267		18	573

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	1120	578	9	499	499	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	267	1700	1700	18	573
Volume to Capacity	0.66	0.34	0.03	0.29	0.29	0.67	0.01
Queue Length 95th (ft)	0	0	3	0	0	45	1
Control Delay (s)	0.0	0.0	18.9	0.0	0.0	392.2	11.3
Lane LOS			C			F	B
Approach Delay (s)	0.0		0.2			273.2	
Approach LOS						F	

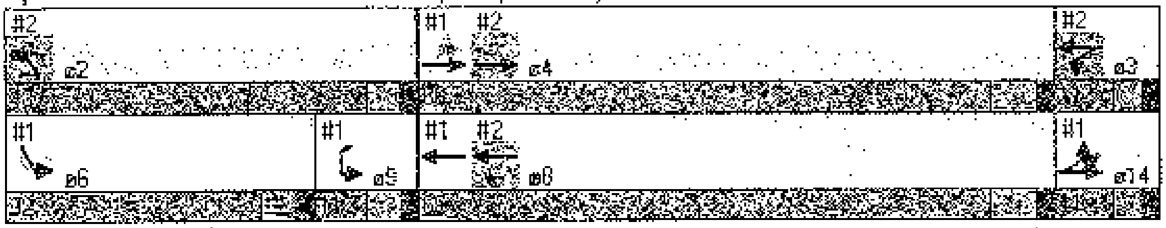
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	Ø2	Ø3	Ø4
Lane Configurations									
Volume (vph)	69	21	689	801	64	7			
Lane Group Flow (vph)	0	99	757	888	166	40			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	5	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.9	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.2	83.2	72.2	17.1	10.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.14	0.08			
v/c Ratio		0.29	0.31	0.42	0.62	0.31			
Control Delay		3.8	1.0	15.0	58.3	57.6			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		3.8	1.1	15.0	58.3	57.6			
LOS		A	A	B	E	E			
Approach Delay			1.1	15.0	58.3	57.6			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	5	192	123	30			
Queue Length 95th (ft)		26	11	281	155	52			
Internal Link Dist (ft)			175	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		343	2453	2110	436	128			
Starvation Cap Reductn		5	659	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.29	0.42	0.42	0.38	0.31			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 55.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

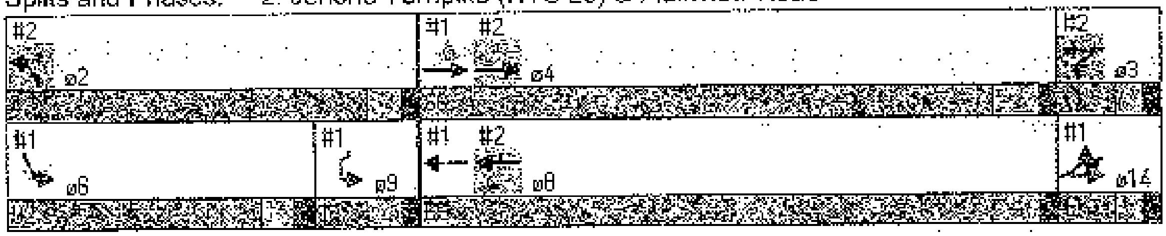


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	737	61	817	65				
Lane Group Flow (vph)	885	64	851	147				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.2	79.2	83.2	28.8				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.42	0.19	0.36	0.37				
Control Delay	14.8	11.4	1.9	38.4				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	14.8	11.4	2.0	38.4				
LOS	B	B	A	D				
Approach Delay	14.8		2.6	38.4				
Approach LOS	B		A	D				
Queue Length 50th (ft)	188	16	25	93				
Queue Length 95th (ft)	277	m28	32	110				
Internal Link Dist (ft)	2642		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2106	344	2371	538				
Starvation Cap Reductn	0	0	500	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.42	0.19	0.46	0.27				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.8 Intersection LOS: B
Intersection Capacity Utilization 44.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

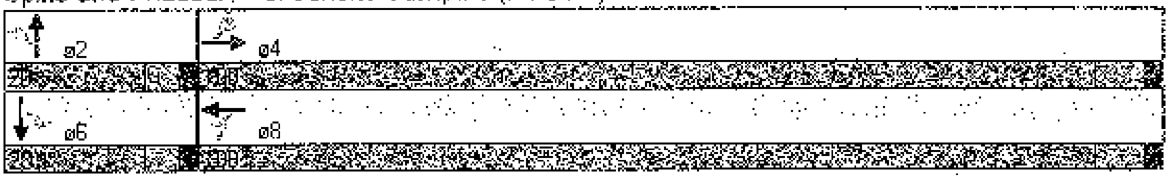


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	905	18	1044	106	2	5	20
Lane Group Flow (vph)	22	1094	20	1160	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.39	0.06	0.41		0.75		0.14
Control Delay	3.0	3.6	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.6	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.6		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	100	3	113		99		3
Queue Length 95th (ft)	8	124	8	137		#193		32
Internal Link Dist (ft)		495		2042		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	325	2820	350	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.39	0.06	0.41		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	124	131	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	153	156	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	325	165	174			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325	165	174			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	667	880	1403			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	157	174
Volume Left	8	4	0
Volume Right	19	0	18
cSH	803	1403	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	743	17	8	842	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	808	18	9	915	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			826		1292	413
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			719		1227	268
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	99
cM capacity (veh/h)			805		155	669

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	538	288	9	458	458	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	805	1700	1700	155	669
Volume to Capacity	0.32	0.17	0.01	0.27	0.27	0.08	0.01
Queue Length 95th (ft)	0	0	1	0	0	6	1
Control Delay (s)	0.0	0.0	9.5	0.0	0.0	30.2	10.4
Lane LOS			A			D	B
Approach Delay (s)	0.0		0.1			24.0	
Approach LOS						C	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		

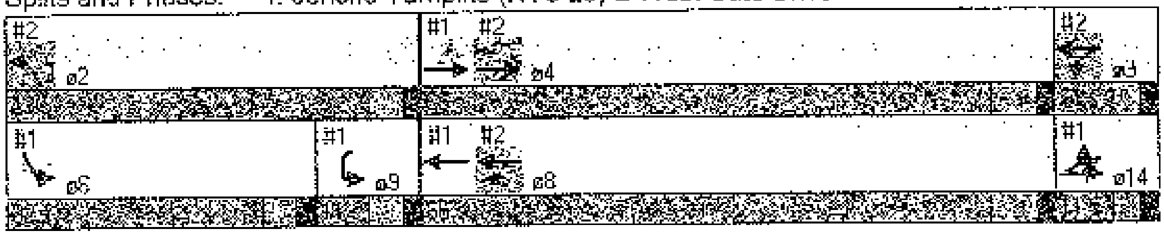
Scenario 4

Lane Group	EBL2	EBL	EBT	WBT	SBL2	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	45	15	526	1512	48	2			
Lane Group Flow (vph)	0	68	591	1666	247	39			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.0	82.0	71.0	22.2	8.4			
Actuated g/C Ratio		0.65	0.68	0.59	0.18	0.07			
v/c Ratio		0.42	0.24	0.80	0.73	0.37			
Control Delay		25.4	3.1	25.0	58.7	63.6			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		25.4	3.2	25.0	58.7	63.6			
LOS		C	A	C	E	E			
Approach Delay			5.5	25.0	58.7	63.6			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		11	28	575	181	29			
Queue Length 95th (ft)		30	34	#733	208	63			
Internal Link Dist (ft)			173	343	564	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		163	2420	2087	425	106			
Starvation Cap Reductn		0	922	0	0	0			
Spillback Cap Reductn		0	0	7	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.42	0.39	0.80	0.58	0.37			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 23.9 Intersection LOS: C
Intersection Capacity Utilization 74.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

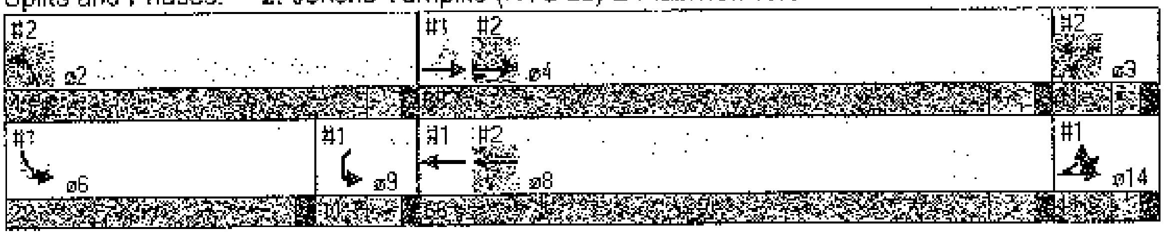


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑	↰	↑↑	Y				
Volume (vph)	529	173	1503	56				
Lane Group Flow (vph)	640	186	1616	151				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.0	79.0	82.0	30.0				
Actuated g/C Ratio	0.59	0.66	0.68	0.25				
v/c Ratio	0.31	0.41	0.69	0.37				
Control Delay	14.0	16.9	2.5	37.6				
Queue Delay	0.0	0.6	0.5	0.0				
Total Delay	14.0	17.6	3.0	37.6				
LOS	B	B	A	D				
Approach Delay	14.0		4.5	37.6				
Approach LOS	B		A	D				
Queue Length 50th (ft)	140	64	44	89				
Queue Length 95th (ft)	185	m83	46	117				
Internal Link Dist (ft)	2935		173	892				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2076	453	2339	532				
Starvation Cap Reductn	0	82	307	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.31	0.50	0.80	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 8.8 Intersection LOS: A
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

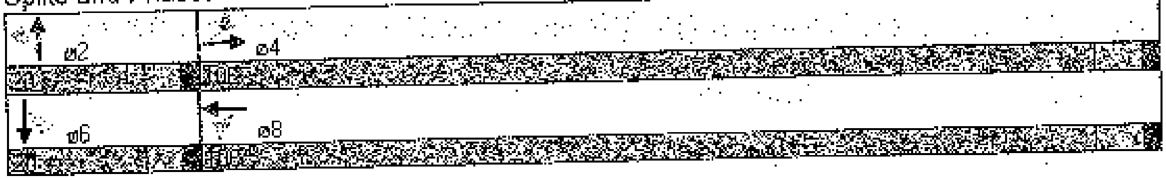


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	544	7	1323	105	0	1	0
Lane Group Flow (vph)	7	649	8	1450	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.23	0.01	0.51		0.71		0.06
Control Delay	2.8	2.8	2.6	4.5		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.5		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.5		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	49	1	161		87		4
Queue Length 95th (ft)	4	64	4	195		#167		20
Internal Link Dist (ft)		421		2936		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	227	2833	581	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.23	0.01	0.51		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 — Intersection LOS: A
Intersection Capacity Utilization 56.4% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	105	170	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	130	181	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	327	187	194			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	327	187	194			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	665	855	1380			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	135	194
Volume Left	18	5	0
Volume Right	8	0	13
cSH	713	1380	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	570	6	3	1539	10	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	620	7	3	1673	11	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			626		1460	313
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			536		1431	202
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	99
cM capacity (veh/h)			965		117	755

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	413	213	3	836	836	11	4
Volume Left	0	0	3	0	0	11	0
Volume Right	0	7	0	0	0	0	4
cSH	1700	1700	965	1700	1700	117	755
Volume to Capacity	0.24	0.13	0.00	0.49	0.49	0.09	0.01
Queue Length 95th (ft)	0	0	0	0	0	7	0
Control Delay (s)	0.0	0.0	8.7	0.0	0.0	38.8	9.8
Lane LOS			A			E	A
Approach Delay (s)	0.0		0.0			30.5	
Approach LOS						D	

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

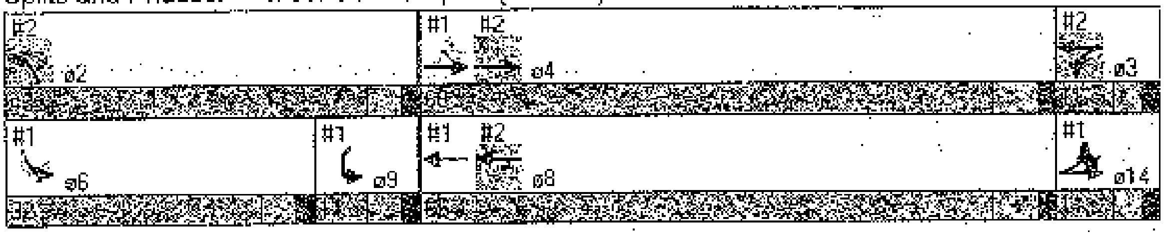
Lane Group	EBL	EBR	EBT	WBT	SBL	SBR	ø2	ø3	ø4
Lane Configurations		↗	↑↑	↑↱	↙	↘			
Volume (vph)	122	29	1467	872	109	15			
Lane Group Flow (vph)	0	193	1681	1029	312	64			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.3	77.3	66.3	24.8	8.3			
Actuated g/C Ratio		0.61	0.64	0.55	0.21	0.07			
v/c Ratio		0.71	0.82	0.53	0.81	0.59			
Control Delay		22.3	4.3	19.4	61.8	77.2			
Queue Delay		0.0	10.8	0.0	0.0	0.0			
Total Delay		22.3	15.1	19.4	61.8	77.2			
LOS		C	B	B	E	E			
Approach Delay			15.8	19.4	61.8	77.3			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		30	55	275	228	49			
Queue Length 95th (ft)		m30	52	341	291	#91			
Internal Link Dist (ft)			173	342	384	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		273	2280	1932	435	108			
Starvation Cap Reductn		0	403	0	0	0			
Spillback Cap Reductn		0	0	15	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.71	1.00	0.54	0.72	0.59			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

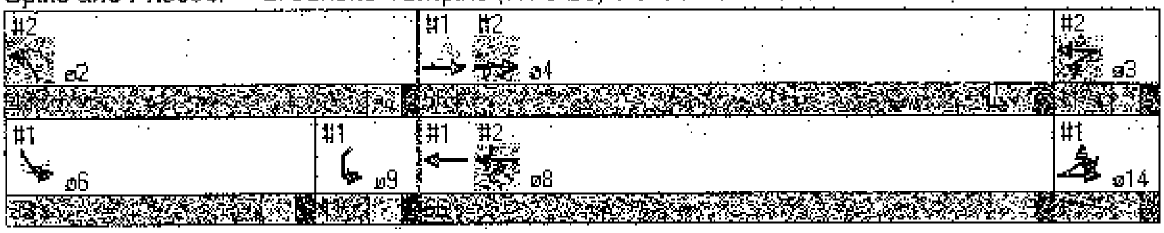


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
	→	↙	←	↖				
Lane Configurations	↑↑↱	↰	↑↑	↖↗				
Volume (vph)	1463	123	905	61				
Lane Group Flow (vph)	1973	134	1006	273				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.3	73.3	77.3	34.7				
Actuated g/C Ratio	0.55	0.61	0.64	0.29				
v/c Ratio	1.01	0.84	0.46	0.59				
Control Delay	52.4	79.5	3.9	41.1				
Queue Delay	1.6	0.0	0.2	0.0				
Total Delay	54.0	79.5	4.1	41.1				
LOS	D	E	A	D				
Approach Delay	54.0		13.0	41.1				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~903	68	60	171				
Queue Length 95th (ft)	#797	m#140	70	219				
Internal Link Dist (ft)	2948		173	896				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1944	159	2204	521				
Starvation Cap Reductn	0	0	414	0				
Spillback Cap Reductn	10	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.02	0.84	0.56	0.52				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 39.2 Intersection LOS: D
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1555	11	788	10	0	1	0
Lane Group Flow (vph)	16	1797	12	859	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.64	0.08	0.30		0.79		0.05
Control Delay	2.7	5.9	4.0	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.9	4.0	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.9		3.4		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	238	2	74		103		1
Queue Length 95th (ft)	6	289	6	92		#206		17
Internal Link Dist (ft)		534		2948		220		253
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	458	2828	142	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.64	0.08	0.30		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.8 Intersection LOS: A
Intersection Capacity Utilization 66.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	206	143	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	229	155	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	417	168	182			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	417	168	182			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	588	876	1394			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	239	182
Volume Left	30	10	0
Volume Right	11	0	26
cSH	645	1394	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1574	17	8	936	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1711	18	9	1017	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	422					
pX, platoon unblocked			0.58		0.58	0.58
vC, conflicting volume			1729		2246	865
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1535		2423	51
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		21	99
cM capacity (veh/h)			250		15	586

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	1141	589	9	509	509	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	250	1700	1700	15	586
Volume to Capacity	0.67	0.35	0.03	0.30	0.30	0.79	0.01
Queue Length 95th (ft)	0	0	3	0	0	48	1
Control Delay (s)	0.0	0.0	19.9	0.0	0.0	493.3	11.2
Lane LOS			C			F	B
Approach Delay (s)	0.0		0.2			342.7	
Approach LOS						F	

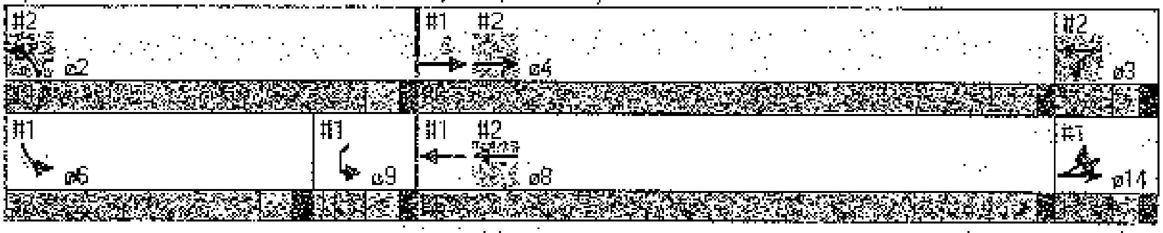
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	75	27	713	822	64	7			
Lane Group Flow (vph)	0	112	784	910	173	47			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.4	82.4	71.4	17.5	10.2			
Actuated g/C Ratio		0.65	0.69	0.60	0.15	0.08			
v/c Ratio		0.34	0.32	0.44	0.64	0.36			
Control Delay		5.9	1.1	15.6	58.3	58.9			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		5.9	1.2	15.6	58.3	58.9			
LOS		A	A	B	E	E			
Approach Delay			1.8	15.6	58.3	58.9			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		5	10	203	128	35			
Queue Length 95th (ft)		46	12	290	161	58			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		332	2431	2088	435	131			
Starvation Cap Reductn		0	606	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.34	0.43	0.44	0.40	0.36			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 55.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

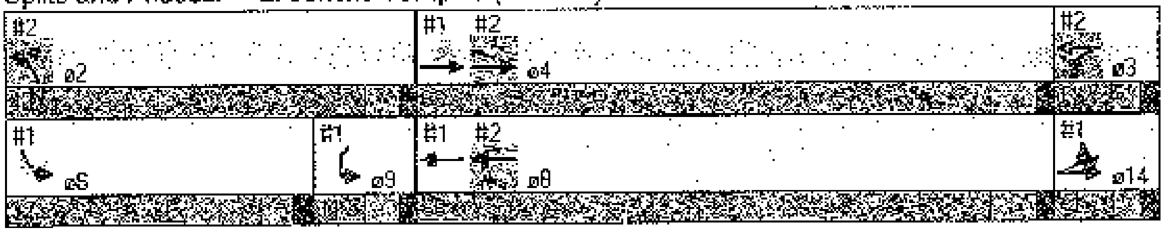


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	767	66	843	65				
Lane Group Flow (vph)	918	69	878	155				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.4	78.4	82.4	29.6				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.44	0.21	0.37	0.38				
Control Delay	15.4	13.1	2.1	38.1				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	15.4	13.1	2.3	38.1				
LOS	B	B	A	D				
Approach Delay	15.4		3.0	38.1				
Approach LOS	B		A	D				
Queue Length 50th (ft)	203	18	31	97				
Queue Length 95th (ft)	290	m32	36	115				
Internal Link Dist (ft)	2942		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2086	328	2350	536				
Starvation Cap Reductn	0	0	450	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.44	0.21	0.46	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 14.4 Intersection LOS: B
Intersection Capacity Utilization 45.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	20	935	18	1070	106	2	5	0
Lane Group Flow (vph)	22	1126	20	1188	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.40	0.06	0.42		0.75		0.14
Control Delay	3.1	3.7	2.9	3.9		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.1	3.7	2.9	3.9		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.7		3.9		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	105	3	117		99		6
Queue Length 95th (ft)	9	129	8	142		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	314	2820	337	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.40	0.06	0.42		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 50.8% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	130	136	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	160	162	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	339	171	180			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	339	171	180			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	655	873	1396			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	164	180
Volume Left	8	4	0
Volume Right	19	0	18
cSH	794	1396	1700
Volume to Capacity	0.03	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	767	17	8	863	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	834	18	9	938	12	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			852		1329	426
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			740		1264	272
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	99
cM capacity (veh/h)			786		145	661

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	556	296	9	469	469	12	5
Volume Left	0	0	9	0	0	12	0
Volume Right	0	18	0	0	0	0	5
cSH	1700	1700	786	1700	1700	145	661
Volume to Capacity	0.33	0.17	0.01	0.28	0.28	0.08	0.01
Queue Length 95th (ft)	0	0	1	0	0	7	1
Control Delay (s)	0.0	0.0	9.6	0.0	0.0	32.0	10.5
Lane LOS			A			D	B
Approach Delay (s)	0.0		0.1			25.3	
Approach LOS						D	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

BUILD CONDITIONS (PLAN C)

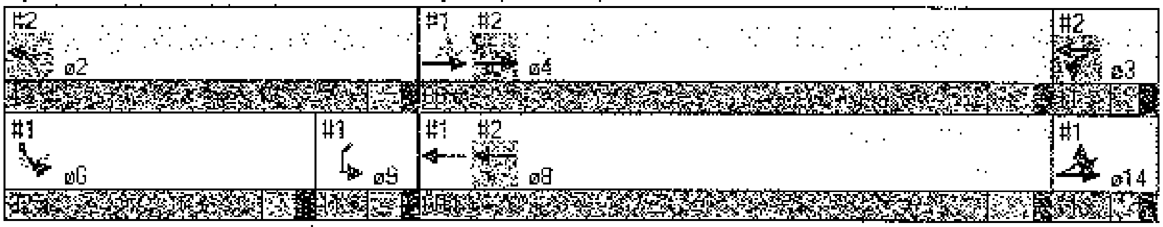
Scenario 1

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations			↑↑	↑↑					
Volume (vph)	38	10	480	1442	48	2			
Lane Group Flow (vph)	0	54	539	1590	227	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.3	83.3	72.3	21.2	8.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.18	0.07			
v/c Ratio		0.33	0.22	0.75	0.70	0.22			
Control Delay		20.5	2.4	22.4	57.8	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		20.5	2.5	22.4	57.8	58.3			
LOS		C	A	C	E	E			
Approach Delay			4.2	22.4	57.8	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		6	20	497	167	16			
Queue Length 95th (ft)		24	25	663	191	42			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2455	2123	426	102			
Starvation Cap Reductn		0	1031	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.33	0.38	0.75	0.53	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

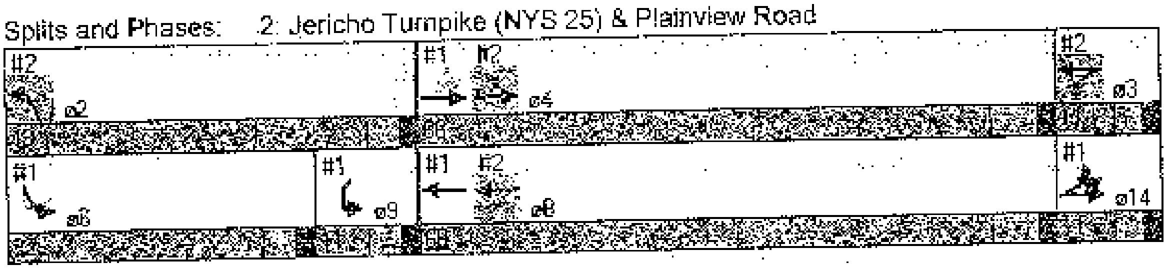


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	488	159	1418	55				
Lane Group Flow (vph)	592	171	1525	126				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.5	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.3	79.3	83.3	28.7				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.28	0.35	0.64	0.32				
Control Delay	13.2	13.4	2.0	37.1				
Queue Delay	0.0	0.5	0.3	0.0				
Total Delay	13.2	13.9	2.3	37.1				
LOS	B	B	A	D				
Approach Delay	13.2		3.5	37.1				
Approach LOS	B		A	D				
Queue Length 50th (ft)	120	51	36	76				
Queue Length 95th (ft)	170	m70	40	99				
Internal Link Dist (ft)	2935		175	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2112	486	2373	536				
Starvation Cap Reductn	0	101	315	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.28	0.44	0.74	0.24				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 51.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	511	7	1211	105	0	4	0
Lane Group Flow (vph)	7	613	8	1328	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.46		0.71		0.06
Control Delay	2.7	2.7	2.6	4.2		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.6	4.2		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.2		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	45	1	140		87		1
Queue Length 95th (ft)	4	60	4	169		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	265	2831	603	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.46		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1>	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	5	4	99	146	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	6	5	122	155	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	294	162	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	162	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	695	883	1410			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	127	168
Volume Left	18	5	0
Volume Right	6	0	13
cSH	742	1410	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.0	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	6	89	3	6	192
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	97	3	7	209
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	320	98			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	98			100	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	670	958			1493	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	100	215
Volume Left	4	0	7
Volume Right	7	3	0
cSH	817	1700	1493
Volume to Capacity	0.01	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.5	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	0.3
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	530	0	0	1478	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	576	0	0	1607	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			576		1379	288
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			498		1345	194
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1007		135	772

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	288	288	803	803	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	772
Volume to Capacity	0.17	0.17	0.47	0.47	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	9.7
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.7
Approach LOS					A

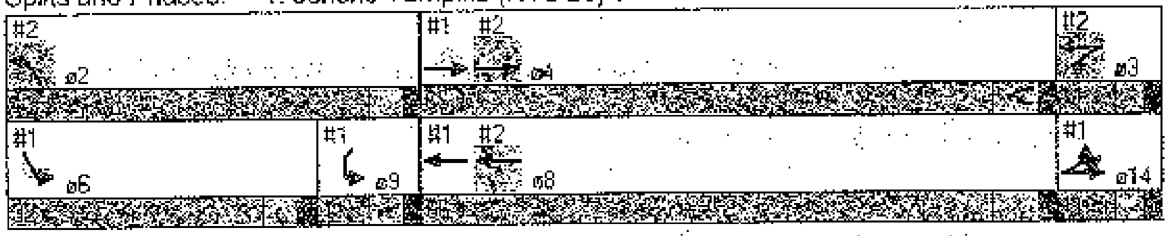
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations		↰	↑↑	↑↱	↰	↰			
Volume (vph)	105	13	1375	813	108	15			
Lane Group Flow (vph)	0	152	1763	964	298	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.9	77.9	66.9	24.2	8.1			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.51	0.77	0.49	0.79	0.49			
Control Delay		9.3	3.3	18.5	60.5	70.4			
Queue Delay		0.0	2.2	0.0	0.0	0.0			
Total Delay		9.3	5.6	18.5	60.5	70.4			
LOS		A	A	B	E	E			
Approach Delay			5.9	18.5	60.5	70.4			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		14	48	252	218	39			
Queue Length 95th (ft)		m15	46	313	277	69			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		297	2297	1949	436	106			
Starvation Cap Reductn		1	382	0	0	0			
Spillback Cap Reductn		0	0	4	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.51	0.92	0.50	0.68	0.49			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 65.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



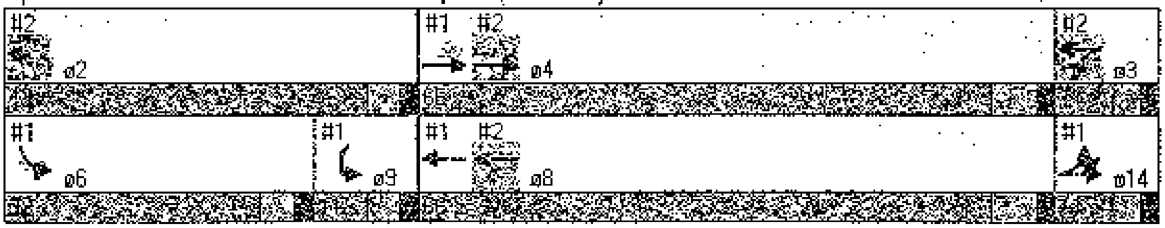
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑↱	↰	↑↑	↰↱				
Volume (vph)	1361	113	835	59				
Lane Group Flow (vph)	1830	123	929	242				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.9	73.9	77.9	34.1				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.93	0.77	0.42	0.53				
Control Delay	36.1	70.6	3.6	39.5				
Queue Delay	0.3	0.0	0.1	0.0				
Total Delay	36.4	70.6	3.7	39.5				
LOS	D	E	A	D				
Approach Delay	36.4		11.6	39.5				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~734	59	52	148				
Queue Length 95th (ft)	644	m#123	60	194				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1961	160	2220	523				
Starvation Cap Reductn	0	0	423	0				
Spillback Cap Reductn	13	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.94	0.77	0.52	0.46				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 28.3 Intersection LOS: C
Intersection Capacity Utilization 67.4% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

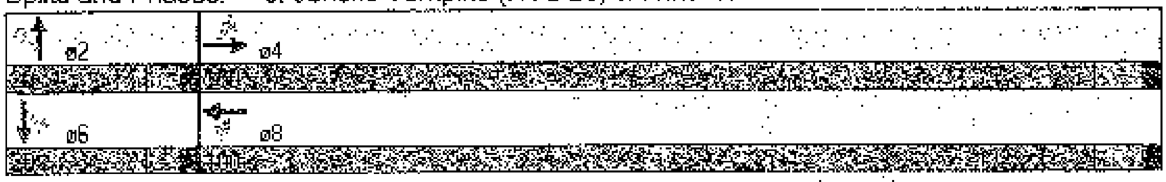


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	15	1434	11	725	110	0	1	0
Lane Group Flow (vph)	16	1666	12	790	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.28		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	205	2	66		103		1
Queue Length 95th (ft)	6	248	6	84		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	494	2826	171	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	184	131	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	204	142	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	380	155	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	380	155	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	618	890	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	214	168
Volume Left	30	10	0
Volume Right	11	0	26
cSH	673	1409	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.7	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	184	8	18	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	200	9	20	175
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	418	204			209	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418	204			209	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	583	836			1362	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	209	195
Volume Left	5	0	20
Volume Right	8	9	0
cSH	708	1700	1362
Volume to Capacity	0.02	0.12	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.2	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.2	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1498	0	0	887	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1628	0	0	964	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.64		0.64	0.64
vC, conflicting volume			1628		2110	814
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1421		2172	154
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			305		26	555

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	814	814	482	482	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	555
Volume to Capacity	0.48	0.48	0.28	0.28	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	11.5
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.5
Approach LOS					B

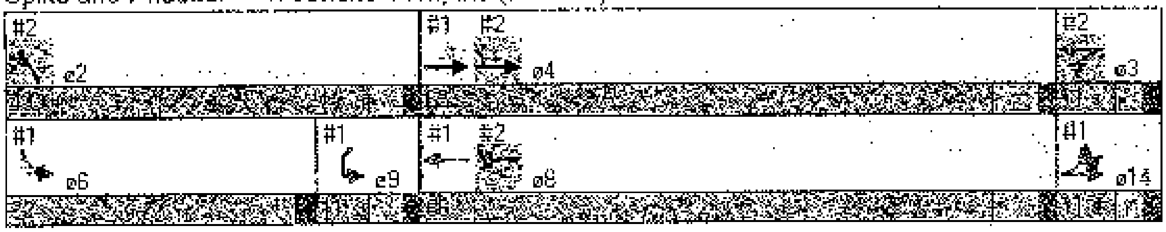
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	60	14	614	744	63	7			
Lane Group Flow (vph)	0	81	675	828	155	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.5	86.5	75.5	16.5	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.21	0.26	0.38	0.60	0.26			
Control Delay		1.9	0.7	13.1	58.1	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		1.9	0.8	13.1	58.1	56.1			
LOS		A	A	B	E	E			
Approach Delay			0.9	13.1	58.1	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	6	169	116	24			
Queue Length 95th (ft)		17	7	255	148	44			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		381	2552	2206	437	124			
Starvation Cap Reductn		0	818	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.21	0.39	0.38	0.35	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

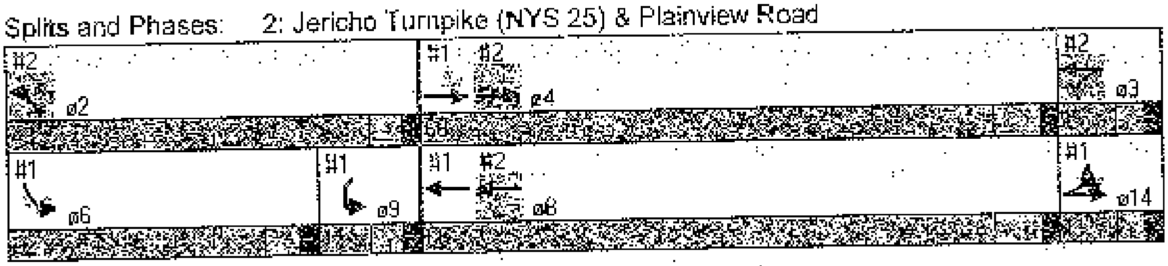


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Ⲩ				
Volume (vph)	664	54	753	58				
Lane Group Flow (vph)	794	56	784	112				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.5	82.5	86.5	25.5				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.36	0.14	0.32	0.32				
Control Delay	12.7	9.5	1.5	39.2				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	12.7	9.5	1.6	39.2				
LOS	B	A	A	D				
Approach Delay	12.7		2.1	39.2				
Approach LOS	B		A	D				
Queue Length 50th (ft)	158	13	21	70				
Queue Length 95th (ft)	240	m24	25	87				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2205	397	2467	543				
Starvation Cap Reductn	0	0	622	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.36	0.14	0.42	0.21				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 43.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

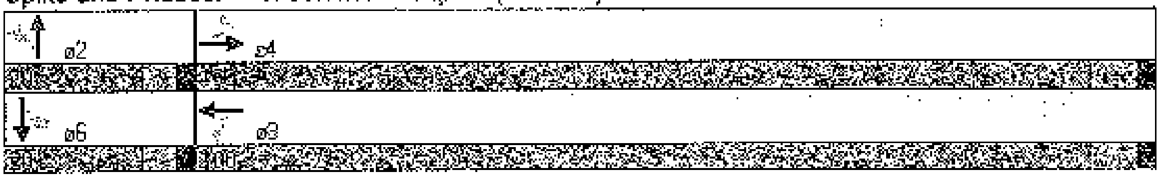


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	818	18	976	106	2	5	0
Lane Group Flow (vph)	22	999	20	1086	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.35	0.05	0.38		0.75		0.14
Control Delay	3.0	3.4	2.8	3.7		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.4	2.8	3.7		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.4		3.7		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	87	3	102		99		3
Queue Length 95th (ft)	8	108	8	126		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	353	2816	390	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.35	0.05	0.38		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 48.2% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	106	117	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	131	139	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	286	148	157			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	286	148	157			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	702	899	1423			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	135	157
Volume Left	8	4	0
Volume Right	19	0	18
cSH	829	1423	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.5	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	75	8	18	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	82	9	20	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	227	86			90	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227	86			90	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	751	973			1505	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	90	122
Volume Left	5	0	20
Volume Right	8	9	0
cSH	866	1700	1505
Volume to Capacity	0.02	0.05	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	9.2	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	1.3
Approach LOS	A		

Intersection Summary

Average Delay 1.2

Intersection Capacity Utilization 22.6% ICU Level of Service A

Analysis Period (min) 15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	684	0	0	795	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	743	0	0	864	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			743		1176	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			654		1117	256
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			867		168	694

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	372	372	432	432	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	694
Volume to Capacity	0.22	0.22	0.25	0.25	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

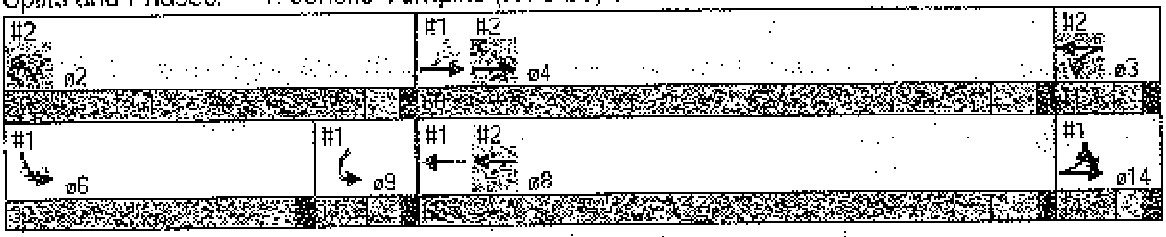
Scenario 2

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations		↰	↑↑	↑↑↱	Ƴ	Y			
Volume (vph)	41	40	501	1447	48	2			
Lane Group Flow (vph)	0	57	563	1595	229	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	16.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.2	83.2	72.2	21.3	8.0			
Actuated g/C Ratio		0.66	0.69	0.60	0.18	0.07			
v/c Ratio		0.35	0.23	0.75	0.70	0.22			
Control Delay		21.4	2.8	22.6	57.8	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		21.4	3.0	22.6	57.8	58.3			
LOS		C	A	C	E	E			
Approach Delay			4.7	22.6	57.8	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		7	25	501	189	15			
Queue Length 95th (ft)		27	32	667	193	42			
Internal Link Dist (ft)			173	343	364	379			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2452	2120	426	102			
Starvation Cap Reductn		0	1011	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.35	0.39	0.75	0.54	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	500	161	1423	61				
Lane Group Flow (vph)	611	173	1530	150				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.2	79.2	83.2	28.8				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.29	0.36	0.65	0.38				
Control Delay	13.3	14.2	2.0	38.5				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	13.3	14.8	2.4	38.5				
LOS	B	B	A	D				
Approach Delay	13.3		3.6	38.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	124	53	36	82				
Queue Length 95th (ft)	175	m73	40	115				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2107	475	2371	535				
Starvation Cap Reductn	0	95	318	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.29	0.46	0.75	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 52.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

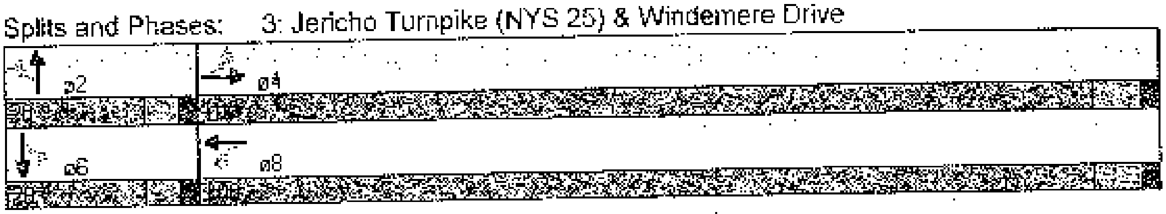
Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	518	7	1248	105	0	1	0
Lane Group Flow (vph)	7	621	8	1369	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.48		0.71		0.06
Control Delay	2.6	2.8	2.6	4.3		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.0	4.3		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.3		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	146		87		1
Queue Length 95th (ft)	4	61	4	177		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	253	2830	599	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.48		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	102	159	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	126	169	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	311	176	182			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311	176	182			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	679	868	1393			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	131	182
Volume Left	18	5	0
Volume Right	8	0	13
cSH	726	1393	1700
Volume to Capacity	0.03	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.1	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	6	92	3	6	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	100	3	7	223
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	338	102			103	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338	102			103	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	655	954			1489	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	103	229
Volume Left	4	0	7
Volume Right	7	3	0
cSH	807	1700	1489
Volume to Capacity	0.01	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.5	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	551	0	0	1483	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	599	0	0	1612	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			599		1405	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			516		1370	199
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			967		130	764

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	299	299	806	806	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	764
Volume to Capacity	0.18	0.18	0.47	0.47	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	9.7
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.7
Approach LOS					A

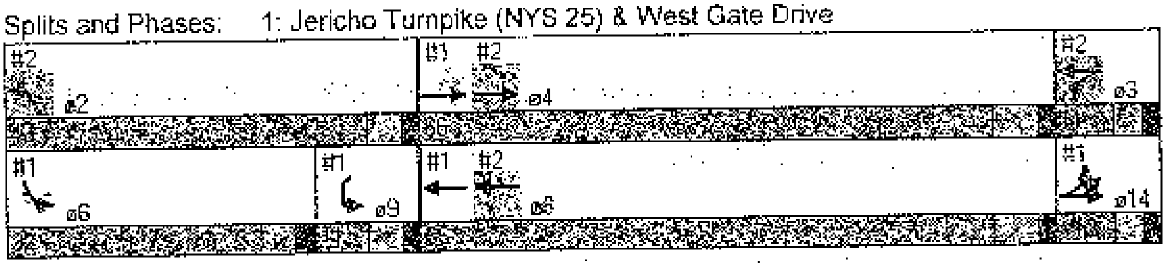
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	107	13	1387	831	108	15			
Lane Group Flow (vph)	0	154	1778	983	301	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.8	77.8	66.6	24.3	8.1			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.53	0.77	0.50	0.79	0.50			
Control Delay		16.5	3.4	18.7	60.8	70.7			
Queue Delay		0.0	3.1	0.0	0.0	0.0			
Total Delay		16.5	6.5	18.7	60.8	70.7			
LOS		B	A	B	E	E			
Approach Delay			7.6	18.7	60.8	70.7			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		29	51	260	224	39			
Queue Length 95th (ft)		m32	48	321	280	69			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		290	2295	1947	436	105			
Starvation Cap Reductn		0	402	0	0	0			
Spillback Cap Reductn		0	0	4	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.53	0.94	0.51	0.69	0.50			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



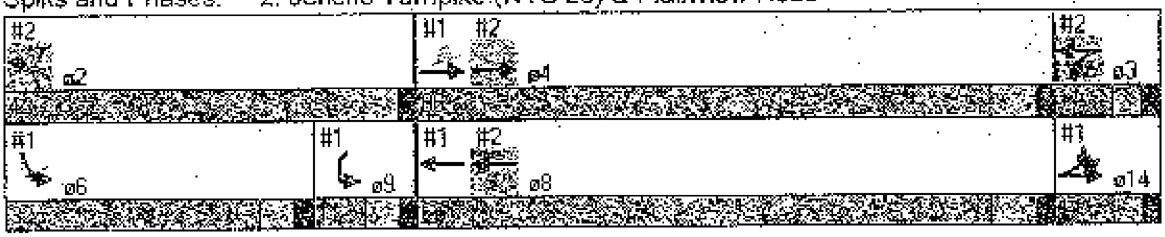
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	1399	120	850	67				
Lane Group Flow (vph)	1865	130	944	260				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	35.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.8	73.8	77.8	34.2				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.95	0.82	0.43	0.57				
Control Delay	38.9	76.5	3.6	40.6				
Queue Delay	0.6	0.0	0.2	0.0				
Total Delay	39.5	76.5	3.7	40.6				
LOS	D	E	A	D				
Approach Delay	39.5		12.5	40.6				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~811	66	51	162				
Queue Length 95th (ft)	666	m#141	59	208				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1956	159	2218	524				
Starvation Cap Reductn	0	0	420	0				
Spillback Cap Reductn	15	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.96	0.82	0.53	0.50				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 30.5 Intersection LOS: C
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

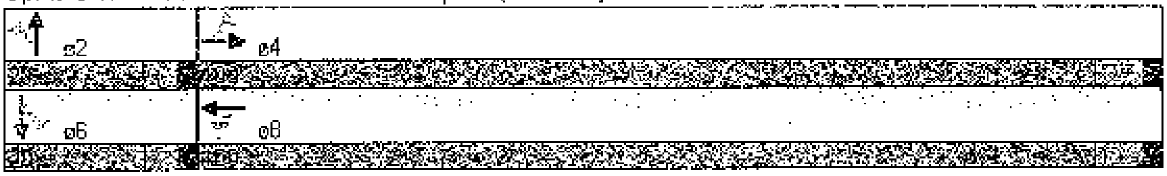


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	15	1471	11	739	110	0	1	0
Lane Group Flow (vph)	16	1706	12	805	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.60	0.07	0.28		0.79		0.05
Control Delay	2.7	5.5	3.6	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.5	3.6	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.5		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	215	2	68		103		1
Queue Length 95th (ft)	6	260	6	85		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	485	2829	161	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.60	0.07	0.28		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	196	137	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	218	149	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	400	162	175			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	400	162	175			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	602	883	1401			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	228	175
Volume Left	30	10	0
Volume Right	11	0	26
cSH	658	1401	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.8	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	196	8	18	166
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	213	9	20	180
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	437	217			222	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	437	217			222	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	568	822			1347	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	222	200
Volume Left	5	0	20
Volume Right	8	9	0
cSH	693	1700	1347
Volume to Capacity	0.02	0.13	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.3	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.3	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1510	0	0	905	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1641	0	0	984	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.64		0.64	0.64
vC, conflicting volume			1641		2133	821
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1435		2210	143
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			298		24	558

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	821	821	492	492	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	558
Volume to Capacity	0.48	0.48	0.29	0.29	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	11.5
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.5
Approach LOS					B

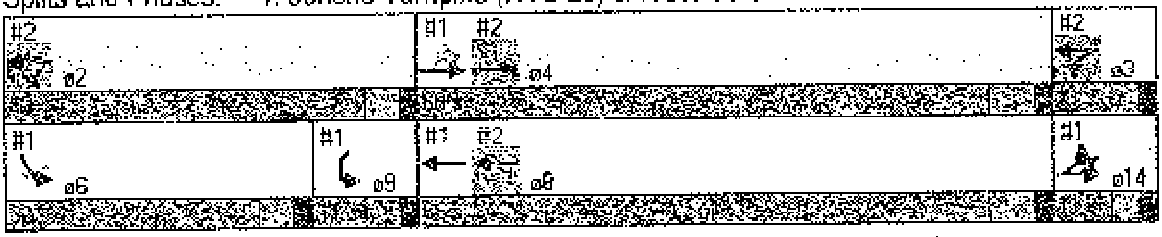
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL2	SWL2	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	63	14	644	774	63	7			
Lane Group Flow (vph)	0	84	708	859	159	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.3	86.3	75.3	16.7	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.23	0.28	0.39	0.61	0.26			
Control Delay		2.3	0.8	13.4	58.2	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		2.3	0.9	13.4	58.2	56.1			
LOS		A	A	B	E	E			
Approach Delay			1.1	13.4	58.2	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		1	8	179	118	24			
Queue Length 95th (ft)		20	10	269	151	44			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		365	2546	2201	437	124			
Starvation Cap Reductn		0	763	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.23	0.40	0.39	0.36	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

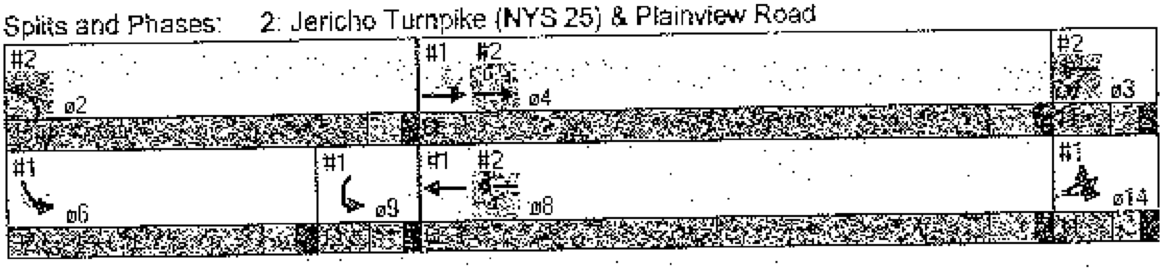


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	687	61	779	71				
Lane Group Flow (vph)	841	64	811	144				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.3	82.3	86.3	25.7				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.38	0.17	0.33	0.40				
Control Delay	13.1	10.4	1.5	41.3				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	13.1	10.4	1.6	41.3				
LOS	B	B	A	D				
Approach Delay	13.1		2.3	41.3				
Approach LOS	B		A	D				
Queue Length 50th (ft)	171	16	22	82				
Queue Length 95th (ft)	258	m28	26	108				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2194	374	2461	641				
Starvation Cap Reductn	0	0	570	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.38	0.17	0.43	0.27				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 10.2 Intersection LOS: B
Intersection Capacity Utilization 44.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	20	865	18	1012	106	2	25	0
Lane Group Flow (vph)	22	1050	20	1125	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.37	0.05	0.39		0.75		0.14
Control Delay	3.0	3.5	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.5	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.5		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	94	3	107		99		3
Queue Length 95th (ft)	8	116	8	132		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	339	2818	369	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.37	0.05	0.39		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	123	128	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	152	152	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	321	161	170			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321	161	170			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	671	884	1407			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	156	170
Volume Left	8	4	0
Volume Right	19	0	18
cSH	807	1407	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	87	8	18	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	95	9	20	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	252	99			103	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	252	99			103	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	727	957			1489	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	103	134
Volume Left	5	0	20
Volume Right	8	9	0
cSH	845	1700	1489
Volume to Capacity	0.02	0.06	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	9.3	0.0	1.2
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	1.2
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	714	0	0	825	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	776	0	0	897	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			776		1224	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			682		1165	264
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			842		174	682

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	388	388	448	448	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	682
Volume to Capacity	0.23	0.23	0.26	0.26	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

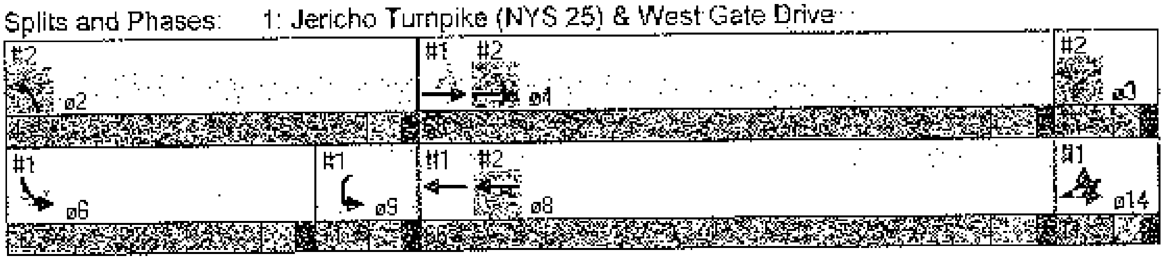
Scenario 3

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	44	13	511	1478	48	2			
Lane Group Flow (vph)	0	64	574	1628	240	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.4	82.4	71.4	21.8	8.4			
Actuated g/C Ratio		0.65	0.69	0.60	0.18	0.07			
v/c Ratio		0.39	0.24	0.78	0.73	0.30			
Control Delay		23.3	3.0	23.9	58.5	60.9			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		23.3	3.1	23.9	58.5	60.9			
LOS		C	A	C	E	E			
Approach Delay			5.2	23.9	58.5	60.9			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		9	27	538	176	24			
Queue Length 95th (ft)		26	33	694	202	55			
Internal Link Dist (ft)			173	3450	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		164	2431	2098	426	106			
Starvation Cap Reductn		0	966	0	0	0			
Spillback Cap Reductn		0	0	2	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.39	0.39	0.78	0.56	0.30			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	513	169	1462	61				
Lane Group Flow (vph)	625	182	1572	154				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.4	78.4	82.4	29.6				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.30	0.39	0.67	0.38				
Control Delay	13.8	16.1	2.2	38.1				
Queue Delay	0.0	0.6	0.4	0.0				
Total Delay	13.8	16.6	2.7	38.1				
LOS	B	B	A	D				
Approach Delay	13.8		4.1	38.1				
Approach LOS	B		A	D				
Queue Length 50th (ft)	132	61	40	93				
Queue Length 95th (ft)	180	m80	44	119				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2086	464	2350	534				
Starvation Cap Reductn	0	88	310	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.30	0.48	0.77	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 8.5 Intersection LOS: A
Intersection Capacity Utilization 53.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

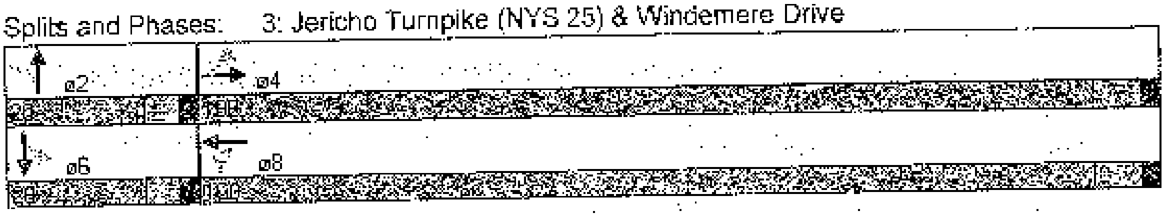
Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	531	7	1287	105	0	1	9
Lane Group Flow (vph)	7	635	8	1411	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.49		0.71		0.06
Control Delay	2.8	2.8	2.6	4.4		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.4		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.4		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	47	1	154		87		1
Queue Length 95th (ft)	4	62	4	186		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	239	2830	590	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.49		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	105	167	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	130	178	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	324	184	190			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324	184	190			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	668	858	1383			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	135	190
Volume Left	18	5	0
Volume Right	8	0	13
cSH	716	1383	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	6	95	3	6	213
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	103	3	7	232
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	349	105			107	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	349	105			107	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	645	950			1484	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	107	238
Volume Left	4	0	7
Volume Right	7	3	0
cSH	799	1700	1484
Volume to Capacity	0.01	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	561	0	0	1514	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	610	0	0	1646	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			610		1433	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			523		1397	199
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			979		124	761

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	305	305	823	823	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	761
Volume to Capacity	0.18	0.18	0.48	0.48	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	9.8
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.8
Approach LOS					A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

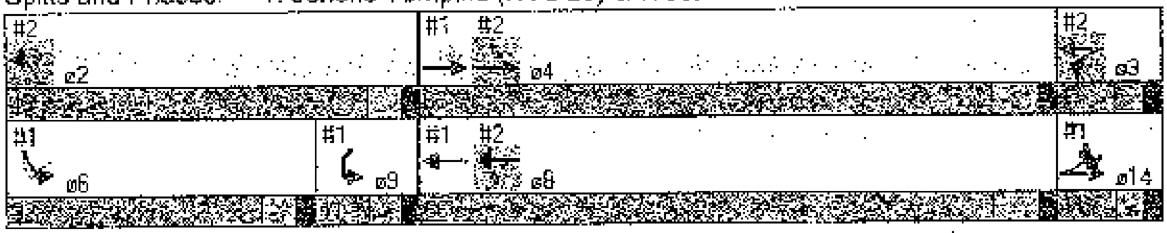
Lane Group	EBL2	EBL	EBT	WBT	SBR	SWL	Ø2	Ø3	Ø4
Lane Configurations									
Volume (vph)	116	22	1422	852	108	15			
Lane Group Flow (vph)	0	177	1823	1006	307	59			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.5	77.5	66.5	24.6	8.2			
Actuated g/C Ratio		0.61	0.65	0.55	0.20	0.07			
v/c Ratio		0.63	0.80	0.52	0.80	0.55			
Control Delay		19.6	3.7	19.1	61.4	74.4			
Queue Delay		0.0	5.6	0.0	0.0	0.0			
Total Delay		19.6	9.3	19.1	61.4	74.4			
LOS		B	A	B	E	E			
Approach Delay			10.2	19.1	61.4	74.4			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		31	58	268	225	45			
Queue Length 95th (ft)		m33	50	331	286	#82			
Internal Link Dist (ft)			173	349	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		282	2287	1939	435	107			
Starvation Cap Reductn		0	410	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.63	0.97	0.52	0.71	0.55			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 18.6 Intersection LOS: B
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



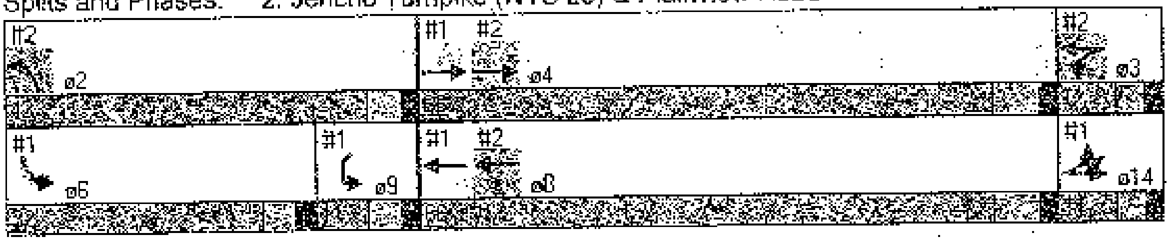
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1413	125	876	67				
Lane Group Flow (vph)	1922	136	973	271				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.5	73.5	77.5	34.5				
Actuated g/C Ratio	0.55	0.61	0.65	0.29				
v/c Ratio	0.99	0.86	0.44	0.59				
Control Delay	45.3	81.7	3.7	41.2				
Queue Delay	2.0	0.0	0.2	0.0				
Total Delay	47.3	81.7	3.9	41.2				
LOS	D	F	A	D				
Approach Delay	47.3		13.4	41.2				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~860	71	55	170				
Queue Length 95th (ft)	705	m#148	64	217				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1948	159	2210	523				
Starvation Cap Reductn	0	0	421	0				
Spillback Cap Reductn	20	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.00	0.86	0.54	0.52				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 35.4 Intersection LOS: D
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

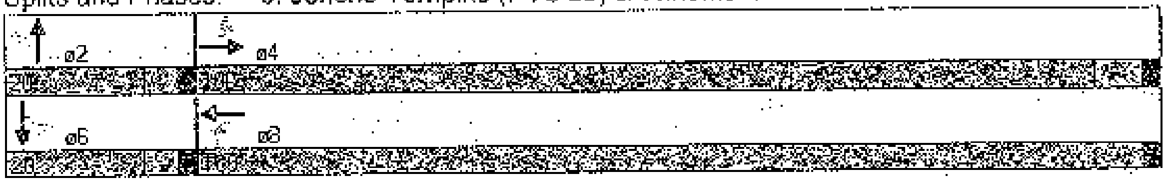


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	15	1515	11	765	110	0	1	0
Lane Group Flow (vph)	16	1754	12	834	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.62	0.08	0.29		0.79		0.05
Control Delay	2.7	5.7	3.8	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.7	3.8	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.7		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	227	2	71		103		1
Queue Length 95th (ft)	6	274	6	90		#206		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	471	2829	151	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.62	0.08	0.29		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	205	142	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	228	154	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	415	167	180			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	415	167	180			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	589	877	1395			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	238	180
Volume Left	30	10	0
Volume Right	11	0	26
cSH	647	1395	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	205	8	18	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	223	9	20	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	452	227			232	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	452	227			232	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	557	812			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	232	205
Volume Left	5	0	20
Volume Right	8	9	0
cSH	682	1700	1336
Volume to Capacity	0.02	0.14	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.4	0.0	0.9
Lane LOS	B		A
Approach Delay (s)	10.4	0.0	0.9
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1545	0	0	926	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1679	0	0	1007	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.61		0.61	0.61
vC, conflicting volume			1679		2183	840
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1476		2298	105
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			277		20	569

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	840	840	503	503	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	569
Volume to Capacity	0.49	0.49	0.30	0.30	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	11.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.4
Approach LOS					B

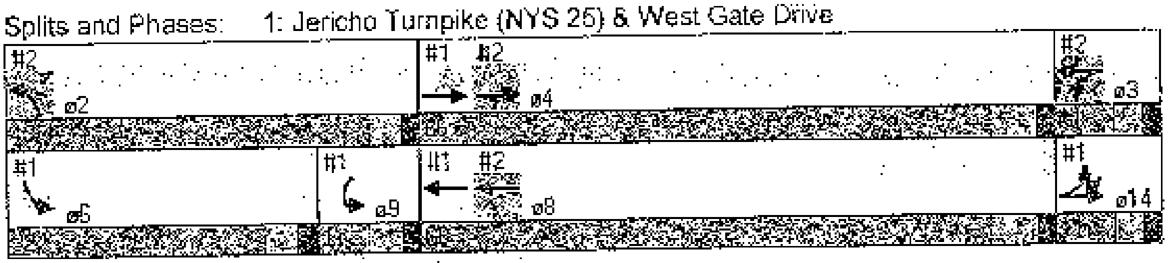
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	Ø2	Ø3	Ø4
Lane Configurations									
Volume (vph)	70	21	673	798	63	7			
Lane Group Flow (vph)	0	100	740	884	167	40			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.1	83.1	72.1	17.2	9.9			
Actuated g/C Ratio		0.66	0.69	0.60	0.14	0.08			
v/c Ratio		0.29	0.30	0.42	0.63	0.31			
Control Delay		3.8	1.0	15.0	58.3	57.6			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		3.9	1.1	15.0	58.3	57.6			
LOS		A	A	B	E	E			
Approach Delay			1.5	15.0	58.3	57.6			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		1	0	191	123	30			
Queue Length 95th (ft)		29	11	280	156	52			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		344	2451	2108	436	128			
Starvation Cap Reductn		4	689	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.29	0.42	0.42	0.38	0.31			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 55.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

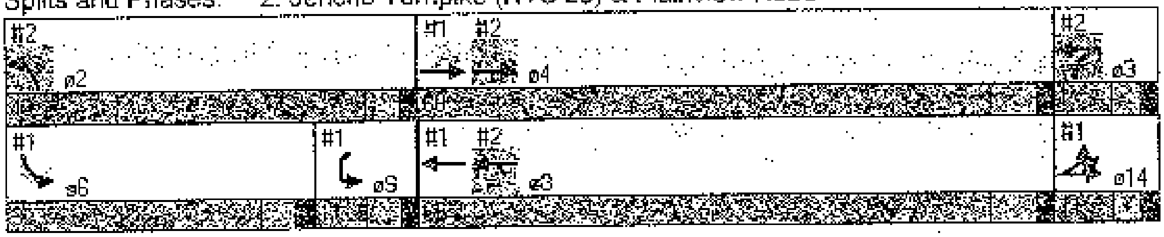


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	723	67	809	71				
Lane Group Flow (vph)	881	70	843	153				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.1	79.1	83.1	28.9				
Actuated g/C Ratio	0.60	0.66	0.69	0.24				
v/c Ratio	0.42	0.20	0.36	0.38				
Control Delay	14.7	11.9	1.9	38.7				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	14.7	11.9	2.0	38.7				
LOS	B	B	A	D				
Approach Delay	14.7		2.7	38.7				
Approach LOS	B		A	D				
Queue Length 50th (ft)	187	18	25	97				
Queue Length 95th (ft)	274	m31	31	114				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2101	346	2370	539				
Starvation Cap Reductn	0	0	510	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.42	0.20	0.45	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 45.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	901	18	1042	106	2	5	0
Lane Group Flow (vph)	22	1089	20	1158	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.39	0.06	0.41		0.75		0.14
Control Delay	3.0	3.6	2.9	3.8		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.6	2.9	3.8		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.6		3.8		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	100	3	112		99		3
Queue Length 95th (ft)	8	122	8	137		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	325	2820	353	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.39	0.06	0.41		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	130	134	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	160	160	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	336	168	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	336	168	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	657	876	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	164	177
Volume Left	8	4	0
Volume Right	19	0	18
cSH	796	1399	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↰
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	94	8	18	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	102	9	20	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	266	107			111	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	266	107			111	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	713	948			1479	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	111	140
Volume Left	5	0	20
Volume Right	8	9	0
cSH	834	1700	1479
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	9.4	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	1.1
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	743	0	0	849	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	808	0	0	923	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			808		1269	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			703		1205	263
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			819		162	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	404	404	461	461	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	676
Volume to Capacity	0.24	0.24	0.27	0.27	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.4
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

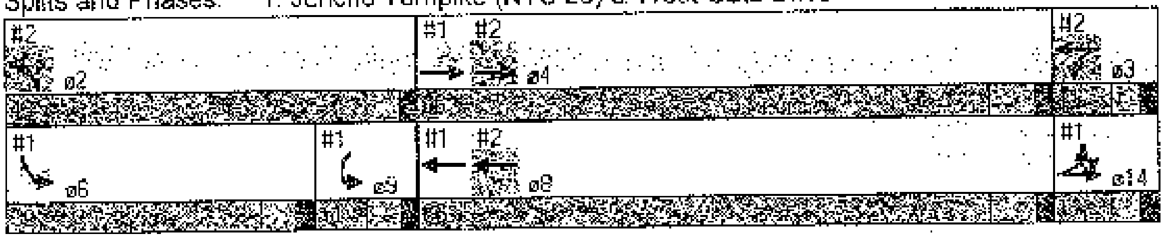
Scenario 4

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	46	15	520	1505	48	2			
Lane Group Flow (vph)	0	69	584	1657	248	39			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.0	82.0	71.0	22.2	8.4			
Actuated g/C Ratio		0.65	0.68	0.59	0.18	0.07			
v/c Ratio		0.42	0.24	0.79	0.73	0.37			
Control Delay		25.7	3.1	24.8	58.8	63.7			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		25.7	3.2	24.8	58.8	63.7			
LOS		C	A	C	E	E			
Approach Delay			5.6	24.8	58.8	63.7			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		11	27	568	182	29			
Queue Length 95th (ft)		31	34	#718	209	63			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		163	2419	2088	425	106			
Starvation Cap Reductn		0	932	0	0	0			
Spillback Cap Reductn		0	0	7	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.42	0.39	0.80	0.58	0.37			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

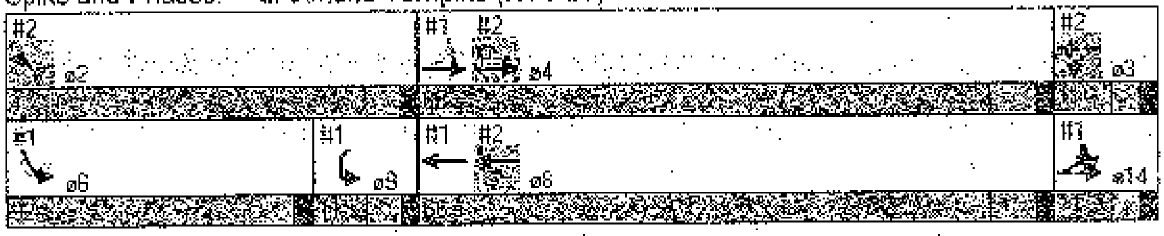


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑	↖	↑↑	Y				
Volume (vph)	524	175	1495	51				
Lane Group Flow (vph)	638	188	1608	157				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.0	78.0	82.0	30.0				
Actuated g/C Ratio	0.59	0.65	0.68	0.25				
v/c Ratio	0.31	0.41	0.69	0.38				
Control Delay	14.0	17.2	2.5	37.8				
Queue Delay	0.0	0.6	0.5	0.0				
Total Delay	14.0	17.8	3.0	37.8				
LOS	B	B	A	D				
Approach Delay	14.0		4.6	37.8				
Approach LOS	B		A	D				
Queue Length 50th (ft)	139	65	44	93				
Queue Length 95th (ft)	184	m84	47	121				
Internal Link Dist (ft)	2985		173	269				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2074	454	2338	534				
Starvation Cap Reductn	0	82	307	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.31	0.51	0.79	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.9 — Intersection LOS: A
Intersection Capacity Utilization 54.9% — ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road...



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	542	7	1320	105	0	1	0
Lane Group Flow (vph)	7	647	8	1447	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.23	0.01	0.51		0.71		0.06
Control Delay	2.8	2.8	2.6	4.5		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.3	2.6	4.5		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.5		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	18	1	161		87		1
Queue Length 95th (ft)	4	63	4	194		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	229	2833	581	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.23	0.01	0.51		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 56.3% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	107	173	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	132	184	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	332	190	197			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	190	197			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	660	851	1376			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	137	197
Volume Left	18	5	0
Volume Right	8	0	13
cSH	708	1376	1700
Volume to Capacity	0.04	0.00	0.12
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.3	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↓
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	4	6	97	3	6	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	105	3	7	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						349
pX, platoon unblocked						
vC, conflicting volume	358	107			109	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358	107			109	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	638	947			1482	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	109	245
Volume Left	4	0	7
Volume Right	7	3	0
cSH	793	1700	1482
Volume to Capacity	0.01	0.06	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	570	0	0	1541	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	620	0	0	1675	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			620		1457	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			530		1422	200
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			970		119	758

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	310	310	838	838	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	758
Volume to Capacity	0.18	0.18	0.49	0.49	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	9.8
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.8
Approach LOS					A

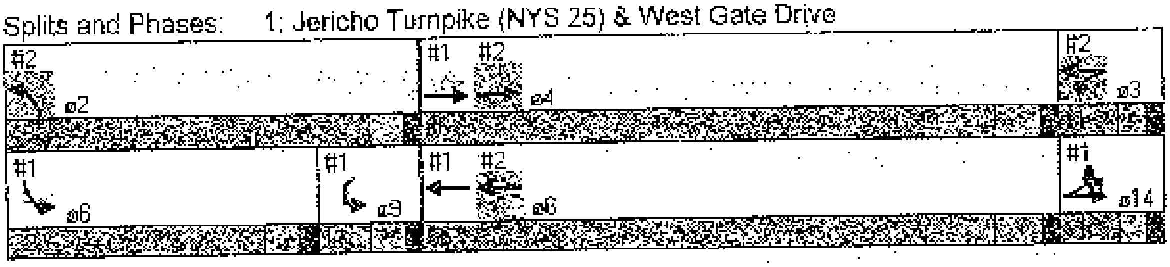
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	123	29	1451	869	108	15			
Lane Group Flow (vph)	0	195	1860	1025	312	64			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	15.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.3	77.3	66.3	24.8	8.3			
Actuated g/C Ratio		0.61	0.64	0.55	0.21	0.07			
v/c Ratio		0.71	0.82	0.53	0.81	0.59			
Control Delay		24.3	4.0	19.4	61.8	77.2			
Queue Delay		0.0	9.7	0.0	0.0	0.0			
Total Delay		24.3	13.7	19.4	61.8	77.2			
LOS		C	B	B	E	E			
Approach Delay			14.7	19.4	61.8	77.2			
Approach LOS			B	B	E	E			
Queue Length 50th (ft)		35	55	275	228	49			
Queue Length 95th (ft)		m34	52	340	291	#91			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		275	2280	1932	435	108			
Starvation Cap Reductn		0	414	0	0	0			
Spillback Cap Reductn		0	0	11	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.71	1.00	0.53	0.72	0.59			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 21.5 Intersection LOS: C
Intersection Capacity Utilization 68.4% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



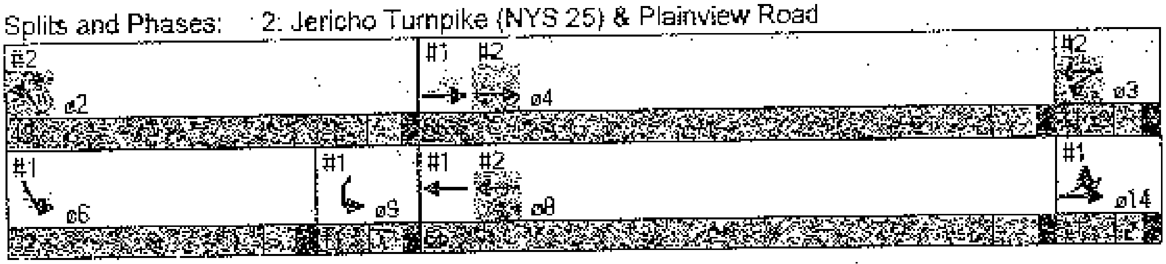
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↑	↰	↑↑	Y				
Volume (vph)	1449	129	897	67				
Lane Group Flow (vph)	1968	140	997	280				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.3	73.3	77.3	34.7				
Actuated g/C Ratio	0.55	0.61	0.64	0.29				
v/c Ratio	1.01	0.88	0.45	0.60				
Control Delay	51.9	85.6	3.9	41.6				
Queue Delay	1.3	0.0	0.2	0.0				
Total Delay	53.1	85.6	4.0	41.6				
LOS	D	F	A	D				
Approach Delay	53.1		14.1	41.6				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~399	73	58	177				
Queue Length 95th (ft)	#765	m#157	68	225				
Internal Link Dist (ft)	2948		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1943	159	2204	522				
Starvation Cap Reductn	0	0	420	0				
Spillback Cap Reductn	8	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.02	0.88	0.56	0.54				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 39.1 Intersection LOS: D
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1551	11	786	110	0	1	0
Lane Group Flow (vph)	16	1793	12	856	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.63	0.08	0.30		0.79		0.05
Control Delay	2.7	5.9	4.0	3.3		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.9	4.0	3.3		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.8		3.3		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	238	2	74		103		1
Queue Length 95th (ft)	6	288	6	92		#206		17
Internal Link Dist (ft)		534		2948		220		283
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	460	2828	142	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.63	0.08	0.30		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.8 Intersection LOS: A
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	212	146	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	236	159	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					975	
pX, platoon unblocked						
vC, conflicting volume	427	172	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427	172	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	580	872	1390			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	246	185
Volume Left	30	10	0
Volume Right	11	0	26
cSH	637	1390	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	212	8	18	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	230	9	20	190
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	464	235			239	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	464	235			239	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	548	804			1328	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	239	210
Volume Left	5	0	20
Volume Right	8	9	0
cSH	673	1700	1328
Volume to Capacity	0.02	0.14	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.5	0.0	0.8
Lane LOS	B		A
Approach Delay (s)	10.5	0.0	0.8
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1574	0	0	943	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1711	0	0	1025	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.59		0.59	0.59
vC, conflicting volume			1711		2223	855
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1512		2377	70
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			260		17	580

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	855	855	512	512	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	580
Volume to Capacity	0.50	0.50	0.30	0.30	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	11.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.2
Approach LOS					B

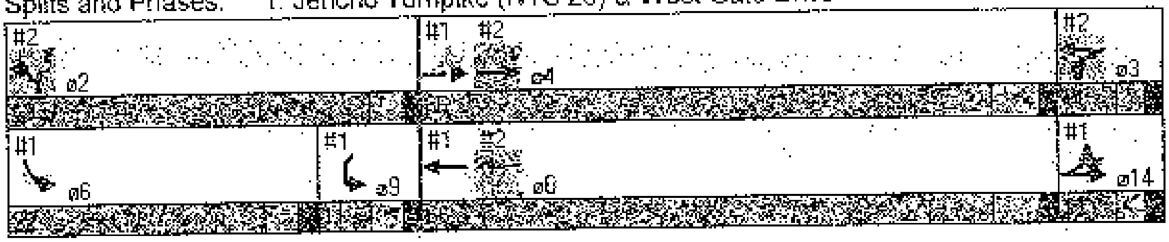
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWR	Ø2	Ø3	Ø4
Lane Configurations									
Volume (vph)	76	27	697	819	63	7			
Lane Group Flow (vph)	0	114	766	906	173	47			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		35.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		78.4	82.4	71.4	17.5	10.2			
Actuated g/C Ratio		0.65	0.69	0.60	0.15	0.08			
v/c Ratio		0.34	0.32	0.43	0.64	0.36			
Control Delay		5.3	1.1	15.5	58.3	58.9			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		5.3	1.2	15.5	58.3	58.9			
LOS		A	A	B	E	E			
Approach Delay			1.7	15.5	58.3	58.9			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		3	10	202	128	35			
Queue Length 95th (ft)		31	12	288	161	58			
Internal Link Dist (ft)			173	343	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		333	2491	2088	435	131			
Starvation Cap Reductn		0	626	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.34	0.42	0.43	0.40	0.36			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 55.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

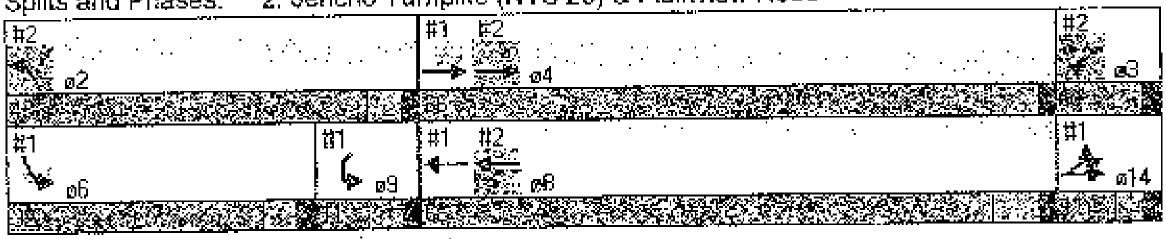


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	753	72	835	71				
Lane Group Flow (vph)	913	75	870	161				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	71.4	78.4	82.4	29.6				
Actuated g/C Ratio	0.60	0.65	0.69	0.25				
v/c Ratio	0.44	0.23	0.37	0.39				
Control Delay	15.3	15.4	2.0	38.5				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	15.3	15.4	2.1	38.5				
LOS	B	B	A	D				
Approach Delay	15.3		3.2	38.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	201	22	29	101				
Queue Length 95th (ft)	288	m38	34	119				
Internal Link Dist (ft)	2942		173	270				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2083	330	2350	538				
Starvation Cap Reductn	0	0	455	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.44	0.23	0.46	0.30				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 45.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	20	931	18	1068	106	2	5	9
Lane Group Flow (vph)	22	1122	20	1186	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.40	0.06	0.42		0.75		0.14
Control Delay	3.1	3.7	2.9	3.9		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.1	3.7	2.9	3.9		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.7		3.9		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	104	3	116		99		3
Queue Length 95th (ft)	9	128	8	142		#193		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	314	2820	339	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.40	0.06	0.42		0.71		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 50.8% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	136	139	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	168	165	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	350	174	183			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350	174	183			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	646	869	1392			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	172	183
Volume Left	8	4	0
Volume Right	19	0	18
cSH	787	1392	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	7	100	8	18	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	109	9	20	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						350
pX, platoon unblocked						
vC, conflicting volume	278	113			117	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	278	113			117	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	702	939			1471	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	117	146
Volume Left	5	0	20
Volume Right	8	9	0
cSH	824	1700	1471
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	9.4	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	1.1
Approach LOS	A		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	767	0	0	870	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	834	0	0	946	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	423					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			834		1307	417
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			723		1241	267
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			799		153	668

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	417	417	473	473	4
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1700	1700	668
Volume to Capacity	0.25	0.25	0.28	0.28	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.4
Approach LOS					B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix F-2

Supplemental Traffic Impact Study
Nelson & Pope
July 2008, Revised January 2009

SUPPLEMENTAL TRAFFIC IMPACT STUDY

(ACCESS ON JERICHO TURNPIKE)

KENSINGTON ESTATES

Towns of Huntington and Oyster Bay

JULY 2008
REVISED JANUARY, 2009

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PURPOSE OF REPORT

Nelson & Pope has investigated the potential traffic impacts associated with the proposed application to construct 80 age-restricted condominiums and 3 single-family homes at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The site is located in both Nassau and Suffolk Counties. A portion of the subject property is located on a parcel of land designated as District 0400, Section 226 Block 01 Lot 01 on the Suffolk County Tax Maps and the other portion of the subject property is located on a parcel of land designated as Section 13, Block D, Lots 114 & 115 on the Nassau County Tax Maps. The portion of the site in Oyster Bay is presently zoned R1-1A One-Family Residence and is proposed to be rezoned to RMF-10 Multi-Family Residence. The portion of the site in Huntington is presently zoned R-40 Residence and is proposed to be rezoned to R-RM Retirement Community.

Access to the 3 single-family homes will be provided via driveways on Plainview Road. Access to the condominium portion of the project will be provided via one full movement driveway on Jericho Turnpike directly opposite Avery Road. The proposed access will form the northbound leg at the signalized intersection of Jericho Turnpike and Avery Road. Figure 1 shows a map of the area and Figure 2 shows the location of the site.

This report summarizes the results of a detailed investigation of the traffic impacts of the proposed residential development by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the proposed residential development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network.

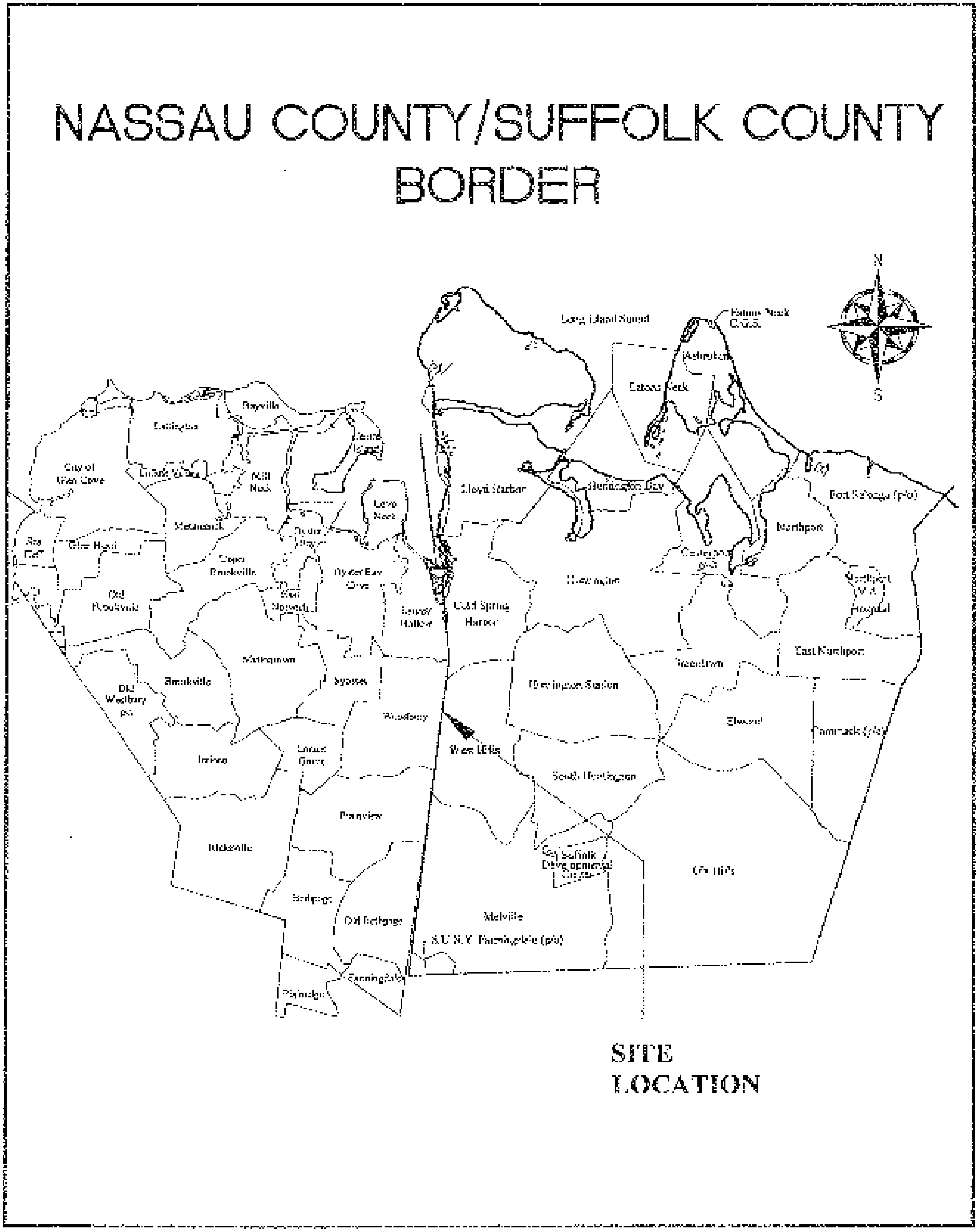
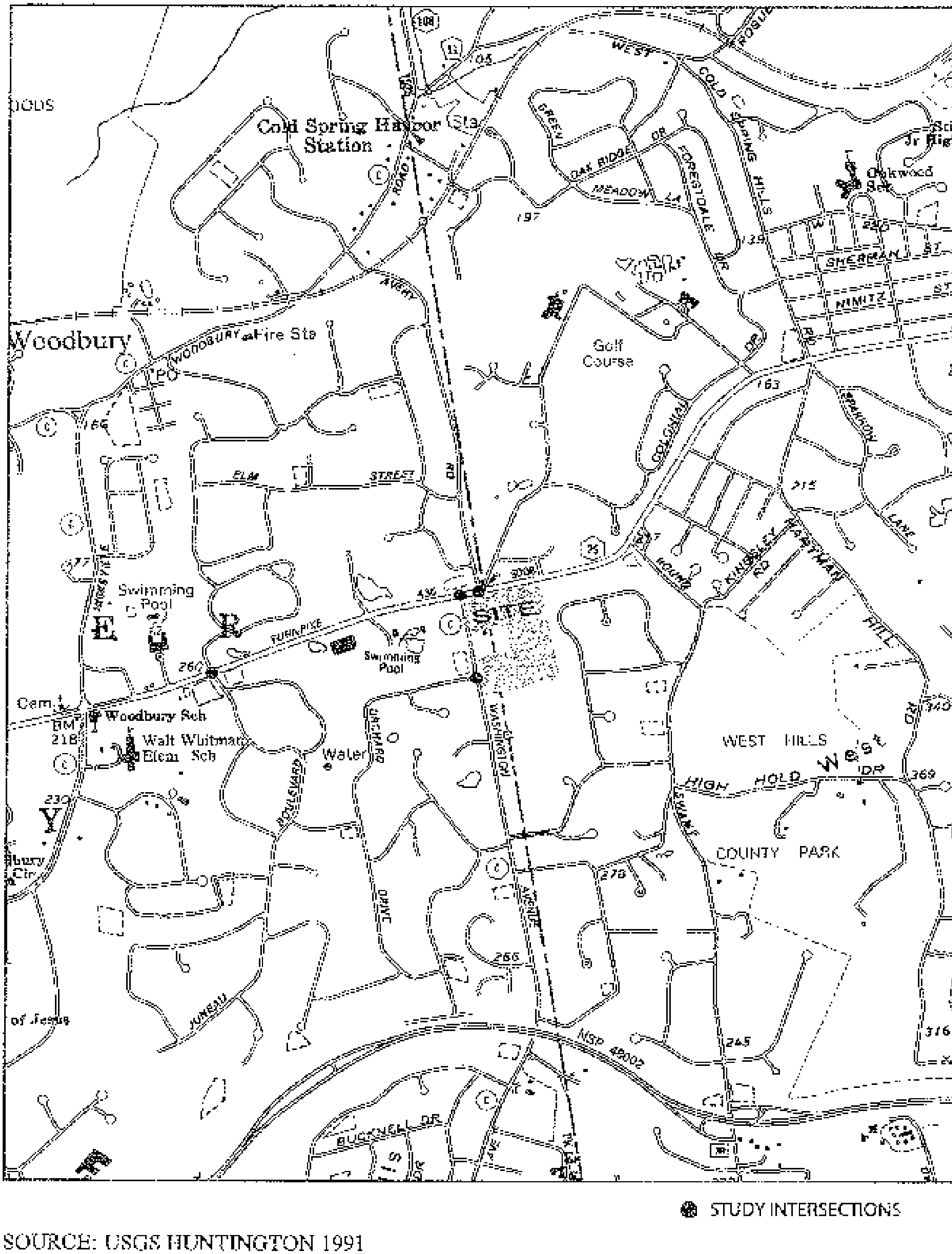


Figure 1: Area Map



STUDY INTERSECTIONS

SOURCE: USGS HUNTINGTON 1991

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic impacts associated with the proposed residential development and identifies appropriate mitigation if necessary. In executing the scope of work, the following steps were undertaken:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing, signal timings, phasing and cycle lengths.

- Turning movement volume counts were conducted during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods on a typical weekday and during the Saturday midday (11:00 AM – 2:00 PM) peak period at the following study intersections.

    - Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive
    - Jericho Turnpike (NYS Route 25) at Plainview Road
    - Jericho Turnpike (NYS Route 25) at Juneau Boulevard
    - Plainview Road at Orchard Drive

- Hourly traffic volumes collected on Jericho Turnpike (NYS Route 25) were obtained from the New York State Department of Transportation (NYSDOT).

- An annual growth factor, obtained from the NYSDOT, was applied to the existing traffic volumes to estimate the increase in background traffic that would occur in 2010.

- As requested by the Towns of Huntington and Oyster Bay, a No Build analyses that will only consider background growth through the assumed build year for the subject application was conducted.

- The Towns of Huntington and Oyster Bay Planning Departments were contacted to obtain information on other planned developments that may impact traffic flow in the study area.

- Estimates of traffic that would be generated by the proposed residential development were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Seventh Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.

- As part of this traffic study, four build scenarios will be analyzed. The following is a brief description of the four build scenarios:

- The first build scenario will add to the No Build condition only Kensington Estates Traffic. The analyses of this scenario will identify the impacts that will be created on the roadway network, if only Kensington Estates is built.

- The second build scenario will add to the No Build condition, traffic from the proposed Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments. The analyses of this scenario will identify the traffic impacts that will be created on the roadway network, if all these proposed projects are built.

- The third build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 40 residential zoning (135 single family homes). These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 40 residential) are built.

- The fourth build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 20 residential zoning (260 single family homes). These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 20 residential) are built.

EXISTING CONDITION

Land Use

As previously discussed, the site is located at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The portion of the site in Oyster Bay is presently zoned R1-1A and the portion of the site in Huntington is presently zoned R-40. The Woodbury Country Club is located on the property west of the site, on the opposite side of Plainview Road. The Cold Spring Country Club, Oheka Castle, and surrounding residences are located on the north side of Jericho Turnpike. Residential properties abut the site along the south and east property lines.

Roadway Conditions

Jericho Turnpike (NYS Route 25) is a major east-west arterial under the jurisdiction of the New York State Department of Transportation. The roadway extends across a significant portion of Nassau and Suffolk Counties. In the vicinity near the site it has a cross-section consisting of two lanes in each direction with left turn lanes at key intersections. The land uses along Jericho Turnpike (NYS Route 25) are predominantly commercial. The posted speed limit in the vicinity of the site is 50 miles per hour.

Plainview Road is a north-south collector road connecting Jericho Turnpike, Northern State Parkway and the Long Island Expressway. Plainview Road is under the jurisdiction of the Town of Oyster Bay. The cross section provides one lane in each direction in the vicinity of the site. The horizontal alignment is straight and the vertical alignment is flat. The land uses along Plainview Road are a mix of residential uses and vacant parcels. The posted speed limit in the vicinity of the site is 35 miles per hour.

Juneau Boulevard is a north-south local roadway intersecting Jericho Turnpike directly opposite Windermere Way, an entrance to a gated community on the north side of Jericho Turnpike. The cross section provides one lane in each direction. The land uses along Juneau Boulevard are typically residential uses.

Jericho Turnpike at Plainview Road and at Avery Road/West Gate Drive- The intersections of Jericho Turnpike at Plainview Road and Jericho Turnpike at Avery Road/West Gate Drive are approximately 140 feet apart as measured between stop lines. The distance between the two intersections provides back to back left turn lanes for vehicles making left turns onto Plainview Road and Avery Road/West Gate Drive from Jericho Turnpike. Plainview Road and Avery Road are north/south roadways that intersect Jericho Turnpike at right angles (T-intersection) and West Gate Drive is a southwest roadway that intersects Jericho Turnpike at an acute angle. West Gate Drive and Avery Road intersect Jericho Turnpike at the same point. The eastbound Jericho Turnpike approach at Plainview Road provides one through lane and one shared through/right turn lane and the westbound Jericho Turnpike approach at Plainview Road provides one lane for left turn movements and two through lanes. The northbound Plainview Road approach provides one lane for left turn/right turn movements. The eastbound Jericho Turnpike approach at Avery Road/West Gate Drive provides one lane for left turn movements and two through lanes. The westbound Jericho Turnpike approach at Avery Road/West Gate Drive provides one lane for through movements and one lane for shared through/right turn movements. The southbound Avery Road and southwest bound West Gate Drive approaches provide one lane for left turn/right turn movements. These two intersections are controlled by two traffic signals operating under the same controller with a 120 second cycle length and three phases.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
Jericho Turnpike (NYS Route 25) at Plainview Road	EB WB NB	T-TR L-2T LR	3-phase traffic signal
Jericho Turnpike (NYS Route 25) at Avery Road (S)/West Gate Drive (SW)	EB WB SB SWB	L-2T T-TR LR LR	3-Phase traffic signal
Jericho Turnpike (NYS Route 25) Juneau Boulevard	EB WB NB SB	L-T-TR L-T-TR LTR LTR	2-Phase traffic signal
Plainview Road at Orchard Drive	EB NB SB	LR LT TR	Stop Control on Eastbound Orchard Drive

** L = Left turn lane, T = through lane; R = Right turn lane*

Traffic Volume Data

Turning movement volumes were collected at the following study intersections on Thursday, November 2, 2006 during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods and on Saturday, July 29, 2006 during the Saturday midday (11 AM-2PM) peak period:

- Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive

- Jericho Turnpike (NYS Route 25) at Plainview Road
- Plainview Road at Orchard Drive

Additional turning movement counts were collected at the intersection of Jericho Turnpike and Juneau Boulevard on Wednesday, May 2, 2007 during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods and on Saturday, May 5, 2007 during the Saturday midday (11 AM-2PM) peak period. The volume data was tabulated to identify the peak hours at each of the intersections. The existing intersection peak hour volumes are shown on Figures 3, 4, 5 and detailed data in Appendix A.

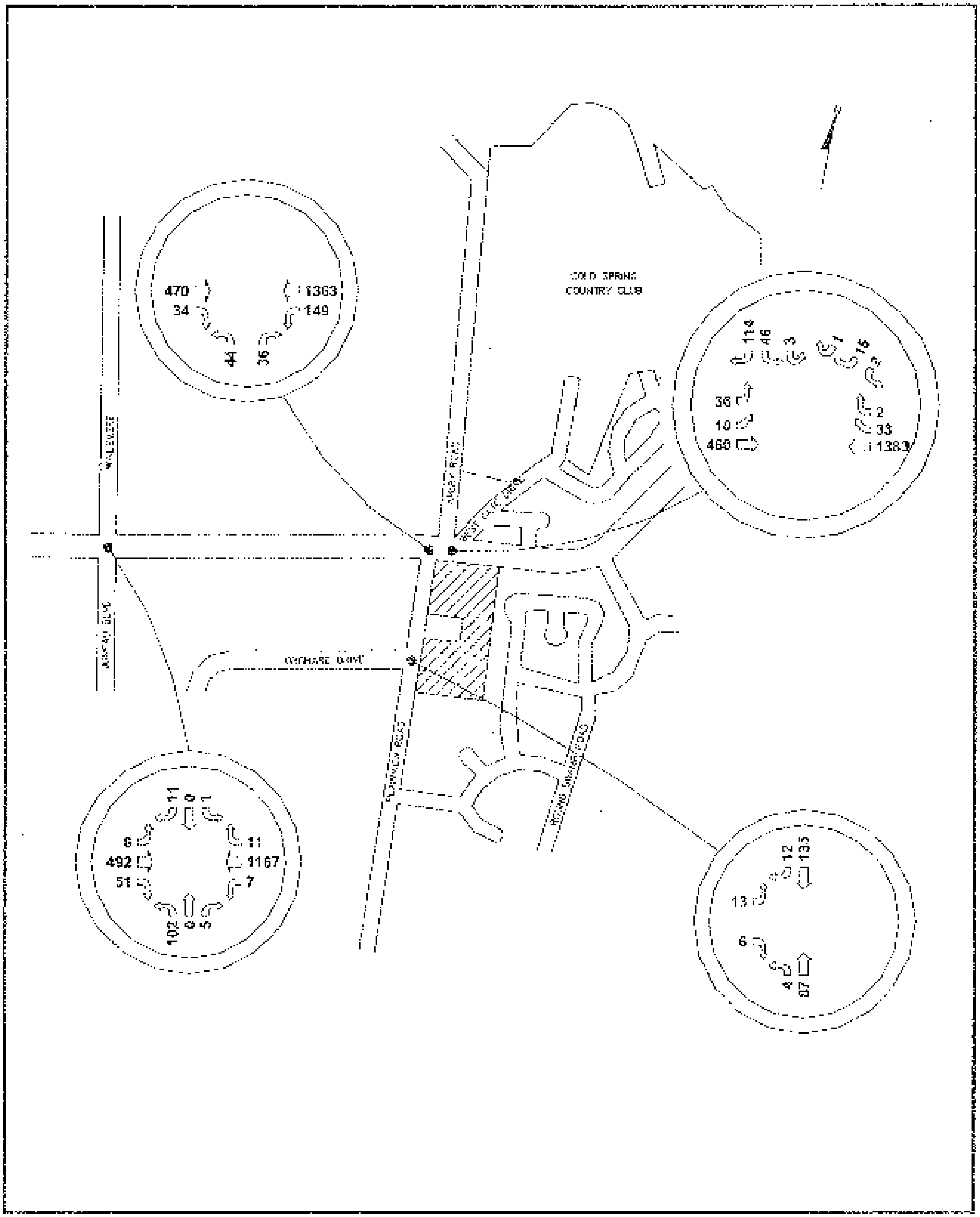


Figure 3: Existing AM Peak Hour Traffic Volumes

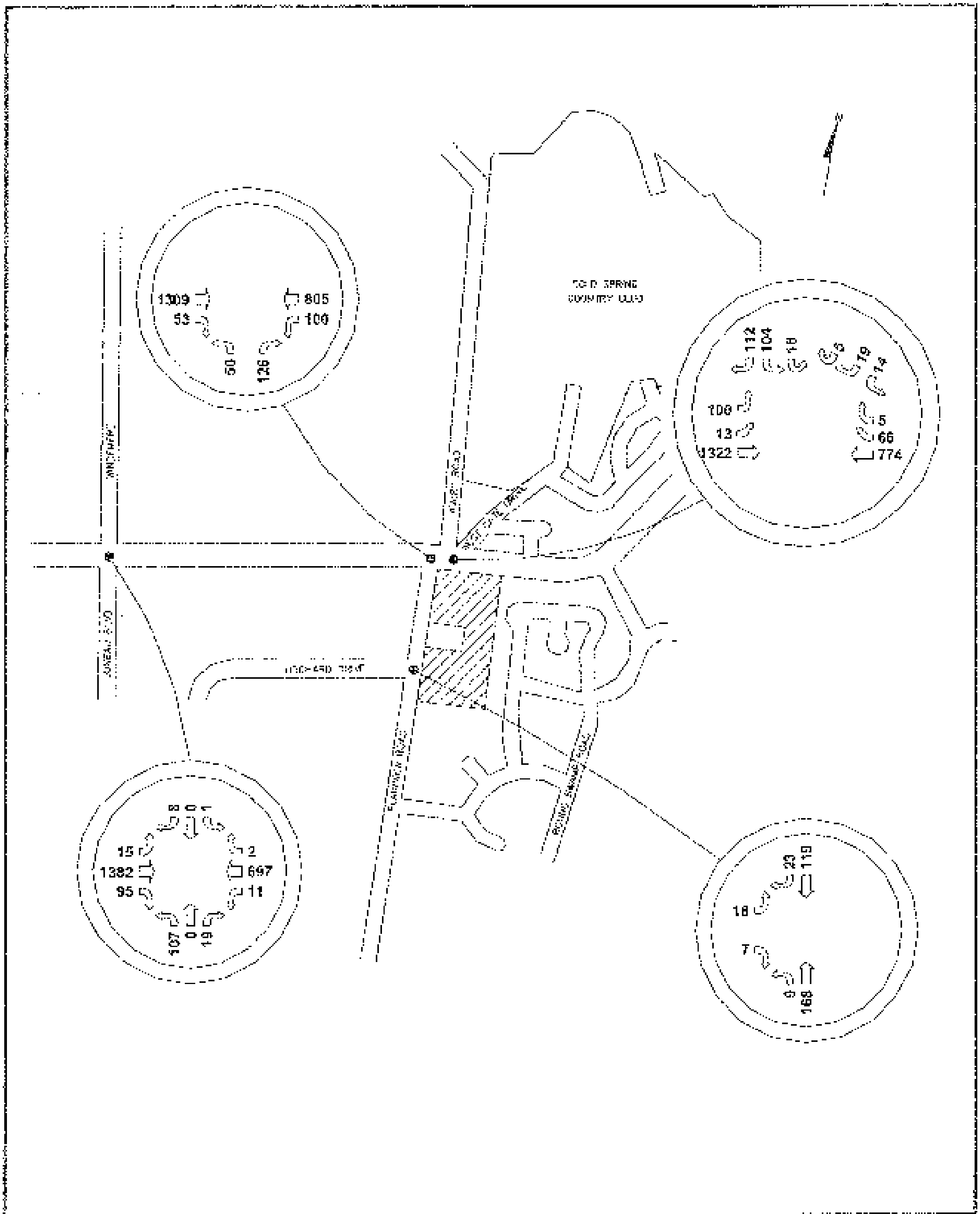


Figure 4: Existing PM Peak Hour Traffic Volumes

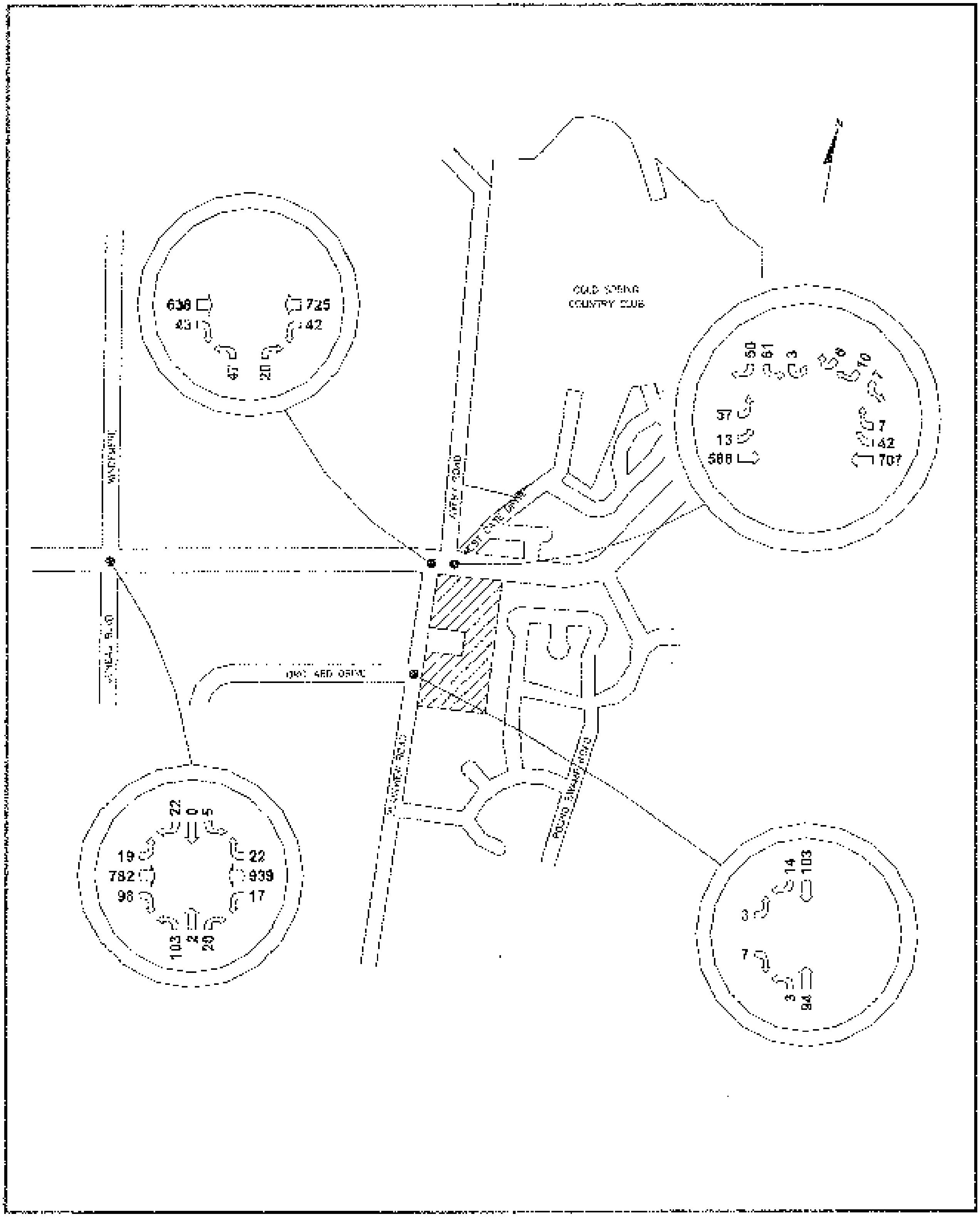


Figure 5: Existing Saturday Peak Hour Traffic Volumes

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the NYSDOT. The most recent data available was from January 2001 to December 2003 (3 year period). The data was reviewed and summarized in the following tables.

Table 2: Accident Summary by Severity

Location	Accident Severity			
	Fatality	Injury	Property Damage	TOTAL
Jericho Turnpike (NYS 25) at Plainview Rd/Avery Rd/West Gate Drive	-	8	12	20
Plainview Road from Jericho Turnpike (NYS 25) to Cedar Grove Lane	-	-	-	0
West Gate Drive from Jericho Turnpike (NYS 25) to Colonial Drive	-	-	1	1
West Gate Drive at Colonial Drive	-	1	-	1
Avery Road between Jericho Turnpike (NYS 25) and Stafford Avenue	-	-	-	0
Avery Road at Stafford Avenue	-	-	1	1
West of Jericho Turnpike (NYS 25) at Juneau Boulevard	-	3	1	4
Jericho Turnpike (NYS 25) at Juneau Boulevard	-	-	2	2
Jericho Turnpike (NYS 25) from Juneau Boulevard to Plainview Road	-	9	8	17
Total	0 0%	21 46%	25 54%	46 100%

Table 2 indicates a total of 46 accidents occurred at or in the vicinity of study intersections during the analysis period. The majority of accidents, 54%, involved property damage only. There were no fatal accidents experienced in the vicinity of the site within the time period studied. The locations that experienced the greatest number of accidents were the intersections of Jericho Turnpike (NYS Route 25) at Plainview Road/Avery Road/West Gate Drive and Jericho Turnpike between Juneau Boulevard and Plainview Road with a total of 20 and 17 accidents respectively.

Table 3: Accident Summary by Type of Collision

Location	Accident Type											
	Right Angle	Rear End	Head On	Left Turn	Right Turn	Fixed Object	Ped/ Bicycle	Side-Swipe	Over-Taking	Non-Reportable	Other/ Unknown	Total
Jericho Turnpike (NYS 25) at Plainview Rd/Avery Rd/West Gate Dr	4	2	-	1	1	1	-	-	-	6	5	20
Plainview Road from Jericho Turnpike (NYS 25) to Cedar Grove La	-	-	-	-	-	-	-	-	-	-	-	0
West Gate Drive from Jericho Turnpike (NYS 25) to Colonial Drive	-	-	-	-	-	-	-	-	-	-	1	1
West Gate Drive at Colonial Drive	-	-	-	-	-	1	-	-	-	-	-	1
Avery Road between Jericho Turnpike (NYS 25) and Stafford Ave	-	-	-	-	-	-	-	-	-	-	-	0
Avery Road at Stafford Avenue	-	-	-	-	-	-	-	-	-	-	1	1
West of Jericho Turnpike (NYS 25) at Juneau Boulevard	1	2	-	-	-	1	-	-	-	-	-	4
Jericho Turnpike (NYS 25) at Juneau Boulevard	1	-	-	-	-	-	-	-	-	-	1	2
Jericho Turnpike (NYS 25) from Juneau Boulevard to Plainview Road	4	5	-	1	1	3	-	-	-	-	3	17
Total	10 *22%*	9 *20%*	0 *0%*	2 *4%*	2 *4%*	6 *13%*	0 *0%*	0 *0%*	0 *0%*	6 *13%*	11 *24%*	46 *100%*

A review of Table 3 indicates that a plurality of the reportable accidents (22% and 20%) involved a right-angle collision and a rear-end collision, respectively. Most of the rear-end accidents occurred on Jericho Turnpike between Juneau Boulevard and Plainview Road and an equal number of right angle accidents (4 each) occurred at the intersection of Jericho Turnpike at Avery Road/West Gate Drive and on Jericho Turnpike between Juneau Boulevard and Plainview Road.

During the three-year study period a total of 20 accidents occurred at the intersection of Jericho Turnpike (NYS Route 25) and Plainview Road/Avery Road/West Gate Drive and a total of 17 accident occurred on Jericho Turnpike between Juneau Boulevard and Plainview Road. Accident rates were calculated for the intersection and roadway segment and compared to the statewide average. The accident rate at the intersection of Jericho Turnpike at Plainview Road/Avery Road/West Gate Drive was 0.41 accidents per million entering vehicles, which is higher than the statewide average accident rate of 0.26 accidents per million entering vehicles. However, the frequency of accidents at the intersection is decreasing over the 3-year period reviewed with 10 accidents recorded in 2001, 7 in 2002 and 3 in 2003. In order to assess the potential impact of the proposed development on existing accident rates, a percentage increase in daily traffic at the intersection was calculated from the existing Average Annual Daily traffic (AADT) volumes at the intersection and the weekday daily traffic projected to be generated by the proposed development. The AADT at the intersection is approximately 31,000 vehicles per day and the average weekday daily traffic for the proposed project is 448 vehicle trips per day. Therefore, the proposed project will increase the daily traffic volumes at the intersection by 1.5% and hence increase the number of accidents at the intersection by 1.5%. A total of 20 accidents occurred at this intersection over a 3-year period. Therefore, the proposed project will increase the number of accident at the intersection by less than 1 accident over a three year period. The accident rate for Jericho Turnpike between Juneau Boulevard and Plainview Road was 1.08 accidents per million vehicle-miles, which is lower than statewide average accident rate of 1.28 accidents per million vehicle-miles.

LEVEL OF SERVICE DESCRIPTION

Level of service and capacity analyses were performed using *SYNCHRO Version 6* Software. *SYNCHRO*, in conjunction with *SimTraffic*, is a software package that allows for an interactive analysis of a single intersection or a network of intersections and can also be used for modeling and optimizing traffic signal timings. The *SimTraffic* component provides simulations of operations with animation features. *SYNCHRO* implements the Intersection Capacity Utilization (ICU) 2003 method for determining intersection capacity. This method compares the current volume to the intersections ultimate capacity. *SYNCHRO* also implements the methods of the *2000 Highway Capacity Manual (HCM)* for Urban Streets, Signalized intersections, and unsignalized intersections for determining intersection capacity analyses. The *HCM* contains procedures and methodologies for estimating capacity and determining level of service for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's level of service (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The level of service definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix E.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The level of service of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/decoration delay that is caused by the signalized intersection.

The flow at a two-way stop controlled (TWSC) intersection is gauged in terms of LOS and capacity. The capacity of a controlled leg is based on the distribution of gaps in the major street traffic, driver judgment in selecting a gap, and the follow-up time required by each driver in a queue. The LOS for a TWSC intersection is determined by the control-delay, and is defined for each movement rather than for the overall intersection. As with signalized intersections, HCS quantifies only the average control-delay, which is a function of the approach and the degree of saturation for any particular minor movement.

EXISTING CONDITION ANALYSIS

The peak hour traffic volumes depicted in Figures 3, 4 and 5 were used to determine the existing capacity and LOS of the study intersections. Table 4 contains the LOS summary for the Existing Condition calculated through the SYNCHRO software described previously. The detailed analysis worksheets are in Appendix E.

Table 4: Existing Condition LOS Summary

Location (Signalized Intersections)	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Jericho Turnpike at Plainview Road	A	6.8	C	24.8	A	8.8
Jericho Turnpike at Avery /West Gate Drive	B	19.2	B	14.7	B	12.4
Jericho Turnpike at Juneau Blvd/Windermere Way	A	7.6	A	8.3	A	7.9

Location (Unsignalized Intersections)	Approach	Movmnt.	AM Peak Hour			PM Peak Hour			Saturday Midday Peak Hour		
			LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Orchard Drive at Plainview Road	NB	LT	A	0.4	0.00	A	0.4	0.01	A	0.3	0.00
	EB	LR	A	9.8	0.03	B	10.4	0.06	A	9.4	0.03

Notes: LOS = Level of Service, V/C = Volume/Capacity Ratio, Delay = seconds/vehicle

Jericho Turnpike and Plainview Road

The signalized intersection of Jericho Turnpike and Plainview Road currently operates at LOS A, C and A during the weekday AM, weekday PM and Saturday midday peak hours respectively.

Jericho Turnpike and Avery Road/West Gate Drive

The signalized intersection of Jericho Turnpike and Avery Road/West Gate Drive currently operates at LOS B during the weekday AM, weekday PM and Saturday midday peak hours.

Jericho Turnpike and Juneau Boulevard/Windermere Way

The signalized intersection of Jericho Turnpike and Juneau Boulevard/Windermere Way currently operates at LOS A during the weekday AM, weekday PM and Saturday midday peak hours.

Plainview Road and Orchard Drive

Orchard Drive intersects Plainview Road to form a stop-controlled T-intersection. Currently, the northbound Plainview Road left turn movement operates at LOS A during the weekday AM, weekday PM and Saturday midday peak hours. The eastbound Orchard Drive stop-controlled approach operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the weekday PM peak hour.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the assumed future build year (2010) without the construction of the proposed project. For the purpose of determining the cumulative traffic impacts anticipated to be created by proposed projects in the study area, the No Build Condition traffic volumes will consider only background growth through the assumed build year for the subject application.

Traffic Growth

Annual growth factors of 1% and 0.6% were obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 study (LITP2000) for the Towns of Huntington and Oyster Bay respectively. The higher of the two growth factors was utilized to perform a more conservative analysis. The existing traffic volumes were increased by this factor (1%) for a period of 4 years to the traffic volumes obtained in 2006 and for a period 3 years to the traffic volumes obtained in 2007 to generate the 2010 No Build Volumes. The No Build Condition volumes are illustrated in Figures 6, 7 and 8.

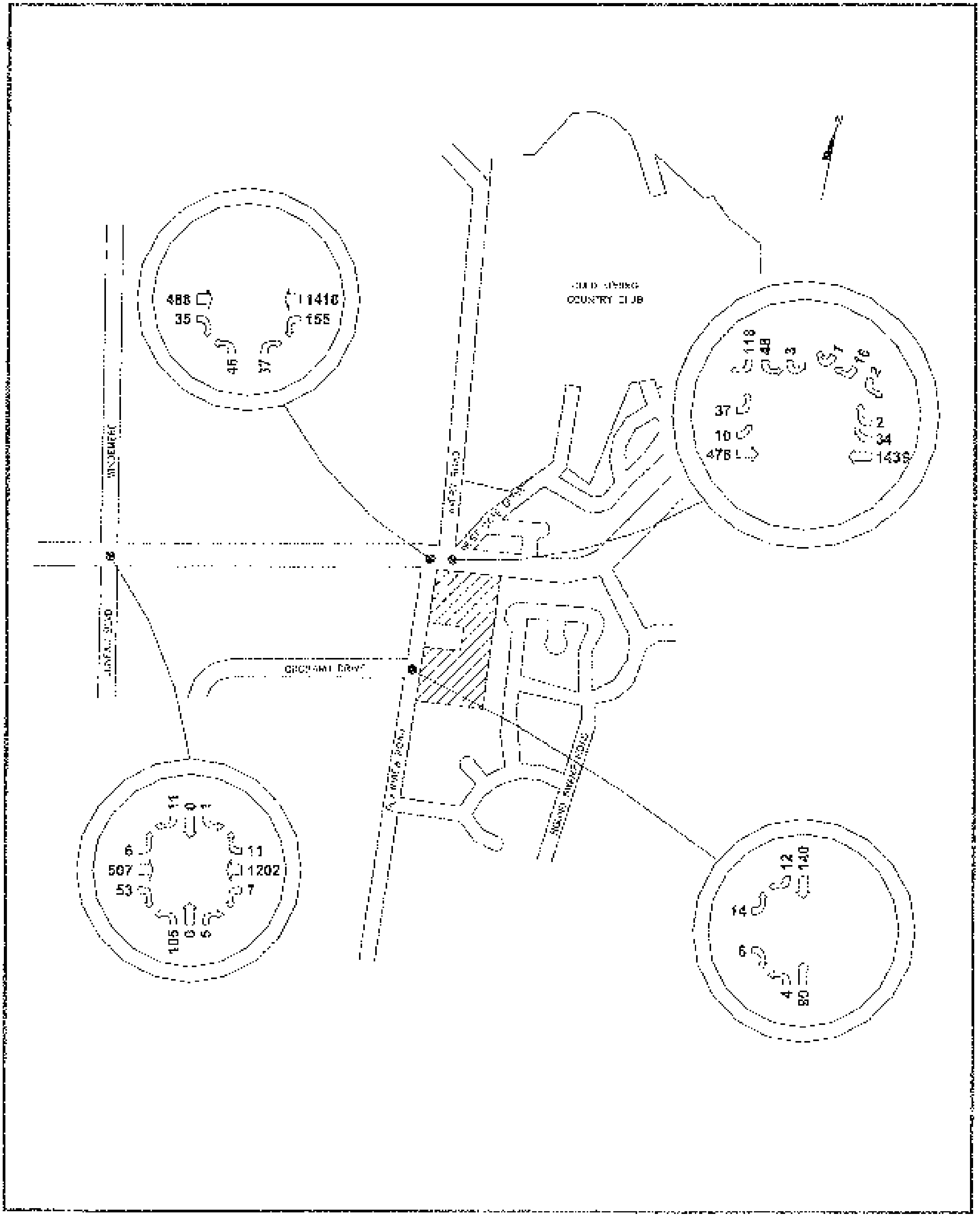


Figure 6: 2010 No Build AM Traffic Volumes

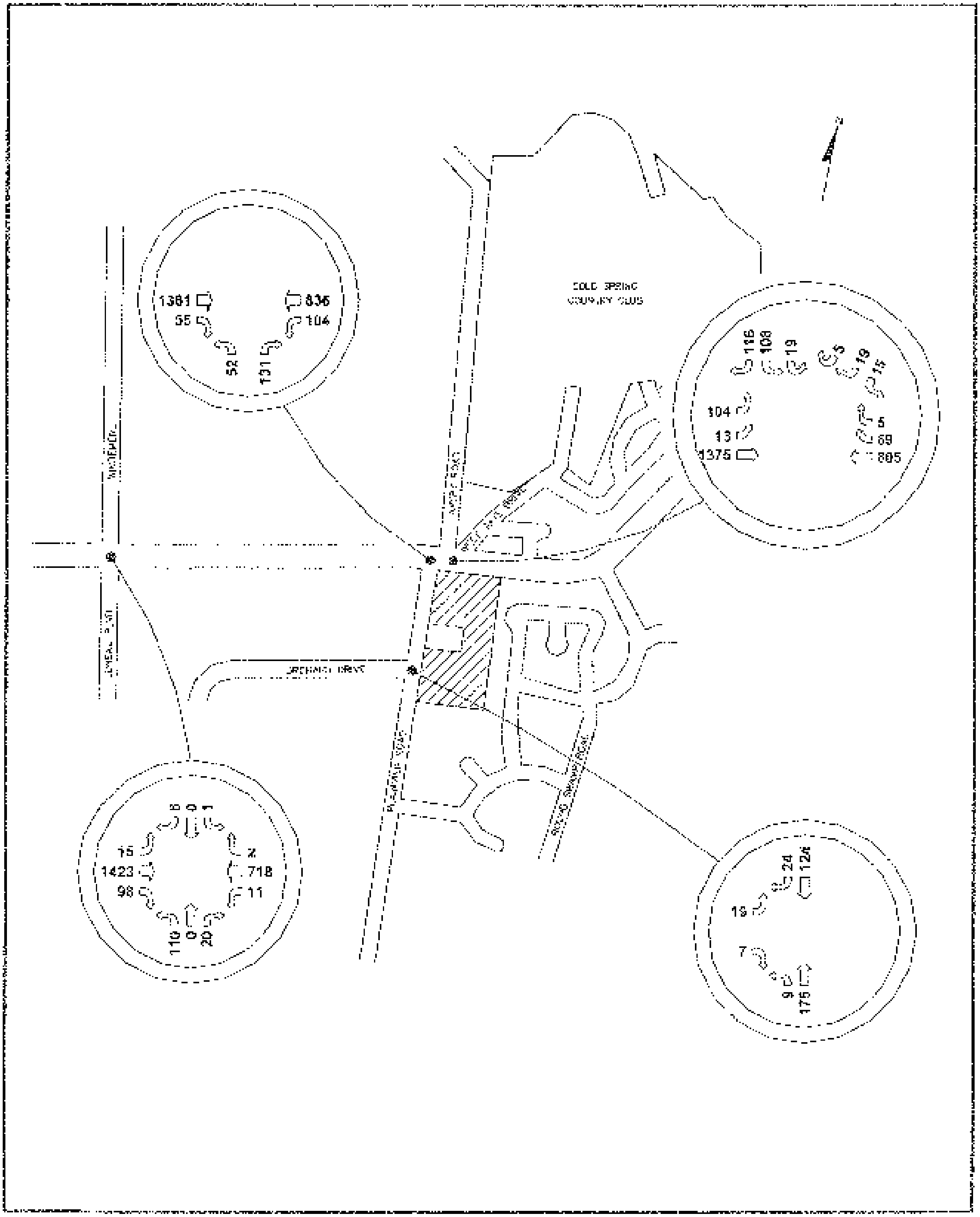


Figure 7: 2010 No Build PM Traffic Volumes

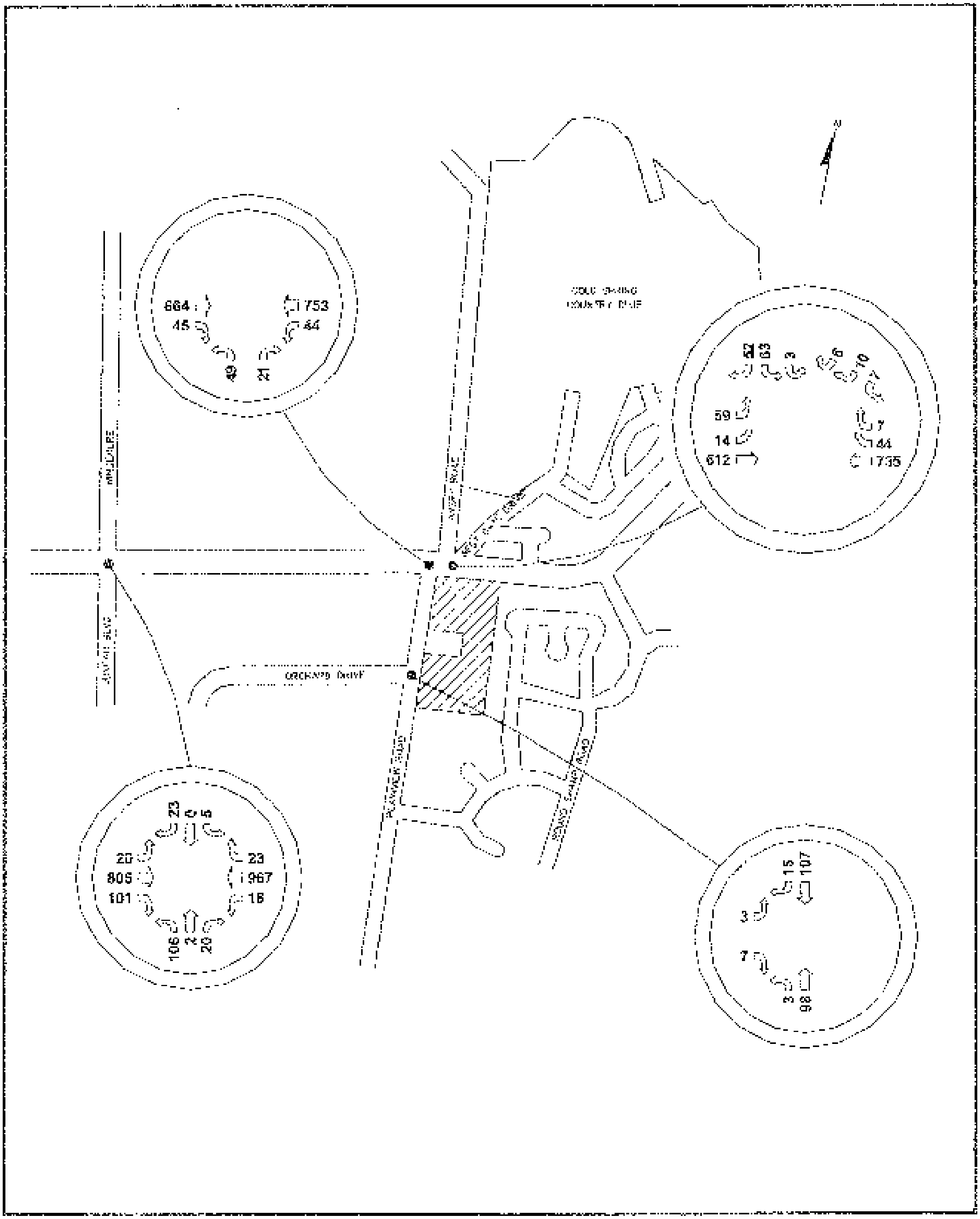


Figure 8: 2010 No Build Saturday Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

As recommended by the New York State Department of Transportation (NYSDOT), access to the site will be provided via a full movement driveway on NYS Route 25 (Jericho Turnpike) directly opposite Avery Road. The site access will form the northbound leg at the signalized intersection of Jericho Turnpike and Avery Road and will be designed to provide one right turn lane and a shared left turn/through lane. Also, a left turn lane permitting access into the subject site will be provided on westbound Jericho Turnpike. The existing traffic signal at this location will be reconstructed in order to accommodate the additional leg for the driveway of the proposed development. NYSDOT also recommended the widening of NYS Route 25 between Plainview Road and Avery Road to provide increased left turn storage eastbound and westbound.

Trip Generation

In order to identify the impacts the proposed residential development will have on the adjacent street system, it is necessary to estimate the traffic volume that will be generated during the peak hours and to estimate the directional distribution of that site traffic when entering and exiting the subject property. The proposed residential development will contain 80 age-restricted attached housing units and 3 single family homes. The trip generation estimates for the proposed residential development were based on the traffic data for Land Use Code 251 Senior Housing Detached (for the townhouse units) and Land Use Code 210-Single Family Detached Housing (for the three single family homes) contained in the *Institute of Transportation Engineer's manual, Trip Generation, Seventh Edition.* This publication sets forth trip generation data obtained by traffic counts conducted at research sites throughout the country.

The analysis herein utilized the traffic generation number for detached senior housing units for the townhouse units because the ITE description of residents in detached senior housing communities appears to better correspond to the community that will reside at Kensington Estates than does the ITE description of Land Use Code 252 Senior Attached Housing. According to the ITE trip generation manual, residents in detached senior adult housing communities are typically active, requiring little to no medical supervision. This type of use would correspond to the age-restricted units proposed in this project. (Detailed descriptions of Land Use Codes 251, 252 and 210 are included in appendix C.) The number of trips generated by Senior Housing Attached are significantly lower than those generated by Senior Housing Detached. Therefore, the analysis contained herein reflects a conservative approach.

A summary of the trip generation is shown in Table 5 and in Appendix C as well. It is projected that, the proposed residential development will generate 35 trips during the AM peak hour (12 entering and 23 exiting), 47 trips during the PM peak hour (29 entering, 18 exiting) and 56 trips during the Saturday midday peak hour (33 entering, 23 exiting).

Table 5: Trip Generation

Time Period	Distribution	80 Senior Housing Detached units - ITE LUC 251	3 Single Family Homes ITE LUC 210	Total
AM Peak Hour	Enter	9	3	12
	Exit	14	9	23
	Total	23	**12**	35
PM Peak Hour	Enter	26	3	29
	Exit	16	2	18
	Total	**42**	5	47
Saturday Midday Peak Hour	Enter	26	7	33
	Exit	16	7	23
	Total	42	**14**	56

Source: Trip Generation, 7th Edition, published by ITE

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figures 9 and 10 present the trip distribution for the age-restricted condominiums and the single family homes respectively. Figures 11, 12 and 13 depict the site generated volumes for the AM, PM and Saturday midday peak hours.

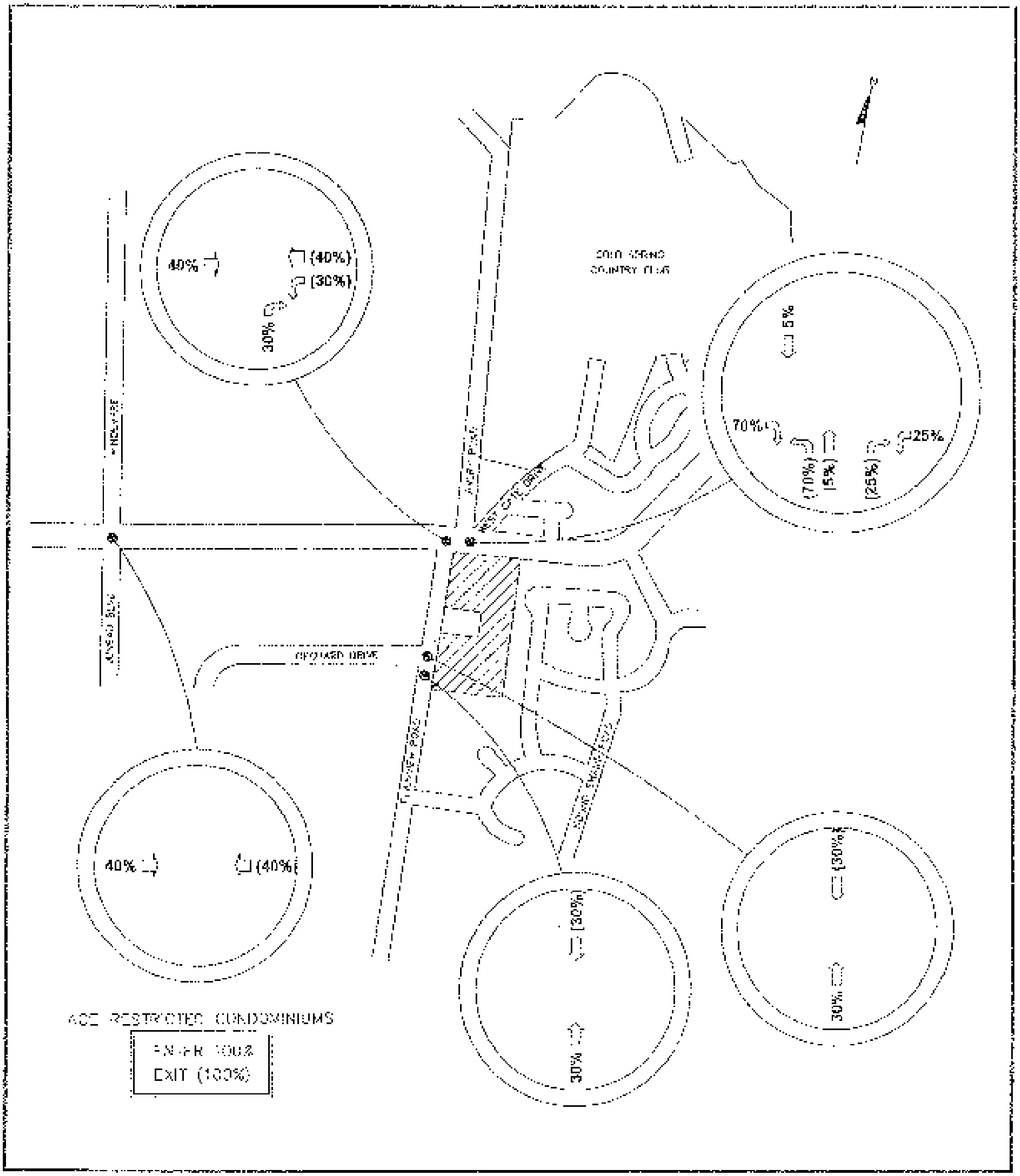


Figure 9: Site Generated Trip Distribution – Age Restricted Condominiums

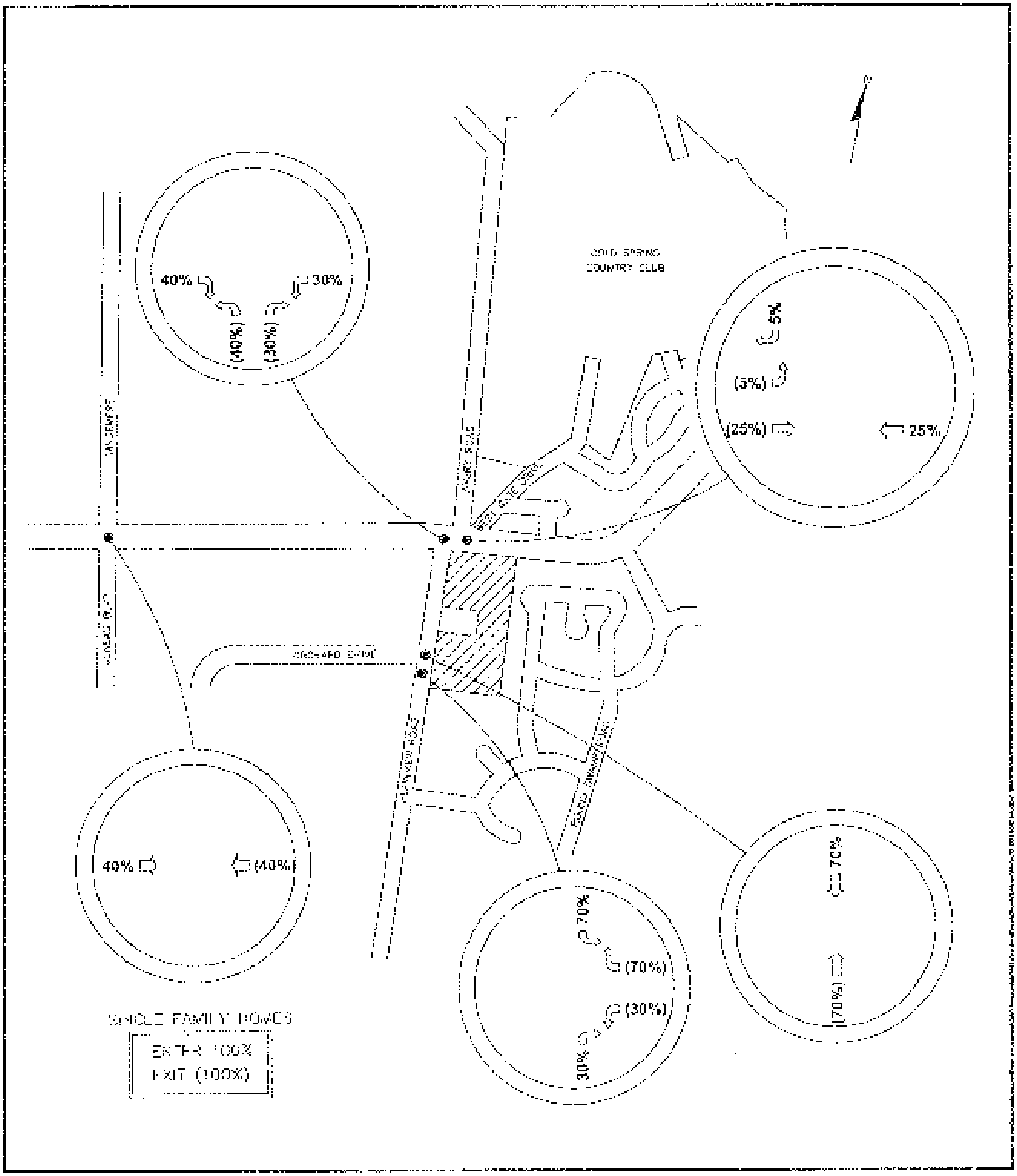


Figure 10: Site Generated Trip Distribution -- Single Family Homes

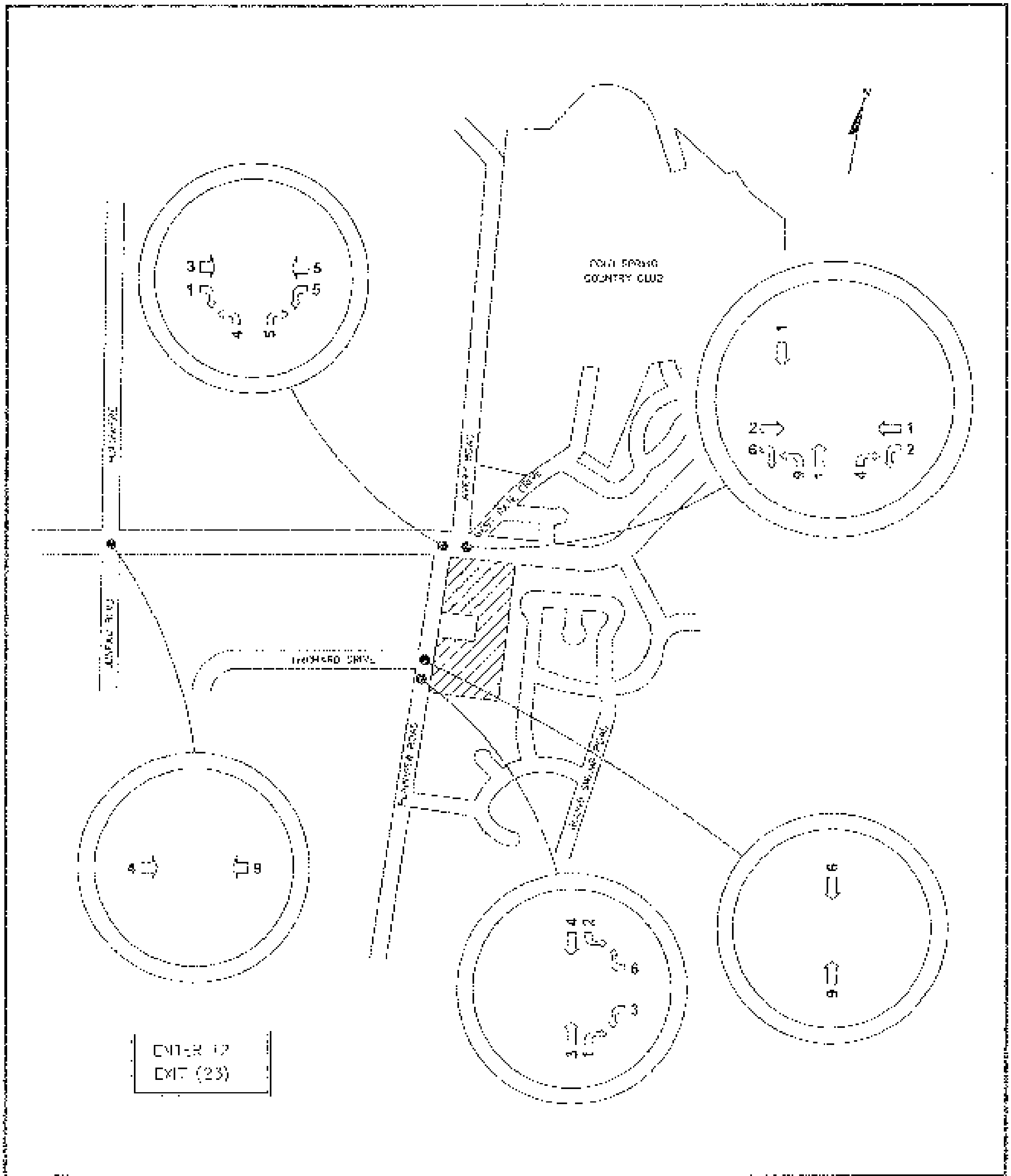


Figure 11: Site Generated AM Traffic Volumes

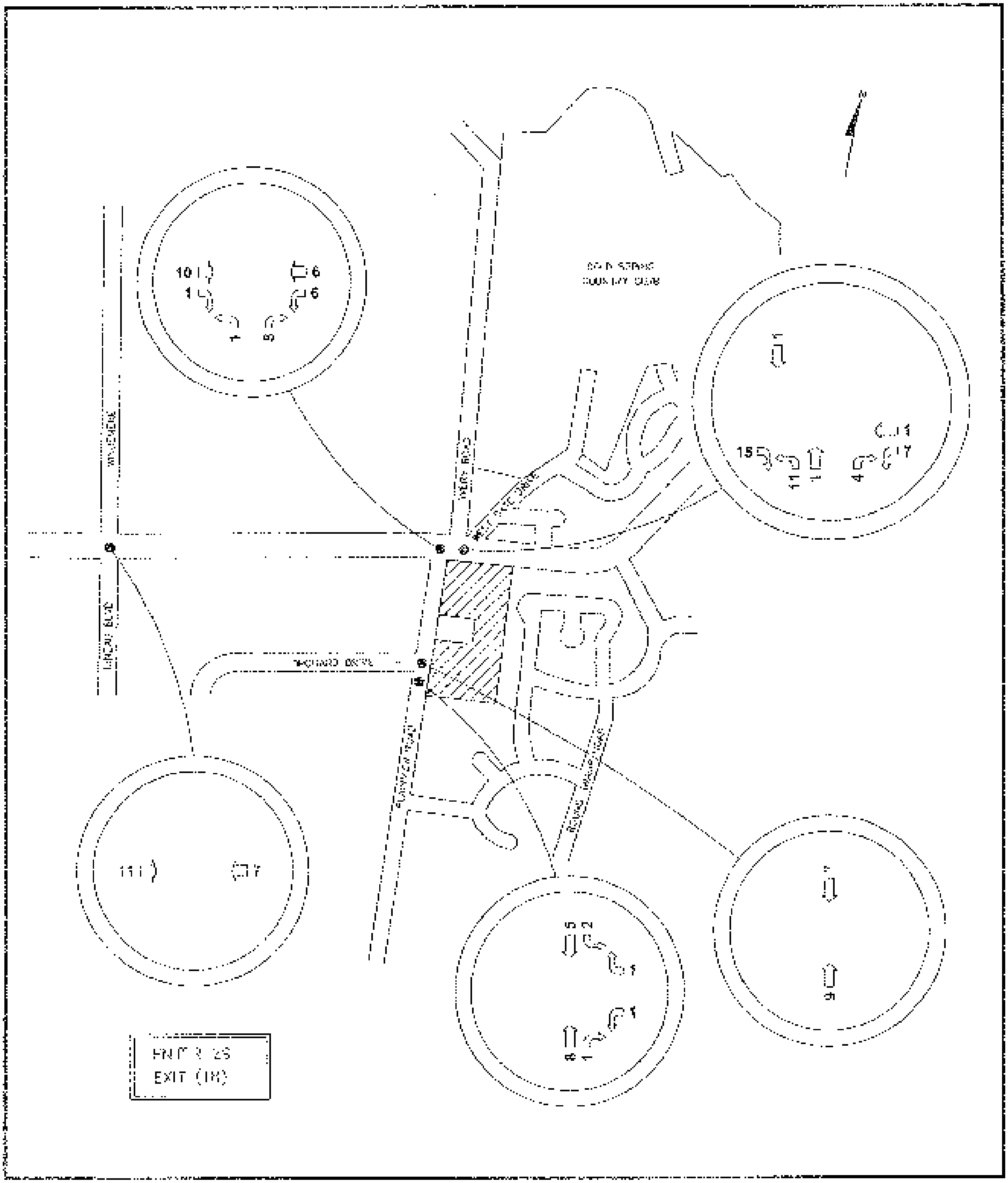


Figure 12: Site Generated PM Traffic Volumes

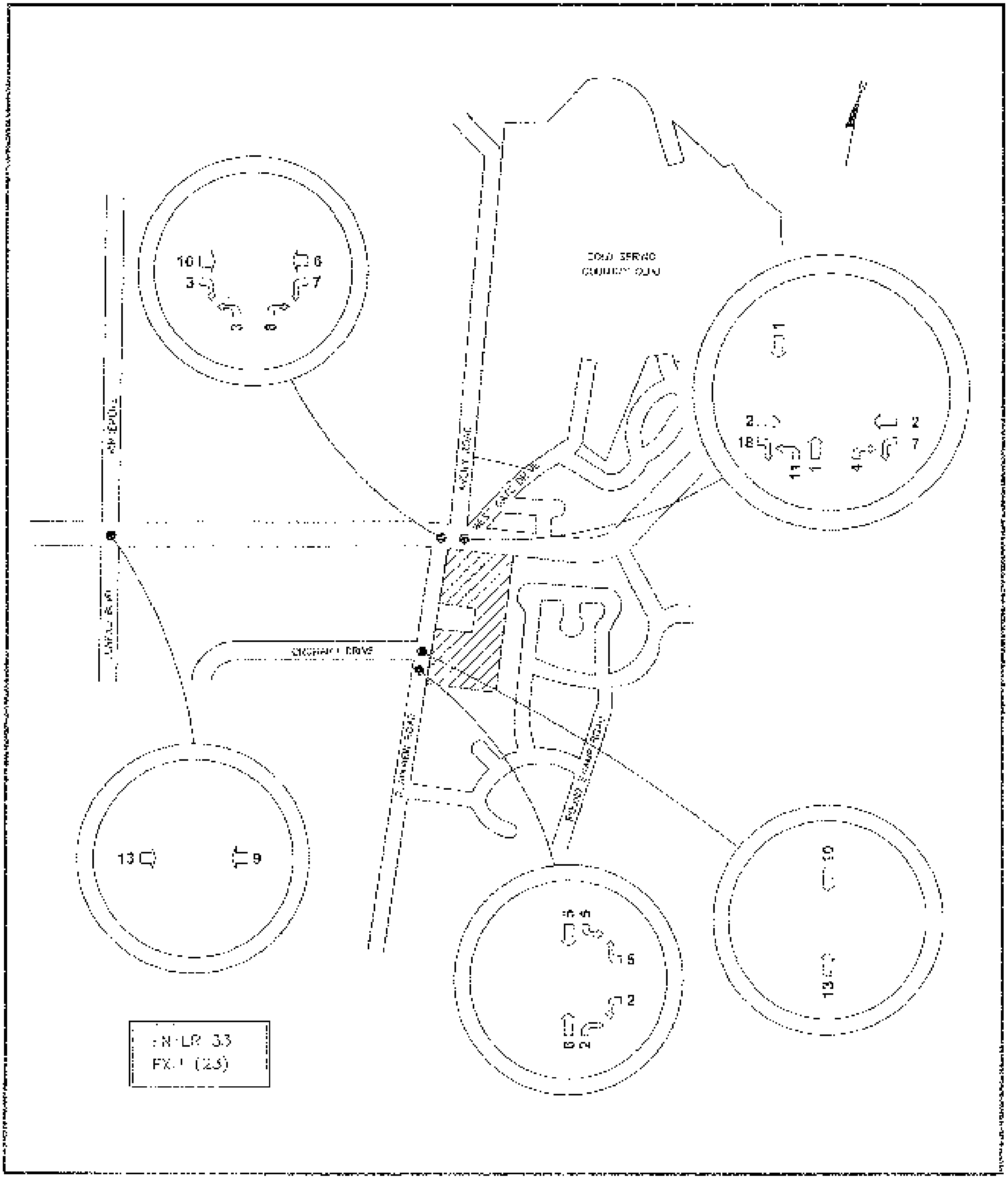


Figure 13: Site Generated Saturday Traffic Volumes

BUILD CONDITION

The Build Condition represents traffic conditions expected at the study intersections in the assumed future build year (2010) with the construction of the proposed project. In this traffic study four separate Build Scenarios were analyzed. The analyses at the study intersections for the four build scenarios included the widening of NYS Route 25 between Plainview Road and Avery Road to provide increased left turn storage eastbound and westbound as recommended by NYSDOT and the construction of the site access on NYS Route 25 opposite Avery Road. The following is a brief description of the four build scenarios:

Build Scenario 1 Condition - This condition represents the analyses of the study intersections in 2010 assuming only the proposed project (Kensington Estates) will be built in the study area. The 2010 Build Scenario 1 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed project (Kensington Estates) to the 2010 No Build traffic volumes (Ambient volumes). The 2010 Build Scenario 1 Condition analyses when compared to the 2010 No Build condition analyses will identify impacts that will be created by the proposed Kensington Estate development if, no other planned projects is built. Figures 14, 15 and 16 represent the 2010 Build Volumes under Scenario 1.

Build Scenario 2 Condition - This condition represents the analyses of the study intersections in 2010 assuming the proposed project (Kensington Estates) and other planned projects (Votypka, Woodbury Country Club and The Preserve) are built in the study area. The 2010 Build Scenario 2 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments to the 2010 No Build traffic volumes. The 2010 Build Scenario 2 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments. Figures 17, 18 and 19 represent the 2010 Build Volumes under Scenario 2.

Build Scenario 3 Condition - In addition to the above mentioned projects under Scenario 2, the Town of Huntington requested the consideration of the development of Cold Spring Country Club, alternatively evaluating both residential zoning yields (R-20 and R-40). The Scenario 3 Build condition represents the analyses of the study intersections in 2010 assuming all the proposed projects under Scenario 2 and Cold Spring County Club developed at R-40 zoning (135 single family homes) are built. The 2010 Build Scenario 3 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed developments under Scenario 2 and Cold Spring Country Club developed at R-40 to the 2010 No Build traffic volumes. The 2010 Build Scenario 3 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the projects developed under Scenario 3. Figures 20, 21 and 22 represent the 2010 Build Volumes under Scenario 3.

Build Scenario 4 Condition - The Scenario 4 Build condition represents the analyses of the study intersections in 2010 assuming all the proposed projects under Scenario 2 and Cold Spring County Club developed at R-20 zoning (260 single family homes) are built. The 2010 Build Scenario 4 traffic volumes were developed by adding the traffic anticipated to be generated by the proposed developments under Scenario 2 and Cold Spring Country Club developed at R-20 to the 2010 No Build traffic volumes. The 2010 Build Scenario 4 Condition analyses when compared to the 2010 No Build condition analyses will identify cumulative impacts created by the projects developed under Scenario 4. Figures 23, 24 and 25 represent the 2010 Build Volumes under Scenario 4.

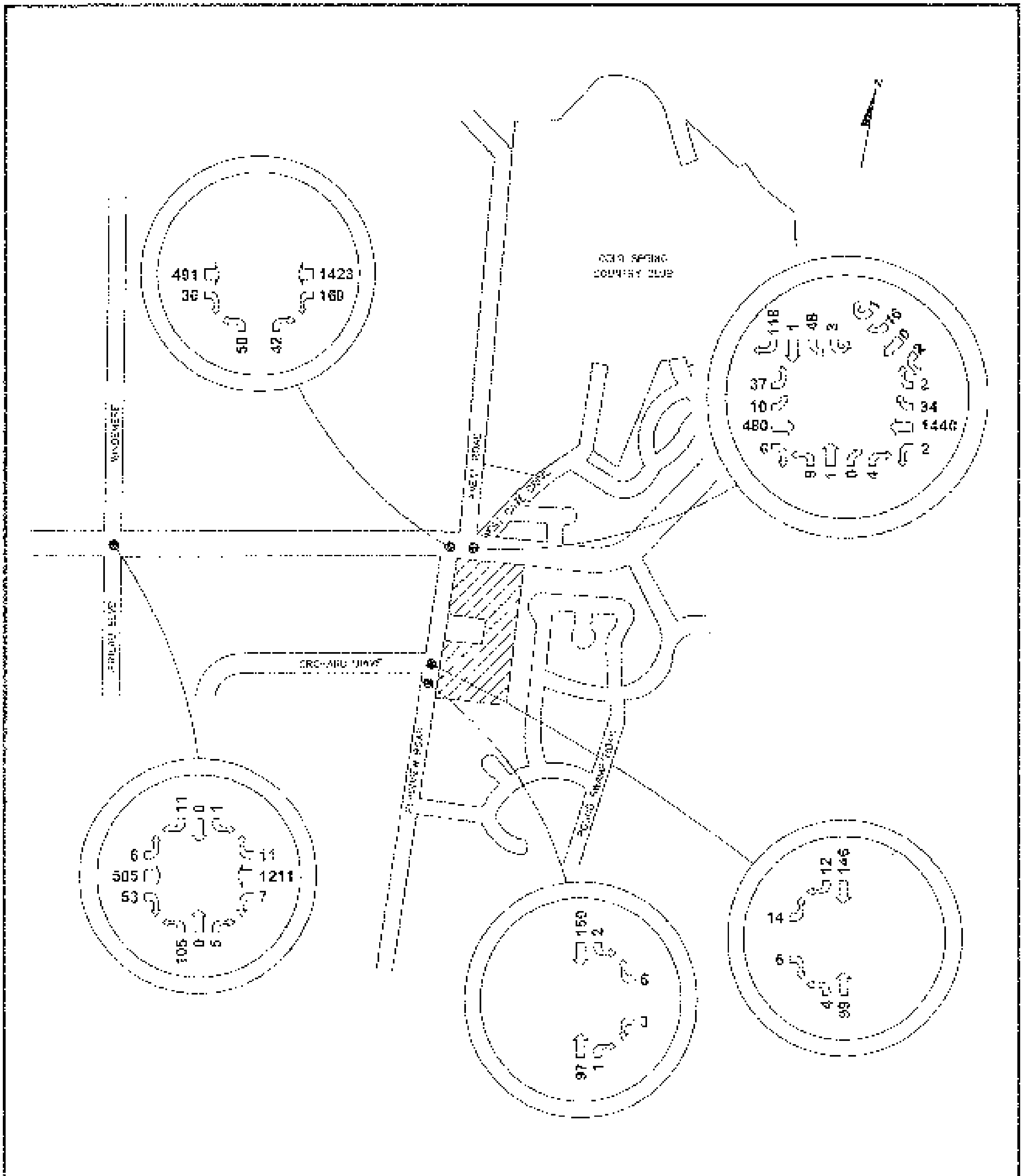


Figure 14: 2019 Build - Scenario 1 AM Traffic Volumes

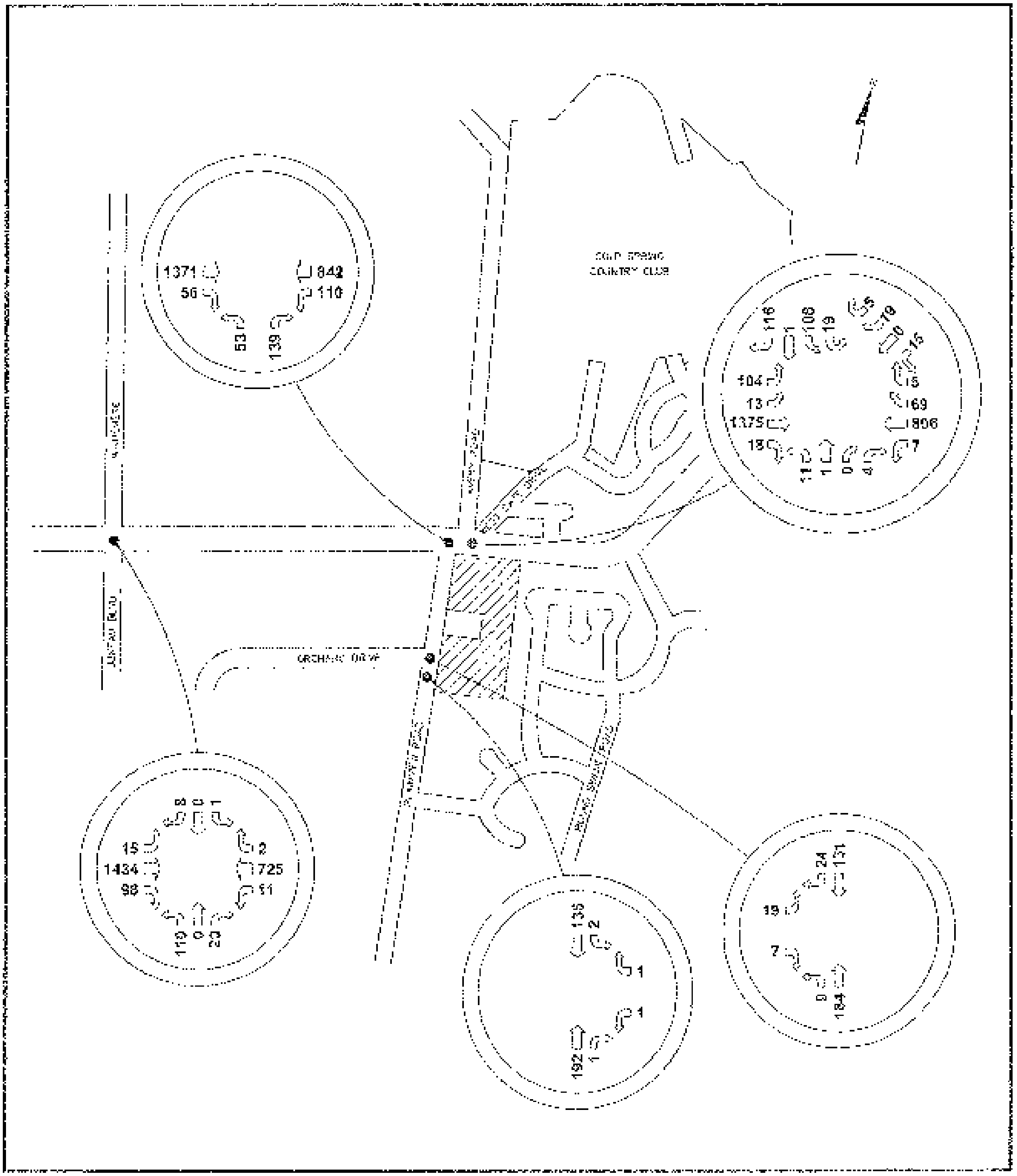


Figure 15: 2010 Build - Scenario 1 PM Traffic Volumes

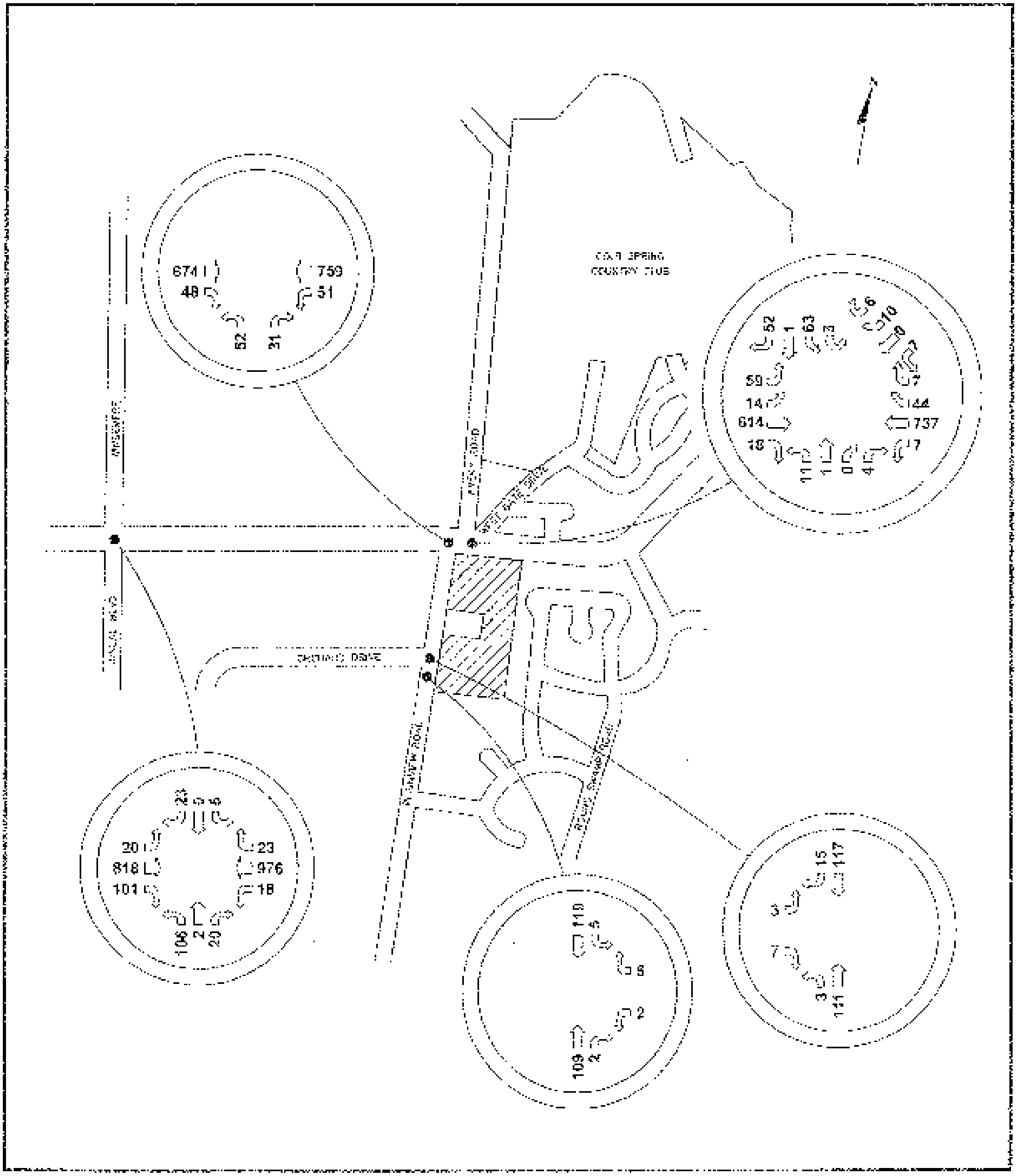


Figure 16: 2010 Build – Scenario 1 Saturday Traffic Volumes

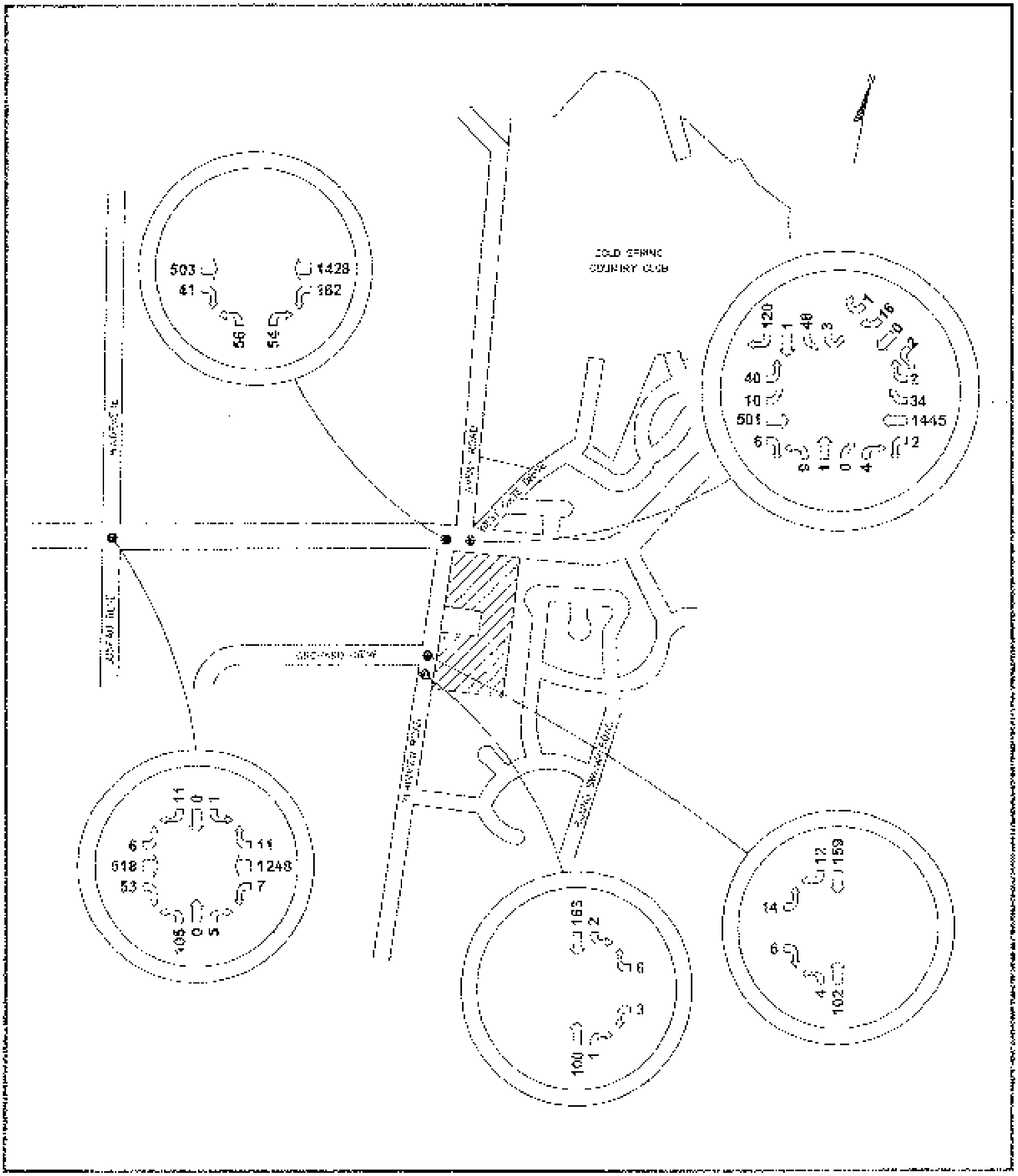


Figure 17: 2010 Build – Scenario 2 AM Traffic Volumes

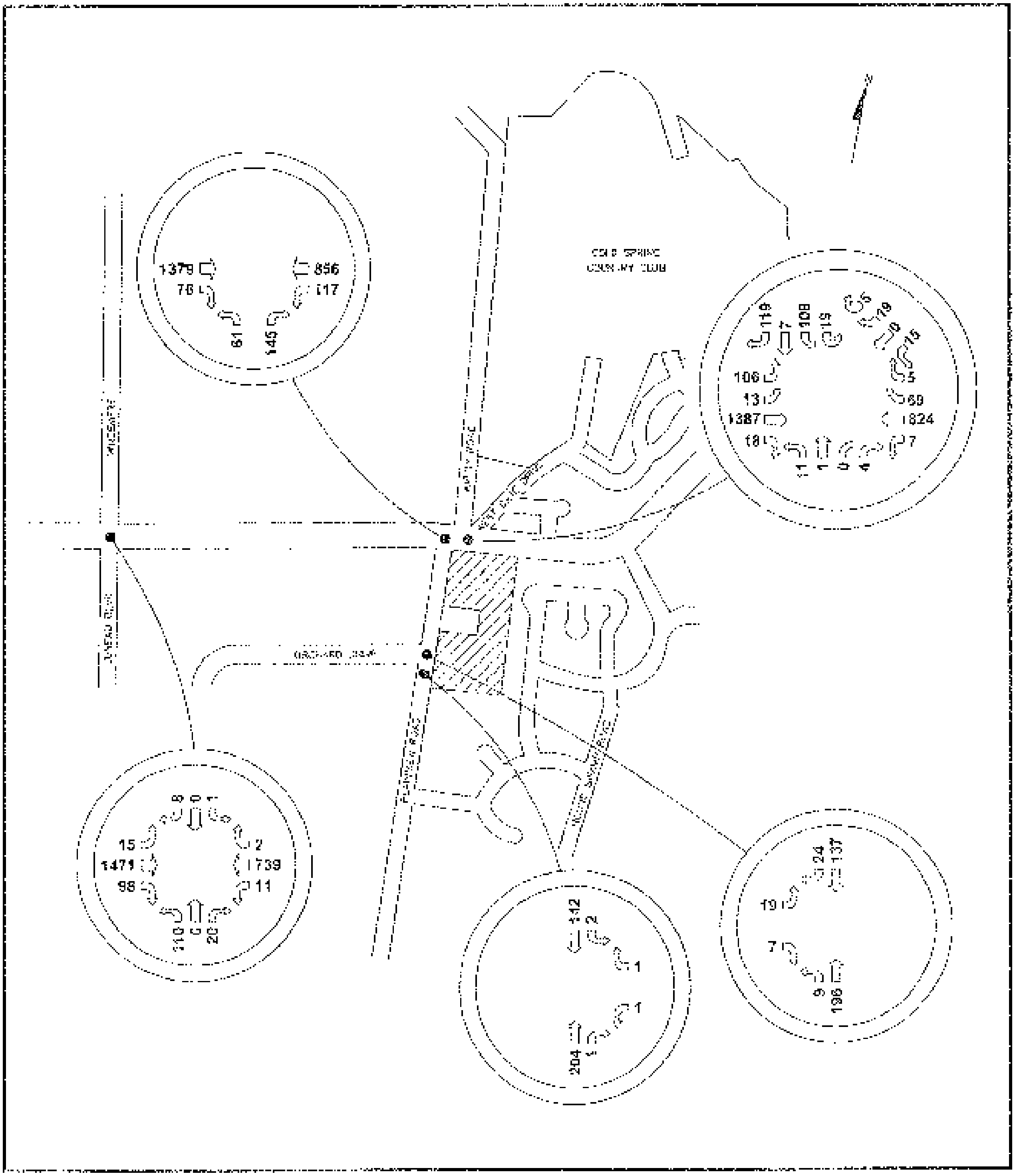


Figure 18: 2010 Build – Scenario 2 PM Traffic Volumes

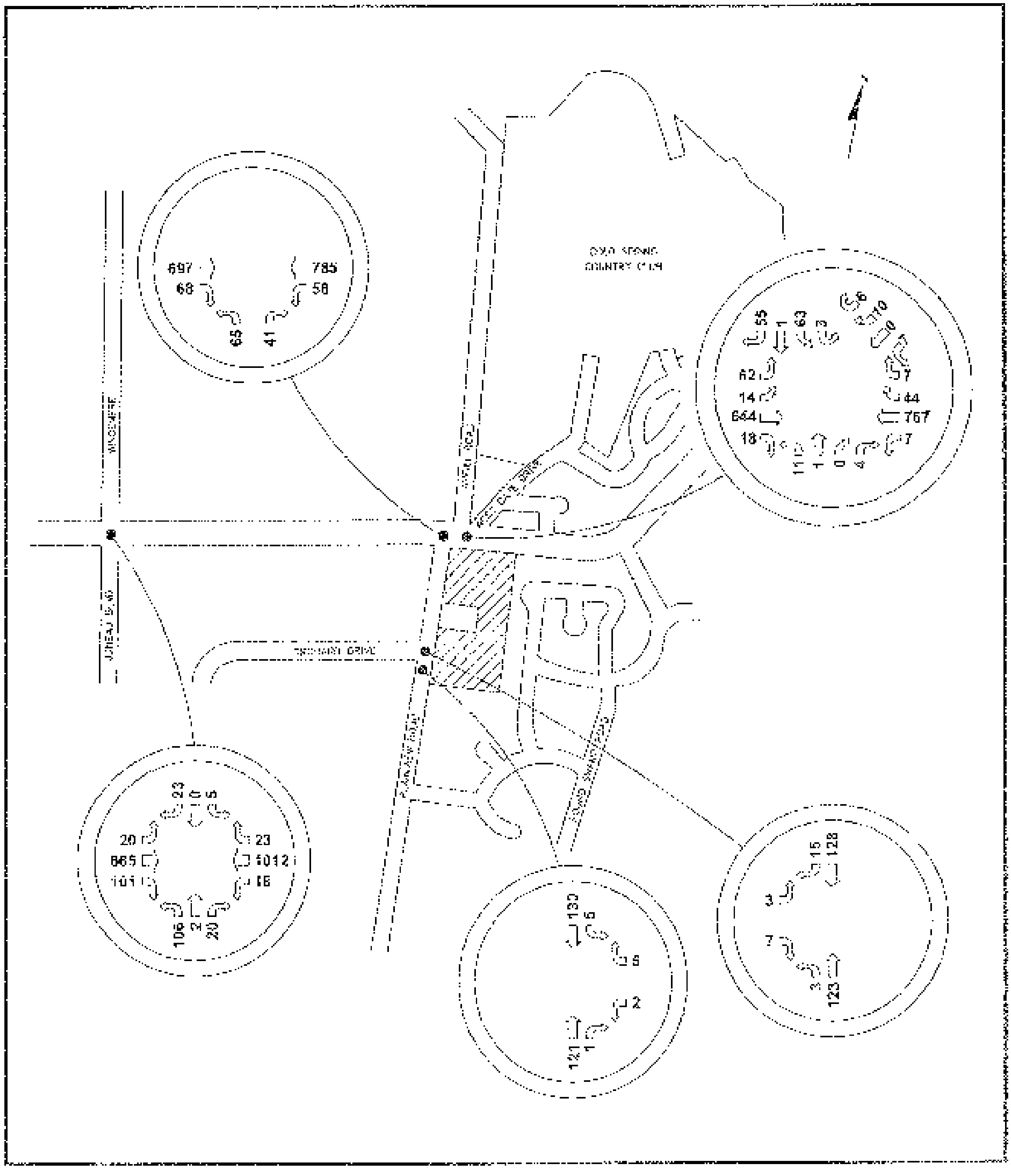


Figure 19: 2010 Build – Scenario 2 Saturday Traffic Volumes

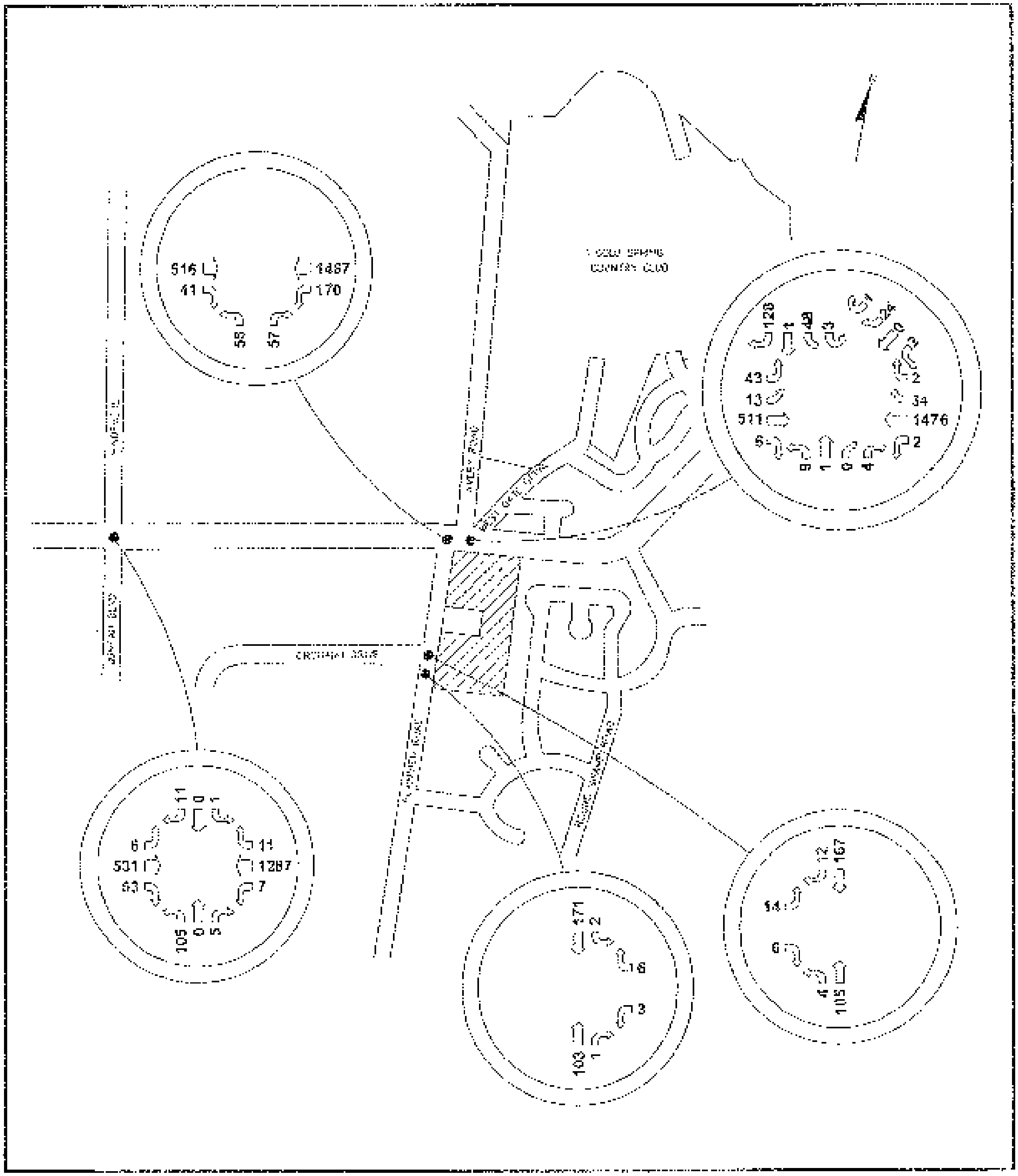


Figure 26: 2010 Build - Scenario 3 AM Traffic Volumes

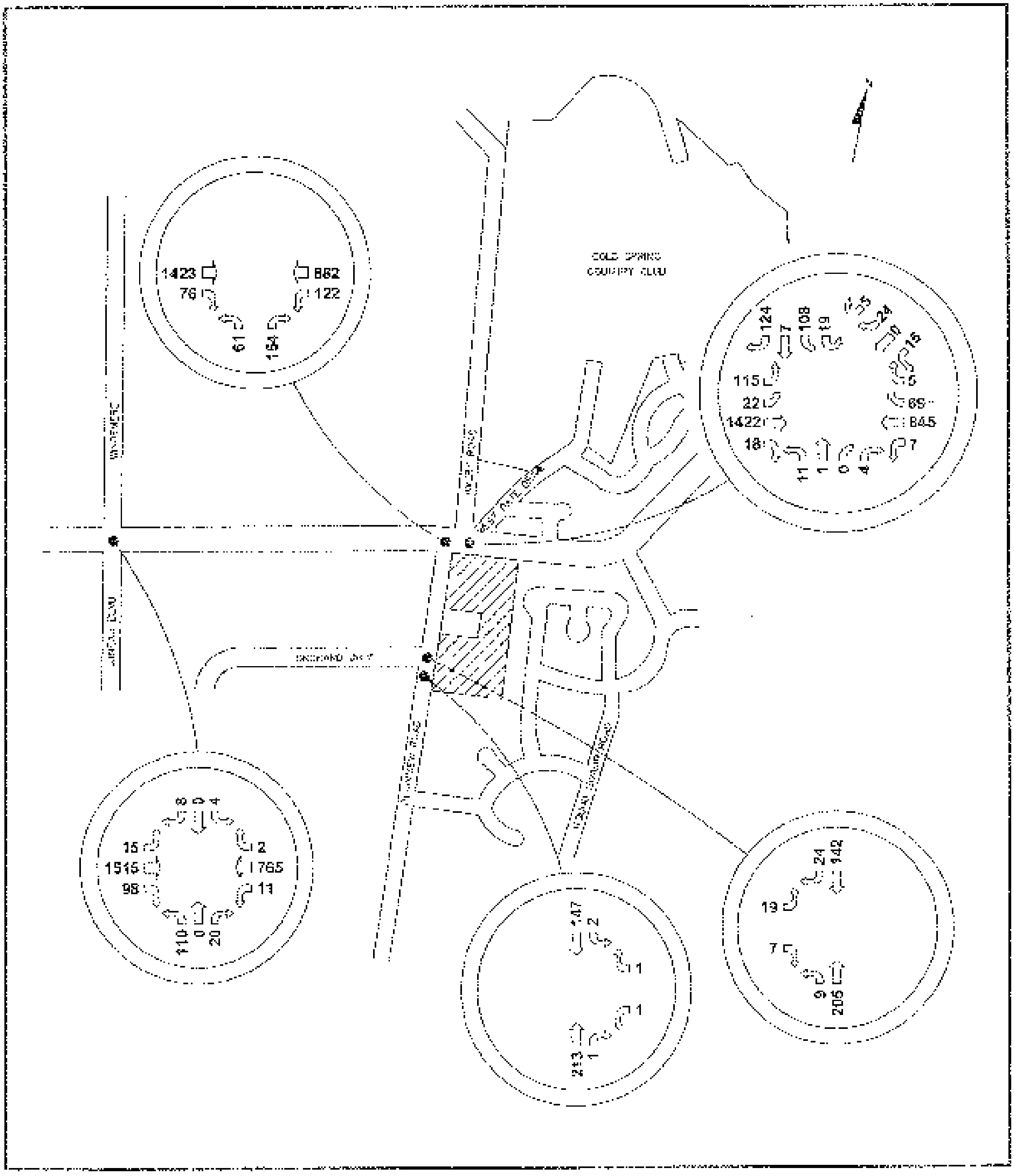


Figure 21: 2010 Build - Scenario 3 PM Traffic Volumes

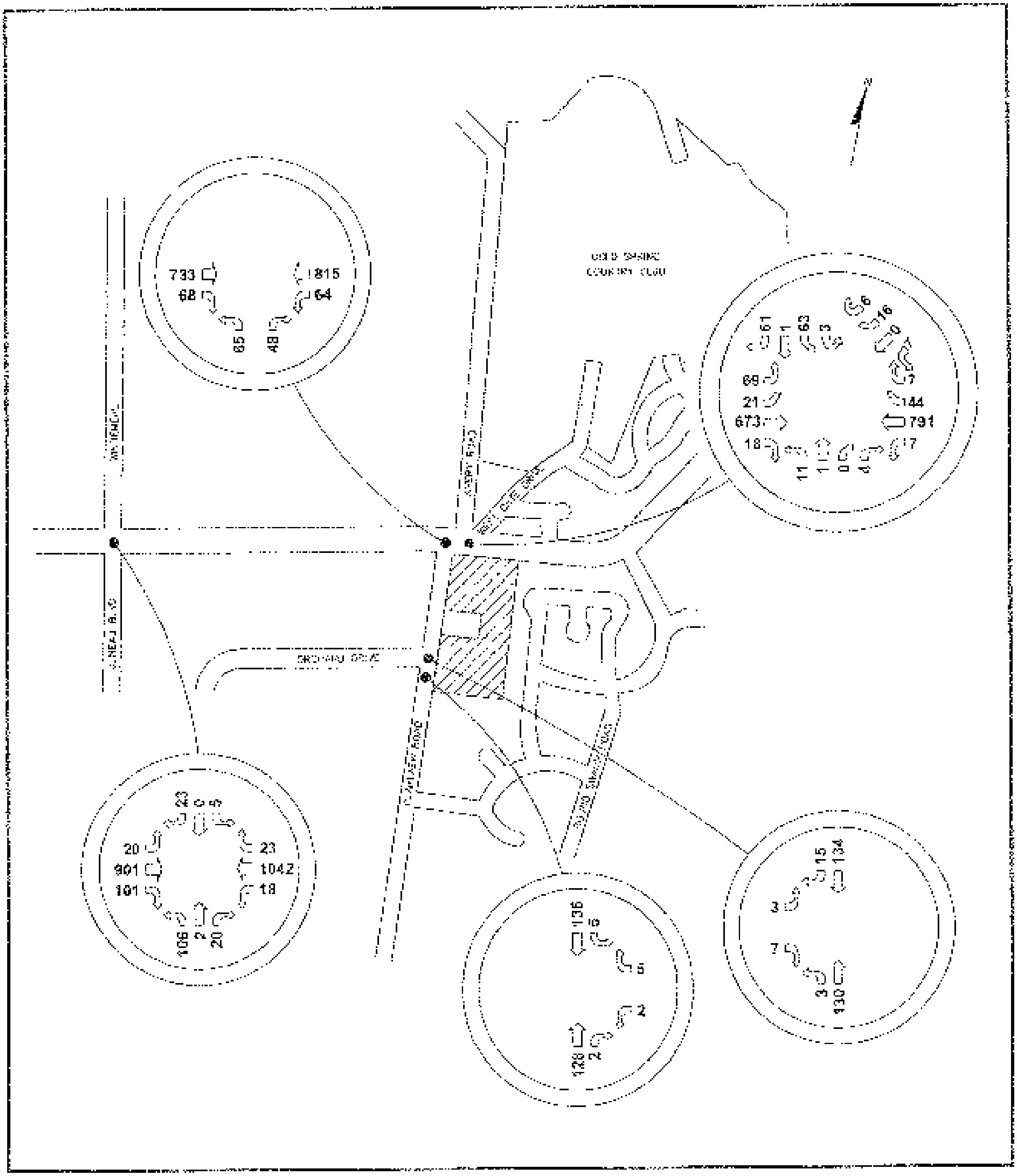


Figure 22: 2010 Build – Scenario 3 Saturday Traffic Volumes

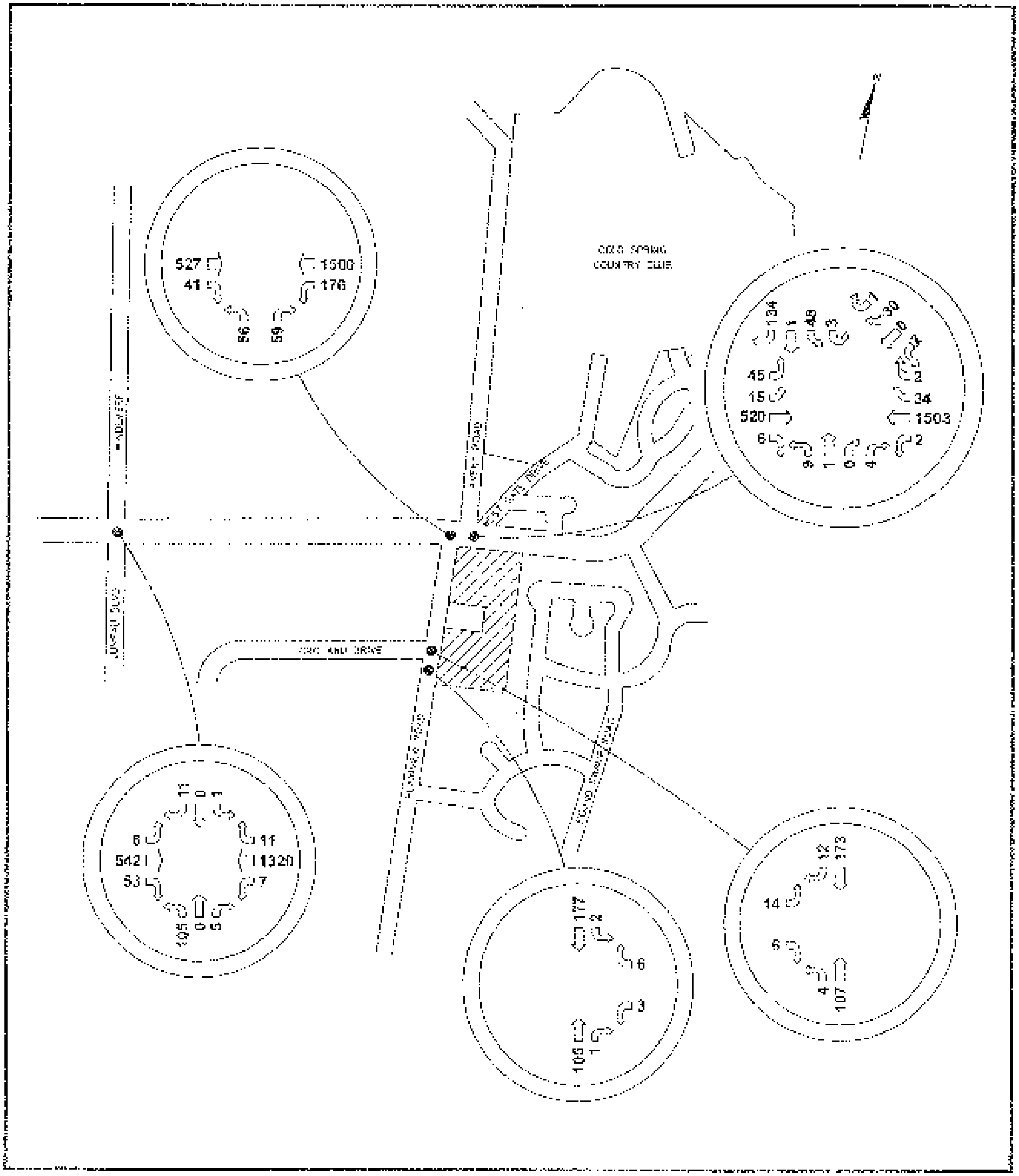


Figure 23: 2010 Build – Scenario 4 AM Traffic Volumes

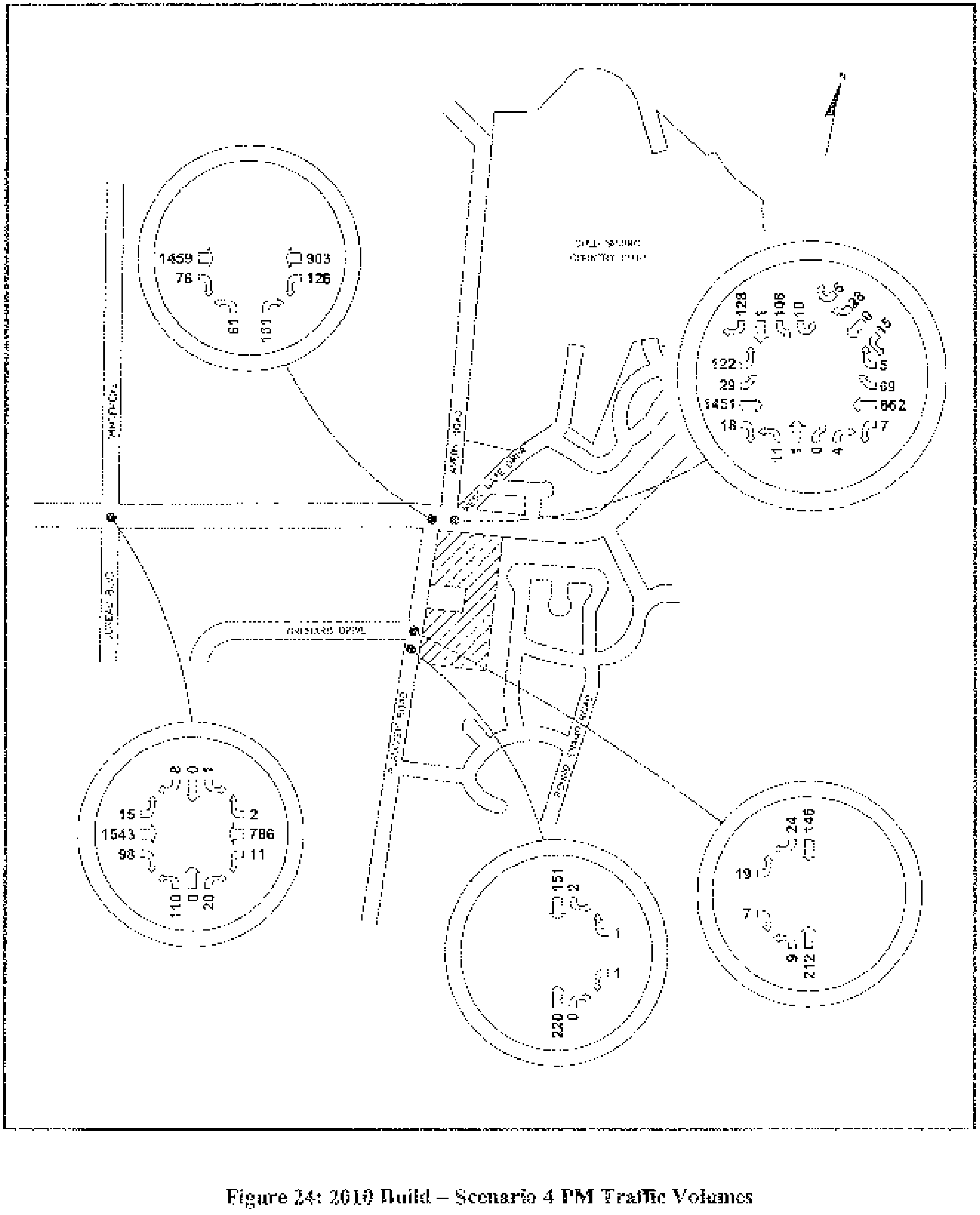


Figure 24: 2010 Build – Scenario 4 PM Traffic Volumes

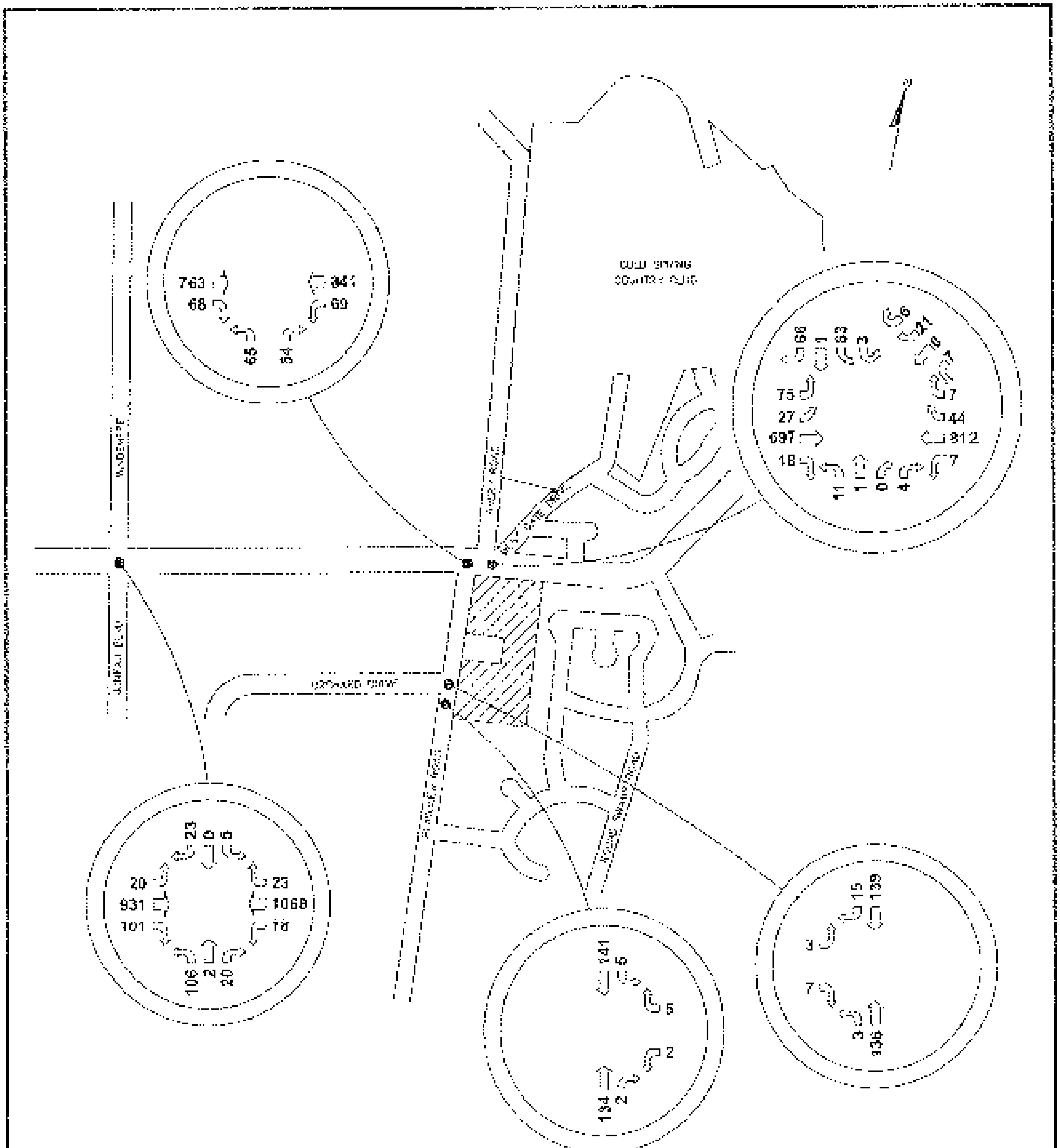


Figure 25: 2010 Build – Scenario 4 Saturday Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2000)*, published by the *Transportation Research Board*. *SYNCHRO* and *SimTraffic* were used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix D. The following table illustrates the LOS summaries at the study intersections under the four build scenarios.

Table 6: Level of Service Summary (Signalized intersections) – AM Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition		2010 Build Condition (Scenario 1)		2010 Build Condition (Scenario 2)		2010 Build Condition (Scenario 3)		2010 Build Condition (Scenario 4)	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	13.1	B	14.0	B	14.1	B	14.5	B	15.8	B
	WB	L	14.6	B	14.7	B	15.2	B	17.3	B	19.3	B
		T	2.3	A	2.5	A	2.5	A	2.8	A	3.7	A
	NB	LR	36.2	D	35.4	D	36.7	D	36.4	D	34.4	C
	Overall		7.4	A	7.9	A	8.3	A	8.7	A	9.6	A
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	20.8	C	22.0	C	23.7	C	25.2	C	27.2	C
		TR	2.4	A	2.7	A	3.2	A	3.2	A	3.7	A
	WB	L	-	-	15.5	B	15.5	B	15.5	B	15.5	B
		TR	22.3	C	23.9	C	24.1	C	25.4	C	28.9	C
	NB	LT			38.8	D	38.0	D	37.8	D	37.7	D
		R			0.0	A	0.0	A	0.0	A	0.0	A
	Avery-SB	LR	57.7	E	69.1	E	69.3	E	70.3	E	71.3	E
	West Gate-SB	LR	58.3	E	64.1	E	64.2	E	69.4	E	74.7	E
	Overall		21.4	C	23.7	C	23.9	C	25.2	C	27.9	C
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/ Windemere Way	EB	L	2.7	A	2.7	A	2.8	A	2.8	A	2.8	A
		TR	2.7	A	2.7	A	2.8	A	2.8	A	2.8	A
	WB	L	2.6	A	2.6	A	2.6	A	2.6	A	2.6	A
		TR	4.1	A	4.2	A	4.3	A	4.4	A	4.5	A
	NB	LTR	72.3	E	72.1	E	72.1	E	72.1	E	72.1	E
	SB	LTR	23.1	C	23.1	C	23.1	C	23.1	C	23.1	C
	Overall		7.7	A	7.7	A	7.7	A	7.7	A	7.7	A

Table 7: Level of Service Summary for (signalized intersections) – PM Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition Delay	LOS	2010 Build Condition (Scenario 1) Delay	LOS	2010 Build Condition (Scenario 2) Delay	LOS	2010 Build Condition (Scenario 3) Delay	LOS	2010 Build Condition (Scenario 4) Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	35.4	D	47.7	D	54.3	D	68.6	E	95.8	F
	WB	L	64.5	E	74.5	E	79.6	E	84.6	F	88.9	F
		T	3.8	A	3.1	A	3.0	A	3.2	A	3.6	A
	NB	LR	38.9	D	36.1	D	36.9	D	37.4	D	35.9	D
	Overall		27.2	C	34.7	C	38.9	D	47.6	D	63.7	E
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	9.0	A	5.1	A	5.7	A	8.4	A	13.3	B
		TR	5.4	A	9.1	A	10.8	B	15.9	B	37.0	D
	WB	L	-	-	23.3	C	23.3	C	23.3	C	23.3	C
		TR	18.4	B	19.8	B	20.0	C	20.3	C	21.8	C
	NB	LT			36.2	D	36.2	D	36.2	D	36.2	D
		R			0.0	A	0.0	A	0.0	A	0.0	A
	Avery-SB	LR	60.3	E	79.3	E	80.8	F	82.3	F	83.8	F
	West Gate-SB	LR	70.2	E	88.6	F	88.6	F	96.6	F	102.8	F
	Overall		15.5	B	19.8	B	21.0	C	24.3	C	36.6	D
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/ Windemere Way	EB	L	2.7	A	2.7	A	2.7	A	2.7	A	2.7	A
		TR	5.3	A	5.3	A	5.5	A	5.7	A	5.8	A
	WB	L	3.5	A	3.5	A	3.6	A	3.8	A	3.9	A
		TR	3.2	A	3.2	A	3.2	A	3.3	A	3.3	A
	NB	LTR	77.7	E	77.5	E	77.5	E	77.6	E	77.5	E
	SB	LTR	25.4	C	25.4	C	25.4	C	28.5	C	25.4	C
	Overall		8.7	A	8.7	A	8.7	A	8.7	A	8.7	A

Table 8: Level of Service Summary for (signalized intersections) Saturday Midday Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition		2010 Build Condition (Scenario 1)		2010 Build Condition (Scenario 2)		2010 Build Condition (Scenario 3)		2010 Build Condition (Scenario 4)	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	12.6	B	13.9	B	14.2	B	16.1	B	16.6	B
	WB	L	11.4	B	14.5	B	15.8	B	16.4	B	18.6	B
		T	1.6	A	1.9	A	1.6	A	2.0	A	2.2	A
	NB	LR	38.1	D	37.6	D	38.9	D	36.5	D	36.5	D
	Overall		9.0	A	10.0	A	10.7	B	11.6	B	12.1	B
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	1.8	A	1.2	A	1.4	A	2.4	A	3.5	A
		TR	0.7	A	1.6	A	1.9	A	2.3	A	2.5	A
	WB	L	-	-	15.1	B	15.3	B	15.7	B	15.9	B
		TR	13.0	B	14.3	B	14.5	B	16.3	B	16.7	B
	NB	LT			41.0	D	40.8	D	40.2	D	39.8	D
		R			0.0	A	0.0	A	0.0	A	0.0	A
	Avery-SB	LR	58.1	E	65.6	E	65.5	E	65.3	E	65.6	E
	West Gate-SB	LR	56.1	E	63.2	E	63.6	E	66.0	E	69.0	E
	Overall		12.5	B	14.3	B	14.3	B	15.5	B	16.0	B
Jericho Turnpike (NYS Route 25) at Janesu Boulevard/ Windemere Way	EB	L	3.0	A	3.0	A	3.0	A	3.0	A	3.1	A
		TR	3.4	A	3.4	A	3.5	A	3.6	A	3.7	A
	WB	L	2.8	A	2.8	A	2.9	A	2.9	A	2.9	A
		TR	3.7	A	3.7	A	3.8	A	3.8	A	3.9	A
	NB	LTR	71.7	E	71.3	E	71.3	E	71.3	E	71.3	E
	SB	LTR	21.4	C	21.4	C	21.4	C	21.4	C	21.4	C
	Overall		7.9	A	7.9	A	7.9	A	7.9	A	7.9	A

Jericho Turnpike and Plainview Road

During the No Build Condition, the signalized intersection of Jericho Turnpike and Plainview Road operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS C during the weekday PM peak hour. It can be seen from the review of Tables 6, 7 and 8 that, if only the proposed Kensington Estates project is constructed in the study area (Build Scenario 1), this intersection will continue to operate at the No Build LOSs. With the construction of the Kensington Estates project and the other planned projects (Votypka, Woodbury Country Club and The Preserve) in the study area (Build scenario 2), the intersection will continue to operate at the No Build LOS during the AM peak hour and will change from LOS C to D (11.7 second increase in delay) during the PM peak hour and from LOS A to B (an imperceptible 1.7 seconds increase in delay) during the Saturday midday peak hour. With the construction of the other planned projects and the Cold Spring Harbor residential development (scenarios 3 and 4), the LOS at the intersection will remain at LOS A for the AM peak hour, and change from LOS C to D under scenario 3 and from LOS C to E under scenario 4 during the PM peak hour and from LOS A to B during the Saturday midday peak hour. If Votypka, Woodbury Country Club, the Preserve and Cold Spring Harbor are all developed, the LOS condition of this intersection could be improved by widening Avery Road to provide one left turn lane and a shared through/right turn lane with some signal timing modifications. An analysis of this road improvement is shown on Table 9.

Table 9: Level of Service Summary with potential future widening of Avery Road- PM Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition		2010 Build Condition (Scenario 1)		2010 Build Condition (Scenario 2)		2010 Build Condition (Scenario 3)		2010 Build Condition (Scenario 4)	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	35.4	D	36.5	D	39.4	D	52.7	D	69.1	E
	WB	L	64.3	E	69.8	E	73.5	E	76.7	E	78.3	E
		T	3.8	A	3.0	A	3.0	A	3.2	A	3.5	A
	NB	LR	38.9	D	41.9	D	43.2	D	43.4	D	42.5	D
	Overall		27.2	C	28.1	C	30.4	C	38.5	D	48.1	D
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	9.0	A	4.5	A	5.2	A	8.7	A	10.4	B
		TR	5.4	A	7.4	A	8.1	A	10.6	B	17.5	B
	WB	L	-	-	22.9	C	22.6	C	22.9	C	23.1	C
		TR	18.4	B	16.7	B	16.9	B	17.4	B	18.3	B
	NB	LT			41.9	D	41.6	D	43.8	D	42.0	D
		R			0.0	A	0.0	A	0.0	A	0.0	A
	Avery-SB	LR	60.3	E								
		L			56.4	E	56.0	E	55.7	E	58.6	E
		TR			56.8	E	57.2	E	58.1	E	63.1	E
	West Gate-SB	LR	70.2	E	63.2	E	63.2	E	63.6	E	63.6	E
	Overall		15.5	B	15.5	B	16.0	B	17.7	B	22.1	C

Jericho Turnpike and Avery Road/West Gate Drive/Site Driveway

In the No Build Condition, the signalized intersection of Jericho Turnpike and Avery Road/West Gate Drive operates at LOS C during the weekday AM peak hour and at LOS B during the weekday PM and Saturday midday peak hours. All the approach movements to this intersection currently operate at LOS C or better except for the southbound Avery Road approach and southbound West Gate Drive approach that operate at LOS E during the AM, PM and Saturday midday peak hours.

As previously mentioned, the Build analyses at this location is based on the NYSDOT recommended widening of NYS Route 25 between Avery Road and Plainview Road and the modification of the traffic signal to accommodate the proposed site access opposite Avery Road. It can be seen from the review of Tables 6, 7 and 8 that, if only the proposed Kensington Estates project is constructed in the study area (Build Scenario 1), this intersection will continue to operate at the same LOSs as in the No Build Condition.

With the construction of Kensington Estates as well as Votypka, Woodbury Country Club and The Preserve (Build Scenario 2), the intersection will continue to operate at the No Build LOS conditions during the AM and Saturday midday peak hours and will change from LOS B to C with only a 5.5 second increase in delay during the PM peak hour. With the further addition of the Cold Spring residential development (scenarios 3 and 4), the LOS for the AM and Saturday midday peak hours will continue to remain at the No Build levels, while the PM peak hour LOS would be LOS C (only an 8.8 seconds increase in delay from the No Build condition) under scenario 3 and LOS D (a 21.1 second increase in delay) under scenario 4. These PM changes in LOS are primarily due to the change in the LOS of the southbound Avery Road and southbound West Gate Drive approaches from LOS E to LOS F. (See Table 7). Widening Avery Road to provide one left turn lane and a shared through/right turn lane with some signal timing modifications would sufficiently mitigate that PM LOS condition in Scenarios 3 and 4, as reflected in Table 9. (Table 9 does not include the AM and Saturday peak periods because no further mitigation will be required for those peak periods even if Votypka, Woodbury Country Club, the Preserve and Cold Spring Harbor are all also developed.)

With regard to NYSDOT's recommended widening of NYS 25 between Avery Road and Plainview Road, Kensington Estates will not add any traffic on the eastbound NYS Route 25 left turn lane at Avery Road and will add only 5, 6 and 7 vehicles on the westbound NYS Route 25 left turn lane at Plainview Road during the weekday AM, weekday PM and midday Saturday peak hours respectively. A comparison of traffic conditions at this intersection with and without the widening of Jericho Turnpike shows that the Kensington Estates project would not impact this intersection even without the widening of NYS Route 25. (See Tables 10, 11 and 12). Therefore, since the Kensington Estates project by itself does not justify widening NYS Route 25 to provide increased left turn storage eastbound and westbound, applicant should not be required to undertake or fund the widening of NYS Route 25. However, the applicant is willing to dedicate land along the site frontage if NYSDOT intends to implement this action. It is important to note that the widening of NYS Route 25 will need additional dedication of land from the properties to the east and west of the Kensington Estate property. Hence the NYSDOT will need to request the dedication from the owners of those properties.

Table 10: Level of Service Summary (Signalized intersections) – AM Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition Delay	2010 No Build Condition LOS	2010 Build Condition (Scenario 1) with widening Delay	2010 Build Condition (Scenario 1) with widening LOS	2010 Build Condition (Scenario 1) without widening Delay	2010 Build Condition (Scenario 1) without widening LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	13.1	B	14.0	B	14.0	B
	WB	L	14.0	B	14.7	B	14.7	B
		T	2.3	A	2.5	A	2.5	A
	NB	LR	36.2	D	35.4	D	35.4	D
	Overall		7.4	A	7.9	A	7.9	A
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	20.0	C	22.0	C	22.0	C
		TR	2.4	A	2.7	A	2.7	A
	WB	L	-	-	15.5	B	15.5	B
		TR	22.3	C	23.9	C	23.9	C
	NB	LT			38.0	D	38.0	D
		R			0.0	A	0.0	A
	Avery-SB	LR	57.7	E	69.1	E	69.1	E
	West Gate-SB	LR	58.3	E	64.1	E	64.1	E
	Overall		21.4	C	23.7	C	23.7	C
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/ Windermere Way	EB	L	2.7	A	2.7	A	2.7	A
		TR	2.7	A	2.7	A	2.7	A
	WB	L	2.6	A	2.6	A	2.6	A
		TR	4.1	A	4.2	A	4.2	A
	NB	LTR	72.3	E	72.1	E	72.1	E
	SB	LTR	23.1	C	23.1	C	23.1	C
	Overall		7.7	A	7.7	A	7.7	A

Table 11: Level of Service Summary (Signalized intersections) – PM Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition		2010 Build Condition (Scenario 1) With widening		2010 Build Condition (Scenario 1) Without widening	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	35.4	D	47.7	D	48.2	D
	WB	L	64.3	F	74.5	E	74.7	E
		T	3.8	A	3.1	A	3.1	A
	NB	LR	38.9	D	36.1	D	36.1	D
	Overall		27.2	C	34.7	C	35.0	C
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	9.0	A	5.1	A	5.1	A
		TR	8.4	A	9.1	A	9.1	A
	WB	L	-		23.3	C	23.3	C
		TR	18.4	B	19.8	B	19.8	B
	NB	LT			36.2	D	36.2	D
		R			0.0	A	0.0	A
	Avery-SB	LR	60.3	E	79.3	E	79.3	E
	West Gate-SB	LR	78.2	E	88.6	F	88.6	F
	Overall		15.5	B	19.8	B	19.8	B
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/ Windemere Way	EB	L	2.7	A	2.7	A	2.7	A
		TR	5.3	A	5.3	A	5.3	A
	WB	L	3.5	A	3.5	A	3.5	A
		TR	3.2	A	3.2	A	3.2	A
	NB	LTR	77.7	E	77.5	E	77.5	E
	SB	LTR	25.4	C	25.4	C	25.4	C
	Overall		8.7	A	8.7	A	8.7	A

Table 12: Level of Service Summary for (Signalized intersections) Saturday Midday Peak Hour

Signalized Intersections	Approach/ Movement		2010 No Build Condition		2010 Build Condition (Scenario 1) with widening		2010 Build Condition (Scenario 1) without widening	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike (NYS Route 25) at Plainview Road	EB	TR	12.6	B	13.9	B	13.9	B
	WB	L	11.4	B	14.5	B	14.5	B
		T	1.6	A	1.9	A	1.9	A
	NB	LR	38.1	D	37.0	D	37.0	D
	Overall		9.0	A	10.0	A	10.0	A
Jericho Turnpike (NYS Route 25) at Avery Road/West Gate Drive/Site Driveway	EB	L	1.8	A	1.2	A	1.2	A
		TR	0.7	A	1.6	A	1.6	A
	WB	L	-	-	15.1	B	15.1	B
		TR	13.0	B	14.3	B	14.3	B
	NB	LT			41.0	D	41.0	D
		R			0.0	A	0.0	A
	Avery-SB	LR	58.1	E	65.6	E	65.6	F
	West Gate-SB	LR	56.1	E	63.2	E	63.2	E
	Overall		12.5	B	14.3	B	14.3	B
Jericho Turnpike (NYS Route 25) at Juneau Boulevard/ Windemere Way	EB	L	3.0	A	3.0	A	3.0	A
		TR	3.4	A	3.4	A	3.4	A
	WB	L	2.8	A	2.8	A	2.8	A
		TR	3.7	A	3.7	A	3.7	A
	NB	LTR	71.7	E	71.3	E	71.3	E
	SB	LTR	21.4	C	21.4	C	21.4	C
	Overall		7.9	A	7.9	A	7.9	A

Jericho Turnpike and Juneau Boulevard/Windermere Way

During the No Build Condition, the signalized intersection of Jericho Turnpike and Juneau Boulevard/Windermere Way operates at LOS A during the analyzed peak periods. After the completion of the projects, the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods.

Plainview Road and Orchard Drive

During the No Build Condition, the northbound left turn movement at the stop-controlled intersection of Plainview Road and Orchard Drive will operate at LOS A during the weekday AM, weekday PM and

Saturday midday peak hours. The eastbound Orchard Drive approach operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the PM peak hour. After the completion of the project, the intersection will continue to operate at No Build LOS Condition during the analyzed peak periods, except for the eastbound approach that change from LOS A to LOS B during the AM peak hour. The following table summarizes the results of the analyses at this intersection.

Table 13: Level of Service Summary for (Unsignalized intersections)

Location (Unsignalized Intersections)	Approach Movemt.		AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Plainview Road and Orchard Drive	Existing	NB-LT	A	0.4	A	0.4	A	0.3
		EB-LR	A	9.8	B	10.4	A	9.4
	No Build	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	A	9.9	B	10.6	A	9.4
	Build Scenario 1	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.0	B	10.7	A	9.5
	Build Scenario 2	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.1	B	10.8	A	9.6
	Build Scenario 3	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.2	B	10.9	A	9.7
	Build Scenario 4	NB-LT	A	0.3	A	0.4	A	0.2
		EB-LR	B	10.3	B	11.0	A	9.7

Note: LOS = Level of Service, Delay = seconds/vehicle

QUEUE ANALYSES

Queue analyses were conducted to analyze the stacking capacity of the left turn lanes on Jericho Turnpike at Plainview Road/Avery Road/West Gate Drive under existing, No Build and cumulative build-out conditions as requested by the Town of Oyster Bay Department of Environmental Resources. As previously mentioned, the intersections of Jericho Turnpike at Plainview Road and Jericho Turnpike at Avery Road/West Gate Drive are approximately 140 feet apart as measured between stop lines. The distance between the two intersections currently provides back to back left turn lanes for vehicles making left turns onto Plainview Road and Avery Road/West Gate Drive from Jericho Turnpike. With the widening of Jericho Turnpike, the section of Jericho Turnpike between Plainview Road and Avery Road will provide side by side eastbound and westbound left turn lanes.

The estimates of vehicle queuing distances at the eastbound left turn lane onto Avery Road Road/West Gate Drive and the westbound left turn lane onto Plainview Road during the peak hours were taken from the capacity analysis worksheets presented in the appendix. These queuing estimates are based on the traffic signal operation and estimated volumes. The following tables summarize the results of the queue analyses.

Table 14: Queue Analyses

Approach	Time Period	Estimated Average Queue Length in feet (95th Percentile Queue in feet)					
		Existing	No Build	Build Scenario 1	Build Scenario 2	Build Scenario 3	Build Scenario 4
Eastbound Left turn lane onto Avery Road/West Gate Drive	AM	2 (23)	6 (24)	7 (25)	8 (27)	10 (27)	12 (30)
	PM	14 (15)	14 (15)	0 (0)	0 (0)	4 (4)	32 (32)
	Saturday	0 (13)	0 (16)	0 (0)	0 (1)	0 (1)	0 (11)
Westbound Left turn Lane onto Plainview Road	AM	49 (71)	51 (70)	54 (74)	55 (74)	64 (84)	67 (131)
	PM	48 (96)	51 (102)	62 (105)	70 (123)	74 (127)	76 (131)
	Saturday	11 (21)	13 (25)	18 (36)	23 (44)	23 (44)	27 (49)

It can be seen from the review of Table14 above that, both existing Jericho Turnpike left turn storage lengths provided between Plainview Road and Avery Road will be adequate to accommodate the average left turn queues that will be created by the traffic from the proposed project under all the analyzed scenarios without disrupting the traffic flow on Jericho Turnpike. However, the 95th percentile left turn queue at Plainview Road will exceed the existing left turn storage length during the PM peak hour for the existing, No Build and all the Build scenarios and during the AM peak hour for Build scenarios 3 and 4. It can also be seen that, the construction of the Kensington Estates project (Build Scenario 1) will only increase the No Build queue by 3 feet (from 102 feet to 105 feet) during the PM peak hour. The widening of Jericho Turnpike between Avery Road and Plainview Road will increase the eastbound and westbound left turn storage length from 70 feet to 140 feet. Therefore, the additional storage length can accommodate the 95th percentile queue during all time periods analyzed under all scenarios.

CONCLUSION

Nelson & Pope has investigated the potential traffic impacts associated with the proposed application to construct 80 age-restricted condominiums and 3 single family homes at the southeast quadrant of the intersection of Plainview Road at Jericho Turnpike in the Towns of Oyster Bay in Nassau County and Huntington in Suffolk County. The site is located in both Nassau and Suffolk Counties. The following is a summary of this investigation and the findings thereof:

1. The following intersections were included in this study:
   - Jericho Turnpike (NYS Route 25) at Avery Road (County Line Road)/West Gate Drive
   - Jericho Turnpike (NYS Route 25) at Plainview Road
   - Jericho Turnpike (NYS Route 25) at Juneau Boulevard/Windermere Way
   - Plainview Road at Orchard Drive
2. Existing volumes were counted in July and November 2006 and in May 2007 during the weekday AM, PM and Saturday midday peak hours. Future No Build traffic volumes were determined by applying a 1.0% NYSDOT annual growth factor to the existing traffic volumes. The site-generated traffic was estimated and distributed to the study intersections and then added to the No Build traffic volumes to generate the future Build traffic volumes.
3. The proposed age-restricted residential development is projected to generate 35 trips during the AM peak hour (12 entering, 23 exiting), 47 trips during the PM peak hour (29 entering, 18 exiting) and 56 trips during the Saturday midday peak hour (33 entering and 23 exiting).
4. As requested by NYSDOT, the access to the proposed residential development will be provided via a full movement driveway directly opposite Avery Road to form the northbound leg at the intersection of Jericho Turnpike and Avery Road.
5. As requested by the Towns of Huntington and Oyster Bay, the following four (4) build scenarios were analyzed.
   - The first build scenario will add to the No Build condition only Kensington Estates Traffic. The analyses of this scenario will identify the impacts that will be created on the roadway network, if only Kensington Estates is built.
   - The second build scenario will add to the No Build condition, traffic from the proposed Kensington Estates, Votypka, Woodbury Country Club and The Preserve developments. The

analyses of this scenario will identify the traffic impacts that will be created on the roadway network, if all these proposed projects are built.

- The third build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 40 residential zoning (135 single family homes). These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 40 residential) are built.

- The fourth build scenario will add to the second build scenario, traffic from the pending Cold Spring development evaluated as R 20 residential zoning (260 single family homes). These analyses will identify the traffic impacts that will be created on the roadway network if all the proposed projects and the pending Cold Spring development (evaluated as R 20 residential) are built.

6. The signalized intersection of Jericho Turnpike and Plainview Road operates at LOS A during the weekday AM and Saturday midday peak hours and at LOS C during the weekday PM peak hour for the No Build Condition. It can be seen from the review of Tables 6, 7 and 8 that, if only the proposed Kensington Estates project is constructed in the study area (Build Scenario 1), this intersection will continue to operate at the No Build LOSs. With the construction of the Kensington Estates project and the other planned projects (Votypka, Woodbury Country Club and The Preserve) in the study area (Build scenario 2), the intersection will still operate at the No Build LOS during the AM peak hour and will change from LOS C to D (11.7 second increase in delay) during the PM peak hour and from LOS A to B (an imperceptible 1.7 seconds increase in delay) during the Saturday midday peak hour. With the construction of the other planned projects and the Cold Spring Harbor residential development, the LOS at the intersection will change from LOS C to D (for Scenario 3) and from LOS C to E (for Scenario 4) during the PM peak hour and from LOS A to B (Scenarios 3 and 4) during the Saturday midday peak hour.

7. The signalized intersection of Jericho Turnpike and Avery Road/West Gate Drive operates at LOS C during the weekday AM peak hour and at LOS B during the weekday PM and Saturday midday peak hours for the No Build Condition. All the approach movements to this intersection currently operate at LOS C or better except for the southbound Avery Road approach and southbound West Gate Drive approach that operate at LOS E during the AM, PM and Saturday midday peak hours. It can be seen from the review of Tables 6, 7 and 8 that, if only the proposed Kensington Estates project is

constructed in the study area (Build Scenario 1), this intersection will continue to operate at No Build LOSs. With the construction of the Kensington Estates project and the other planned projects (Votypka, Woodbury Country Club and The Preserve) in the study area (Build Scenario 2), the intersection will continue to operate at No Build LOSs during the AM and Saturday midday peak hours and will change from LOS B to C with an overall increase in delay of only 5.5 seconds during the PM peak hour. With the construction of the other planned projects and the Cold Spring residential development (scenarios 3 and 4), the No Build LOS will be maintained except for the PM peak hour LOS that will change from LOS B to C (only 8.8 seconds increase in delay) under scenario 3 and from LOS B to D (21.1 second increase in delay) under scenario 4. These PM changes in LOS are primarily due to the change in LOS at the southbound Avery Road and southbound West Gate Drive approaches from LOS E to LOS F. If all of these other projects proceed in the future, the PM peak hour LOS could be improved by widening Avery Road to provide one left turn lane and a shared through right turn lane with some signal timing modifications.

8. As previously mentioned, the build analyses at this location is based on the NYSDOT recommended widening of NYS Route 25 between Avery Road and Plainview Road and the reconstruction of the traffic signal to accommodate the proposed site access opposite Avery Road. However, Kensington Estates will not add any traffic on the eastbound NYS Route 25 left turn lane at Avery Road and will add only 5, 6 and 7 vehicles on the westbound NYS Route 25 left turn lane at Plainview Road during the weekday AM, weekday PM and midday Saturday peak hours respectively. A comparison of traffic conditions at this intersection with and without the widening of Jericho Turnpike shows that the Kensington Estates project would not impact this intersection even without the widening of NYS Route 25. (See Tables 10, 11 and 12).

9. After the completion of the project, the intersection of Jericho Turnpike (NYS Route 25) at Juneau Boulevard/Windermere Way will continue to operate at No Build LOS A during the weekday AM, PM and Saturday midday peak hours under scenarios 1, 2, 3 and 4.

10. After the completion of the project, the southbound Plainview Road left turn movement at the intersection of Plainview Road and Site Driveway will operate at LOS A during the weekday AM, PM and Saturday midday peak hours. The westbound Site Driveway approach will operate at LOS A during the weekday AM and Saturday midday peak hours and at LOS B during the weekday PM peak hour.

Based on our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of

Nelson & Pope that the construction of the proposed age-restricted residential development will not create significant impacts on the adjacent street network. Any traffic impacts that may be created by the construction of the Kensington Estates project and all other planned projects within the study area could be mitigated by the proposed mitigations detailed in the body of this report.

KENSINGTON ESTATES

TOWNS OF HUNTINGTON AND OYSTER BAY

APPENDIX

July 2008
Revised January 2009

N & P JOB NO. 03469

Appendix A: Existing Traffic Volume

TURNING MOVEMENT DATA

NELSON & POPE

INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD

DATE COLLECTED: 11/02/06 THURSDAY

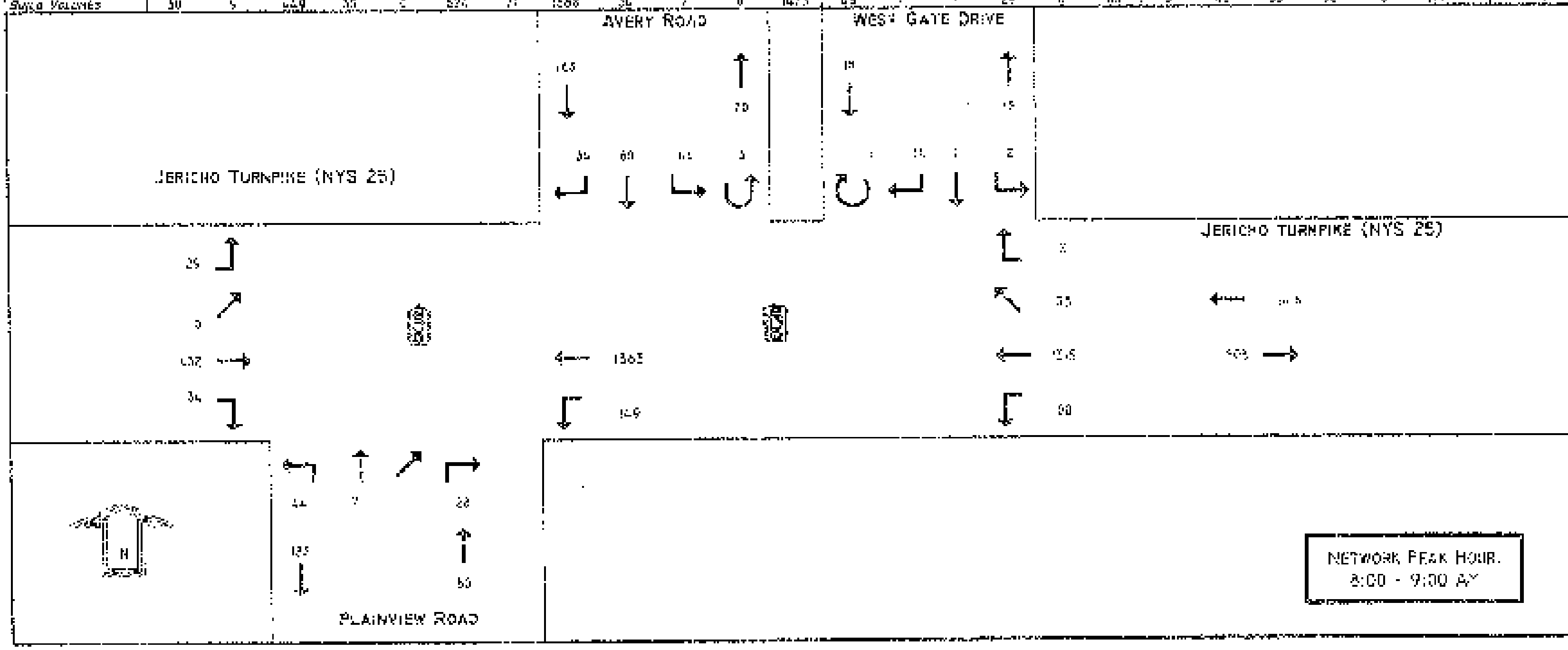
PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND LEFT	EASTBOUND FAR LEFT	EASTBOUND THRU	EASTBOUND RIGHT	EASTBOUND RTOR	EASTBOUND TOTAL	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND FAR RIGHT	WESTBOUND RIGHT	WESTBOUND RTOR	WESTBOUND TOTAL
7:00 AM	1	17	51	6	0	87	11	212	1	0	0	240
7:15 AM		2	55	3	5	[illegible]	15	263	2	0	0	302
7:30 AM	2	1	95	14	0	115	14	320	9	0	0	341
7:45 AM	1		92	4	0	105	16	274	10	0	0	300
8:00 AM	2	5	100	13	0	126	13	323	9	2	0	347
8:15 AM	3	1	52	5	0	65	21	311	6	0	0	332
8:30 AM	10	1	125	9	0	145	23	257	11	5	0	295
8:45 AM	5	1	110	5	0	128	14	314	12	2	0	345
NETWORK PEAK HOUR: 8:00 - 9:00 AM												
PEAK HOUR VOLUMES	29	9	432	36	0	504	66	1315	33	2	0	1416
PEAK HOUR FACTOR						0.87						0.89
SEASONAL ADJUSTMENT FACTOR			1.000									
ADJUSTED VOLUMES	29	9	432	36	0	504	66	1315	33	2	0	1416
GROWTH FACTOR	1.040											
2010 AMBIENT NO BUILD VOLUMES	30	9	449	35	0	524	71	1368	34	2	0	1473

START TIME	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND U-TURN	NORTHBOUND RIGHT	NORTHBOUND RTOR	NORTHBOUND TOTAL	SOUTHBOUND (AVERY RD) LEFT 1	SOUTHBOUND (AVERY RD) LEFT 2	SOUTHBOUND (AVERY RD) THRU	SOUTHBOUND (AVERY RD) RIGHT	SOUTHBOUND (AVERY RD) RTOR	SOUTHBOUND (AVERY RD) TOTAL
7:00 AM	5	5	1	1	0	22	1	4	7	4	0	16
7:15 AM	8	1	2	2	0	13	1	4	8	5	0	18
7:30 AM	29	1	2	5	0	37	2	7	7	5	0	31
7:45 AM	12	4	1	8	0	27	0	1	12	1	0	36
8:00 AM	9	2	0	5	0	17	2	3	26	1	0	43
8:15 AM	12	1	5	3	0	21	0	3	17	8	0	28
8:30 AM	13	2	0	7	0	22	2	6	19	17	0	45
8:45 AM	12	2	1	8	0	33		20	5	7	0	43
NETWORK PEAK HOUR: 8:00 - 9:00 AM												
PEAK HOUR VOLUMES	44	7	1	26	0	78	3	46	30	54	0	163
PEAK HOUR FACTOR						0.90						0.92
SEASONAL ADJUSTMENT FACTOR												
ADJUSTED VOLUMES	44	7	1	28	0	80	3	46	30	54	0	163
GROWTH FACTOR												
2010 AMBIENT NO BUILD VOLUMES	46	7	1	29	0	83	3	48	33	56	0	170

START TIME	SOUTHBOUND (WEST GATE DRIVE) LEFT	SOUTHBOUND (WEST GATE DRIVE) THRU	SOUTHBOUND (WEST GATE DRIVE) RIGHT 1	SOUTHBOUND (WEST GATE DRIVE) RIGHT 2	SOUTHBOUND (WEST GATE DRIVE) RTOR	SOUTHBOUND (WEST GATE DRIVE) TOTAL	TOTAL	CUM. HOURLY
7:00 AM		1	2	0	0	4	366	
7:15 AM	2	0	2	0	0	4	413	
7:30 AM	1		4	0	0	5	566	
7:45 AM	2		3	0	0	5	473	1795
8:00 AM	0	0	3	0	0	3	531	1956
8:15 AM	0	1	8		1	10	562	2065
8:30 AM	2	0	2	1	0	5	540	2123
8:45 AM	0	0	2	0	0	2	532	2153
NETWORK PEAK HOUR: 8:00 - 9:00 AM								
PEAK HOUR VOLUMES	2	1	14		0	18		
PEAK HOUR FACTOR						0.45		
SEASONAL ADJUSTMENT FACTOR								
ADJUSTED VOLUMES	2	1	14	1	0	18	2,163	
GROWTH FACTOR								
2010 AMBIENT NO BUILD VOLUMES	2	1	15	1	0	19		



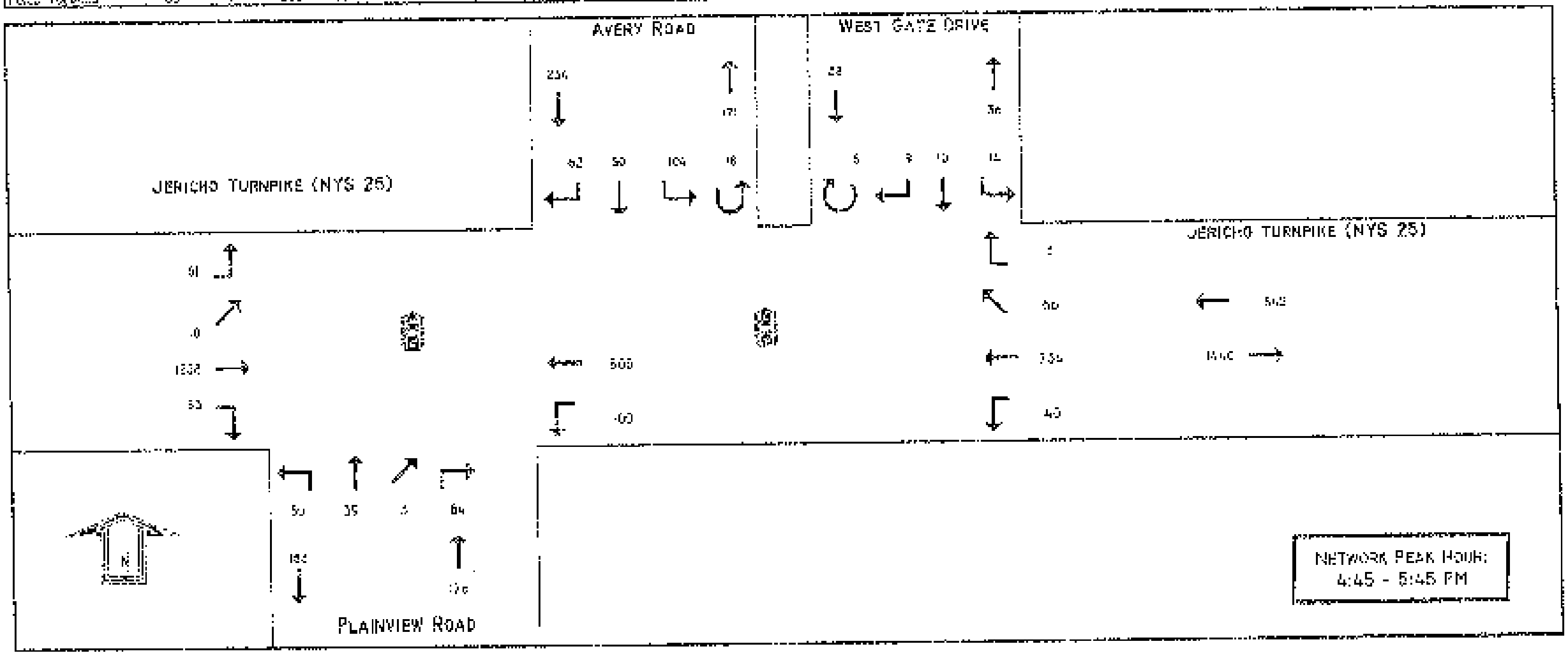
INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD
DATE COLLECTED: 11/02/06 THURSDAY

PROJECT TITLE: TRIANGLE EQUITIES
JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND LEFT	EASTBOUND FAR LEFT	EASTBOUND THRU	EASTBOUND RIGHT	EASTBOUND RTOR	EASTBOUND TOTAL	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND FAR RIGHT	WESTBOUND RIGHT	WESTBOUND RTOR	WESTBOUND TOTAL
4:00 PM	6	1	222	[illegible]	0	235	0	116	15	1	0	132
4:15 PM	3	0	145	[illegible]	0	160	9	165	8	2	0	185
4:30 PM	2	1	127	6	0	138	5	175	17	6	0	203
4:45 PM	1	2	155	6	0	164	7	203	17	7	0	234
5:00 PM	13	2	393	20	0	428	13	152	15	2	0	182
5:15 PM	15	2	369	15	0	415	12	195	24	0	0	231
5:30 PM	33	3	270	16	0	[illegible]	1	177	9	1	0	188
5:45 PM	27	7	241	1	0	[illegible]	6	[illegible]	2	1	0	[illegible]
NETWORK PEAK HOUR: 4:45 - 5:45 PM												
PEAK HOUR VOLUMES	61	10	1238	53	0	1362	40	734	66	3	0	843
PEAK HOUR FACTOR						0.79						0.90
SEASONAL ADJUSTMENT FACTOR =			1.000									
ADJUSTED VOLUMES	61	10	1238	53	0	1362	40	734	66	3	0	843
GROWTH FACTOR	1.040											
2009 AMBIENT NO BUILD VOLUMES	63	10	1288	55	0	1416	42	763	69	3	0	877

START TIME	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND R TURN	NORTHBOUND RIGHT	NORTHBOUND RTOR	NORTHBOUND TOTAL	SOUTHBOUND (AVERY RD) LEFT 1	SOUTHBOUND (AVERY RD) LEFT 2	SOUTHBOUND (AVERY RD) THRU	SOUTHBOUND (AVERY RD) RIGHT	SOUTHBOUND (AVERY RD) RTOR	SOUTHBOUND (AVERY RD) TOTAL
4:00 PM	9	0	1	14	0	23	2	17	1	10	0	32
4:15 PM	20	8	0	12	0	40	6	26	5	2	0	39
4:30 PM	26	6	0	22	0	50	3	27	21	12	0	63
4:45 PM	11	10	1	24	0	46	1	45	10	5	0	61
5:00 PM	15	6	0	17	0	40	1	25	19	6	0	58
5:15 PM	9	7	6	20	0	42	7	9	13	17	0	56
5:30 PM	12	1	2	23	0	40	1	20	1	3	0	26
5:45 PM	1	6	1	24	0	35	7	13	5	2	0	19
NETWORK PEAK HOUR: 4:45 - 5:45 PM												
PEAK HOUR VOLUMES	50	34	3	89	0	176	18	104	50	62	0	234
PEAK HOUR FACTOR						0.92						0.72
SEASONAL ADJUSTMENT FACTOR =												
ADJUSTED VOLUMES	50	34	3	89	0	176	18	104	50	62	0	234
GROWTH FACTOR												
2009 AMBIENT NO BUILD VOLUMES	52	35	3	93	0	183	19	108	52	64	0	243

START TIME	SOUTHBOUND (WEST GATE DRIVE) LEFT	SOUTHBOUND (WEST GATE DRIVE) THRU	SOUTHBOUND (WEST GATE DRIVE) RIGHT 1	SOUTHBOUND (WEST GATE DRIVE) RIGHT 2	SOUTHBOUND (WEST GATE DRIVE) RTOR	SOUTHBOUND (WEST GATE DRIVE) TOTAL	TOTAL	CUM. HOURLY
4:00 PM	0	0	0	2	0	2	432	
4:15 PM	7	3	0	0	0	10	451	
4:30 PM	3	3	1	0	0	7	482	
4:45 PM		3	3	1	0	9	546	1925
5:00 PM	4	1	2	1	0	8	717	2160
5:15 PM	2	2	1	0	0	5	760	2465
5:30 PM	2	4	3	1	0	12	652	2655
5:45 PM	1	1	1	0	0	3	541	2650
NETWORK PEAK HOUR: 4:45 - 5:45 PM								
PEAK HOUR VOLUMES	14	10	9	5	0	38		
PEAK HOUR FACTOR						0.79		
SEASONAL ADJUSTMENT FACTOR =								
ADJUSTED VOLUMES	14	10	9	5	0	38	2655	
GROWTH FACTOR								
2009 AMBIENT NO BUILD VOLUMES	15	10	9	5	0	40		



TURNING MOVEMENT DATA

NELSON & POPE

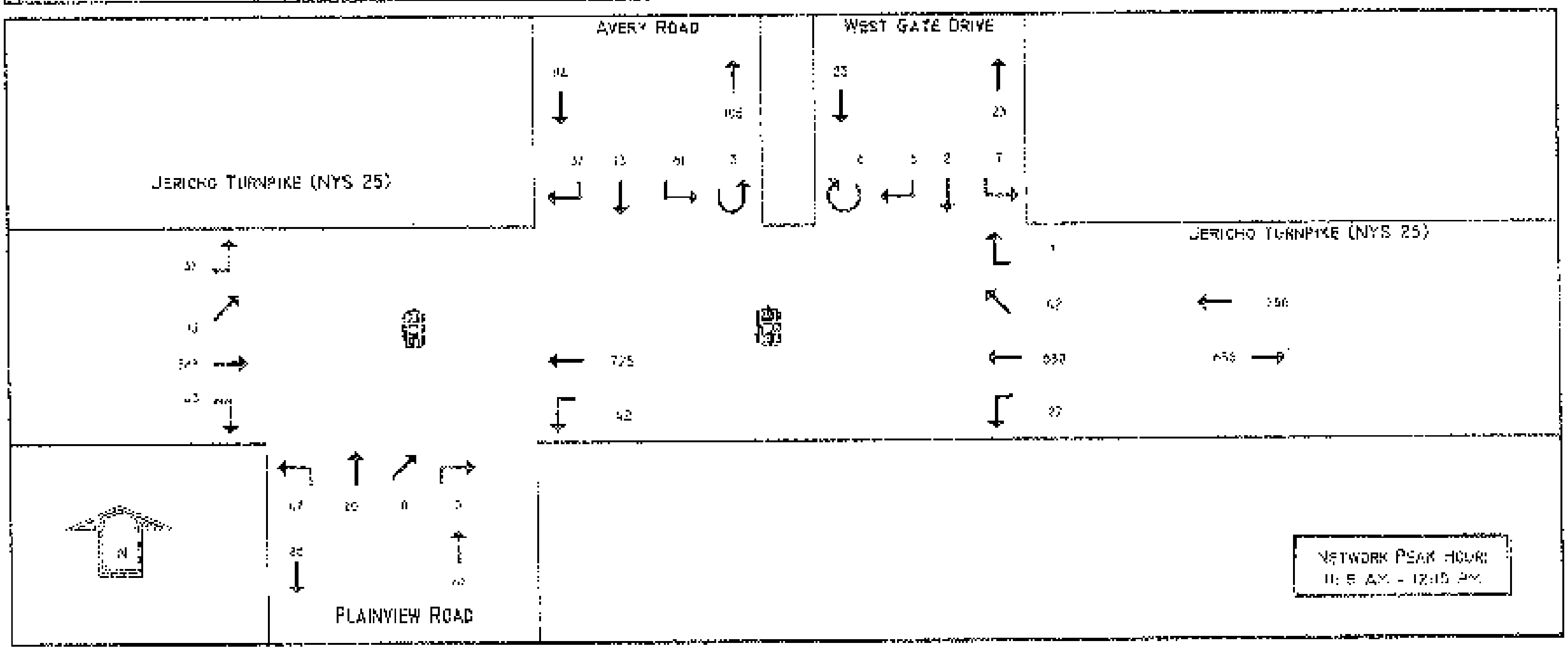
INTERSECTION: JERICHO TURNPIKE (NYS 25) @ PLAINVIEW ROAD

DATE COLLECTED: 07/29/06 SATURDAY

PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND (AVERY RD)						SOUTHBOUND (WEST GATE DRIVE)						TOTAL	CUM. HOURLY
	LEFT	FAR LEFT	THRU	RIGHT	RTOR	TOTAL	LEFT	THRU	FAR RIGHT	RIGHT	RTOR	TOTAL	LEFT	THRU	R THRU	RIGHT	RTOR	TOTAL	LEFT 1	LEFT 2	THRU	RIGHT	RTOR	TOTAL	LEFT	THRU	RIGHT 1	RIGHT 2	RTOR	TOTAL		
11:00 AM	9	7	150	4	0	165	4	157	4	2	0	176	7	2	2	2	0	13	1	5	2	1	0	25	5		12		0	19	401	
11:15 AM	3	0	39	6	0	165	5	157	0	2	0	152	14	5	5	0	0	20	1	16	6	5	0	27	1	1	4	2	0	5	385	
11:30 AM	10	4	56	17	0	187	10	153	15	1	0	129	3	5	0	0	0	12	2	17	4	14	0	37	3	0		0	0	4	429	
11:45 AM	14	3	152	2	0	163	6	17[illegible]	7	3	0	159	19	5	0	0	1	25	0	4		5	0	20	3	1	1	2	0	7	402	1617
12:00 PM	10	5	153	2	0	153	4	179	17	1	0	196	9	3	0	0	0	12	9	14	1	15	0	30	0	2	2	2	0	4	425	1641
12:15 PM	7		131	9	0	146	6	156	14	3	0	159	10	2	0	0	0	12	3	9	3	4	0	19	2	0	1		0	3	371	1627
12:30 PM	3	1	121	5	0	142	6	180	14	1	0	201	15	3	0	0	0	23	2	21	1	8	0	45	2	0	4	2	0	5	416	1614
12:45 PM	5	0	127	3	0	148	4	183	13	6	0	199	17	4	0	0	0	21	2	19	5	4	0	37	1	0	2	0	0	3	405	1615
1:00 PM	7	3	165	6	0	180	1	55	6	5	0	166	5	3	0	0	0	7	5	5	5	5	0	21	2	0	1	0	0	3	387	1577
1:15 PM	8	3	156	6	0	173	2	152	9	1	0	171	12	2	0	0	0	14	6	7	5	6	0	28	2	0	2	0	0	4	393	1599
1:30 PM	4	5	157	7	0	170	3	165	1	0	0	169	9	1	0	0	0	15	1	23	3	5	0	37	0	0	2	0	0	2	382	1566
1:45 PM	9	9	170	8	0	95	5	160	1		0	175	7	2	0	0	0	14	0	6	2	6	0	14	2	0	2	1	0	5	403	1565
NETWORK PEAK HOUR: 11:15 AM - 12:15 PM																																
PEAK HOUR VOLUMES	37	13	658	43	0	581	27	690	42	7	0	766	47	20	0	0	0	67	5	61	13	37	0	116	7	2	8	6	0	23		
PEAK HOUR FACTOR						0.91						0.96						0.73						0.72						0.72		
SEASONAL ADJUSTMENT FACTOR =			1.000																													
ADJUSTED VOLUMES	37	12	583	43	0	681	27	680	42	7	0	756	47	20	0	0	0	67	5	6	13	37	0	114	7	2	8	6	0	23	1641	
GROWTH FACTOR	1.040																															
2010 AMBIENT NO BUILD VOLUMES	38	14	6[illegible]	45	0	704	28	70[illegible]	44	7	0	785	49	21	0	0	0	70	5	66	14	38	0	119	7	2	5	6	0	24		



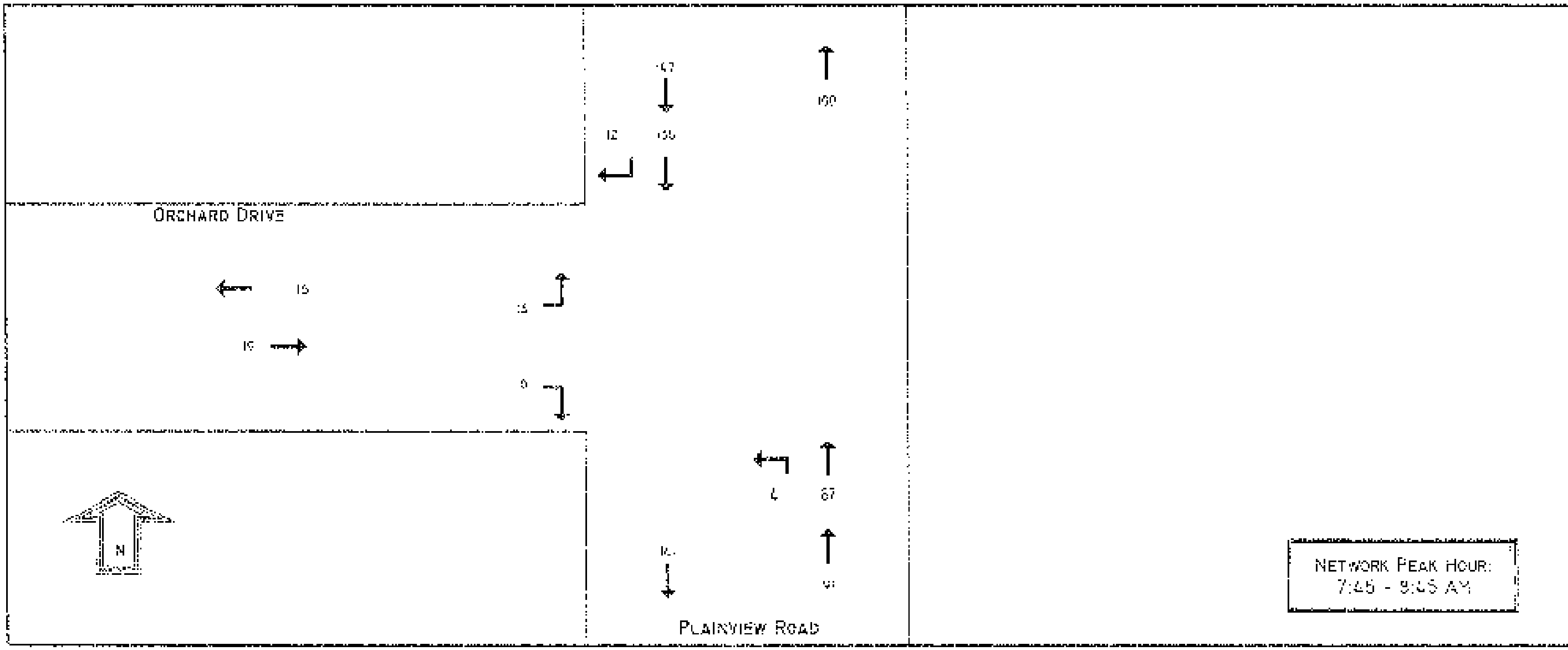
INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD

DATE COLLECTED: 11/02/06 THURSDAY

PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CON. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOP	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	25	0	0	25	0	0	24	1	0	25	55	
7:15 AM	0	3	0	2	0	5	0	0	0	0	0	0	0	0	11	0	0	11	0	0	26	3	0	29	45	
7:30 AM	0	3	0		0	3	0	0	0	0	0	0	0	1	23	0	0	24	0	0	23	3	0	26	53	
7:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	28	0	0	28	0	0	36	3	0	39	71	220
8:00 AM	0	2	0	4	0	6	0	0	0	0	0	0	0	2	13	0	0	15	0	0	29	3	0	32	53	226
8:15 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	24	0	0	24	0	0	35	4	0	39	68	247
8:30 AM	0	2	0	2	0	4	0	0	0	0	0	0	0	2	22	0	0	24	0	0	35	2	0	37	65	257
8:45 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	1	27	0	0	28	0	0	32	2	0	34	64	250
NETWORK PEAK HOUR: 7:45 - 8:45 AM																										
PEAK HOUR VOLUMES	0	13	0	6	0	19	0	0	0	0	0	0	0	4	87	0	0	91	0	0	135	12	0	147		
PEAK HOUR FACTOR						0.79												0.81						0.94		
SEASONAL ADJUSTMENT FACTOR = 1.000																										
ADJUSTED VOLUMES	0	13	0	6	0	19	0	0	0	0	0	0	0	4	87	0	0	91	0	0	135	12	0	147	257	
GROWTH FACTOR	1.040																									
2010 AMBIENT AM BUILD VOLUMES	0	4	0	5	0	20	0	0	0	0	0	0	0	4	90	0	0	95	0	0	142	7	0	153	257	



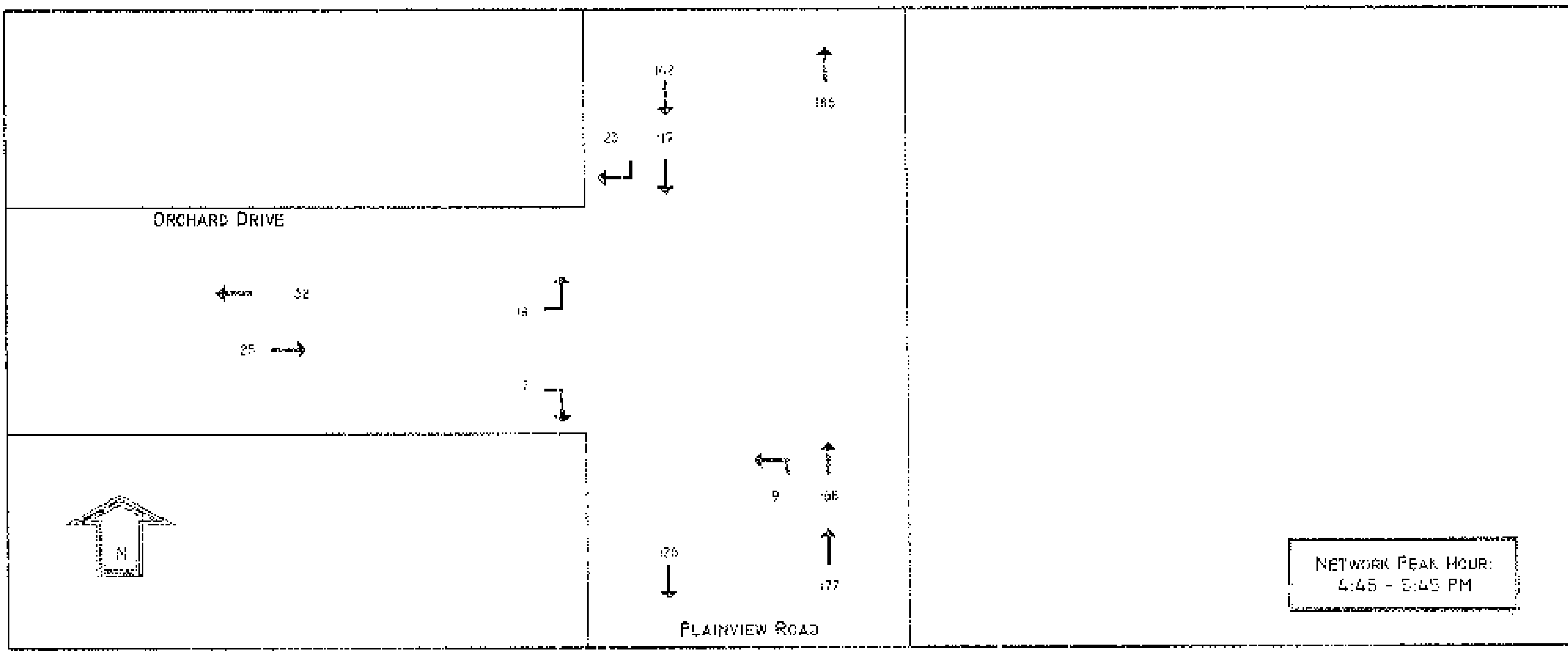
INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD

DATE COLLECTED: 11/02/06 THURSDAY

PROJECT TITLE: TRIANGLE EQUITIES

JURISDICTION: NASSAU/SUFFOLK BORDER

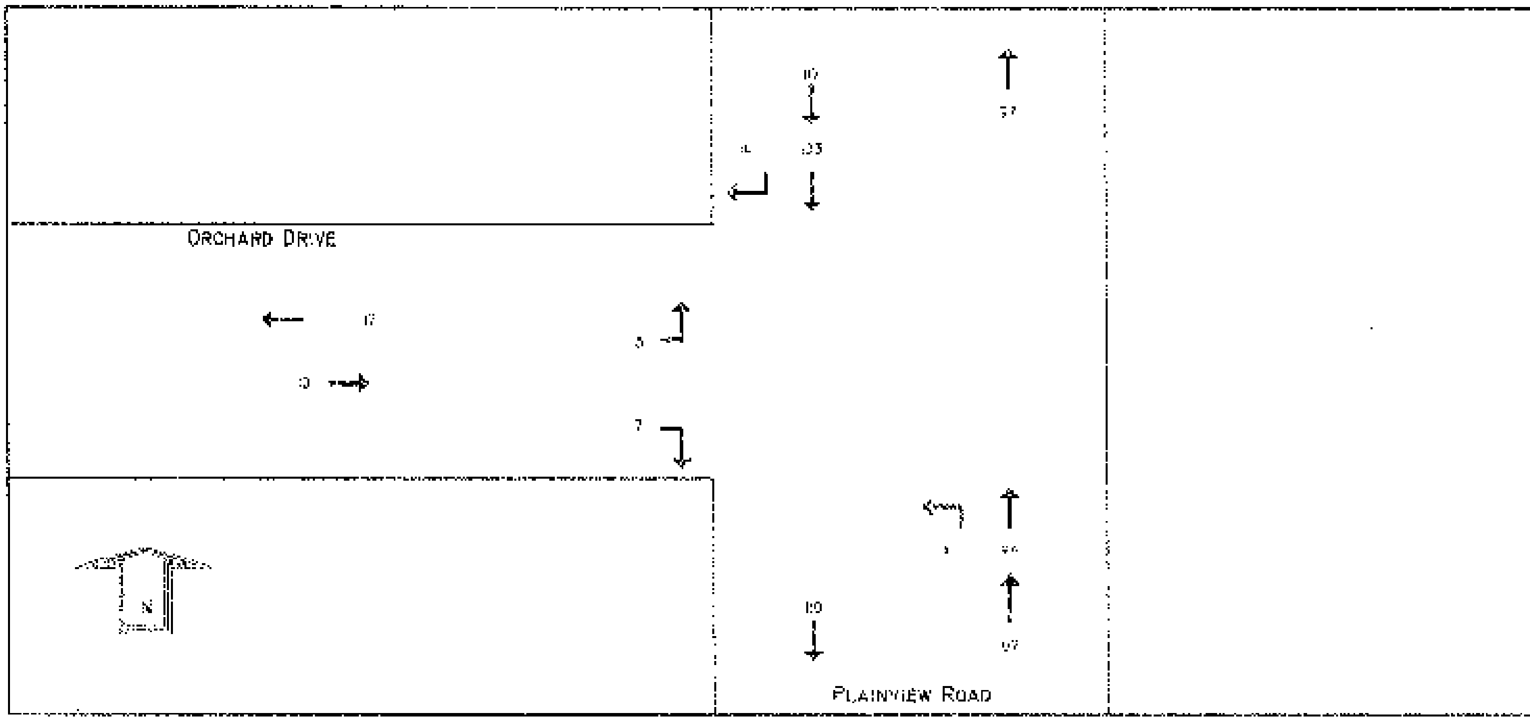
START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	7	0	1	0	8	0	0	0	0	0	0	0	1	25	0	0	26	0	0	21	3	0	24	58	
4:15 PM	0	7	0	3	0	10	0	0	0	0	0	0	0	1	30	0	0	31	0	0	28	6	0	34	79	
4:30 PM	0	15	0	1	0	16	0	0	0	0	0	0	0	1	33	0	0	34	0	0	24	3	0	27	77	
4:45 PM	0	10	0	0	0	10	0	0	0	0	0	0	0	4	41	0	0	45	0	0	27	6	0	33	89	302
5:00 PM	0	3	0	1	0	4	0	0	0	0	0	0	0	1	45	0	0	46	0	0	28	12	0	40	90	334
5:15 PM	0	2	0	3	0	5	0	0	0	0	0	0	0	0	37	0	0	37	0	0	36	3	0	39	81	336
5:30 PM	0	3	0	3	0	6	0	0	0	0	0	0	0	4	45	0	0	49	0	0	26	2	0	30	85	344
5:45 PM	0	2	0	2	0	4	0	0	0	0	0	0	0	2	35	0	0	37	0	0	22	1	0	23	66	322
NETWORK PEAK HOUR: 4:45 - 5:45 PM																										
PEAK HOUR VOLUMES	0	18	0	7	0	25	0	0	0	0	0	0	0	9	168	0	0	177	0	0	119	23	0	142		
PEAK HOUR FACTOR						0.63												0.90						0.89		
SEASONAL ADJUSTMENT FACTOR = 1.000																										
ADJUSTED VOLUMES	0	18	0	7	0	25	0	0	0	0	0	0	0	9	168	0	0	177	0	0	119	23	0	142	344	
GROWTH FACTOR	1.040																									
2010 AMBIENT NO BUILD VOLUMES	0	19	0	7	0	26	0	0	0	0	0	0	0	9	175	0	0	184	0	0	124	24	0	148	358	



INTERSECTION: ORCHARD DRIVE @ PLAINVIEW ROAD
DATE COLLECTED: 07/29/06 SATURDAY

PROJECT TITLE: TRIANGLE EQUITIES
JURISDICTION: NASSAU/SUFFOLK BORDER

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
11:00 AM	0	3	0	2	0	5	0	0	0	0	0	0	0	2	20	0	0	22	0	0	21		0	21	48	
11:15 AM	0	6	0	1	0	7	0	0	0	0	0	0	0	1	24	0	0	25	0	0	21	2	0	23	55	
11:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	17	0	0	17	0	0	27	0	0	27	49	
11:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	25	0	2	27	0	0	24	3	0	27	59	211
12:00 PM	0	3	0	1	0	4	0	0	0	0	0	0	0	1	14	0	0	15	0	0	19	1	0	20	39	207
12:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	22	0	0	23	0	0	18	6	0	24	48	195
12:30 PM	0	2	0	5	0	7	0	0	0	0	0	0	0	1	23	0	0	24	0	0	31	4	0	35	66	212
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	30	0	0	29	2	0	31	61	224
1:00 PM	0	1	0	1	0	2	0	0	0	0	0	0	0	1	19	0	0	20	0	0	25	2	0	27	49	225
1:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	1	23	0	0	24	0	0	[illegible]	2	0	20	46	222
1:30 PM	0	2	0	2	0	4	0	0	0	0	0	0	0	0	24	0	0	24	0	0	24	5	0	29	57	213
1:45 PM	0	5	0	1	0	6	0	0	0	0	0	0	0	0	22	0	0	22	0	0	15	4	0	19	47	199
NETWORK PEAK HOUR: 12:15 - 1:15 PM																										
PEAK HOUR VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	94	0	0	97	0	0	103	14	0	117		
PEAK HOUR FACTOR						0.36												0.81						0.94		
SEASONAL ADJUSTMENT FACTOR =			1.000																							
ADJUSTED VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	94	0	0	97	0	0	103	14	0	117	224	
GROWTH FACTOR	1.000																									
2010 AMBIENT NO BUILD VOLUMES	0	3	0	7	0	10	0	0	0	0	0	0	0	3	98	0	0	101	0	0	107	15	0	122		



NETWORK PEAK HOUR: 12:15 - 1:15 PM

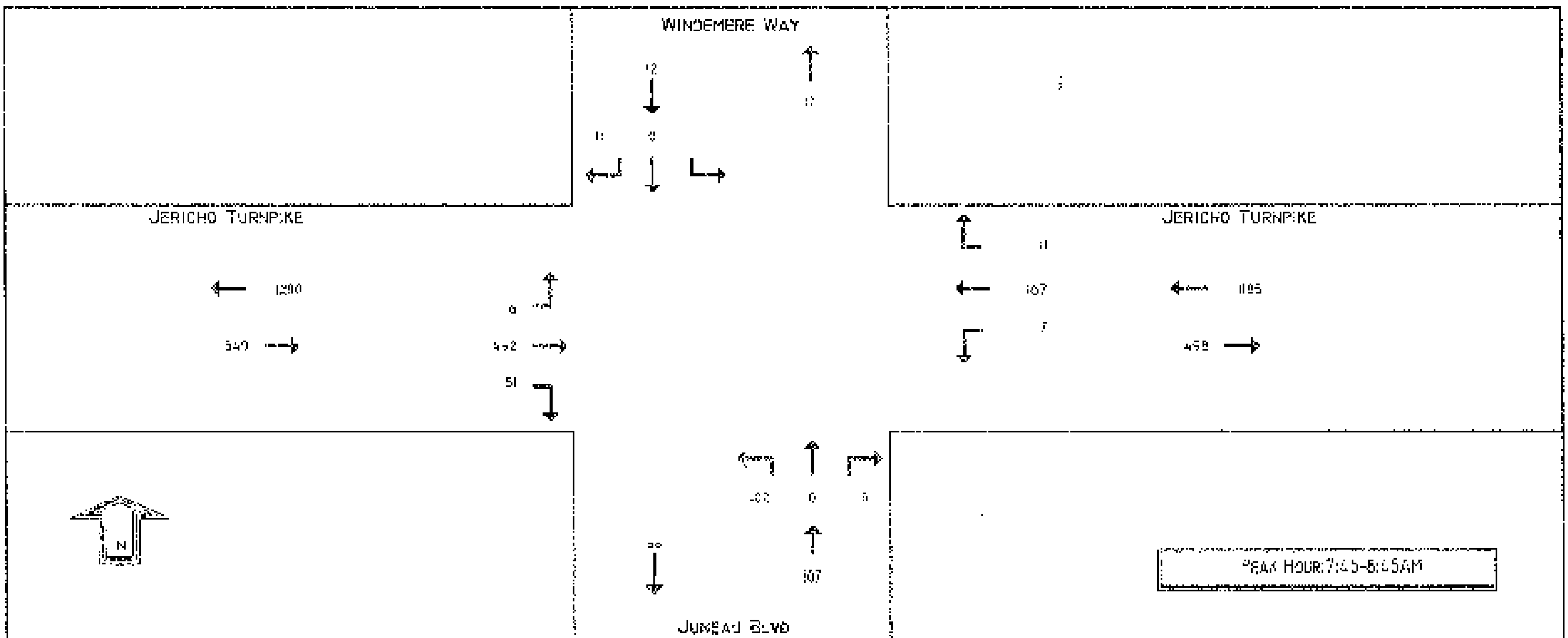
INTERSECTION: JERICHO TURNPIKE @ JUNEAU BLVD

PROJECT TITLE: SHIRE ESTATES

DATE COLLECTED: 5/02/07 AM

JURISDICTION: TOWN OF OYSTER BAY

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0		76	6	0	65	0	[illegible]	213	1	0	215	0	33	0	0	0	33	2	0	0	2	2	4	337	
7:15 AM	0		56	15	0	100	0	1	218	0	0	219	0	30	0	2	0	70	0	0	0	1	3	4	363	
7:30 AM	0	5	100	16	0	119	0	0	310	2	0	312	0	33	0	0	0	33	0	[illegible]	0	3	2	6	470	
7:45 AM	0	3	125	12	0	140	0	1	311	0	0	312	0	[illegible]	0	0	0	[illegible]	0	0	0	1	3	4	474	1644
8:00 AM	0	0	119	13	0	132	0	1	251	0	0	252	0	25	0	0	0	25	0	0	0	0	1	1	422	1729
8:15 AM	0	2	118	4	0	124	0	2	296	1	0	299	0	27	0	2	0	29	0	1	0	1	0	2	464	1830
8:30 AM	0	1	130	0	0	141	0	3	299	10	0	312	0	32	0	2	1	35	0	0	0	3	2	5	492	1853
8:45 AM	0	3	13	22	0	154	0	1	255	1	0	253	0	[illegible]	0	2	0	75	0	0	0	1	1	2	439	1813
PEAK HOUR 7:45-8:45AM	0	0	492	51	0	549	0	7	1167	11	0	1185	0	102	0	4	1	107	0	1	0	5	6	12	1850	
PHF						0.97						0.95						0.76						0.60		
SEASONAL ADJUSTMENT FACTOR = 1	0	6	492	5	0	549	0	7	1167	11	0	1185	0	102	0	4	1	107	0	1	0	5	5	12		
2010 AMBIENT NO BUILD 1.03 GROW 20	0	0	507	53	0	565	0	7	1202	11	0	1221	0	105	0	4	1	110	0	1	0	5	6	12		



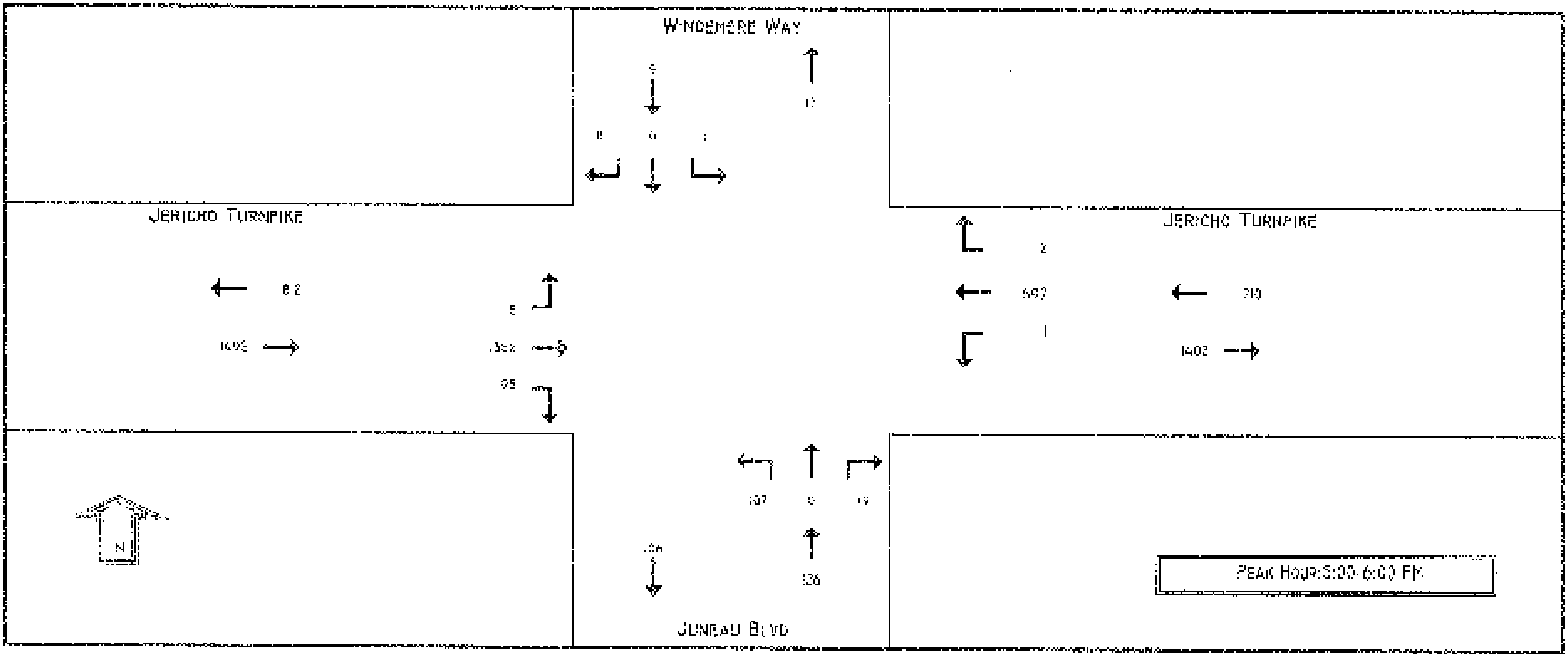
INTERSECTION: JERICHO TURNPIKE & JUNEAU BLVD

DATE COLLECTED: 5/02/07 PM

PROJECT TITLE: SHIRE ESTATES

JURISDICTION: TOWN OF OYESTER BAY

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	5	296	22	2	325	0	6	168	2	0	196	0	31	0	5	0	36	0	0	1	2	2	5	561	
4:15 PM	0	4	250	23	0	277	0	4	165	6	0	175	0	[illegible]	0	[illegible]	1	[illegible]	0	0	0	0	0	0	442	
4:30 PM	0	2	311	25	0	338	0	1	146	0	0	147	0	19	0	6	0	25	0	1	0	2	2	4	514	
4:45 PM	0	2	287	23	0	312	0	4	131	1	0	136	0	15	0	4	0	19	0	0	0	5	1	6	471	1988
5:00 PM	0	4	342	24	1	371	0	2	169	0	0	172	0	22	0	7	0	30	0	1	0	0	0	1	585	2010
5:15 PM	0	6	343	24	1	374	0	2	177	1	0	181	0	19	0	3	0	22	0	0	0	2	0	2	579	2047
5:30 PM	0	4	335	28	3	366	2	4	191	1	0	198	0	30	0	0	1	31	0	0	0	2	2	4	597	2235
5:45 PM	0	1	359	26	1	387	0	1	160	0	0	161	0	25	0	2	1	28	0	0	0	1	1	2	575	2337
PEAK HOUR 5:00-6:00 PM	0	5	1382	92	3	1492	0	11	697	2	0	716	0	107	0	13	1	126	0	1	0	5	3	9	2187	
PHF						0.95						0.9						0.91						0.56		
SEASONAL ADJUSTMENT FACTOR =	0	5	1382	92	3	1492	0	11	697	2	0	710	0	107	0	16	1	120	0	1	0	5	3	9		
2010 AMBIENT NO BUILD + 1.03 *Row 23	0	5	1423	95	3	1532	0	11	715	2	0	733	0	110	0	19	1	130	0	1	0	5	3	9		



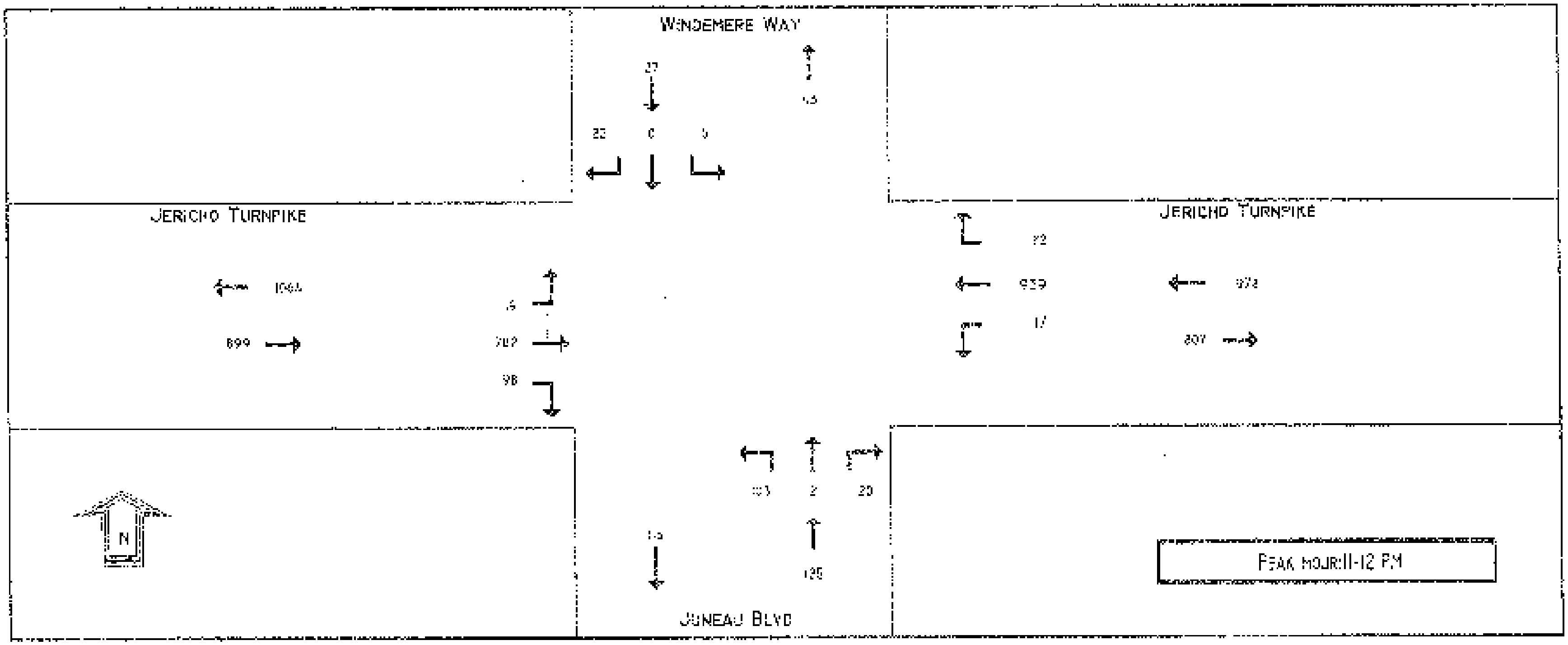
INTERSECTION: JERICHO TURNPIKE @ JUNEAU BLVD

DATE COLLECTED: 6/05/07 SAT

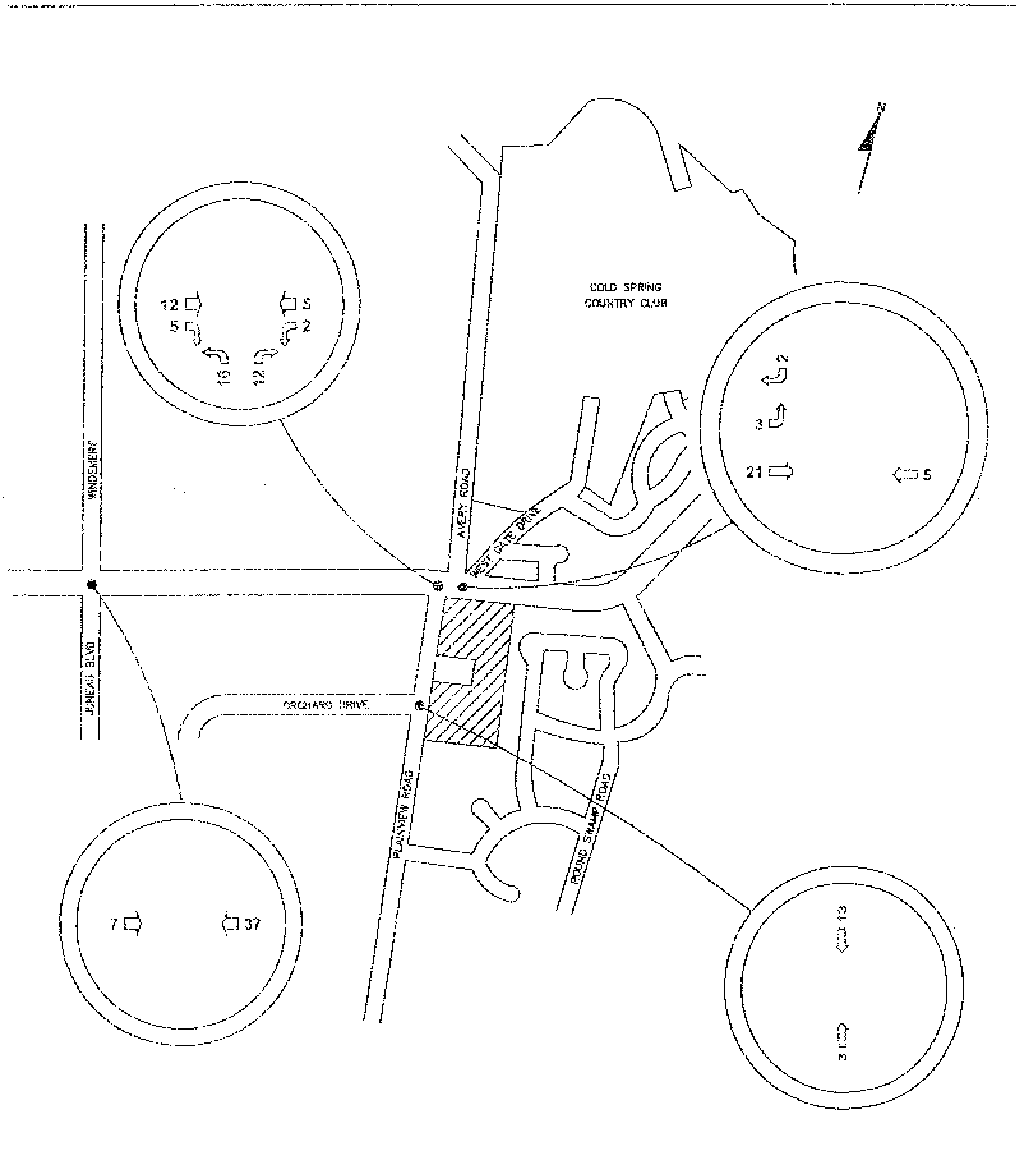
PROJECT TITLE: SHORE ESTATES

JURISDICTION: TOWN OF OYSTER BAY

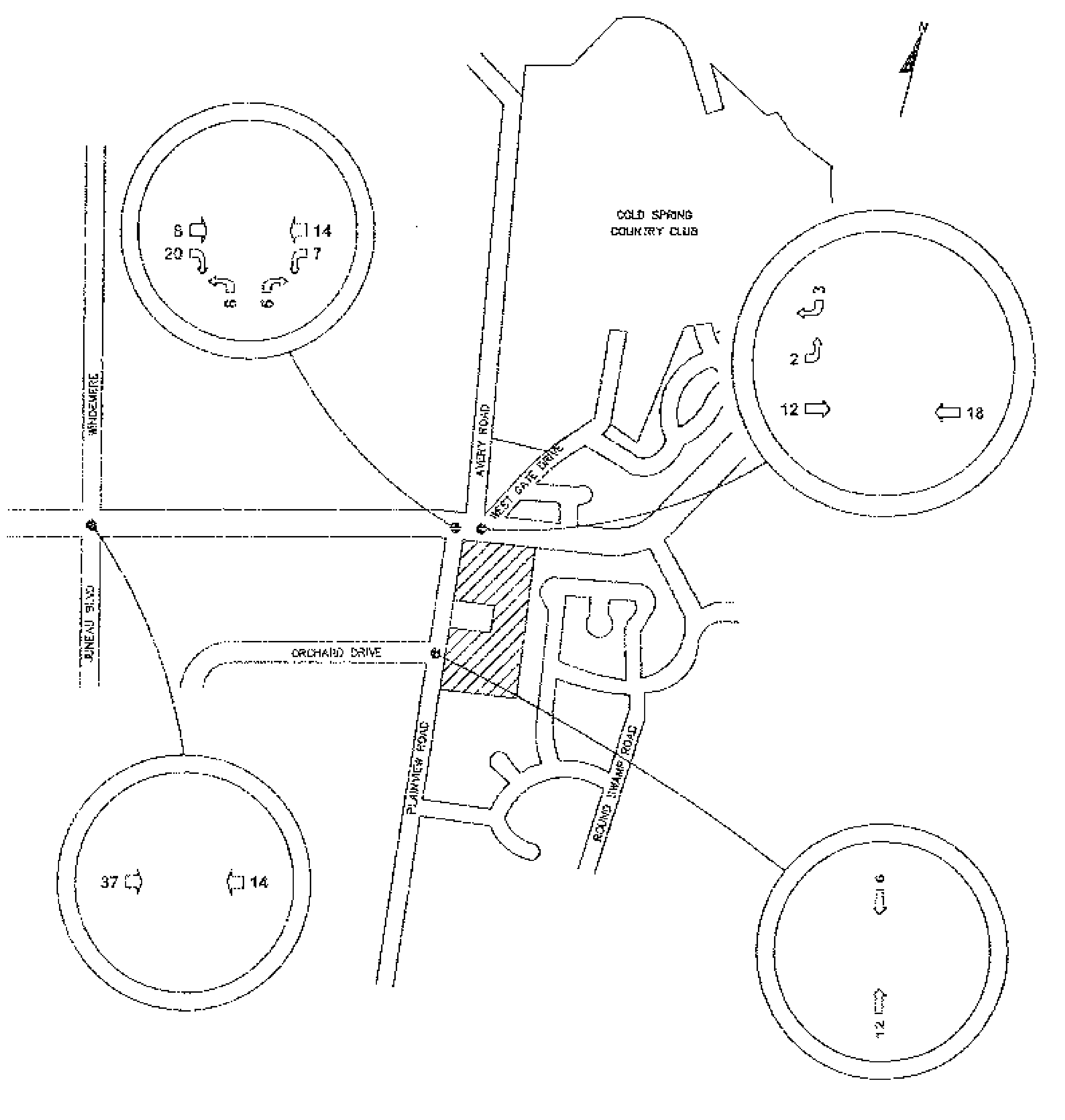
START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
11:00 AM	0	5	210	76	0	291	0	7	225	2	0	275	0	26	[illegible]	4	2	33	0	7	0	5	0	7	520	
11:15 AM	0	4	[illegible]	22	0	207	0	4	230	[illegible]	0	244	0	23		[illegible]	0	30	0	2	0	4	0	6	487	
11:30 AM	0	[illegible]	194	24	0	223	0	3	230	9	0	242	0	35	0	2	[illegible]	40	0	1	0	5	0	5	51[illegible]	
11:45 AM	0	[illegible]	186	23	[illegible]	2[illegible]3	0	3	248	6	0	257	0	19	1	2	0	22	0	0	0	[illegible]	0	8	505	2029
12:00 PM	0	4	185	18	0	2[illegible]0	0	4	2[illegible]	[illegible]	0	2[illegible]0	0	29	0	6	[illegible]	35	0	0	[illegible]	0	0	[illegible]	471	1974
12:15 PM	0	[illegible]	174	21	0	200	0	6	174	[illegible]	0	20[illegible]	0	25	1	[illegible]	2	27	0	0	0	1	0	1	441	1928
12:30 PM	0	4	207	20	0	231	0	5	213	6	0	224	1	16	0	[illegible]	3	22	0	0	0	1	0	1	475	1856
12:45 PM	0	[illegible]	187	22	0	219	0	5	202	1	0	205	0	26	0	3	1	32	0	0	0	5	0	5	464	1565
1:00 PM	0	6	2[illegible]5	24	0	240	0	6	214	7	0	227	0	2[illegible]	0	5	2	32	0	0	0	3	0	3	502	1586
1:15 PM	0	6	226	24	0	256	0	2	193	6	0	201	0	2[illegible]	0	4	[illegible]	3[illegible]	0	[illegible]	0	4	2	7	495	1936
1:30 PM	0	5	214	[illegible]	0	234	0	4	190	4	0	198	5	2[illegible]	1	0	2	3[illegible]	0	0	0	[illegible]	0	3	475	1936
1:45 PM	0	3	193	26	0	222	0	3	186	[illegible]	0	192	0	25	0	4	8	37	0	0	0	2	0	2	454	1928
PEAK HOUR 11-12 PM	0	19	702	97		899	0	17	939	22	0	978	0	103	2	15	5	125	0	5	0	22	0	27	1928	
PHF						0.90						0.9[illegible]						0.78						0.84		
SEASONAL ADJUSTMENT FACTOR [illegible]	0	19	702	97		899	0	17	939	22	0	978	0	103	2	15	5	125	0	5	0	22	0	27		
2010 AMBIENT NO BUILD + 1.03 *GROW 2010	0	20	809	100	1	976	0	18	967	23	0	1002	0	106	3	15	5	129	0	5	0	23	0	28		



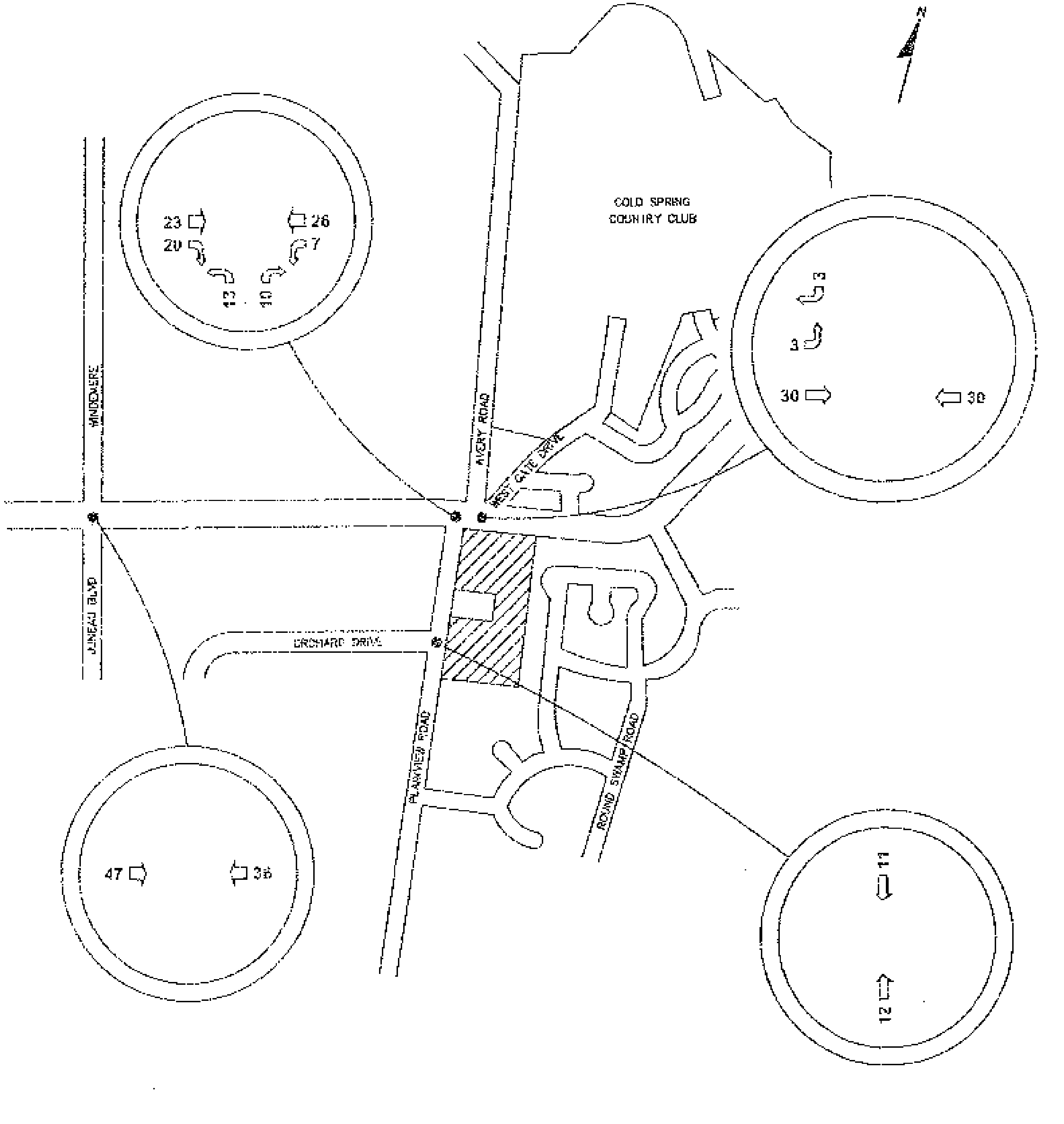
Appendix B: Other Planned Projects Trip Assigment



OTHER PLANNED PROJECTS - AM TRAFFIC VOLUMES



OTHER PLANNED PROJECTS - PM TRAFFIC VOLUMES



OTHER PLANNED PROJECTS - SATURDAY TRAFFIC VOLUMES

Appendix C: Trip Generation

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents have a high correlation with average weekday vehicle trip ends. The use of these variables is limited, however, because the numbers of vehicles and residents was often difficult to obtain or predict. The number of dwelling units is generally used as the independent variable of choice because it is usually readily available, easy to project and has a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations and ages. Consequently, there was a wide variation in trips generated within this category. As expected, dwelling units that were larger in size, more expensive, or farther away from the central business district (CBD) had a higher rate of trip generation per unit than those smaller in size, less expensive, or closer to the CBD. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses, because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas and other trip attractors than other residential land uses; and they generally had fewer alternate modes of transportation available, because they were typically not as concentrated as other residential land uses.

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed from the late 1960s to the 2000s throughout the United States and Canada.

Source Numbers

1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 26, 34, 35, 36, 38, 40, 71, 72, 84, 91, 98, 100, 105, 108, 110, 114, 117, 119, 157, 167, 177, 187, 192, 207, 211, 246, 275, 283, 293, 300, 319, 320, 357, 384, 435, 550, 552, 579

Land Use: 251
Senior Adult Housing—Detached

Description

Senior adult housing consists of detached independent living developments, including retirement communities, age-restricted housing and active adult communities. These developments may include amenities such as golf courses, swimming pools, 24-hour security, transportation and common recreational facilities. However, they generally lack centralized dining and on-site health facilities. Detached senior adult housing communities may or may not be gated. Residents in these communities are typically active (requiring little to no medical supervision). The percentage of retired residents varies by development. Senior adult housing—attached (Land Use 252), congregate care facility (Land Use 253) and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use, as it contains a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip generation rates for detached senior adult housing. Factors such as average age of residents, development location and size, affluence of residents, employment status and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks and recreational activities.

The peak hour of the generator typically did not coincide with the peak hour of the adjacent street traffic. The a.m. peak hour of the generator typically ranged from 10:00 a.m.–12:00 p.m. and the p.m. peak hour of the generator typically ranged from 1:00 p.m.–6:00 p.m.

The sites were surveyed in the 1980s, 1990s and 2000s in California, Florida, New Jersey and Canada.

Source Numbers

221, 289, 398, 421, 500, 550

Kensington Estates
Summary of Trip Generation Calculation
For 80 Dwelling Units of Elderly Housing - Detached
July 16, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	5.50	0.00	1.00	440
7-9 AM Peak Hour Enter	0.11	0.00	1.00	9
7-9 AM Peak Hour Exit	0.18	0.00	1.00	14
7-9 AM Peak Hour Total	0.29	0.00	1.00	23
4-6 PM Peak Hour Enter	0.32	0.00	1.00	26
4-6 PM Peak Hour Exit	0.20	0.00	1.00	16
4-6 PM Peak Hour Total	0.52	0.00	1.00	42
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
The above rates were calculated from these equations:

```
24-Hr. 2-Way Volume:    LN(T) = .85LN(X) + 2.39, R^2 = 0.98
7-9 AM Peak Hr. Total:  LN(T) = .86LN(X) + -.63
                        R^2 = 0.96 , 0.38 Enter, 0.62 Exit
4-6 PM Peak Hr. Total:  LN(T) = .72LN(X) + .58
                        R^2 = 0.88 , 0.61 Enter, 0.39 Exit
AM Gen Pk Hr. Total:    0
                        R^2 = 0 , 0 Enter, 0 Exit
PM Gen Pk Hr. Total:    0
                        R^2 = 0 , 0 Enter, 0 Exit
Sat. 2-Way Volume:      0, R^2 = 0
Sat. Pk Hr. Total:      0
                        R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:      0, R^2 = 0
Sun. Pk Hr. Total:      0
                        R^2 = 0 , 0 Enter, 0 Exit
```

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Summary of Trip Generation Calculation
For 3 Dwelling Units of Single Family Detached Housing
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	13.76	0.00	1.00	41
7-9 AM Peak Hour Enter	0.96	0.00	1.00	3
7-9 AM Peak Hour Exit	2.88	0.00	1.00	9
7-9 AM Peak Hour Total	3.84	0.00	1.00	12
4-6 PM Peak Hour Enter	0.96	0.00	1.00	3
4-6 PM Peak Hour Exit	0.56	0.00	1.00	2
4-6 PM Peak Hour Total	1.52	0.00	1.00	5
Saturday 2-Way Volume	12.99	0.00	1.00	39
Saturday Peak Hour Enter	2.45	0.00	1.00	7
Saturday Peak Hour Exit	2.09	0.00	1.00	6
Saturday Peak Hour Total	4.53	0.00	1.00	14

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .92LN(X) + 2.71, R^2 = 0.96
7-9 AM Peak Hr. Total:	T = .7(X) + 9.43
	R^2 = 0.89 , 0.25 Enter, 0.75 Exit
4-6 PM Peak Hr. Total:	LN(T) = .9LN(X) + .53
	R^2 = 0.91 , 0.63 Enter, 0.37 Exit
AM Gen Pk Hr. Total:	T = .7(X) + 12.05
	R^2 = 0.89 , 0.26 Enter, 0.74 Exit
PM Gen Pk Hr. Total:	LN(T) = .89LN(X) + .61
	R^2 = 0.91 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume:	LN(T) = .94LN(X) + 2.63, R^2 = 0.93
Sat. Pk Hr. Total:	T = .89(X) + 10.93
	R^2 = 0.9 , 0.54 Enter, 0.46 Exit
Sun. 2-Way Volume:	T = 8.83(X) + -9.76, R^2 = 0.94
Sun. Pk Hr. Total:	LN(T) = .89LN(X) + .44
	R^2 = 0.88 , 0.53 Enter, 0.47 Exit

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Appendix D: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	≤ 10.0 seconds per vehicle
Level of Service B	> 10.0 and ≤ 20.0 seconds per vehicle
Level of Service C	> 20.0 and ≤ 35.0 seconds per vehicle
Level of Service D	> 35.0 and ≤ 55.0 seconds per vehicle
Level of Service E	> 55.0 and ≤ 80.0 seconds per vehicle
Level of Service F	> 80.0 seconds per vehicle

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume-to-capacity ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	≤ 10 seconds per vehicle
Level of Service B	> 10 and ≤ 15 seconds per vehicle
Level of Service C	> 15 and ≤ 25 seconds per vehicle
Level of Service D	> 25 and ≤ 35 seconds per vehicle
Level of Service E	> 35 and ≤ 50 seconds per vehicle
Level of Service F	> 50 seconds per vehicle

Appendix E: Capacity Analysis/Level of Service Worksheets & Summary Tables

Detailed SYNCHRO LOS Summary - Weekday AM Peak Hour Analysis

			Existing Condition			2010 No Build Condition			Site Access on Jericho Turnpike: 2010 Build Scenario 1 Condition			Site Access on Jericho Turnpike: 2010 Build Scenario 2 Condition			Site Access on Jericho Turnpike: 2010 Build Scenario 3 Condition			Site Access on Jericho Turnpike: 2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.31	18.6	B	0.37	20.0	C	0.35	22.0	C	0.35	23.7	C	0.40	25.2	C	0.43	27.2	C
		TR	0.20	[illegible]	A	0.22	2.4	A	0.23	2.7	A	0.24	3.2	A	0.24	3.4	A	0.26	3.7	A
	WB	L	-	-	-	-	-	-	0.00	15.5	B	0.00	15.5	B	0.00	15.5	B	0.01	15.5	B
		TR	0.69	15.9	B	0.72	22.1	C	0.77	23.9	C	0.77	24.1	C	0.80	25.4	C	0.84	28.5	C
	NB	L							0.06	38.9	D	0.06	38.9	D	0.07	38.8	D	0.07	38.7	D
		TR							0.02	25.0	C	0.07	25.0	C	0.02	25.0	C	0.02	25.0	C
	Avery-SB	LR	0.69	57.7	E	0.70	57.7	E	0.81	63.8	E	0.82	69.1	E	0.83	70.4	E	0.84	71.0	E
	West Gate-SB	LR	0.21	57.9	E	0.22	55.3	E	0.25	64.0	E	0.28	64.2	E	0.39	69.2	E	0.48	74.7	E
		Intersection	-	19.2	B	-	21.4	C	-	22.7	C	-	24.9	C	-	25.2	C	-	27.9	C
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.26	11.7	B	0.28	13.1	B	0.29	14.0	B	0.30	14.2	B	0.31	14.5	B	0.32	15.8	B
	WB	L	0.31	12.8	B	0.34	14.9	B	0.35	14.8	B	0.35	15.3	B	0.35	17.4	B	0.43	19.4	B
		T	0.60	2.0	A	0.64	2.5	A	0.66	2.5	A	0.66	2.5	A	0.68	2.8	A	0.72	3.6	A
	NB	LR	0.30	39.0	D	0.28	39.2	D	0.29	35.4	D	0.35	30.7	D	0.35	36.4	D	0.32	34.4	C
		Intersection	-	6.8	A	-	7.6	A	-	7.9	A	-	8.3	A	-	8.7	A	-	9.6	A
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windermere Way	EB	L	0.02	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.8	A	0.05	2.8	A	0.02	2.3	A
		TR	0.23	2.7	A	0.22	2.7	A	0.23	2.7	A	0.22	2.8	A	0.22	2.8	A	0.23	2.8	A
	WB	L	0.01	2.4	A	0.01	2.6	A	0.01	2.6	A	0.01	2.6	A	0.01	2.5	A	0.01	2.6	A
		TR	0.45	4.0	A	0.46	4.1	A	0.46	4.2	A	0.48	4.3	A	0.47	4.4	A	0.51	4.5	A
	NB	LTR	0.70	71.1	E	0.72	72.3	E	0.72	72.3	E	0.71	72.1	E	0.71	72.1	E	0.71	72.3	E
	SB	LTR	0.06	23.1	C	0.06	23.1	C	0.06	23.3	C	0.06	23.3	C	0.06	23.3	C	0.06	23.1	C
		Intersection	-	7.6	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.7	A	-	7.9	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.8	A	0.03	9.9	A	0.03	10.0	B	0.03	10.1	A	0.04	10.2	B	0.04	10.3	B
	NB	LT	0.00	0.4	A	0.00	0.1	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A	0.00	0.3	A

Detailed SYNCHRO LOS Summary - Weekday PM Peak Hour Analysis

Intersection	Approach	Movt.	Existing Condition V/C Ratio	Existing Condition Delay Sec/Veh	Existing Condition LOS	2010 No Build Condition V/C Ratio	2010 No Build Condition Delay Sec/Veh	2010 No Build Condition LOS	Site Access on Jericho Turnpike: 2010 Build Scenario 1 Condition V/C Ratio	2010 Build Scenario 1 Condition Delay Sec/Veh	2010 Build Scenario 1 Condition LOS	2010 Build Scenario 2 Condition V/C Ratio	2010 Build Scenario 2 Condition Delay Sec/Veh	2010 Build Scenario 2 Condition LOS	2010 Build Scenario 3 Condition V/C Ratio	2010 Build Scenario 3 Condition Delay Sec/Veh	2010 Build Scenario 3 Condition LOS	2010 Build Scenario 4 Condition V/C Ratio	2010 Build Scenario 4 Condition Delay Sec/Veh	2010 Build Scenario 4 Condition LOS
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.46	7.7	A	0.50	9.0	A	0.54	5.0	A	0.57	5.8	A	0.57	8.2	A	0.80	13.3	B
		TR	0.74	6.4	A	0.77	5.4	A	0.87	9.1	A	0.88	13.7	B	0.91	15.8	B	0.96	36.8	D
	WB	L	-	-	-	-	-	-	0.13	23.3	C	0.17	23.3	C	0.13	23.3	C	0.13	23.3	C
		TR	0.47	13.6	B	0.49	13.4	B	0.51	19.8	B	0.52	20.0	C	0.53	20.5	C	0.57	21.8	C
	NB	L							0.05	36.7	D	0.05	36.7	D	0.05	36.7	D	0.05	36.8	D
		TR							0.01	24.2	C	0.01	24.2	C	0.01	24.2	C	0.01	24.2	C
	Avery-SB	LTR	0.77	59.5	E	0.79	60.5	A	0.92	78.5	E	0.93	80.0	E	0.94	81.6	F	0.94	83.3	F
	West Site-SB	LR	0.47	64.0	E	0.49	70.2	E	0.63	85.5	F	0.63	88.6	F	0.70	96.6	F	0.75	102.9	F
	Intersection		-	14.7	B	-	15.5	B	-	19.8	B		20.2	C	-	24.1	C	-	30.4	D
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.89	31.5	C	0.92	35.4	D	0.98	47.5	D	1.02	54.1	D	1.04	68.3	E	1.11	95.5	F
	WB	L	0.68	22.6	C	0.71	64.3	E	0.76	74.7	E	0.81	79.7	E	0.85	84.7	F	0.88	88.8	F
		T	0.40	3.8	A	0.42	3.8	A	0.45	3.1	A	0.46	3.0	A	0.47	3.2	A	0.52	3.6	A
	NB	LR	0.45	38.3	D	0.51	38.5	D	0.49	35.1	D	0.52	37.0	D	0.54	37.5	D	0.52	35.9	D
	Intersection		-	24.8	C	-	27.2	C	-	34.6	C	-	38.8	D	-	47.4	D	-	63.4	E
Jericho Turnpike (NYS 25) at Jonean Boulevard/Windemere Way	EB	L	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A
		TR	0.57	5.1	A	0.59	5.2	A	0.59	5.5	A	0.62	5.5	A	0.62	5.7	A	0.63	5.8	A
	WB	L	0.06	3.4	A	0.07	3.5	A	0.07	3.5	A	0.07	3.6	A	0.08	3.8	A	0.08	3.9	A
		TR	0.27	3.2	A	0.27	3.2	A	0.28	3.2	A	0.28	3.3	A	0.29	3.3	A	0.30	3.3	A
	NB	LTR	0.77	75.0	E	0.79	77.2	E	0.79	77.5	E	0.79	77.5	E	0.79	77.6	E	0.79	97.5	F
	SB	LTR	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.06	25.5	C	0.05	25.4	C
	Intersection		-	8.3	A	-	8.7	A	-	8.6	A	-	8.7	A	-	8.7	A	-	8.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.8	A	0.03	9.9	A	0.06	13.7	B	0.06	10.8	B	0.06	10.9	B	0.06	11.0	B
	NB	LT	0.00	0.4	A	0.00	0.1	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A

Detailed SYNCHRO LOS Summary - Weekday SAT Peak Hour Analysis

			Existing Condition			2010 No Build Condition			Site Access on Jericho Turnpike: 2010 Build Scenario 1 Condition			2010 Build Scenario 2 Condition			2010 Build Scenario 3 Condition			2010 Build Scenario 4 Condition		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.19	3.5	A	0.21	3.5	A	0.20	1.2	A	0.22	1.4	A	0.28	2.3	A	0.32	3.5	A
		TR	0.25	0.7	A	0.26	0.7	A	0.28	1.6	A	0.29	1.9	A	0.32	2.3	A	0.33	2.5	A
	WB	L	-		-	-	-	-	0.02	15.3	B	0.00	15.3	B	0.02	15.6	B	0.02	15.7	B
		TR	0.35	12.8	B	0.27	13.0	B	0.28	14.2	B	0.40	14.5	B	0.43	16.2	B	0.44	16.0	B
	NB	L							0.07	41.3	D	0.07	41.2	D	0.07	40.7	D	0.07	40.4	D
		TR							0.22	26.4	C	0.22	26.4	C	0.22	25.0	C	0.22	25.8	C
	Avery-SB	LR	0.59	58.1	E	0.60	58.1	E	0.75	63.5	E	0.71	65.4	E	0.72	65.3	E	0.74	65.4	E
	West Gate-SB	LR	0.26	56.1	E	0.26	56.1	E	0.53	63.8	E	0.53	65.4	E	0.40	65.8	E	0.46	68.9	E
	Intersection		-	12.4	B	-	12.5	B	-	14.3	B	-	14.4	B	-	15.5	B	-	18.0	B
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.34	12.3	B	0.35	12.6	B	0.37	13.9	B	0.39	14.2	B	0.42	16.0	B	0.42	15.6	B
	WB	L	0.10	9.3	A	0.11	11.4	B	0.13	14.5	B	0.15	15.8	B	0.19	16.4	B	0.21	18.5	B
		T	0.32	1.7	A	0.32	1.6	A	0.33	1.9	A	0.34	1.6	A	0.37	2.0	A	0.38	2.2	A
	NB	LR	0.26	38.2	D	0.27	38.1	D	0.30	37.3	D	0.38	39.0	D	0.36	36.6	D	0.37	35.6	D
	Intersection		-	8.8	A	-	9.0	A	-	10.0	A	-	10.7	B	-	11.6	B	-	12.3	B
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.05	2.9	A	0.06	3.0	A	0.06	3.0	A	0.06	3.0	A	0.07	3.2	A	0.07	3.1	A
		TR	0.34	3.3	A	0.35	3.4	A	0.35	3.4	A	0.37	3.5	A	0.39	3.6	A	0.40	3.7	A
	WB	L	0.04	2.8	A	0.05	2.8	A	0.05	2.8	A	0.05	2.9	A	0.06	2.9	A	0.06	2.9	A
		TR	0.37	3.6	A	0.38	3.7	A	0.38	3.7	A	0.39	3.8	A	0.41	3.8	A	0.42	3.9	A
	NB	LTR	0.74	71.9	E	0.75	71.7	E	0.74	71.3	E	0.74	71.3	E	0.74	71.3	E	0.74	71.3	E
	SB	LTR	0.13	21.7	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C	0.14	21.4	C
	Intersection		-	7.9	A	-	7.9	A	-	7.9	A	-	7.8	A	-	7.8	A		7.7	A
Plainview Road at Orchard Drive	EB	LR	0.05	9.8	A	0.03	9.9	A	0.03	9.5	A	0.03	9.6	A	0.03	9.7	A	0.04	9.7	A
	NB	LT	0.00	0.4	A	0.00	0.5	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A	0.00	0.2	A

Detailed SYNCHRO LOS Summary - Weekday PM Peak Hour Analysis

									Site Access on Jericho Turnpike											
			Existing Condition			2010 No Build Condition			2010 Build Scenario 1 Condition (Mitigation)			2010 Build Scenario 2 Condition (Mitigation)			2010 Build Scenario 3 Condition (Mitigation)			2010 Build Scenario 4 Condition (Mitigation)		
Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS	V/C Ratio	Delay Sec/Veh	LOS
Jericho Turnpike (NYS 25) at West Gate/Avery	EB	L	0.46	7.7	A	0.50	9.0	A	0.50	4.5	A	0.52	5.2	A	0.62	8.8	A	0.71	10.4	B
		TR	0.74	4.4	A	0.77	5.4	A	0.85	5.4	A	0.84	8.1	A	0.57	10.5	B	0.91	17.2	D
	WB	L	-	-	-	-	-	-	0.12	22.6	C	0.12	22.6	C	0.13	22.9	C	0.13	22.1	C
		TR	0.47	18.0	B	0.49	18.4	B	0.47	16.6	B	0.45	18.9	B	0.50	17.4	B	0.50	15.2	B
	NB	L							0.08	42.3	D	0.08	42.6	D	0.08	42.6	D	0.09	43.1	D
		TR							0.02	27.0	C	0.02	27.0	C	0.02	27.0	C	0.02	27.2	C
	Avery-EB	L	0.77	53.5	E	0.79	60.5	E	0.61	55.3	E	0.60	55.9	E	0.59	55.6	E	0.54	58.6	E
		TR							0.56	57.0	E	0.60	57.4	E	0.62	58.2	E	0.60	63.4	E
	West Gre-SB	LR	0.47	62.0	E	0.49	58.2	E	0.42	63.2	E	0.42	55.2	E	0.45	63.5	E	0.47	63.6	E
	Intersection			14.7	B	-	15.5	B	-	15.5	B	-	16.3	B	-	17.7	B	-	22.0	C
Jericho Turnpike (NYS 25) at Plainview Road	EB	TR	0.89	41.5	C	0.92	35.4	D	0.95	36.0	D	0.93	39.3	D	0.99	52.2	D	1.04	68.7	E
	WB	L	0.63	62.3	E	0.71	64.2	E	0.65	69.9	E	0.69	72.3	E	0.72	75.7	E	0.74	78.2	E
		T	0.40	1.8	A	0.12	1.8	A	0.41	3.0	A	0.41	3.0	A	0.42	3.2	A	0.45	3.5	A
	NB	LR	0.49	38.5	D	0.51	38.9	D	0.57	42.0	D	0.61	40.2	D	0.62	45.4	D	0.61	42.6	D
	Intersection		-	24.8	C		27.2	C	-	28.1	C	-	30.2	C	-	38.1	D	-	47.9	D
Jericho Turnpike (NYS 25) at Juneau Boulevard/Windemere Way	EB	L	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A	0.03	2.7	A
		TR	0.57	5.1	A	0.59	5.5	A	0.59	5.3	A	0.65	5.5	A	0.62	5.7	A	0.63	5.8	A
	WB	L	0.06	3.4	A	0.07	3.5	A	0.07	3.5	A	0.07	3.6	A	0.08	3.8	A	0.08	3.9	A
		TR	0.27	3.2	A	0.27	3.2	A	0.28	3.2	A	0.28	3.3	A	0.29	3.3	A	0.30	3.3	A
	NB	LTR	0.77	75.0	E	0.79	77.7	E	0.79	77.5	E	0.79	77.3	E	0.79	77.6	E	0.79	77.5	E
	SB	LTR	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.05	25.4	C	0.06	25.5	C	0.05	25.4	C
	Intersection		-	8.3	A	-	8.7	A	-	8.8	A	-	8.7	A	-	8.7	A	-	8.7	A
Plainview Road at Orchard Drive	EB	LR	0.03	9.8	A	0.03	9.9	A	0.06	10.7	B	0.06	10.6	B	0.06	10.9	B	0.06	11.0	B
	NB	LT	0.00	0.4	A	0.00	0.5	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A	0.01	0.4	A

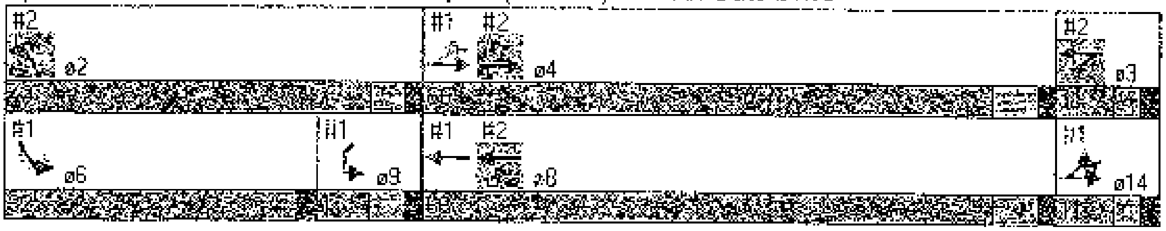
EXISTING CONDITIONS

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	Ø2	Ø3	Ø4
Lane Configurations									
Volume (vph)	36	10	460	1383	46	2			
Lane Group Flow (vph)	0	51	517	1524	217	21			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.3	86.3	75.3	20.6	8.0			
Actuated g/C Ratio		0.69	0.72	0.63	0.17	0.07			
v/c Ratio		0.31	0.20	0.69	0.69	0.21			
Control Delay		18.6	2.0	18.9	57.7	57.9			
Queue Delay		0.0	0.3	0.0	0.0	0.0			
Total Delay		18.6	2.3	18.9	57.7	57.9			
LOS		B	A	B	E	E			
Approach Delay			3.7	18.9	57.7	57.9			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		2	17	328	100	16			
Queue Length 95th (ft)		23	22	616	185	40			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		167	2546	2219	426	101			
Starvation Cap Reductn		0	1312	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.31	0.42	0.69	0.51	0.21			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 19.2 Intersection LOS: B
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

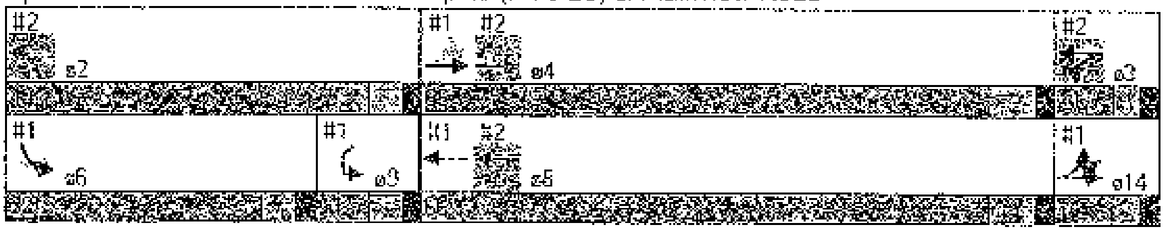


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	470	149	1363	44				
Lane Group Flow (vph)	566	160	1466	107				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.0	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.3	82.3	86.3	25.7				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.26	0.31	0.60	0.30				
Control Delay	11.7	12.2	1.8	39.0				
Queue Delay	0.0	0.6	0.2	0.0				
Total Delay	11.7	12.8	2.0	39.0				
LOS	B	B	A	D				
Approach Delay	11.7		3.0	39.0				
Approach LOS	B		A	D				
Queue Length 50th (ft)	81	49	27	27				
Queue Length 95th (ft)	162	m71	38	86				
Internal Link Dist (ft)	2935		173	382				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2203	518	2461	535				
Starvation Cap Reductn	0	147	326	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.26	0.43	0.69	0.20				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 6.8 Intersection LOS: A
Intersection Capacity Utilization 49.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

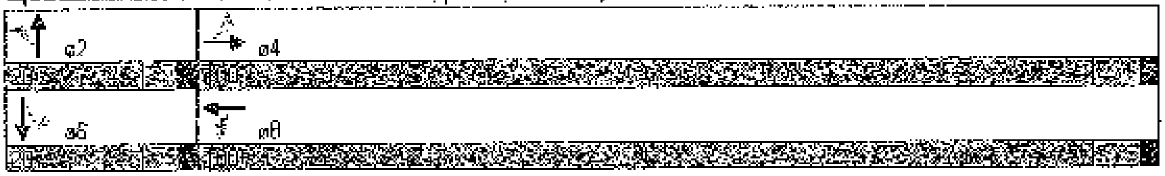


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	492	7	1167	102	0	1	0
Lane Group Flow (vph)	7	590	8	1280	0	116	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.5		14.5
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.02	0.21	0.01	0.45		0.70		0.06
Control Delay	2.7	2.7	2.4	4.0		71.4		20.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.4	4.0		71.4		20.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.0		71.4		20.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	42	1	132		85		1
Queue Length 95th (ft)	4	57	4	159		#163		20
Internal Link Dist (ft)		421		293		410		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	282	2833	520	2865		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.02	0.21	0.01	0.45		0.64		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.6
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 51.9% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	13	6	4	87	135	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	16	8	5	107	144	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	267	150	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	267	150	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	719	896	1424			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	24	112	156
Volume Left	16	5	0
Volume Right	8	0	13
cSH	767	1424	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.8	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	0.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		

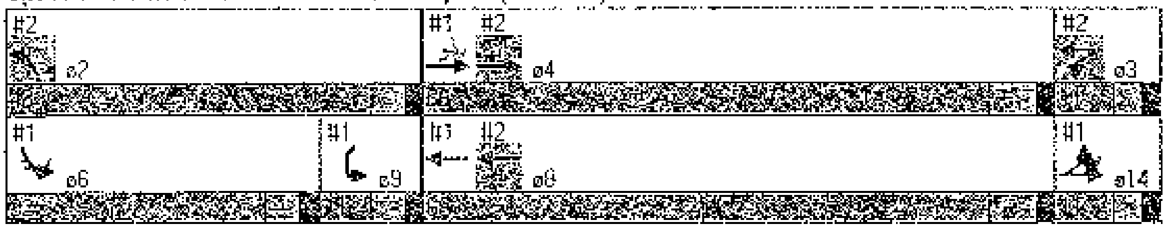
Existing Condition
Nelson & Pope, Engineers & Surveyors

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	100	13	1322	774	104	14			
Lane Group Flow (vph)	0	145	1695	918	286	51			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		74.2	78.2	67.2	23.8	8.3			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.46	0.74	0.47	0.77	0.47			
Control Delay		7.6	3.1	17.9	59.5	69.0			
Queue Delay		0.1	1.3	0.0	0.0	0.0			
Total Delay		7.7	4.4	18.0	59.5	69.0			
LOS		A	A	B	E	E			
Approach Delay			4.7	18.0	59.5	69.0			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		14	46	236	210	38			
Queue Length 95th (ft)		m15	45	294	265	68			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		314	2306	1955	498	108			
Starvation Cap Reductn		6	374	0	0	0			
Spillback Cap Reductn		0	0	[illegible]	70	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.47	0.88	0.47	0.66	0.47			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

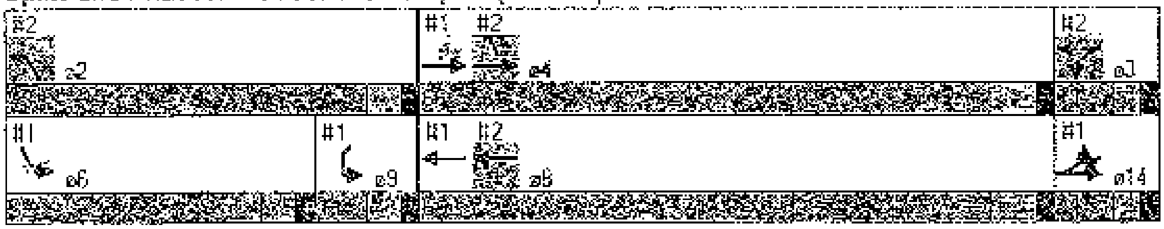


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1309	100	805	50				
Lane Group Flow (vph)	1746	109	894	222				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.6	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	67.2	74.2	78.2	33.8				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.89	0.68	0.40	0.49				
Control Delay	31.4	62.6	3.7	38.5				
Queue Delay	0.1	0.0	0.1	0.0				
Total Delay	31.5	62.6	3.8	38.5				
LOS	C	E	A	D				
Approach Delay	31.5		10.2	38.5				
Approach LOS	C		B	D				
Queue Length 50th (ft)	656	48	51	134				
Queue Length 95th (ft)	592	m#96	59	178				
Internal Link Dist (ft)	2948		5173	896				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1972	160	2229	521				
Starvation Cap Reductn	0	0	418	0				
Spillback Cap Reductn	9	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.89	0.68	0.49	0.43				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 24.8 Intersection LOS: C
Intersection Capacity Utilization 63.9% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↱	↖	↑↱		✥		✥
Volume (vph)	15	1382	11	697	107	0	1	0
Lane Group Flow (vph)	16	1605	12	760	0	137	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.1		15.1
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.57	0.06	0.27		0.77		0.05
Control Delay	2.7	5.1	3.4	3.2		75.0		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.1	3.4	3.2		75.0		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.1		3.2		75.0		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	192	2	63		99		1
Queue Length 95th (ft)	6	232	6	80		#196		17
Internal Link Dist (ft)		534		2948		220		233
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	513	2828	185	2853		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.57	0.06	0.27		0.73		0.05

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 119.1

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 8.3 Intersection LOS: A

Intersection Capacity Utilization 61.6% ICU Level of Service B

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰		↱
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	18	7	9	168	119	23
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	29	11	10	187	129	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	349	142	154			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	349	142	154			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	99			
cM capacity (veh/h)	644	906	1426			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	40	197	154
Volume Left	29	10	0
Volume Right	11	0	25
cSH	701	1426	1700
Volume to Capacity	0.06	0.01	0.09
Queue Length 95th (ft)	4	1	0
Control Delay (s)	10.4	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	0.4	0.0
Approach LOS	B		

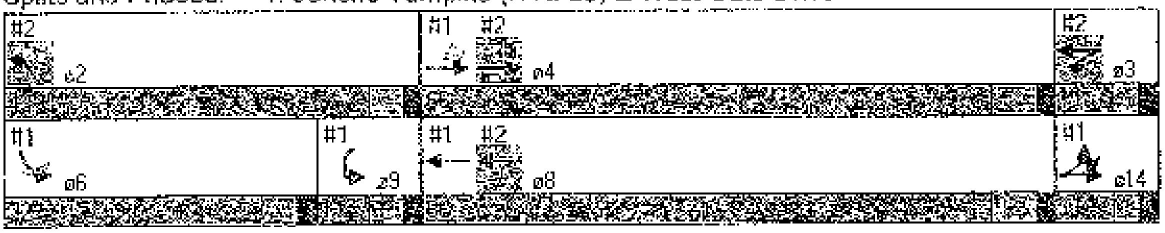
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	57	13	588	707	61	7			
Lane Group Flow (vph)	0	77	646	787	148	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.9	86.9	75.9	16.1	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.13	0.08			
v/c Ratio		0.19	0.25	0.35	0.59	0.26			
Control Delay		1.5	9.6	12.6	58.1	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		1.5	9.7	12.6	58.1	56.1			
LOS		A	A	B	E	E			
Approach Delay			8.8	12.6	58.1	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	4	156	110	24			
Queue Length 95th (ft)		13	5	237	144	44			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		402	2664	2247	438	124			
Starvation Cap Reductn		0	876	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.19	0.38	0.35	0.34	0.26			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 12.4 Intersection LOS: B
Intersection Capacity Utilization 53.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	638	42	725	47				
Lane Group Flow (vph)	748	44	755	91				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases	4	8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.9	82.9	86.9	25.1				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.34	0.10	0.30	0.26				
Control Delay	12.9	9.2	1.6	38.2				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	12.9	9.2	1.7	38.2				
LOS	B	A	A	D				
Approach Delay	12.9		2.1	38.2				
Approach LOS	B		A	D				
Queue Length 50th (ft)	146	11	72	57				
Queue Length 95th (ft)	221	m21	26	74				
Internal Link Dist (ft)	2942		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2229	421	2478	543				
Starvation Cap Reductn	0	0	690	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.34	0.10	0.42	0.17				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

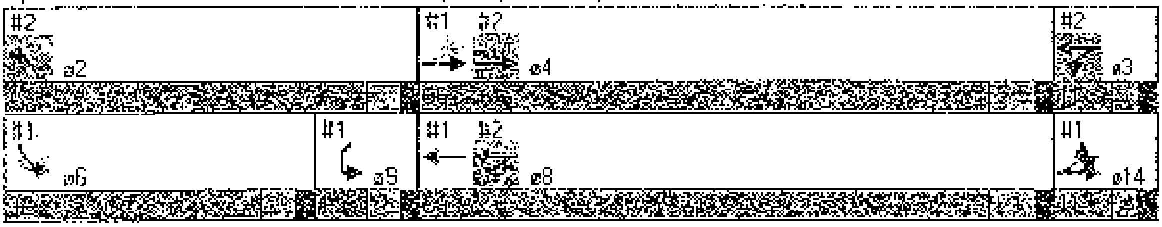
Intersection Signal Delay: 8.8 Intersection LOS: A

Intersection Capacity Utilization 42.2% ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	19	782	17	939	103	2	5	0
Lane Group Flow (vph)	21	957	18	1045	0	136	0	29
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.9		14.9
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.34	0.04	0.37		0.74		0.13
Control Delay	2.9	3.3	2.8	3.6		71.9		21.7
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.9	3.3	2.8	3.6		71.9		21.7
LOS	A	A	A	A		E		C
Approach Delay		3.3		3.6		71.9		21.7
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	82	2	95		97		8
Queue Length 95th (ft)	8	102	7	118		#189		32
Internal Link Dist (ft)		495		2942		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	371	2816	412	2851		194		233
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.34	0.04	0.37		0.70		0.12

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.9
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 47.0% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	94	103	14
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	116	123	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	254	131	139			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254	131	139			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	792	919	1444			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	120	139
Volume Left	8	4	0
Volume Right	19	0	17
cSH	853	1444	1700
Volume to Capacity	0.03	0.00	0.08
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.4	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		

NO BUILD CONDITIONS

Lane Group	EBL2	EBL	EBT	WBT	SBL	SBR	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	37	10	478	1439	48	2			
Lane Group Flow (vph)	0	53	537	1586	225	22			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	3.4	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		79.4	83.4	72.4	21.1	8.0			
Actuated g/C Ratio		0.66	0.70	0.60	0.18	0.07			
v/c Ratio		0.32	0.22	0.75	0.70	0.22			
Control Delay		20.0	2.2	22.3	57.7	58.3			
Queue Delay		0.0	0.2	0.0	0.0	0.0			
Total Delay		20.0	2.4	22.3	57.7	58.3			
LOS		C	A	C	E	E			
Approach Delay			4.0	22.3	57.7	58.3			
Approach LOS			A	C	E	E			
Queue Length 50th (ft)		8	19	494	166	16			
Queue Length 95th (ft)		24	22	662	189	42			
Internal Link Dist (ft)			173	476	364	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		165	2459	2126	427	102			
Starvation Cap Reductn		0	1028	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.32	0.38	0.75	0.53	0.22			

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 64.3% ICU Level of Service C
Analysis Period (min) 15

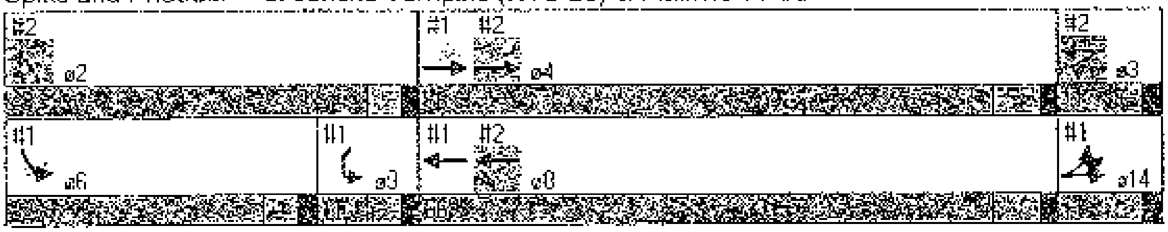
Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	488	155	1418	46				
Lane Group Flow (vph)	587	167	1525	110				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	72.4	79.4	83.4	28.6				
Actuated g/C Ratio	0.60	0.66	0.70	0.24				
v/c Ratio	0.28	0.34	0.64	0.28				
Control Delay	13.1	13.5	2.0	36.2				
Queue Delay	0.0	0.5	0.3	0.0				
Total Delay	13.1	14.0	2.3	36.2				
LOS	B	B	A	D				
Approach Delay	13.1		3.5	36.2				
Approach LOS	B		A	C				
Queue Length 50th (ft)	118	51	36	56				
Queue Length 95th (ft)	168	m70	40	88				
Internal Link Dist (ft)	2935		173	802				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2117	489	2377	535				
Starvation Cap Reductn	0	106	312	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.28	0.44	0.74	0.21				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.4 Intersection LOS: A
Intersection Capacity Utilization 50.7% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	507	7	1202	105	0	1	0
Lane Group Flow (vph)	7	609	8	1319	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.1	96.1	96.1	96.1		14.6		14.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.46		0.71		0.06
Control Delay	2.7	2.7	2.6	4.1		72.3		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.6	4.1		72.3		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.1		72.3		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	[illegible]	1	[illegible]		87		1
Queue Length 95th (ft)	4	58	4	167		#167		20
Internal Link Dist (ft)		421		2935		418		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	268	2891	609	2862		181		224
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.46		0.66		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.0% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	6	4	90	140	12
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	111	149	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					972	
pX, platoon unblocked						
vC, conflicting volume	276	155	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	276	155	162			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	716	890	1417			

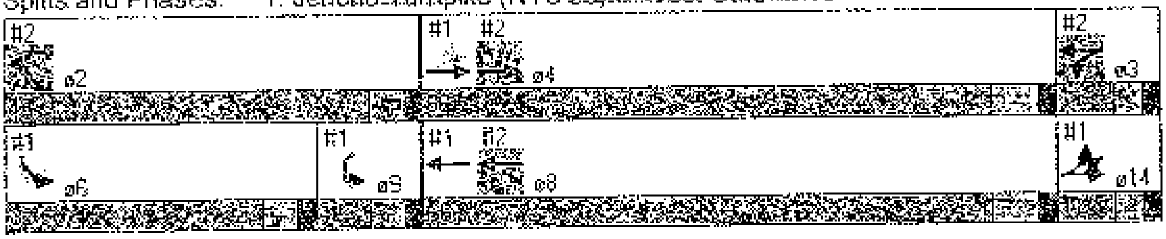
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	116	162
Volume Left	18	5	0
Volume Right	8	0	13
cSH	757	1417	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.9	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.9	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	104	13	1375	805	108	15			
Lane Group Flow (vph)	0	150	1763	955	296	52			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	9.6	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		73.9	77.9	66.9	24.2	8.2			
Actuated g/C Ratio		0.62	0.65	0.56	0.20	0.07			
v/c Ratio		0.50	0.77	0.49	0.79	0.49			
Control Delay		8.9	3.4	18.4	60.3	70.2			
Queue Delay		0.0	2.0	0.0	0.0	0.0			
Total Delay		8.9	5.4	18.4	60.3	70.2			
LOS		A	A	B	E	E			
Approach Delay			9.7	18.4	60.3	70.2			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		14	48	250	217	39			
Queue Length 95th (ft)		m15	45	309	276	69			
Internal Link Dist (ft)			773	376	804	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		300	2297	1948	436	106			
Starvation Cap Reductn		2	369	0	0	0			
Spillback Cap Reductn		0	0	5	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.50	0.91	0.49	0.68	0.49			

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 15.5 Intersection LOS: B
Intersection Capacity Utilization 65.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

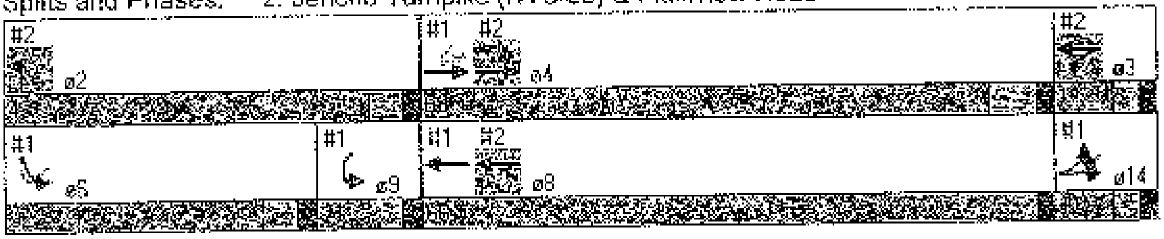
Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	1361	104	836	52				
Lane Group Flow (vph)	1816	113	929	232				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	9.5	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.9	73.9	77.9	34.1				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.92	0.71	0.42	0.51				
Control Delay	35.1	64.3	2.7	38.9				
Queue Delay	0.2	0.0	0.1	0.0				
Total Delay	35.4	64.3	3.8	38.9				
LOS	D	E	A	D				
Approach Delay	35.4		10.4	38.9				
Approach LOS	D		B	D				
Queue Length 50th (ft)	701	61	153	144				
Queue Length 95th (ft)	636	m#102	61	186				
Internal Link Dist (ft)	2942		173	836				
Turn Bay Length (ft)		75						
Base Capacity (vph)	1964	160	2221	521				
Starvation Cap Reductn	0	0	419	0				
Spillback Cap Reductn	12	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.93	0.71	0.52	0.45				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 27.2 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
~ Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

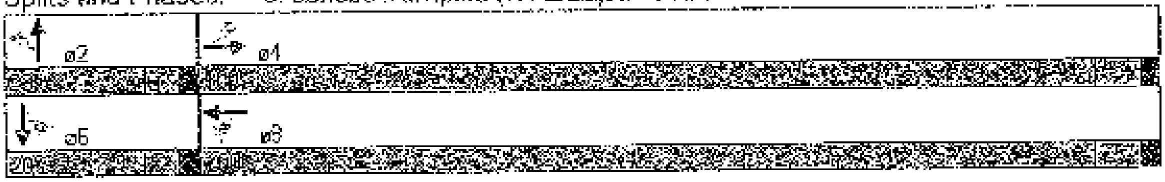


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	15	1423	11	718	110	0	1	0
Lane Group Flow (vph)	16	1654	12	782	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.27		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.7		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.7		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.7		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	202	2	65		103		3
Queue Length 95th (ft)	6	245	6	83		#206		17
Internal Link Dist (ft)		534		2948		220		293
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	498	2826	174	2850		188		222
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.27		0.76		0.05

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 63.1% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	7	9	175	124	24
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	194	135	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					976	
pX, platoon unblocked						
vC, conflicting volume	362	148	161			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	362	148	161			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	632	899	1419			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	204	161
Volume Left	30	10	0
Volume Right	11	0	26
cSH	687	1418	1700
Volume to Capacity	0.06	0.01	0.09
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.6	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBT	SBL	SWL	ø2	ø3	ø4
Lane Configurations									
Volume (vph)	59	14	612	735	63	27			
Lane Group Flow (vph)	0	80	673	819	154	32			
Turn Type	custom	custom							
Protected Phases	14	14	4 14	8	6	9	2	3	4
Permitted Phases	4	4							
Detector Phases	14	14	4 14	8	6	9			
Minimum Initial (s)	4.0	4.0		30.0	10.0	4.0	4.0	4.0	30.0
Minimum Split (s)	9.0	9.0		36.7	16.0	10.0	21.6	9.0	36.7
Total Split (s)	11.0	11.0	77.0	66.0	32.0	11.0	43.0	11.0	66.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	26.7%	9.2%	36%	9%	55%
Yellow Time (s)	3.0	3.0		4.7	3.6	3.6	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes				Yes	Yes
Recall Mode	None	None		C-Max	None	None	None	None	C-Max
Act Effct Green (s)		82.6	86.6	75.6	16.4	9.6			
Actuated g/C Ratio		0.69	0.72	0.63	0.14	0.08			
v/c Ratio		0.21	0.26	0.37	0.60	0.26			
Control Delay		1.8	0.6	12.9	58.1	56.1			
Queue Delay		0.0	0.1	0.0	0.0	0.0			
Total Delay		1.8	0.7	13.0	58.1	56.1			
LOS		A	A	B	E	E			
Approach Delay			0.9	13.0	58.1	56.1			
Approach LOS			A	B	E	E			
Queue Length 50th (ft)		0	5	166	114	24			
Queue Length 95th (ft)		16	6	251	148	44			
Internal Link Dist (ft)			173	473	384	375			
Turn Bay Length (ft)		75							
Base Capacity (vph)		385	2554	2207	437	124			
Starvation Cap Reductn		0	820	0	0	0			
Spillback Cap Reductn		0	0	0	0	0			
Storage Cap Reductn		0	0	0	0	0			
Reduced v/c Ratio		0.21	0.39	0.37	0.35	0.26			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection

Natural Cycle: 75

Control Type: Actuated-Coordinated

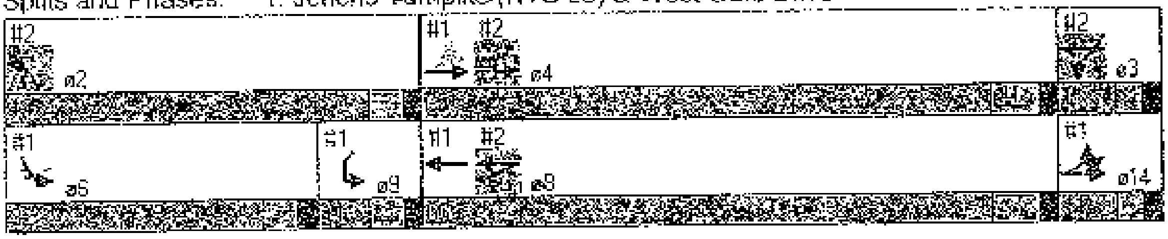
Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.5 Intersection LOS: B

Intersection Capacity Utilization 54.0% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

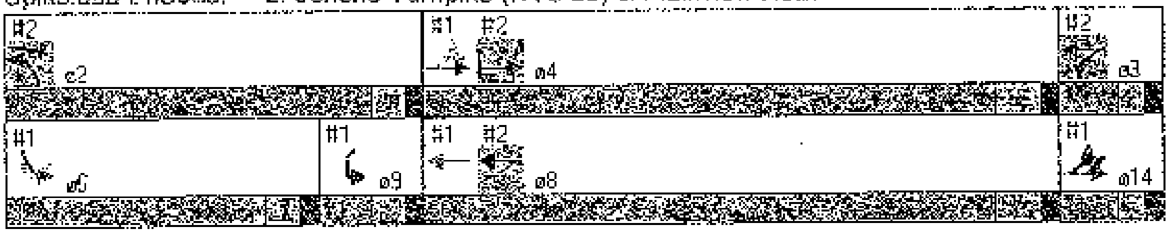


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	664	44	753	49				
Lane Group Flow (vph)	779	46	784	96				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phases	4	3	8 3	2				
Minimum Initial (s)	30.0	4.0		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	75.6	82.6	86.6	25.4				
Actuated g/C Ratio	0.63	0.69	0.72	0.21				
v/c Ratio	0.35	0.11	0.32	0.27				
Control Delay	12.6	11.4	1.5	38.1				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	12.6	11.4	1.6	38.1				
LOS	B	B	A	D				
Approach Delay	12.6		2.2	38.1				
Approach LOS	B		A	D				
Queue Length 50th (ft)	154	13	21	50				
Queue Length 95th (ft)	234	m25	25	77				
Internal Link Dist (ft)	2942		173	893				
Turn Bay Length (ft)		75						
Base Capacity (vph)	2212	404	2469	542				
Starvation Cap Reductn	0	0	623	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.35	0.11	0.42	0.18				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 42.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	805	18	967	106	2	5	0
Lane Group Flow (vph)	22	985	20	1076	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phases	4	4	8	8	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	6.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.35	0.05	0.38		0.75		0.14
Control Delay	3.0	3.4	2.8	3.7		71.7		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.4	2.8	3.7		71.7		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.4		3.7		71.7		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	85	3	101		99		13
Queue Length 95th (ft)	8	106	8	124		#193		32
Internal Link Dist (ft)		495		2042		279		242
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	357	2815	398	2849		197		234
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.35	0.05	0.38		0.71		0.13

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 48.0% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windmere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	7	3	98	107	15
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	121	127	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					973	
pX, platoon unblocked						
vC, conflicting volume	265	136	145			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265	136	145			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	722	912	1437			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	125	145
Volume Left	8	4	0
Volume Right	19	0	18
cSH	846	1437	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.4	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	17.6%	ICU Level of Service	A
Analysis Period (min)		15	

BUILD CONDITION

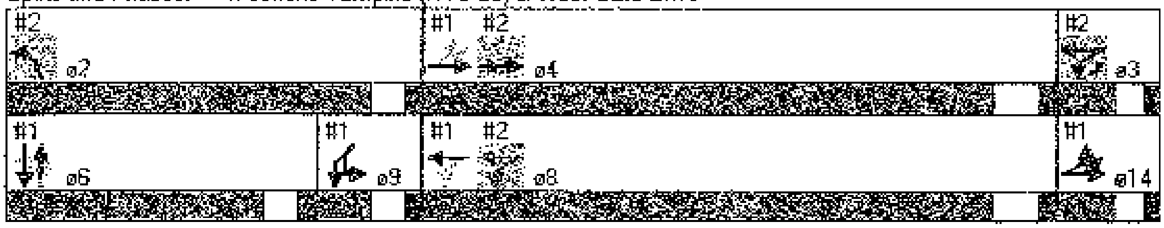
Scenario 1

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	37	10	480	2	1440	9	1	0	3	46	1	0
Lane Group Flow (vph)	0	53	546	2	1587	0	11	4	0	0	226	22
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		77.4	81.4	67.7	70.4		22.0	22.0			22.0	5.9
Actuated g/C Ratio		0.64	0.68	0.56	0.59		0.18	0.18			0.18	0.05
v/c Ratio		0.33	0.23	0.00	0.77		0.04	0.01			0.82	0.28
Control Delay		22.0	2.5	15.5	23.9		38.0	0.0			69.1	64.1
Queue Delay		0.0	0.2	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		22.0	2.7	15.5	23.9		38.0	0.0			69.1	64.1
LOS		C	A	B	C		D	A			E	E
Approach Delay			4.4		23.9		27.9				69.1	64.1
Approach LOS			A		C		C				E	E
Queue Length 50th (ft)		7	20	1	530		7	0			168	17
Queue Length 95th (ft)		25	25	5	662		23	0			201	42
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		159	2397	447	2068		309	559			332	80
Starvation Cap Reductn		0	961	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.33	0.38	0.00	0.77		0.04	0.01			0.68	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 73.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group			
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

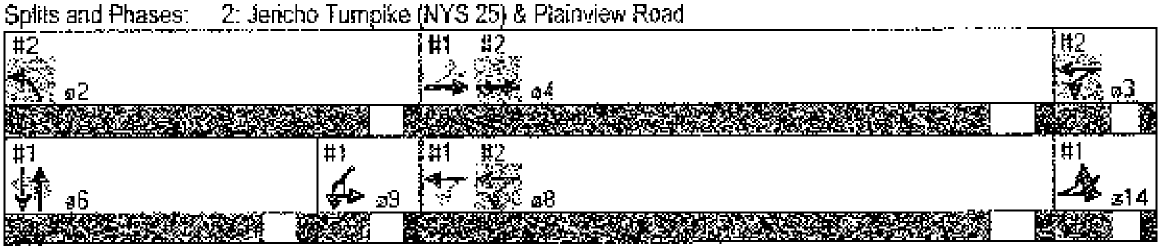
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	491	160	1423	50				
Lane Group Flow (vph)	592	172	1530	123				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	70.4	77.4	81.4	30.6				
Actuated g/C Ratio	0.59	0.64	0.68	0.26				
v/c Ratio	0.29	0.35	0.66	0.29				
Control Delay	14.0	14.1	2.1	35.4				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	14.0	14.7	2.5	35.4				
LOS	B	B	A	D				
Approach Delay	14.0		3.7	35.4				
Approach LOS	B		A	D				
Queue Length 50th (ft)	128	54	37	71				
Queue Length 95th (ft)	170	m74	41	97				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2060	489	2321	535				
Starvation Cap Reductn	0	104	309	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.29	0.45	0.76	0.23				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 51.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

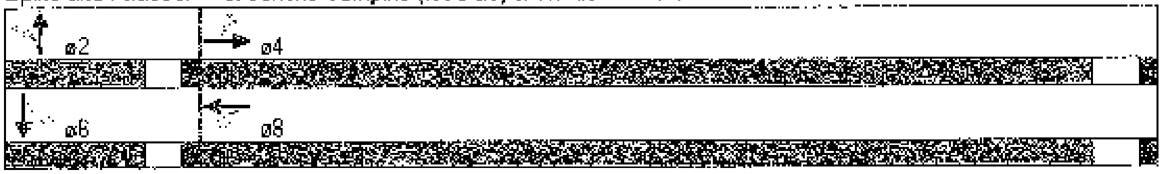


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	505	7	1211	105	0	1	0
Lane Group Flow (vph)	7	607	8	1328	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.7		14.7
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.21	0.01	0.46		0.71		0.06
Control Delay	2.7	2.7	2.6	4.2		72.1		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.6	4.2		72.1		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.2		72.1		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	45	1	140		87		1
Queue Length 95th (ft)	4	58	4	169		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	268	2830	609	2861		163		226
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.21	0.01	0.46		0.65		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

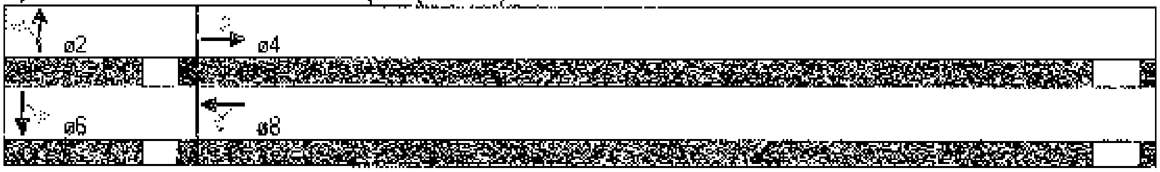


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✣		✣
Volume (vph)	6	505	7	1211	105	0	1	0
Lane Group Flow (vph)	7	607	8	1328	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.7		14.7
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.21	0.01	0.46		0.71		0.06
Control Delay	2.7	2.7	2.6	4.2		72.1		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	2.7	2.6	4.2		72.1		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.7		4.2		72.1		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	45	1	140		87		1
Queue Length 95th (ft)	4	58	4	169		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	268	2830	609	2861		183		226
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.21	0.01	0.46		0.65		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	14	6	4	99	146	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	122	155	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	294	162	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	162	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	695	883	1410			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	127	168
Volume Left	18	5	0
Volume Right	8	0	13
cSH	742	1410	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.0	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	104	13	1375	7	806	11	1	0	19	105	1	0
Lane Group Flow (vph)	0	150	1786	8	956	0	13	4	0	0	297	52
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	74.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	61.7%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		69.4	69.4	61.7	64.4		26.8	26.8			26.8	5.9
Actuated g/C Ratio		0.58	0.58	0.51	0.54		0.22	0.22			0.22	0.05
v/c Ratio		0.55	0.87	0.13	0.51		0.04	0.01			0.92	0.63
Control Delay		5.1	6.7	23.3	19.8		36.2	0.0			79.3	88.6
Queue Delay		0.0	2.5	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		5.1	9.1	23.3	19.8		36.2	0.0			79.3	88.6
LOS		A	A	C	B		D	A			E	F
Approach Delay			8.6		19.8		27.7				79.3	88.6
Approach LOS			A		B		C				E	F
Queue Length 50th (ft)		0	67	3	255		8	0			224	40
Queue Length 95th (ft)		m0	63	15	315		25	0			#327	#76
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		275	2044	63	1875		325	420			336	82
Starvation Cap Reductn		0	155	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.55	0.95	0.13	0.51		0.04	0.01			0.88	0.63

Intersection Summary

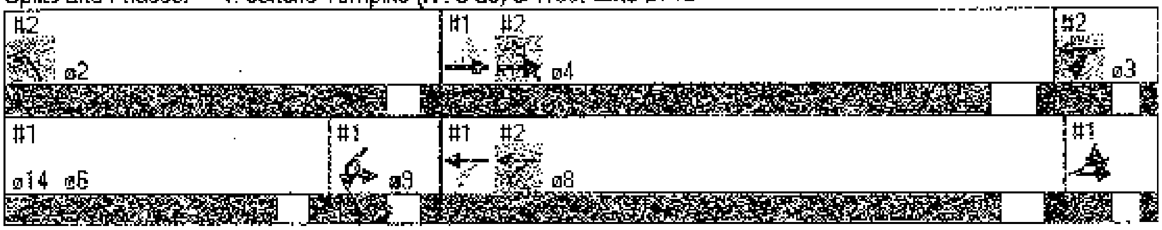
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 103.8% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Lane Group			
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	11.0	64.0
Total Split (%)	38%	9%	53%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	[illegible]	[illegible]	[illegible]	[illegible]
Lane Configurations	↑↑↱	↰	↑↑	Y				
Volume (vph)	1371	110	842	53				
Lane Group Flow (vph)	1830	120	915	243				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	64.0	11.0	76.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	53.3%	9.2%	63.3%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	63.4	71.4	71.4	37.6				
Actuated g/C Ratio	0.53	0.60	0.60	0.31				
v/c Ratio	0.98	0.76	0.45	0.48				
Control Delay	46.3	74.5	3.0	36.1				
Queue Delay	1.3	0.0	0.1	0.0				
Total Delay	47.7	74.5	3.1	36.1				
LOS	D	E	A	D				
Approach Delay	47.7		11.4	36.1				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~805	62	41	145				
Queue Length 95th (ft)	668	m#105	m48	190				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1861	157	2036	547				
Starvation Cap Reductn	0	0	166	0				
Spillback Cap Reductn	14	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.99	0.76	0.49	0.44				

Intersection Summary

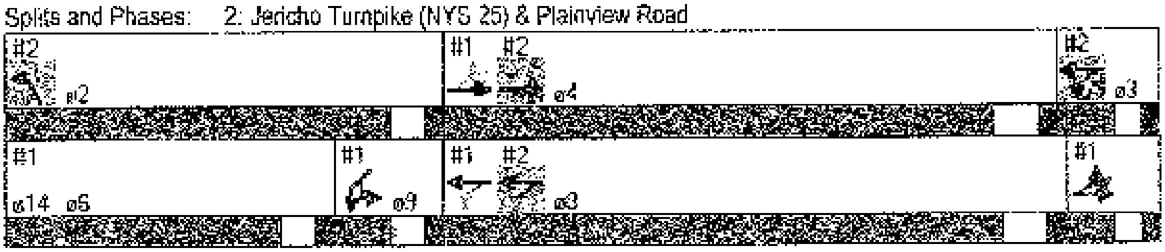
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1434	11	725	110	0	1	0
Lane Group Flow (vph)	16	1666	12	790	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.28		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	205	2	66		103		1
Queue Length 95th (ft)	6	248	6	84		#206		17
Internal Link Dist (ft)		421		2936		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	496	2825	172	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.28		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	184	131	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	204	142	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	380	155	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	380	155	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	618	890	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	214	168
Volume Left	30	10	0
Volume Right	11	0	26
cSH	673	1409	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.7	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.4	0.0
Approach LOS	B		

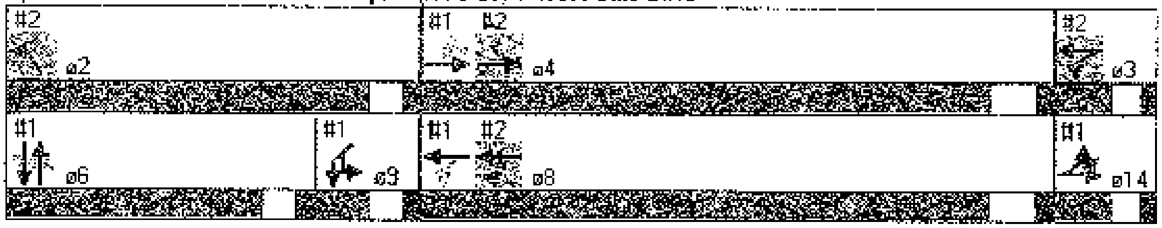
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	14	614	7	737	11	1	0	3	63	1	0
Lane Group Flow (vph)	0	80	695	7	821	0	13	4	0	0	155	32
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		80.3	84.3	70.6	73.3		18.1	18.1			18.1	7.0
Actuated g/C Ratio		0.67	0.70	0.59	0.61		0.15	0.15			0.15	0.06
v/c Ratio		0.20	0.28	0.02	0.38		0.06	0.01			0.71	0.33
Control Delay		1.2	1.5	15.1	14.3		41.0	0.0			65.6	63.2
Queue Delay		0.0	0.1	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		1.2	1.6	15.1	14.3		41.0	0.0			65.6	63.2
LOS		A	A	B	B		D	A			E	E
Approach Delay			1.6		14.3		31.4				65.6	63.2
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		0	15	2	181		9	0			116	24
Queue Length 95th (ft)		0	18	11	255		26	0			148	46
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		400	2477	392	2140		316	582			316	98
Starvation Cap Reductn		0	750	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.20	0.40	0.02	0.38		0.04	0.01			0.49	0.33

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 62.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group			
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

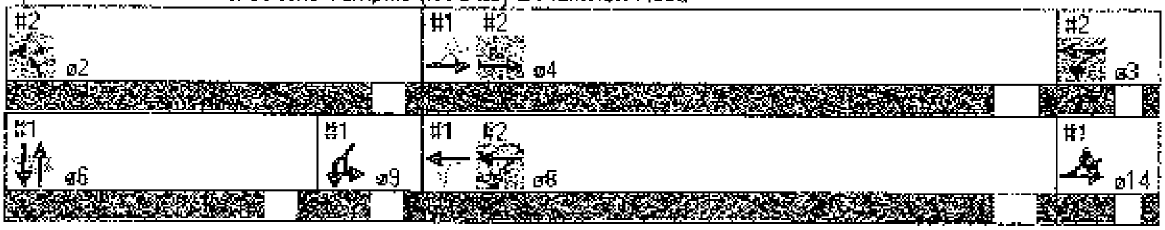
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	674	51	759	52				
Lane Group Flow (vph)	794	53	791	113				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	73.3	80.3	84.3	27.7				
Actuated g/C Ratio	0.61	0.67	0.70	0.23				
v/c Ratio	0.37	0.13	0.33	0.30				
Control Delay	13.9	14.5	1.8	37.0				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	13.9	14.5	1.9	37.0				
LOS	B	B	A	D				
Approach Delay	13.9		2.7	37.0				
Approach LOS	B		A	D				
Queue Length 50th (ft)	171	18	24	68				
Queue Length 95th (ft)	242	36	28	88				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2143	411	2403	539				
Starvation Cap Reductn	0	0	559	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.37	0.13	0.43	0.21				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 10.0 Intersection LOS: A
Intersection Capacity Utilization 43.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↰	↑↱	↰	↑↱		✥		✥
Volume (vph)	20	818	18	976	106	2	5	0
Lane Group Flow (vph)	22	999	20	1086	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.35	0.05	0.38		0.74		0.14
Control Delay	3.0	3.4	2.8	3.7		71.3		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.4	2.8	3.7		71.3		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.4		3.7		71.3		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	87	3	102		99		3
Queue Length 95th (ft)	8	108	8	126		#192		32
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	356	2815	392	2849		200		236
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.35	0.05	0.38		0.69		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 48.2% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	7	3	111	117	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	137	139	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	293	148	157			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293	148	157			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	696	899	1423			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	141	157
Volume Left	8	4	0
Volume Right	19	0	18
cSH	827	1423	1700
Volume to Capacity	0.03	0.00	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.5	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

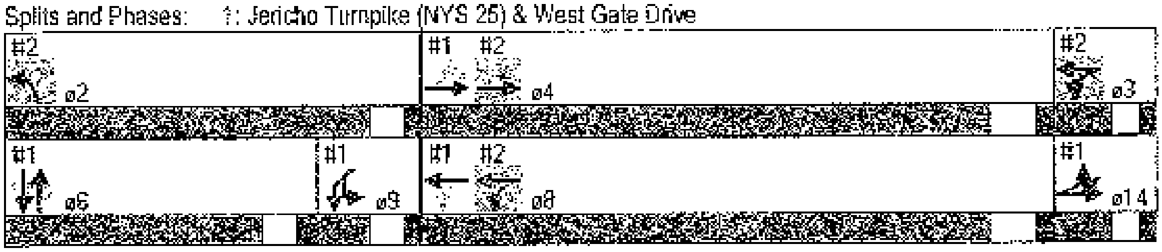
Scenario 2

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	40	10	501	2	1445	9	1	0	3	46	1	0
Lane Group Flow (vph)	0	56	570	2	1593	0	11	4	0	0	229	22
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		77.3	81.3	67.6	70.3		22.2	22.2			22.2	5.9
Actuated g/C Ratio		0.64	0.68	0.56	0.59		0.18	0.18			0.18	0.05
v/c Ratio		0.36	0.24	0.00	0.77		0.04	0.01			0.82	0.28
Control Delay		23.7	3.1	15.5	24.1		38.0	0.0			69.3	64.2
Queue Delay		0.0	0.2	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		23.7	3.2	15.5	24.1		38.0	0.0			69.3	64.2
LOS		C	A	B	C		D	A			E	E
Approach Delay			5.1		24.1		27.9				69.3	64.2
Approach LOS			A		C		C				E	E
Queue Length 50th (ft)		8	26	1	535		7	0			170	17
Queue Length 95th (ft)		27	33	5	666		23	0			204	42
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		157	2393	432	2064		309	647			333	80
Starvation Cap Reductn		0	940	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.36	0.39	0.00	0.77		0.04	0.01			0.69	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.9 Intersection LOS: C
Intersection Capacity Utilization 74.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

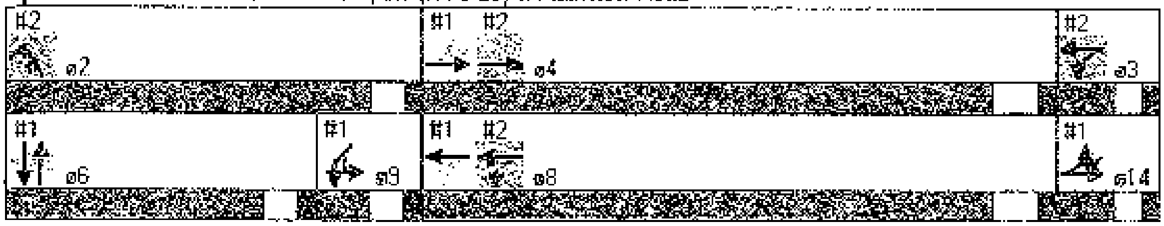
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	503	162	1428	56				
Lane Group Flow (vph)	611	174	1535	147				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	70.3	77.3	81.3	30.7				
Actuated g/C Ratio	0.59	0.64	0.68	0.26				
v/c Ratio	0.30	0.36	0.66	0.35				
Control Delay	14.1	14.6	2.1	36.7				
Queue Delay	0.0	0.5	0.4	0.0				
Total Delay	14.1	15.2	2.5	36.7				
LOS	B	B	A	D				
Approach Delay	14.1		3.8	36.7				
Approach LOS	B		A	D				
Queue Length 50th (ft)	133	55	38	86				
Queue Length 95th (ft)	176	m74	42	113				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2054	477	2317	533				
Starvation Cap Reductn	0	97	307	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.30	0.46	0.76	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 8.3 Intersection LOS: A
Intersection Capacity Utilization 52.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	518	7	1248	105	0	1	0
Lane Group Flow (vph)	7	621	8	1369	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.7		14.7
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.48		0.71		0.06
Control Delay	2.8	2.8	2.6	4.3		72.1		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.3		72.1		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.3		72.1		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	46	1	146		87		1
Queue Length 95th (ft)	4	61	4	177		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	255	2829	601	2861		183		226
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.48		0.65		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	14	6	4	102	159	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	126	169	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	311	176	182			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311	176	182			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	679	868	1393			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	131	182
Volume Left	18	5	0
Volume Right	8	0	13
cSH	726	1393	1700
Volume to Capacity	0.03	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.1	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	106	13	1387	7	824	11	1	0	19	106	1	0
Lane Group Flow (vph)	0	153	1801	8	976	0	13	4	0	0	301	52
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	74.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	61.7%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		69.3	69.3	61.6	64.3		26.9	26.9			26.9	5.9
Actuated g/C Ratio		0.58	0.58	0.51	0.54		0.22	0.22			0.22	0.05
v/c Ratio		0.57	0.88	0.13	0.52		0.04	0.01			0.93	0.63
Control Delay		5.7	6.9	23.3	20.0		36.2	0.0			80.8	88.6
Queue Delay		0.0	3.9	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		5.7	10.8	23.3	20.0		36.2	0.0			80.8	88.6
LOS		A	B	C	C		D	A			F	F
Approach Delay			10.4		20.0		27.7				80.8	88.6
Approach LOS			B		C		C				F	F
Queue Length 50th (ft)		0	70	3	262		8	0			227	40
Queue Length 95th (ft)		m0	66	15	323		25	0			#333	#75
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		269	2041	63	1874		324	420			336	82
Starvation Cap Reductn		0	174	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.57	0.96	0.13	0.52		0.04	0.01			0.90	0.63

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 21.0 Intersection LOS: C
Intersection Capacity Utilization 104.4% ICU Level of Service G
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.

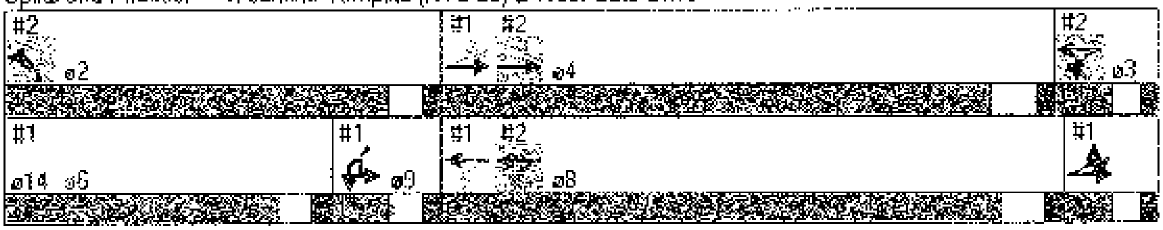
Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	11.0	64.0
Total Split (%)	38%	9%	53%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	↰↱				
Volume (vph)	1379	117	856	61				
Lane Group Flow (vph)	1865	127	930	261				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	64.0	11.0	76.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	53.3%	9.2%	63.3%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	63.3	71.3	71.3	37.7				
Actuated g/C Ratio	0.53	0.59	0.59	0.31				
v/c Ratio	1.01	0.81	0.46	0.52				
Control Delay	51.6	79.6	3.0	36.9				
Queue Delay	2.8	0.0	0.1	0.0				
Total Delay	54.3	79.5	3.0	36.9				
LOS	D	E	A	D				
Approach Delay	54.3		12.2	36.9				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~835	70	40	158				
Queue Length 95th (ft)	692	m#123	m46	204				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1855	157	2033	546				
Starvation Cap Reductn	0	0	160	0				
Spillback Cap Reductn	18	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.02	0.81	0.50	0.48				

Intersection Summary

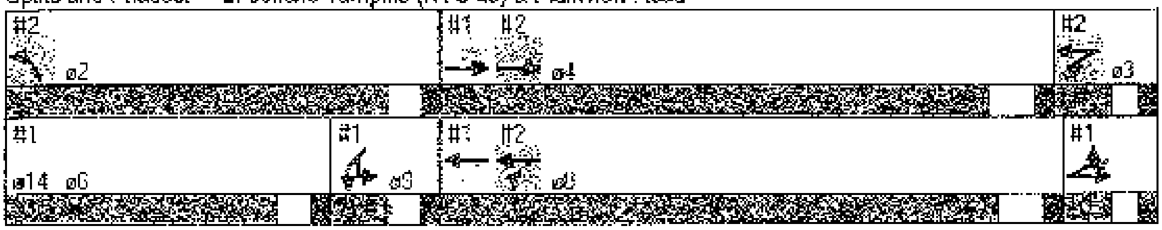
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 38.9 Intersection LOS: D
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1471	11	739	110	0	1	0
Lane Group Flow (vph)	16	1706	12	805	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.60	0.07	0.28		0.79		0.05
Control Delay	2.7	5.5	3.6	3.3		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.5	3.6	3.3		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.5		3.3		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	215	2	68		103		1
Queue Length 95th (ft)	6	260	6	85		#206		17
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	487	2828	163	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.60	0.07	0.28		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	196	137	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	218	149	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	400	162	175			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	400	162	175			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	602	883	1401			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	228	175
Volume Left	30	10	0
Volume Right	11	0	26
cSH	658	1401	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.8	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.4	0.0
Approach LOS	B		

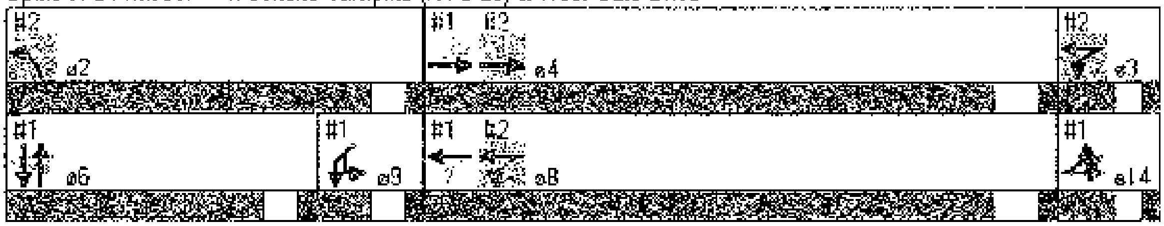
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBR2	SWL
Lane Configurations												
Volume (vph)	62	14	644	7	767	11	1	0	3	63	1	0
Lane Group Flow (vph)	0	83	726	7	852	0	13	4	0	0	158	32
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		80.1	84.1	70.4	73.1		18.4	18.4			18.4	7.0
Actuated g/C Ratio		0.67	0.70	0.59	0.61		0.15	0.15			0.15	0.06
v/c Ratio		0.22	0.29	0.02	0.40		0.05	0.01			0.71	0.33
Control Delay		1.4	1.8	15.3	14.5		40.8	0.0			65.5	63.6
Queue Delay		0.0	0.1	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		1.4	1.9	15.3	14.5		40.8	0.0			65.5	63.6
LOS		A	A	B	B		D	A			E	E
Approach Delay			1.9		14.5		31.2				65.5	63.6
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		0	20	2	190		9	0			118	24
Queue Length 95th (ft)		1	24	11	267		26	0			150	47
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		386	2472	375	2137		316	570			317	97
Starvation Cap Reductn		0	708	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.22	0.41	0.02	0.40		0.04	0.01			0.50	0.33

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	[illegible]	[illegible]	[illegible]
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

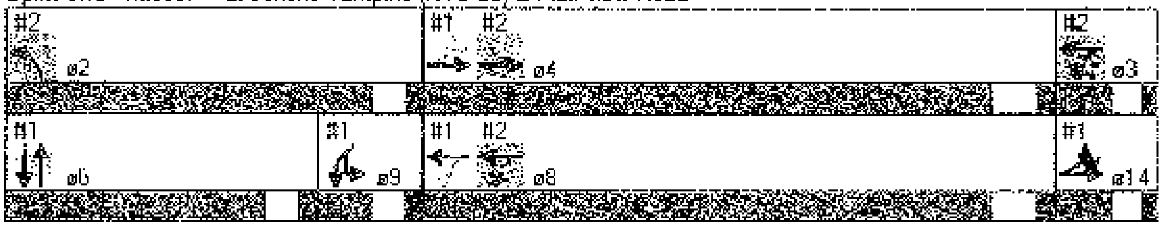
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	697	58	765	65				
Lane Group Flow (vph)	841	60	818	145				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	73.1	80.1	84.1	27.9				
Actuated g/C Ratio	0.61	0.67	0.70	0.23				
v/c Ratio	0.39	0.15	0.34	0.39				
Control Delay	14.2	15.8	1.5	38.9				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	14.2	15.8	1.6	38.9				
LOS	B	B	A	D				
Approach Delay	14.2		2.6	38.9				
Approach LOS	B		A	D				
Queue Length 50th (ft)	184	22	22	89				
Queue Length 95th (ft)	260	44	25	108				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2133	390	2398	538				
Starvation Cap Reductn	0	0	504	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.39	0.15	0.43	0.27				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 10.7 Intersection LOS: B
Intersection Capacity Utilization 44.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

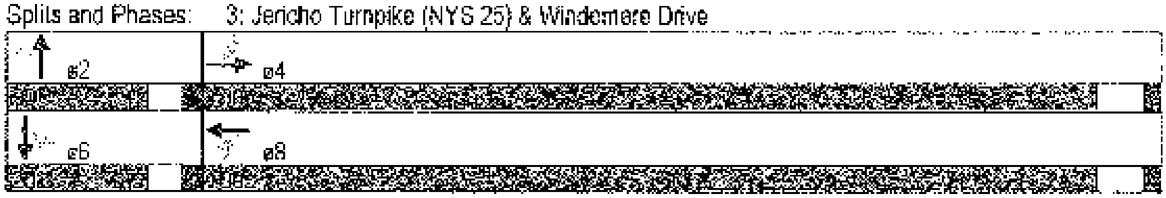


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	865	18	1012	106	2	5	0
Lane Group Flow (vph)	22	1050	20	1125	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.06	0.37	0.05	0.39		0.74		0.14
Control Delay	3.0	3.5	2.9	3.8		71.3		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.5	2.9	3.8		71.3		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.5		3.8		71.3		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	94	3	107		99		3
Queue Length 95th (ft)	8	116	8	132		#192		32
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	340	2818	370	2849		200		236
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.06	0.37	0.05	0.39		0.69		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	7	3	123	128	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	152	152	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	321	161	170			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321	161	170			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	671	884	1407			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	156	170
Volume Left	8	4	0
Volume Right	19	0	18
cSH	807	1407	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Scenario 3

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	43	13	511	2	1476	9	1	0	3	48	1	0
Lane Group Flow (vph)	0	63	581	2	1626	0	11	4	0	0	240	32
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		76.6	80.6	66.9	69.6		22.8	22.8			22.8	6.1
Actuated g/C Ratio		0.64	0.67	0.56	0.58		0.19	0.19			0.19	0.05
v/c Ratio		0.40	0.24	0.00	0.80		0.04	0.01			0.83	0.39
Control Delay		25.2	3.2	15.5	25.4		37.8	0.0			70.3	69.4
Queue Delay		0.0	0.2	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		25.2	3.4	15.5	25.4		37.8	0.0			70.3	69.4
LOS		C	A	B	C		D	A			E	E
Approach Delay			5.5		25.4		27.7				70.3	69.4
Approach LOS			A		C		C				E	E
Queue Length 50th (ft)		10	27	1	573		7	0			178	24
Queue Length 95th (ft)		27	34	5	692		23	0			213	55
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		158	2373	421	2044		307	541			334	82
Starvation Cap Reductn		0	896	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	2		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.40	0.39	0.00	0.80		0.04	0.01			0.72	0.39

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

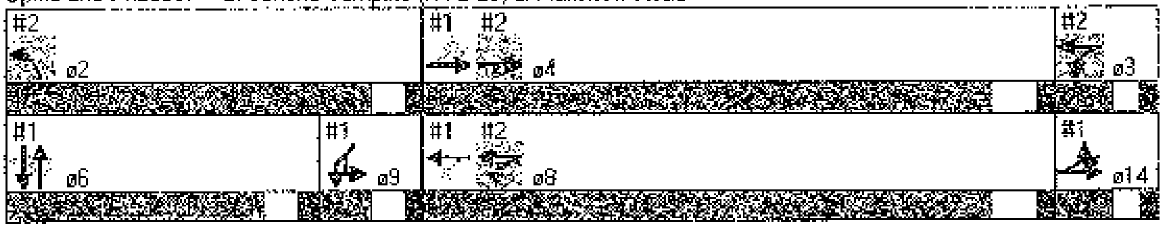
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	516	170	1467	56				
Lane Group Flow (vph)	626	183	1577	151				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	69.6	76.6	80.6	31.4				
Actuated g/C Ratio	0.58	0.64	0.67	0.26				
v/c Ratio	0.31	0.39	0.69	0.35				
Control Delay	14.5	16.7	2.3	36.4				
Queue Delay	0.0	0.6	0.5	0.0				
Total Delay	14.5	17.3	2.8	36.4				
LOS	B	B	A	D				
Approach Delay	14.5		4.3	36.4				
Approach LOS	B		A	D				
Queue Length 50th (ft)	142	64	41	87				
Queue Length 95th (ft)	181	m84	45	117				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2034	464	2298	532				
Starvation Cap Reductn	0	90	300	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.31	0.49	0.79	0.28				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 53.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	531	7	1287	105	0	1	0
Lane Group Flow (vph)	7	635	8	1411	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.7		14.7
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.22	0.01	0.49		0.71		0.06
Control Delay	2.8	2.8	2.6	4.4		72.1		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.4		72.1		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.4		72.1		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	47	1	154		87		1
Queue Length 95th (ft)	4	62	4	186		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	242	2829	592	2861		183		226
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.22	0.01	0.49		0.65		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	14	6	4	105	167	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	130	178	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	324	184	190			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324	184	190			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	668	858	1383			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	135	190
Volume Left	18	5	0
Volume Right	8	0	13
cSH	716	1383	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWR
Lane Configurations												
Volume (vph)	115	22	1422	7	845	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	175	1846	8	998	0	13	4	0	0	307	59
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	74.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	61.7%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		69.1	69.1	61.4	64.1		27.1	27.1			27.1	6.0
Actuated g/C Ratio		0.58	0.58	0.51	0.53		0.23	0.23			0.23	0.05
v/c Ratio		0.67	0.91	0.13	0.53		0.04	0.01			0.94	0.70
Control Delay		8.4	7.6	23.3	20.3		35.2	0.0			82.3	96.6
Queue Delay		0.0	8.3	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		8.4	15.9	23.3	20.3		35.2	0.0			82.3	96.6
LOS		A	B	C	C		D	A			F	F
Approach Delay			15.2		20.3		27.7				82.3	96.6
Approach LOS			B		C		C				F	F
Queue Length 50th (ft)		5	73	3	270		8	0			233	46
Queue Length 95th (ft)		m0	69	15	334		25	0			#342	#89
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)		253		75								
Base Capacity (vph)		260	2036	63	1869		323	419			337	84
Starvation Cap Reductn		0	184	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.67	1.00	0.13	0.53		0.04	0.01			0.91	0.70

Intersection Summary

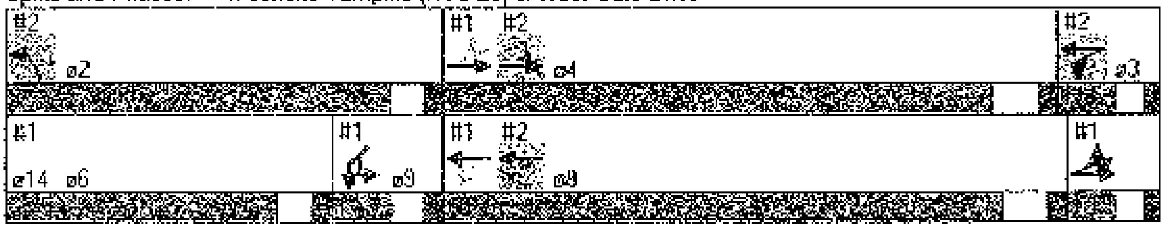
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 106.3% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	11.0	64.0
Total Split (%)	36%	9%	53%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	1423	122	882	61				
Lane Group Flow (vph)	1921	133	959	272				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	64.0	11.0	76.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	53.3%	9.2%	63.3%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	63.1	71.1	71.1	37.9				
Actuated g/C Ratio	0.53	0.59	0.59	0.32				
v/c Ratio	1.04	0.85	0.47	0.54				
Control Delay	60.9	84.6	3.2	37.4				
Queue Delay	7.7	0.0	0.1	0.0				
Total Delay	68.6	84.6	3.2	37.4				
LOS	E	F	A	D				
Approach Delay	68.6		13.1	37.4				
Approach LOS	E		B	D				
Queue Length 50th (ft)	~884	74	43	166				
Queue Length 95th (ft)	#785	m#126	m51	213				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1850	157	2028	548				
Starvation Cap Reductn	0	0	159	0				
Spillback Cap Reductn	35	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.06	0.85	0.51	0.50				

Intersection Summary

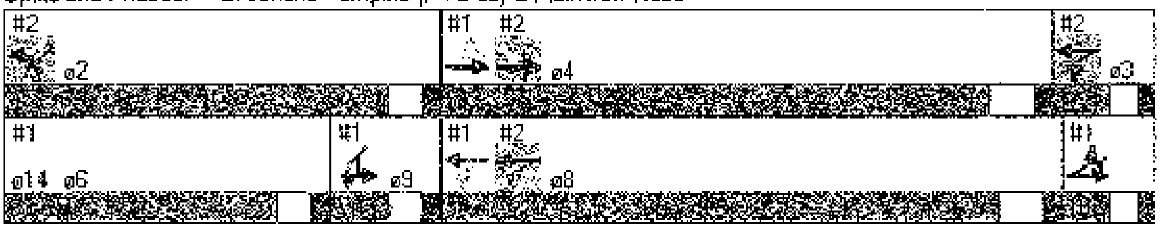
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 47.6 Intersection LOS: D
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1515	11	765	110	0	4	0
Lane Group Flow (vph)	16	1754	12	834	0	142	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.62	0.08	0.29		0.79		0.06
Control Delay	2.7	5.7	3.8	3.3		77.6		28.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.7	3.8	3.3		77.6		28.5
LOS	A	A	A	A		E		C
Approach Delay		5.7		3.3		77.6		28.5
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	227	2	71		103		3
Queue Length 95th (ft)	6	274	6	90		#207		22
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	473	2826	152	2850		189		220
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.62	0.08	0.29		0.75		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	205	142	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	228	154	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	415	167	180			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	415	167	180			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	589	877	1395			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	238	180
Volume Left	30	10	0
Volume Right	11	0	26
cSH	647	1395	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

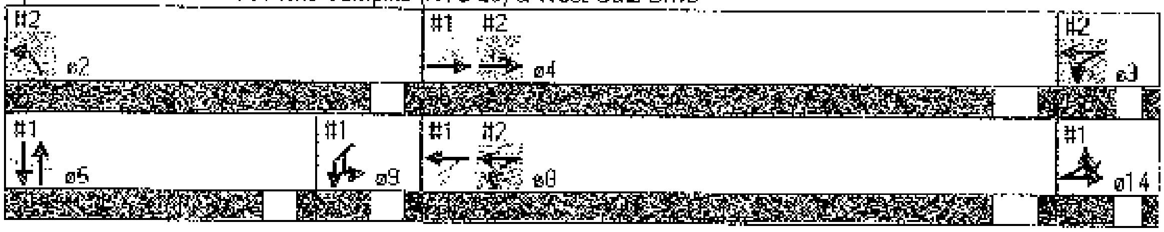
1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	69	21	673	7	791	11	1	0	3	63	1	0
Lane Group Flow (vph)	0	99	760	7	877	0	13	4	0	0	166	40
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		76.8	80.8	67.1	69.8		19.0	19.0			19.0	7.3
Actuated g/C Ratio		0.64	0.67	0.56	0.58		0.16	0.16			0.16	0.06
v/c Ratio		0.28	0.32	0.02	0.43		0.06	0.01			0.72	0.40
Control Delay		2.3	2.2	15.7	16.3		40.2	0.0			65.3	66.0
Queue Delay		0.0	0.1	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		2.4	2.3	15.7	16.3		40.2	0.0			65.3	66.0
LOS		A	A	B	B		D	A			E	E
Approach Delay			2.3		16.3		30.7				65.3	66.0
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		0	23	2	204		9	0			124	30
Queue Length 95th (ft)		1	27	11	277		26	0			156	55
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		356	2374	337	2039		315	557			316	101
Starvation Cap Reductn		12	637	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.29	0.44	0.02	0.43		0.04	0.01			0.52	0.40

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 15.5 — Intersection LOS: B
Intersection Capacity Utilization 83.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

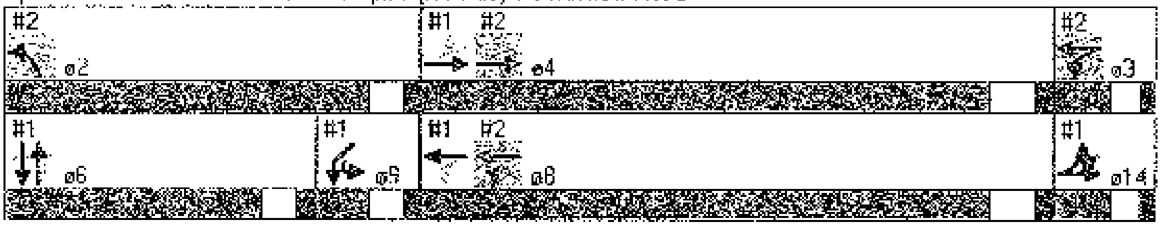
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	730	64	815	65				
Lane Group Flow (vph)	880	67	849	155				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.5	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	69.8	76.8	80.8	31.2				
Actuated g/C Ratio	0.56	0.64	0.67	0.26				
v/c Ratio	0.43	0.19	0.37	0.36				
Control Delay	16.1	16.4	1.8	36.5				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	16.1	16.4	2.0	36.5				
LOS	B	B	A	D				
Approach Delay	16.1		3.0	36.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	202	23	25	94				
Queue Length 95th (ft)	274	44	27	115				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2036	355	2302	536				
Starvation Cap Reductn	0	0	449	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.43	0.19	0.46	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 45.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	901	18	1042	106	2	5	0
Lane Group Flow (vph)	22	1089	20	1158	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.39	0.06	0.41		0.74		0.14
Control Delay	3.0	3.6	2.9	3.8		71.3		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.0	3.6	2.9	3.8		71.3		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.6		3.8		71.3		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	100	3	112		99		3
Queue Length 95th (ft)	8	122	8	137		#192		32
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	327	2820	354	2849		200		236
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.39	0.06	0.41		0.69		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Volume (veh/h)	3	7	3	130	134	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	160	160	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	336	168	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	336	168	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	657	876	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	164	177
Volume Left	8	4	0
Volume Right	19	0	18
cSH	796	1399	1700
Volume to Capacity	0.03	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

Scenario 4

1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWR
Lane Configurations												
Volume (vph)	45	15	520	2	1503	9	1	6	3	48	1	0
Lane Group Flow (vph)	0	68	591	2	1655	0	11	4	0	0	248	39
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		73.8	77.8	64.1	66.8		23.2	23.2			23.2	6.1
Actuated g/C Ratio		0.62	0.65	0.53	0.56		0.19	0.19			0.19	0.05
v/c Ratio		0.43	0.26	0.01	0.84		0.04	0.01			0.85	0.48
Control Delay		27.2	3.5	15.5	28.9		37.7	0.0			71.3	74.7
Queue Delay		0.0	0.2	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		27.2	3.7	15.5	28.9		37.7	0.0			71.3	74.7
LOS		C	A	B	C		D	A			E	E
Approach Delay			6.1		28.9		27.6				71.3	74.7
Approach LOS			A		C		C				E	E
Queue Length 50th (ft)		12	28	1	593		7	0			183	30
Queue Length 95th (ft)		30	35	5	715		23	0			221	#70
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		157	2290	395	1961		306	636			334	82
Starvation Cap Reductn		0	882	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	5		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.43	0.42	0.01	0.85		0.04	0.01			0.74	0.48

Intersection Summary

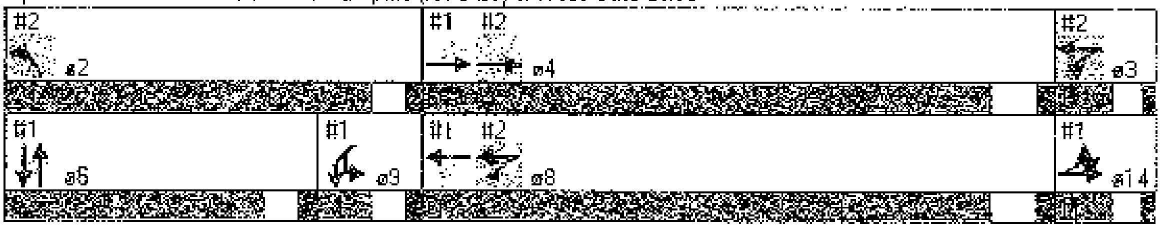
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 27.9 — Intersection LOS: C
Intersection Capacity Utilization 83.7% — ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

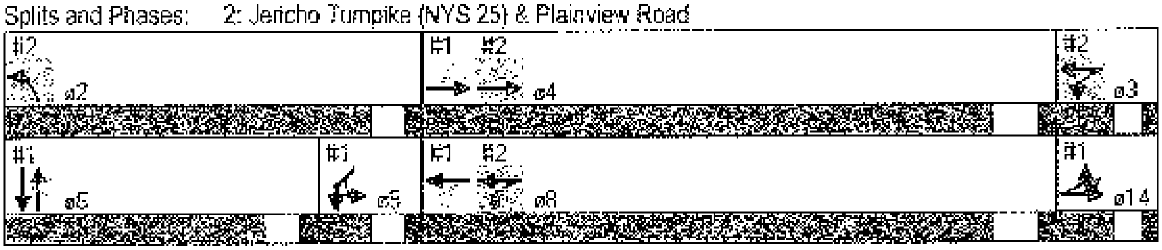


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	527	176	1500	56				
Lane Group Flow (vph)	638	189	1613	154				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.8	73.8	77.8	34.2				
Actuated g/C Ratio	0.56	0.62	0.65	0.28				
v/c Ratio	0.33	0.43	0.73	0.33				
Control Delay	15.8	18.5	2.8	34.4				
Queue Delay	0.0	0.8	0.8	0.0				
Total Delay	15.8	19.3	3.7	34.4				
LOS	B	B	A	C				
Approach Delay	15.8		5.3	34.4				
Approach LOS	B		A	C				
Queue Length 50th (ft)	145	68	45	89				
Queue Length 95th (ft)	185	m84	50	119				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1952	440	2217	532				
Starvation Cap Reductn	0	83	300	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.33	0.53	0.84	0.29				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 9.6 Intersection LOS: A
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	542	7	1320	105	0	1	0
Lane Group Flow (vph)	7	647	8	1447	0	119	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		14.7		14.7
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.12		0.12
v/c Ratio	0.03	0.23	0.01	0.51		0.71		0.06
Control Delay	2.8	2.8	2.6	4.5		72.1		23.1
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.8	2.8	2.6	4.5		72.1		23.1
LOS	A	A	A	A		E		C
Approach Delay		2.8		4.5		72.1		23.1
Approach LOS		A		A		E		C
Queue Length 50th (ft)	1	40	1	161		87		1
Queue Length 95th (ft)	4	63	4	194		#167		20
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	231	2832	584	2861		183		226
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.23	0.01	0.51		0.65		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 118.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 56.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			ৰ	৮	
Volume (veh/h)	14	6	4	107	173	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.81	0.81	0.94	0.94
Hourly flow rate (vph)	18	8	5	132	184	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	332	190	197			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	190	197			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	660	851	1376			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	25	137	197
Volume Left	18	5	0
Volume Right	8	0	13
cSH	708	1376	1700
Volume to Capacity	0.04	0.00	0.12
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.3	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	122	29	1451	7	862	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	193	1883	8	1017	0	13	4	0	0	312	64
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	74.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	61.7%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		66.4	66.4	58.7	61.4		27.3	27.3			27.3	6.1
Actuated g/C Ratio		0.55	0.55	0.49	0.51		0.23	0.23			0.23	0.05
v/c Ratio		0.80	0.96	0.13	0.57		0.04	0.01			0.95	0.75
Control Delay		13.3	8.3	23.3	21.8		36.2	0.0			83.8	102.8
Queue Delay		0.0	28.7	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		13.3	37.0	23.3	21.8		36.2	0.0			83.8	102.8
LOS		B	D	C	C		D	A			F	F
Approach Delay			34.8		21.8		27.7				83.8	102.8
Approach LOS			C		C		C				F	F
Queue Length 50th (ft)		32	76	3	277		8	0			238	50
Queue Length 95th (ft)		m12	m69	15	342		25	0			#350	#98
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		242	1956	62	1790		322	419			337	85
Starvation Cap Reductn		0	190	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.80	1.07	0.13	0.57		0.04	0.01			0.93	0.75

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 36.6 Intersection LOS: D
Intersection Capacity Utilization 107.8% ICU Level of Service G
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.

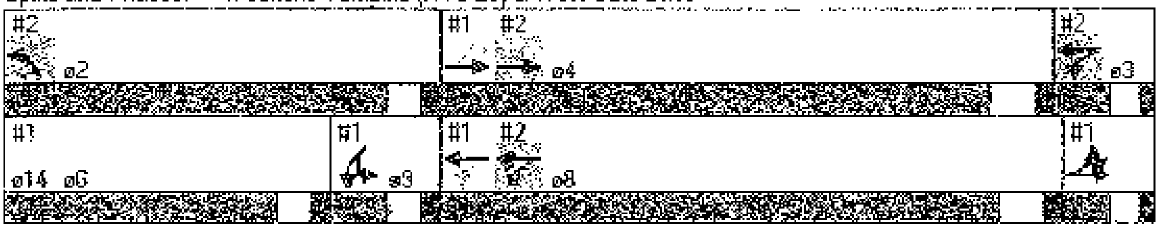
Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	11.0	64.0
Total Split (%)	38%	9%	53%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1459	126	903	61				
Lane Group Flow (vph)	1968	137	982	281				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	64.0	11.0	76.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	53.3%	9.2%	63.3%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	60.4	68.4	68.4	40.6				
Actuated g/C Ratio	0.50	0.57	0.57	0.34				
v/c Ratio	1.11	0.88	0.50	0.62				
Control Delay	88.1	88.9	3.5	35.9				
Queue Delay	7.7	0.0	0.1	0.0				
Total Delay	95.8	88.9	3.6	35.9				
LOS	F	F	A	D				
Approach Delay	95.8		14.1	35.9				
Approach LOS	F		B	D				
Queue Length 50th (ft)	~924	76	46	173				
Queue Length 95th (ft)	#820	m#130	m54	220				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1772	155	1950	547				
Starvation Cap Reductn	0	0	160	0				
Spillback Cap Reductn	28	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.13	0.88	0.55	0.51				

Intersection Summary

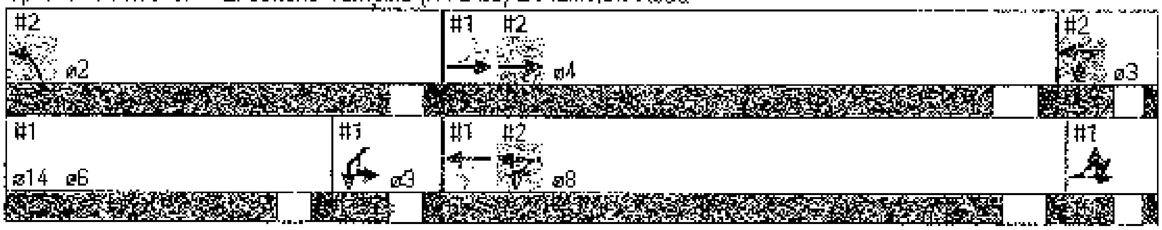
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 63.7 Intersection LOS: E
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1543	11	786	110	0	1	0
Lane Group Flow (vph)	16	1784	12	856	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.63	0.08	0.30		0.79		0.05
Control Delay	2.7	5.8	3.9	3.3		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.8	3.9	3.3		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.8		3.4		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	235	2	74		103		1
Queue Length 95th (ft)	6	285	6	92		#206		17
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	461	2827	147	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.63	0.08	0.30		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	212	146	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	236	159	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	427	172	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427	172	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	580	872	1390			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	246	185
Volume Left	30	10	0
Volume Right	11	0	26
cSH	637	1390	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR2	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	75	27	697	7	812	11	1	0	3	63	1	0
Lane Group Flow (vph)	0	112	786	7	899	0	13	4	0	0	173	47
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	11.0	11.0	77.0	66.0	66.0	32.0	32.0	32.0	32.0	32.0	32.0	11.0
Total Split (%)	9.2%	9.2%	64.2%	55.0%	55.0%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	9.2%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		76.2	80.2	66.5	69.2		19.4	19.4			19.4	7.5
Actuated g/C Ratio		0.64	0.67	0.55	0.58		0.16	0.16			0.16	0.06
v/c Ratio		0.32	0.33	0.02	0.44		0.06	0.01			0.74	0.46
Control Delay		3.5	2.3	15.9	16.7		39.8	0.0			65.6	69.0
Queue Delay		0.0	0.1	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		3.5	2.5	15.9	16.7		39.8	0.0			65.6	69.0
LOS		A	A	B	B		D	A			E	E
Approach Delay			2.6		16.7		30.5				65.6	69.0
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		0	25	3	216		9	0			129	35
Queue Length 95th (ft)		11	30	11	285		26	0			162	#66
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		345	2358	323	2023		314	549			320	103
Starvation Cap Reductn		4	585	0	0		0	0			0	0
Spillback Cap Reductn		0	0	0	0		0	0			0	0
Storage Cap Reductn		0	0	0	0		0	0			0	0
Reduced v/c Ratio		0.33	0.44	0.02	0.44		0.04	0.01			0.54	0.46

Intersection Summary

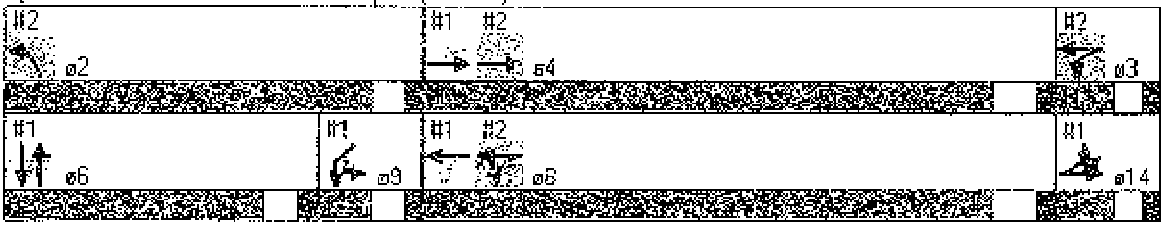
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 83.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	43.0	11.0	66.0
Total Split (%)	36%	9%	55%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive

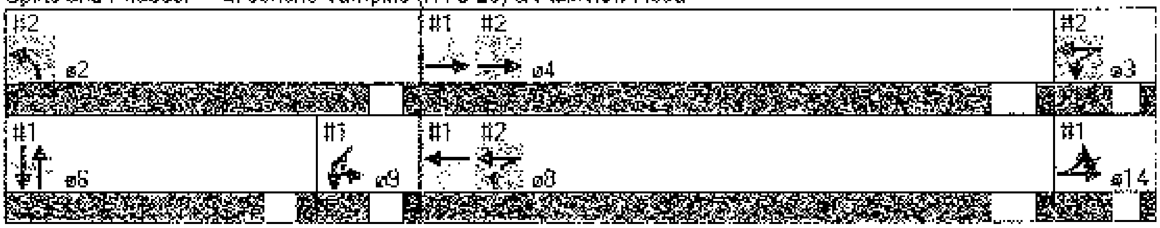


Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	763	69	841	65				
Lane Group Flow (vph)	913	72	876	163				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	66.0	11.0	77.0	43.0	32.0	66.0	11.0	11.0
Total Split (%)	55.0%	9.2%	64.2%	35.8%	27%	55%	9%	9%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	69.2	76.2	80.2	31.8				
Actuated g/C Ratio	0.58	0.64	0.67	0.26				
v/c Ratio	0.45	0.21	0.38	0.37				
Control Delay	16.6	18.6	2.1	36.5				
Queue Delay	0.0	0.0	0.1	0.0				
Total Delay	16.6	18.6	2.2	36.5				
LOS	B	B	A	D				
Approach Delay	16.6		3.5	36.5				
Approach LOS	B		A	D				
Queue Length 50th (ft)	217	27	30	98				
Queue Length 95th (ft)	268	49	33	121				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	2022	339	2287	535				
Starvation Cap Reductn	0	0	391	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.45	0.21	0.46	0.30				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 45.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

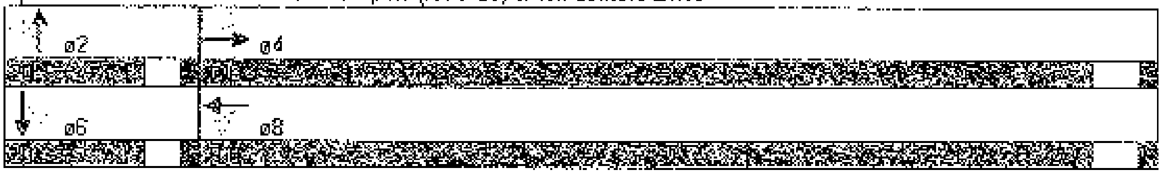


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	931	18	1068	106	2	5	0
Lane Group Flow (vph)	22	1122	20	1186	0	139	0	30
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.0		15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.07	0.40	0.06	0.42		0.74		0.14
Control Delay	3.1	3.7	2.9	3.9		71.3		21.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	3.1	3.7	2.9	3.9		71.3		21.4
LOS	A	A	A	A		E		C
Approach Delay		3.7		3.9		71.3		21.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	3	104	3	116		99		3
Queue Length 95th (ft)	9	128	8	142		#192		32
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	317	2820	341	2849		200		236
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.07	0.40	0.06	0.42		0.69		0.13

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 50.8% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	7	3	136	139	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.36	0.36	0.81	0.81	0.84	0.84
Hourly flow rate (vph)	8	19	4	168	165	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	350	174	183			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350	174	183			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	646	869	1392			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	172	183
Volume Left	8	4	0
Volume Right	19	0	18
cSH	787	1392	1700
Volume to Capacity	0.04	0.00	0.11
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.7	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

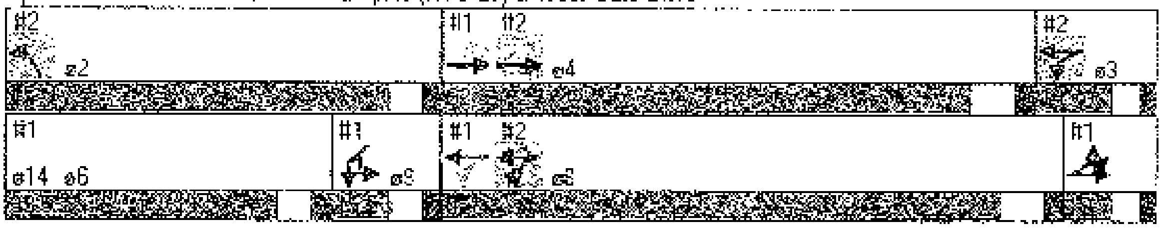
BUILD WITH MITIGATION (PM)

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	104	13	1375	7	806	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	150	1786	8	956	0	13	4	0	165	142	52
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	72.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	60.0%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		72.9	72.9	67.2	69.9		18.3	18.3		19.9	18.3	8.8
Actuated g/C Ratio		0.61	0.61	0.56	0.58		0.15	0.15		0.17	0.15	0.07
v/c Ratio		0.50	0.83	0.13	0.47		0.06	0.01		0.51	0.59	0.42
Control Delay		4.3	6.3	22.9	16.7		41.9	0.0		56.4	56.8	63.2
Queue Delay		0.1	1.1	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		4.5	7.4	22.9	16.7		41.9	0.0		56.4	56.8	63.2
LOS		A	A	C	B		D	A		E	E	E
Approach Delay			7.2		16.7		32.1				56.6	63.2
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		1	66	3	222		9	0		114	105	39
Queue Length 95th (ft)		m2	63	16	315		26	0		157	146	67
Internal Link Dist (ft)			173		475		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		302	2148	63	2036		327	420		377	369	123
Starvation Cap Reductn		7	163	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.51	0.90	0.13	0.47		0.04	0.01		0.41	0.38	0.42

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 15.5 Intersection LOS: B
Intersection Capacity Utilization 96.6% ICU Level of Service F
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	13.0	62.0
Total Split (%)	38%	11%	52%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

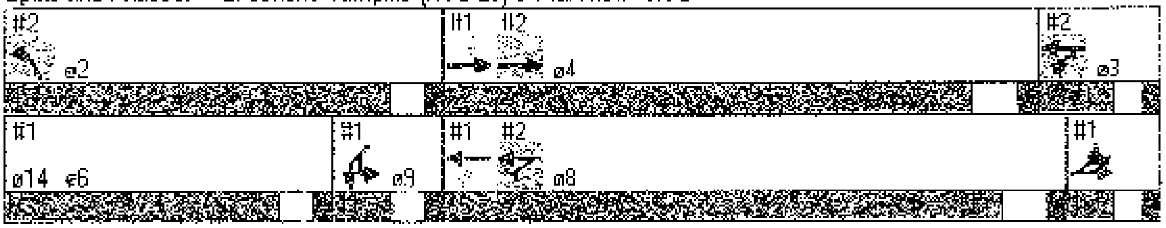
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations	↑↱	↰	↑↑	Y				
Volume (vph)	1371	110	842	53				
Lane Group Flow (vph)	1630	120	915	243				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	62.0	13.0	78.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	51.7%	10.8%	65.0%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.9	78.9	78.9	32.1				
Actuated g/C Ratio	0.56	0.66	0.66	0.27				
v/c Ratio	0.93	0.65	0.41	0.57				
Control Delay	35.8	69.8	3.0	41.9				
Queue Delay	0.2	0.0	0.1	0.0				
Total Delay	36.1	69.8	3.0	41.9				
LOS	D	E	A	D				
Approach Delay	36.1		10.8	41.9				
Approach LOS	D		B	D				
Queue Length 50th (ft)	683	62	41	159				
Queue Length 95th (ft)	#715	#135	48	180				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1965	184	2251	547				
Starvation Cap Reductn	0	0	212	0				
Spillback Cap Reductn	10	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.94	0.65	0.45	0.44				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1434	11	725	110	0	1	0
Lane Group Flow (vph)	16	1666	12	790	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.59	0.07	0.28		0.79		0.05
Control Delay	2.7	5.3	3.5	3.2		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.3	3.5	3.2		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.3		3.2		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	205	2	66		103		1
Queue Length 95th (ft)	6	248	6	84		#206		17
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	496	2825	172	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.59	0.07	0.28		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	184	131	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	204	142	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	380	155	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	380	155	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	618	890	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	214	168
Volume Left	30	10	0
Volume Right	11	0	26
cSH	673	1409	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.7	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.4	0.0
Approach LOS	B		

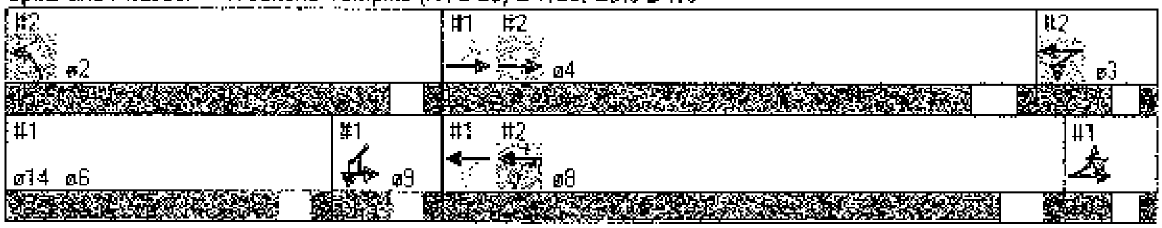
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	106	13	1387	7	824	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	153	1801	8	976	0	13	4	0	155	146	52
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	72.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	60.0%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		72.7	72.7	67.0	69.7		18.5	18.5		20.1	18.5	8.8
Actuated g/C Ratio		0.61	0.61	0.56	0.58		0.15	0.15		0.17	0.15	0.07
v/c Ratio		0.52	0.84	0.12	0.48		0.06	0.01		0.60	0.60	0.42
Control Delay		5.1	6.5	22.6	16.9		41.8	0.0		56.0	57.2	63.2
Queue Delay		0.1	1.6	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		5.2	8.1	22.6	16.9		41.8	0.0		56.0	57.2	63.2
LOS		A	A	C	B		D	A		E	E	E
Approach Delay			7.9		16.9		32.0				56.5	63.2
Approach LOS			A		B		C				E	E
Queue Length 50th (ft)		2	70	3	227		9	0		114	108	39
Queue Length 95th (ft)		m2	66	16	323		26	0		157	150	67
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		293	2142	64	2032		327	420		377	369	123
Starvation Cap Reductn		5	183	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.53	0.92	0.13	0.48		0.04	0.01		0.41	0.40	0.42

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 97.1% ICU Level of Service F
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	13.0	62.0
Total Split (%)	38%	11%	52%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

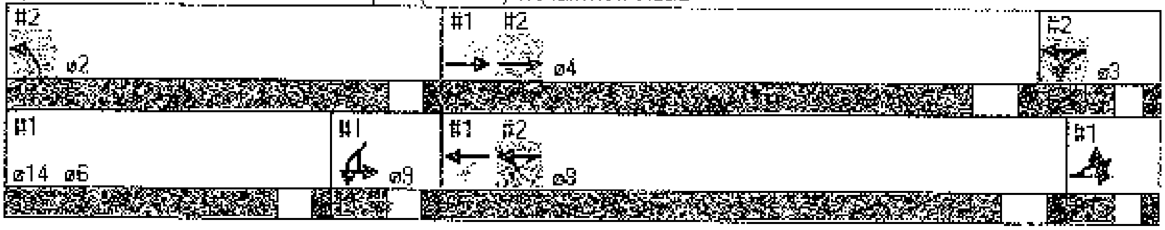
Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1379	117	856	61				
Lane Group Flow (vph)	1865	127	930	261				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	62.0	13.0	78.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	51.7%	10.8%	65.0%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.7	78.7	78.7	32.3				
Actuated g/C Ratio	0.56	0.66	0.66	0.27				
v/c Ratio	0.95	0.69	0.41	0.61				
Control Delay	38.9	73.5	2.9	43.2				
Queue Delay	0.5	0.0	0.0	0.0				
Total Delay	39.4	73.5	3.0	43.2				
LOS	D	E	A	D				
Approach Delay	39.4		11.4	43.2				
Approach LOS	D		B	D				
Queue Length 50th (ft)	712	70	40	173				
Queue Length 95th (ft)	#769	#157	46	204				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1955	184	2245	548				
Starvation Cap Reductn	0	0	189	0				
Spillback Cap Reductn	12	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0.96	0.69	0.45	0.48				

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 30.4 Intersection LOS: C
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

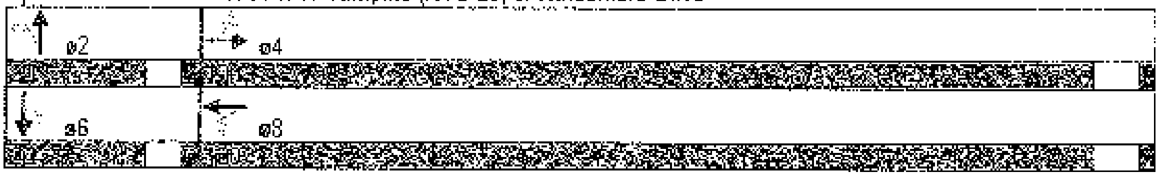


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1471	11	739	110	0	1	0
Lane Group Flow (vph)	16	1706	12	805	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.60	0.07	0.28		0.79		0.05
Control Delay	2.7	5.5	3.6	3.3		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.5	3.6	3.3		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.5		3.3		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	215	2	68		103		1
Queue Length 95th (ft)	6	260	6	85		#206		17
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	487	2828	163	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.60	0.07	0.28		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	196	137	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	218	149	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	400	162	175			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	400	162	175			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	602	883	1401			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	228	175
Volume Left	30	10	0
Volume Right	11	0	26
cSH	658	1401	1700
Volume to Capacity	0.06	0.01	0.10
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.8	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

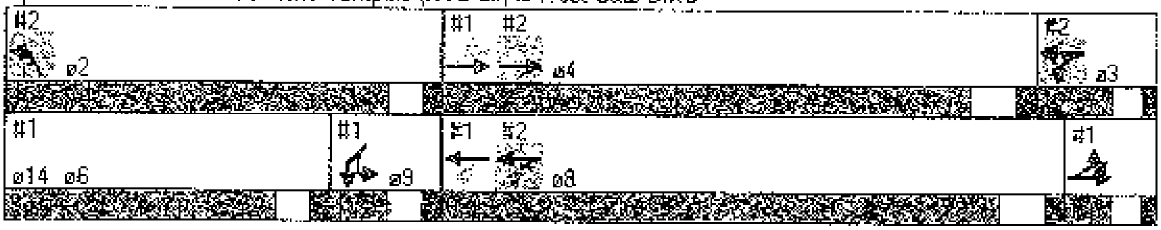
1: Jericho Turnpike (NYS 25) & West Gate Drive

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	115	22	1422	7	845	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	175	1846	8	998	0	13	4	0	155	152	59
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	72.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	60.0%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		72.1	72.1	66.4	69.1		18.7	18.7		20.3	18.7	9.4
Actuated g/C Ratio		0.60	0.60	0.55	0.58		0.16	0.16		0.17	0.16	0.08
v/c Ratio		0.62	0.87	0.13	0.50		0.06	0.01		0.60	0.62	0.45
Control Delay		8.7	7.4	22.9	17.4		41.8	0.0		55.7	58.1	63.6
Queue Delay		0.0	3.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		8.7	10.6	22.9	17.4		41.8	0.0		55.7	58.1	63.6
LOS		A	B	C	B		D	A		E	E	E
Approach Delay			10.4		17.5		32.0				56.9	63.6
Approach LOS			B		B		C				E	E
Queue Length 50th (ft)		3	73	3	239		9	0		114	113	44
Queue Length 95th (ft)		m5	69	16	334		26	0		157	156	74
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)		253		75						100		
Base Capacity (vph)		282	2124	63	2015		326	419		377	369	131
Starvation Cap Reductn		0	192	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.62	0.96	0.13	0.50		0.04	0.01		0.41	0.41	0.45

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 17.7 Intersection LOS: B
Intersection Capacity Utilization 98.6% ICU Level of Service F
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	13.0	62.0
Total Split (%)	38%	11%	52%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1423	122	882	61				
Lane Group Flow (vph)	1921	133	959	272				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	62.0	13.0	78.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	51.7%	10.8%	65.0%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	66.1	78.1	78.1	32.9				
Actuated g/C Ratio	0.55	0.65	0.65	0.27				
v/c Ratio	0.99	0.72	0.43	0.62				
Control Delay	46.5	76.7	3.2	43.3				
Queue Delay	6.2	0.0	0.0	0.1				
Total Delay	52.7	76.7	3.2	43.4				
LOS	D	E	A	D				
Approach Delay	52.7		12.2	43.4				
Approach LOS	D		B	D				
Queue Length 50th (ft)	~832	74	43	180				
Queue Length 95th (ft)	#811	#163	51	213				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1938	184	2228	548				
Starvation Cap Reductn	0	0	173	0				
Spillback Cap Reductn	47	0	0	11				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.02	0.72	0.47	0.51				

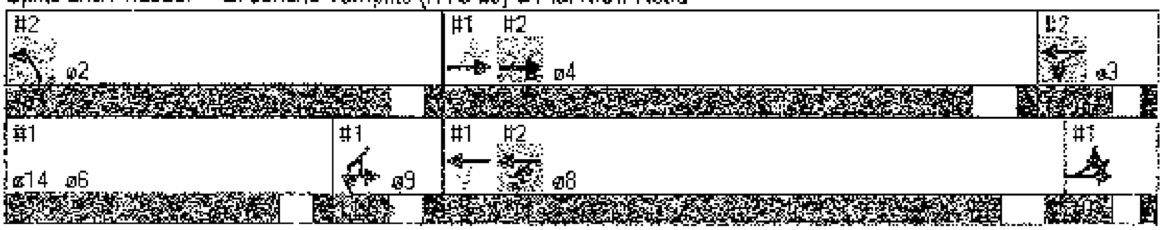
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 38.5 Intersection LOS: D
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road

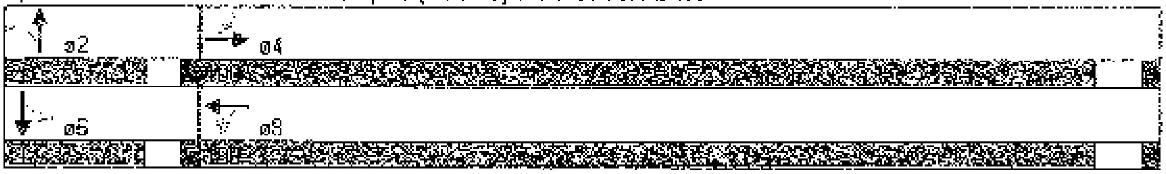


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1515	11	765	110	0	4	0
Lane Group Flow (vph)	16	1764	12	834	0	142	0	13
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.62	0.08	0.29		0.79		0.06
Control Delay	2.7	5.7	3.8	3.3		77.6		28.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.7	3.8	3.3		77.6		28.5
LOS	A	A	A	A		E		C
Approach Delay		5.7		3.3		77.6		28.5
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	227	2	71		103		3
Queue Length 95th (ft)	6	274	6	90		#207		22
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	473	2828	152	2850		189		220
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.62	0.08	0.29		0.75		0.06

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	205	142	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	228	154	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	415	167	180			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	415	167	180			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	589	877	1395			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	238	180
Volume Left	30	10	0
Volume Right	11	0	26
cSH	647	1395	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.9	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	0.4	0.0
Approach LOS	B		

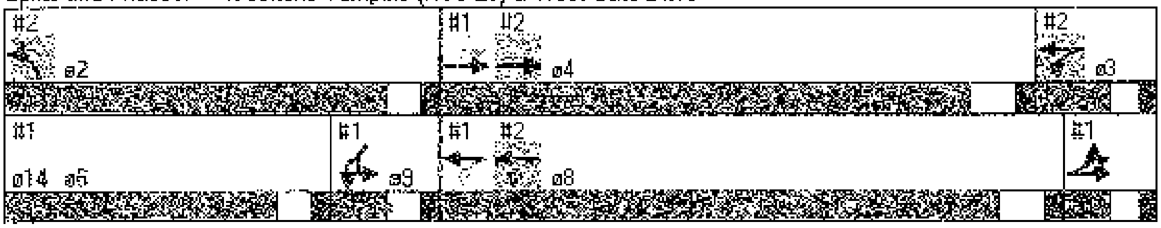
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL2	SBL	SBT	SWL
Lane Configurations												
Volume (vph)	122	29	1451	7	862	11	1	0	19	108	1	0
Lane Group Flow (vph)	0	193	1883	8	1017	0	13	4	0	155	157	64
Turn Type	custom	custom		Perm		Perm		Perm	Perm	Perm		
Protected Phases	14	14	4 14		8		6				6	9
Permitted Phases	4	4		8		6		6	6	6		
Detector Phase	14	14	4 14	8	8	6	6	6	6	6	6	9
Switch Phase												
Minimum Initial (s)	4.0	4.0		30.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.0	9.0		36.7	36.7	16.0	16.0	16.0	16.0	16.0	16.0	10.0
Total Split (s)	10.0	10.0	72.0	65.0	65.0	33.5	33.5	33.5	33.5	33.5	33.5	11.5
Total Split (%)	8.3%	8.3%	60.0%	54.2%	54.2%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	9.6%
Yellow Time (s)	3.0	3.0		4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.7	0.0	-2.7	0.0	0.0	0.0	-1.6	-1.6	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	6.7	4.0	5.6	5.6	5.6	4.0	4.0	5.6	5.6
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		C-Max	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)		70.5	70.5	64.8	67.5		17.4	17.4		19.9	17.4	9.9
Actuated g/C Ratio		0.59	0.59	0.54	0.56		0.14	0.14		0.16	0.14	0.08
v/c Ratio		0.71	0.91	0.13	0.52		0.07	0.01		0.64	0.68	0.47
Control Delay		10.4	8.2	23.1	18.3		42.0	0.0		58.3	63.1	63.6
Queue Delay		0.0	9.2	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		10.4	17.5	23.1	18.3		42.0	0.0		58.3	63.1	63.6
LOS		B	B	C	B		D	A		E	E	E
Approach Delay			16.8		18.3		32.1				60.9	63.6
Approach LOS			B		B		C				E	E
Queue Length 50th (ft)		12	76	3	249		9	0		114	117	48
Queue Length 95th (ft)		m21	72	15	342		26	0		157	160	79
Internal Link Dist (ft)			173		476		304				364	375
Turn Bay Length (ft)				75								
Base Capacity (vph)		270	2077	62	1968		321	419		377	369	137
Starvation Cap Reductn		0	196	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.71	1.00	0.13	0.52		0.04	0.01		0.41	0.43	0.47

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 99.9% ICU Level of Service F
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Jericho Turnpike (NYS 25) & West Gate Drive



Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	3.4	30.0
Minimum Split (s)	21.6	9.0	36.7
Total Split (s)	45.0	13.0	62.0
Total Split (%)	38%	11%	52%
Yellow Time (s)	3.6	3.0	4.7
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Recall Mode	None	None	C-Max
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	ø6	ø8	ø9	ø14
Lane Configurations								
Volume (vph)	1459	126	903	61				
Lane Group Flow (vph)	1968	137	982	281				
Turn Type		custom						
Protected Phases	4	3	8 3	2	6	8	9	14
Permitted Phases		8						
Detector Phase	4	3	8 3	2				
Switch Phase								
Minimum Initial (s)	30.0	3.4		4.0	10.0	30.0	4.0	4.0
Minimum Split (s)	36.7	9.0		21.6	16.0	36.7	10.0	9.0
Total Split (s)	62.0	13.0	78.0	45.0	33.5	65.0	11.5	10.0
Total Split (%)	51.7%	10.8%	65.0%	37.5%	28%	54%	10%	8%
Yellow Time (s)	4.7	3.0		3.6	3.6	4.7	3.6	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.7	-1.0	-2.7	-1.6				
Total Lost Time (s)	4.0	4.0	4.0	4.0				
Lead/Lag	Lead	Lag				Lead		Lag
Lead-Lag Optimize?	Yes	Yes				Yes		Yes
Recall Mode	C-Max	None		None	None	C-Max	None	None
Act Effct Green (s)	64.5	76.5	76.5	34.5				
Actuated g/C Ratio	0.54	0.64	0.64	0.29				
v/c Ratio	1.04	0.74	0.45	0.61				
Control Delay	60.3	78.3	3.5	42.2				
Queue Delay	8.7	0.0	0.1	0.4				
Total Delay	69.1	78.3	3.5	42.5				
LOS	E	E	A	D				
Approach Delay	69.1		12.7	42.5				
Approach LOS	E		B	D				
Queue Length 50th (ft)	~881	76	46	186				
Queue Length 95th (ft)	#845	#170	54	220				
Internal Link Dist (ft)	2935		173	269				
Turn Bay Length (ft)								
Base Capacity (vph)	1893	184	2182	547				
Starvation Cap Reductn	0	0	172	0				
Spillback Cap Reductn	40	0	0	52				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	1.06	0.74	0.49	0.57				

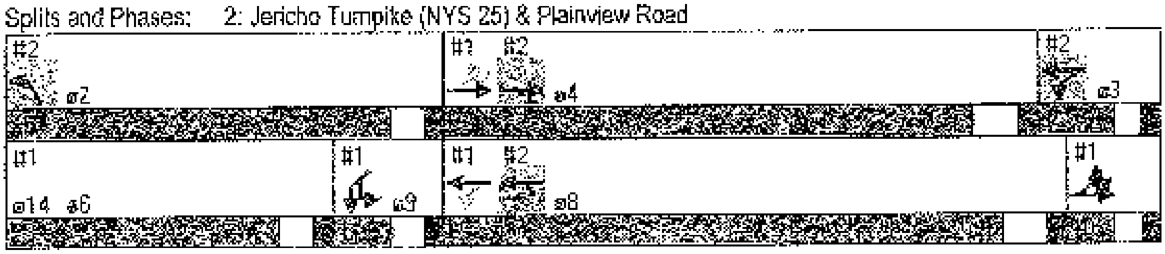
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 48.1 Intersection LOS: D
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Jericho Turnpike (NYS 25) & Plainview Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	1543	11	786	110	0	1	0
Lane Group Flow (vph)	16	1784	12	856	0	142	0	10
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	23.0	23.0	14.4	14.4	14.4	14.4
Total Split (s)	100.0	100.0	100.0	100.0	20.0	20.0	20.0	20.0
Total Split (%)	83.3%	83.3%	83.3%	83.3%	16.7%	16.7%	16.7%	16.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-1.6	-1.6	-1.6	-1.6
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)	96.0	96.0	96.0	96.0		15.2		15.2
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.13		0.13
v/c Ratio	0.03	0.63	0.08	0.30		0.79		0.05
Control Delay	2.7	5.8	3.9	3.3		77.5		25.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	2.7	5.8	3.9	3.3		77.5		25.4
LOS	A	A	A	A		E		C
Approach Delay		5.8		3.4		77.5		25.4
Approach LOS		A		A		E		C
Queue Length 50th (ft)	2	235	2	74		103		1
Queue Length 95th (ft)	6	285	6	92		#206		17
Internal Link Dist (ft)		421		2935		413		377
Turn Bay Length (ft)	100		200					
Base Capacity (vph)	461	2827	147	2850		189		223
Starvation Cap Reductn	0	0	0	0		0		0
Spillback Cap Reductn	0	0	0	0		0		0
Storage Cap Reductn	0	0	0	0		0		0
Reduced v/c Ratio	0.03	0.63	0.08	0.30		0.75		0.04

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 119.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jericho Turnpike (NYS 25) & Windemere Drive

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	7	9	212	146	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	30	11	10	236	159	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					971	
pX, platoon unblocked						
vC, conflicting volume	427	172	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427	172	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	580	872	1390			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	246	185
Volume Left	30	10	0
Volume Right	11	0	26
cSH	637	1390	1700
Volume to Capacity	0.06	0.01	0.11
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix F-3

Trip Generation for Project Alternatives

Trip Generation for Project Alternative 2:
As of Right Zoning

Summary of Trip Generation Calculation
For 15 Dwelling Units of Single Family Detached Housing
March 02, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	12.10	0.00	1.00	182
7-9 AM Peak Hour Enter	0.34	0.00	1.00	5
7-9 AM Peak Hour Exit	1.01	0.00	1.00	15
7-9 AM Peak Hour Total	1.35	0.00	1.00	20
4-6 PM Peak Hour Enter	0.80	0.00	1.00	12
4-6 PM Peak Hour Exit	0.47	0.00	1.00	7
4-6 PM Peak Hour Total	1.27	0.00	1.00	19
AM Pk Hr, Generator, Enter	0.40	0.00	1.00	6
AM Pk Hr, Generator, Exit	1.13	0.00	1.00	17
AM Pk Hr, Generator, Total	1.52	0.00	1.00	23
PM Pk Hr, Generator, Enter	0.86	0.00	1.00	13
PM Pk Hr, Generator, Exit	0.48	0.00	1.00	7
PM Pk Hr, Generator, Total	1.34	0.00	1.00	20
Saturday 2-Way Volume	11.64	0.00	1.00	175
Saturday Peak Hour Enter	0.81	0.00	1.00	12
Saturday Peak Hour Exit	0.72	0.00	1.00	11
Saturday Peak Hour Total	1.53	0.00	1.00	23
Sunday 2-Way Volume	7.95	0.00	1.00	119
Sunday Peak Hour Enter	0.59	0.00	1.00	9
Sunday Peak Hour Exit	0.52	0.00	1.00	8
Sunday Peak Hour Total	1.11	0.00	1.00	17

Note: A zero indicates no data available.
The above rates were calculated from these equations:

```
24-Hr. 2-Way Volume:    LN(T) = .92LN(X) + 2.71, R^2 = 0.96
7-9 AM Peak Hr. Total:  T = .7(X) + 9.74
                        R^2 = 0.89 , 0.25 Enter, 0.75 Exit
4-6 PM Peak Hr. Total:  LN(T) = .9LN(X) + .51
                        R^2 = 0.91 , 0.63 Enter, 0.37 Exit
AM Gen Pk Hr. Total:    T = .7(X) + 12.39
                        R^2 = 0.89 , 0.26 Enter, 0.74 Exit
PM Gen Pk Hr. Total:    LN(T) = .88LN(X) + .62
                        R^2 = 0.91 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume:      LN(T) = .95LN(X) + 2.59, R^2 = 0.92
Sat. Pk Hr. Total:      T = .89(X) + 9.56
                        R^2 = 0.91 , 0.53 Enter, 0.47 Exit
Sun. 2-Way Volume:      T = 8.84(X) + -13.31, R^2 = 0.94
Sun. Pk Hr. Total:      LN(T) = .91LN(X) + .35
                        R^2 = 0.87 , 0.53 Enter, 0.47 Exit
```

Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

Trip Generation for Project Alternative 3: No Age Restriction

Summary of Trip Generation Calculation
For 80 Dwelling Units of Residential Condominium / Townhouse
March 02, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.62	0.00	1.00	530
7-9 AM Peak Hour Enter	0.09	0.00	1.00	7
7-9 AM Peak Hour Exit	0.45	0.00	1.00	36
7-9 AM Peak Hour Total	0.54	0.00	1.00	43
4-6 PM Peak Hour Enter	0.42	0.00	1.00	34
4-6 PM Peak Hour Exit	0.21	0.00	1.00	17
4-6 PM Peak Hour Total	0.63	0.00	1.00	50
AM Pk Hr, Generator, Enter	0.10	0.00	1.00	8
AM Pk Hr, Generator, Exit	0.43	0.00	1.00	34
AM Pk Hr, Generator, Total	0.53	0.00	1.00	42
PM Pk Hr, Generator, Enter	0.50	0.00	1.00	40
PM Pk Hr, Generator, Exit	0.28	0.00	1.00	23
PM Pk Hr, Generator, Total	0.79	0.00	1.00	63
Saturday 2-Way Volume	8.97	0.00	1.00	718
Saturday Peak Hour Enter	0.44	0.00	1.00	36
Saturday Peak Hour Exit	0.38	0.00	1.00	30
Saturday Peak Hour Total	0.82	0.00	1.00	66
Sunday 2-Way Volume	7.60	0.00	1.00	608
Sunday Peak Hour Enter	0.42	0.00	1.00	34
Sunday Peak Hour Exit	0.44	0.00	1.00	35
Sunday Peak Hour Total	0.86	0.00	1.00	68

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume: LN(T) = .87LN(X) + 2.46, R^2 = 0.8
7-9 AM Peak Hr. Total: LN(T) = .8LN(X) + .26
R^2 = 0.76 , 0.17 Enter, 0.83 Exit
4-6 PM Peak Hr. Total: LN(T) = .82LN(X) + .32
R^2 = 0.8 , 0.67 Enter, 0.33 Exit
AM Gen Pk Hr. Total: LN(T) = .82LN(X) + .15
R^2 = 0.8 , 0.19 Enter, 0.81 Exit
PM Gen Pk Hr. Total: T = .34(X) + 35.87
R^2 = 0.82 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume: T = 3.62(X) + 427.93, R^2 = 0.84
Sat. Pk Hr. Total: T = .29(X) + 42.63
R^2 = 0.84 , 0.54 Enter, 0.46 Exit
Sun. 2-Way Volume: T = 3.13(X) + 357.26, R^2 = 0.88
Sun. Pk Hr. Total: T = .23(X) + 50.01
R^2 = 0.78 , 0.49 Enter, 0.51 Exit

Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

Summary of Trip Generation Calculation
For 3 Dwelling Units of Single Family Detached Housing
March 02, 2010

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	13.76	0.00	1.00	41
7-9 AM Peak Hour Enter	0.99	0.00	1.00	3
7-9 AM Peak Hour Exit	2.96	0.00	1.00	9
7-9 AM Peak Hour Total	3.95	0.00	1.00	12
4-6 PM Peak Hour Enter	0.94	0.00	1.00	3
4-6 PM Peak Hour Exit	0.55	0.00	1.00	2
4-6 PM Peak Hour Total	1.49	0.00	1.00	4
AM Pk Hr, Generator, Enter	1.25	0.00	1.00	4
AM Pk Hr, Generator, Exit	3.57	0.00	1.00	11
AM Pk Hr, Generator, Total	4.82	0.00	1.00	14
PM Pk Hr, Generator, Enter	1.04	0.00	1.00	3
PM Pk Hr, Generator, Exit	0.59	0.00	1.00	2
PM Pk Hr, Generator, Total	1.63	0.00	1.00	5
Saturday 2-Way Volume	12.62	0.00	1.00	38
Saturday Peak Hour Enter	2.16	0.00	1.00	6
Saturday Peak Hour Exit	1.92	0.00	1.00	6
Saturday Peak Hour Total	4.08	0.00	1.00	12
Sunday 2-Way Volume	4.40	0.00	1.00	13
Sunday Peak Hour Enter	0.60	0.00	1.00	2
Sunday Peak Hour Exit	0.69	0.00	1.00	2
Sunday Peak Hour Total	1.29	0.00	1.00	4

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .92LN(X) + 2.71, R^2 = 0.96
7-9 AM Peak Hr. Total:	T = .7(X) + 9.74
	R^2 = 0.89 , 0.25 Enter, 0.75 Exit
4-6 PM Peak Hr. Total:	LN(T) = .9LN(X) + .51
	R^2 = 0.91 , 0.63 Enter, 0.37 Exit
AM Gen Pk Hr. Total:	T = .7(X) + 12.37
	R^2 = 0.89 , 0.26 Enter, 0.74 Exit
PM Gen Pk Hr. Total:	LN(T) = .88LN(X) + .62
	R^2 = 0.91 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume:	LN(T) = .95LN(X) + 2.59, R^2 = 0.92
Sat. Pk Hr. Total:	T = .89(X) + 9.96
	R^2 = 0.91 , 0.53 Enter, 0.47 Exit
Sun. 2-Way Volume:	T = 8.84(X) + -13.31, R^2 = 0.94
Sun. Pk Hr. Total:	LN(T) = .91LN(X) + .35
	R^2 = 0.87 , 0.53 Enter, 0.47 Exit

Source: Institute of Transportation Engineers
Trip Generation, 8th Edition, 2008.

TRIP GENERATION BY MICROTRANS

APPENDIX G

COMMUNITY SERVICE CORRESPONDENCE

NP&V

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL - PLANNING - CONSULTING

CHARLES J. VOORHIS, CEP, AICP • VICTOR BERT, P.E. • ARTHUR J. KOERBER, P.E.
JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E. • PAUL M. RACZ, P.L.S.
THOMAS F. LEMBO, P.E. • GREGORY D. PETERMAN, P.L.S.
GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

October 18, 2006

Peter Logan, Supt.
Jericho Water District
125 Convent Road
Syosset, NY 11791
516. 921. 8280

Kevin Carroll, Supt.
South Huntington Water District
75 5th Avenue South
Huntington Station, NY 11746

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Superintendent Logan/Supt. Carroll:

Nelson, Pope & Voorhis is an environmental and planning consulting firm located in Melville, New York. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 136 age-restricted town houses and flats (109 units are in the Town of Huntington and 27 units are located in the Town of Oyster Bay). The project proposes in total twenty-two (22) one bedroom flats (11 of which are to be affordable), 22 two bedroom flats and 92 two-bedroom townhouses. A more detailed project description as well as a location map and site plan are attached.

As you will note, the project falls within the Jericho and Huntington Water Districts. Consequently, we are attempting to secure a Letter of Water Availability with the appropriate Water District. Based on calls to your office, it was determined that water would be supplied by the Jericho Water District. It is anticipated that the project will require approximately 61,905 gallons of potable water per day (based upon Nassau County Sanitary Flow standards as noted below).

Unit Type	Number of Units	Design Flow	Total
1-BR Flat	22	275 GPD	6,050 GPD
2-BR Flat	22	475 GPD	10,450 GPD
2-BR Townhouse	92	475 GPD	43,700 GPD
Tennis Court	2	200 GPD	400 GPD
Pool	128 bathers	5 GPD	640 GPD
Recreation Facility	2,215 SF	.3 GPD	6.65 GPD
TOTAL		61,905 GPD	

Your response will be included in our final report. Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

NELSON, POPE & VOORHIS, LLC

Gary Pappas

Gary Pappas, Senior Planner

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

CHARLES J. VOORHIS, CEP, AICP • VICTOR BERT, P.E. • ARTHUR J. KOERBER, P.E.
JOSEPH R. EPIFANIA, P.E. • ROBERT G. NELSON, JR., P.E. • PAUL M. RACZ, P.L.S.
THOMAS F. LEMBO, P.E. • GREGORY D. PETERMAN, P.L.S.
GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

March 4, 2008

Huntington Community First Aid Squad
2 Railroad Street
Huntington Station, NY 11746

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Sir or Madame:

Nelson, Pope & Voorhis, LLC is an environmental and planning consulting firm located in Melville. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 80 age-restricted town houses, flats and single family houses. A more detailed project description as well as a location map and site plan are attached.

Specifically, I am writing to obtain information regarding the Huntington Community First Aid Squad facilities relative to servicing the site including the location of the station which would serve the site, service available to serve the site and any other information you may deem pertinent.

Your response will be included in our final report. Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

Nelson, Pope & Voorhis, LLC

Kristen L. McCabe

Kristen McCabe
Environmental Planner

572 WALT WHITMAN ROAD, MELVILLE, NY 11747 • 2188
(631) 427-5665 FAX (631) 427-5620 WWW.NELSONPOPE.COM

NELSON, POPE & VOORHIS, LLC
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GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

October 18, 2006

Scott Metzger
Fire Inspector
Huntington Manor Fire Dept.
1650 New York Avenue
Huntington Station, NY
11746

Dennis Hendrickson, Commissioner
Syosset Fire District
50 Cold Spring Road
Syosset, NY

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Inspector Metzger/Commissioner Hendrickson:

Nelson, Pope & Voorhis is an environmental and planning consulting firm located in Melville, New York. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 136 age-restricted town houses and flats (109 units are in the Town of Huntington and 27 units are located in the Town of Oyster Bay). The project proposes in total twenty-two (22) one bedroom flats (11 of which are to be affordable), 22 two bedroom flats and 92 two-bedroom townhouses. A more detailed project description as well as a location map and site plan are attached.

As you will note in the project description, the project is located partially in both the Syosset Fire District and the Huntington Manor District. Consequently, we are attempting to ascertain jurisdictional responsibilities regarding fire service. Specifically the location of substations to serve the site, the availability of major fire fighting equipment which may be required and most importantly any additional information you may deem appropriate. Information regarding ambulance/emergency response service would as well be helpful. Your response will be included in our final report.

Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

NELSON, POPE & VOORHIS, LLC

Gary Pappas

Gary Pappas, Senior Planner

572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
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GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

October 18, 2006

Inspector Joseph Blaettler
Suffolk County Police Dept.
Second Precinct
1071 Park Avenue
Huntington, NY 11743

Richard Meyer, Deputy Inspector
Nassau County Police Dept.
Second Precinct
7700 Jericho Tpke
Woodbury, NY 11797

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Inspector Blaettler/Deputy Inspector Meyer:

Nelson, Pope & Voorhis is an environmental and planning consulting firm located in Melville, New York. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 136 age-restricted town houses and flats (109 units are in the Town of Huntington and 27 units are located in the Town of Oyster Bay). The project proposes in total twenty-two (22) one bedroom flats (11 of which are to be affordable), 22 two bedroom flats and 92 two-bedroom townhouses. A more detailed project description as well as a location map and site plan are attached.

As you will note, the proposed project is located in dual jurisdictions. Consequently, I am writing to ascertain jurisdictional responsibilities relative to providing police protection for this site. Specifically, I would like to confirm the location of the local station house which would serve the site and to solicit any information you may deem appropriate. Your response will be included in our final report.

Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

NELSON, POPE & VOORHIS, LLC
Gary Pappas
Gary Pappas, Senior Planner

572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
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THOMAS F. LEMBO, P.E. • GREGORY D. PETERMAN, P.L.S.
GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

October 23, 2006

KeySpan Energy/Gas
175 Old Country Road
Hicksville, NY 11801
Attn: Ken Camilleri

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Mr. Camilleri:

Nelson, Pope & Voorhis is an environmental and planning consulting firm located in Melville, New York. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 136 age-restricted town houses and flats (109 units are in the Town of Huntington and 27 units are located in the Town of Oyster Bay). The project proposes in total twenty-two (22) one bedroom flats (11 of which are to be affordable), 22 two bedroom flats and 92 two-bedroom townhouses. A more detailed project description as well as a location map and site plan are attached.

I am writing to obtain information relative to natural gas and electric service available to serve the site. Your response will be included in our final report.

Thank you for you time and attention. Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

Nelson, Pope & Voorhis, LLC

Gary Pappas

Gary Pappas, Senior Planner

GP
File ✓

572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620 WWW.NELSONPOPE.COM

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THOMAS F. LEMBO, P.E. • GREGORY D. PETERMAN, P.L.S.
GARY S. BECKER, P.E. • ERIC J. McFERRAN, P.E.

October 23, 2006

Josephine Jahier, Interim Director ✓
Environmental Waste Management
100 Main Street
Huntington, NY 11743

James Byrne, Commissioner
Dept. of Public Works
Town of Oyster Bay
150 Miller Place
Syosset, NY 11791

Re: Shire Estates at Woodbury
Part III EAF
NP& V #03469

Dear Ms. Jaheir/ Mr. Byrne:

Nelson, Pope & Voorhis is an environmental and planning consulting firm located in Melville, New York. We are currently preparing a Part III Environmental Assessment (EAF) for a project which proposes the construction of 136 age-restricted town houses and flats (109 units are in the Town of Huntington and 27 units are located in the Town of Oyster Bay). The project proposes in total twenty-two (22) one bedroom flats (11 of which are to be affordable), 22 two bedroom flats and 92 two-bedroom townhouses. A more detailed project description as well as a location map and site plan are attached.

As the project is located within two jurisdictions, I am contacting the Town of Huntington's Environmental Waste Management Department as well as the Town of Oyster Bay's Dept. of Public Works to verify who will be accepting solid waste should the project receive approval. Your response will be included within our final report.

The proposed project will generate approximately ±9.90 tons per month, based on 3.12 LBS/ 100 SF- Recreation building, 2.3 LBS/ capita for the residential units (assumes 1.86 occupants per 1 bedroom unit and 1.88 occupants per 2 bedroom units). We are writing to inquire whether municipal curb side garbage pick-up will be available for this development.

Should you have any questions or a need for additional information, please feel free to contact us at your convenience.

Very truly yours,

Nelson, Pope & Voorhis, LLC

Gary Pappas

Gary Pappas, Senior Planner

GP
file ✓

575 WALT WHITMAN ROAD, MELVILLE, NY 11747 · 2188
(631) 427-5665 FAX (631) 427-5620 WWW.NELSONPOPE.COM

JERICHO WATER DISTRICT

NICHOLAS J. BARTILUCCI, CHAIRMAN
ANTHONY J. CINCOTTA, SECRETARY
THOMAS A. ABBATE, TREASURER
GREG G. HENDRICKSON, GENERAL MANAGER
PETER F. LOGAN, SUPERINTENDENT

125 CONVENT ROAD
SYOSSET, NEW YORK 11791
TEL. (516) 921-8280
FAX (516) 921-7554

November 3, 2006

RECEIVED
NOV 06 2006 G. PAPPAS
NELSON & POPE KW

Nelson, Pope & Voorhis, LLC
Attn: Gary Pappas
572 Walt Whitman Road
Melville, New York 11747-2188

Re: Shire Estates at Woodbury
Part III EAF NP&V #03469

PR
VB

Gentlemen:

Before water main layout can be prepared, we will need three more copies of your preliminary map and the enclosed application forms signed and returned to this office along with deposit check of $5,000.00.

When this information has been received and water main layout approved, we will return one copy of your map for processing along with Letter of Availability of Water.

If you have any questions, please call.

Very truly yours,

Board of Commissioners
Jericho Water District

Greg G. Hendrickson

Greg G. Hendrickson
General Manager

GGH/gw
Enc.
cc: Michael Ingham, Esq.
S.B.Bowne, Engineers
Peter F. Logan

HUNTINGTON COMMUNITY FIRST AID SQUAD INC.
2 Railroad Street, Huntington Station, New York 11746-1231
Emergency Phone 911 Business Phone (631) 421-1263
Fax (631) 421-0666

MAR 12 2008

March 11, 2008

Kristen McCabe
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Rd
Melville, NY 11747-2188

Dear Kristen,

I am in receipt of your letter of March 4, 2008 regarding Shire Estates at Woodbury.

Based on the map that you provided, it appears to me that the entrance to the proposed facility, and a percentage of the unites, will be in Nassau County, and specifically the Syosset Fire District. The remainder of the units will be in our district (the eastern side of the border).

The Huntington Community First Aid Squad is centrally located in our district, and the ambulance covering this area would typically respond from that building, about 3.6 miles away (according to MapQuest).

Feel free to contact us with any questions.

Sincerely,

Reeve M. Conover
President

Huntington Manor Fire District
DIVISION OF FIRE PREVENTION
OFFICE OF THE INSPECTOR
1650 NEW YORK AVENUE
HUNTINGTON STATION, N.Y. 11746-2443
(631) 427-2144

November 13, 2006

Gary Pappas, Senior Planner
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747

RECEIVED
NOV 15 2006
NELSON & POPE
G. PAPPAS

Re: Shire Estates at Woodbury

Part III EAF
NP&V #03469

Dear Mr. Pappas:

The Huntington Manor Fire Department is the fire department responsible for providing fire protection to most of your proposed new construction at the referenced site.

Huntington Manor Fire Stations are located at the following locations:
1650 New York Avenue (corner of New York Avenue & East 13th Street)
2100 New York Avenue (corner of New York Avenue & East 23rd Street)
813 East Jericho Turnpike (corner of East Jericho Turnpike & Totten Avenue)

Fire Department equipment available to provide fire protection to this site:
4 – Pumpers, 2 - Quints, 2 – Ladder Trucks, 3 – Rescue Trucks

A Knox Box keyed to Huntington Manor's specifications must be provided at the gated entrance to provide keyed access to the site.

Huntington Community First Aid Squad provides medical / ambulance service for this site.

Should you need additional information, please feel free to contact this office.

Sincerely,

Scott R. Metzger

Scott R. Metzger
Fire Prevention Inspector

cc: Board of Fire Commissioners, H.M.F.D.
Chief, Huntington Manor Fire Department

COUNTY OF SUFFOLK

RECEIVED
NOV 06 2006 KW
G. Pappas
NELSON & POPE

STEVE LEVY
COUNTY EXECUTIVE

RICHARD DORMER
POLICE COMMISSIONER

POLICE DEPARTMENT

October 31, 2006

Nelson, Pope and Voorhis
572 Walt Whitman Road
Melville, NY 11747-2188
Attn: Mr. Gary Pappas, Senior Planner

Dear Mr. Pappas:

I am writing in reply to your letter sent to the Commanding Officer on October 18, 2006, wherein you requested information about police coverage at the proposed Shire Estates at Woodbury (NP & V #03469). The specific information you requested for the portion located in Suffolk County is as follows:

Precinct Number: 2
Station Address and Telephone Number: 1071 Park Avenue, Huntington, NY 11743-5429, (631) 854-8200
Commanding Officer: Inspector Joseph Blaettler
Patrol Sector Assigned to Site: 213
Expected Impact of the Proposed Project on the Department: Negligible.

I recommend that your firm or the developer make contact with our Information Technologies Section at (631) 852-6354 to make sure that our Enhanced-911 system is programmed properly so that all 911 calls originating from the units within Suffolk County are properly routed to our Communications Section. I noted from examining your preliminary site plan that one unit, number 124, lies partially within Suffolk County and partially within Nassau, though the majority of it appears to be in Suffolk County. I would assume that our agency would handle calls for service in that unit, but probably the best determinant of the proper agency to respond would be in what county it will be considered to be situated for tax purposes.

If you have any additional questions, feel free to contact me by telephone at (631) 854-8203 or by email at blossjoh@suffolkcountyny.gov.

Sincerely,
John R. Blosser Capt./LGL
John Blosser, Captain
Operations Officer, Second Precinct

Nassau County Police Department

THOMAS R. SUOZZI
COUNTY EXECUTIVE

1490 Franklin Avenue
Mineola, New York 11501
(516) 573-7000

JAMES H. LAWRENCE
COMMISSIONER

October 26, 2006

RECEIVED
NOV 16 2006
NELSON & POPE

C. PAPPAS KW

Mr. Gary Pappas
Nelson, Pope and Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11797

Dear Mr. Pappas,

In response to your recent request dated October 18, 2006 regarding the planned Shire Estates at Woodbury project, I am submitting this reply.

The portion of this project that is within the hamlet of Woodbury, Town of Oyster Bay is also within the jurisdiction of the Nassau County Police Department, Second Precinct. The Second Precinct is located at 7700 Jericho Turnpike, Woodbury, New York 11797. The Nassau County Police Department is a full service department and as such would be the primary responder for all policing requests in this jurisdiction.

Of particular note, this location originally experienced extensive problems with the implementation of the 911 emergency telephone system. Hardwired telephones should be programmed to be routed to the appropriate jurisdiction as the majority of police responses are 911 generated.

Sincerely,

Richard Meyer

Inspector

TOWN OF OYSTER BAY
DEPARTMENT OF PUBLIC WORKS
Syosset, New York 11791-5699
www.oysterbaytown.com

James M. Byrne, P.E.
Commissioner

(516) 677-5935

November 22, 2006

Mr. Gary Pappas, Senior Planner
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747

Dear Mr. Pappas:

The Town of Oyster Bay Sanitation Division is in receipt of a copy of your letter, dated October 23, 2006, to James M. Byrne, Commissioner of the Dept. of Public Works, inquiring about the availability of sanitary collection for the proposed project of 27 units located in the Town of Oyster Bay.

In order to receive Town collection you must request, through the Town Attorney's office, to be included in our sanitary garbage district. The Town provides sanitary collection to Town of Oyster Bay residents in our collection district. When we receive confirmation that you are included and pay the appropriate taxes, we will contact you to make an appointment to inspect the premises and implement a plan to begin collection.

The Town collects rubbish and trash curbside twice weekly.

The recyclable are to be collected once weekly and the Town provides the recycling containers.

If you have any further questions please contact Raymond Starke at (516) 677-5854.

Sincerely yours,

Raymond Starke, Division Head
Sanitation & Recycling Div. / DPW

James M. Byrne, P.E.
Commissioner / DPW

JMB:RS:jm

cc: Gregory Giammalvo, Town Attorney

APPENDIX H

COMMUNITY CHARACTER INFORMATION
Photographs of Site and Vicinity

1. Western side of property looking west towards Plainview Road.

2. Western side of property looking north from Plainview Road towards Jericho Turnpike.

3. Looking south down Plainview Road from Jericho Turnpike from northwestern corner of the property.

4. Looking east from the northwest corner of the property along Jericho Turnpike.

5. Looking west toward the Jericho Turnpike/Plainview Road intersection from the northern portion of the property.

6. Looking south towards the woodcarving business on the site, from the northern portion of the site along Jericho Turnpike.

7. Looking north towards Jericho Turnpike from the woodcarving business driveway.

8. Looking east in the vicinity of the horse farm along Jericho Turnpike.

9. Looking west along Jericho Turnpike from the northeast corner of the property.

10. Looking west towards the riding corals from the eastern boundary of the property.

11. Looking east towards the wetland/recharge basin off-site, from the northeastern corner of the property.

12. Looking west towards the site from the wetland/recharge basin off-site.

APPENDIX I

CULTURAL RESOURCES ASSESSMENT, PHASE I

Tracker Archaeology Services, Inc.,

December 2006

TRACKER

Archaeology Services, Inc.

Tracking the Footsteps of the Ancestors

REPORTS OF INVESTIGATIONS

Phase I Archaeological Investigation
for the proposed Triangle Equities subdivision
Woodbury and West Hills, Townships of Huntington and Oyster Bay
Suffolk and Nassau Counties, New York

December 2006

Prepared for:

Nelson, Pope & Voorhis, LLC.
Melville, New York

Prepared by:

Alfred G. Cammisa
Felicia Cammisa, Alexander Padilla

Report #: 477

TRACKER ARCHAEOLOGY SERVICES, INC.
MONROE, NY 10950 • (845) 783-4082
NORTH BABYLON, NY 11703 • (631) 321-1380

MANAGEMENT SUMMARY

PR#:
none known

Involved agencies:
Towns of Huntington & Oyster Bay

Phase:
Phase IA & IB

Location:
West Hills, Town of Huntington, Suffolk
Woodbury, Town of Oyster Bay, Nassau County

Survey Area:
Length: about 1100 feet (335 meters) north-south for each of 6 lots
Width: about 800 feet (244 m) east-west.
Acres Surveyed: 18.5 acres (7.48 hectares)

USGS:
Huntington, NY

Survey overview:
ST no. & Interval: 137 ST's at 50ft (15m) intervals.
Size of freshly plowed area: na
Surface survey transect interval: na

Results:
No prehistoric or historic remains

Results of Architectural Survey:
No. Of buildings/structures/cemeteries in project area: 5
No. Of buildings/structures/cemeteries adjacent to project area: 13
No. Of previously determined NR listed or eligible buildings/structures/cemeteries/districts: none
No. Of identified eligible buildings/structures/cemeteries/districts: none

Authors:
Alfred G. Cammisa, M.A./RPA
Felicia Cammisa, B.A.
Alexander Padilla, B.A.

Date of Report:
Report completed December, 2006

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF PHOTOGRAPHS

INTRODUCTION

Between September 27 and November 28, 2006, TRACKER-Archaeology Services, Inc. conducted a Phase IA documentary study and a Phase IB archaeological survey for the proposed Triangle Equities subdivision in the West Hills, Town of Huntington, Suffolk County, and Woodbury, Town of Oyster Bay, Nassau County, New York. The purpose of the Phase IA documentary study was to determine the prehistoric and historic potential of the property for the recovery of archaeological remains. This was accomplished by a review of the original and current environmental data, archaeological site files, other archival literature, maps, and documents.

A prehistoric site file search was conducted utilizing the resources of the New York State Historic Preservation Office - Field Services Bureau in Waterford, New York by the firm of Edward Curtin, archaeologist. Various historical and archaeological web sites were reviewed for any pertinent information.

The purpose of the Phase IB survey was to recover physical evidence for the presence or absence of archaeological sites on the property. This was accomplished through subsurface testing and ground surface reconnaissance.

The APE consists of the entire property, approximately 18.5 acres, inclusive with developed areas and other associated extensive disturbance. The property is bounded on the north by Jericho Turnpike (RT. 25), to the east by Plainview Road, and to the remaining sides by private property.

The study was conducted by TRACKER-Archaeology Services, Inc. of Monroe, New York. Prehistoric and historic research was conducted by Alfred Cammisa, M.A. Field work was conducted by field director Jean Cascardi, B.A. and field technicians Michelle Cotty, B.A. and Elaine Peiffer, B.A. Report preparation was conducted by Alfred Cammisa, Felicia Cammisa, B.A., and Alexander Padilla.

The work was performed for Nelson, Pope and Voorhis, LLC., Melville, New York.

ENVIRONMENT

Geology

The study area is located in the southeast portion of New York State, in the west part of Suffolk County. This portion of New York lies in the Atlantic Coastal Plains Physiographic Province. The coastal plain slopes gently eastward and is actually a strip of recently emerged sea bottom. The soils in this region consist largely of sand, clay and marl (a mixture of clay, finely fragmented shell and calcite). This area of Long Island is known as the Harbor Hill Moraine. The moraine extends from Rhode Island, through Plum, Great Gull and Fishers Islands and then from Orient Point to Brooklyn, Staten Island (south and east shores), northern New Jersey and terminates in Pennsylvania. It caps the north shore of Long island overlooking the Long island Sound. The moraine has been heavily eroded by the Long Island Sound as far west as Port Jefferson. From Lake Success westward, the older Ronkonkoma Moraine underlies the younger Harbor Hill Moraine (Schuberth 1968:cover map, 9, 184-186; Jensen and Soren 1974; Sirkin 1996:41, 168).

Soils and Topography

Soils in the study area consist of:

Name	Soil Horizon Depth cm(in)	Color	Texture Inclusion	Slope %	Drainage	Landform
Montauk	A 0-2 (0-5) B 2-17 (-43)	10YR4/3 10YR5/6	Silo	3-8 & 8-15	well	moraines

(Warner 1975: map #50, inset B, pgs. 74-75).

KEY:
Shade: Lt=Light, Dk=Dark, V=Very
Color: Br=Brown, Blk=Black, Gry=Gray, Gbr=Gray Brown, StBr=Strong Brown, Rbr=Red Brown, Ybr= Yellow Brown
Soils: Si=Silt, Lo=Loam, Sa=Sand, Cl=Clay
Other: Sh=shale, M=Mottle, Gr=Gravelly, Cb=cobbles, Fi=Fine /=or

Elevations on the property range from approximately 240 to 280 feet above mean sea level.

Hydrology
The project area is approximately 500 feet east of a pond. This area is dotted with small ponds.

Vegetation
The predominant forest community inhabiting the Coastal Plain Physiographic Province in this vicinity (Cape Cod to the Carolinas) was the Northern Pine-Oak Forest. These forests are maintained largely by the effects of frequent fires. Were it not for the fires which the pine species have adapted to, these forests would slowly change to Mesic, dominated by oak, hickory and red maple. Northern Pine-Oak forests occur on sandy, or otherwise poor soils that are overly dry. All coastal plains of eastern North America are Xeric (dry forest). They generally have lower species diversity than bottomland forests (Kricher 1988:16-17, 65-66). The reason the forest soils and surfaces are so dry in this moist region is due to the excessive drainage of overly sandy soils on the Coastal Plain.

At the time of the Phase IB survey, the area consisted of forest of oak and pine and some scrub. The northern portion of the property has been developed with buildings, unpaved parking areas/lots and large dumping areas, corrals, and riding trails.

PREHISTORIC POTENTIAL

A prehistoric site file search was conducted at the New York State Historic Preservation Office (NYSHPO). Archaeological sites recorded within 1 mile of the study area included:

NYSM Site	NYSHPO Site	Distance from APE ft(m)	Site Type
	05903.000217	705 (215)	Aveley Farm Prehistoric & Historic

	10304.000965	4623 (1409)	West Hills Ridge II Site : Late Woodland Camp, Workshop

Indian foot trails passed through the vicinity. One such trail traversed along the Jericho Turnpike (see Cammisa 1997; Stone nd: map). Although recorded historically, it undoubtedly existed prehistorically.

Assessing the known environmental and prehistoric archaeological data, we can summarize the following points:

-The project area is approximately 500 feet east of a pond. This area is dotted with small ponds.

-The project area contains moderate to steeply sloped topography with well drained soils.

-An Indian foot trail passed nearby the project area.

-Prehistoric sites are recorded near the project area.

In our opinion, the study area has a higher than average potential for the recovery of prehistoric archaeological remains.

HISTORIC POTENTIAL

Contact Period (Seventeenth Century)
At the time of European contact and settlement, this section of Long Island was occupied by the Matinnecock tribe (Bolton 1975:map, 53-54; Stone-Levine 1980:161). The nearest villages of the Matinnecock tribe were the Massakack and the Wallage (Stone nd. map).

Indian trails have been reported in the vicinity of the project area. They traversed along the west side of the tributary to Cold Spring Harbor, as well as the east side of the harbor, along or near, Harbor Road and Shore Road (see Prehistoric Potential).

By 1650 the Matinnecock tribe consisted of only 30 families. This number was most likely greatly reduced from their pre-Contact population. At this time "great numbers of Indian plantations now lie waste and vacant" (Bolton 1975:54).

Between 1653 and 1654, the Matinnecock "sold" the last of traditionally occupied territory to the new European settlers (Bolton 1975:54).

Actually, the Matinnecock may have been pressured to "sell" their land. They were likely influenced by the now powerful (probably due to European influence) Wyandanch, chief of the Montauket tribe. Wyandanch denied the Matinnecock to any land between Cow Harbor (Northport Harbor) and the Nissequogue River which they sold to the settlers. Land in Huntington, including the present day Township of Babylon, was sold either by Wyandanch himself or under pressure from Wyandanch by the local villages (Street 1982:2-10; Thompson 1918: 306 Bolton 1975:46). Since hunter-gatherers are normally exogamous, and since the Long Island Indians also appeared to follow this custom, genealogical connections between individuals or villages may have also played a part in political influence between tribes.

The map of early settlements shows Lloyd Neck referred to by the Indian tribe, Caumsett. It is "acquired" in 1654 from the Indians (Figure 3).

The map of early settlements shows the property along the western border with Nassau County (Figure 3).

Eighteenth Century
The old Indian trails became established roads used by settlers (Huntington Historical Society 1937:17).

Wigwams were reported in the 1740's by Reverend Horton who may have lived in them. The nearest such wigwam/village was reported along an Indian foot trail which followed the drainage into Cold Spring Harbor (Stone ndmap, Stone 1980:170).

The Matinnecock tribe was nearly passed away by this time. Many scattered survivors of the tribe lived as servants to the European-Americans. Farming operations were in all parts of the Township and the associated buildings consisted of small, rude houses and barns with thatched roofs (Street 1982:36).

Nineteenth Century
About 1810 a movement to improve the old Indian trails (now established roads) spread to Long Island from upstate. Private companies were hired to improve roads, build toll gates and levy tolls. These roads became known as turnpikes and were merely old dirt roads, in some cases straightened a bit, but worked into such shape that the road was raised toward the middle for better drainage with gutters along the edges. A toll gate along Jericho Turnpike was placed at Commack in the Huntington-Smithtown border (Huntington Historical Society 1937:17-18).

Farmers were principally engaged in raising wheat, rye and corn, and the raising of livestock, including horses, cattle and sheep. Only a limited amount of sheep were originally raised due to the ever present threat of wolves. As many as five flour mills were constructed (Street 1982:36).

The 1836 Colton map shows Jericho Turnpike with buildings along it. No buildings are depicted on or immediately adjacent to the project area although there are some nearby (Figure 4).

The 1858 Chace map depicts the project area with no buildings on or immediately adjacent to it although there is one across the road (Figure 5)

The 1873 Beers atlas (Oyster Bay) shows no buildings on or adjacent to the project parcel (Figure 6).

The 1896 Hyde atlas depicts Van Wycks Mill nearby but not immediately adjacent to the project area (Figure 7).

Twentieth Century
The 1904 U.S.G.S depicts no structures on or immediately adjacent to the project area (Figure 8).

An historic site file search was conducted at the New York State Historic Preservation Office (NYSHPO). Archaeological sites recorded within 1 mile of the study area included:

NYSM Site	NYSHPO Site	Distance from APE ft(m)	Site Type
	05903.000217	705 (215)	Aveley Farm Prehistoric & Historic: c. 1855Complete Structure

Assessing the known environmental and historic archaeological data, we can summarize the following points:

-The project area is approximately 500 feet east of a pond. This area is dotted with small ponds.

-The project area contains moderate to steeply sloped topography with well drained soils.

-An Indian foot trail passed nearby the project area.

-Historic map documented structure were recorded nearby but not on or immediately adjacent to the project area.

In our opinion, the study area has a moderate potential for the recovery of historic archaeological remains.

FIELD METHODS

Walkover Reconnaissance
Exposed ground surfaces (70 to 100 percent visibility) were subjected to a close quarters walkover, at 3 to 5 meter intervals, to observe for artifacts. Covered ground terrain was reconnoitered at about 15 meter (50ft)intervals to observe for any above ground features, such as berms, depression, or rock configurations, which could be evidence for a prehistoric or historic site. Photographs were taken of the project area.

Shovel Testing
Shovel tests (ST's) were excavated at about 15 meter (50ft) intervals across most of the project area. However, shovel testing went to 100 foot intervals (30m) through disturbed areas such as deep horse manure piles/fill to test for good ground. Shovel testing resumed at 50 foot intervals once past these areas.

Each ST measured about 30 to 40 cm. in diameter and was dug into the underlying subsoil (B horizon) 10 to 20 cm. when possible. All soils were screened through 1/4 inch wire mesh and observed for artifacts. Shovel tests and surface finds were flagged in the field. Any ST's or SF's were mapped on the project area map at this time.

Soil stratigraphy was recorded according to texture and color. Soil color was matched against the Munsell color chart for soils. Notes were transcribed in a notebook and on pre-printed field forms.

FIELD RESULTS

Field testing of the project area included the excavation of 137 ST's across the project area. No prehistoric artifacts or features were encountered. No historic artifacts or features were encountered.

Extensive areas of the property were disturbed due to past development, including use of the property as a horse farm and a wood art shop and mulch business. Buildings included 2 trailers, a large metal barn and 2 crudely constructed shacks/sheds, with either concrete slab or concrete block foundation or no foundation. There were also parking areas, horse stalls and corrals, as well as campers and other broken down vehicles which were parked on the property. The landscape at and around these developed areas were all stripped and/or filled.

Stratigraphy

Stratigraphy across the property consisted of the following:

A/O horizon - 2-17 cm of rootmat, leaves, and humus.

A horizon - 6 to 50 cm. thick of 10YR3/3 dark brown or 10YR3/2 very dark gray brown, or 10YR4/3 brown, sandy loam.

A horizon - 3 to 22 cm thick of 10YR4/3 brown or 10YR4/6 dark yellow brown, sandy loam

B horizon - consisted of 10 to 20 cm. dug into of 10YR5/6 yellow brown sandy loam.

Soil horizons were occasionally stripped or mottled or impeded by pavement. They were also very often covered with horse manure from the horse farm on the premises, or other dumping such as mulch, topsoil, wood chips, and logs.

CONCLUSIONS AND RECOMMENDATIONS

Based upon topographic characteristics, distance to other known prehistoric sites and an Indian trail, the property was assessed as having a higher than average potential for encountering prehistoric sites.

Based upon topographic characteristics, distance to historic map documented structures and an Indian trail, the property was assessed as having a moderate potential for encountering historic sites.

The field testing included the excavation of 137 ST's on the project area. No historic artifacts or features were encountered. No prehistoric artifacts or features were encountered. Extensive late twentieth century disturbances were recorded. No further work is recommended.

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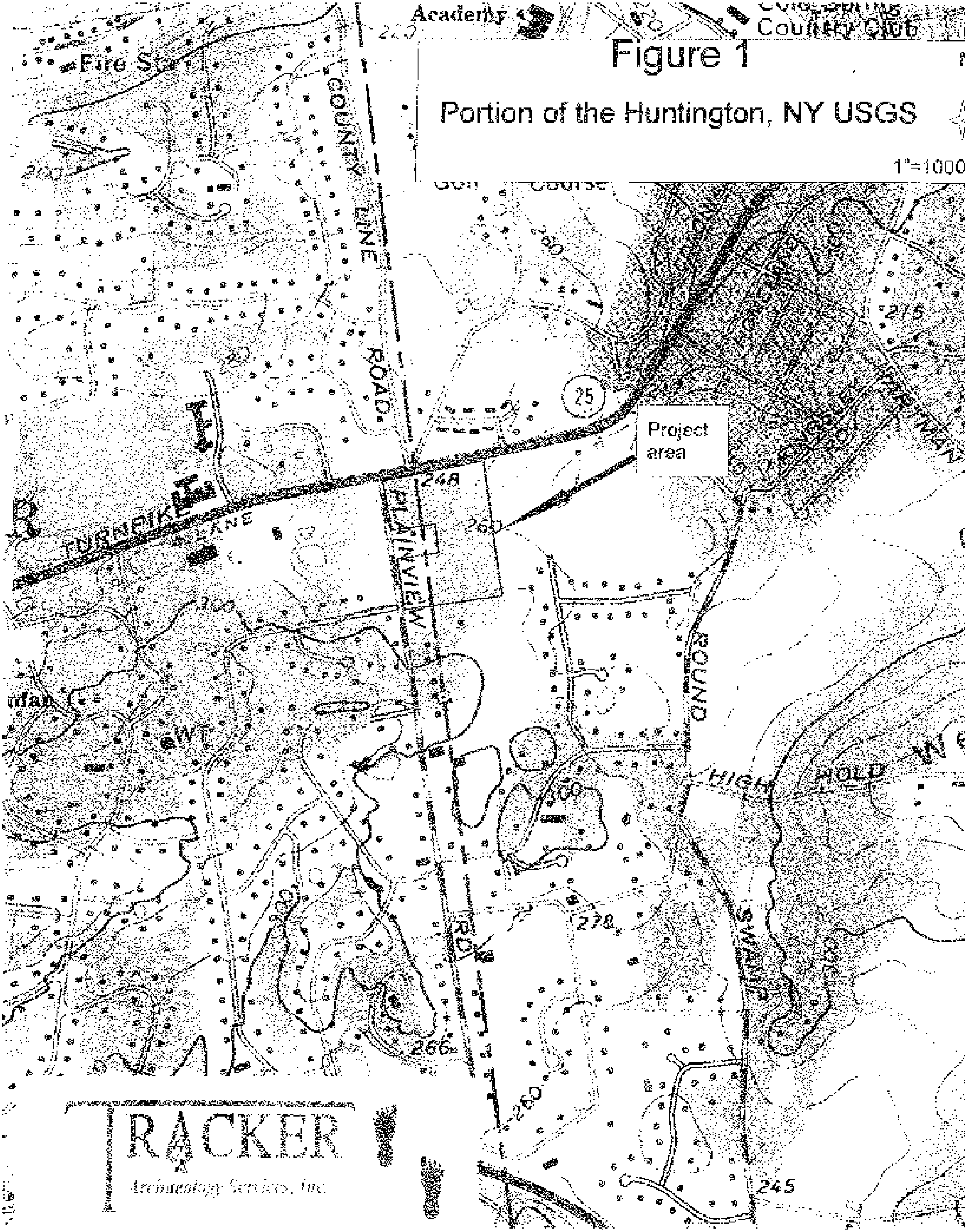
1904 *Islip, New York* quadrangle, 15 minute series.

APPENDIX 1

Figure 1

Portion of the Huntington, NY USGS

1"=1000



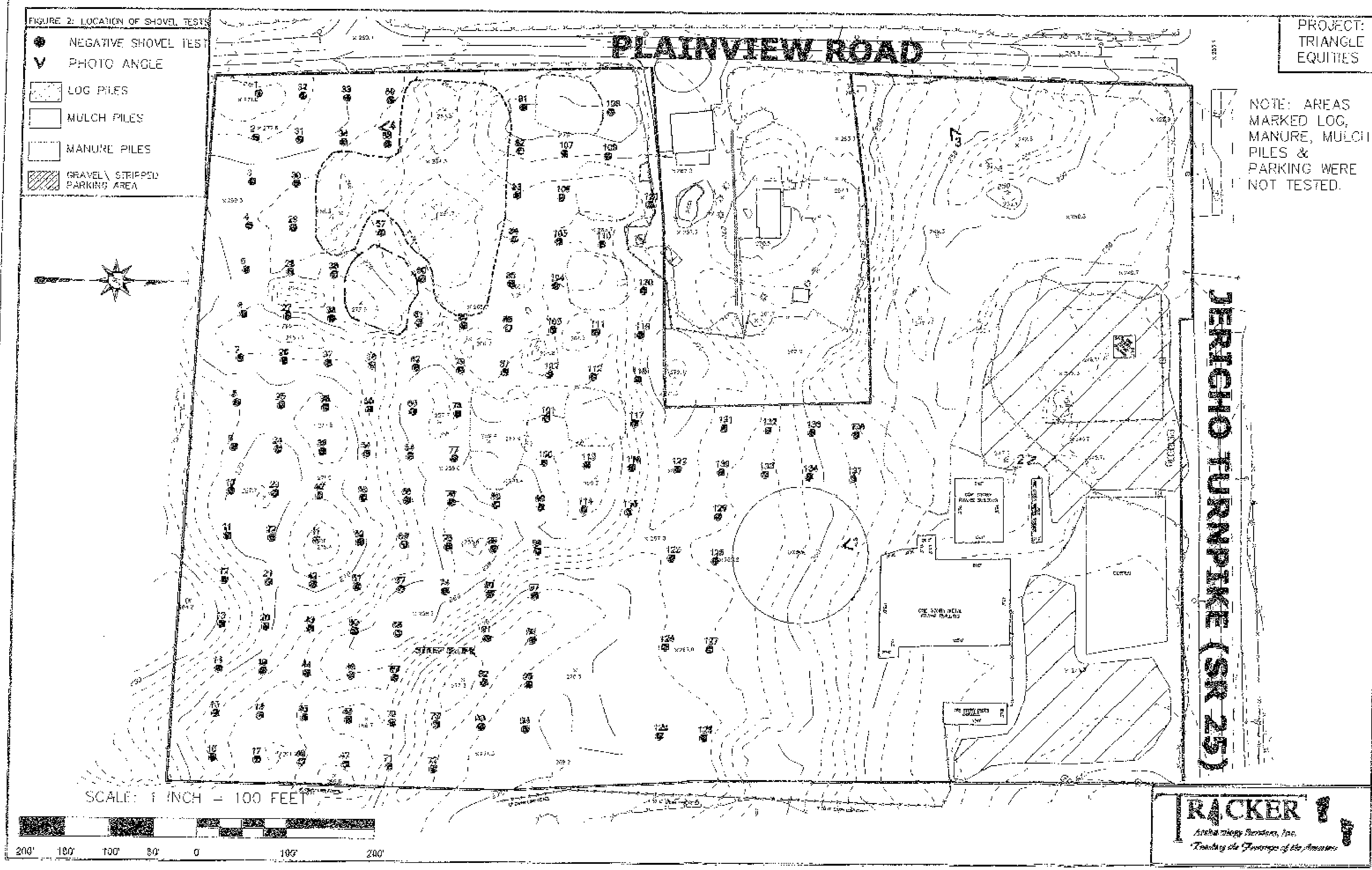


FIGURE 2: LOCATION OF SHOVEL TESTS
NEGATIVE SHOVEL TEST
PHOTO ANGLE
LOG PILES
MULCH PILES
MANURE PILES
GRAVEL\ STRIPPED PARKING AREA
PLAINVIEW ROAD
PROJECT: TRIANGLE EQUITIES
NOTE: AREAS MARKED LOG, MANURE, MULCH PILES & PARKING WERE NOT TESTED.
JERICHO TURNPIKE (SR 25)
SCALE: 1 INCH = 100 FEET
200' 150' 100' 50' 0 100' 200'
TRACKER
Archaeology Services, Inc.
Tracking the Footsteps of the Ancestors

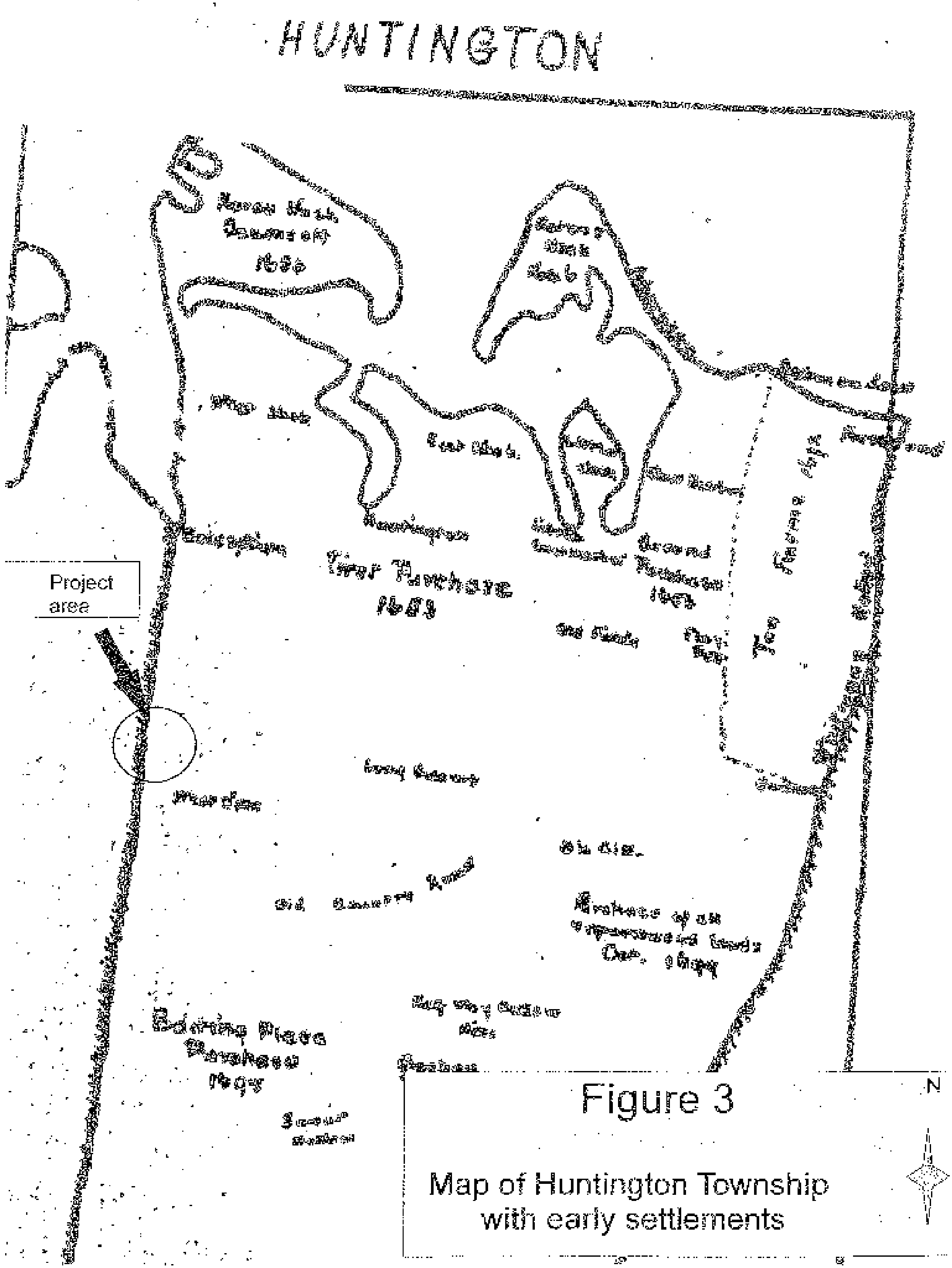


Figure 3

Map of Huntington Township with early settlements

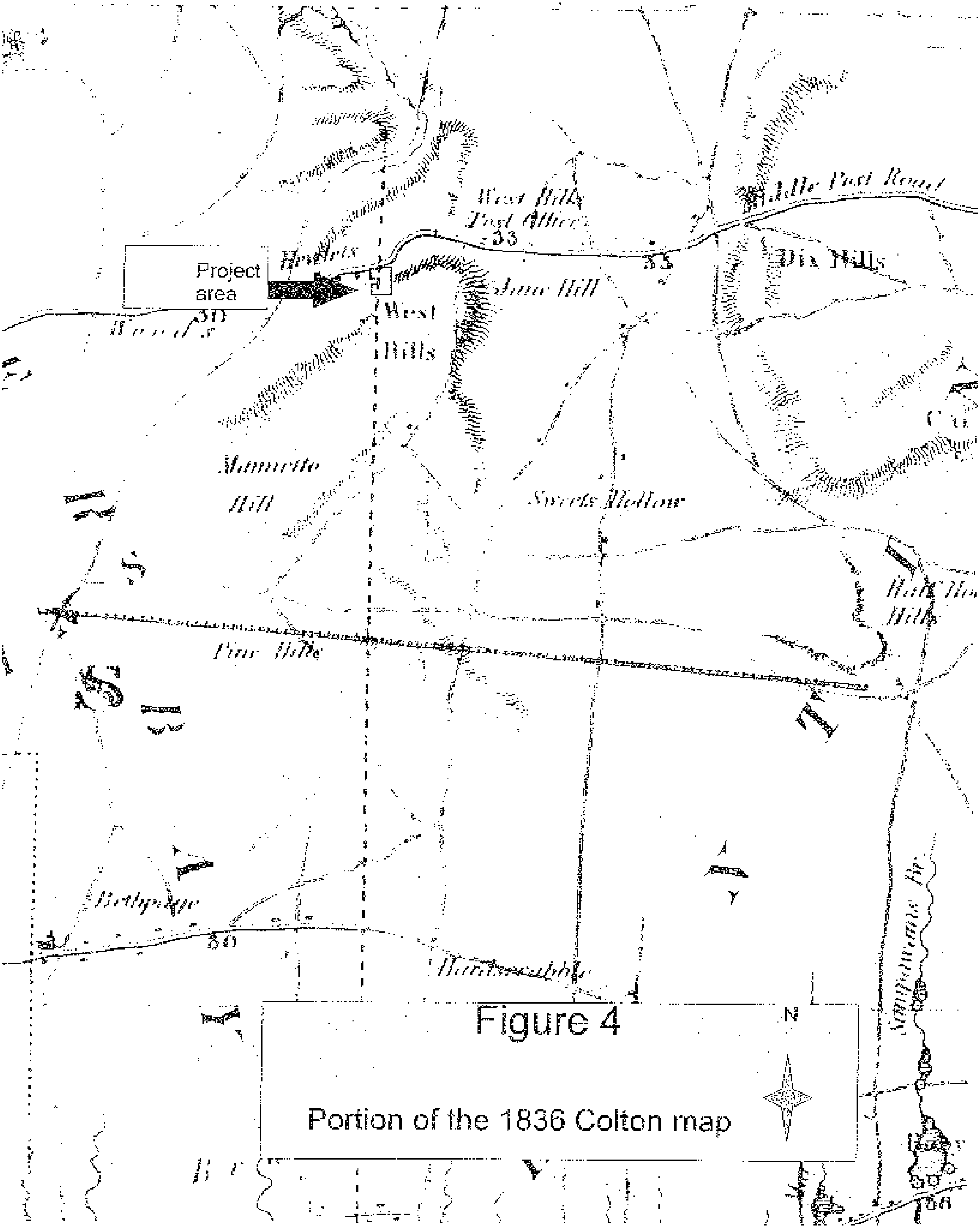


Figure 4

Portion of the 1836 Colton map

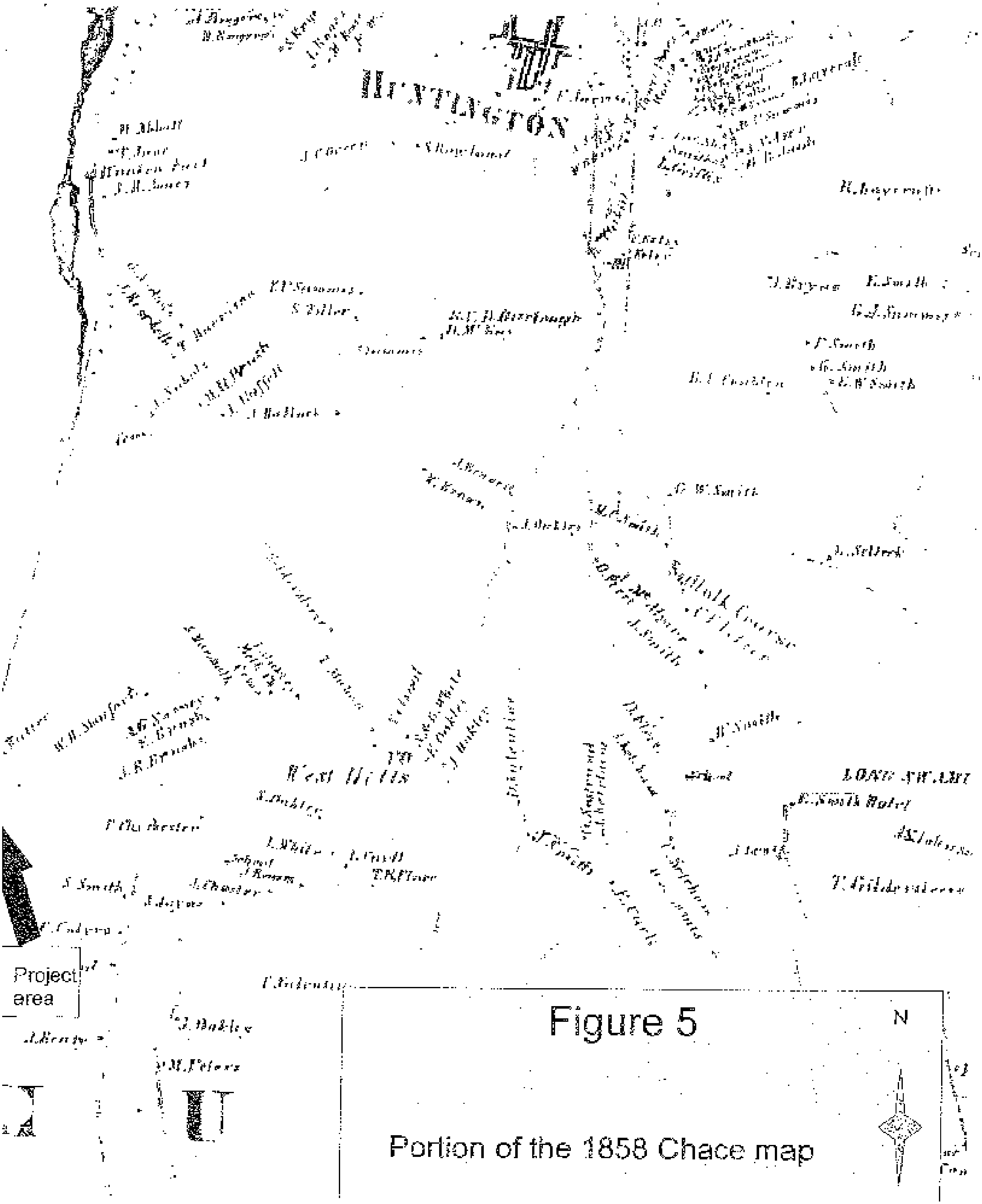
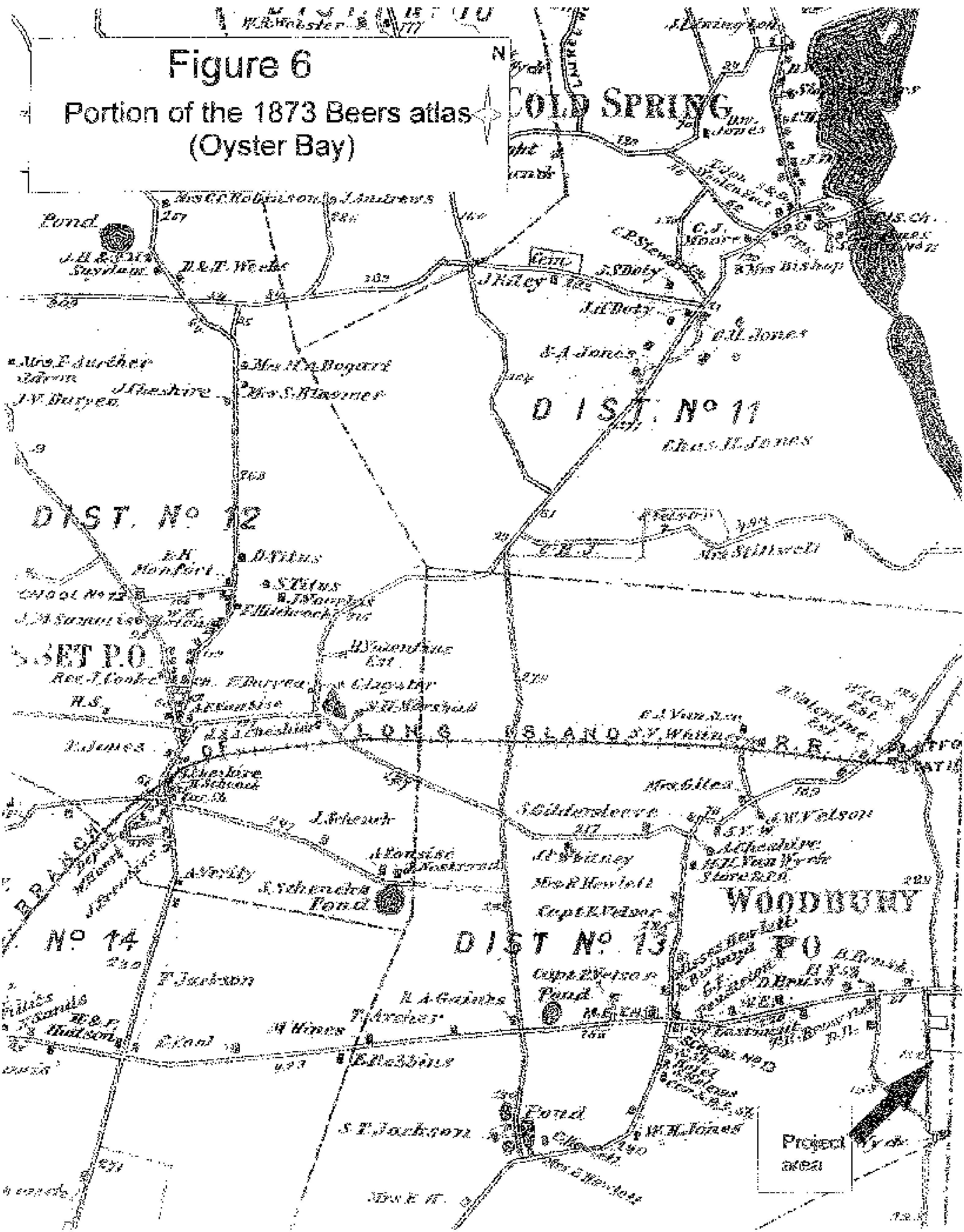


Figure 5

Portion of the 1858 Chace map

Figure 6
Portion of the 1873 Beers atlas
(Oyster Bay)



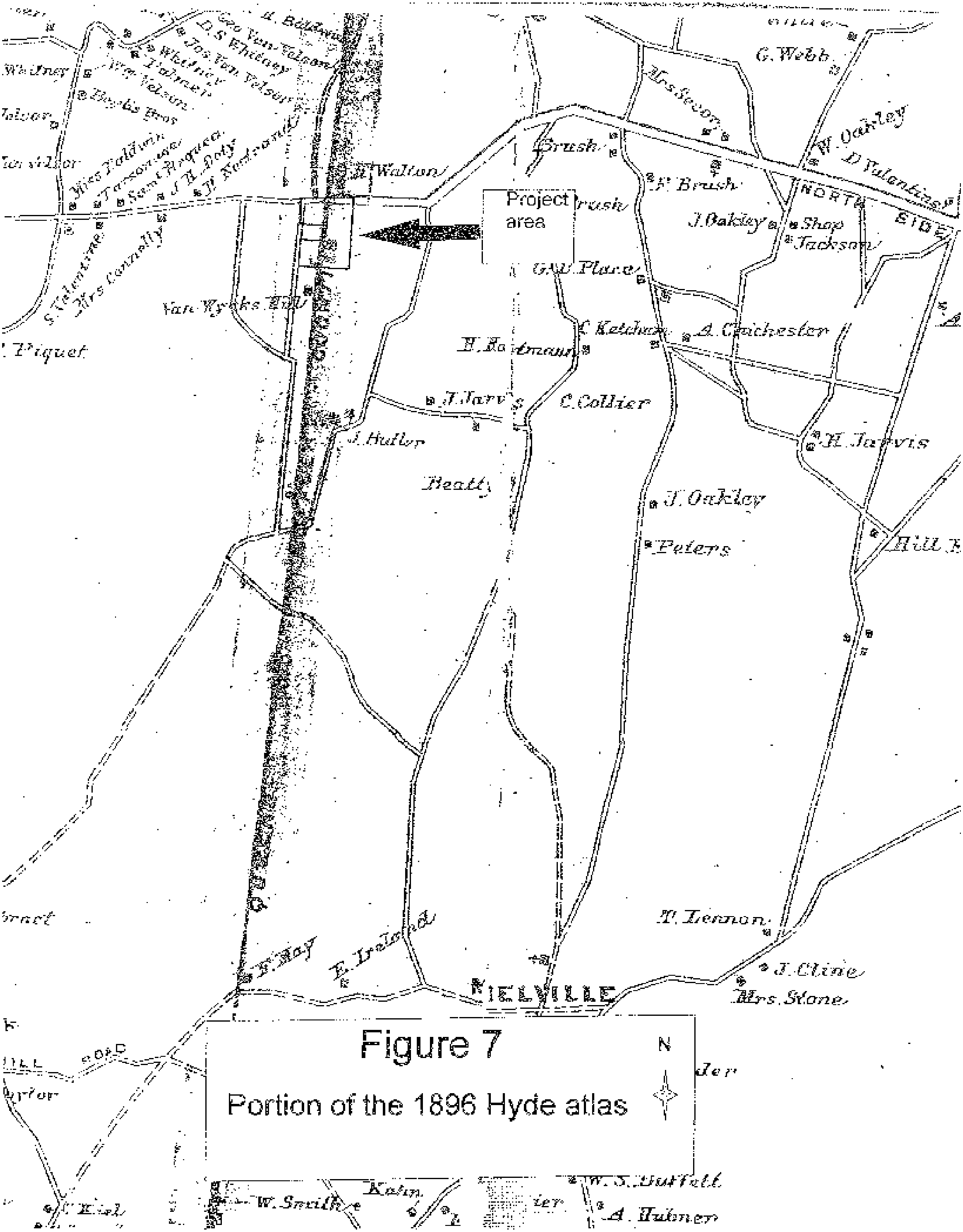


Figure 7

Portion of the 1896 Hyde atlas

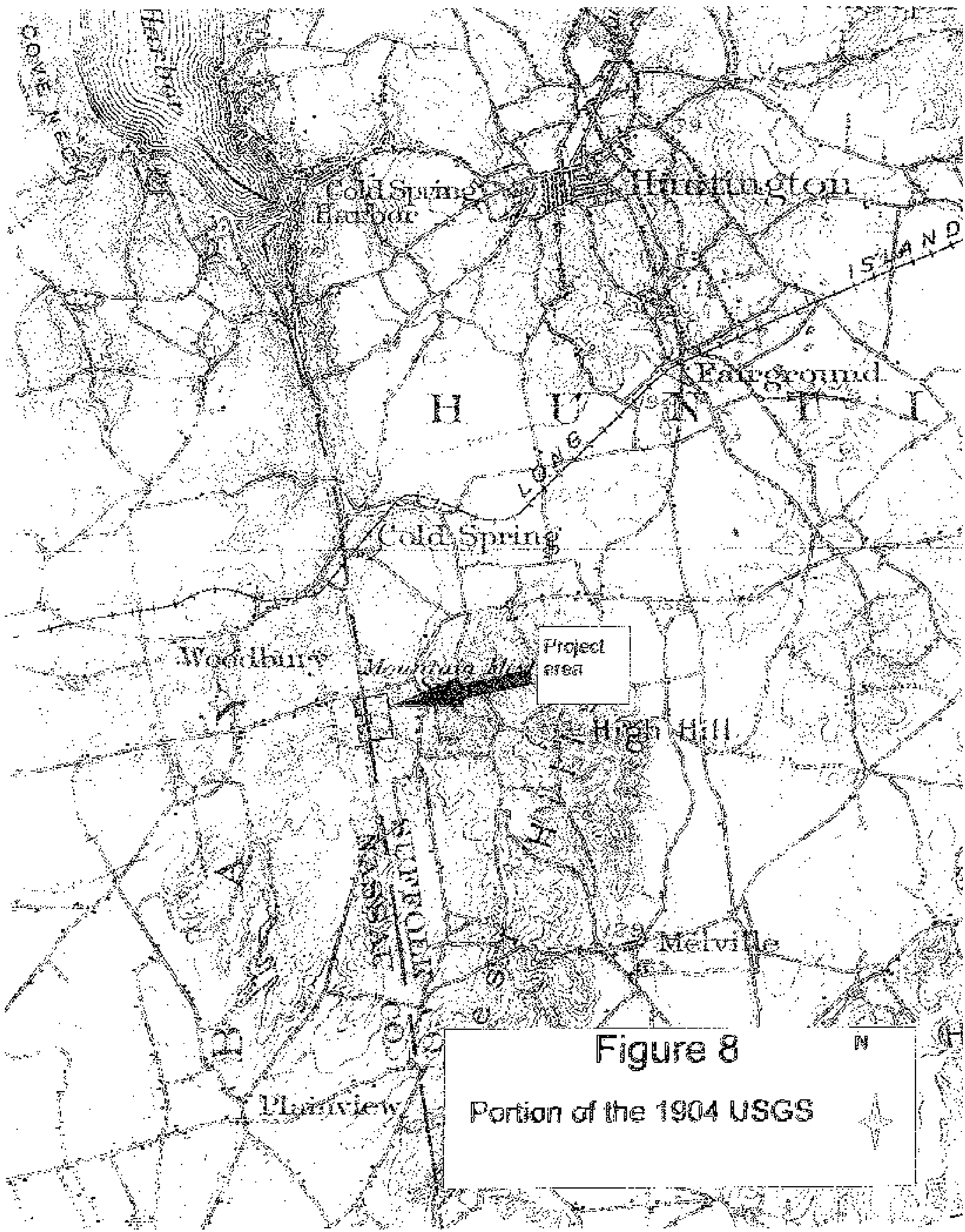
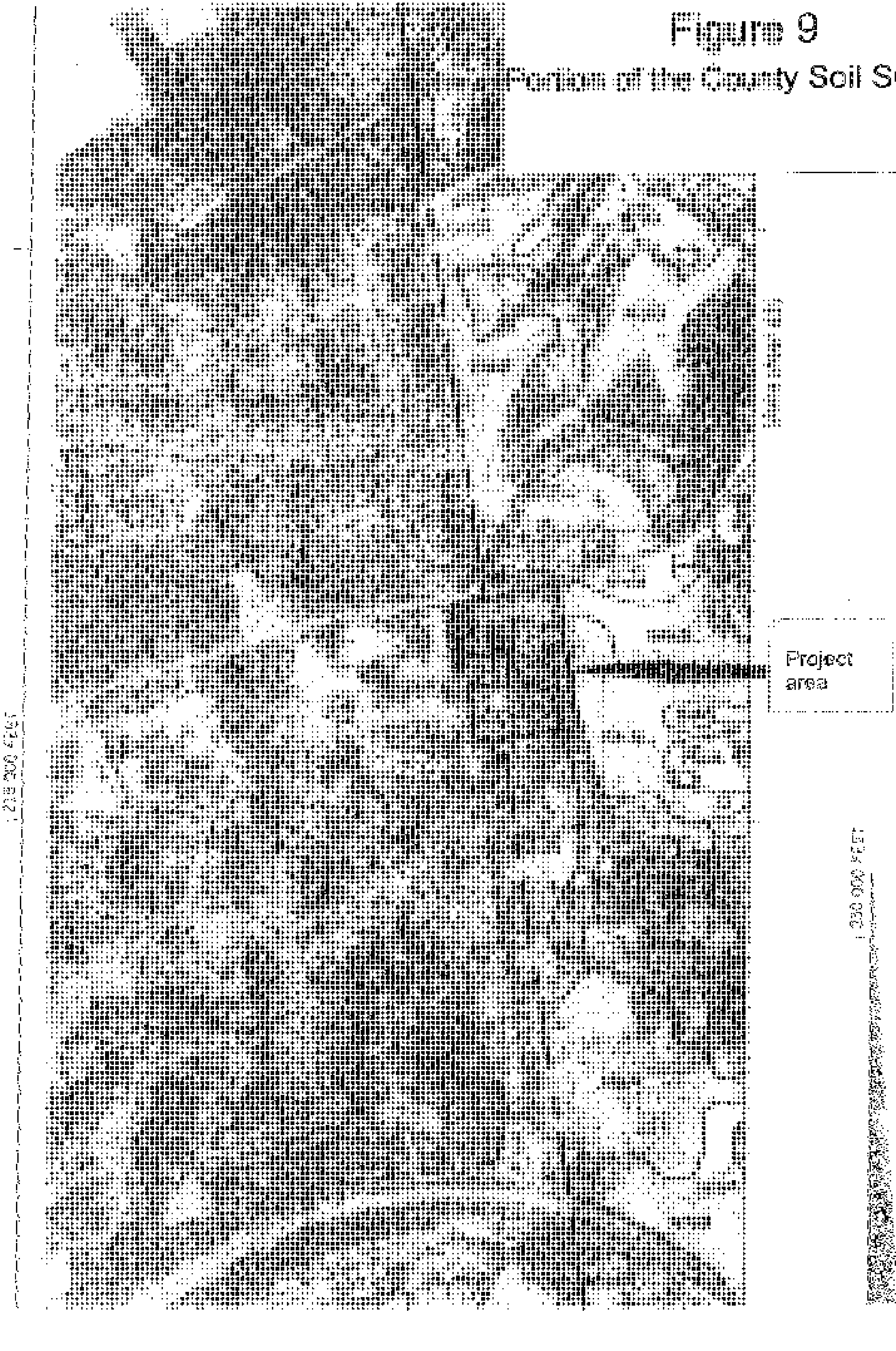


Figure 8

Portion of the 1904 USGS

Figure 9
Portion of the County Soil Survey



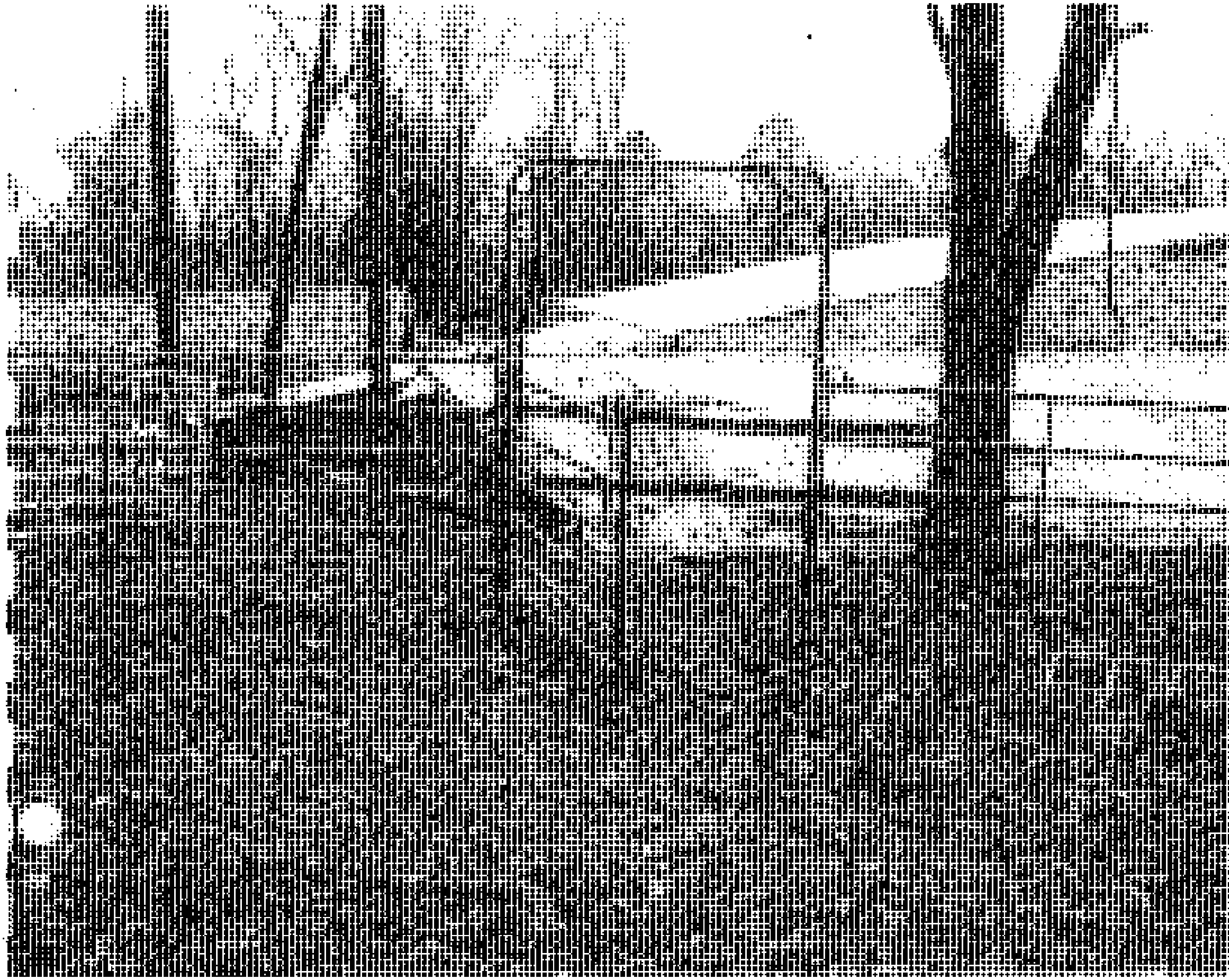


Photo 1
Looking north at metal building/barn and adjacent buildings

Photo 2
Looking south from driveway

Photo 3

Looking at one of many mulch piles

Photo 4

Looking at one of many log piles

APPENDIX 2

SHOVEL TESTS

STP	LV	DEPTH(CM)	TEXTURE	COLOR	HOR	COMMENT
1	1	0-3	rootmat,leave,humus		A/O	NCM
	2	3-9	SaLo	10YR3/3	A	NCM
	3	9-31	SaLo	10YR4/3	A	NCM
	4	31-41	SaLo	10YR5/6	B	NCM
2	1	0-10	mulch		A/O	NCM
	2	3-27	SaLo	10YR4/3	A	NCM
	3	27-39	SaLo	10YR5/6	B	NCM
3	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-36	SaLo	10YR4/3	A	coal
	3	36-48	SaLo	10YR5/6	B	NCM
4	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-32	SaLo	10YR4/3	A	NCM
	3	32-45	SaLo	10YR5/6	B	NCM
5	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-26	SaLo	10YR4/3	A	window glass
	3	26-35	SaLo	10YR5/6	B	NCM
6	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-44	SaLo	10YR4/3	A	NCM
	3	44-45, rocks	SaLo	10YR5/6	B	NCM
7	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-20	SaLo	10YR4/3	A	NCM
	3	20-32	SaLo	10YR4/6	A	NCM
	4	32-43	SaLo	10YR5/6	B	NCM
8	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-20	SaLo	10YR4/3	A	NCM
	3	20-32	SaLo	10YR4/6	A	NCM
	4	32-42	SaLo	10YR5/6	B	NCM
9	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-20	SaLo	10YR4/3	A	NCM
	3	20-34	SaLo	10YR4/6	A	NCM
	4	34-44	SaLo	10YR5/6	B	NCM
10	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-59	SaLo	10YR4/3	A	NCM
	3	59-70	SaLo	10YR5/6	B	NCM
11	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-49	SaLo	10YR4/3	A	undec ww
	3	49-61	SaLo	10YR5/6	B	NCM
12	1	0-12	rootmat,leave,humus		A/O	NCM
	2	12-38	SaLo	10YR4/3	A	NCM
	3	38-48	SaLo	10YR5/6	B	NCM

13	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-31	SaLo	10YR4/3	A	NCM
	3	31-43	SaLo	10YR5/6	B	NCM
14	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-25	SaLo	10YR4/6	A	NCM
	3	25-35	SaLo	10YR5/6	B	NCM
15	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-27	SaLo	10YR4/6	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
16	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-49	SaLo	10YR4/6	A	NCM
	3	49-60	SaLo	10YR5/6	B	NCM
17	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-39	SaLo	10YR4/6	A	NCM
	3	39-50	SaLo	10YR5/6	B	NCM
18	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-40	SaLo	10YR4/6	A	NCM
	3	40-52	SaLo	10YR5/6	B	NCM
19	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-39	SaLo	10YR4/6	A	NCM
	3	39-50	SaLo	10YR5/6	B	NCM
20	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-39	SaLo	10YR4/6	A	NCM
	3	39-50	SaLo	10YR5/6	B	NCM
21	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-25	SaLo	10YR3/3	A	NCM
	3	25-39	SaLo	10YR4/3	A	NCM
	4	39-51	SaLo	10YR5/6	B	NCM
22	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-33	SaLo	10YR4/3	A	NCM
	3	33-44	SaLo	10YR5/6	B	NCM
23	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-42	SaLo	10YR4/6	A	NCM
	3	42-52	SaLo	10YR5/6	B	NCM
24	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-34	SaLo	10YR4/6	A	NCM
	3	34-46	SaLo	10YR5/6	B	NCM
25	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-32	SaLo	10YR4/6	A	NCM
	3	32-42	SaLo	10YR5/6	B	NCM
26	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-29	SaLo	10YR4/6	A	NCM

	3	29-40	SaLo	10YR5/6	B	NCM
27	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-36	SaLo	10YR4/6	A	NCM
	3	36-46	SaLo	10YR5/6	B	NCM
28	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-31	SaLo	10YR4/6	A	NCM
	3	31-42	SaLo	10YR5/6	B	NCM
29	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-43	SaLo mottle	10YR4/6-4/3	A	NCM
	3	43-44	SaLo	10YR5/6	B	NCM
30	1	0-12	rootmat,leave,humus		A/O	NCM
	2	12-30	SaLo	10YR4/3	A	NCM
	3	30-40	SaLo	10YR5/6	B	NCM
31	1	0-12	rootmat,leave,humus		A/O	NCM
	2	12-30	SaLo	10YR4/3	A	NCM
	3	30-45	SaLo	10YR5/6	B	NCM
32	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-22	SaLo	10YR3/3	A	NCM
	3	22-39	SaLo	10YR4/3	A	NCM
	4	39-50	SaLo	10YR5/6	B	NCM
33	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-31	SaLo	10YR4/3	A	NCM
	3	31-41	SaLo	10YR5/6	B	NCM
34	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-32	SaLo	10YR4/6	A	NCM
	3	32-42	SaLo	10YR5/6	B	NCM
35	1	0-20	mulch		A/O	NCM
	2	20-30	SaLo	10YR4/6	A	NCM
	3	30, impeded roots				
36	1	0-2	rootmat,leave,humus		A/O	NCM
	2	2-29	SaLo	10YR4/6	A	asphalt frag
	3	29-40	SaLo	10YR5/6	B	NCM
37	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-29	SaLo	10YR4/6	A	NCM
	3	29-40	SaLo	10YR5/6	B	NCM
38	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-9	SaLo	10YR4/6	A	NCM
	3	impeded roots				
39	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-22	SaLo	10YR4/6	A	NCM
	3	22-44	SaLo	10YR5/6	B	NCM

40	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-20	SaLo	10YR4/3	A	NCM
	3	20-31	SaLo	10YR5/6	B	NCM
41	1	0-3	rootmat,leave,humus		A/O	NCM
	2	3-20	SaLo	10YR4/3	A	NCM
	3	20-34	SaLo	10YR5/6	B	NCM
42	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-25	SaLo	10YR4/3	A	NCM
	3	25-35	SaLo	10YR5/6	B	NCM
43	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-12	SaLo	10YR3/3	A	NCM
	3	12-29	SaLo	10YR4/3	A	NCM
	4	29-40	SaLo	10YR5/6	B	NCM
44	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-31	SaLo	10YR4/3	A	NCM
	3	31--42	SaLo	10YR5/6	B	NCM
45	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-16	SaLo	10YR4/3	A	NCM
	3	16-31	SaLo	10YR4/6	A	NCM
	4	31-52	SaLo	10YR5/6	B	NCM
46	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-22	SaLo	10YR4/6	A	NCM
	3	22-47	SaLo	10YR5/6	B	NCM
47	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-46	SaLo	10YR4/3	A	NCM
	3	46-56	SaLo	10YR5/6	B	NCM
48	1	0-7	rootmat,leave,humus		A/O	NCM
	2	impeded roots				
49	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-20	SaLo	10YR3/2	A	NCM
	3	20-34	SaLo	10YR4/3	B	NCM
	4	34-44	SaLo	10YR5/6	B	NCM
50	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-20	SaLo	10YR3/3	A	NCM
	3	20-31	SaLo	10YR4/3	A	NCM
	4	31-42	SaLo	10YR5/6	B	NCM
51	1	0-2	rootmat,leave,humus		A/O	NCM
	2	2-39	SaLo	10YR4/3	A	NCM
	3	39--50	SaLo	10YR5/6	B	NCM
52	1	0-9	rootmat,leave,humus		A/O	NCM
	2	6-23	SaLo	10YR4/3	A	NCM
	3	23-30	SaLo	10YR4/6	A	NCM
	4	30-50	SaLo	10YR5/6	B	NCM

53	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-17	SaLo	10YR3/2	A	NCM
	3	17-27	SaLo	10YR5/6	B	NCM
54	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-20	SaLo	10YR3/3	A	NCM
	3	20-34	SaLo	10YR4/3	A	NCM
	4	34-45	SaLo	10YR5/6	B	NCM
55	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-19	SaLo	10YR4/3	A	NCM
	3	19-28	SaLo	10YR4/3	A	NCM
	4	28–38	SaLo	10YR5/6	B	NCM
56	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-14	SaLo	10YR4/3	A	NCM
	3	14-33	SaLo	10YR4/6	A	NCM
	4	33-44	SaLo	10YR5/6	B	NCM
57	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-18	SaLo	10YR4/3	A	NCM
	3	18-35	SaLo	10YR4/6	A	NCM
	4	35-45	SaLo	10YR5/6	B	NCM
58	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-29	SaLo	10YR3/2	A	NCM
	3	29-40	SaLo	10YR5/6	B	NCM
59	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-29	SaLo	10YR3/2	A	NCM
	3	29-40	SaLo	10YR5/6	B	NCM
60	1	0-14	wood chips		A/O	NCM
	2	14-43	SaLo mottled	10YR3/2-5/6	A	NCM
61	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-28	SaLo	10YR4/3	A	NCM
	3	28-38	SaLo	10YR4/6	A	NCM
	4	38-51	SaLo	10YR5/6	B	NCM
62	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-18	SaLo	10YR4/3	A	NCM
	3	18-21	SaLo	10YR4/6	A	NCM
	4	21-32	SaLo	10YR5/6	B	NCM
63	1	0-2	rootmat,leave,humus		A/O	NCM
	2	2-36	SaLo	10YR3/2	A	NCM
	3	36-46	SaLo	10YR5/6	B	NCM
64	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-19	SaLo	10YR3/2	A	NCM
	3	19-29	SaLo	10YR5/6	B	NCM
65	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-23	SaLo	10YR4/3	A	NCM

	3	23-33	SaLo	10YR5/6	B	NCM
66	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-28	SaLo	10YR3/2	A	NCM
	3	28-impeded by roots				
67	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-14	SaLo	10YR3/2	A	NCM
	3	14-25	SaLo	10YR5/6	B	NCM
68	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-32	SaLo	10YR3/2	A	NCM
	3	32-44	SaLo	10YR5/6	B	NCM
69	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-50	SaLo	10YR3/3	A	NCM
	3	50-60	SaLo	10YR5/6	B	NCM
70	1	0-3	rootmat,leave,humus		A/O	NCM
	2	3-37	SaLo	10YR4/3	A	NCM
	3	37-48	SaLo	10YR5/6	B	NCM
71	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-46	SaLo	10YR3/2	A	NCM
	3	46-58	SaLo	10YR5/6	B	NCM
72	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-43	SaLo	10YR3/2	A	NCM
	3	43-54	SaLo	10YR5/6	B	NCM
73	1	0-14	rootmat,leave,humus		A/O	NCM
	2	14-25	SaLo	10YR3/2	A	NCM
	3	24-35	SaLo	10YR5/6	B	NCM
74	1	0-50	horse manure			
75	1	0-13	horse manure			NCM
	2	13-20	SaLo	10YR3/2	A	NCM
	3	20-40	SaLo	10YR5/6	A	NCM
	4	40-50	SaLo	10YR6/6	B	NCM
76	1	0-4	rootmat,leave,humus		A/O	NCM
	4	4-15	SaLo	10YR5/6	B	NCM
Note:stripped						
77	1	0-5	rootmat,leave,humus & manure		A/O	NCM
	2	5-15	SaLo	10YR4/3	A	NCM
	3	14-38	SaLo	10YR5/6	B	NCM
78	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-38	SaLo	10YR3/2	A	NCM
	3	38-48	SaLo	10YR5/6	B	NCM
79	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-55	SaLo	10YR4/3	A	NCM

	3	55-65	SaLo	10YR5/6	B	NCM
80	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-39	SaLo	10YR3/3	A	NCM
	3	39-50	SaLo	10YR5/6	B	NCM
81	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-29	SaLo	10YR4/3	A	NCM
	3	29-39	SaLo	10YR5/6	B	NCM
82	1	0-17	rootmat,leave,humus		A/O	NCM
	2	17-46	SaLo	10YR3/2	A	NCM
	3	46-58	SaLo	10YR5/6	B	NCM
83	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-30	SaLo	10YR3/2	A	NCM
	3	30-40	SaLo	10YR5/6	B	NCM
84	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-41	SaLo	10YR3/2	A	brick & asphalt
	3	41-51	SaLo	10YR5/6	B	NCM
85	1	0-5	rootmat,leave,humus & manure		A/O	NCM
	2	5-25	SaLo	10YR4/3	A	NCM
	3	25-35	SaLo	10YR5/6	B	NCM
86	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-27	SaLo	10YR3/2	A	NCM
	3	27-38	SaLo	10YR5/6	B	NCM
87	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-25	SaLo	10YR4/3	A	NCM
	3	25-35	SaLo	10YR5/6	B	NCM
88	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-7, roots	SaLo	10YR3/3	A	NCM
89	1	0-4	rootmat,leave,humus		A/O	NCM
	2	4-6, roots	SaLo	10YR4/3	A	NCM
90	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-45	SaLo	10YR3/2	A	NCM
	3	45-56	SaLo	10YR5/6	B	NCM
91	2	0-35	dug into horse manure			
92	1	0-5	rootmat,leave,humus & manure		A/O	NCM
	2	5-15	SaLo	10YR4/3	A	NCM
	3	14-impeded by roots.				
93	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-20	SaLo	10YR3/2	A	NCM
	3	20-impeded by roots.				

94	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-26	SaLo	10YR4/3	A	NCM
	3	26-36	SaLo	10YR5/6	B	NCM
95	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-35	SaLo	10YR3/3	A	NCM
	3	35-47	SaLo	10YR5/6	B	NCM
96	2	0-30	dug into horse manure			
97	2	0-30	dug into horse manure			
98	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-40	SaLo	10YR3/2	A	NCM
	3	40-impeded by rocks.				
99	1	0-13	rootmat,leave,humus & manure		A/O	NCM
	2	13-38	SaLo	10YR4/3	A	asphalt,glass
	3	38-49	SaLo	10YR5/6	B	NCM
100	1	0-17	rootmat,leave,humus		A/O	NCM
	2	17-38	SaLo	10YR3/2	A	NCM
	3	38-impeded by rocks.				
101	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-25	SaLo	10YR4/3	A	NCM
	3	25-35	SaLo	10YR5/6	B	NCM
102	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-22	SaLo	10YR3/3	A	NCM
	3	22-32	SaLo	10YR5/6	B	NCM
103	1	0-3	rootmat,leave,humus		A/O	NCM
	2	3-29	SaLo	10YR4/3	A	hematite
	3	29-39	SaLo	10YR5/6	B	NCM
104	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-38	SaLo	10YR3/2	A	NCM
	3	38-48	SaLo	10YR5/6	B	NCM
105	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-impeded by asphalt.				
106	1	0-11	rootmat,leave,humus & manure		A/O	NCM
	2	11-34	SaLo	10YR4/3	A	NCM
	3	34-44	SaLo	10YR5/6	B	NCM
107	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-27	SaLo	10YR3/2	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM

108	1	0-8	rootmat,leave,humus		A/O	NCM
	2	8-38	SaLo	10YR4/3	A	NCM
	3	38-50	SaLo	10YR5/6	B	NCM
109	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-25	SaLo	10YR3/3	A	brick frag.
	3	25-37	SaLo	10YR5/6	B	NCM
110	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-29	SaLo	10YR4/3	A	NCM
	3	29-39	SaLo	10YR5/6	B	NCM
111	1	0-17	rootmat,leave,humus		A/O	NCM
	2	17-35	SaLo	10YR3/2	A	window glass
	3	35-46	SaLo	10YR5/6	B	NCM
112	1	0-10	rootmat,leave,humus		A/O	NCM
	2	10-30	SaLo	10YR3/2	A	NCM
	3	30-impeded by asphalt.				
113	1	0-8	rootmat,leave,humus & manure		A/O	NCM
	2	8-impeded by asphalt.				
114	2	0-38	dug into manure			
115	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	bottle glass
	3	27-37	SaLo	10YR5/6	B	NCM
116	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-39	SaLo	10YR3/3	A	NCM
	3	39-50	SaLo	10YR5/6	B	NCM
117	1	0-13	rootmat,leave,humus		A/O	NCM
	2	13-29	SaLo	10YR4/3	A	NCM
	3	29-39	SaLo	10YR5/6	B	NCM
118	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-46	SaLo	10YR3/2	A	NCM
	3	46-58	SaLo	10YR5/6	B	NCM
119	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-21	SaLo	10YR3/2	A	NCM
	3	21-impeded by roots.				
120	1	0-5	rootmat,leave,humus & manure		A/O	NCM
	2	5-32	SaLo	10YR4/3	A	NCM
	3	32-44	SaLo	10YR5/6	B	NCM
121	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-38	SaLo	10YR3/2	A	NCM
	3	38-48	SaLo	10YR5/6	B	NCM
122	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-42	dug into horse manure.			

123	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-39	dug into horse manure.			
124	1	0-3	rootmat,leave,humus		A/O	NCM
	2	3-40	dug into horse manure			
125	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-41	SaLo	10YR3/2	A	NCM
	3	41-impeded by rocks.				
126	1	0-39	dug into horse manure			
127	1	0-43	dug into horse manure			
128	1	0-7	rootmat,leave,humus		A/O	NCM
	2	7-38	SaLo	10YR3/2	A	NCM
	3	38-48	SaLo	10YR5/6	B	NCM
129	1	0-5	rootmat,leave,humus		A/O	NCM
	2	5-23	SaLo	10YR4/3	A	NCM
	3	23-32	SaLo	10YR5/6	B	NCM
130	1	0-12	rootmat,leave,humus		A/O	NCM
	2	12-44	SaLo	10YR3/3	A	NCM
	3	44-54	SaLo	10YR5/6	B	NCM
131	1	0-9	rootmat,leave,humus		A/O	NCM
	2	9-30	SaLo	10YR4/3	A	NCM
	3	30-42	SaLo	10YR5/6	B	NCM
132	1	0-6	rootmat,leave,humus		A/O	NCM
	2	6-13	SaLo	10YR3/2	A	NCM
	3	13-impeded by rocks.				
133	1	0-25	dug into horse manure			
134	1	0-15	rootmat,leave,humus & manure		A/O	NCM
	2	15-26	SaLo	10YR4/3	A	NCM
	3	26-39	SaLo	10YR5/6	B	NCM
135	1	0-11	rootmat,leave,humus		A/O	NCM
	2	11-21	SaLo	10YR3/2	A	NCM
	3	21-31	SaLo	10YR5/6	B	NCM
136	2	0-30	SaLo	10YR4/3	A	NCM
	3	30-40	SaLo,compact	10YR5/6	B	NCM
137	2	0-24	SaLo	10YR3/3	A	NCM
	3	24-39	SaLo	10YR5/6	B	NCM