CITY OF RYE

NOTICE

There will be a regular meeting of the City Council of the City of Rye on Wednesday, August 5, 2015, at 7:30 p.m. in Council Chambers at City Hall. *The Council will convene at 6:30 p.m. and it is expected they will adjourn into Executive Session at 6:31 p.m. to discuss litigation.*

AGENDA

1. Pledge of Allegiance.

2. Roll Call.

3. General Announcements.

4. Draft unapproved minutes of the regular meeting of the City Council held July 8, 2015.

5. Issues Update/Old Business.

6. Continuation of Public Hearing to amend local law Chapter 133, "Noise", of the Rye City Code regarding regulations on mechanical rock removal.

7. Continuation of Public Hearing to amend local law Chapter 197, "Zoning", of the Rye City Code by amending Section §197-2, "Districts, A: Residence Districts" to change the zoning designation of a property at 120 Old Post Road from the B-4, Office Building, District to a New RA-6, Active Senior Residence, District; and amending Section §197-86, "Tables of Regulations: Table A, Residence Districts – Area Yard, Height and Miscellaneous Regulations" to add the proposed RA-6 zone.

8. Discussion of the Inter-municipal Agreement with Westchester County for the monitoring of inflow and infiltration as part of the Westchester County Sewer District to comply with the schedule in the Long Island Sound Flow Monitoring Report.

9. Residents may be heard on matters for Council consideration that do not appear on the agenda.

10. Adoption of the 2015/2016 tax levy and tax rate for the Rye Neck Union Free School District.
    Roll Call.

11. Authorization for the City Manager to enter into an Inter-municipal Agreement with Westchester County for the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County.
    Roll Call.

12. Miscellaneous communications and reports.

13. New Business.

14. Adjournment.

* *

The next regular meeting of the City Council will be held on Wednesday, September 16, 2015 at 7:30 p.m.

** City Council meetings are available live on Cablevision Channel 75, Verizon Channel 39, and on the City Website, indexed by Agenda item, at www.ryeny.gov under “RyeTV Live”.

* Office Hours of the Mayor by appointment by emailing jsack@ryeny.gov or contacting the City Manager’s Office at (914) 967-7404.

CITY COUNCIL AGENDA

NO. 4 DEPT.: City Clerk DATE: August 5, 2015
CONTACT: City Clerk

AGENDA ITEM Draft unapproved minutes of the regular meeting of the City Council held July 8, 2015.

FOR THE MEETING OF:
August 5, 2015
RYE CITY CODE,
CHAPTER
SECTION

RECOMMENDATION: That the Council approve the draft minutes.

IMPACT: ☐ Environmental ☐ Fiscal ☐ Neighborhood ☒ Other:

BACKGROUND: Approve the minutes of the regular meeting of the City Council held July 8, 2015, as attached.

DRAFT UNAPPROVED MINUTES of the Regular Meeting of the City Council of the City of Rye held in City Hall on July 8, 2015 at 7:30 P.M.

PRESENT:

JOSEPH A. SACK Mayor
LAURA BRETT
KIRSTIN BUCCI
JULIE KILLIAN
TERRENCE McCARTNEY
RICHARD MECCA (left at 10:30 PM)
RICHARD SLACK
Councilmembers

ABSENT: None

1. Pledge of Allegiance

Mayor Sack called the meeting to order and invited the Council to join in the Pledge of Allegiance.

2. Roll Call

Mayor Sack asked the Corporation Counsel to call the roll; a quorum was present to conduct official city business.

3. General Announcements.

Announcements were made regarding various events and activities that may be of interest to residents. Mayor Sack noted the passing of two valued members of the community; Jonathan Brook and John Carolin and requested a moment of silence in their honor.

4. Draft unapproved minutes of the regular meeting of the City Council held June 10, 2015 and the Special Meeting of the City Council held June 19, 2015.

Councilwoman Brett made a motion, seconded by Mayor Sack and unanimously carried to approve the minutes of the regular meeting of the City Council held on June 10, 2015 and the Special Meeting of the City Council held on June 19, 2015.

5. Isssues Update/Old Business.

Rye Golf Club-Traveler's claim regarding the Scott Yandrasevich related losses is in suit and is pending in the Southern District of New York.

Rye Golf Club-Members are playing on temporary greens due to damage to portions of the greens caused by a chemical which was contaminated.

Rye Golf Club-Fair Labor Standards Act (FLSA)- The City is being sued by a group of former wait staff claiming tips were withheld.

Rye Fire Department-Mayor appointed a study group to flag and vet all issues of the Department. Appointed-Councilmembers Mecca, Bucci, Mayor Sack and Chiefs Cotter, Billington and Taylor. Additional members may be appointed in the future.

Master Plan- Mayor appointed a study group to develop a process for a revised Master Plan. Appointed-Deputy Mayor Brett, Councilwoman Killian, Mayor Sack, Chairman of the Planning Commission Nick Everett and Planning Commission member Andy Ball.

Deer Study Group-Janice Seitz and Anne Dooley discussed the process to develop a deer management program by measuring the current problem and gathering baseline data such as deer count, landscape analysis, lyme disease cases, deer vehicle collisions, resident reporting etc.

6. Presentation on City Financials by Brendan K. Kennedy of the auditing firm of SaxBST LLP.

The City Council made an affirmation decision, as a matter of best practices, to retain new auditors. Brendan Kennedy accompanied by Jeffrey Roude provided the City with an Auditors Report inclusive of Financial Statements, a Yellow Book Report, Required Communications and Management Letter. One deficiency was identified at the Boat Basin regarding internal control relative to the documentation maintained when testing cash receipts. There were no instances of non-compliance identified and SaxBST issued unmodified opinions; the highest level of assurance that the financial statements are free of material errors.

Mr. Kelly summarized the City's three major operating funds:

General Fund-Surplus of $750,000-Total Balance $13,000,000

Rye Golf Club Fund-Trending financially very positively

Boat Basin Fund- Short term perspective-fairly cash flow neutral
Long term perspective- Need to look at user charges and how Boat Basin is set up. Generating a loss from operations. Source Documentation issues were identified which were presented to City's management.

7. Continuation of the Public Hearing to amend local law Chapter 177, "Taxation", Article XII, "Exemption for Historic Districts" by adding Section §177-82, "Historic Districts", to designate portions of downtown Rye as one historic district to allow property owner to apply for the real property tax exemption.

Councilwoman Brett made a motion, seconded by Councilwoman Killian and unanimously carried, to open the public hearing.

Several years ago the City Council adopted a local law which allowed tax exemptions for landmarked properties. The amendment to the local law proposes to create a Historical District in the downtown area which would allow qualified properties to apply for this exemption if they meet the definition of an historic building. Any tax increase resulting in the qualified rehabilitation or repair of an historic property would be phased in over ten years with no increase during the first five years. Additions to the law, as it was originally proposed, were made since the last Council meeting with regard to the definitions of rehabilitation, repair and restore. The following are proposed additional limitations/restrictions specific to the Central Business District:

1. The historic building should be at least 100 years old; have at least one of the characteristics outlined in Chapter 117, Landmarks, of the Rye City Code; and be historic in nature

2. Change the outline of the CBD Historic District map by excluding Locust Ave and including City Hall.

Councilman McCartney made a motion, seconded by Councilwoman Brett and unanimously carried to close the public hearing.

Councilwoman Brett made a motion, seconded by Councilwoman Killian to adopt the following Local Law:

CITY OF RYE

LOCAL LAW NO. 6 2015

A local law to amend Chapter 177 "Taxation" Article XII "Exemption for Historic Districts" of the Code of the City of Rye by adding new definitions to Section 177-79 "Definitions" and adding a new Section 177-82 "Designation of Historic Districts" as follows:

Be it enacted by the City Council of the City of Rye as follows:

<u>Section 1:</u> Chapter 177 Taxation; Article XII Exemption for "Historic Districts"

§ 177-79. Definitions.

HISTORIC BUILDING – Any building that is located within an historic district, is at least 100 years old, and that the Landmarks Advisory Committee has determined to possess one or more of the following characteristics as outlined in Chapter 117 of the Rye City Code.

(1) Association with persons or events of historic significance to the city, region, state or nation.

(2) Illustrative of historic growth and development of the city, region, state or nation.

(3) Embodying distinctive characteristics of a type, period or method of construction or representing the work of a master, or possessing unique architectural and artistic qualities, or representing a significant and distinguishable entity whose components may lack individual distinction.

(4) In the case of interiors: possessing one or more of the characteristics enumerated above and, in addition, embodying distinctive characteristics of architectural scale, form and visual homogeneity which are an integral part of the character of the structure in which the space is contained.

A historic building does not have to be designated as a Protected Site or Structure.

REHABILITATE - the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values.

REPAIR – limited replacement in kind – or with compatible substitute material – of extensively deteriorated or missing parts of features when there are surviving prototypes.

RESTORE – to return its interior or exterior appearance to a particular date or time period.

Section 2: Chapter 177 Taxation; Article XII Exemption for "Historic Districts"

§ 177-82. Designation of Historic Districts.

A. The designated Historic District shall be set forth in this section by block and lot number, street designation, and if appropriate, by local designation.

(1) Central Business District: portions of downtown Rye located in the B-2 zone and portions of contiguous B-1 zones as designated on the accompanying map as one historic district.

Section 3: Severability.

If any clause, sentence, paragraph, section or part of any section of this title shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or part thereof directly involved in the controversy and in which such judgment shall have been rendered.

Section 4: Effective date.

This local law will take effect immediately on filing in the office of the Secretary of State.

ROLL CALL:
AYES: Councilmembers Bucci, Brett, Mecca, Killian, McCartney, Slack and
NAYES: None
ABSENT: None

8. Public Hearing to amend local law Chapter 133, "Noise", of the Rye City Code regarding regulations on mechanical rock removal.

Councilwomen Brett made a motion, seconded by Councilman McCartney and unanimously carried to open the public hearing,

The study group appointed by Mayor Sack worked diligently to analyze Chapter 133. "Noise" and in consideration of their review the proposed law was formulated by the City. The Mayor asked the study group not to make recommendations until the Council heard a wider response from the public.

Several of the principal ideas embodied in the proposed law are:

- Thirty (30) calendar day duration for rock chipping. If additional time is needed a new permit can be issued but must meet criteria of public noticing etc.
- Restriction on proposed rock chipping hours.
- Neighbors must be noticed by mail.
- Added new calendar days excluded from rock chipping
- Exclusion of rock chipping (near schools) on certain testing days.
- Exclusion of rock crushing on site
- Only one active machine on site
- Exclusion for Utilities (i.e. Con Edison)

Mayor Sack made a motion, seconded by Councilman Mecca and unanimously carried, to continue the public hearing at the August 5, 2015 City Council meeting.

9. Public Hearing to amend local law Chapter 197, "Zoning", of the Rye City Code by amending Section §197-2, "Districts, A: Residence Districts" to change the zoning designation of a property at 120 Old Post Road from the B-4, Office Building, District to a new RA-6, Active Senior Residence, District; and amending Section §197-86, "Tables of Regulations: Table A, Residence Districts – Area Yard, Height and Miscellaneous Regulations" to add the proposed RA-6 zone.

Mayor Sack made a motion, seconded by Councilwoman Killian and unanimously carried, to open the public hearing.

Jonathan Kraut, Esq. on behalf of the Alfred Weissman Group discussed the changing of the zoning designation of 120 Old Post Road from B-4, Office Building, District, to a new RA-6, "Active Senior Residence District ; and amending Section §197-86, "Tables of Regulations: Table A, Residence Districts – Area Yard, Height and Miscellaneous Regulations" to add the proposed RA-6 zone.

Highlights and comments of the presentation:

- Present site has a three (3) story office building.
- Leasing the space has been difficult resulting in a 50% reduction in assessment.
- There are no prospects for rental as the building exists.
- The current zoning of the property has no other commercial uses that are viable.
- The new building is for 55 and older residents which is a zero gain burden on the school district. Research indicates there is a need for this type of housing.
- It is a good transitional use for the area.
- Located adjacent to the I-95 and Boston Post Rd.
- Request for an explanation, at the August 5, 2015 meeting as to why this zone was chosen to exceed the density limits as oppose to other residential zones.

Mayor Sack made a motion, seconded by Councilwoman Brett and unanimously carried to continue the public hearing at the August 5, 2015 meeting.

10. Resolution authorizing the acceptance of funding through the NY Rising Community Reconstruction Program and providing authorization for the Mayor and City Council to Manager to enter into the following agreement and resolutions:
    - NY Rising Community Reconstruction Program Subrecipient Agreement
    - Resolution to adopt a Procurement Policy
    - Resolution to adopt a Citizen Participation Plan
    - Resolution to adopt an Affirmative Action Plan
    - Resolution to adopt Section 504 Policies and Grievance Procedures

The City was one of the few communities selected to participate in round two of the NY Rising Community Reconstruction Program and was awarded $3,000.000 for flood mitigation and redevelopment programs. Potential projects have been identified for completion such as flood mitigation at SUNY (retention basins), Bowman Avenue Dam sluice gate, expansion of the upper pond at the Bowman Ave. Dam, and additional. Drainage on Milton Rd. The City must sign on to these Agreements in order to participate in the program. These Agreements, however, have conditions as the funding is coming from HUD through the Community Block Development Disaster Recovery Program (CDBG-DR). Mayor Sack expressed concern that HUD may make future demands on the City regarding Affordable Housing. He cited a section of the Agreement under General Conditions (page 8) which states that the" subrecipient (City) must agree to comply with all other applicable federal, local and state laws, regulations, HUD Notices, policies and guidelines whether existing or to be established provided the same are applied to activities occurring after the date the policy or guideline was established, governing the Grant Funds provided under this Agreement." The Mayor requested that these sections be removed or text be added that states that nothing in this Agreement requires the City of Rye to comply with any requirements imposed by HUD regarding affordable housing, zoning or land use. Councilmembers expressed concern with regard to other sections and requirements of these agreements specifically concerning the SEQRA review; hiring of additional staff (environmental monitor) to manage the projects, document compliance, etc.

11. Resolution to approve a Memorandum of Agreement between the City of Rye and the Rye CSEA Local 1000 Clerical Unit.

Councilman McCartney made a motion, seconded by Councilwoman Bucci to adopt the following Resolution:

> **WHEREAS**, the City of Rye and the Rye CSEA Local 1000 Clerical Unit have negotiated a new Memorandum of Agreement which will replace the agreement which expired on December 31, 2013; and
>
> **WHEREAS**, the CSEA Clerical Unit ratified the proposed terms of the MOA, now therefore be it;
>
> **RESOLVED**, that the City Council approve the three year contract MOA between the Rye CSEA Local 1000 Clerical Unit for the contract period of 01/01/2014 to 12/31/2016.
>
> ROLL CALL:
> AYES: Councilmembers Bucci, Brett, Killian, Slack and Mayor Sack
> NAYS: None
> ABSENT: Councilman Mecca

12. Resolution to adopt the Climate Smart Communities Pledge.

In order to become a Climate Smart Community, the City must adopt the Climate Smart Communities Pledge. The benefit of becoming a member will give the City additional access to potential grant funding opportunities with regard to sustainability issues. The Mayor clarified that this is not a contract and the City Manager added that there is no penalty if the City does not meet the pledge, but it will make the community more green and sustainability issues more cost effective. In order to become a Climate Smart Community the City must adopt all ten elements of the model resolution.

Councilwoman Killian made a motion, seconded by Councilwoman Brett the Council to approve the adoption of the Climate Smart Pledge with a modification made to the first clause (Element #1) of the model resolution:

> **WHEREAS**, the City of Rye (hereinafter "local government") believes that climate change poses a real and increasing threat to our local and global environments; and
>
> **WHEREAS**, the effects of climate change will endanger our infrastructure, economy and livelihoods; harm our farms, orchards, and ecological communities, including native fish and wildlife populations; spread invasive species and exotic diseases; reduce drinking water supplies and recreational opportunities; and pose health threats to our citizens; and
>
> **WHEREAS**, we believe that our response to climate change provides us with an unprecedented opportunity to save money, and to build livable, energy-independent and

secure communities, vibrant innovation economies, healthy and safe schools, and resilient infrastructures; and

WHEREAS, we believe the scale of greenhouse gas (GHG) emissions reductions required for climate stabilization will require sustained and substantial efforts; and

WHEREAS, we believe that even if emissions were dramatically reduced today, communities would still be required to adapt to the effects of climate change for decades to come,

IT IS HEREBY RESOLVED that the City of Rye, in order to reduce greenhouse gas emissions and adapt to a changing climate, adopts the New York State Climate Smart Communities Pledge, which comprises the following ten elements:

1. Pledge to be a Climate Smart Community
2. Set Goals, Inventory Emissions, Plan for Climate Action
3. Decrease Community Energy Use
4. Increase Community Use of Renewable Energy
5. Realize Benefits of Recycling and Other Climate-Smart Solid Waste Management Practices
6. Reduce Greenhouse Gas Emissions Through Climate-Smart Land-Use Tools
7. Enhance Community Resilience and Prepare for the Effects of Climate Change
8. Support Development of a Green Innovation Economy
9. Inform and Inspire the Public
10. Commit to an Evolving Process of Climate Action

NOW, THEREFORE, BE IT RESOLVED, that a certified copy of this Resolution be forwarded to the New York State Department of Conservation.

ROLL CALL:
AYES: Councilmembers Bucci, Brett, Killian, Slack and Mayor Sack
NAYS Councilman McCartney
ABSENT: Councilman Mecca

13. Residents may be heard on matters for Council consideration that do not appear on the agenda.

Robert Zahm, resident, reported that there are two intersections with dangerous sidewalks; corner of Locust Ave and Mead Pl. and Milton Rd. & Playland Pakway-south side on the right hand side of Milton Rd.

14. Bid Award for the Annual Street Resurfacing contract (Contract #2015-04).

Councilwoman Brett made a motion, seconded by Councilwoman Killian to adopt the following resolution:

> **RESOLVED** that Contract 2015-04, Annual Street Resurfacing, is hereby awarded to Bilotta Construction Corp, low bidder, in the amount of $886,634.00.

ROLL CALL:
AYES: Councilmembers Bucci, Brett, Killlian, McCartney, Slack and Mayor Sack
NAYS: None
ABSENT: Councilman Mecca

15. Consideration to amend the Resolution of acceptance for a grant from the New York State Department of Environmental Conservation for reimbursement for equipment purchased by the Department of Public Works.

WHEREAS, the State of New York provides financial aid for municipal waste reduction and municipal recycling projects; and

WHEREAS, the City of Rye herein called the MUNICIPALITY, has examined and duly considered the applicable laws of the State of New York and the MUNICIPALITY deems it to be in the public interest and benefit to file an application under these laws; and

WHEREAS, it is necessary that a Contract by and between THE PEOPLE OF THE STATE OF NEW YORK, herein called the STATE, and the MUNICIPALITY be executed for such STATE Aid;

NOW, THEREFORE, BE IT RESOLVED by the Rye City Council:

1. That the filing of an application in the form required by the State of New York in conformity with the applicable laws of the State of New York including all understanding and assurances contained in said application is hereby authorized.
2. That Ryan X. Coyne is directed and authorized as the official representative of the MUNICIPALITY to act in connection with the application and to provide such additional information as may be required and to sign the resulting contract if said application is approved by the STATE;
3. That the MUNICIPALITY agrees that it will fund its portion of the cost of said Municipal Waste Reduction and Recycling Project.
4. That the MUNICIPALITY or MUNICIPALITIES set forth their respective responsibilities by attached joint resolution relative to a joint Municipal Waste Reduction and/or Recycling Project.
5. That this resolution shall take effect immediately.

ROLL CALL:
AYES: Councilmembers Bucci, Brett, Killian, McCartney, Slack and Mayor Sack
NAYS: None
ABSENT: Councilman Mecca

16. Authorization for the City Manager to enter into an Agreement with the County of Westchester for 2015-2016 Prisoner Transportation Services.

Councilwoman Brett made a motion, seconded by Councilwoman Bucci, to adopt the following resolution.

RESOLVED, that the City Council of the City of Rye hereby authorizes the City Manager to enter into an Intermunicipal Agreement with the County of Westchester for 2015-2016 Prisoner Transportation Services.

ROLL CALL:
AYES: Mayor Sack, Councilmembers Brett, Bucci, Killian, McCartney, and Slack
NAYS: None
ABSENT: Councilman Mecca

17. Authorization for the City Manager to enter into an Inter-municipal Agreement with Westchester County for the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County.

This item was deferred.

18. Designation of one member to the Boat Basin Nominating Committee.

Mayor Sack made a motion, seconded by Councilwoman Brett, to appoint Benjamin Poole (Commission member not standing for re-election) and Alan Caminiti (Permit holder elected to Nominating Committee in last election August 2014) to the Boat Basin Nominating Committee.

19. Two appointments to the Rye Senior Advocacy Committee for a three-year term expiring January 1, 2018, by the Mayor with Council approval.

Mayor Sack made a motion and unanimously carried to appoint Edward Matthews and Jane O'Sullivan to the Rye Senior Advocacy Committee for three-year terms expiring January 1, 2018.

20. Consideration of request for permission to close a section of Purchase Street for the 63nd annual celebration of the Halloween Window Painting Contest.

Councilman McCartney made a motion, seconded by Councilwoman Brett and unanimously carried to adopt the following resolution.

RESOLVED, the City Council hereby approves the request of the Recreation Department for permission to close a section of Purchase Street from the Square House to Purdy Avenue for the 63rd Annual Halloween Window Painting Contest on Sunday October 18, 2015 (rain date October 25) from 8:00 A.M. to 3:00 P.M.

21. Consideration of a request by the Leukemia and Lymphoma Society for use of city streets on Saturday, November 1, 2014 from 5:00 p.m. to 9:00 p.m. for their annual *Light the Night Walk* event.

Councilwoman Brett made a motion, seconded by Councilman McCartney and unanimously carried to adopt the following resolution.

RESOLVED, the City Council hereby approves the request of the Leukemia and Lymphoma Society to use city streets for the annual *Light the Night Walk* to be held at Playland on Saturday, November 7, 2015 from 5:00 p.m. to 9:00 p.m.

22. Consideration of a request by Longford's Ice Cream for the use of City streets for their 20th Anniversary celebration on Sunday, August 6, 2015 from 12:00 p.m. to 5:00 p.m.

Councilwoman Brett made a motion, seconded by Councilman McCartney and unanimously carried to approve the following resolution

RESOLVED, the City Council hereby approves the request of Longford's Ice Cream for use of City streets for their 20th Anniversary celebration on Sunday, August 6, 2015 from 12:00 p.m. to 5:00 p.m.

23. Miscellaneous communications and reports.

There was nothing reported under this agenda item.

24. New Business.

City Clerk position has been advertised with a deadline for applications on Friday, July 10, 2015. The City will do a search for the Police Commissioner position later this year.

Request by Mayor Sack to Corporation Counsel to provide an update on the Beaver Swamp Litigation

25. Adjournment.

There being no further business to discuss Mayor Sack made a motion, seconded by Councilman McCartney and unanimously carried, to adjourn the meeting at 1:06 a.m.

Respectfully submitted

Diane C. Moore
Deputy City Clerk

CITY COUNCIL AGENDA

NO. 5 DEPT.: City Council DATE: August 5, 2015
CONTACT: Mayor Joseph A. Sack

AGENDA ITEM: Issues Update/Old Business

FOR THE MEETING OF:
August 5, 2015
RYE CITY CODE,
CHAPTER
SECTION

RECOMMENDATION: That an update be provided on outstanding issues or Old Business.

IMPACT: ☐ Environmental ☐ Fiscal ☐ Neighborhood ☐ Other:

BACKGROUND:

CITY COUNCIL AGENDA

NO. 6 DEPT.: City Council DATE: August 5, 2015

CONTACT: Mayor Joseph A. Sack

AGENDA ITEM: Public Hearing to amend local law Chapter 133, "Noise", of the Rye City Code regarding regulations on mechanical rock removal.

FOR THE MEETING OF:
August 5, 2015

RYE CITY CODE,
CHAPTER 133
SECTION 8

RECOMMENDATION: That the Council hold a Public Hearing to amend Chapter 133 regarding regulations on mechanical rock removal.

IMPACT: ☐ Environmental ☐ Fiscal ☒ Neighborhood ☐ Other:

BACKGROUND: Recommendations regarding mechanical rock removal will be presented to the City Council including limits on duration of rock chipping, establishing a permit process, better notice to neighbors, increased restrictions on hours and adding additional holidays when rock chipping would be prohibited.

See attached Draft Local Law.

CITY OF RYE

LOCAL LAW NO. 2015

A local law to amend Chapter 133 "Noise" of the Code of the City of Rye by renaming and amending Section 8 as follows "Permit Required; Construction work, mechanical rock removal and blasting restrictions"; amending Section 133-9 "Penalties for Offenses" to increase the penalties, and amending Section 133-10 "Exempt Acts" to exempt certain entities from the requirements as follows:

Be it enacted by the City Council of the City of Rye as follows:

Section 1: Chapter 133-8 "**Permit Required;** Construction work, **mechanical rock removal and blasting restricted**~~ed~~**ions** ~~to certain hours and days~~."

A. Whenever used in this section, the following terms shall have the meanings indicated:

ROCK REMOVAL PERMIT – A permit issued for rock removal on a subject property.

SUBJECT PROPERTY – The lot for which a rock removal permit or blasting permit pursuant to Chapter 98 is issued.

B. **TESTING DAYS – A day when a school is administering a state or federally mandated test or a day when the school is administering an advanced placement test, PSAT, LSAT, SAT, ACT, MCAT, final examinations or other similar tests, as long as the school or district posts on their web site at the beginning of each school year such dates and provides such information at the beginning of the school year to the Building Department .No Mechanical Rock Removal or blasting may take place unless a permit is obtained. All permits shall identify the purpose for which the Rock Removal Permit or blasting permit is being issued, the owner of the Subject Property, including any partners of any limited liability company, and the permitted duration of the Mechanical Rock Removal or blasting.**

(1) **Mechanical Rock Removal and blasting shall be restricted to thirty (30) consecutive calendar days.**

(2) **No new/additional Rock Removal Permit or blasting permit (see Chapter 98) shall be issued for the same Subject Property for 18 months from the date any previously issued permit expires.**

C. **Upon receiving a Rock Removal Permit or blasting permit, any individual who intends to engage in Mechanical Rock Removal or blasting on any property in the City of Rye shall register with the City at least seven (7)**

calendar days prior to the commencement of such activities. Upon such notification, the Subject Property will be listed on the City of Rye website showing the earliest commencement date and when the thirty day period ceases. Such notice shall be displayed in a visible location at the Subject Property.

(3) **In addition to notifying the City as required in Section B(3) above, the individual must also notify the neighbors by sending out a public notification prepared by the Building Department. The applicant shall prepare a notification list, using the most current City of Rye Tax Maps and Tax Assessment Roll, showing the Tax Map sheet, block and lot number, the owner's name and owner's mailing address for each property located wholly or partially within 500 feet of the Subject Property. If a property on the public notification list is also listed as a cooperative or an apartment, the notice shall only be mailed to the property owner of record. These mailing requirements must be performed in accordance with the following requirements:**

a. **The mailing shall be limited solely to the public notice provided by the City Building Department.**

b. **The notice shall be mailed to all property owners by certified mail with certificate of mailing (no return receipt necessary) at a post office or official depository of the Postal Service, at least ten (10) days prior to the commencement of Mechanical Rock Removal.**

c. **The individual must provide a copy of the certificate of mailing to the City Building Department prior to the commencement of any Mechanical Rock Removal or blasting.**

D. Construction work prohibited at certain hours and on certain days. No person shall engage in construction work earlier than 7:30 a.m. or later than 6:30 p.m., prevailing time, on weekdays; earlier than 10:00 a.m. or later than 5:00 p.m., prevailing time, on Saturdays; or at any hour on Sundays or any of the following holidays: New Year's Day, Presidents' Day, **Martin Luther King Jr. Day,** Memorial Day, Independence Day, Labor Day, **Columbus Day, Veterans Day, Yom Kippur,** Thanksgiving Day **through Thanksgiving weekend** and Christmas Day **through New Year's Day.**

E. Notwithstanding any provision of §133-8 to the contrary, an individual may perform construction work him/herself on property on which such individual then resides as follows:

(i) Weekdays, between 7:30 a.m. and 8:00 p.m.
(ii) Saturdays and Sundays (including holidays), between the hours of 10:00 a.m. and 8:00 p.m.

F. Mechanical Rock Removal and blasting are prohibited at certain hours and on certain days. No person shall engage in Mechanical Rock Removal, as defined in Subsection A, or blasting operations using explosives as defined by § 98-40, within the City of Rye after the hour of 3:30 p.m. or before 9:00 a.m. **on weekdays or at any time on Saturday and Sunday;** or on any of the following holidays **and time periods**: New Year's Day, Presidents' Day, **Martin Luther King Jr. Day,** Memorial Day, Independence Day, Labor Day, **Columbus Day, Veterans Day, Yom Kippur,** Thanksgiving Day **through Thanksgiving weekend** and Christmas Day **through New Year's Day** except under authority of a special permit issued by the City Manager. **In addition, Mechanical Rock Removal and blasting will be prohibited within 500 feet of a school on Testing Days.**

G. No person performing Mechanical Rock Removal shall have more than one machine and one hammer operating on the Subject Property at the same time. Rock crushing shall not be permitted on the Subject Property. Any rock hammer must be removed from the site by the end of the third calendar day following the expiration of the 30 calendar day period for Mechanical Rock Removal set forth above.

Section 2: Chapter 133-9. "Penalties for offenses".

In the event an activity is not being performed in accordance with this chapter, the owner of the property or the owner's agent or the person performing such violation shall be notified to suspend all work, and any such persons shall forthwith stop such work and suspend all activities. Such order and notice shall be in writing and may be served upon a person to whom it is directed either by delivering it personally to him or by posting the same upon a conspicuous portion of the property and sending a copy of same by registered or certified mail. Any person who violates any provision of this chapter shall be guilty of an offense and shall, upon conviction thereof, be subject to a fine of not more than $250 or imprisonment for a term of not more than 15 days, or both except that violations under § 133-8, **Permit Required; Construction Work, Mechanical Rock Removal and blasting restrictions**, shall be treated as individual violations for each and every such violation and noncompliance, respectively, thereof, shall be punished upon such first conviction by a fine of not more than **$1,000**, an order to suspend construction work **and/or mechanical rock removal and/or blasting** on the site for a period of not more than 72 hours, or by imprisonment not exceeding 15 days, or any combination of such fine, suspension, and imprisonment, and each day that such violation shall continue shall be construed as a separate offense. Upon any subsequent conviction for the same offense such person shall be subject to a fine of not more than **$2,000**, or an order to suspend construction work **and/or mechanical rock removal and/or blasting** on the site for a period of not more than 72 hours, or by imprisonment not exceeding 15 days, or any

combination of such fine, suspension and imprisonment. The imposition of one penalty for any violation shall not excuse or remedy such violations.

Section 3: Chapter 133-10. "Exempt acts".

§ 133-10. Exempt acts.

The following activities and agencies are exempt from the requirement of this Chapter:

A. The actions of governmental agencies, **including the Rye City School District and the Rye Neck Union Free School District**, shall be specifically exempt from the requirements of this chapter.

B. **Removal of up to 2,000 cubic feet of rock for utilities shall be exempt from the requirements of this Chapter, but in no circumstance may this provision be used for Mechanical Rock removal for more than three (3) days.**

Section 4: Severability.

If any clause, sentence, paragraph, section or part of any section of this title shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or part thereof directly involved in the controversy and in which such judgment shall have been rendered.

Section 5: Effective date.

This local law will take effect immediately on filing in the office of the Secretary of State.

CITY COUNCIL AGENDA

NO. 7 DEPT.: Planning DATE: August 5, 2015

CONTACT: Christian K. Miller, AICP, City Planner

AGENDA ITEM: Public Hearing to amend local law Chapter 197, "Zoning", of the Rye City Code by amending Section §197-2, "Districts, A: Residence Districts" to change the zoning designation of a property at 120 Old Post Road from the B-4, Office Building, District to a New RA-6, Active Senior Residence, District; and amending Section §197-86, "Tables of Regulations: Table A, Residence Districts – Area Yard, Height and Miscellaneous Regulations" to add the proposed RA-6 zone.

FOR THE MEETING OF:
August 5, 2015

RYE CITY CODE,
CHAPTER 197
SECTION 7

RECOMMENDATION: That the City Council hold a Public Hearing to review the Planning Commission's advisory memorandum and the petitioner's amended submission.

IMPACT: ☒ Environmental ☐ Fiscal ☒ Neighborhood ☐ Other:

BACKGROUND: The City Council declared themselves Lead Agency under SEQRA at the October 8, 2014 City Council meeting and referred the petition of Old Post Road Associates to the Planning Commission for their review. Old Post Road Associates, LLC, seeks an amendment to the City Zoning Map to change the zoning district designation of an approximately 7.0-acre property located at the intersection of Old Post Road and Playland Access Drive. The request would change the zoning of the property from the B-4, *Office Building*, District to a new zone RA-6, *Active Senior Residence*, District. The petitioner is seeking to construct units of age-restricted housing limited to those individuals over age 55 who are not interested or in need of residing within a retirement community or nursing facility.

See attached Planning Commission advisory memorandum and applicant's amended petition with supporting documents.

HKP | HARFENIST KRAUT & PERLSTEIN LLP

JONATHAN D. KRAUT

DIRECT TEL.: 914-701-0800
MAIN FAX: 914-701-0808
JKRAUT@HKPLAW.COM

July 30, 2015
VIA HAND DELIVERY

Mayor Joseph Sack and
Members of the City Council
1051 Boston Post Road
Rye, New York 10580

Re: ***Re-zoning of 120 Old Post Road***

Dear Mayor Sack and Members of the City Council:

As you know, we represent Old Post Road Associates, LLC (the "Petitioner"), in connection with a Petition for Zone Change, Zoning Map Amendment and Amendment to City of Rye Zoning Ordinance (the "Petition") for the above referenced property (the "Subject Property"). We respectfully enclose supplemental materials and information for your review and consideration concerning the Petition as requested at the last City Council meeting.

At the last City Council meeting there were various recommendations of the Planning Commission that were discussed. Attached hereto as Exhibit 1 is a revised version of the Proposed Text Amendments to Chapter 197 reflecting some of those suggested revisions. The changes to the Proposed Text Amendments are as follows:

- §197-8.1.B(4) – included a minimum landscaping buffer of 10 feet on the perimeter of the site
- §197-8.1.B(5) – included a maximum building coverage of thirty-five percent (35%)
- §197-28 – revised the parking requirements to provide a minimum of 1.5 spaces per dwelling unit
- §197-30.E – included a provision allowing for tandem parking for multiple spaces reserved to a single dwelling unit
- Table 2 – revised to include a minimum 50 foot setback for the shortest side yard and rear yard

HKP

We have also met with the City Planner and City Engineer to review potential traffic circulation improvements within the immediate vicinity of the Subject Property. While our review of these issues is ongoing, the Petitioner's traffic engineer anticipates being able to present at your upcoming meeting the potential benefits and impacts of the following concepts:

- The introduction of a right-turn only lane on Playland Access Drive onto Old Post Road immediately adjacent to and in front of the Subject Property;

- The utilization of the "emergency access" driveway from the Subject Property onto Old Post Road; and

- The creation of a left-turn onto Playland Parkway from the access ramp heading northbound on Boston Post Road which currently only permits eastbound access onto Playland Parkway and the diversion of traffic destined for I-95 to this entrance and off Old Post Road by way of new signage on northbound Boston Post Road.

At the last Council meeting there was also a question raised by a member of the public considering other alternative uses of the Subject Property and a potential subdivision with conventional single-family homes. If the Council were to consider re-zoning the Subject Property to a single-family zoning district the most logical zone would be the R-2 District which abuts the Subject Property to the south and east. The R-2 zoning district requires a minimum lot size of ½ acre; therefore, under a subdivision of the Subject Property there could potentially be 14 new single family residences. The Petitioner has not analyzed the impacts of such development as that is not the Petitioner's desired objective in the instant Petition and we do not believe the Council would find such a use desirable. We believe the contemplated use for multi-family age restricted housing is a more appropriate transition between the single-family residential development to the east to the office use to the west and multi-family / assisted living use of the Osborn to the south.

Finally, as requested by the City Council, the Petitioner has engaged a site contractor and geotechnical engineer to perform some preliminary subsurface investigations in order to understand the extent of the anticipated rock removal in order to construct the project. We do not yet have test results but will continue to provide that information to your Council upon completion of the testing.

HKP

We look forward to presenting this information to the City Council and addressing any comments or questions of the Council or the public. Thank you for your attention to this matter.

Very Truly Yours,

HARFENIST KRAUT & PERLSTEIN LLP

By: Jonathan D. Kraut/lp
Jonathan D. Kraut

PROPOSED TEXT AMENDMENTS TO CHAPTER 197 OF RYE CITY CODE

§ 197-2 Districts

RA-6 Active Senior Residence District – Minimum area per family 2,000 square feet

§ 197-8.1 Active Senior Residence District Regulations

A. Limitations on Occupancy.

(1) The occupancy of residential units within the Active Senior Residence Zone shall be limited to:

a) A single person 55 years of age or older;
b) Two or three persons, all of whom are 55 years of age or older;
c) A married couple, live-in companion, or partner, one of which is 55 years of age or older;
d) The surviving spouse of a person 55 years of age or older, provided that the surviving spouse was duly registered as a resident of the development at the time of the elderly person's death;
e) One adult 18 years of age or older residing with a person who is 55 years of age or older, provided that said adult is essential to the long-term care of the elderly person as certified by a physician duly licensed in New York State

(2) Persons under the age of 55 not specifically permitted to be occupants shall not be permitted to be permanent residents of dwelling units. For the purposes of this section, a "permanent resident" shall mean any person who resides within the dwelling for more than three consecutive weeks or in excess of 30 days in any calendar year, or has listed the residence as an abode for any purpose whatsoever, including, but not limited to, enrollment in public or private schools. Temporary occupancy by guests of families shall be permitted, provided that such occupancy does not exceed a total of 30 days in any calendar year.

(3) Notwithstanding the foregoing, one dwelling unit within the community may be set aside to be occupied by a superintendent or building manager, to which the limitations on occupancy set forth above shall not apply.

(4) The limitations on occupancy shall be included in the marketing materials for the development as well as within the rules and regulations or terms of any

leases, by-laws or covenants and restrictions for the development. Violations of the limitations on occupancy shall be enforceable by the City of Rye Building Inspector against the owner or lessee or the agent of any of them and shall be punishable by a fine of $250 per day or by imprisonment not exceeding 15 days, or by both such fine and imprisonment. Exceptions to these regulations shall be granted if any limitations are determined to be in violation of any State or Federal law.

(5) The Planning Commission shall have the right to require that the owner execute agreements and covenants as it may deem to be required during any site plan approval process as it may reasonably deem to be required to ensure compliance with the stated intent of this section. Said agreements or covenants shall be recorded in the office of the Westchester County Clerk and constitute a covenant running with the land. Such covenant or agreement may be modified or released only as set forth in said covenant or agreement or by the City Council.

B. Site Development

(1) At least eighty percent (80%) of the required parking for the development shall be provided in a covered parking structure within the basement level of the principal structure(s).

(2) For any corner lot abutting Boston Post Road or Old Post Road, the front lot line of the lot shall be Boston Post Road or Old Post Road for purposes of the applicable front yard setback irrespective of building arrangement. The provisions of § 197-52 shall not apply to properties in the RA-6 zone.

(3) The provisions of § 197-8.A & C shall not apply to properties in the RA-6 zone.

(4) A landscaping buffer a minimum of ten (10) feet wide shall be required to be provided around the perimeter of the site.

(5) A maximum building coverage of thirty-five percent (35%) shall be permitted.

§ 197-28 Schedule of Off-Street Parking Requirements

A. Schedule of parking requirements. Off-street automobile parking facilities shall be provided as follows:

Use	Number of Spaces per Unit (by Parking District) A	B	C	Unit of Measurement and Conditions
Apartments for active seniors located in RA-6 Districts	1.5	1.5	1.5	Dwelling unit

§ 197-30 Layout and Location of Off-Street Parking Facilities

D. In RA-1, RA-2, RA-3, RA-4, RA-5 and RA-6 Districts, no off-street parking facility accessory to apartments or office buildings shall be developed within five feet of any lot line. Required off-street parking facilities accessory to other main uses shall conform to the provisions of Subsection C above.

E. Subject to the discretion of the Planning Commission during site plan review, in the RA-6 District tandem parking arrangements may be utilized for multiple spaces reserved to a single dwelling unit.

§ 197-44 Minimum Residential Floor Area

E. For dwelling units in apartments or other buildings containing three or more dwelling units in an RA-6 District, the minimum amount of residential floor area in each unit shall be 750 square feet for one bedroom units, 900 square feet for two bedroom units and 1,100 square feet for three bedroom units. Additionally, three-bedroom units must be equipped with at least 1 ½ bathrooms.

§ 197-86 Tables of Regulations

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 1
Permitted Main Uses

RA-6 Districts

(1) Apartments for active seniors. A detached residence for three or more families or housekeeping units, or a group of buildings housing three or more families on one lot, subject to the requirements of § 197-7 and § 197-8.1.

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 2
Uses Permitted Subject to Additional
Standards and Requirements
(Subject to the requirements and provisions of §197-10)

RA-6 Districts

(Reserved)

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 3
Permitted Accessory Uses
(Subject to the requirements and provisions of §197-9)

RA-6 Districts

(1) Off-street parking facilities, subject to the requirements and provisions of § 197-8.1.
(2) Other accessory uses or structures customarily incidental to any permitted main use, including active and passive recreational facilities (i.e. fitness center, pool, library, media room, storage areas, etc.) for the use of the residents of the principle structure. Outside storage on land of boats and boat trailers is prohibited.

(3) The filming of movies, commercials, documentaries, serials, shows, performances or other similar events and activities, including still photography, as regulated in RA-4 Districts.

Table No. 2. *Existing and Proposed Multi-Family Zoning Districts & Bulk Regulations*

4		5	6	7	8	9	10	11	12	13	14	15	16
					Minimum Yard Dimensions (feet)				Specified Distance (feet) as required in Column 2	Maximum Height		One-Story Accessory Structures	
District	Use	Maximum Ratio of Floor Area to Lot Area[j]	Minimum Size of Lot (AC or SF) per a. Family or Equiv.[a] or b. Nonresidential Use	Minimum Width (feet) [See § 197-36]	Front[b]	One Side [b][c]	Total of Two Side Yards	Rear[b]	(Uses)	(stories)	(feet)	Maximum Coverage of Required Rear Yard	Minimum Distance to Side Line (feet)
RA-1	Single-family house	0.40	5,000	50	25	8	20	30	40	2.5	35	30%	5
	Two-family house	0.40	5,000	60	25	8	20	30	--	2.5	35	30%	5
	Apartment house	0.40	5,000[c]	100	70	50	100	50	--	2.5	35	30%	10
RA-2	Single-family house	0.45	5,000	50	25	8	20	50	30	2.5	35	30%	5
	Two-family house	0.45	3,500	60	25	8	20	50	--	2.5	35	30%	5
	Apartment house	0.45	3,500[c]	100	25	20	50	40	--	2.5	35	30%	10
RA-3	Single-family house	0.50	5,000	50	25	8	20	30	20	2.5	35	35%	5
	Two-family house	0.50	3,000	60	25	8	20	30	--	2.5	35	35%	5
	Apartment house	0.50	2,500[c]	80	25	20	40	40	--	2.5	40	35%	10
RA-4	Single-family house	0.50	5,000	50	25	8	20	30	--	2.5	35	35%	5
	Two-family house	0.50	3,000	60	25	8	20	30	--	2.5	35	35%	5
	Apartment house	0.50	2,500[c]	80	25	20[d]	40[d]	40[d]	--	2.5[f]	35[f]	35%	10
RA-5	Apartments for senior citizens and handicapped persons	1.00	1 AC	80	25		40	40	--	4	50	35%	10
RA-6	**Apartments for active senior citizens**	**0.8**	**2,000**	**400**	**100**	**50**	**100**	**50**	**--**	**4**	**45**	**35%**	**10**

(a) Equivalent to one (1) family in computing minimum lot sizes:
[1] Hotels and lodging houses, each two (2) guest sleeping rooms.
[2] Hospitals and similar institutions, each two (2) hospital beds.
[3] Medical offices, each two (2) doctors plus three (3) other employees.
[4] Other nonresidential main uses not specifically provided for in this Table of Regulations or elsewhere in Chapter 197, each one thousand five hundred (1,500) square feet of floor space

(b) [1] Wherever a required yard abuts a street less than fifty (50) feet in width, the minimum yard dimension(s) shall be measured from a line of twenty-five (25) feet from parallel to the center line of said street.
[2] No building shall be nearer than one hundred (100) feet to center line of Post Road between Mamaroneck town line and Central Avenue.

(c) For corner lots, corner side yards at least one fifth (1/5) of the lot width at the location of the building, but need not be more than front yard minimum, except as provided in § 197-62. Permitted nonresidential main uses shall have minimum side yard one and one half (1 1/2) times width specified for a single-family house (See § 197-52).

(d) Twenty-five (25) feet for any side yard containing a driveway serving more than six (6) parking spaces. For a one-, two-, or three-family structure existing on effective date of Chapter 197 (August 9, 1956) and proposed for conversion for up to four (4) families, the Board of Appeals may reduce side yard requirement to eight (8) feet. For side yard requirements for other apartments, see See § 197-54. For spacing between buildings on the same lot, see § 197-70. For the rear and side yards of apartment houses adjoining the right-of-way of a railroad, a parkway or a limited access highway, see § 197-64.

(e) For usable open space requirement, see § 197-68

(f) For buildings in variable height apartment groups (a use permitted in RA-4 Districts subject to additional standards and requirements), see§ 197-13.
[g,h,i omitted]

(j) See § 197-43.1 for floor area ratio reductions for single-family residences on oversized properties in one-family districts.

Robert P. Astorino
County Executive

County Planning Board

June 29, 2015

Christian K. Miller, City Planner
Rye City Planning Department
1051 Boston Post Road
Rye, NY 10580

Subject: **Referral File No. RYC 15 – 001 – Old Post Road Associates, LLC**
Petition for Zoning Text and Map Amendments

Dear Mr. Miller:

The Westchester County Planning Board has received a copy of a petition to amend the text of the City's Zoning Ordinance and to amend the City's Zoning Map so as to allow the redevelopment of an existing office site with a new age-restricted (age 55 and over) apartment building containing 135 one- and two-bedroom units and parking for 240 vehicles.

The 7.0-acre site is located at 120 Old Post Road (County Road 73) with additional frontage along the Playland Parkway Access Drive (County Road 147). The site is currently zoned B-4 and is developed with an office building, described as underutilized. The applicants are petitioning the City to create a new RA-6 Active Senior Residence District and to rezone the subject site to RA-6. If successful, the applicant would then seek site plan approval to develop the proposed apartment building under the new zoning. The site was previously proposed for redevelopment with a hotel.

Because the referred material does not include a site plan, we reserve comment on the potential development under the provisions of Section 239 L, M and N of the General Municipal Law and Section 277.61 of the County Administrative Code until plans are prepared and referred. We are able to offer the following preliminary comments:

1. **Affirmatively furthering fair housing**. The proposed zoning text amendment does not include provisions that would affirmatively further fair housing (AFFH) in the new RA-6 district. We recommend that this be added to ensure that no less than 10% of the total number of units developed would be set aside as affordable AFFH units. We also recommend that the affordable AFFH units be made available to people of all ages.

We note that the City of Rye has not adopted the County's *Model Ordinance Provisions* with respect to affordable AFFH. We encourage the City adopt these provisions to ensure that affordable AFFH units are constructed city-wide as part of all proposed developments.

2. Occupancy restrictions. The proposed RA-6 district regulations contain occupancy restrictions that go beyond the usual requirement that one resident in each housing unit be 55 years of age or older. The proposed regulations specify that all persons living in a dwelling unit be 55 years of age or older unless they are married to or are a "live-in companion, or partner" of someone who is 55 or older. Further, the proposed ~~regulations~~ state that any other resident younger than 55 must be at least 18 years of age and have a certification from a physician stating that "said adult is essential to the long-term care of the elderly person." The proposed zoning text also establishes fines and jail time for persons who violate these occupancy rules.

We suggest that the City exercise caution in adopting regulations that are more restrictive than those typically used for senior housing developments. We are unaware of any zoning regulations in place in the county that have restrictions and penalties similar to what is proposed by this applicant.

3. County road. Old Post Road (CR 73) and the Playland Parkway Access Drive (CR 147) are County roads. Because the site contains frontage on each of these roads, approval for work related to or with an impact on these roads will be required from the Westchester County Department of Public Works and Transportation (WCDPW&T) under Section 239 F of the General Municipal Law. Pertinent drainage, utility, erosion control and curb cut details need to be provided at the time of Section 239 F submittal. All driveways must be designed in accordance with current County, State and AASHTO standards.

Please note that WCDPW&T must be listed as an Involved Agency pursuant to SEQR.

Thank you for calling this matter to our attention.

Respectfully,
WESTCHESTER COUNTY PLANNING BOARD

FOR:
By:
Edward Buroughs, AICP
Commissioner

EEB/LH

cc: Michael Dispenza, Contract Administrator, County Department of Public Works and Transportation
Kevin Roseman, Traffic Engineer, County Department of Public Works and Transportation

Planning Department
1051 Boston Post Road
Rye, New York 10580
Tel: (914) 967-7167
Fax: (914) 967-7185
www.ryeny.gov

CITY OF RYE
Planning Commission

Memorandum

To: Rye City Council

From: Rye City Planning Commission

Date: May 5, 2015

Subject: **Advisory Recommendation Regarding a Petition from Old Post Road Associates, LLC to amend the City Zoning Code and Zoning Map to Change the Zoning Designation of a property at 120 Old Post Road from the B-4, Office Building, District to a New RA-6, *Active Senior Residence,* District.**

As requested, this memorandum provides a recommendation to the Rye City Council regarding the above-referenced matter.

Background

Last fall the applicant submitted to the City Council a petition to change the zoning district of a 7-acre property currently zoned B-4, *Office Building*, District at 120 Old Post Road to a new RA-6, *Active Senior Residence*, District. The petitioner submitted the zoning request in order to advance the construction of a 135-unit age restricted multi-family community. Consistent with City practice, the petition was referred to the Planning Commission for its advisory recommendation. The City Council also declared its intent to be Lead Agency for the environmental review of the application.

At five public meetings since February the Planning Commission has reviewed the petitioner's request and requested supplemental information. All information submitted to the Commission will be repacked into one complete submission to the City Council upon receipt of this memorandum. This memorandum was unanimously adopted by the Planning Commission at its May 5, 2015 meeting.

Existing Permitted and Proposed Uses

The Commission supports the proposed age-restricted multi-family use based on current and anticipated office market trends, land use compatibility considerations and the balance of potential positive and negative impacts

Market Trends

The market analysis provided by the petitioner appears to support that there is demand for the age-restricted multi-family housing within the area. The analysis also affirms long-term historic and future challenges to office use.

The existing office building on the property has struggled to find tenants and has remained vacant for many years. The building age and configuration makes it difficult to re-adapt for multi-tenant users, which is how many former single-tenant buildings have been successful in reducing vacancy rates. While it appears that the office vacancy is relatively low in Rye, area market analysis suggests that office buildings continue their multi-year trend of high vacancy rates and flat or declining rents. There does not appear to be any demographic or economic factor on the horizon to reverse this downward trend. There is little new office construction in the region and other area communities such as Rye Brook and Harrison have amended their zoning codes to allow the reprogramming of existing or approved office space to other uses including multi-family residential, retail and private recreational uses. Age-restricted housing serves the growing needs of the aging baby boom generation, which is consistent with regional and national demographic trends.

The Commission notes that petitioner's characterization that the units would serve a "luxury" market (which is a relative term) cannot be guaranteed because zoning cannot legislate minimum rents or housing values. Actual rents could be higher or lower and housing tenure (i.e. rental vs. ownership) could also change and cannot be legislated in a zoning district.

Land Use Compatibility

The proposed age-restricted multi-family use is not incompatible with surrounding office, medical, institutional and single-family uses. The proposed zoning would create more opportunity for the creation of age-restricted housing and would add to the existing or approved 140 units of senior affordable housing in the nearby RA-5 Districts on Theall Road and Theodore Fremd Avenue. Land use compatibility concerns could be further alleviated by amending the proposed RA-6 District to include some or all of the Planning Commission's recommendations under the *Bulk and Density* section of this memorandum.

In consideration of the petitioner's request, the City Council should contemplate whether other properties in the area may seek similar requests and whether a change in land use or amenities (such as improvements in the pedestrian network) may be necessary to support the growth in age-restricted housing within the area.

Consideration of Impacts

Potentially beneficial and detrimental impacts of the proposed use must be compared to those associated with the continuation of the existing office building. Office may have lower taxes than other uses, but it also generates relatively low municipal costs and no school-age children costs. On a per square-foot basis office generates higher traffic than the proposed use. Office generates less water, sewer and most other utility use than the proposed use. Office provides Rye residents with the potential to work in the City they reside in, but the proposed use offers an expansion of housing opportunities that the City may desire. The City Council needs to consider a comparison of these and other impacts associated with the maximum permitted development under existing and proposed zoning as it conducts its environmental review as Lead Agency under the State Environmental Quality Review (SEQR).

School-age Children

Age-restricted housing has no direct impact on school-age children costs and would likely provide an overall fiscal benefit to the City, County and School District budgets. The petitioner has provided a fiscal impact analysis in its submission. Much is noted that the age-restriction required by proposed zoning will not result in any direct impacts on school district costs because there will be no generation of school-age children.

The City should expect, however that there may be an indirect impact of the proposed development on school age generation based on the statements of need represented by the petitioner and its market study. Those indirect costs will be borne as Rye residents housing choices are expanded, which may induce movement in the housing migration cycle. Those households residing in existing single-family homes over age 55 and without children will have the opportunity to move to the petitioner's proposed development within the Rye community, which may be better suited to their housing needs. This type of housing choice is fairly limited in the City. As those single-family "empty nester" homes are sold they may go to households with children. Studies by the Rye City School District show that sellers of single-family homes typically have fewer children than buyers. Though challenging to quantify, this indirect impact on school-age children generation should be considered.

It is acknowledged that this housing migration could occur independent of whether the petition is approved. For instance, if a similar housing product is offered in another nearby community this too could induce the sale of empty nester single-family homes in the City.

Fiscal Impact

The existing B-4 District on a 7.01-acre property is very limited in terms of the types and range of permitted uses that are both economically feasible for a property owner and fiscally beneficial to municipal and school district tax revenue. Other permitted uses available on this property include *public recreational uses, public uses, nursery schools (not to exceed 30 children), agricultural uses, railroad passenger station and electric substations, religious uses,* and *residential care facility uses (limited to care of 10 or fewer disabled persons or persons in need of supervision or juvenile delinquents).* Given these use restrictions of the existing zoning it's not surprising that the property owner is seeking changes from the City Council to amend the City Zoning Code.

The existing office building is vacant and therefore does not put significant demands on municipal or school district services. However, the vacancy position of the building has resulted in the property owner's successful reduction in property tax. This contributes to a destabilizing tax assessment position and when reductions are successfully secured it requires other tax payers, new revenue sources or service modifications to compensate for lost revenue. Continued vacancy of the office building may result in further future tax reductions.

The existing property pays approximately $21,500 in City tax and $80,300 in Rye City School District tax. The RA-6 District offers an opportunity to increase tax revenue and greater tax assessment stability. The petitioner has estimated that the age-restricted rental multi-family project currently under consideration could generate almost $98,000 in City tax and $365,000 in Rye City School District tax. The City Council should discuss the potential tax generation on this property and what restrictions might be implemented to prevent or limit future tax certioraris.

Traffic

Full development under the proposed zoning would generate less peak hour traffic than full office development permitted by existing Zoning.

Vehicle delays and traffic volumes can be high on some area roadways and intersections. Level of service is particularly poor at the Old Post Road/Playland Parkway Access Drive intersections. Interestingly, peak-hour vehicle trips and delays are generally less today than were shown in traffic studies conducted in 2009 and 2013. Certain turning movements have seen increases, which may be

reduced with potential turning movement restrictions. A traffic signal at congested intersections does not appear to meet the required warrant analysis. There may be opportunities to make traffic improvements to address existing or anticipated traffic challenges.

Bulk and Density

The Commission notes concerns with the increase in overall development density of the proposed zoning as compared to the existing zoning. The proposed zoning would provided for a 166% increase in permitted floor area on the 7.01-acre property. It would also allow for a multi-family development density of 21.78 units per acre. The petitioner has provided a comparison of the unit density of the proposed zoning to other multi-family buildings in the City and similar age-restricted housing in the area In that analysis they note that Rye Manor on Theall Road has 53 units per acre, Highland Hall has 83 units per acre and Blind Brook Lodge has 51 units per acre. The recently approved 41 units of senior housing at 150 North Street/Theodore Fremd Avenue has 19.8 units per acre. The Commission is sensitive to concerns regarding the proposed bulk and scale of future development under the proposed district. To address these concerns the Commission recommends at a minimum the following adjustments in the proposed RA-6 District standards (see summary in Table 1 attached hereto).

Building/Lot Coverage

The existing B-4 District limits building coverage to 15%. There is no maximum lot coverage in the B-4 District so all at-grade parking is not included in the calculation. The Petitioner represents that the existing total impervious coverage on the property is 44%. Under the proposed RA-6 District there would be no building or lot coverage standard, but there would be a requirement that 80% of all required parking be located below grade in the basement. The Commission supports this requirement since it will reduce the over all lot coverage on the property. If a building coverage standard is desired by the City Council the applicant's current plan requires a building coverage of approximately 35%, which *includes* the portion of the court-yard building with basement parking.

Setbacks

The existing B-4 District requires a minimum building setback of 100 feet from all front, side and rear property lines. The proposed RA-6 District would reduce proposed building setbacks to as little as 25 feet for the rear yard and 40 feet for the side yard and the front yard along Playland Parkway Access Drive. Building height in both the existing and proposed districts would be 45 feet, however there would be a notable increase in overall development potential and an allowance for four stories (within 45 feet) rather than three stories in the B-4 District. Given these bulk increases the Commission recommends that no setback be less than

50 feet and that perimeter landscape screening requirements be added to the proposed RA-6 District.

Bedroom Mix and Parking

The Commission recommends that the parking standard be increased from 1.25 spaces per unit rather than 1.5 spaces per unit and that development be limited to one- and two-bedroom units. A higher parking standard is necessary because it is likely that future development have assigned parking spaces, which means sharing of parking is not possible. Giving the nature of the use the Commission would not object to amending the proposed RA-6 District to allow tandem parking.

Attached hereto is a table that summarizes the Planning Commission's recommendations to assist the City Council's continued review of this matter.

Summary of Planning Commission Recommendations

Proposed RA-6, *Active Senior Residence*, District

Zoning Standard	Existing B-4 Office District*	Proposed RA-6 District**	*Summary of Planning Comments and Recommendations*
Permitted Use	Office	Age-Restricted Multi-Family	*Proposed use is acceptable.*
Max. Floor Area Ratio	0.3 (or 91,257 s.f.)	0.8 (or 243,936 s.f.)	*Represents a 166% increase in maximum permitted development potential, however proposed use would be residential rather than existing office development and is considered acceptable if other recommendations provided below are implemented.*
Max. Building Coverage	15%	*No max.*	*A maximum building coverage standard of 35% would meet the project needs of the petitioner. Commission supports the proposed requirement that 80% of required parking be within a basement to reduce overall site coverage.*
Min. Lot Area	7 Acre	0	*No minimum lot area is proposed however a 2,000 square foot minimum lot area per unit (or 21.78 units per acre) is proposed, which could yield a maximum of 152 units on the property. Planning Commission recommends limiting the unit type to one- and two-bedroom units only.*
Min. Lot Width	400 feet	400 feet	
Front Yard Setback	100 feet	100/40 feet	*The front yard setback would only apply to the Post Road frontage. The setback from Playland Parkway Access Drive would be considered a side yard setback. The Commission recommends that this setback be increased to not less than 50 feet.*
One Side Setback	100 feet	40 feet	*Planning Commission recommends that this setback be increased to not less than 50 feet.*
Total of Two Yards	200 feet	100 feet	*Due to proposed reduction in setbacks and increase in permitted floor area the Planning Commission recommends a new landscape buffer standard.*
Rear Yard Setback	100 feet	25 feet	*Planning Commission recommends that this setback be increased to not less than 50 feet.*
Max. Stories	3	4	*Proposed standard is acceptable.*
Max. Building Height	45 feet	45 feet	*Proposed standard is acceptable.*
Required Parking	7 spaces per 10 persons employed at one time.	1.25 spaces/unit	*Planning Commission recommends a minimum parking requirement of 1.50 spaces per unit provided that unit type is limited to one- and two-bedroom units only. Tandem parking for residential units should also be allowed.*
Min. Floor Area per Unit	N/A	1-BR: 750 s.f. 2-BR: 900 s.f. 3-BR: 1,100 s.f.	*Planning Commission finds proposed standard acceptable noting that it meets or exceeds standards for multi-family units in the Zoning Code. Three bedrooms are not recommended.*

**Based on setback requirements for office buildings. Other uses permitted in the B-4 District generally have lesser standards and requirements.*
*** Based on standards included in applicant's March 4, 2015 submission.*

HKP

Proposed Re-zoning of 120 Old Post Road

Table of Contents

HKP

- Ex. 5: Westchester County Office Market: Summary Data prepared by Goman & York Property Advisors, LLC

- Ex. 6: Rye Office Market Analysis: 120 Old Post Road prepared by Goman & York Property Advisors, LLC

- Ex. 7: Market Feasibility Analysis of the Rye, NY Market for Active Adult (55+) Housing prepared by Goman & York Property Advisors, LLC

- Ex. 8: Proposed Property Tax Exposure Report prepared by McCarthy Appraisal / Consulting Svc. Inc.

- Ex. 9: Traffic Access & Impact Study prepared by Frederick P. Clark Associates, Inc.

HKP | HARFENIST KRAUT & PERLSTEIN LLP

JONATHAN D. KRAUT

DIRECT TEL.: 914-701-0800
MAIN FAX: 914-701-0808
JKRAUT@HKPLAW.COM

June 3, 2015
VIA HAND DELIVERY

Mayor Joseph Sack and
Members of the City Council
1051 Boston Post Road
Rye, New York 10580

Re: ***Re-zoning of 120 Old Post Road***

Dear Mayor Sack and Members of the City Council:

We represent Old Post Road Associates, LLC (the "Petitioner"), in connection with a Petition for Zone Change, Zoning Map Amendment and Amendment to City of Rye Zoning Ordinance (the "Petition") in connection with the above referenced property (the "Subject Property"). The Petition was referred by you to the Planning Commission for a report and recommendation. The Petition contemplates creating a new zoning district within the City of Rye and re-zoning the Subject Property to an age-restricted (55+) multifamily housing zone (the "Project"). The Petitioner went through a series of meetings with the Planning Commission spanning several months and we understand the Planning Commission has issued a positive report and recommendation concerning the proposed zone change and proposed use of the Subject Property.

As the City Council may recall, the Subject Property is currently improved with a near fully vacant office building. The Petitioner has previously proposed repurposing the Subject Property with a hotel, which was met with large opposition by members of the community. After careful review of market conditions, the Petitioner believes the Project will provide a desirable housing alternative and product that is not currently available within the City of Rye. (See Market Feasibility Analysis attached hereto as Exhibit 7). Specifically, the Project contemplates the development of the Subject Property with an age-restricted luxury residential community for active adults.

The Project would also benefit the City of Rye as a whole by providing a housing alternative for those individuals 55 years and older who are not interested or in need of residing within a retirement community or nursing facility while not causing any increased burden on the expenses of the City of Rye School District due to the age-restricted residency requirements.

Simultaneously, if approved, the proposed real estate development would have a very beneficial impact on the property's market tax assessment – which has steadily decreased over the past years due to the erosion in market value of office use generally and the Subject Property specifically. (See Westchester County Office Market Report and Rye Office Market Analysis attached hereto as Exhibits 5 & 6). As set forth in the proposed fiscal impacts information attached hereto, the Project is anticipated to generate a significant increase in property taxes, without any burden on the School District due to the age restriction prohibiting occupancy by any school age children and a de minimis demand for other public services over the current use (See Proposed Property Tax Exposure attached hereto as Exhibit 8).

In addition, as further set forth in the attached reports, the Project would not have any significant adverse environmental or traffic impacts. As is described Traffic Impact and Impact Study, prepared by Frederick P. Clark Associates, Inc. (Exhibit 9), the Project "will result in a significant reduction in site traffic, with a decrease of 82 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively." Moreover, as detailed in the Zoning, Land Use and Fiscal Impacts Memorandum prepared by Divney Tung Schwalbe, the Project will reduce impervious surfaces on the site by over 10%.

The Proposed Text Amendments have been modified slightly since the Petition was first submitted to the City Council reflecting some comments and clarifications requested by the Planning Commission. The Petitioner has included a requirement that at least eighty percent (80%) of the required off-street parking be provided in a covered parking structure within the basement of the proposed structure(s). The Proposed Text Amendments also include a maximum density of 2,000 square feet per unit. The Zoning, Land Use and Fiscal Impacts Memorandum (Exhibit 3) contains a density analysis and references other multi-family developments within the City of Rye as well as more recent projects in other municipalities for comparison.

In sum, we believe the proposed zoning change to permit a multi-family development is much more harmonious with the neighborhood than the existing office use, serving as a transition from the single family neighborhood on one side to the office districts on the other. We look forward to presenting this information to the City Council and addressing any comments or questions of the Council or the public. Thank you for your attention to this matter.

Very Truly Yours,

HARFENIST KRAUT & PERLSTEIN LLP

By: _____
Jonathan D. Kraut

CITY OF RYE: RYE CITY COUNCIL
COUNTY OF WESTCHESTER: STATE OF NEW YORK
----------X

In the Matter of the Application of

OLD POST ROAD ASSOCIATES, LLC

PETITION FOR ZONE CHANGE, ZONING MAP AMENDMENT, AND AMENDMENT TO CITY OF RYE ZONING ORDINANCE

PROPERTY LOCATION:
120 Old Post Road, Rye, New York
Sheet 146.13, Block 1, Lot 7

----------X

Petitioner, OLD POST ROAD ASSOCIATES, LLC, by its attorneys, Harfenist Kraut & Perlstein, LLP, hereby petitions the City Council of the City of Rye for a zone change, a zoning map amendment and an amendment to the City of Rye Zoning Ordinance as follows:

1. Old Post Road Associates, LLC, (hereinafter "Petitioner"), with an address at 120 Old Post Road, Rye, New York 10580, is a Limited Liability Company duly formed and existing under the laws of the State of New York.

SUBJECT PROPERTY

2. The Petitioner is the owner of the subject premises located at 120 Old Post Road, as further set forth in the caption of this Petition (hereinafter the "Property").

3. The Property is a single parcel of approximately 7.0 acres located at the intersection of Old Post Road and Playland Access Drive which is known and designated on the Tax Assessment Map of the City of Rye as Sheet 146.13, Block 1, Lot 7.

4. The Property currently lies wholly within the B-4 (Office Building) Zoning District.

5. The Property is currently improved with a three story office building and related parking infrastructure.

6. The Property has the following uses adjacent to its boundaries: i) the Osborn senior living facility is immediately adjacent to the southwest; ii) single family residences in the R-2 zone are located to the southeast across Old Post Road; iii) Playland Parkway to the northeast; and iv) the WestMed Medical Group facility is located to the northwest.

ZONE CHANGE, ZONING MAP AMENDMENT AND AMENDMENT TO ZONING ORDINANCE

7. The Petitioner requests a change in the zoning of the Property, including a zoning map amendment and zoning ordinance text amendment of the Zoning Ordinance of the City of Rye, to rezone the Subject Property from B-4 (Office Building) to a new zone RA-6 (Active Senior Residence District) proposed herein. The Petitioner requests that the relief sought be granted and the zoning map and zoning ordinance of the City of Rye be amended to reflect the relief requested herein.

8. The Petitioner specifically requests that the official zoning map of the City of Rye be redrawn and amended to identify the Subject Premises known and designated on the Tax Assessment Map of the City of Rye, as Sheet 146.13, Block 1, Lot 7 as wholly within the RA-6 Zone as set forth hereinbelow.

9. The Petitioner also specifically requests that the Zoning Code of the City of Rye, Chapter 197: Zoning, Section 197-2: Districts, last amended 6-19-1991 by Local Law No. 13-1991, be further amended. Specifically, the Petitioners request that Section 197-2: Districts, A. Residence Districts, therein be amended to include a new residential district as follows:

> *RA-6: Active Senior Residence District – Minimum lot size area per family 2,000 square feet*

10. Further, the Petitioner specifically requests that the Zoning Code of the City of Rye, Chapter 197: Zoning, Section 197-86: Tables of Regulations: Table A, be amended. Specifically, the Petitioners request that Section 197-86: Tables of Regulations: Table A, Residence Districts – Use Regulations, Column 1: Permitted Main Uses, therein be amended to include as a permitted main use in the RA-6 district the following:

> *(1) Apartments for active seniors in an age-restricted development. A building or group of buildings housing three or more families on one lot, subject to the requirements of §197-7 and Table A.*

11. The Petitioner also specifically requests that the Zoning Code of the City of Rye, Chapter 197: Zoning, be amended to include a new Section entitled *Active Senior Residence District.* Specifically, the Petitioners request that this new Section contain the particulars of the design parameters and limitations as set forth on Exhibit A attached hereto.

12. Lastly, the Petitioner specifically requests that the Zoning Code of the City of Rye, Chapter 197: Zoning, Section 197-86: Tables of Regulations: Table A, be amended. Specifically, the Petitioners request that Section 197-86: Tables of Regulations: Table A, Residence Districts – Area Yard, Height and Miscellaneous Regulations, last amended 7-16-03 by Local Law No. 6-2003; be further amended. Specifically, the Petitioners request that a new row for the proposed RA-6 zone be added, an amendment be made to footnote "C" and a new footnote "K" be added to Table A, all as more specifically set forth on Exhibit B attached hereto.

FACTS SUPPORTING PETITIONER'S REQUEST

13. The existing office building at the Property has been largely vacant for a significant period of time. As this condition of high vacancy rates for office space is not isolated to the Property but is a macro-trend throughout Westchester and other metropolitan areas the Petitioner is not optimistic on the likelihood of the existing office building becoming reoccupied to a sustainable level. Accordingly, the Petitioner has explored various options for uses at the Property.

14. The Petitioner has noted that with property values continuing to increase in Rye, there is a shortage of independent living accommodations for active adults ages 55 and older who wish to remain in Rye but no longer have the necessity of maintaining the related costs and expense necessarily attendant to home ownership within the City of Rye.

15. The Petitioner believes that due to the unique location and size of the Property, the Property could accommodate a viable alternative for those older individuals seeking alternative housing arrangements in an age-restricted community that does not provide nursing care.

16. The requested amendments to the Zoning Ordinance would not have any adverse impacts on the City of Rye. If this Petition were granted it would not only allow the Property to be redeveloped and put back to a sustainable use, it would also provide an alternative housing opportunity that is not currently being offered within the City of Rye. The redevelopment of the Property would also provide a benefit to the City of Rye by reestablishing the taxable value of the Property for real property tax purposes, which has continued to erode year after year as the Property remains vacant. Furthermore, the redevelopment of the Property in accordance with the residency limitations proposed herein would not create any additional strain on the Rye City School District as the development would expressly prohibit residency of any school age children.

SEQRA REVIEW

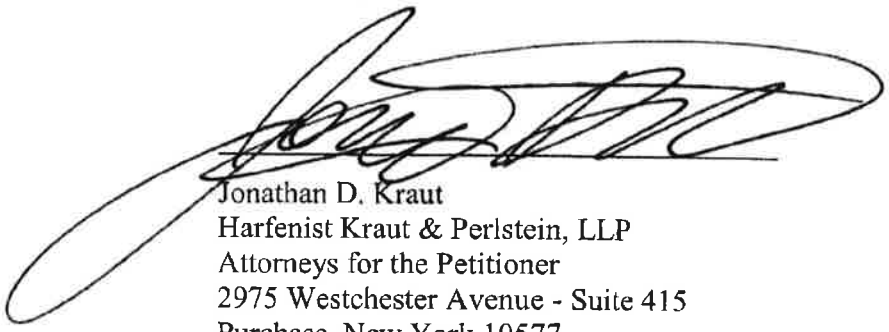
17. With respect to the environmental procedure and review of this Petition pursuant to Article 8 of the Environmental Conservation Law of the State of New York and Part 617 of the New York Codes, Rules and Regulations promulgated pursuant to the New York State Environmental Quality Review Act, it is respectfully submitted that the requested zoning amendments are consistent with the long range planning goals of the City of Rye and would permit a harmonious use between the Property and the community at large.

18. Petitioner has reviewed all pertinent environmental issues relating to the proposed zone change and has prepared a short form Environmental Assessment Form (EAF) in connection with this application. It is submitted herewith, so as to enable the City Council to take steps necessary to consider, and to issue, a negative declaration pursuant to the New York State Environmental Quality Review Act.

WHEREFORE, it is respectfully requested that this matter be placed on the calendar of the City Council for a hearing and that the relief sought herein be in all respects granted.

Dated: Purchase, New York
September 5, 2014

Respectfully submitted,



Jonathan D. Kraut
Harfenist Kraut & Perlstein, LLP
Attorneys for the Petitioner
2975 Westchester Avenue - Suite 415
Purchase, New York 10577
Tel: (914) 701-0800

PROPOSED TEXT AMENDMENTS TO CHAPTER 197 OF RYE CITY CODE

§ 197-2 Districts

RA-6 Active Senior Residence District – Minimum area per family 2,000 square feet

§ 197-8.1 Active Senior Residence District Regulations

A. Limitations on Occupancy.

(1) The occupancy of residential units within the Active Senior Residence Zone shall be limited to:

a) A single person 55 years of age or older;
b) Two or three persons, all of whom are 55 years of age or older;
c) A married couple, live-in companion, or partner, one of which is 55 years of age or older;
d) The surviving spouse of a person 55 years of age or older, provided that the surviving spouse was duly registered as a resident of the development at the time of the elderly person's death;
e) One adult 18 years of age or older residing with a person who is 55 years of age or older, provided that said adult is essential to the long-term care of the elderly person as certified by a physician duly licensed in New York State

(2) Persons under the age of 55 not specifically permitted to be occupants shall not be permitted to be permanent residents of dwelling units. For the purposes of this section, a "permanent resident" shall mean any person who resides within the dwelling for more than three consecutive weeks or in excess of 30 days in any calendar year, or has listed the residence as an abode for any purpose whatsoever, including, but not limited to, enrollment in public or private schools. Temporary occupancy by guests of families shall be permitted, provided that such occupancy does not exceed a total of 30 days in any calendar year.

(3) Notwithstanding the foregoing, one dwelling unit within the community may be set aside to be occupied by a superintendent or building manager, to which the limitations on occupancy set forth above shall not apply.

(4) The limitations on occupancy shall be included in the marketing materials for the development as well as within the rules and regulations or terms of any

leases, by-laws or covenants and restrictions for the development. Violations of the limitations on occupancy shall be enforceable by the City of Rye Building Inspector against the owner or lessee or the agent of any of them and shall be punishable by a fine of $250 per day or by imprisonment not exceeding 15 days, or by both such fine and imprisonment. Exceptions to these regulations shall be granted if any limitations are determined to be in violation of any State or Federal law.

(5) The Planning Commission shall have the right to require that the owner execute agreements and covenants as it may deem to be required during any site plan approval process as it may reasonably deem to be required to ensure compliance with the stated intent of this section. Said agreements or covenants shall be recorded in the office of the Westchester County Clerk and constitute a covenant running with the land. Such covenant or agreement may be modified or released only as set forth in said covenant or agreement or by the City Council.

B. Site Development

(1) At least eighty percent (80%) of the required parking for the development shall be provided in a covered parking structure within the basement level of the principal structure(s).

(2) For any corner lot abutting Boston Post Road or Old Post Road, the front lot line of the lot shall be Boston Post Road or Old Post Road for purposes of the applicable front yard setback irrespective of building arrangement. The provisions of § 197-52 shall not apply to properties in the RA-6 zone.

(3) The provisions of § 197-8.A & C shall not apply to properties in the RA-6 zone.

§ 197-28 Schedule of Off-Street Parking Requirements

A. Schedule of parking requirements. Off-street automobile parking facilities shall be provided as follows:

Use	Number of Spaces per Unit (by Parking District) A	B	C	Unit of Measurement and Conditions
Apartments for active seniors located in RA-6 Districts	1.25	1.25	1.25	Dwelling unit

§ 197-30 Layout and Location of Off-Street Parking Facilities

D. In RA-1, RA-2, RA-3, RA-4, RA-5 and RA-6 Districts, no off-street parking facility accessory to apartments or office buildings shall be developed within five feet of any lot line. Required off-street parking facilities accessory to other main uses shall conform to the provisions of Subsection C above.

§ 197-44 Minimum Residential Floor Area

E. For dwelling units in apartments or other buildings containing three or more dwelling units in an RA-6 District, the minimum amount of residential floor area in each unit shall be 750 square feet for one bedroom units, 900 square feet for two bedroom units and 1,100 square feet for three bedroom units. Additionally, three-bedroom units must be equipped with at least 1 ½ bathrooms.

§ 197-86 Tables of Regulations

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 1
Permitted Main Uses

RA-6 Districts

(1) Apartments for active seniors. A detached residence for three or more families or housekeeping units, or a group of buildings housing three or more families on one lot, subject to the requirements of § 197-7 and § 197-8.1.

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 2
Uses Permitted Subject to Additional Standards and Requirements
(Subject to the requirements and provisions of §197-10)

RA-6 Districts

(Reserved)

TABLE OF REGULATIONS: TABLE A
RESIDENCE DISTRICTS – USE REGULATIONS
Column 3
Permitted Accessory Uses
(Subject to the requirements and provisions of §197-9)

RA-6 Districts

(1) Off-street parking facilities, subject to the requirements and provisions of § 197-8.1.
(2) Other accessory uses or structures customarily incidental to any permitted main use, including active and passive recreational facilities (i.e. fitness center, pool, library, media room, storage areas, etc.) for the use of the residents of the principle structure. Outside storage on land of boats and boat trailers is prohibited.

(3) The filming of movies, commercials, documentaries, serials, shows, performances or other similar events and activities, including still photography, as regulated in RA-4 Districts.

DIVNEY • TUNG • SCHWALBE
Intelligent Land Use

Divney Tung Schwalbe, LLP
One North Broadway
White Plains, NY 10601
P: 914.428.0010
F: 914.428.0017
www.divneytungschwalbe.com

Andrew V. Tung, ASLA, Esq., LEED AP
Gerhard M. Schwalbe, P.E.

William J. Carey, Jr.
Mark S. Gratz, P.E.
Maria Coplit Alfaro, P.E.
Donna M. Maiello, ASLA, RLA

Jason E. Bajor, ASLA, RLA
Cosimo Reale, CPESC
Mark J. Shogren, P.E.
Matthew N. Steinberg, AICP

MEMORANDUM

TO: City Council of the City of Rye

DATE: June 3, 2015

FROM: Gerhard M. Schwalbe, P.E.

RE: 120 Old Post Road

INTRODUCTION

Old Post Road Associates, LLC (the "Applicant") is seeking a zoning change, amendment to the City of Rye zoning map and amendment to the City of Rye Zoning Ordinance (the "Proposed Action" or "Action") to facilitate the redevelopment of 120 Old Post Road as an age-restricted multi-family residential community (the "Proposed Project" or "Project").

The subject property, located 120 Old Post Road (the "Project Site" or "Site"), is currently improved with an existing 75,000 square foot, 3-story office building, a parking lot for approximately 240 vehicles, and an entrance on Playland Access Drive. The existing building has remained mostly vacant and underutilized for over four years and, as documented below, current real estate market conditions suggest that re-occupancy with the existing office use is unlikely for the foreseeable future.

The Applicant proposes to replace the existing office building with a 245,000 square foot age-restricted, luxury residential building. The Project would consist of approximately 135 one and two bedroom units for residents aged 55 and older, along with underground parking, stormwater management facilities, landscape screening, and amenities typical of a luxury residential building. The driveway entrance would remain near its current location and provide access to Playland Access Drive. The existing emergency access driveway to Old Post Road would be retained for emergencies only. See Figure No. 1, *Illustrative Site Plan*.

This memorandum summarizes the land use and fiscal considerations that support the Proposed Action and Project. In addition, a full form NYS Environmental Assessment Form (EAF) is attached hereto for the Action, and an assessment of the potential environmental impacts and mitigation measures related to the Project is included, following the EAF.

OFFICE MARKET CONDITIONS

As set forth in greater detail in a report titled *Rye Office Market Analysis* prepared by Goman & York Property Advisors, LLC, dated March 2, 2015 ("Office Market Study"), vacancy rates for office buildings in southeastern Westchester County have steadily increased over the past decade and are currently at a 10-year high reducing the direct asking average rent. In addition, during this same time period operating costs have further increased, reducing net rent returns on office buildings in

Westchester County. Most current leasing activity in the market is a result of renewals or extensions and not a result of any positive change in market conditions. *See,* Office Market Study.

The following table summarizes the supply of office space within the City of Rye. The information contained in the chart below was obtained from the City of Rye Tax Assessment Cards. The property list is limited to other office buildings or facilities within the City of Rye and does not include mixed use structures along Purchase Street or elsewhere.

Table No. 1. ***Summary of Rye Office Space***

Property	Lot Area (AC) [1]	Floor Area (SF) [1]	Rye Office Space (% of Floor Area)
2 Clinton Avenue	0.79	10,600	1%
14-16 Elm	0.26	19,600	2%
22 Elm	0.26	20,000	2%
150 Purchase Street	0.86	22,245	2%
31 Purchase Street	0.10	10,000	1%
600 Midland Avenue	7.83	30,000	3%
601 Midland Avenue	N/A	173,315	18%
2 Second Street	0.20	15,000	2%
16 School Street	1.61	18,316	2%
1 Theall Road	7	65,000	7%
350 Theodore Fremd Avenue	1.80	34,000	4%
401 Theodore Fremd Avenue	7	59,522	6%
411 Theodore Fremd Avenue	8.2	150,946	16%
555 Theodore Fremd Avenue	13.02	165,592	17%
511 Theodore Fremd Avenue	7.53	90,080	9%
120 Old Post Road	**7.01**	**76,000**	**8%**

[1]Data obtained through City of Rye Tax Assessment Cards and confirmed with City of Rye GIS.

With increasing vacancy rates throughout the Rye area along with decreasing rents and the abundance of available office space, re-occupancy under existing market conditions appears highly challenging and doubtful. With regard to the Property, the existing structure is configured primarily as an open plan headquarters building. This configuration places the building in a highly uncompetitive market position since the majority of office leasing activity is focused upon smaller spaces. As a result of these market conditions and the continued vacancy of the building the tax assessment of the property has been reduced by over fifty percent (50%).

On some similar properties, the conversion costs have been determined to be prohibitive and the building has been torn down as a result. However, conversions of underutilized office space have occurred or are proposed on sites in the general vicinity of the Property. Examples include the development of LifeTime Fitness Center and a proposed residential development at 103-105 Corporate Park Drive in Harrison, as well as a recent application for a residential development at the Reckson Executive Park in Rye Brook. As set forth in greater detail in the attached Market Feasibility Analysis prepared by Goman & York Property Advisors, LLC, dated November 2014 ("Market Feasibility Analysis"), an age-restricted, luxury residential community is a viable repurposing of the Site and would offer a housing alternative that is not available within the City of Rye.

ZONING AND LAND USE CONDITIONS

Zoning

The Project Site contains 7.0 acres locaed north of Old Post Road and west of Playland Access Drive in the City of Rye. It is located within the B-4 office building zone, and is bordered by the R-3 residential district to the northeast, the R-2 residential district to the southeast and southwest, and the B-4 district extends to the north and west. See Figure No. 2, *Area Zoning Map*. In the project area, the R-4 and R-5 districts lie further to the south, with the RA-1 and RA-5 districts lying further to the north and southwest respectively.

The B-4 zone is designated as an "Office Building District" with a minimum area requirement of 7 acres. Permitted main uses in the B-4 zone are "Nonresidence main uses permitted in the R-2 Districts and as limited therein." However, there are no "nonresidence" main uses permitted in the R-2 district (i.e. the only permitted main use in the R-2 district are single family residences). Therefore, while there are special exception uses, in essence there are no permitted main uses allowed in the B-4 zone.

The uses permitted subject to additional standards and requirements (i.e. special permit uses) in the B-4 zone are:

a) Office buildings
b) Educational uses (requires a minimum of 10 acres)
c) Public recreational uses
d) Private recreational uses (requires a minimum of 7.5 acres)
e) Extension of welfare uses (operated by nonprofits in existence or which had a permit before January 1, 1958)
f) Public uses
g) Nursery schools (not to exceed 30 children)
h) Agricultural uses (i.e. nurseries, truck gardens, greenhouses and similar agricultural uses)
i) Railroad passenger stations and electric substations
j) Temporary real estate offices in connection with a subdivision containing 10 or more lots
k) Religious headquarters offices (requires a minimum of 20 acres)
l) Religious uses
m) Residential care facility uses (limited to care of 10 or fewer disabled persons or persons in need of supervision or juvenile delinquents)

In sum, outside of the existing use of the Subject Property as an office building there are virtually no other permitted or special permit uses allowed in the B-4 zone for which the Site could be expected to yield a reasonable return.

The Proposed Action

The City currently permits multi-family residences in the following districts:

1. RT – Two Family District
2. RA-1 – Garden Apartment District

3. RA-2, 3, and 4 – Apartment House Districts
4. RA-5 – Apartment District for Senior Citizens and Handicapped Persons
5. RFWP – Residential Floodplain and Wetlands Preservation

The RA-5 is the only district in Rye that currently restricts residential occupancy for senior citizens, and it is intended for housing developments that are undertaken by private nonprofit sponsors with public financial assistance. Therefore, its dimensional regulations are generally more permissive than the current standards for apartment buildings in other districts (e.g., a maximum height of 4 stories compared to 2.5, and a maximum F.A.R. of 1.0 compared to .40-.50). While the proposed age-restricted housing district would allow for less restrictive dimensional standards than most multi-family districts in the City, it would be more restrictive than the RA-5. See Table No. 2, *Existing and Proposed Multi-Family Zoning Districts and Bulk Regulations*, attached at the end of this memo.

The proposed dimensional and use regulations are generally consistent with similar districts across the region. See Table No. 3, *Bulk Characteristics of Regional Active Adult Zoning Districts.* The proposed yard dimensions and maximum building height would either be consistent with existing zoning or more restrictive than in comparable districts, requiring them to be greater than average. Alternatively, the proposed lot area and FAR would be less restrictive than in the comparable districts. However, these regulations would be offset by the Action's requirement for underground parking, which would minimize surface coverage and preserve open green space on the site. For example, as applied to the Project Site, these regulations maintain building and surface coverage rates that are below the minimum requirements for every comparable district at 22% and 33% of the site area respectively. By maintaining lower rates of surface coverage, it is the applicant's belief that this requirement will help preserve a desirable community character for both residents of the Proposed Project and its neighbors.

The proposed off-street parking provision of 1.25 spaces per dwelling unit is based on the supply ratio from the Institute of Transportation Engineers (ITE) *Parking Generation,* Land Use 252 – Senior Adult Housing, as well as characteristics of the Project's target market[1]. While ITE rates indicate that a ratio of 1 space per dwelling unit is sufficient for residences with active seniors, the 0.25 fractional spaces would accommodate facility staff, visitors, or some residents who may wish to maintain more than one vehicle. These provisions are consistent with the comparable districts' range of .75 to 2 spaces per unit as indicated in Table 3.

It is the Applicant's opinion that these proposed standards are appropriate based on the district's age restriction, as it would permit housing for a sector of the population that would not create any additional strain on the Rye City School District.

Existing and Proposed Conditions

The existing office building on the Project Site is compliant with both use and bulk regulations in the B-4 Zoning District with potential for further as-of-right expansion. The following compares the Site's current dimensional characteristics to the limits of its existing zoning, and to the corresponding conditions in the Proposed Zoning and the Proposed Project. These characteristics are also illustrated in Table No. 4, *120 Old Post Road - Existing and Proposed Zoning Districts*, Figure No. 3, *Existing Zone*

[1] Institute of Transportation Engineers, *Parking Generation*, 4th Edition, 2010

(B-4) Max. Build Out and Figure No. 4, *Proposed Zone (RA-6) Max Build Out,* attached at the end of this report.

Lot Area

As a nonresidential use, the existing B-4 zoning district requires a 7-acre minimum lot area, with which the Property is compliant at approximately 7.01 acres. The proposed use would be residential, and therefore lot area would be measured per family or equivalent rather than minimum acreage. The Proposed Zoning district would require 2,000 square feet of lot area per family, permitting a maximum of approximately 152 units.

Floor Area Ratio and Lot Coverage

As described below in Table No. 5, *Floor Area Ratio and Lot Coverage*, the existing building on the Property has approximately 75,000 square feet of floor area, and a Floor Area Ratio (FAR) of 0.25. Under these existing conditions, the site has approximately 25,000 square feet of building coverage and 240 parking spaces, for approximately 135,400 square feet of total lot coverage (approximately 44% of the lot area). Existing zoning permits a maximum FAR of 0.3, indicating the potential for as-of-right expansion of approximately 16,000 square feet of floor area. Under full build out conditions, there would be approximately 8,000 additional square feet of building coverage and approximately 105 additional parking spaces would be required, increasing the total lot coverage to approximately 58%.

The Proposed RA-6 Zoning District would permit an FAR of 0.8, or approximately 244,500 square feet of floor area on the Property. Therefore, full build out of the Property under Proposed Zoning would permit approximately 75,000 square feet of building coverage at maximum height, and underground parking would be required for a total lot coverage of approximately 108,600 square feet (approximately 36% of the lot area). This is the maximum FAR and coverage that would be permitted on the Property in the Proposed Action. Therefore, under Proposed Zoning, total site coverage would be reduced by approximately 27,000 square feet from what the existing zone permits. See Figure No. 5, *Site Development Analysis – Impervious Coverage,* attached at the end of this memo.

Table No. 5. *Floor Area Ratio and Lot Coverage*

	Maximum FAR	Maximum Floor Area	Building Coverage (SF / Percent of Lot Area)	Lot Coverage (SF / Percent of Lot Area)
Existing Office Building – *B-4*	0.25	76,000 SF	28,000 / 9%	135,400 / 44%
Potential Office Build-out – *B-4*	0.30	91,500 SF	36,600 / 12%	176,200 / 58%
Proposed Zoning – *RA-6*	0.80	244,500 SF	75,300 / 25%	108,650 / 36%

As described above, the increased FAR and building coverage under Proposed Zoning is offset by the requirement of underground parking, which preserves approximately two-thirds of the site as open green space, to be attractively landscaped and maintain the existing character of the community. As described below in the Surface Parking Alternative, if underground parking is

not required by zoning, potential coverage rates would be more than double the rate in the Proposed Project. See Table No. 5, *Floor Area Ratio and Lot Coverage.*

Yard Dimensions

As described below in Table No. 6, *Minimum Yard Dimensions*, the existing office building meets the minimum yard dimensions for the front and one side yard at 100 feet each. The total of the two current side yards, however, is 300 feet, which exceeds the 200-foot minimum that is required. The current rear yard is approximately 290', also in excess the 100-foot minimum that is required. In short, existing zoning would permit building expansion into one side or the rear yard area.

Under Proposed Zoning, yard dimensions would either be maintained from the existing zone or adjusted to be greater than or equal to dimensions in the City's other multi-family districts, as described above. The front yard dimension would be maintained at 100 feet. One side yard would be 40 feet, and the total of the two side yards would be 100 feet. The rear yard, which abuts the parking area of a commercial property in the case of the Project Site, would be 25 feet. The yard dimensions in the Proposed Project would be generally more conservative than the minimum requirements permitted in the Proposed Action.

Table No. 6, *Minimum Yard Dimensions*

	Front Yard	One Side Yard	Total of Two Side Yards	Rear Yard
Existing Office Building *(B-4)*	100'	100'	300'	290'
Potential Office Build-out *(B-4)*	100'	100'	200'	100'
Proposed Zoning *(RA-6)*	100'	40'	100'	25'

Building Height

The existing building is 40 feet in height over three stories. Current zoning would maintain the three-story limit, but would permit a building 45 feet in height.

Proposed zoning would maintain the existing 45-foot height limit, with an increase from three to four stories. The increase in stories corresponds with the change in use, as typical residential buildings have a smaller distance between stories than office buildings. Although the Project Site does not contain steep slopes, there is a gradual but significant change in ground elevation from approximately 50 feet at the southeast corner to approximately 100 feet at the northwest. The Proposed Project has been designed to accommodate this topography with the average height being maintained as the elevation changes. See Figure No. 6, *Building Height Diagram,* Figure No. 7, *Site Section Diagram,* and Figure No. 8, *Site Section Diagram – Proposed Building.*

Multi-Family Housing Mass and Density Analysis

Table No. 7 below summarizes the building mass and density characteristics of comparable multi-family residence developments in the City of Rye. These sites are located in different zoning districts and may be subject to different permits or restrictions, but are intended to provide a point of comparison for the scales of mass and density that exist within the City's multi-family residence developments. Aerial and street-level imagery for each property is provided at the end of this memo.

The proposed development of the Project Site would be less intense from a bulk and density perspective than all but The Osborn.

Table No. 7, ***Summary of Comparable Properties in Rye***

Property	Lot Area (AC)	Floor Area (SF)	FAR	Units	Density (Units/ Acre)	Height		Yard			Parking	
						Feet	Stories	Front	Side	Rear	Spaces	Spaces/ Unit
Rye Manor[1]	1.9	71,000	0.86	100	53	50'	4	95'	30'/50'	30'	34	0.34
The Osborn[1]	55.9	N/A	N/A	377	7	N/A	5	160'	160'	160'	484	1.28
Highland Hall[2]	1.23	86,153	1.61	102	83	N/A	4	30'	5'	15'	0	0
Blind Brook Lodge[2]	2.7	134,401	1.14	137	51	N/A	6	30'	5'	30'	76	0.55
120 Old Post Road												
Proposed Zoning	7.01	244,500	0.80	152	21	45'	4	100'	40'/ 100'	25'	168	1.25
Proposed Project	7.01	222,500	0.73	135	19	45'	4	100	100'/ 200'	25'	205	1.51

[1]Data obtained through City of Rye Site Plan Approval Records and confirmed with City of Rye GIS.
[2]Data obtained through the City of Rye Tax Assessment Cards and confirmed with City of Rye GIS.

Below, Table No. 8 summarizes the building mass and density characteristics of comparable multi-family developments in other municipalities in the region. As noted in the table, these properties may have different classifications than the Proposed Project, but the figures below are for their residential components. Available imagery for each property is provided at the end of this memo. The proposed development of the Project Site is generally less intense from a bulk and density perspective then these other projects, except for The Ambassador which is an assisted living facility.

Table No. 8, ***Summary of Comparable Properties in Other Municipalities***

Property	Lot Area (AC)	Floor Area (SF)	FAR	Units	Density (Units/ Acre)	Height		Yard			Parking	
						Feet	Stories	Front	Side	Rear	Spaces	Spaces/ Unit
The Cambium, Larchmont[1]	2.94	222,075	1.17	186	63	75'	6	15'	15'	15'	267	1.44
Christie Place, Scarsdale[2]	1.73	105,500	1.4	42	24	46'	4	N/A	N/A	N/A	67	1.6
The Ambassador, Scarsdale[3]	6.98	119,779	0.4	115	16.7	N/A	3	40'	25'	30'	43	0.37
120 Old Post Road												
Proposed Zoning	7.01	244,500	0.80	152	21	45'	4	100'	40'/ 100'	25'	168	1.25
Proposed Project	7.01	222,500	0.73	135	19	45'	4	100'	100'/ 200'	25'	205	1.51

[1] Mixed use development; Data obtained through City of Mamaroneck Site Plan Approval Records and Westchester County GIS
[2] Mixed use development; Data obtained from Scarsdale Town Planner and As-Built Survey.
[3] Assisted living facility; Data obtained from Scarsdale Town Planner and As-Built Survey.

Surface Parking Alternative

The Applicant has contemplated an alternative plan in which surface level parking would be permitted in lieu of the requirement for structured, subterranean parking. See Figure No. 9, *Surface Parking Alternative.* With the same dimensional constraints that the Proposed Action would permit, this alternative would have an approximate FAR of 0.8, and building coverage of approximately 60,000 square feet. The surface parking area would cover approximately 118,000 square feet for total lot coverage of 178,000 square feet (58% of the total lot area). In order to provide parking spaces at the ratio required in the Proposed Action, the series of four-story buildings shown in Figure 9 would also require more permissive setbacks than the Action proposes.

Although surface parking would likely save construction costs, significant impacts to stormwater management and visual resources could be anticipated in this alternative. Potential lot coverage rates would be nearly double what the Proposed Action would permit, and this alternative would limit the Applicant's ability to provide a site-sensitive design with an attractive landscape plan and adequate stormwater management facilities. This alternative illustrates the crucial role that subterranean parking would play in the Proposed Action's ability to preserve open green space, maintain community character, and minimize lot coverage. In sum, the applicant believes that this alternative would lead to a less desirable outcome for residents of the Project and the neighboring community, and requiring underground parking will help to mitigate these impacts.

Land Use

The Project Site is bordered by Playland Access Drive to the northeast with access to Playland Parkway located at the Site's northeast corner. Old Post Road forms the southeast border with single family homes extending south and east of the Project Site, and to the north and east beyond Playland Parkway. The Site is also adjacent to The Osborn retirement community to the southwest, and WESTMED Medical Group's Rye office to the northwest. Additional office uses extend north and south of the Project Site, with additional multi-family residences to the southwest and north along Theall Road. In the larger context, the Project Site is located at the edge of an office district, with a variety of different land uses in the area which are generally characterized by single and multi-family residences, office buildings, institutional and public assembly spaces, cemeteries, public parks and parkway lands, nature preserves, and vacant land. See Figure No. 10, *Area Land Use Map*.

We believe the age-restricted luxury rental apartment building would provide an ideal transition between the residential community and office building district. It would also complement the scale and use characteristics of The Osborn as a multi-family residential community for senior citizens, while diversifying housing options in Rye specifically for active adults who do not require nursing care but no longer have the necessity of maintaining the costs of home ownership. See Figures 11, 12, and 13, *Conceptual Renderings*.

The City of Rye's Development Plan was adopted in 1985, and intended to guide land use decisions in the City through the year 2000[2]. Although the Plan describes a "great pressure in Westchester County in recent years to build corporate office buildings [... which] has led to pressure from builders for the

[2] City of Rye, NY. *City of Rye 1985 Development Plan.* Adopted April 23, 1985.

rezoning of Rye land from residential to commercial," the Plan acknowledges that it "is not a static document to be followed without regard to changing conditions." As previously stated, such conditions in the office market have changed significantly since the Plan's adoption. However, the Proposed Action is consistent with the Plan's goals and policies related to residential development as follows:

> II.1 Residential Development, Goal 4 – *Provide an opportunity for the development of housing of various types, sizes, and costs to meet the needs of people at various stages in the life cycle, income, age levels, and household compositions, without compromising the integrity of Rye's single family residential areas.*

Consistent with the Development Plan's goal, the Proposed Action would provide an opportunity for living accommodations in Rye in a way that is not currently regulated in the Zoning Ordinance. It would address what the Plan identifies as "an increasing need to provide housing for senior citizens who are no longer able to (or wish to) maintain a home," with a viable alternative for those older individuals seeking alternative housing arrangements who are able to remain active and independent.

Further, the Proposed Project's location near the office buildings and major roadways is identified in the plan as highly desirable for redevelopment with higher density multi-family residences. Located within the Post Road Residential/ Institutional Area, its vicinity was "envisioned as a mixed use area blending in with the surrounding residential areas. Permitted uses would be a variety of residential uses and densities." Therefore, it is expected that the project would enhance the integrity of the adjacent single family residential area by providing an added buffer of residential use between it and the office building district, with an aesthetic style that would complement the adjacent single family community as well as The Osborn.

FISCAL IMPACTS

Property Taxes

The Project Site is subject to real property taxation by the City or Rye, the Rye City School District, Westchester County, and special benefit assessments for Westchester County (e.g., sewer and solid waste special districts). The project site currently has a full market value for assessment purposes of $7,492,146. The City's equalization rate is 1.91%, which results in an assessed value of $143,100. The 2014 tax rates for the taxing jurisdictions are presented below in Table No. 9, *120 Old Post Road Current Tax Bill.*

The Project Site is currently occupied by one office tenant. As indicated above, the property has an assessed value of $143,000. The existing tax generation from the site is provided below in Table No. 9, below.

Table No. 9, *120 Old Post Road Current Tax Bill*

				Equalization Rate: 1.91%
	Tax Rate (per $1,000 value)	**2014 Market Value Valuation**	**2014 Assessed Value**	**Tax Bill**
City of Rye	$ 150.38	$ 7,492,146	$ 143,100	$ 21,519
Rye School District	$ 561.33	--	--	$ 80,327
Westchester County	$ 187.92	--	--	$ 26,891
Refuse Disposal District	$ 17.61	--	--	$ 2,519
Blind Brook Sewer	$ 29.68	--	--	$ 4,248
Total Tax Rate (Rye School District)	**$ 946.93**	**$ 7,492,146**	**$ 143,100**	**$ 135.504**
2014 numbers were obtained from the Westchester County Government's published Property Tax Rates and 2014 City of Rye Adopted Tax Rate.				

As further detailed in the attached Proposed Property Tax Exposure Report prepared by McCarthy Appraisal / Consulting Svc. Inc. dated January 9, 2014, the Project could be anticipated to have a future market value for assessment purposes of approximately $34,000,000, resulting in an approximate assessed value of $650,414. This would obviously be a marked increase over the existing tax base. The details of this increase on the tax roll are set forth in Table No. 10, below.

Table No. 10, *120 Old Post Road Anticipated Tax Bill based on 2014 Tax Rates*

				Equalization Rate: 1.91%
	Tax Rate (per $1,000 value)	**Anticipated Market Value Valuation**	**Anticipated Assessed Value**	**Approx. Tax Bill**
City of Rye	$ 150.38	$ 34,053,067	$ 650,414	$ 97,809
Rye School District	$ 561.33	--	--	$ 365,096
Westchester County	$ 187.92	--	--	$ 122,225
Refuse Disposal District	$ 17.61	--	--	$ 11,453
Blind Brook Sewer	$ 29.68	--	--	$ 19,310
Total Tax Rate (Rye School District)	**$ 946.93**	**$ 34,053,067**	**$ 650,414**	**$ 615,896**
2014 numbers were obtained from the Westchester County Government's published Property Tax Rates and 2014 City of Rye Adopted Tax Rate.				

In total, the Project is anticipated to produce an increase of approximately $480,000 in tax total tax revenue. Perhaps most significantly, as the Project will be an age-restricted residential community there will be no additional burden on the Rye City School District caused by the Project, while generating approximately $280,000 in additional School Taxes.

Service Costs

The Subject Property is a located within the City of Rye, and is presently served by the Rye Police Department, Rye Fire Department, Rye Public Works, and the Port Chester-Rye-Rye Brook

Volunteer Ambulance Corps. The existing and potential fiscal impacts of community services for its current and proposed land use have been considered by analyzing the Property within the context of all properties in Rye that receive these services. Based on 2014 tax rates, the Property currently has a full market value of $7.5 million, and an assessed value of $143,100. As per the City of Rye Annual Budget adopted for 2014, the City's total assessed value was $165,669,516. Therefore, the Property currently accounts for approximately 0.09% of the value of City property that is currently covered by the City's services. As indicated above with regard to property taxes, the Proposed Action would permit residential use on the Property, and the resulting project would have an anticipated assessed value of $650,414. Based on the methodology above, the Project's anticipated portion of the City's assessed value would be 0.39%.

It is the applicant's opinion that this change in use for an existing developed property represents such a small portion of the overall property to be served, and therefore no significant adverse impacts would be anticipated for overall departmental operations or City budgeting. As per Tables 9 and 10 above, the Property's 2014 tax bill for the City of Rye taxes was $21,519, and with the Proposed Project it would be approximately $97,809. Table 11 below outlines the applicable service costs that could potentially increase from the existing to the proposed conditions, their portion of the 2014 Combined Operating budget, and how those same portions could be applied to the existing and proposed bills for City taxes.

Table No. 11, ***City of Rye Operating Budget, Services and 120 Old Post Road City Tax Bill***

			Existing Tax Bill	Proposed Tax Bill
Combined Operating Budget	**$ 50,371,169**	**100%**	**$ 21,519**	**$ 97,809**
Police Services	$ 9,214,601	18%	$ 3,873	$ 17,606
Fire Department	$ 4,993,909	10%	$ 2,152	$ 9,781
Emergency Medical Services	$ 221,748	0.4%	$ 86	$ 391
Sanitation Services	$ 3,934,282	8%	$ 1,722	$ 7,824
Senior Adult Programs	$ 8,600	0.1%	$ 22	$ 98

It should be noted that some City services are generally supported as pay for use services, and as such would not increase the City budget. Based on information described in the 2014 City Budget, emergency medical services are provided by a contract service agency using their own facilities, equipment, supplies and staff, and are costs that are typically charged to the individual seeking services. In addition, senior adult programs are part of the City's culture and recreation services, and typically charge participants for various programs, realizing revenue that exceeds the Budget's allocated cost. Overall, even if minor costs were incurred as a result of the change in use of the property, the anticipated increased revenue from City taxes as described above would likely exceed these costs.

Police and EMS Service Calls

The following table summarizes calls made to the Rye Police Department from 2010 to 2013, from the Rye Manor apartments, located at 300 Theall Road in Rye. Rye Manor was selected for this analysis because it is the only other age-restricted multi-family residence development in Rye. As noted in the table, calls are categorized by their respective CFS codes, with the exception of calls classified as "other," which represents calls received in low volumes across various categories. Calls classified as

"other" include reports of missing persons, hit and run accidents, larceny, property damage, disorderly conduct, city code violations, illegally parked vehicles, flood conditions, unattended deaths, noise complaints, requests to assist other police departments, and hang-ups.

Table No. 12, ***Summary of Police Service Calls from 300 Theall Road***

RMS CFS Code[1]	2010	2011	2012	2013
Ambulance Request – CFS.013	28	22	19	12
Aided Case – CFS.012	20	18	13	17
Assist Citizen – CFS.014	12	21	11	8
Are You Ok Resident Check – CFS.246	18	11	1	2
Other	6	10	6	5
Total Police Service Calls per Year	**84**	**82**	**50**	**44**

[1]City of Rye Police Department, Incident Search Result Report for 300 Theall Rd, Rye NY, obtained from Rye City Planner.

CONCLUSION

As described above, the existing office building at the Property has been mostly vacant for a significant period of time. As this condition is not isolated to the Property but is a macro-trend throughout Westchester County and other metropolitan areas, re-occupancy by substantial office use would be highly challenging and unlikely.

The Proposed Action would not only allow the property to be redeveloped and put back to sustainable use, it would also provide a housing opportunity that is not currently being offered within the City of Rye and would further reestablish the taxable value of the Property for real property tax purposes, which has continued to erode as the property has remained vacant. Furthermore, the Proposed Project would not create any additional strain on the Rye City School District as the development would expressly prohibit school age children from residing in the development. Therefore, it is the Applicant's view that the Proposed Action and Project present a reasonable and logical alternative for the potentially valuable and underutilized Property while at the same time achieving the goal of providing a diverse housing stock within the City of Rye in a form that is not currently available.

Table No. 2. *Existing and Proposed Multi-Family Zoning Districts & Bulk Regulations*

4		5	6	7	8	9	10	11	12	13	14	15	16
					Minimum Yard Dimensions (feet)				Specified Distance (feet) as required in Column 2 (Uses)	Maximum Height		One-Story Accessory Structures	
District	Use	Maximum Ratio of Floor Area to Lot Area[(j)]	Minimum Size of Lot (AC or SF) per a. Family or Equiv.[(a)] or b. Nonresidential Use	Minimum Width (feet) [See § 197-36]	Front[(b)]	One Side [(b)(c)]	Total of Two Side Yards	Rear[(b)]		(stories)	(feet)	Maximum Coverage of Required Rear Yard	Minimum Distance to Side Line (feet)
RA-1	Single-family house	0.40	5,000	50	25	8	20	30	40	2.5	35	30%	5
	Two-family house	0.40	5,000	60	25	8	20	30	--	2.5	35	30%	5
	Apartment house	0.40	5,000[(c)]	100	70	50	100	50	--	2.5	35	30%	10
RA-2	Single-family house	0.45	5,000	50	25	8	20	50	30	2.5	35	30%	5
	Two-family house	0.45	3,500	60	25	8	20	50	--	2.5	35	30%	5
	Apartment house	0.45	3,500[(c)]	100	25	20	50	40	--	2.5	35	30%	10
RA-3	Single-family house	0.50	5,000	50	25	8	20	30	20	2.5	35	35%	5
	Two-family house	0.50	3,000	60	25	8	20	30	--	2.5	35	35%	5
	Apartment house	0.50	2,500[(c)]	80	25	20	40	40	--	2.5	40	35%	10
RA-4	Single-family house	0.50	5,000	50	25	8	20	30	--	2.5	35	35%	5
	Two-family house	0.50	3,000	60	25	8	20	30	--	2.5	35	35%	5
	Apartment house	0.50	2,500[(c)]	80	25	20[(d)]	40[(d)]	40[(d)]	--	2.5[(f)]	35[(f)]	35%	10
RA-5	Apartments for senior citizens and handicapped persons	1.00	1 AC	80	25		40	40	--	4	50	35%	10
RA-6	**Apartments for active senior citizens**	**0.8**	**2,000**	**400**	**100**	**40**	**100**	**25**	**--**	**4**	**45**	**35%**	**10**

(a) Equivalent to one (1) family in computing minimum lot sizes:
[1] Hotels and lodging houses, each two (2) guest sleeping rooms.
[2] Hospitals and similar institutions, each two (2) hospital beds.
[3] Medical offices, each two (2) doctors plus three (3) other employees.
[4] Other nonresidential main uses not specifically provided for in this Table of Regulations or elsewhere in Chapter 197, each one thousand five hundred (1,500) square feet of floor space

(b) [1] Wherever a required yard abuts a street less than fifty (50) feet in width, the minimum yard dimension(s) shall be measured from a line of twenty-five (25) feet from parallel to the center line of said street.
[2] No building shall be nearer than one hundred (100) feet to center line of Post Road between Mamaroneck town line and Central Avenue.

(c) For corner lots, corner side yards at least one fifth (1/5) of the lot width at the location of the building, but need not be more than front yard minimum, except as provided in § 197-62. Permitted nonresidential main uses shall have minimum side yard one and one half (1 1/2) times width specified for a single-family house (See § 197-52).

(d) Twenty-five (25) feet for any side yard containing a driveway serving more than six (6) parking spaces. For a one-, two-, or three-family structure existing on effective date of Chapter 197 (August 9, 1956) and proposed for conversion for up to four (4) families, the Board of Appeals may reduce side yard requirement to eight (8) feet. For side yard requirements for other apartments, see See § 197-54. For spacing between buildings on the same lot, see § 197-70. For the rear and side yards of apartment houses adjoining the right-of-way of a railroad, a parkway or a limited access highway, see § 197-64.

(e) For usable open space requirement, see § 197-68

(f) For buildings in variable height apartment groups (a use permitted in RA-4 Districts subject to additional standards and requirements), see§ 197-13.
[g,h,i omitted]

(j) See § 197-43.1 for floor area ratio reductions for single-family residences on oversized properties in one-family districts.

Table No. 3, *Bulk Characteristics of Regional Active Adult Zoning Districts*

Municipality	Maximum Ratio of Floor Area to Lot Area	Maximum Dwelling Units	Lot Building Coverage (%)	Lot Surface Coverage (%)	Required Parking Spaces Per Unit	Minimum Size of Lot (AC)	Minimum Width (feet)	Minimum Yard Dimensions (feet)				Maximum Height	
								Front	One Side	Total of Two Side Yards	Rear	(stories)	(feet)
Rye	**0.8**	**21/AC**	**--**	**--**	**1.25**	**2,000 SF/ unit**	**125**	**100**	**40**	**100**	**25**	**4**	**45**
Carmel[3]	--	8/AC	35%	--	1.5	5	125	40	--	--	--	2	40
Massapequa Park[4]	--	25/AC	35%	--	1.5	2.5	--	25	25/35	50/70	25/50	2.5	30
Newburgh[5]	--	--	30%	80%	2	3	100	60	30	60	40	--	35
North Greenbush[6]	--	20/AC	40%	--	1.4	2	--	40	40	80	40	Existing	Existing
Smithtown[7]	0.25	--	--	--	0.75	10	200	60	60	120	60	2.5	35

1 Values based on Proposed Project and not proposed zoning standard. Values used for comparison purposes

2 Village of Amityville, NY, Chapter 183 "Zoning," Article X "PAC (Planned Adult Community) Residence Districts"

3 Town of Carmel, NY; Chapter 156 "Zoning," Section 39 "Senior Citizens Multifamily Dwellings"

4 Village of Massapequa Park, NY; Chapter 354 "Zoning," Article VII "Golden Age District"

5 Town of Newburgh, NY; Chapter 185 "Zoning," Section 48 "Senior Citizen Housing"

6 Town of North Greenbush, NY; Chapter 197 "Zoning," Article XV "Senior Citizens Housing District"

7 Town of Smithtown, NY; Chapter 322 "Zoning," Article VII "Retirement Community District"

Table No. 4. *120 Old Post Road - Existing and Proposed Zoning Districts*

	B-4[1]				RA-6			
Zoning Compliance & Maximum Site Build Out	Existing Office Building		Zoning-Compliant Maximum Build Out		Active Senior Residence District		Proposed Apartment House	
Maximum Floor Area Ratio	0.25		0.3		0.8		0.73	
Minimum Size of Lot per a. Family or Equiv. or b. Nonresidential Use	7 AC		7 AC		2,000 SF		2,280	
Minimum Yard Dimensions (feet)								
Front	200'		100'		100'		100'	
One Side	100'		100'		40'		100'	
Total of Two Side Yards	390'		200'		100'		125'	
Rear	100'		100'		25'		25'	
Maximum Height								
Stories	3		3		4		4	
Feet	40'		45'		45'		45'	
Parking Requirement[2] (approx.)	240 Spaces		345 Spaces		1.25 Spaces/ Unit		205 Spaces (168 req.)	
Project Development Analysis	SF	% Coverage	SF	% Coverage	SF[4]	% Coverage[4]	SF	% Coverage
Total Building Floor Area	75,000	0.25	91,600	0.30	244,260	0.80	222,500	0.73
Total Impervious Coverage	135,400	44%	176,200	58%	108,650	36%	100,150	33%
Building Footprint	28,000	9%	36,600	12%	75,300	25%	66,800	22%
Paved Area	107,400	35%	139,600	46%	33,350	11%	33,350	11%

1 City of Rye, Chapter 197 "Zoning," Att. 2

2 Based on § 197-28 "Schedule of off-street parking requirements," which provides 7 spaces per 10 people employed or intended to be employed in office buildings or other permitted uses in the B-4 District. Parking ratio for maximum build out conditions is estimated at 3.8/1000 SF

3 Potential build out conditions are estimated using existing conditions and are prorated by F.A.R. regulations.

4 Coverage calculations are based on the lot area of the Project Site, which is approximately 7.01 acres or 305,322 square feet.

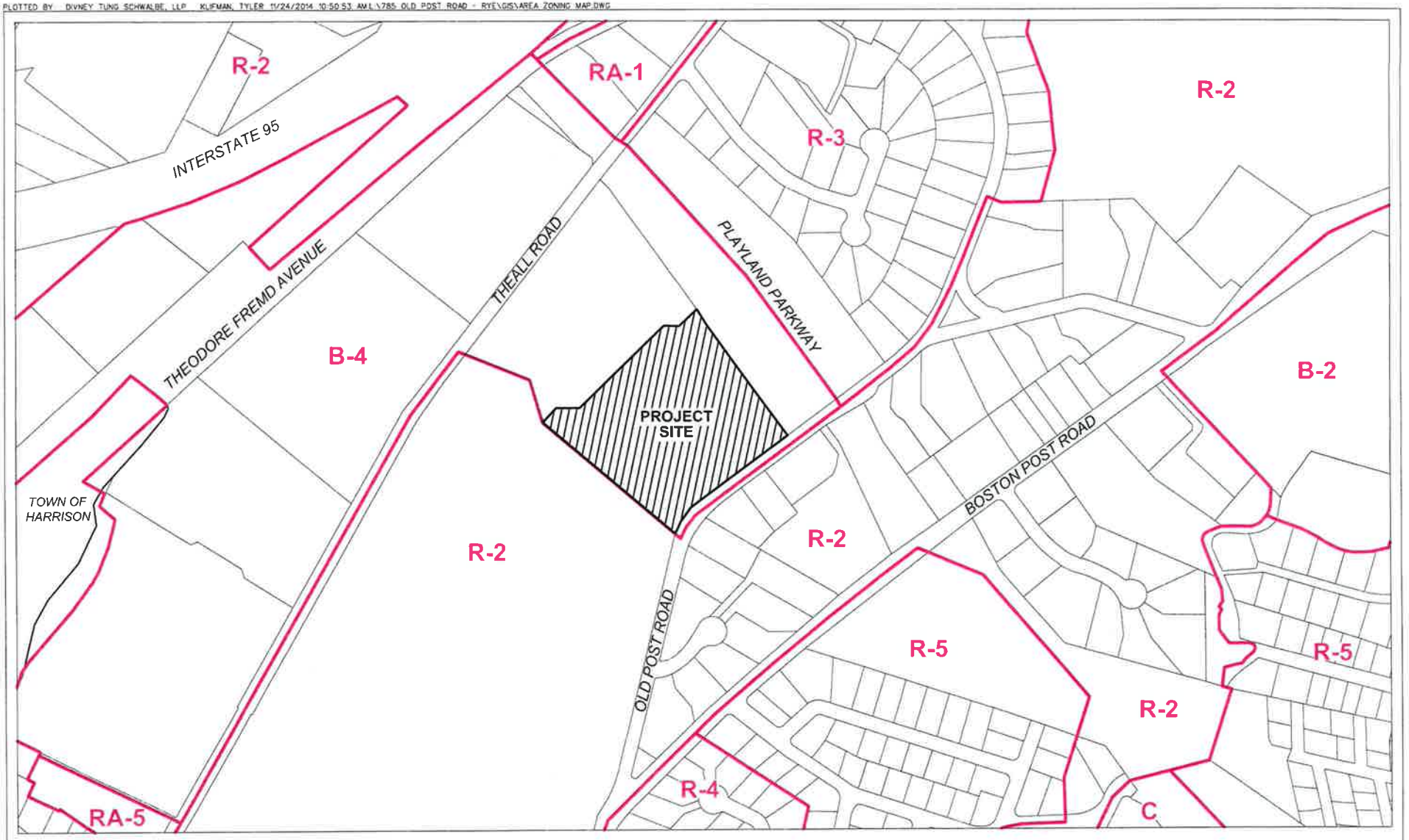
ILLUSTRATIVE SITE PLAN

DIVNEY • TUNG • SCHWALBE
Site/Master Land Use

120 OLD POST ROAD
RYE, NY

AW815AR.06 - 1/12/2015 revised 6/2/2015

FIGURE NO. 1



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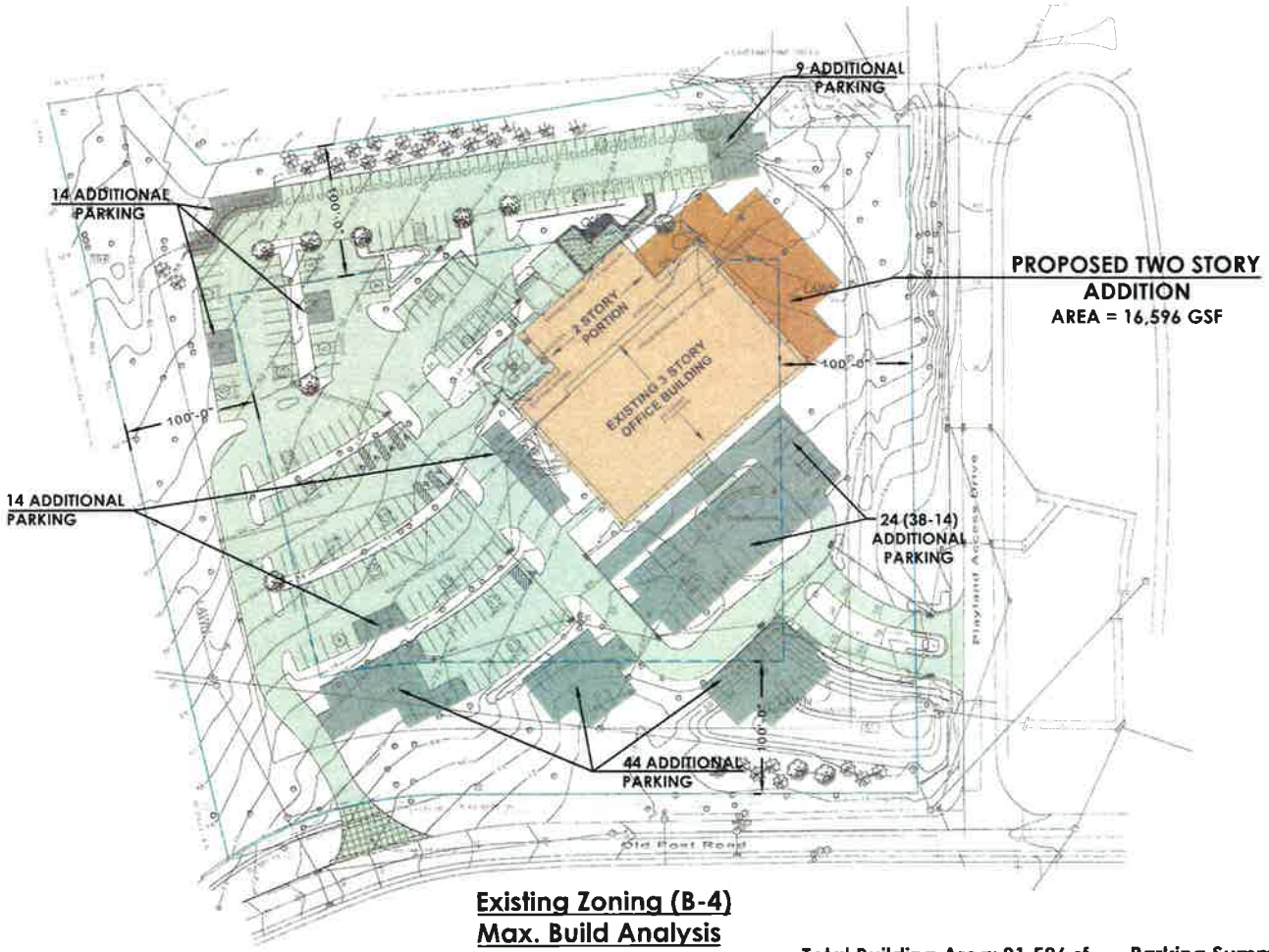
Intelligent Land Use

AREA ZONING MAP

120 OLD POST ROAD
CITY OF RYE, NEW YORK

FIGURE NO. 2



Existing Zoning (B-4)
Max. Build Analysis

FAR:	0.30
Max. Floor Area:	91,596 sf
Site Area ~	305,322 sf

Total Building Area: 91,596 sf

Existing Building:	75,000 sf
Proposed Addition:	16,596 sf
(two story @ 8,250 sf per floor)	

Parking Summary

Existing ~	240 Spaces
Proposed:	105 Spaces
Total ~	345 Spaces
Parking Ratio ~	3.8/1000

EXISTING ZONE (B-4) MAX. BUILD OUT

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Intelligent Land Use

120 OLD POST ROAD
RYE, NY

AWR16AR 06 - 3/2/2015 revised 6/2/2015

FIGURE NO. 3

Proposed Zoning (RA-6)
Max. Build Analysis

FAR:	0.80
Max. Floor Area:	244,257
Site Area ~	305,322 sf

Building Area Summary

Original Concept:	222,500 sf
Max. Build Additions:	21,757 sf
Total Building Area:	244,257 sf

Parking Summary

Covered ~	190 Spaces
Surface ~	15 Spaces
Total ~	205 Spaces

PROPOSED ZONE (RA-6) MAX. BUILD OUT

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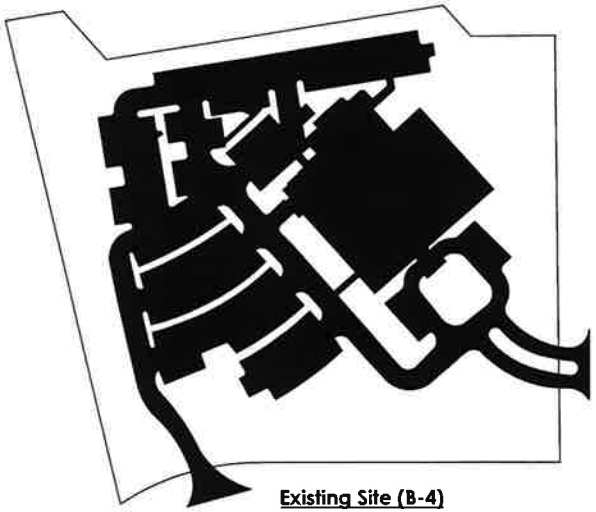
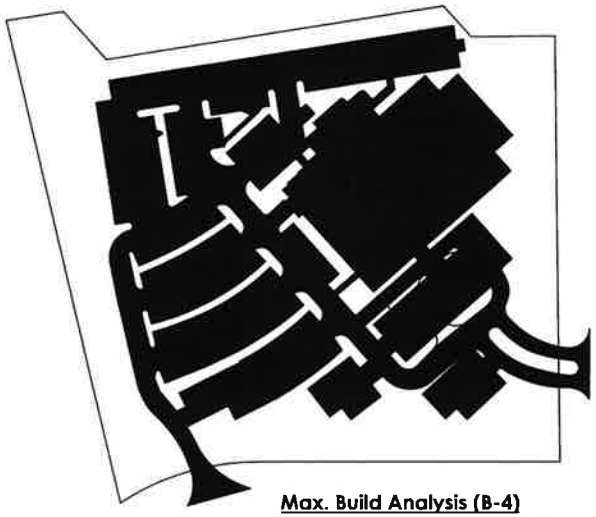
120 OLD POST ROAD
RYE, NY

FIGURE NO. 4



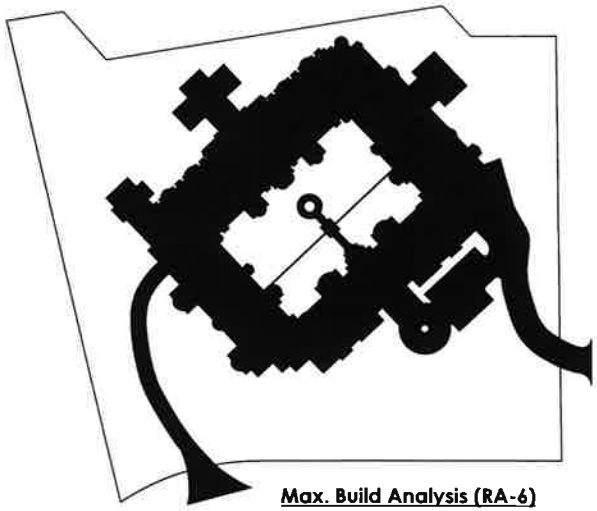
Existing Site (B-4)

Building Footprint ~	27,935 sf
Paved Areas ~	107,418
Total Impervious ~	135,353
Site Area ~	305,322
% Impervious ~	44.33%



Max. Build Analysis (B-4)

Building Footprint ~	36,505 sf
Paved Areas ~	139,616
Total Impervious ~	176,121
Site Area ~	305,322
% Impervious ~	57.68%



Max. Build Analysis (RA-6)

Building Footprint ~	75,315 sf
Paved Areas ~	33,347
Total Impervious ~	108,662
Site Area ~	305,322
% Impervious ~	35.59%

SITE DEVELOPMENT ANALYSIS - IMPERVIOUS CONDITIONS

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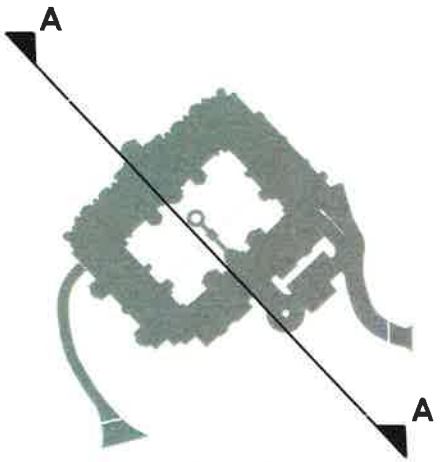
N

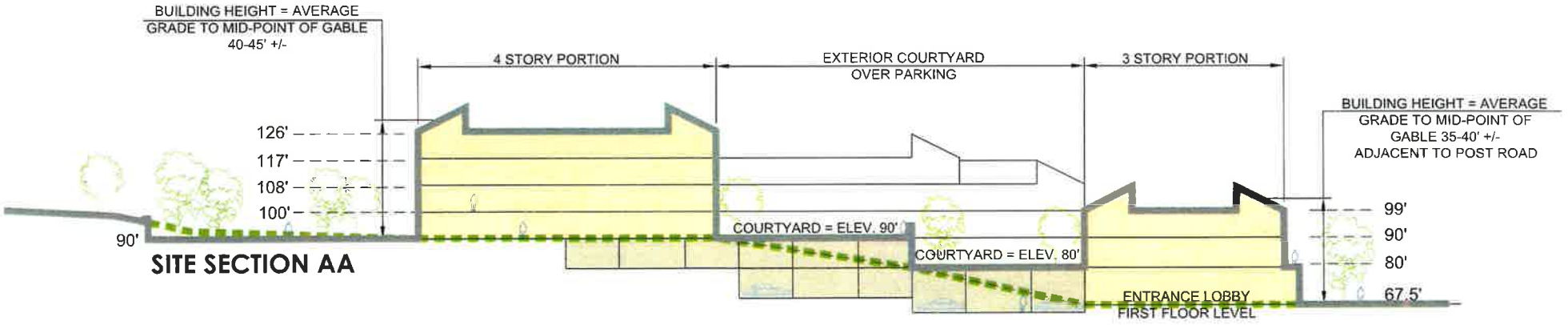
120 OLD POST ROAD
RYE, NY

AW815AE 06 - 3/4/2015,revised 6/2/2015

FIGURE NO. 5



KEY PLAN



SITE SECTION AA

BUILDING HEIGHT DIAGRAM

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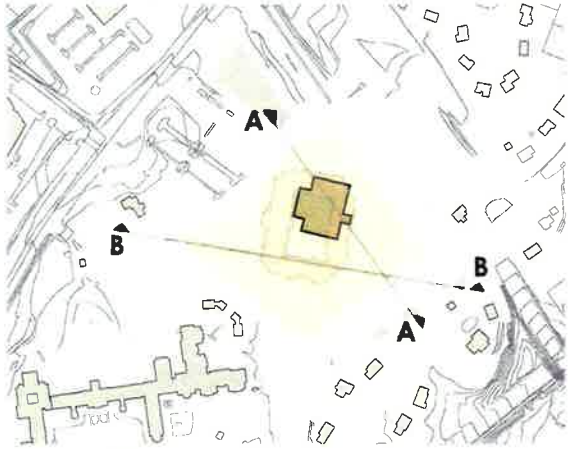
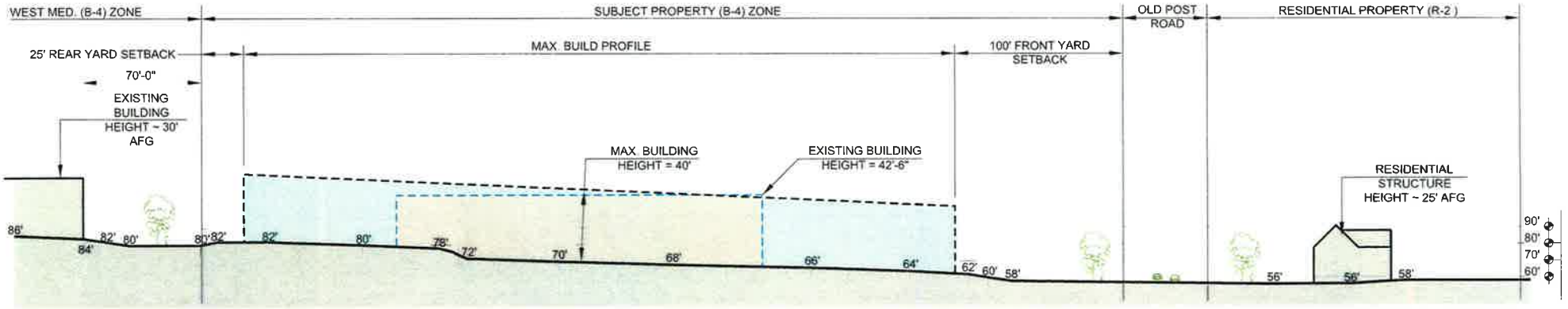
120 OLD POST ROAD
RYE, NY

FIGURE NO. 6



KEY PLAN



SITE SECTION DIAGRAM - AA

SITE SECTION DIAGRAM

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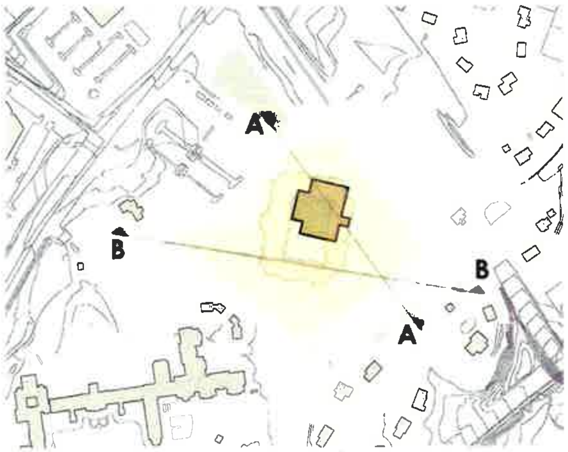
N

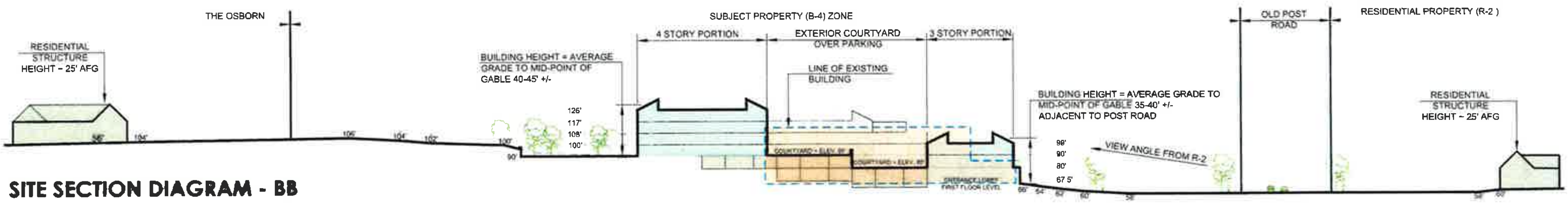
120 OLD POST ROAD
RYE, NY

AW81SAR.06 - 3-31-2015, revised 6-2-2015

FIGURE NO. 7



KEY PLAN



SITE SECTION DIAGRAM - BB

SITE SECTION DIAGRAM - PROPOSED BUILDING

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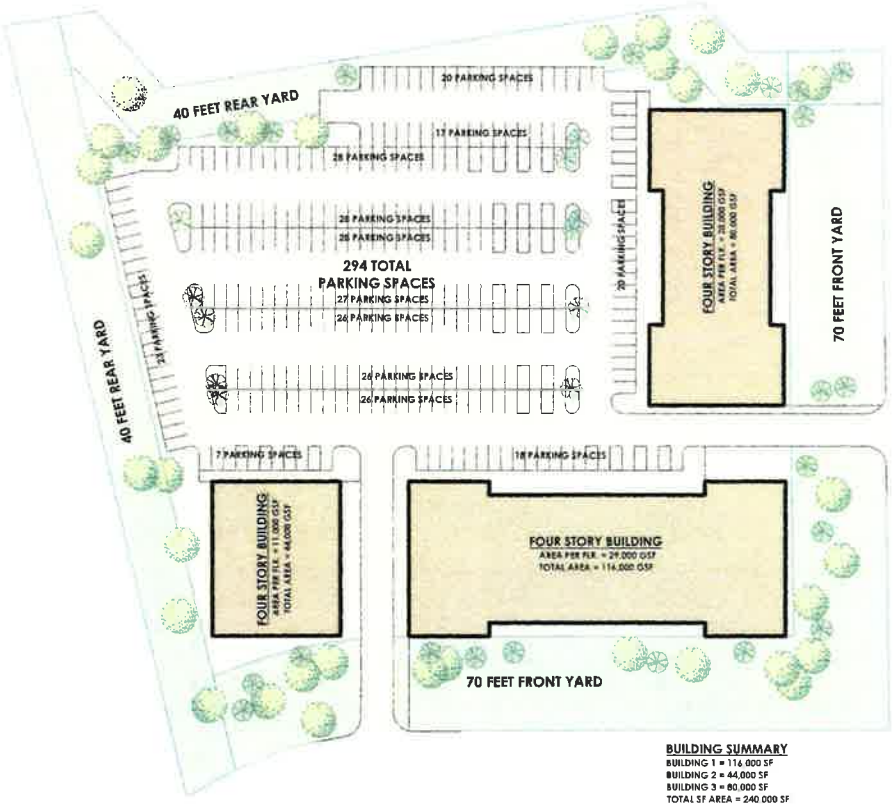
Tecton

120 OLD POST ROAD
RYE, NY
AWR15AR.06 - 3-31-2015 revised 6-2-2015

FIGURE NO. 8



BUILDING SUMMARY
BUILDING 1 = 116,000 SF
BUILDING 2 = 44,000 SF
BUILDING 3 = 80,000 SF
TOTAL SF AREA = 240,000 SF

RA-6 Density Study		
Zoning Regulations		
Lot Area	304,920	
	RA-6	
	Req.	**Proposed**
Maximum F.A.R	0.8	
Site Maximum Allowed	243,936	240,000
Min. Yard Dimensions (Feet)		
Front	70	70
One Side	70	70
Total of Two Sides	140	140
Rear	40	40
Maximum Height		
Stories	4	4
Feet	50	45
Parking	2	per unit
Max. Parking (per unit above)	296	

Proposed Density Study		
Building Area (Gross)	**240,000**	**gross sf**
Area per floor (4 Story)	**60,000**	**sf/floor**
Efficiency Factor	25%	
Net Area for Units	180,000	
Average net area/unit	1,220	
Total estimated units	147.541	
Proposed Units	**148**	
Parking Required	295.082	
Proposed Parking	**294**	
Impervious Coverage	**177,928**	**58.4%**
Building Footprint	60,000	19.7%
Paved Surfaces	117,928	38.7%

SITE PLAN - SURFACE PARKING ALTERNATIVE

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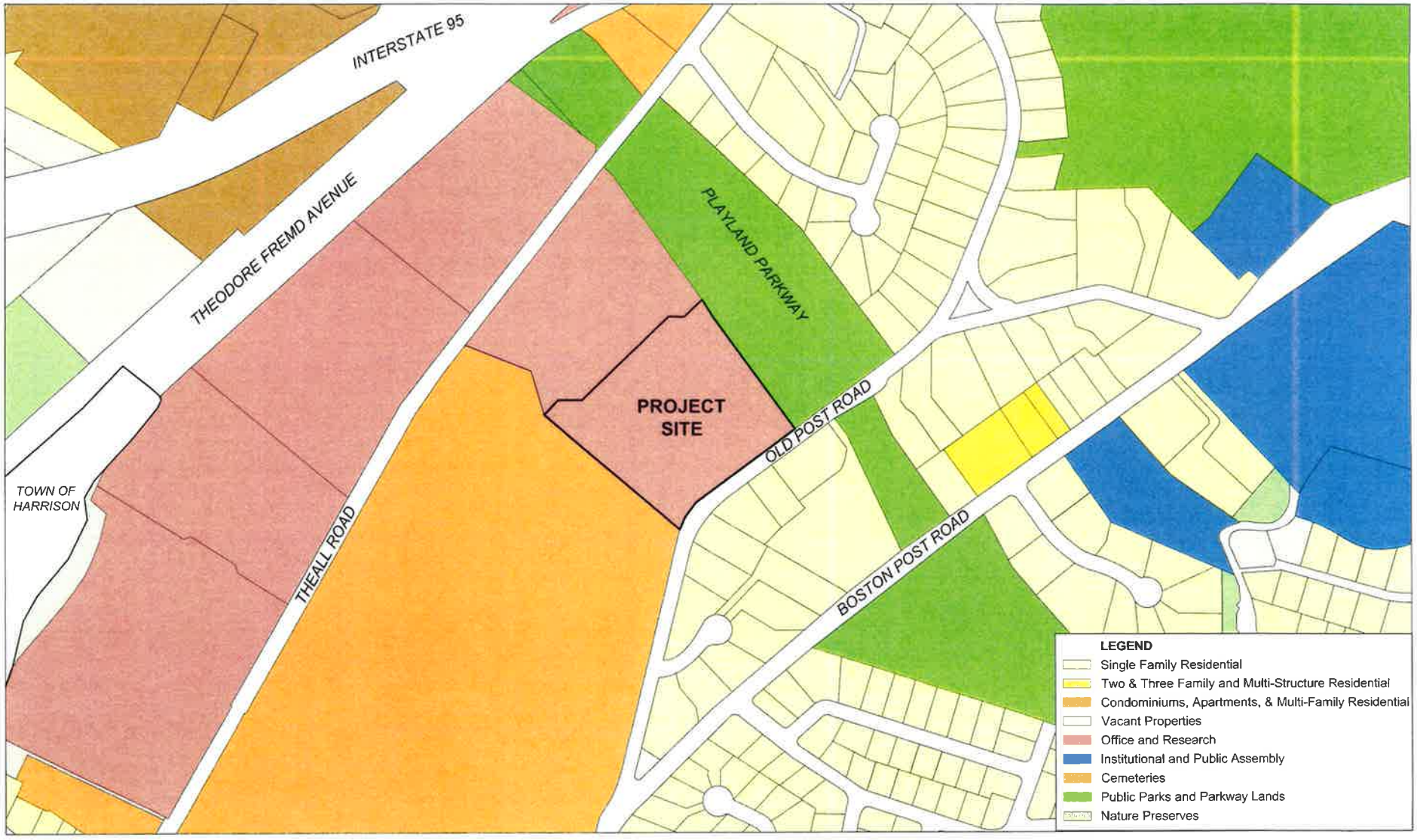
120 OLD POST ROAD
RYE, NY
AWTSAR 86 - 1-12-2015, revised 6-2-2015

FIGURE NO. 9



AREA LAND USE MAP

120 OLD POST ROAD
CITY OF RYE, NEW YORK

FIGURE NO. 3

CONCEPTUAL RENDERING - VIEW FROM PLAYLAND ACCESS DRIVE

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Intelligent Land Use

120 OLD POST ROAD
RYE, NY

FIGURE NO. 11

CONCEPTUAL RENDERING - VIEW FROM OLD POST ROAD

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Intelligent Land Use

120 OLD POST ROAD
RYE, NY

FIGURE NO. 12

CONCEPTUAL RENDERING - VIEW OF INTERIOR COURTYARD

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120 OLD POST ROAD
RYE, NY
AWR15AR 06 / 1-12-2015 revised 6-2-2015

FIGURE NO. 13

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Rezoning of 120 Old Post Road		
Project Location (describe, and attach a general location map): 120 Old Post Road, City of Rye, Westchester County		
Brief Description of Proposed Action (include purpose or need): Rezoning of the property at 120 Old Post Road for an age-restricted, multi-family residential development.		
Name of Applicant/Sponsor: Old Post Road Associates LLP c/o Harfenist Kraut & Perlstein LLP	Telephone: 914-701-0800 E-Mail: jkraut@hkplaw.com	
Address: 2975 Westchester Ave, Suite 415		
City/PO: Purchase	State: New York	Zip Code: 10577
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes☐No		
b. City, Town or Village Planning Board or Commission ☑Yes☐No		
c. City Council, Town or Village Zoning Board of Appeals ☑Yes☐No		
d. Other local agencies ☐Yes☐No		
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☐No		
g. State agencies ☐Yes☐No		
h. Federal agencies ☐Yes☐No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes☑No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
B-4 Office Building District

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? RA-6 Apartments for Active Senior Citizens

C.4. Existing community services.

a. In what school district is the project site located? City of Rye

b. What police or other public protection forces serve the project site?
City of Rye

c. Which fire protection and emergency medical services serve the project site?
City of Rye

d. What parks serve the project site?
Project Site is adjacent to Playland Parkway Lands and approximately 1/4 mile from Rye Nature Center.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Residential

b. a. Total acreage of the site of the proposed action? 7 acres
b. Total acreage to be physically disturbed? 7 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 7 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				135

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☑ No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i. What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No
If Yes, describe:

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No
If Yes:

i. Total anticipated water usage/demand per day: 16,250 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No
If Yes:

- Name of district or service area: United Water
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☑ No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑ No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:
N/A

vi. If water supply will be from wells (public or private), maximum pumping capacity: N/A gallons/minute.

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No
If Yes:

i. Total anticipated liquid waste generation per day: 14,775 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary Discharge

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No
If Yes:

- Name of wastewater treatment plant to be used: Blind Brook Wastewater Treatment Facility
- Name of district: Blind Brook
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☑No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

N/A

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

N/A

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing 240 Proposed 186 Net increase/decrease -54

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

N/A

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☑Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:
- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:
- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe:

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

To be determined

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: Vegetation and Landscape Screening

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): Parkway, Institutional

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	3.0	1.8	-1.2
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: Lawn and Landscaped Area	4.0	5.2	+1.2

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

The Osbom Senior Living Facility

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☑ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

N/A

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): V00571

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

The Rye Gas Works site indicated in (iii) is located between Theodore Fremd Avenue and the New York, New Haven, and Hartford Railroad tracks in the Town of Rye. It is currently used as a ConEdison service center. Remediation was completed 06/28/2010 through NYSDEC Voluntary Cleanup Program.

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☑No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >5 feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☑No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: PnC/PnB - Paxton Fine Sandy Loam 100 %
_____ %
_____ %

d. What is the average depth to the water table on the project site? Average: 1.5-2.5 feet

e. Drainage status of project site soils: ☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☑ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐Yes ☑No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐Yes ☑No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐Yes ☑No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐Yes ☑No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☑No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐Yes ☑No

j. Is the project site in the 100 year Floodplain? ☐Yes ☑No

k. Is the project site in the 500 year Floodplain? ☐Yes ☑No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☑No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:
N/A

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☑No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☑Yes ☐No
If Yes:
i. CEA name: County & State Park Lands
ii. Basis for designation: Exceptional or unique character
iii. Designating agency and date: Date:1-31-90, Agency:Westchester County

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? If Yes: *i.* Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District *ii.* Name: _____ *iii.* Brief description of attributes on which listing is based: _____	☐ Yes ☑ No
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑ Yes ☐ No
g. Have additional archaeological or historic site(s) or resources been identified on the project site? If Yes: *i.* Describe possible resource(s): _____ *ii.* Basis for identification: _____	☐ Yes ☑ No
h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? If Yes: *i.* Identify resource: _____ *ii.* Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____ *iii.* Distance between project and resource: _____ miles.	☐ Yes ☑ No
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? If Yes: *i.* Identify the name of the river and its designation: _____ *ii.* Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	☐ Yes ☑ No ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

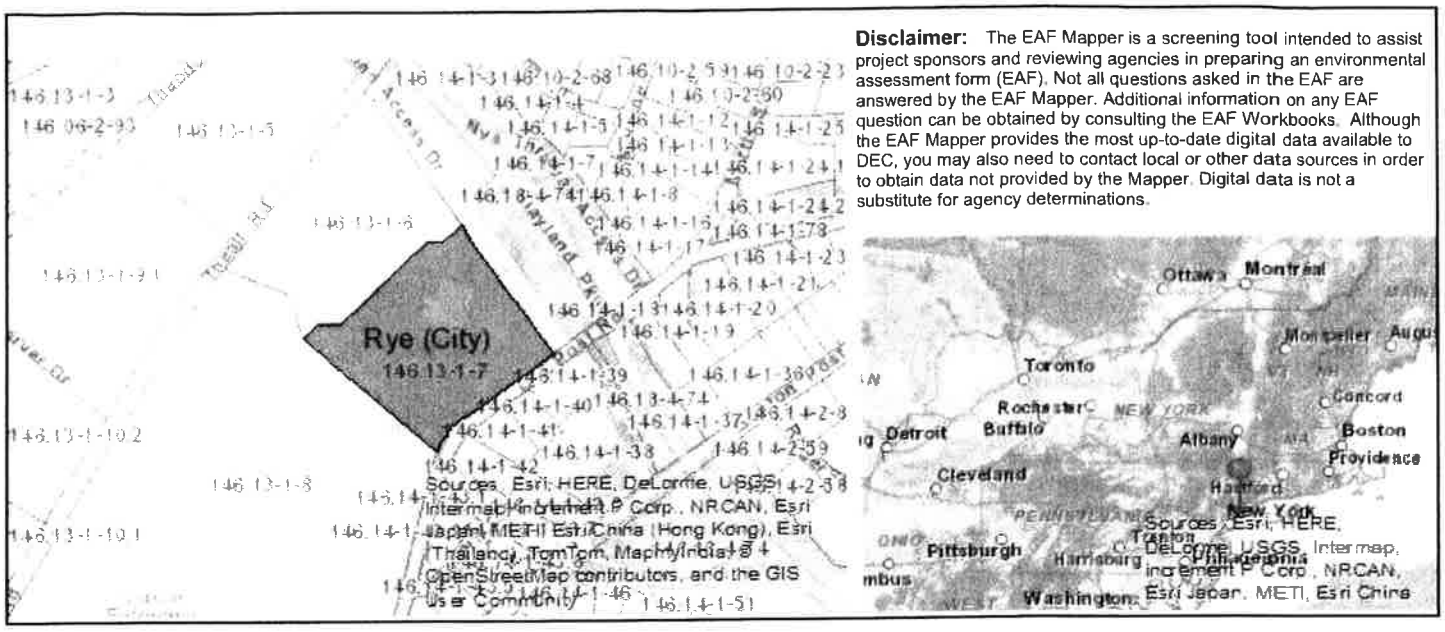
Applicant/Sponsor Name Leo Napior Date 1/29/15

Signature [signature] Title Attorney

PRINT FORM

EAF Mapper Summary Report

Tuesday, January 13, 2015 12:29 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	V00571
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	No
E.2.h.iii [Surface Water Features]	No
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	County & State Park Lands
E.3.d.ii [Critical Environmental Area - Reason]	Exceptional or unique character
E.3.d.iii [Critical Environmental Area – Date and Agency]	Date:1-31-90, Agency:Westchester County
E.3.e. [National Register of Historic Places]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

The following provides a brief evaluation of the potential environmental impacts of the proposed project to supplement the analysis of Zoning, Land Use, and Fiscal Impacts previously identified in this petition. In this case, the types of impacts often associated with a development proposal are limited since the project involves a previously developed site. In addition, the site is not constrained by wetlands or other regulated waterbodies, floodplains, significant steep slopes, or other identified sensitive natural resources:

Transportation

The results of the Traffic Analysis prepared by Frederick P. Clark Associates, attached herein, indicate that the Proposed Project will generate 27 and 34 vehicle trip ends during a typical weekday morning and weekday afternoon peak hour, respectively. For comparison purposes, the existing office building, if fully occupied with a variety of commercial tenants, could generate 109 and 104 vehicle trip ends during the same weekday morning and weekday afternoon peak hours, respectively. Therefore, the Proposed Project would result in a significant reduction in site traffic, with a decrease of 82 and 80 vehicle trip ends during the weekday morning and weekday afternoon peak periods, respectively.

The results of the analyses indicate that area roadways will continue to operate with essentially no change in Level of Service, except for an overall decrease in Level of Service at the signalized intersection of Theodore Fremd Avenue and Playland Access Drive. At this intersection, the Level of Service will change from "B" to "C" during the weekday and morning peak hour, resulting in an overall increase in average delay per vehicle of only 0.3 seconds, which is considered insignificant.

The results of these analyses and a comparison between a background and combined conditions indicate that traffic control and pavement markings at each of these intersections should remain unchanged as no modifications are necessary to accommodate this residential development. Based on these results, it is the applicant's opinion that no significant adverse impacts to transportation are expected.

Visual Resources

The Project would maintain the existing 100 foot buffer to Old Post Road, and further enhance local visual resources by providing subterranean parking within the proposed structure. This allows for the implementation of an attractive landscape plan and the preservation of many of the Site's existing mature trees. The Project also contemplates the development having a traditional architectural style that is typical of Rye, and a design which will complement the historic character of the adjacent Osborn property, serving as an appropriate visual transition from the adjacent single family neighborhoods to the adjacent office parks. See Figures 7, 8, and 9, *Conceptual Renderings*.

Air Quality and Noise

The Proposed Project will include below grade parking for the tenants and the loading area has been located toward Playland Access Road so as to minimize noise associated with vehicles and trucks. Similarly, air quality impacts should be lessened since there will be a significant reduction in site traffic.

Utilities

Water usage and sanitary discharge will increase from current land use approximately 16,250 and 14,775 gallons per day (gpd) respectively. It is not anticipated that this increase will have a significant impact on water and sanitary facilities since these values are conservative when compared to typical units with families. Actual usage is anticipated to be lower. All units will be equipped with low-flow fixtures. Further site specific review will be conducted during the Site Plan review process. Electric, gas, and communications also exist in the area to support the new project. The utility providers will be contacted once the land use zoning has been approved to identify connections and service modifications needed to support the Proposed Project. All existing utilities are anticipated to support the demand of the Proposed Project.

WESTCHESTER COUNTY OFFICE MARKET: SUMMARY DATA

Prepared for ALFRED WEISSMAN REAL ESTATE, LLC

NOVEMBER, 2014

GOMAN + YORK

Goman+York Property Advisors LLC was engaged by Alfred Weissman Real Estate LLC to review several issues related to the possible redevelopment of the property located at 120 Old Post Road in Rye, NY. Those issues include:

Impact of Current Market Conditions

- Regional Trends in Local Office Market
  - History and growth
  - Current supply and demand parameters
  - Current vacancy rates
  - Impact of current market/vacancies on market valuations and property taxes

Impact of Current Market Conditions

Office Market Trends

Vacancy rates for Westchester County historically have increased over the past 10 years, from a low of 15.2% in 2006 to its current high of 21.1% as of Q3 2014. In that same time period, direct asking average rent has decreased from $27.50 per square foot in 2005 to its current low of $25.65 per square foot. While rent growth over the last year has been 7.6%, this is due to significant renewal activity in the market and not any changes in the market conditions. It should be noted that operating costs have risen during that same period, pushing net rents on office properties even lower.

Since the 2008 recession, overall net absorption has been negative, only showing positive net absorption during 2012. Current availability has exceeded 5 million square feet and current absorption trends indicate that is yet to peak. 494,500 square feet of office space is currently under construction for Regeneron Pharmaceuticals and WestMed Medical Group. Both companies have been located within Westchester County and this is likely the result of obsolete office stock. We reviewed a variety of industry sources and all indicate vacancy rates are currently at a 10-year high.

Tax certiorari proceedings have increased in recent years by 10% to 86 in 2013 compared to 78 in 2013. Pressures from the courts to settle these cases has further impacted the value of commercial real estate in that potential buyers see it as a complicating factor to their business model and thus it serves as a disincentive to making investments in this asset class.

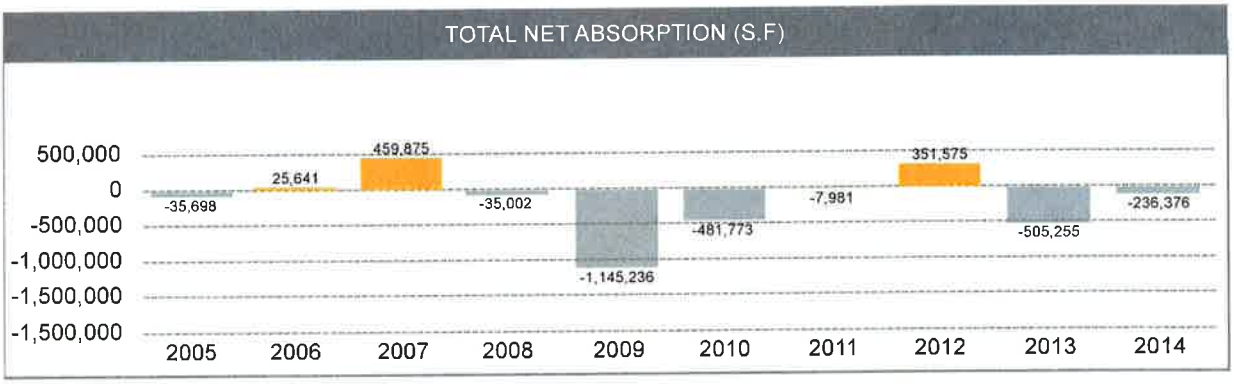
WESTCHESTER COUNTY OFFICE MARKET: SUMMARY DATA

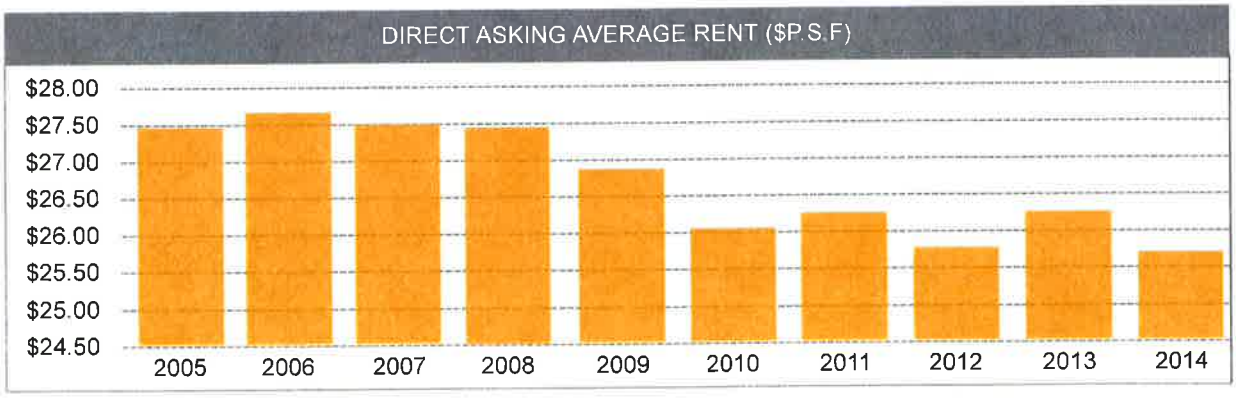
21.1%
TOTAL VACANCY
6,707,572
Total Vacancy (s.f.)

-244,078
YTD net absorption (s.f.)
-57,737
Q3 2014 net absorption (s.f.)

7.6%
12-month rent growth
*see page 1 for explanation

494,500
Total under construction (s.f.)
*see page 1 for explanation





*Data compiled from various industry sources

GOMAN+YORK

RYE OFFICE MARKET ANALYSIS

120 OLD POST RD

Prepared for **ALFRED WEISSMAN REAL ESTATE, LLC**

March 2, 2015

GOMAN + YORK

Market Definition

The competitive office market for Rye, NY includes parts of southeastern Westchester County, southeastern White Plains, along with the southeastern I-287 corridor and the I-95 corridor.

The information contained in this analysis was taken from a variety of sources including regional market reports from the major commercial real estate brokerage houses along with data on commercial real estate activity from several real estate research and listing services.

Office Market Demand

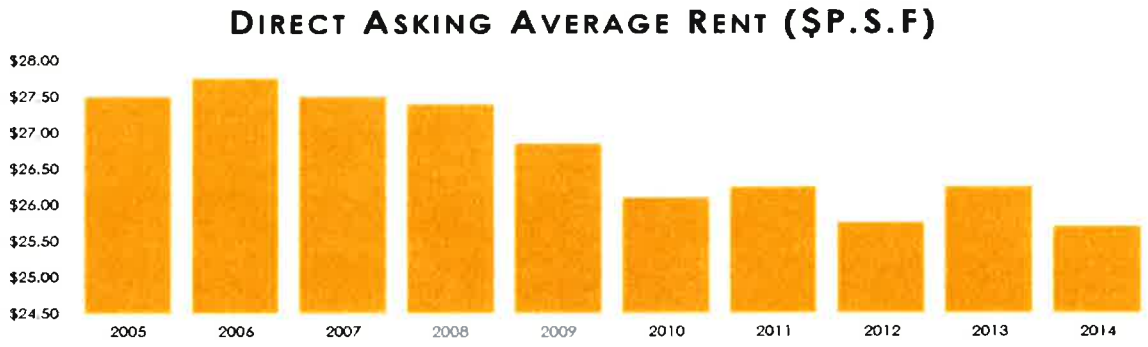
While we have seen modest improvement in the national, regional and local economies and encouraging improvement in the unemployment rate during the past year, the demand for office space in the subject area continues to be very slow. In the portions of the market most relevant to Rye, the office vacancy rate continues to hover around 20% while the vacancy rate in the overall market area has continued to edge slightly higher in recent quarters.

Market Trends

The trend of utilizing less square footage of space for each worker is one factor influencing the slow rate of leasing activity despite increasing employment. We expect this will continue to be of significant influence for an extended period of time, as many older buildings are adapted to the new layouts.

Much of the low level of office leasing activity has been in the medical, financial and business services sectors. Although not an unusually large amount of space, the lease to Acadia Realty Trust for approximately 30,000 square feet at 411 Theodore Fremd Avenue ranks as one largest transactions in the Westchester County market in Q4-2014, and the largest in the eastern submarket of Westchester County. While an important transaction, the fact that this is one of the largest deals done in the entire Westchester County market speaks to the continuing low level of activity.

Market Outlook



Each of the eastern sub-markets of Westchester County are currently showing reported vacancy of more than 1 million square feet of Class A office. Correspondingly, average asking rates have generally continued to decline slightly and are currently at their lowest reported level in the past 10 years. As expected, leasing velocity remains at record low levels. Non-CBD markets are particularly experiencing long term vacancy and low rental rates, and we don't expect improvement in this regard in the foreseeable future.

120 Old Post Rd

It should be noted that the subject property is configured primarily as an open plan headquarters building. This configuration places the building in a highly uncompetitive market position since the majority of office leasing activity is focused upon smaller spaces. The cost of reconfiguring the subject property will be significant as it will require major modifications to essentially all the existing mechanical, electrical and plumbing systems, as well as extensive re-demising of the building to create competitive leasable spaces. In many similar cases involving similar headquarters buildings the conversion cost has been determined to be prohibitive and the building has eventually been torn down as a result. We know of numerous situations involving millions of square feet of 1980's vintage headquarters buildings where this has been the outcome.

MARKET FEASIBILITY ANALYSIS OF THE RYE, NY MARKET FOR ACTIVE ADULT (+55) HOUSING

Prepared for ALFRED WEISSMAN REAL ESTATE, LLC

NOVEMBER, 2014

GOMAN + YORK

This report and plan was prepared for **ALFRED WEISSMAN REAL ESTATE, LLC**

KEY STAFF
Mike Goman - President
Dusty McMahan - Senior Vice President

CONSULTANT TEAM
Steve Lanza - Senior Advisor of Analytics
Sonny Nguyen - Creative Director
Hai Nguyen - Director of Data Analytics
Dave Correia - Data Consultant

GOMAN+YORK
NOVEMBER, 2014

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GOMAN+YORK
NOVEMBER, 2014

EXECUTIVE SUMMARY

The Assignment

Goman+York Property Advisors LLC was engaged by Alfred Weissman Real Estate LLC to provide a preliminary study examining the market capacity and the for-sale and for-rent parameters for the development of approximately 135 new senior (+55) independent living luxury housing units in Rye, New York.

The following report is a market feasibility analysis of the proposed senior (+55) housing project in Rye, New York based upon the conceptual design and project scope as provided by Alfred Weissman Real Estate LLC and Tecton Architects.

This analysis should be viewed as a macro level review of the market feasibility of the conceptual development plan. Essentially,this analysis is intended to provide information adequate to assist the developer in deciding whether further work on the given project is warranted. More specifically, the analysis assists the developer in making a "go or no go" decision before expending substantially more time and effort on the next level of detailed development tasks, including design development, cost estimating, geotechnical and environmental analysis, detailed financial projections and similar development related work.

It is important to point out that this analysis is not intended to provide the detailed information necessary for the purpose of formally underwriting debt or equity investment with respect to the given project.

The Project

The proposed project, as presented in the conceptual plans from Tecton Architects dated April 25, 2014, envisions a three-story independent living facility targeted at active adults (+55). The proposed design contains 135 luxury residential units and includes a variety of amenities such as a cafe/bistro, theater, study/game room, natatorium and fitness center along with locker rooms, multipurpose room and several courtyard areas. The overall facility is proposed to be approximately 245,000 square ft. with parking for 186 vehicles. The project site is located at the northwest corner of Old Post Road and Play Land Access Drive in Rye, New York.

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The Market

We established 3 discrete study areas for the project based upon drive time parameters of 5, 13 and 23 minutes. In our experience, study areas based upon driving times provide a more accurate and realistic picture than, for example, concentric rings. Essentially, this is simply saying that the particular study area consists of those residents who live within the given drive time parameter from the project site.

The 23 minute drive time study area should be viewed as the regional market (based on 2010 US DOT Federal Highway Administration Report) for the project. The average commute to work drive time for the US is approximately 23 minutes and we believe that it serves as a reasonable proxy for the largest study area. While the project is likely to attract some residents from outside that study area, the majority are likely to come from within it. The 5 minute drive time study area should be viewed as the immediate neighborhood market for the project. We would expect the project to receive very significant consideration from potential buyers who currently reside within this study area. The 13 minute drive time study area simply bisects the other two study areas and provides an additional way to view the market for this project.

The data for the residents living within all 3 study areas shows that the market possesses exceptionally attractive socioeconomic indicators. In particular, the 5 minute drive time trade area contains very high percentages of residents who are in the top socioeconomic segments in the US in terms of wealth, education and employment status. While the socioeconomic characteristics decline somewhat as the trade area size increases, the overall market remains remarkably strong. Ethnic diversity increases significantly along with the size of the study area. In summary, our analysis shows that the drive time trade area is ideally suited for the contemplated project.

The Competitive Environment

We conducted a review of available rental and for sale housing within the applicable study area. Our review identified several projects which we consider to be directly competitive and which we believe are reflective of the tenant profile being sought for the project. Rental rates and multi-family unit values within the reviewed projects are high while vacancy rates are low, relative to the averages. These conditions are positive indicators for a proposed new entrant to the market.

Given the prominent position it occupies within this study area, we paid particular attention to The Osborn development adjacent to the planned project. Goman+York personnel confidentially "shopped" The Osborn to determine unit availability, pricing and occupancy. The very low vacancy at The Osborn, combined with their focus on providing a comprehensive service offering including meal plans and other services not being contemplated as part of the proposed project leads us to conclude that there will be limited overlap between potential tenants for The Osborn and the proposed project. In fact, we think it is more likely that these two projects will complement each other as opposed to competing with each other.

Conclusion

Based upon our review of the study area characteristics and the competitive environment, we believe that the market response to the contemplated project will be very positive.

We recommend that further and more specific market research and testing be done once the project plans have been more fully developed, unit designs/layouts and features have been detailed, specific amenities can be described and a professional marketing campaign, along with appropriate collateral materials, are available.

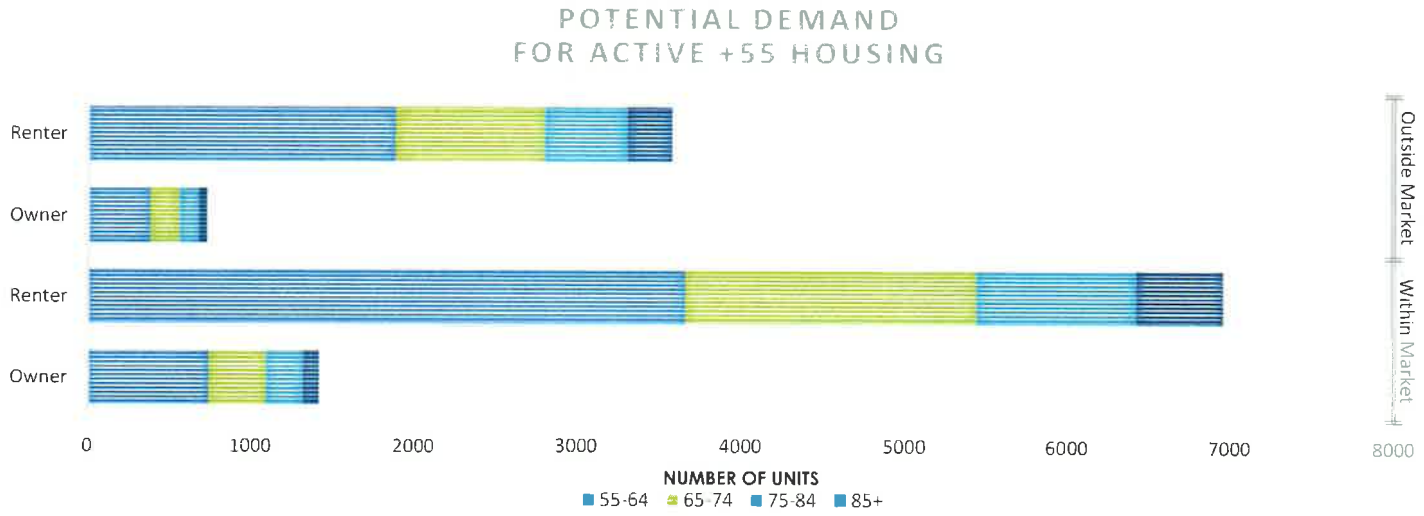
STUDY METHODOLOGY

The Study prepared for **Rye, NY** provides an overview of the **Active Adult (+55) Housing Market**. The analysis will inform projections that will allow Rye, NY to accurately plan for its future development.

Potential Market

The potential market for active senior housing derives from the pool of households, aged 55 and older, who move within the market area in a given year, and those who move to the area from other counties and even other states.

Mobility rates for seniors, who often prefer to age in place, are much lower than for younger households. Rates are, however, higher for seniors who rent rather than own their own homes. To estimate the size of the potential market, national in-county mobility rates were used as a proxy for the rates at which seniors within various age cohorts are likely to relocate somewhere within the target market area. Table below shows that for seniors 55 and older already living within the 23-minute radius of the proposed project, from which approximately 8,400 are likely to move in a given year based on 2010 Census data. More than 80% of those moving are expected to come from among the ranks of existing renters who are likely to prefer rental units, as would many of those who might choose to downsize from homes they currently own.



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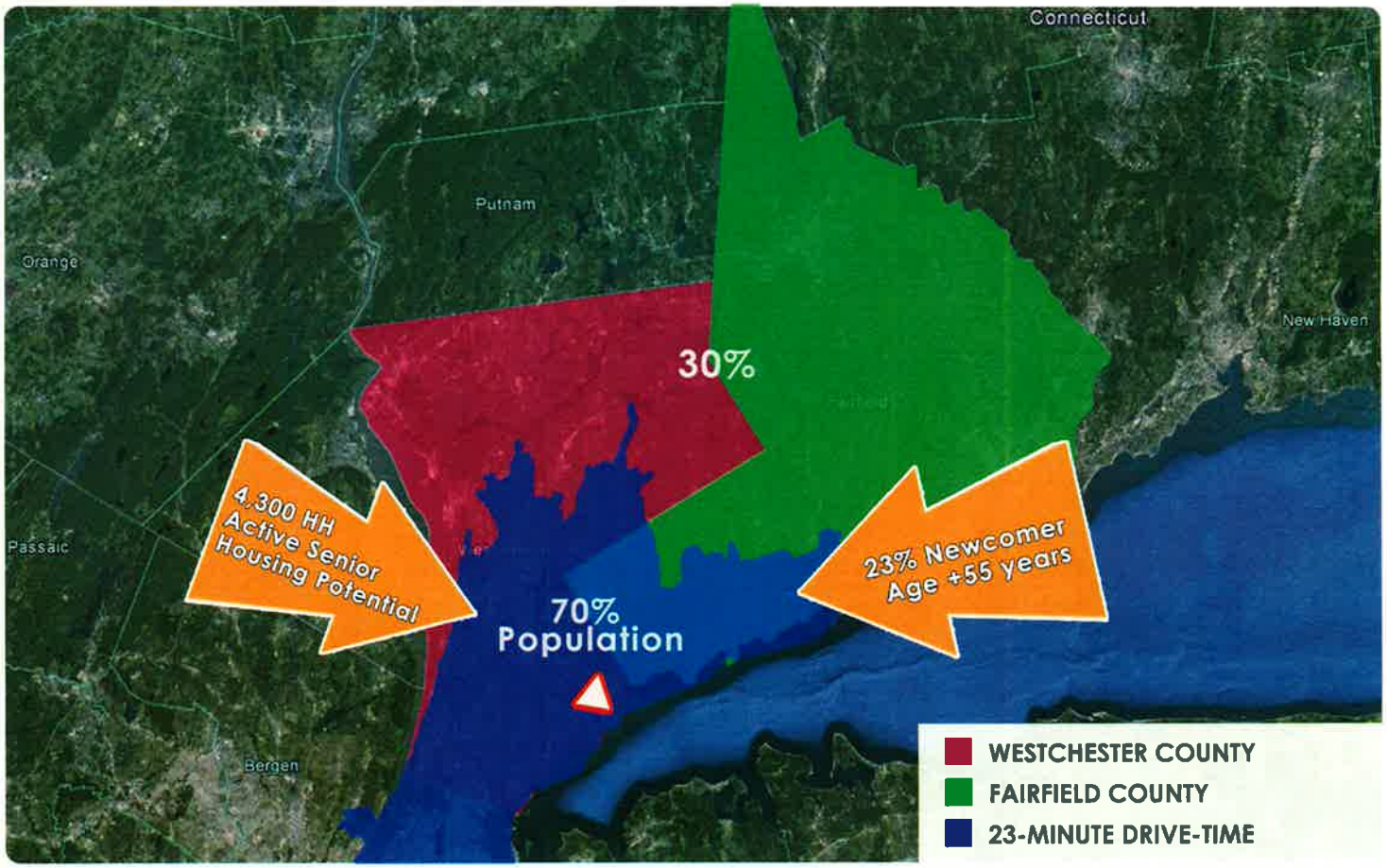
Population Migration

Households moving into the market area were assumed to have characteristics that are similar to current residents. Approximately 27,000 households moved into the two-county area of Westchester, NY and Fairfield, CT between 2009 and 2010, according to the latest IRS data. The 23-minute target market holds nearly 70% of the two-county population and will presumably attract a similar share of the new households. And reflecting the national migration patterns of households, about 23% of the newcomers are likely to be 55 and older. Consequently, about 4,300 households that move into the 23-minute target market each year are potential candidates for active senior housing.

Combining the 8,400 senior households that move within the market area each year with 4,300 in from outside produces a potential market for active senior housing of 12,000 households or more. That is an average of approximately 1,000 households monthly. However, these estimates should be narrowed further to adjust for characteristics, such as target income and age ranges, that are in keeping with the design and scope of this project.



DEMOGRAPHIC & SOCIOECONOMIC CHARACTERISTICS

To get a grasp of the social elements that make up the community, we explored the **Demographic and Socioeconomic characteristics** of the study area.

Demographic

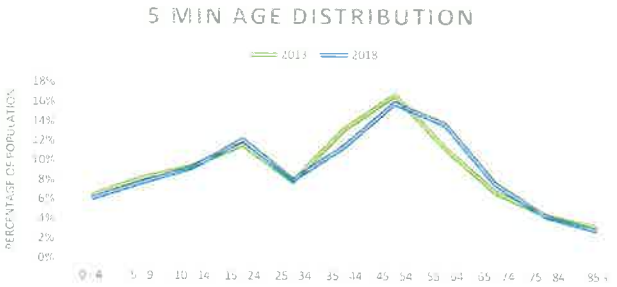
The target markets surrounding the proposed Rye, NY active senior housing project are predominantly white, well-educated, and wealthy.

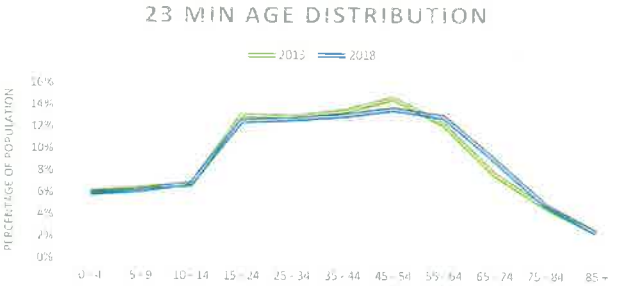
The majority of residents in all three study areas are white, with shares in 2013 ranging from 84%, 73% and 55% within the 5, 13 and 23 minute drive-times, respectively. The larger markets exhibit more racial and ethnic diversity with the black share of the population growing from just 2% within the 5-minute range to 24% within the 23-minute range.

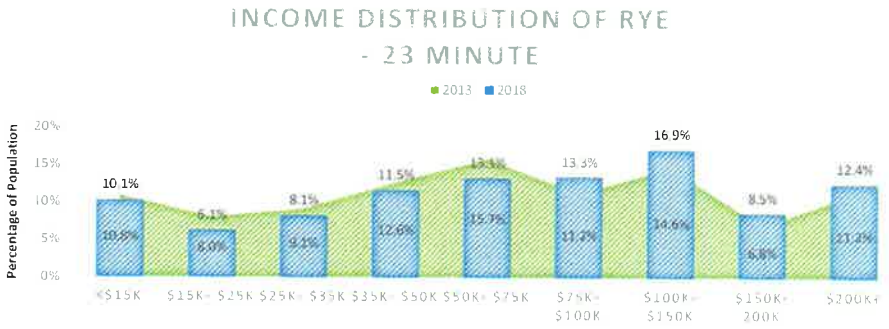
Similarly, residents of Hispanic origin make up 27% of the population within the 23-minute market area but only 12% of the market at the 5-minute mark. All three markets are expected to become more diverse, largely as a result of a growing Hispanic population.

Within a 23-minute drive time, the median age of area residents matches the US average in 2013 of 38.5 years, but in the two smaller markets residents tend to be older. Seniors 55 and older represented about 27% of the population in the two larger markets—a figure that is likely to top 29% by 2018.

Housing is evenly divided between owner and renter occupied units at the 23-minute drive time from the Rye, NY center point. But within closer radii, owner occupied units are in the majority—58% at the 5-minute mark, 53% within a 13-minute drive time. Owner-occupied housing is expected to represent a slightly larger share of all three markets by 2018.







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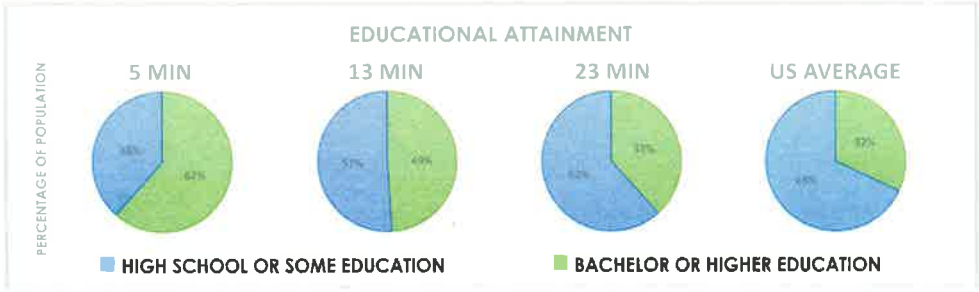
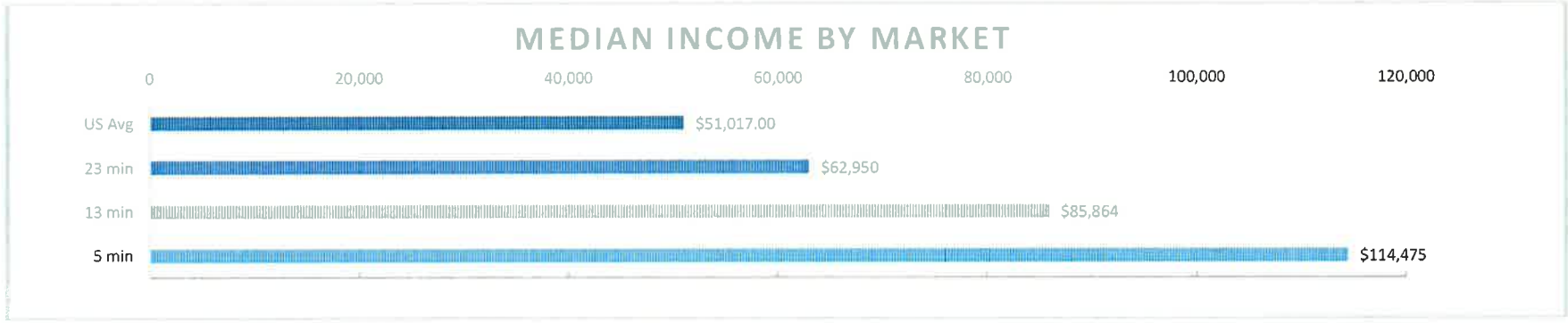
Education

Rye area residents are highly educated, with the share of the population 25 and older holding a Bachelor's degree or higher at 62%, 49% and 38% within a 5, 13 and 23-minute drive of Rye, respectively. The comparable US figure is just 32%. The employed population of the area works predominantly in the services sector and in white-collar occupations, earning exceptional levels of income.

Income

Median household income within a 5-minute drive time of Rye exceeds $114,000, more than double the US median. Incomes are lower in the two broader market areas—$86,000 and $63,000 in the 13-minute and 23-minute rings, respectively—but still above the comparable US figure.





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HOUSING OCCUPANCY

The target market is characterized by a relatively low vacancy rate, and a large share of **renter-occupied** as opposed to **owner-occupied** housing.

Vacancy Rates

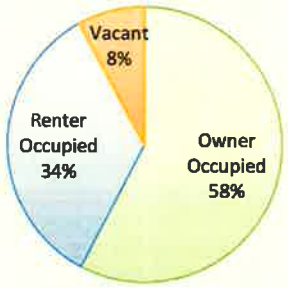
Vacancy rates within 23-minutes of the subject property were 6.1%, according to 2010 Census data. That compares favorably to a U.S. average rate of 11.4% the same year, and to rates of 9.7%, 7.9% and 9.5%, respectively in the states of New York, Connecticut and New Jersey.

Current (2013) vacancy rates in the 23-minute radius have inched up a bit since 2010 (to 6.3%) but they remain lower in this larger market than in the more narrowly defined drive time markets where they are 7.9% within a 5-minute area and 7.5% within the 13-minute area. The housing market is expected to remain tight for the foreseeable future, with projected 2018 vacancy rates of 6.2% within the 23-minute drive time and 7.2% within the 13-minute market. Even an anticipated 9.0% vacancy rate for the 5-minute drive time market in 2018 compares favorably to current national and regional rates.

Rental Market Demand

The low vacancy rates in the local markets surrounding the proposed project are particularly noteworthy given the relatively high share of rental housing in the area. Within the 23-minute drive time market, housing is divided evenly between owner and rental occupied units at about 47% each. That represents a relatively large share of rental-occupied units which tend to have much higher vacancy rates than do owner-occupied units. Nationally, and in Connecticut and New Jersey, renter-occupied housing makes up 25% or less of the total number of housing units. New York's statewide renter occupancy rate is 37%.

2013 Housing Summary
- 5 minute



2013 Housing Summary
- 23 minute

COMPETITION ANALYSIS & PRICING- RENTAL

Our review included properties in Rye, as well as properties in markets immediately adjacent to Rye and properties in markets located same distance from Rye but which have similiar demographic and socioeconomic characteristics. With respect to properties located in Rye, we looked closely at four apartment complexes: The Osborn in Rye, NY, 101 Park Place in Stamford, CT, Scarsdale Commons, Scarsdale, NY and The Avalon Bronxville in Bronxville, NY all built since 2005.

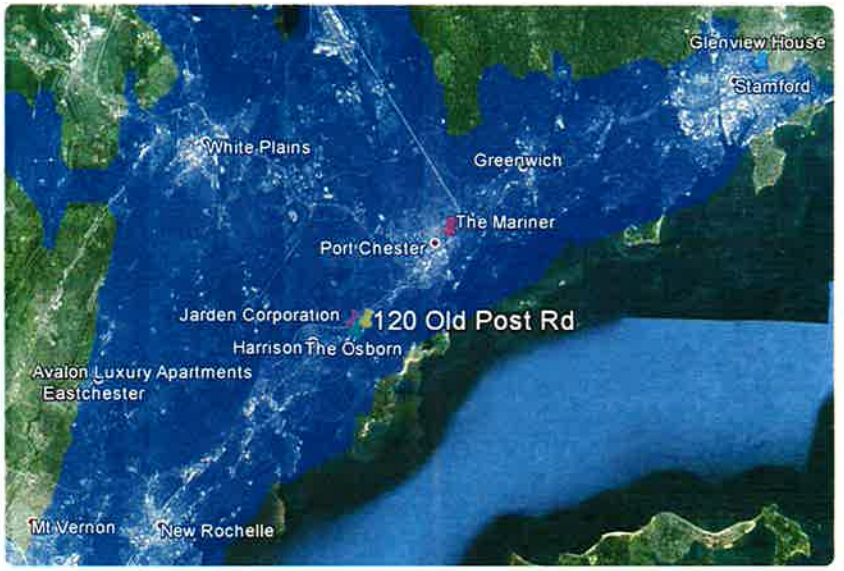
Comparison

They range in size from 336 to 100 units and offer both 1-bedroom, 1-bathroom and 2-bedroom, 2-bathroom options (see table below).

All three complexes can be decribed as luxury properties, offering unit amenities that include parking, full kitchens, washer/dryers, and central air. Community amenities include fitness centers, clubrooms, and picnic/barbecue areas.

Pricing- Rental

The accompanying scatter plot shows the monthly rental prices and square footage for three competitive projects. The smaller units, each around 800 square feet, are all 1-bedroom, 1-bathrooms apartments; the larger units, each around 1,200 square feet, are all 2-bedroom, 2-bathroom units. Assuming area renters judge the amenities of the Rye project as significantly better than these apartments, an appropriate price for 1-bedroom units would be +/- $2,800 and an appropriate price for 2-bedroom units would be +/- $3,900.

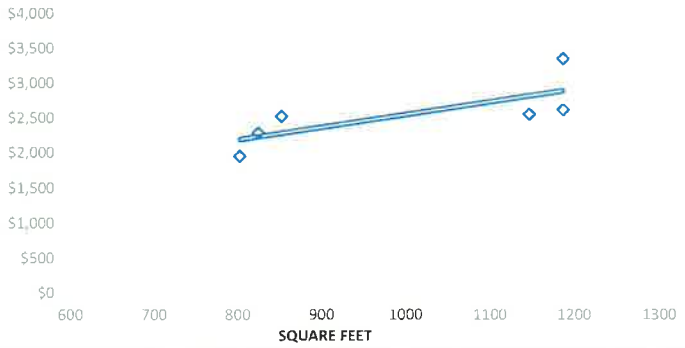


23-MINUTE DRIVE-TIME

CHARACTERISTICS OF COMPARABLE UNITS

	UNITS	BEDROOMS	BATHS	SQ. FT.	RENT	DISTANCE TO TRANSIT
THE OSBORN	138	1	1	756	$5,400	3 min
		2	2	1186	$3,356	
101 PARK PLACE	336	1	1	806	$2,450	1 min
		2	2	1023	$2,560	
SCARSDALE COMMONS	43	1	1	855	$3,000	2 min
		2	2	1175	$3,900	
THE AVALON BRONXVILLE	146	1	1	821	$3,010	2 min
		2	2	985	$4,125	

SIZE VERSUS RENT OF COMPETITORS



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COMPETITION ANALYSIS & PRICING- SALE

Local Property Records served as the comparison for potential market value.

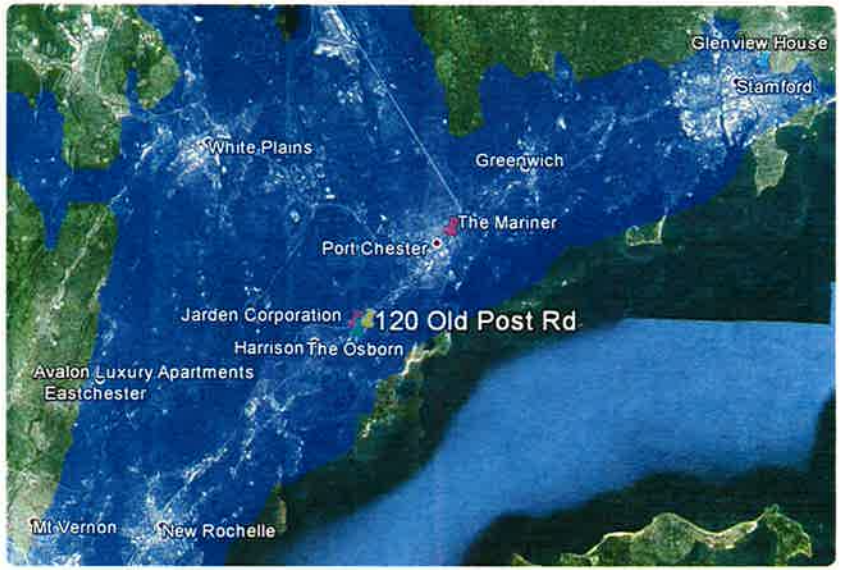
Comparison

We examined similar for-sale condominium properties in a variety of markets in Rye, several markets which are immediately proximate to Rye, and additional markets located some distance from Rye but which have similar demographic and socioeconomic characteristics.

It should be noted that in looking at comparable properties, our focus was on well-located luxury residential properties having a high level of finish and extensive in-suite features, and which offer a significant list of common facilities and amenities.

Pricing- Sale

The accompanying charts show sale prices and square footage for luxury properties in similar markets. Assuming potential buyers judge the level of finish, features and amenities of the Rye project to be equal to or better than these properties, appropriate prices for 1 bedroom units would be about $385,600 or $482 per square foot, and for 2 bedroom units would be about $522,000 or $475 per square foot.



23-MINUTE DRIVE-TIME

RYE COMPARABLE SALES

	UNIT TYPE	BEDROOMS	BATHS	SQFT	PRICE	$/SQFT
RYE	CONDO	2	2	1104	$521,088	$472
WESTBURY	APT	2	2	1261	$616,667	$492
PORT WASHINGTON	CONDO	2	2	1371	$572,479	$417

PHASING AND IMPLEMENTATION

The analysis of **senior migration patterns** in the study area concluded that approximately 1,000 households could be in the market each month. Only some of these households, however, are likely to match the income and age profile that would make **living in an active senior community** either feasible or attractive.

Defining the Market

Given the proposed pricing structure, the target market for the units should include seniors with incomes of $112,000 or more annually. (Industry rules-of-thumb suggest that income should be at least 40 times the monthly cost of housing.) According to current (2013) estimates, about 27.8% of senior (55+) households in the area meet this income criterion. It is likely, therefore, that only 278 of the 1,000 monthly, house-hunting, senior households would pass the income test for the proposed project.

However, active lifestyle arrangements are unlikely to appeal to the oldest senior cohort. And 16% of area seniors are 80 and older. Limiting the market to seniors between 55 and 79 reduces the target market of potential new tenants to about 233 per month.

Implementation

Assuming that all 135 of the proposed Rye units go on the market simultaneously and that the units are expected to be occupied within 90 days, the project would have to capture just over 15% of the market. Extending the marketing time would reduce the necessary capture rate. Over a 180-day period, for example, the Rye project would only have to capture less than 8% of the market. Alternatively, intensive pre-marketing or unit discounting would improve the chances of capturing a 15% market share within 90 days.

CONCLUSION- PRICING

Goman+York was asked to review the market feasibility of the proposed conversion of the subject property into a luxury, age-restricted (55+) residential development positioned at the upper end of the price spectrum. Our review included both rental and for-sale properties. The primary focus of our review was to assess the rents or sales prices which can be reasonably expected to be achieved if the redeveloped subject property is positioned at the upper end of the market.

A component of our work in this regard involved establishing several study areas based upon specific geographic parameters and subsequently conducting a review of residential projects having similar market positioning within those study areas. In broad terms, the study areas we established and examined included:

a) the city of Rye,
b) similar markets in close or immediate proximity to Rye, and,
c) markets in the greater metropolitan New York City area having similar demographic and socioeconomic characteristics to those present in Rye but which are located some distance from Rye.

The estimates of achievable rents and sales pricing contained in these conclusions are conditioned upon certain specific assumptions about the redeveloped property, including:

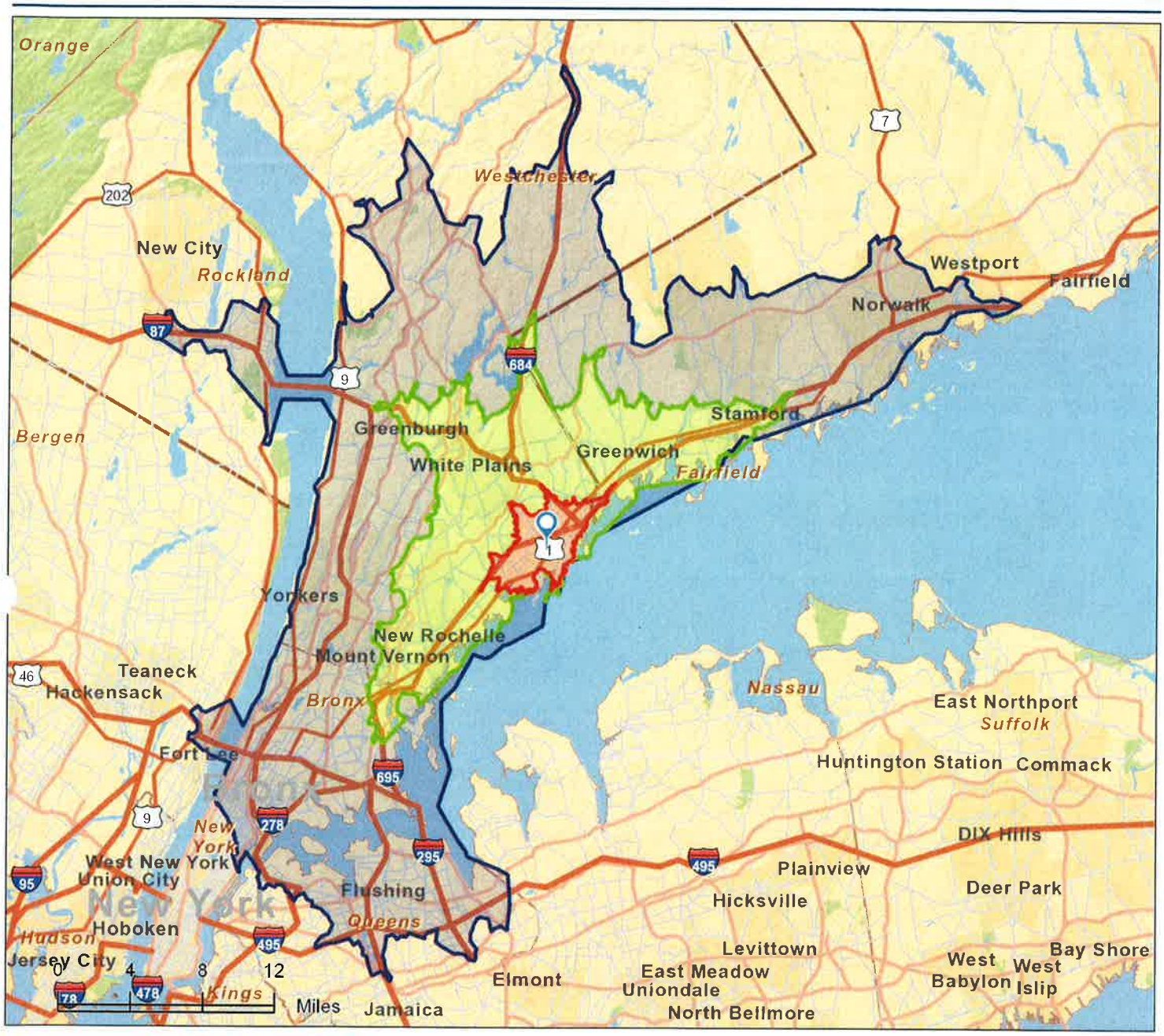
1. that it is positioned as a luxury, age-restricted (55+) community,
2. that an experienced firm with a successful track record with similar luxury projects be engaged to market the project,
3. that individual units feature gourmet kitchens, luxury baths, and extensive entryway, trim, tile and general levels of finish
4. the the proprty offers on-site amenities equal to or exceeding the best available at competitive luxury properties

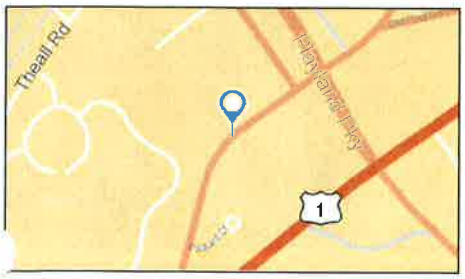
Based upon the entirety of our review, we conclude that the redeveloped project can reasonably be expected to achieve rents of between $3.25 and $3.75 per square foot per month or approximately $2,800 to $3,200 per month for a 1 bedroom and from approximately $3,900 to $4,900 per month for a 2 bedroom. In the case of condominium units offered for sale, we conclude that the redeveloped project can reasonably be expected to achieve pricing between $480 and $550 per square foot or approximately $425,000 to $475,000 for a 1 bedroom and from approximately $575,000 to $715,000 for a 2 bedroom.

Site Map

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5, 13, 23 Minutes

Prepared by Robert Goman

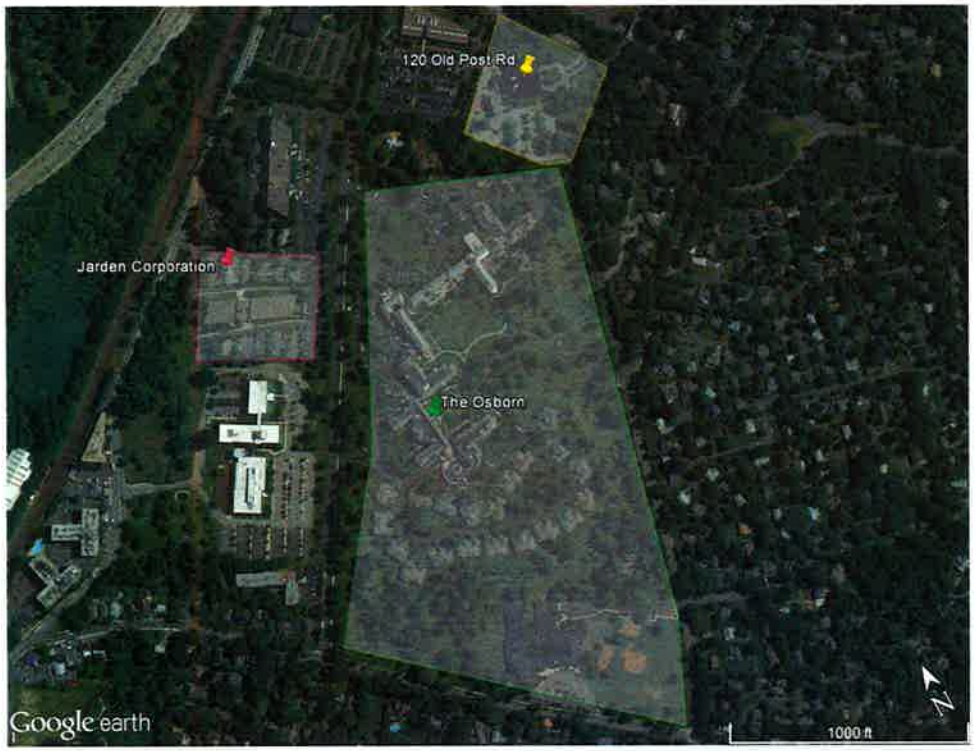


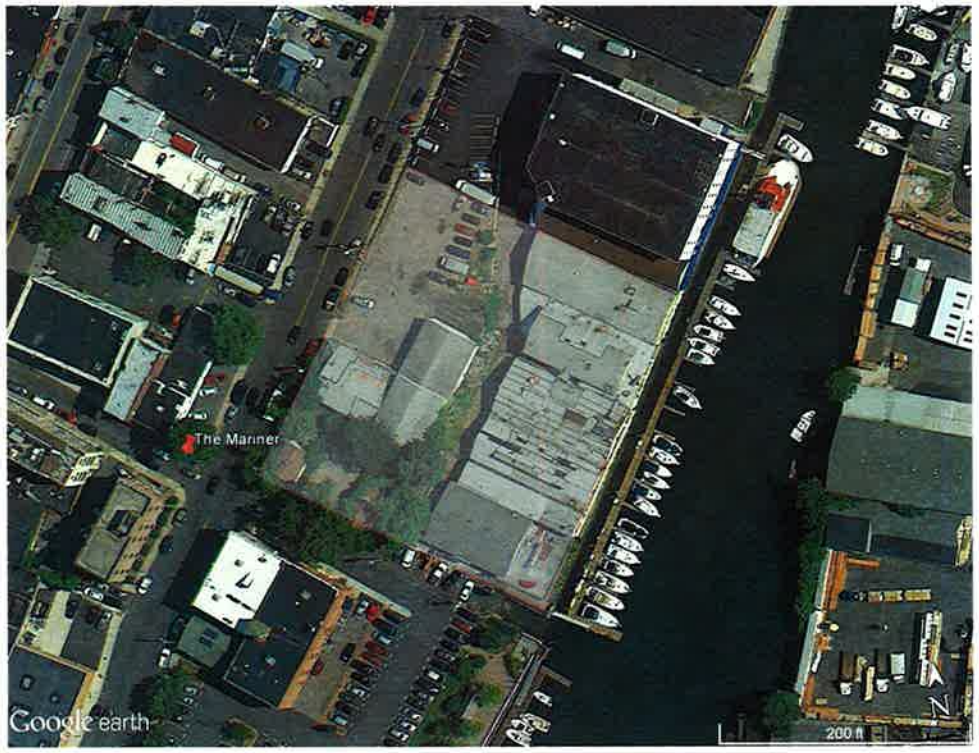


April 29, 2014

AERIAL OF COMPETITORS

The Osborn and The Mariner





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NOVEMBER, 2014

AERIAL OF COMPETITORS

Avalon and Glenview House

GOMAN+YORK

NOVEMBER, 2014

SITE AND FLOOR PLANS

VIEW FROM ENTRY DRIVE

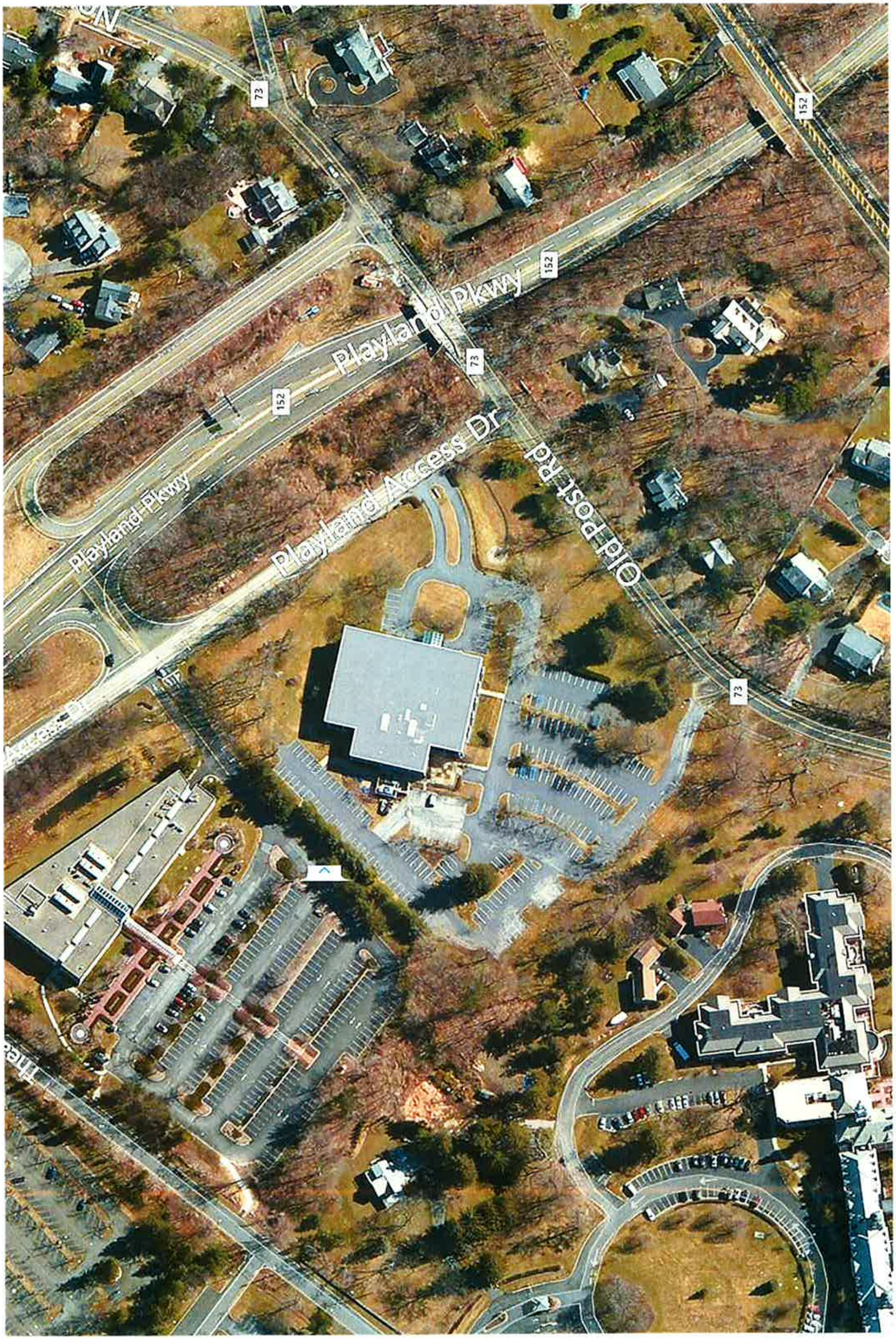
Tecton
ARCHITECTS

VIEW FROM RESIDENTIAL OFF OLD POST ROAD

Tecton
ARCHITECTS

VIEW OF INTERIOR COURTYARD

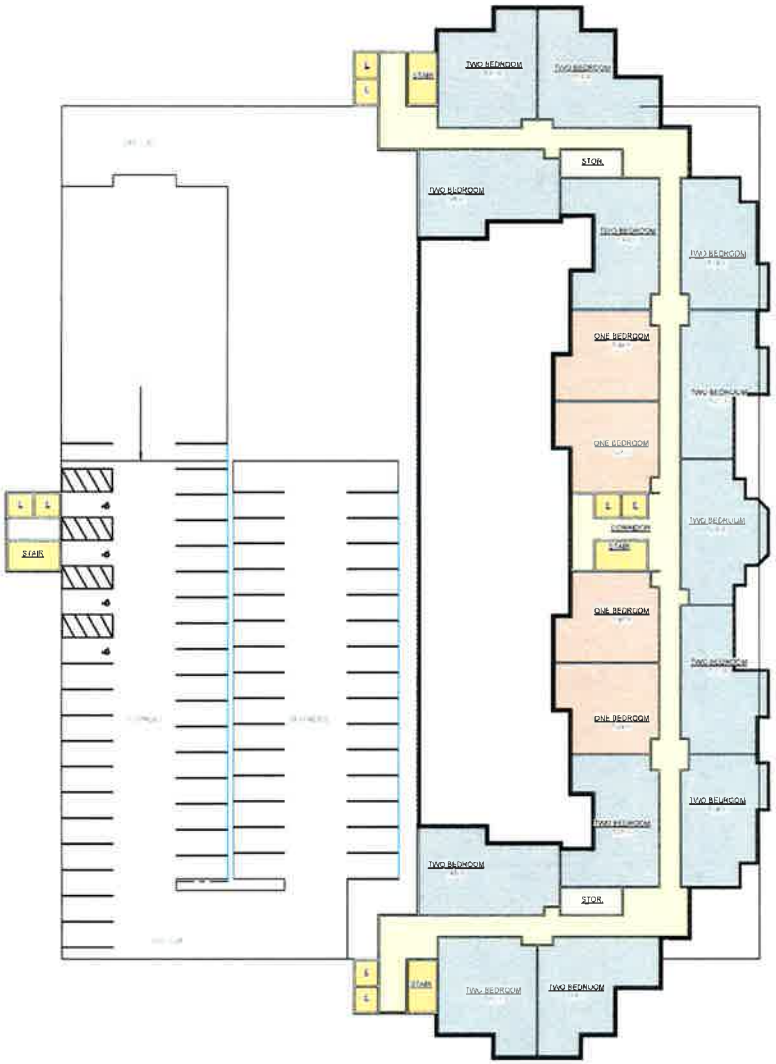
Tecton
ARCHITECTS


Playland Pkwy
Playland Pkwy
Playland Access Dr
Old Post Rd
73
73
73
152
152
152


Playland Pkwy
Playland Pkwy
Playland Pkwy
Old Post Rd
152
73
73
152
73
152

New England Thruway
North St
Mead Pond Ln
Playland Pkwy
Old Post Rd
Boston Post Rd
Parkway Dr
Osborn Rd

New England Thruway
North St
Old Post Rd
Boston Post Rd
Playland Pkwy
Parkway Dr



2ND FLOOR

1" = 20'-0"

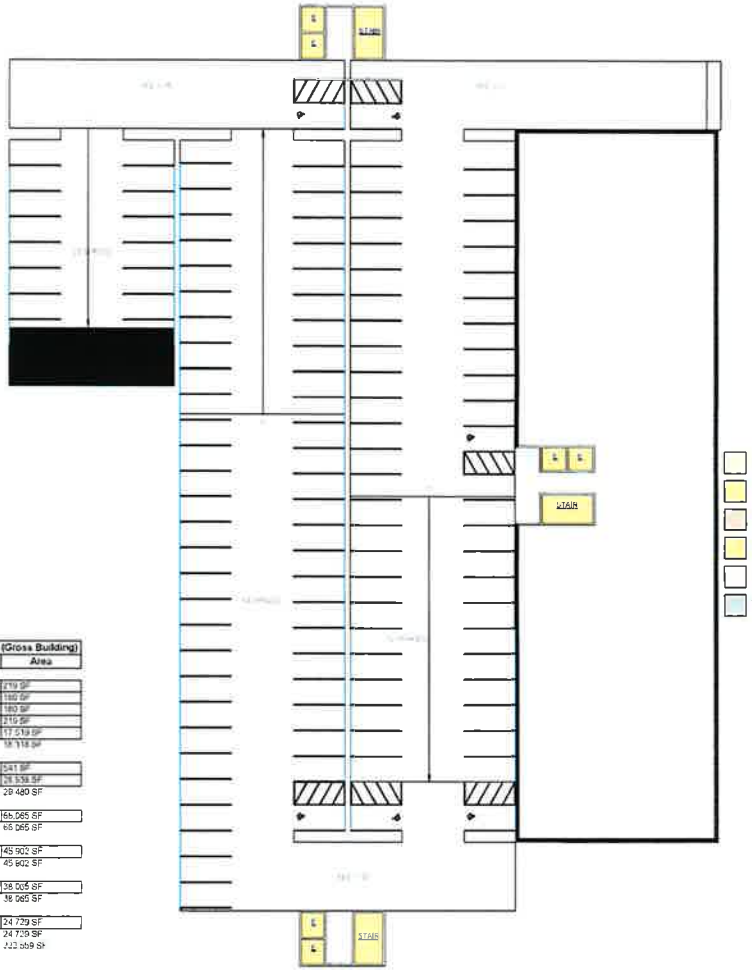
ROOM AREAS	
Name	Area
ONE BEDROOM	14 532 SF
TWO BEDROOM	16 213 SF
2ND FLOOR 17	30 442 SF
ONE BEDROOM	14,557 SF
TWO BEDROOM	34,703 SF
3RD FLOOR 42	49 260 SF
ONE BEDROOM	14 626 SF
TWO BEDROOM	21,134 SF
4TH FLOOR 32	35 762 SF
ONE BEDROOM	8,193 SF
TWO BEDROOM	21,162 SF
5TH FLOOR 25	29 355 SF
ONE BEDROOM	6 792 SF
TWO BEDROOM	14 152 SF
6TH FLOOR 17	20 204 SF
Grand total: 133	155 973 SF

UNITS - ONE BEDROOM	
Level	Name
2ND FLOOR	ONE BEDROOM
2ND FLOOR 4	
3RD FLOOR	ONE BEDROOM
3RD FLOOR 14	
4TH FLOOR	ONE BEDROOM
4TH FLOOR 14	
5TH FLOOR	ONE BEDROOM
5TH FLOOR 8	
6TH FLOOR	ONE BEDROOM
6TH FLOOR 6	
Grand total: 46	

UNITS - TWO BEDROOM	
Level	Name
2ND FLOOR	TWO BEDROOM
2ND FLOOR 13	
3RD FLOOR	TWO BEDROOM
3RD FLOOR 28	
4TH FLOOR	TWO BEDROOM
4TH FLOOR 18	
5TH FLOOR	TWO BEDROOM
5TH FLOOR 17	
6TH FLOOR	TWO BEDROOM
6TH FLOOR 11	
Grand total: 87	

Area Schedule (Gross Building)	
Level	Area
1ST FLOOR	219 SF
1ST FLOOR	180 SF
1ST FLOOR	180 SF
1ST FLOOR	219 SF
1ST FLOOR	17 519 SF
	18 318 SF
2ND FLOOR	541 SF
2ND FLOOR	28 939 SF
	29 480 SF
3RD FLOOR	65 065 SF
	65 065 SF
4TH FLOOR	45 902 SF
	45 902 SF
5TH FLOOR	38 065 SF
	38 065 SF
6TH FLOOR	24 729 SF
	24 729 SF
	222 359 SF

- CORRIDOR
- E
- ONE BEDROOM
- STAIR
- STOR.
- TWO BEDROOM



1ST FLOOR

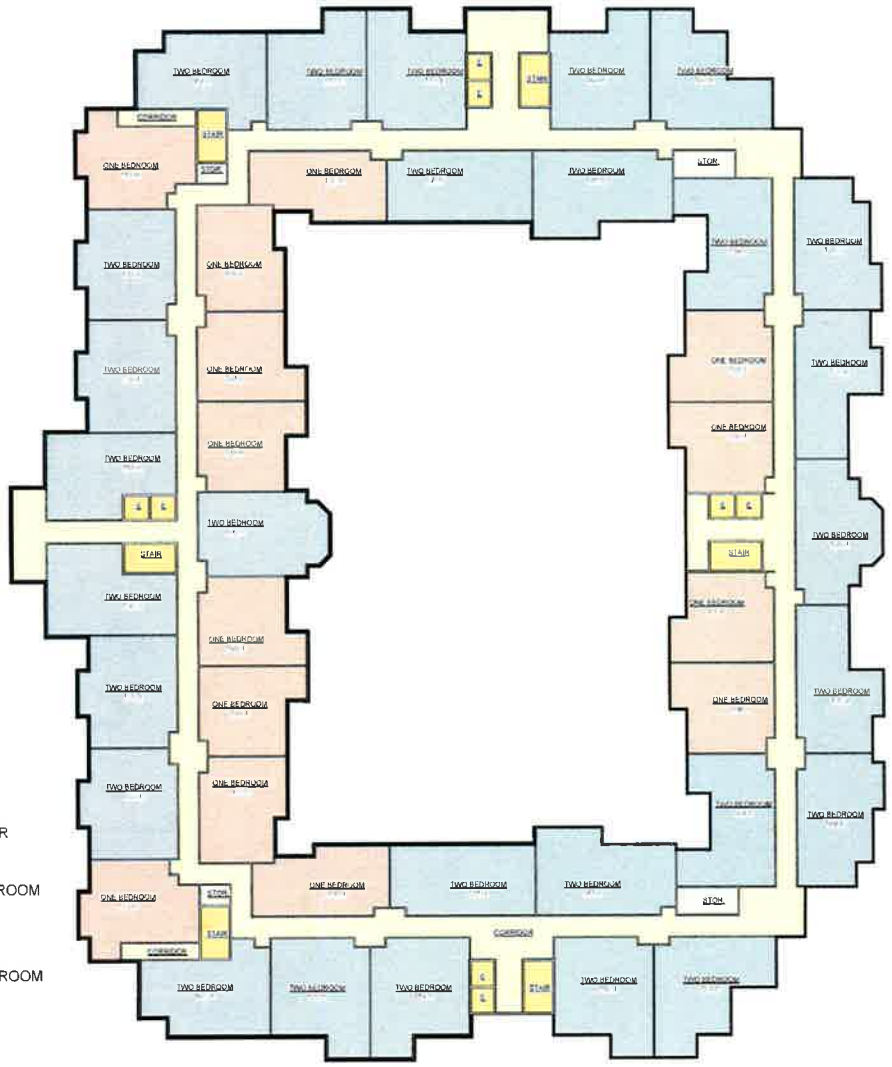
1" = 20'-0"

- CORRIDOR
- E
- ONE BEDROOM
- STAIR
- STOR.
- TWO BEDROOM

FIRST & SECOND FLOOR PLANS

Tecton Architects

SENIOR LUXURY HOUSING - RYE, NY



CORRIDOR
E
ONE BEDROOM
STAIR
STOR.
TWO BEDROOM

3RD FLOOR
1" = 20'-0"

ROOM AREAS	
Name	Area
ONE BEDROOM	4 132 SF
TWO BEDROOM	16 310 SF
2ND FLOOR 17	20 442 SF
ONE BEDROOM	14 527 SF
TWO BEDROOM	34 933 SF
3RD FLOOR 42	49 460 SF
ONE BEDROOM	14 628 SF
TWO BEDROOM	21 134 SF
4TH FLOOR 32	35 762 SF
ONE BEDROOM	8 103 SF
TWO BEDROOM	21 162 SF
5TH FLOOR 25	29 265 SF
ONE BEDROOM	6 102 SF
TWO BEDROOM	14 152 SF
6TH FLOOR 17	20 254 SF
Grand total 133	155 073 SF

UNITS - ONE BEDROOM	
Level	Name
2ND FLOOR	ONE BEDROOM
2ND FLOOR 4	
3RD FLOOR	ONE BEDROOM
3RD FLOOR 14	
4TH FLOOR	ONE BEDROOM
4TH FLOOR 14	
5TH FLOOR	ONE BEDROOM
5TH FLOOR 8	
6TH FLOOR	ONE BEDROOM
6TH FLOOR 6	
Grand total 46	

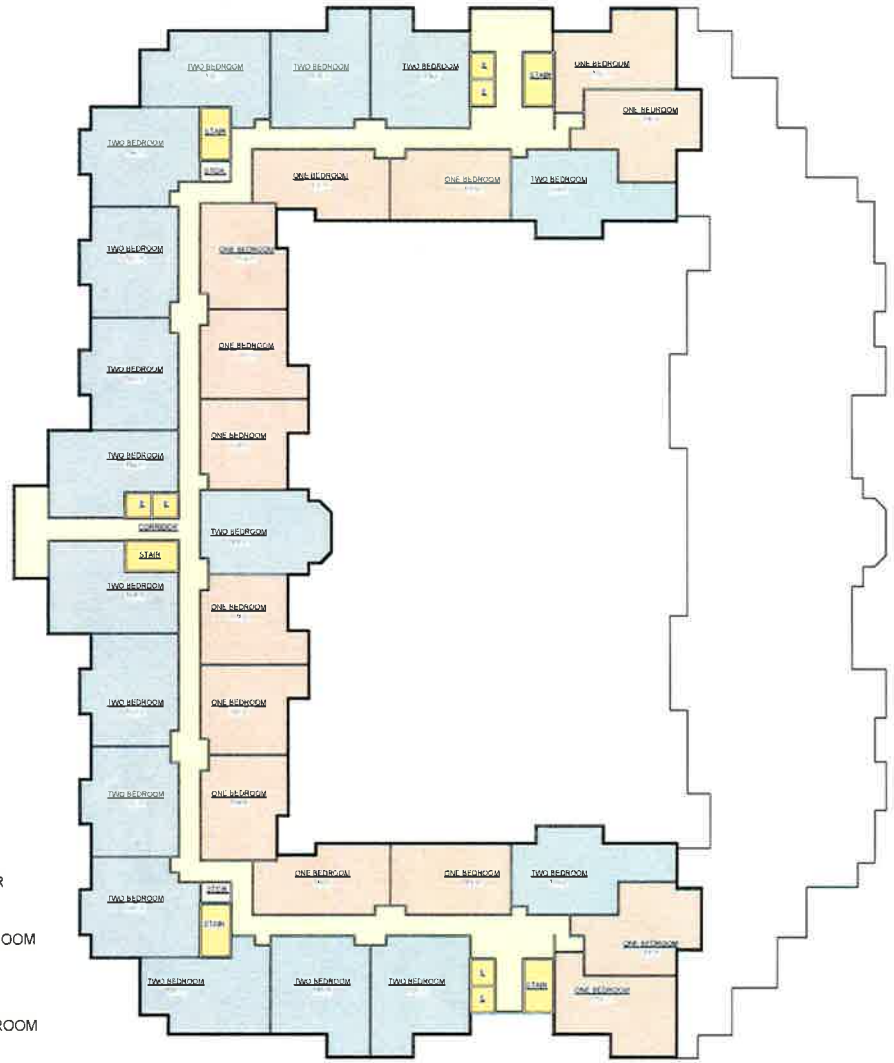
UNITS - TWO BEDROOM	
Level	Name
2ND FLOOR	TWO BEDROOM
2ND FLOOR 13	
3RD FLOOR	TWO BEDROOM
3RD FLOOR 28	
4TH FLOOR	TWO BEDROOM
4TH FLOOR 18	
5TH FLOOR	TWO BEDROOM
5TH FLOOR 17	
6TH FLOOR	TWO BEDROOM
6TH FLOOR 11	
Grand total 87	

Area Schedule (Gross Building)	
Level	Area
1ST FLOOR	210 SF
1ST FLOOR	180 SF
1ST FLOOR	180 SF
1ST FLOOR	210 SF
1ST FLOOR	17 510 SF
	18 318 SF
2ND FLOOR	841 SF
2ND FLOOR	28 639 SF
	29 480 SF
3RD FLOOR	66 065 SF
	66 065 SF
4TH FLOOR	45 992 SF
	45 992 SF
5TH FLOOR	38 065 SF
	38 065 SF
6TH FLOOR	24 729 SF
	24 729 SF
	222 668 SF

THIRD FLOOR PLAN

Tecton Architects

SENIOR LUXURY HOUSING - RYE, NY



CORRIDOR
E
ONE BEDROOM
STAIR
STOR.
TWO BEDROOM

4TH FLOOR
1" = 20'-0"

ROOM AREAS	
Name	Area
ONE BEDROOM	4 132 SF
TWO BEDROOM	16 310 SF
2ND FLOOR 17	20 442 SF
ONE BEDROOM	14 157 SF
TWO BEDROOM	34 703 SF
3RD FLOOR 42	48 860 SF
ONE BEDROOM	14 626 SF
TWO BEDROOM	21 156 SF
4TH FLOOR 32	35 782 SF
ONE BEDROOM	8 120 SF
TWO BEDROOM	21 142 SF
5TH FLOOR 25	29 262 SF
ONE BEDROOM	6 102 SF
TWO BEDROOM	14 172 SF
6TH FLOOR 17	20 274 SF
Grand total: 130	155 073 SF

UNITS - ONE BEDROOM	
Level	Name
2ND FLOOR	ONE BEDROOM
2ND FLOOR 4	
3RD FLOOR	ONE BEDROOM
3RD FLOOR 14	
4TH FLOOR	ONE BEDROOM
4TH FLOOR 14	
5TH FLOOR	ONE BEDROOM
5TH FLOOR 8	
6TH FLOOR	ONE BEDROOM
6TH FLOOR 6	
Grand total: 46	

UNITS - TWO BEDROOM	
Level	Name
2ND FLOOR	TWO BEDROOM
2ND FLOOR 13	
3RD FLOOR	TWO BEDROOM
3RD FLOOR 28	
4TH FLOOR	TWO BEDROOM
4TH FLOOR 18	
5TH FLOOR	TWO BEDROOM
5TH FLOOR 17	
6TH FLOOR	TWO BEDROOM
6TH FLOOR 11	
Grand total: 87	

Area Schedule (Gross Building)	
Level	Area
1ST FLOOR	212 SF
1ST FLOOR	180 SF
1ST FLOOR	150 SF
1ST FLOOR	210 SF
1ST FLOOR	17 578 SF
	18 318 SF
2ND FLOOR	841 SF
2ND FLOOR	28 639 SF
	29 480 SF
3RD FLOOR	66 065 SF
	66 065 SF
4TH FLOOR	45 802 SF
	45 802 SF
5TH FLOOR	38 063 SF
	38 063 SF
6TH FLOOR	24 729 SF
	24 729 SF
	222 559 SF

FOURTH FLOOR PLAN

Tecton Architects

SENIOR LUXURY HOUSING - RYE, NY

6TH FLOOR

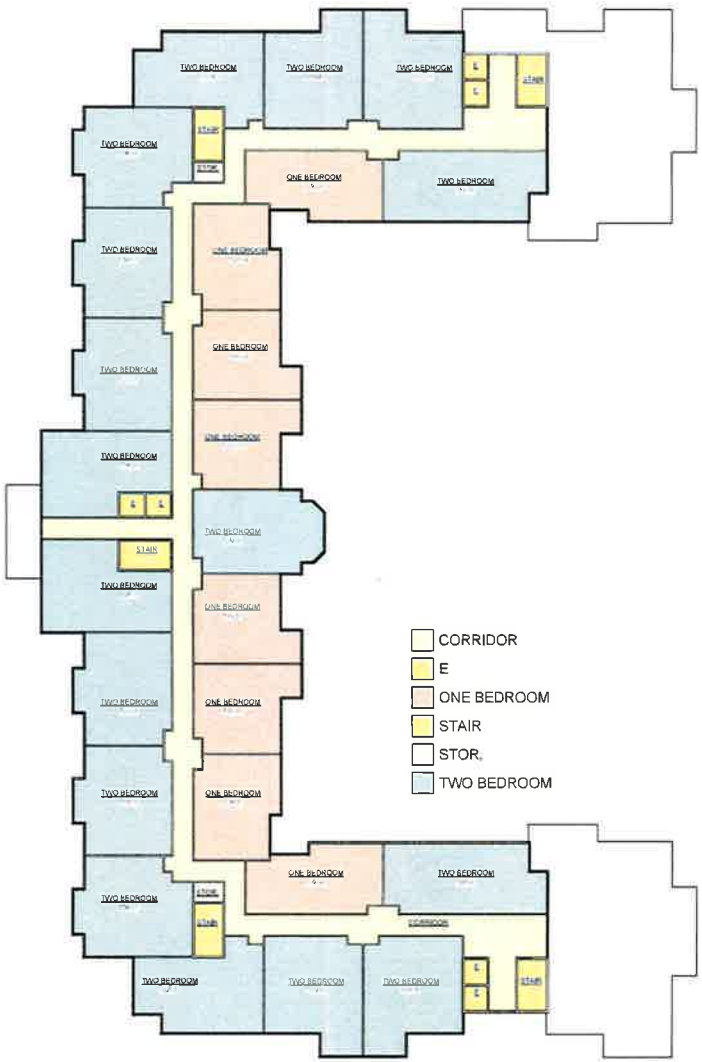
1" = 20'-0"

ROOM AREAS	
Name	Area
ONE BEDROOM	4 122 SF
TWO BEDROOM	16 310 SF
2ND FLOOR 17	20 440 SF
ONE BEDROOM	14 557 SF
TWO BEDROOM	34 702 SF
3RD FLOOR 42	49 260 SF
ONE BEDROOM	14 828 SF
TWO BEDROOM	21 134 SF
4TH FLOOR 32	35 962 SF
ONE BEDROOM	8 193 SF
TWO BEDROOM	21 162 SF
5TH FLOOR 25	29 355 SF
ONE BEDROOM	6 102 SF
TWO BEDROOM	14 152 SF
6TH FLOOR 17	20 254 SF
Grand total 132	155 371 SF

UNITS - ONE BEDROOM	
Level	Name
2ND FLOOR	ONE BEDROOM
2ND FLOOR 4	
3RD FLOOR	ONE BEDROOM
3RD FLOOR 14	
4TH FLOOR	ONE BEDROOM
4TH FLOOR 14	
5TH FLOOR	ONE BEDROOM
5TH FLOOR 8	
6TH FLOOR	ONE BEDROOM
6TH FLOOR 6	
Grand total 46	

UNITS - TWO BEDROOM	
Level	Name
2ND FLOOR	TWO BEDROOM
2ND FLOOR 13	
3RD FLOOR	TWO BEDROOM
3RD FLOOR 28	
4TH FLOOR	TWO BEDROOM
4TH FLOOR 18	
5TH FLOOR	TWO BEDROOM
5TH FLOOR 17	
6TH FLOOR	TWO BEDROOM
6TH FLOOR 11	
Grand total 87	

Area Schedule (Gross Building)	
Level	Area
1ST FLOOR	712 SF
1ST FLOOR	760 SF
1ST FLOOR	760 SF
1ST FLOOR	219 SF
1ST FLOOR	17 519 SF
	19 318 SF
2ND FLOOR	541 SF
2ND FLOOR	28 939 SF
	29 480 SF
3RD FLOOR	66 065 SF
	66 065 SF
4TH FLOOR	45 902 SF
	45 902 SF
5TH FLOOR	38 065 SF
	38 065 SF
6TH FLOOR	24 720 SF
	24 720 SF
	222 559 SF



5TH FLOOR

1" = 20'-0"

FIFTH & SIXTH FLOOR PLANS

Tecton Architects

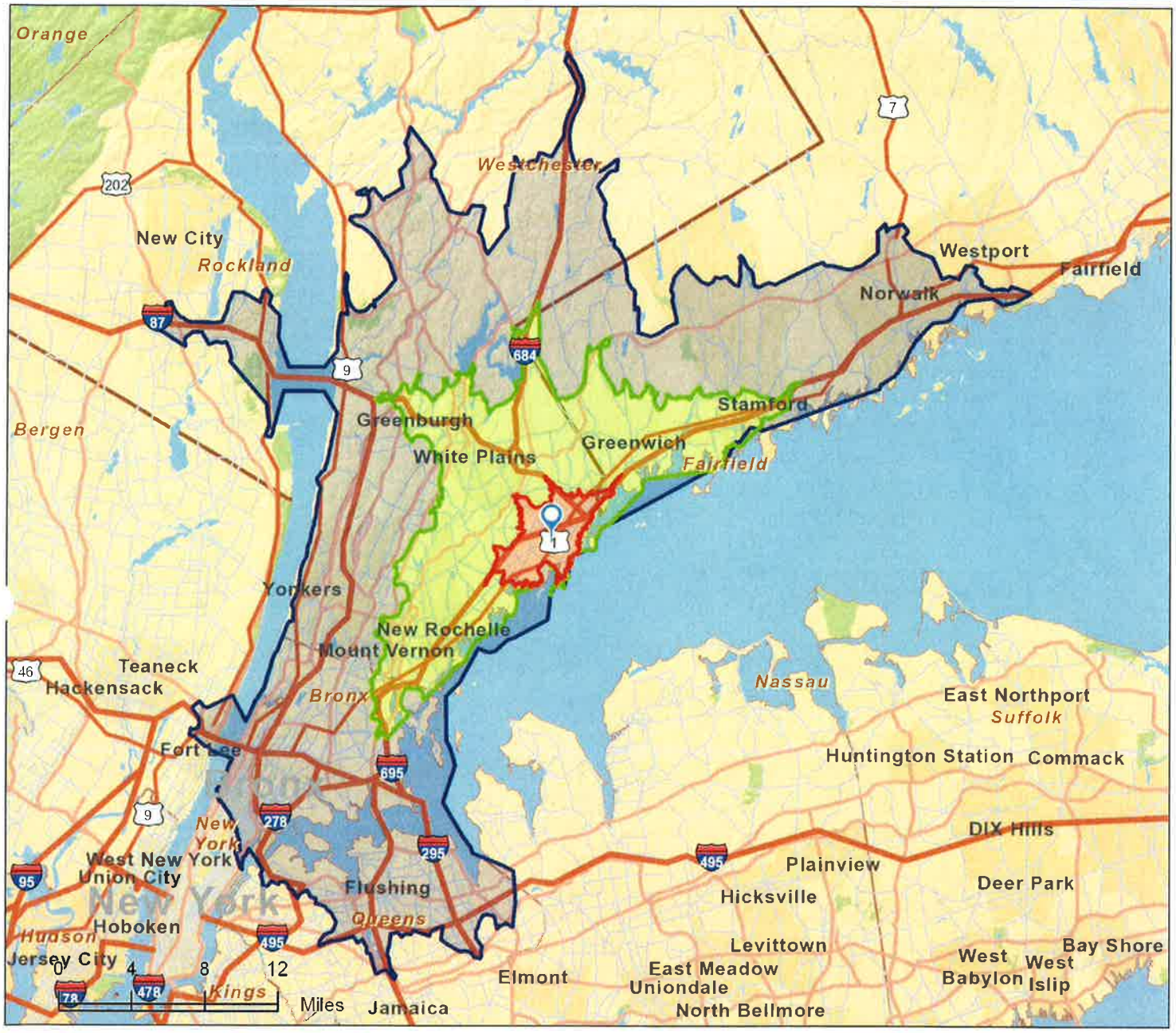
SENIOR LUXURY HOUSING - RYE, NY

APPENDIX

Site Map

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5, 13, 23 Minutes

Prepared by Robert Goman



April 29, 2014

Rye Rental Comparables
Prepared for Allied Weissman Real Estate LLC

Prepared by Gomon+York
Nov 2014

Business	Address	Units	Type	Bedrooms	Baths	Square Footage	Cost (Rental per month)	Cost per Square Foot (Rental per Month)	Unit Amenities	Community Amenities	Established	Walk Score	Website
The [illegible]	[illegible]	[illegible]	Apartment Rent	1 2	1 2	[illegible] [illegible]	$2,530.00 $[illegible]	$2.97 $2.8[illegible]	Washer/Dryer Central Air On-Site Storage Master Bedroom/Bath [illegible] Full Kitchens Pet Friendly Parking	Business Center On-Site Boat Slip Riverside View Attended Lobby Concierge Fitness Center Clubroom [illegible] Downtown Location [illegible]	[illegible]	[illegible]	[illegible]
Glenview House	25 [illegible] Rd Stamford CT	[illegible]	Apartment Rent	1 [illegible]	1 [illegible]	[illegible] [illegible]	$2,288.00 $2,624.00	[illegible] [illegible]	Washer/Dryer Master Bedroom/Bath 2BR [illegible] Central Air Security System Energy Star Appliances Patio/Balcony Handicap Accessible Garage Parking	Fitness Center Pool Nearby Shopping District Clubroom Picnic/BBQ Area Business Center Public Wifi On-Site Maintenance Walgreen's Pharmacy Concierge On-Site Maintenance Train Shuttle	2008	[illegible]	[illegible]
The Highlands At Rye	233 Purchase St Rye NY		Apartment Rent	1	1	[illegible]	$2,[illegible]	[illegible]	[illegible] Fitness Center	Downtown Access Train Station near by Restaurants Shopping		[illegible]	[illegible]
Trump Tower	[illegible] Place White Plains NY	[illegible]	Condo Buy/Rent	1 2 3	1 2	[illegible]	[illegible]		In and out door pool Jacuzzi Children's Playroom Stainless Steel Appliance Doorman Club Room 24 Hour Parking Valet Tennis Basketball Courts Grills Putting Green Outdoor Play Area [illegible]	Downtown Access [illegible] Easy Transportation Metro North to NY City Shopping Restaurants	2005	[illegible]	[illegible]
The [illegible]	1 Renaissance Square White Plains NY		[illegible] Rent	1 2 3	1 2	[illegible] 1489 [illegible] [illegible]	[illegible] [illegible] [illegible] 10,000.00		Hotel Gym Spa Swimming Pool Valet Parking Private Media Room Concierge Furniture/Finishes Housekeeping/Porter Stainless Steel Appliance	Downtown Access Shopping Center Restaurants 4 On Site Restaurants Easy Transportation Metro North to NY City		[illegible]	[illegible]
[illegible] Main	[illegible] Main St Yonkers, NY		Condo Buy/Rent	[illegible] 1 2	1 1.5 [illegible]	 [illegible] [illegible]	[illegible] [illegible] [illegible]		Open Kitchens Stone Counter Tops Stainless Steel Appliance Bamboo Floors Floor to Ceiling Windows Wrap Around Terraces Walk in Closets 24 HR Doorman Concierge Rooftop Gym Media Center Lounge	Shuttle to Metro North Near Major Highway Water Taxi/Bus Shopping Restaurants		[illegible]	[illegible]
Hudson Park [illegible]	1 Alexander St Yonkers NY		[illegible] Buy/Rent	1 2	1 2	[illegible] [illegible]	[illegible] [illegible]		Upgraded Kitchens Parking Garage [illegible] Fitness Centers Walk in Closets Washer and Dryer Storage Media Center	Downtown Access Local Shopping Restaurants City Services Remodeled Parks NY View		[illegible]	[illegible]
[illegible] Gardens	[illegible] Yonkers NY			1 2	1 [illegible]	[illegible] [illegible]	[illegible] 2,261.[illegible]		[illegible] Stainless Steel Appliance Upgraded Bathroom Olympic Size Pool Heat and Hot water included Air Conditioning	Bus to NYC Shopping Playgrounds Highway close by	[illegible]	[illegible]	
Business	**Address**	**Units**	**Type**	**Bedrooms**	**Baths**	**Square Footage**	**Cost (Rental per month)**	**Cost per Square Foot (Rental per Month)**	**Unit Amenities**	**Community Amenities**	**Established**	**Walk Score**	**Website**
[illegible]	[illegible]	[illegible]	Rent/Buy	Studio 1 2	1 [illegible] 2	[illegible] [illegible] [illegible]			Swimming Pool Fitness Center Cabana Seating Seven BBQ Stations [illegible]	[illegible]	[illegible]	[illegible]	
The Lofts at Yale and Towne	[illegible] CT [illegible]	[illegible]	Rent	Studio 1 2	1 1 2	518 765 1037	[illegible] [illegible] [illegible]		Swimming Pool Central Air BBQ Stations High Ceilings Pet Friendly Stainless Steel Appliance Concierge	Shuttle Service Metro North to NY City Amtrak Station Nearby Shopping	[illegible]	[illegible]	[illegible]
[illegible]	101 Washington Blvd Stamford CT 06902	[illegible]	Rent	1 2 3	1 2 [illegible]	606 1022 1338	[illegible] [illegible] [illegible]		Gated Entry Pool Fitness Center Dog Run Concierge Complimentary Wi-Fi [illegible]	Near Shopping Near Highway Shopping Restaurants		[illegible]	[illegible]
Greenwich Place	[illegible] Greenwich CT [illegible]		Rent	1 2	1 [illegible]	[illegible] [illegible]	[illegible] [illegible]		Playground Central Air Private Balcony Pool [illegible]	Near Highway Shopping Restaurants		[illegible]	[illegible]
[illegible]	[illegible] Greenwich CT [illegible]		Rent	1 2	1 [illegible]	757 1570	2,[illegible] 4,253		Walk in Closets Stainless Steel Appliance Stone Floors Island Kitchen Security System Fitness Center Washer and Dryer Dishwasher Microwave	Near Highway Near Shopping Restaurants	[illegible]	[illegible]	[illegible]
Business	**Address**	**Units**	**Type**	**Bedrooms**	**Baths**	**Square Footage**	**Cost (Rental per month)**	**Cost per Square Foot (Rental per Month)**	**Unit Amenities**	**Community Amenities**	**Established**	**Walk Score**	**Website**
Tarryland Apartments	[illegible] Tarrytown NY [illegible]	[illegible]	Rent	1 2	1 2	[illegible] [illegible]	2,[illegible] 2,[illegible]		Playground [illegible]			[illegible]	[illegible]
The [illegible] Condominium	[illegible] Broadway Tarrytown NY [illegible]		Rent	[illegible]	[illegible]	[illegible]	2,[illegible]		[illegible]	Near Shopping		[illegible]	

				3	2	2700	$ 400		BBQ Ready Vaulted Ceilings Hardwood Floors Cable Ready	Near Highway Shopping Restaurants Rail Line Nearby			

Rye Sale Comparable
Prepared for Alfred Weissman Real Estate, LLC

Prepared by Goman+York
Nov 2014

Rye Sale Comparable

Address	Type	Bedrooms	Baths	SqFt	Built in	Price Listed	Date Listed	Sold Price	Date Sold
720 Milton Rd	Apartment	1	2	1,100	1963	425,000	14-Jul		
66 Milton Rd	Apartment	2	1	1,060	1929	409,000	13-May		
66 Milton Rd	Apartment	1	1	1,000	1927	405,000	14-Sep		
20 Chestnut St	Condo	2	1	780	1954	389,000	14-May		
4 Walnut St	Condo	2	1	850	1955	349,000	14-Oct		
24 Peck Ave	Condo	2	1	1,025	1948	335,000	14-Sep		
6 Davis Ave	Apartment	2	1	1,150	1926	329,000	14-Jun		
66 Milton Rd	Apartment	1	1	750	1927	297,700	14-Oct		
79 Peck Ave.	Apartment	2	1	1,000	1948	289,000	14-Jul		
222 Peck Ave	Apartment	2	1	1,010	1948	274,999	14-Oct		
33 Peck Ave.	Apartment	1	1	800	1948	149,000	14-Jul		
30 Pondview Rd	Condo	2	2	1,000	1940	439,000			
102 Peck Ave	Apartment	2	2	1,288	1989			1,250,000	13-Jul
30 Pondview Rd	Condo	2	1	900	1940			349,500	12-Nov
2 Walnut St	Condo	2	1	875	1955			374,900	14-Jan
1 Walnut St	Condo	2	1	850	1954			299,000	14-Jan
216 Purchase St	Apartment	2	2	1,100	1965			530,000	14-Mar
6 Davis Ave.	Apartment	2	1	1,400	1926			330,000	14-Oct
66 Milton Rd	Apartment	1	1	750	1929			310,000	13-Jun
110 Theodore	Apartment	2	2.5	1,130	1986			470,000	13-Jul
3 Peck Ave	Apartment	2	1	1,000	1948			265,000	13-Apr
216 Purchase St	Apartment	3	2	1,400	1969			635,000	14-Feb
216 Purchase St	Apartment	3	2	1,400	1969			654,321	13-Jun

Sale Comparable Around Rye

Business	Address	City	State	Units	Type	Bedrooms	Baths	Square Footage	Price
The Ritz Calrton	1 Renaissance Sq	White Plains	NY		Condo	2	3	1445	859,000
The Ritz Calrton	1 Renaissance Sq	White Plains	NY		Condo	2	2.5	1445	899,900
The Seasons	124 Spring Dr	East Meadow	NY		Condo	2	3	974	559,900
The Wyndham at Garden City	111 Cherry Valley Ave	Garden City	NY		Condo	2	3	1,440	1,250,000
The Wyndham at Garden City	111 Cherry Valley Ave	Garden City	NY		Condo	2	3	1,397	964,000
	4312 214th PL	Bayside	NY		Condo	2	2	928	670,000
	4312 214th PL	Bayside	NY			2	2	871	668,000
The Seasons	124 Spring Dr.	East Meadow	NY		Condo	2	3	974	559,900
The Cabium	10 Byron Place	Larchmont	NY	149	Condo	1	1	811	567,700
	10 Byron Place	Larchmont	NY	149	Condo	1	2	1,280	730,000
	10 Byron Place	Larchmont	NY	149	Condo	2	2	1,442	829,150
	500 Central Park Ave.	Scarsdale	NY		Condo	2	2	1,350	539,000
River House	72 Pondfield Rd.	Bronxville	NY		Condo	2	2	1,225	699,000
	701 Ridge Hill Blvd	Yonkers	NY		Condo	2	2	1,232	512,000
	55 1st St	Pelham	NY		Condo	1	1.5	1,264	529,000
The Addison		Port Washingtc	NY		Apartm	2	3	1,630	625,000
					Apartm	1	2	1,064	460,000
					Apartm	2	2.5	1,420	620,000
Meadowbrook Pointe		Westbury	NY		Apartm	2	2	1,461	695,000
					Apartm	2	2	1,353	650,000
					Apartm	1	1.5	970	505,000

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
TOTALS				
Total Population	15,109		769	
Total Households	5,528		242	
Total Housing Units	5,840		254	
OWNER-OCCUPIED HOUSING UNITS BY VALUE				
Total	3,562	100.0%	181	
Less than $10,000	4	0.1%	25	
$10,000 to $14,999	1	0.0%	20	
$15,000 to $19,999	0	0.0%	0	
$20,000 to $24,999	0	0.0%	0	
$25,000 to $29,999	9	0.3%	14	
$30,000 to $34,999	1	0.0%	14	
$35,000 to $39,999	5	0.1%	21	
$40,000 to $49,999	0	0.0%	0	
$50,000 to $59,999	0	0.0%	0	
$60,000 to $69,999	4	0.1%	15	
$70,000 to $79,999	9	0.3%	61	
$80,000 to $89,999	0	0.0%	0	
$90,000 to $99,999	0	0.0%	0	
$100,000 to $124,999	27	0.8%	27	
$125,000 to $149,999	34	1.0%	25	
$150,000 to $174,999	32	0.9%	37	
$175,000 to $199,999	85	2.4%	74	
$200,000 to $249,999	142	4.0%	51	
$250,000 to $299,999	187	5.2%	61	
$300,000 to $399,999	200	5.6%	85	
$400,000 to $499,999	179	5.0%	59	
$500,000 to $749,999	512	14.4%	92	
$750,000 to $999,999	636	17.9%	80	
$1,000,000 or more	1,495	42.0%	117	
Median Home Value	$887,579		N/A	
Average Home Value	N/A		N/A	
OWNER-OCCUPIED HOUSING UNITS BY MORTGAGE STATUS				
Total	3,562	100.0%	181	
Housing units with a mortgage/contract to purchase/similar debt	2,419	67.9%	167	
Second mortgage only	18	0.5%	10	
Home equity loan only	662	18.6%	89	
Both second mortgage and home equity loan	29	0.8%	32	
No second mortgage and no home equity loan	1,710	48.0%	163	
Housing units without a mortgage	1,144	32.1%	130	
AVERAGE VALUE BY MORTGAGE STATUS				
Housing units with a mortgage	N/A		N/A	
Housing units without a mortgage	N/A		N/A	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
RENTER-OCCUPIED HOUSING UNITS BY CONTRACT RENT				
Total	1,965	100.0%	200	
With cash rent	1,837	93.5%	200	
Less than $100	0	0.0%	0	
$100 to $149	73	3.7%	59	
$150 to $199	51	2.6%	29	
$200 to $249	12	0.6%	44	
$250 to $299	68	3.5%	52	
$300 to $349	20	1.0%	20	
$350 to $399	19	1.0%	14	
$400 to $449	5	0.3%	34	
$450 to $499	0	0.0%	0	
$500 to $549	9	0.5%	14	
$550 to $599	4	0.2%	13	
$600 to $649	24	1.2%	68	
$650 to $699	11	0.6%	43	
$700 to $749	32	1.6%	10	
$750 to $799	52	2.6%	50	
$800 to $899	131	6.7%	57	
$900 to $999	72	3.7%	27	
$1,000 to $1,249	145	7.4%	85	
$1,250 to $1,499	395	20.1%	136	
$1,500 to $1,999	343	17.5%	82	
$2,000 or more	372	18.9%	102	
No cash rent	128	6.5%	41	
Median Contract Rent	N/A		N/A	
Average Contract Rent	N/A		N/A	
RENTER-OCCUPIED HOUSING UNITS BY INCLUSION OF UTILITIES IN RENT				
Total	1,965	100.0%	200	
Pay extra for one or more utilities	1,655	84.2%	196	
No extra payment for any utilities	310	15.8%	63	
HOUSING UNITS BY UNITS IN STRUCTURE				
Total	5,840	100.0%	254	
1, detached	3,004	51.4%	148	
1, attached	435	7.4%	104	
2	606	10.4%	149	
3 or 4	338	5.8%	76	
5 to 9	128	2.2%	32	
10 to 19	396	6.8%	111	
20 to 49	169	2.9%	75	
50 or more	753	12.9%	144	
Mobile home	1	0.0%	14	
Boat, RV, van, etc.	11	0.2%	16	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

GOMAN YORK

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
HOUSING UNITS BY YEAR STRUCTURE BUILT				
Total	5,840	100.0%	254	
Built 2005 or later	45	0.8%	22	
Built 2000 to 2004	152	2.6%	60	
Built 1990 to 1999	210	3.6%	41	
Built 1980 to 1989	361	6.2%	77	
Built 1970 to 1979	467	8.0%	112	
Built 1960 to 1969	810	13.9%	122	
Built 1950 to 1959	883	15.1%	122	
Built 1940 to 1949	843	14.4%	131	
Built 1939 or earlier	2,068	35.4%	224	
Median Year Structure Built	1950		N/A	
OCCUPIED HOUSING UNITS BY YEAR HOUSEHOLDER MOVED INTO UNIT				
Total	5,526	100.0%	242	
Owner occupied				
Moved in 2005 or later	509	9.2%	116	
Moved in 2000 to 2004	796	14.4%	115	
Moved in 1990 to 1999	940	17.0%	110	
Moved in 1980 to 1989	534	9.7%	85	
Moved in 1970 to 1979	397	7.2%	75	
Moved in 1969 or earlier	386	7.0%	67	
Renter occupied				
Moved in 2005 or later	731	13.2%	147	
Moved in 2000 to 2004	702	12.7%	147	
Moved in 1990 to 1999	286	5.2%	69	
Moved in 1980 to 1989	142	2.6%	84	
Moved in 1970 to 1979	63	1.1%	27	
Moved in 1969 or earlier	42	0.8%	37	
Median Year Householder Moved Into Unit	2000		N/A	
OCCUPIED HOUSING UNITS BY HOUSE HEATING FUEL				
Total	5,528	100.0%	242	
Utility gas	3,317	60.0%	229	
Bottled, tank, or LP gas	126	2.3%	40	
Electricity	257	4.6%	55	
Fuel oil, kerosene, etc.	1,796	32.5%	177	
Coal or coke	0	0.0%	0	
Wood	1	0.0%	14	
Solar energy	0	0.0%	0	
Other fuel	0	0.0%	0	
No fuel used	32	0.6%	35	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

GOMAN YORK

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
OCCUPIED HOUSING UNITS BY VEHICLES AVAILABLE				
Total	5,528	100.0%	242	
Owner occupied				
No vehicle available	152	2.7%	66	
1 vehicle available	843	15.2%	96	
2 vehicles available	1,807	32.7%	162	
3 vehicles available	553	10.0%	86	
4 vehicles available	165	3.0%	37	
5 or more vehicles available	43	0.8%	35	
Renter occupied				
No vehicle available	316	5.7%	72	
1 vehicle available	1,102	19.9%	178	
2 vehicles available	491	8.9%	126	
3 vehicles available	42	0.8%	24	
4 vehicles available	3	0.1%	15	
5 or more vehicles available	11	0.2%	18	
Average Number of Vehicles Available	N/A		N/A	

Data Note: N/A means not available.

2005-2009 ACS Estimate: The American Community Survey (ACS) replaces census sample data. Esri is releasing the 2005-2009 ACS estimates, five-year period data collected monthly from January 1, 2005 through December 31, 2009. Although the ACS includes many of the subjects previously covered by the decennial census sample, there are significant differences between the two surveys including fundamental differences in survey design and residency rules.

Margin of error (MOE): The MOE is a measure of the variability of the estimate due to sampling error. MOEs enable the data user to measure the range of uncertainty for each estimate with 90 percent confidence. The range of uncertainty is called the confidence interval, and it is calculated by taking the estimate +/- the MOE. For example, if the ACS reports an estimate of 100 with an MOE of +/- 20, then you can be 90 percent certain the value for the whole population falls between 80 and 120.

Reliability: These symbols represent threshold values that Esri has established from the Coefficients of Variation (CV) to designate the usability of the estimates. The CV measures the amount of sampling error relative to the size of the estimate, expressed as a percentage.

- High Reliability: Small CVs (less than or equal to 12 percent) are flagged green to indicate that the sampling error is small relative to the estimate and the estimate is reasonably reliable.
- Medium Reliability: Estimates with CVs between 12 and 40 are flagged yellow—use with caution.
- Low Reliability: Large CVs (over 40 percent) are flagged red to indicate that the sampling error is large relative to the estimate. The estimate is considered very unreliable.

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
TOTALS				
Total Population	193,147		4,135	
Total Households	72,174		1,145	
Total Housing Units	76,616		1,170	
OWNER-OCCUPIED HOUSING UNITS BY VALUE				
Total	45,394	100.0%	942	
Less than $10,000	96	0.2%	46	
$10,000 to $14,999	7	0.0%	15	
$15,000 to $19,999	30	0.1%	28	
$20,000 to $24,999	46	0.1%	53	
$25,000 to $29,999	24	0.1%	26	
$30,000 to $34,999	19	0.0%	12	
$35,000 to $39,999	45	0.1%	30	
$40,000 to $49,999	41	0.1%	19	
$50,000 to $59,999	155	0.3%	81	
$60,000 to $69,999	96	0.2%	65	
$70,000 to $79,999	144	0.3%	97	
$80,000 to $89,999	155	0.3%	55	
$90,000 to $99,999	110	0.2%	60	
$100,000 to $124,999	580	1.3%	150	
$125,000 to $149,999	658	1.4%	196	
$150,000 to $174,999	831	1.8%	179	
$175,000 to $199,999	700	1.5%	169	
$200,000 to $249,999	2,033	4.5%	277	
$250,000 to $299,999	1,316	2.9%	235	
$300,000 to $399,999	3,508	7.7%	380	
$400,000 to $499,999	4,124	9.1%	396	
$500,000 to $749,999	10,699	23.6%	579	
$750,000 to $999,999	7,839	17.3%	471	
$1,000,000 or more	12,138	26.7%	469	
Median Home Value	N/A		N/A	
Average Home Value	N/A		N/A	
OWNER-OCCUPIED HOUSING UNITS BY MORTGAGE STATUS				
Total	45,394	100.0%	942	
Housing units with a mortgage/contract to purchase/similar debt	30,227	66.6%	890	
Second mortgage only	729	1.6%	157	
Home equity loan only	7,853	17.3%	456	
Both second mortgage and home equity loan	269	0.6%	113	
No second mortgage and no home equity loan	21,375	47.1%	824	
Housing units without a mortgage	15,167	33.4%	619	
AVERAGE VALUE BY MORTGAGE STATUS				
Housing units with a mortgage	N/A		N/A	
Housing units without a mortgage	N/A		N/A	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
RENTER-OCCUPIED HOUSING UNITS BY CONTRACT RENT				
Total	26,781	100.0%	943	
With cash rent	25,677	95.9%	928	
Less than $100	146	0.5%	72	
$100 to $149	253	0.9%	110	
$150 to $199	397	1.5%	113	
$200 to $249	423	1.6%	142	
$250 to $299	237	0.9%	91	
$300 to $349	269	1.0%	97	
$350 to $399	290	1.1%	127	
$400 to $449	409	1.5%	130	
$450 to $499	361	1.3%	147	
$500 to $549	349	1.3%	136	
$550 to $599	386	1.4%	122	
$600 to $649	736	2.7%	194	
$650 to $699	660	2.5%	173	
$700 to $749	524	2.0%	128	
$750 to $799	484	1.8%	143	
$800 to $899	1,716	6.4%	288	
$900 to $999	1,382	5.2%	255	
$1,000 to $1,249	3,755	14.0%	429	
$1,250 to $1,499	4,268	15.9%	474	
$1,500 to $1,999	4,671	17.4%	458	
$2,000 or more	3,960	14.8%	433	
No cash rent	1,103	4.1%	241	
Median Contract Rent	N/A		N/A	
Average Contract Rent	N/A		N/A	
RENTER-OCCUPIED HOUSING UNITS BY INCLUSION OF UTILITIES IN RENT				
Total	26,781	100.0%	943	
Pay extra for one or more utilities	22,679	84.7%	891	
No extra payment for any utilities	4,102	15.3%	443	
HOUSING UNITS BY UNITS IN STRUCTURE				
Total	76,616	100.0%	1,170	
1, detached	33,400	43.6%	773	
1, attached	4,591	6.0%	423	
2	8,787	11.5%	617	
3 or 4	6,344	8.3%	549	
5 to 9	3,585	4.7%	437	
10 to 19	2,859	3.7%	334	
20 to 49	5,837	7.6%	441	
50 or more	11,115	14.5%	552	
Mobile home	87	0.1%	65	
Boat, RV, van, etc.	11	0.0%	16	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

GOMAN+YORK
NOVEMBER 2014

GOMAN YORK

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
HOUSING UNITS BY YEAR STRUCTURE BUILT				
Total	76,616	100.0%	1,170	
Built 2005 or later	1,174	1.5%	209	
Built 2000 to 2004	2,466	3.2%	303	
Built 1990 to 1999	4,010	5.2%	358	
Built 1980 to 1989	6,134	8.0%	439	
Built 1970 to 1979	6,588	8.6%	504	
Built 1960 to 1969	10,656	13.9%	623	
Built 1950 to 1959	14,273	18.6%	684	
Built 1940 to 1949	7,241	9.5%	536	
Built 1939 or earlier	24,075	31.4%	905	
Median Year Structure Built	1955		N/A	
OCCUPIED HOUSING UNITS BY YEAR HOUSEHOLDER MOVED INTO UNIT				
Total	72,174	100.0%	1,145	
Owner occupied				
Moved in 2005 or later	6,062	8.4%	490	
Moved in 2000 to 2004	10,299	14.3%	576	
Moved in 1990 to 1999	11,959	16.6%	600	
Moved in 1980 to 1989	6,512	9.0%	427	
Moved in 1970 to 1979	4,717	6.5%	362	
Moved in 1969 or earlier	5,844	8.1%	417	
Renter occupied				
Moved in 2005 or later	10,783	14.9%	691	
Moved in 2000 to 2004	8,606	11.9%	656	
Moved in 1990 to 1999	4,227	5.9%	428	
Moved in 1980 to 1989	1,492	2.1%	253	
Moved in 1970 to 1979	938	1.3%	178	
Moved in 1969 or earlier	734	1.0%	176	
Median Year Householder Moved Into Unit	N/A		N/A	
OCCUPIED HOUSING UNITS BY HOUSE HEATING FUEL				
Total	72,174	100.0%	1,145	
Utility gas	40,585	56.2%	1,053	
Bottled, tank, or LP gas	1,005	1.4%	170	
Electricity	5,207	7.2%	402	
Fuel oil, kerosene, etc.	24,758	34.3%	904	
Coal or coke	12	0.0%	36	
Wood	58	0.1%	40	
Solar energy	17	0.0%	20	
Other fuel	352	0.5%	115	
No fuel used	180	0.2%	70	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN YORK

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
HOUSING UNITS BY YEAR STRUCTURE BUILT				
Total	76,616	100.0%	1,170	
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Built 2000 to 2004	2,466	3.2%	303	
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Total	72,174	100.0%	1,145	
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Moved in 2005 or later	6,062	8.4%	490	
Moved in 2000 to 2004	10,299	14.3%	576	
Moved in 1990 to 1999	11,959	16.6%	600	
Moved in 1980 to 1989	6,512	9.0%	427	
Moved in 1970 to 1979	4,717	6.5%	362	
Moved in 1969 or earlier	5,844	8.1%	417	
Renter occupied				
Moved in 2005 or later	10,783	14.9%	691	
Moved in 2000 to 2004	8,606	11.9%	656	
Moved in 1990 to 1999	4,227	5.9%	428	
Moved in 1980 to 1989	1,492	2.1%	253	
Moved in 1970 to 1979	938	1.3%	178	
Moved in 1969 or earlier	734	1.0%	176	
Median Year Householder Moved Into Unit	N/A		N/A	
OCCUPIED HOUSING UNITS BY HOUSE HEATING FUEL				
Total	72,174	100.0%	1,145	
Utility gas	40,585	56.2%	1,053	
Bottled, tank, or LP gas	1,005	1.4%	170	
Electricity	5,207	7.2%	402	
Fuel oil, kerosene, etc	24,758	34.3%	904	
Coal or coke	12	0.0%	36	
Wood	58	0.1%	40	
Solar energy	17	0.0%	20	
Other fuel	352	0.5%	115	
No fuel used	180	0.2%	70	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
TOTALS				
Total Population	1,289,719		11,485	
Total Households	470,798		3,018	
Total Housing Units	501,069		3,003	
OWNER-OCCUPIED HOUSING UNITS BY VALUE				
Total	252,892	100.0%	2,424	
Less than $10,000	1,249	0.5%	213	
$10,000 to $14,999	1,555	0.6%	256	
$15,000 to $19,999	912	0.4%	192	
$20,000 to $24,999	560	0.2%	155	
$25,000 to $29,999	582	0.2%	163	
$30,000 to $34,999	463	0.2%	147	
$35,000 to $39,999	338	0.1%	97	
$40,000 to $49,999	739	0.3%	179	
$50,000 to $59,999	1,668	0.7%	329	
$60,000 to $69,999	1,275	0.5%	249	
$70,000 to $79,999	1,671	0.7%	310	
$80,000 to $89,999	1,949	0.8%	340	
$90,000 to $99,999	1,599	0.6%	255	
$100,000 to $124,999	4,651	1.8%	480	
$125,000 to $149,999	3,923	1.6%	434	
$150,000 to $174,999	5,758	2.3%	513	
$175,000 to $199,999	4,314	1.7%	458	
$200,000 to $249,999	11,131	4.4%	677	
$250,000 to $299,999	6,757	3.5%	631	
$300,000 to $399,999	30,997	12.3%	1,135	
$400,000 to $499,999	37,108	14.7%	1,208	
$500,000 to $749,999	66,979	26.5%	1,489	
$750,000 to $999,999	27,811	11.0%	952	
$1,000,000 or more	36,902	14.6%	908	
Median Home Value	N/A		N/A	
Average Home Value	N/A		N/A	
OWNER-OCCUPIED HOUSING UNITS BY MORTGAGE STATUS				
Total	252,892	100.0%	2,424	
Housing units with a mortgage/contract to purchase/similar debt	166,566	65.9%	2,231	
Second mortgage only	5,863	2.3%	487	
Home equity loan only	36,608	14.5%	1,121	
Both second mortgage and home equity loan	2,069	0.8%	326	
No second mortgage and no home equity loan	122,008	48.2%	2,059	
Housing units without a mortgage	86,324	34.1%	1,626	
AVERAGE VALUE BY MORTGAGE STATUS				
Housing units with a mortgage	N/A		N/A	
Housing units without a mortgage	N/A		N/A	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
RENTER-OCCUPIED HOUSING UNITS BY CONTRACT RENT				
Total	217,907	100.0%	2,632	
With cash rent	211,634	97.1%	2,611	
Less than $100	1,017	0.5%	237	
$100 to $149	2,034	0.9%	322	
$150 to $199	3,949	1.8%	421	
$200 to $249	4,305	2.0%	457	
$250 to $299	2,281	1.0%	323	
$300 to $349	2,808	1.3%	349	
$350 to $399	2,341	1.1%	335	
$400 to $449	3,486	1.6%	418	
$450 to $499	3,679	1.7%	435	
$500 to $549	5,194	2.4%	516	
$550 to $599	4,672	2.1%	478	
$600 to $649	6,886	3.2%	563	
$650 to $699	7,415	3.4%	611	
$700 to $749	8,407	3.9%	651	
$750 to $799	9,385	4.3%	686	
$800 to $899	21,218	9.7%	1,016	
$900 to $999	23,125	10.6%	1,108	
$1,000 to $1,249	38,445	17.6%	1,424	
$1,250 to $1,499	26,442	12.1%	1,197	
$1,500 to $1,999	22,702	10.4%	1,127	
$2,000 or more	11,842	5.4%	729	
No cash rent	6,272	2.9%	569	
Median Contract Rent	N/A		N/A	
Average Contract Rent	N/A		N/A	
RENTER-OCCUPIED HOUSING UNITS BY INCLUSION OF UTILITIES IN RENT				
Total	217,907	100.0%	2,632	
Pay extra for one or more utilities	174,076	79.9%	2,464	
No extra payment for any utilities	43,831	20.1%	1,281	
HOUSING UNITS BY UNITS IN STRUCTURE				
Total	501,069	100.0%	3,003	
1, detached	167,394	33.4%	1,958	
1, attached	31,375	6.3%	1,100	
2	58,525	11.7%	1,623	
3 or 4	48,130	9.6%	1,511	
5 to 9	25,122	5.0%	1,076	
10 to 19	20,426	4.1%	964	
20 to 49	48,758	9.7%	1,422	
50 or more	100,482	20.1%	1,650	
Mobile home	734	0.1%	219	
Boat, RV, van, etc.	125	0.0%	97	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
HOUSING UNITS BY YEAR STRUCTURE BUILT				
Total	501,069	100.0%	3,003	
Built 2005 or later	5,192	1.0%	482	
Built 2000 to 2004	12,782	2.6%	730	
Built 1990 to 1999	18,329	3.7%	861	
Built 1980 to 1989	27,716	5.5%	1,080	
Built 1970 to 1979	43,218	8.6%	1,365	
Built 1960 to 1969	73,598	14.7%	1,732	
Built 1950 to 1959	103,759	20.7%	2,005	
Built 1940 to 1949	59,934	12.0%	1,627	
Built 1939 or earlier	156,541	31.2%	2,373	
Median Year Structure Built	N/A		N/A	
OCCUPIED HOUSING UNITS BY YEAR HOUSEHOLDER MOVED INTO UNIT				
Total	470,798	100.0%	3,018	
Owner occupied				
Moved in 2005 or later	32,491	6.9%	1,182	
Moved in 2000 to 2004	56,552	12.0%	1,480	
Moved in 1990 to 1999	68,031	14.5%	1,583	
Moved in 1980 to 1989	36,964	7.9%	1,153	
Moved in 1970 to 1979	28,892	6.1%	1,015	
Moved in 1969 or earlier	29,962	6.4%	1,006	
Renter occupied				
Moved in 2005 or later	73,200	15.5%	1,904	
Moved in 2000 to 2004	65,455	13.9%	1,820	
Moved in 1990 to 1999	42,736	9.1%	1,426	
Moved in 1980 to 1989	15,960	3.4%	869	
Moved in 1970 to 1979	13,923	3.0%	760	
Moved in 1969 or earlier	6,633	1.4%	515	
Median Year Householder Moved Into Unit	N/A		N/A	
OCCUPIED HOUSING UNITS BY HOUSE HEATING FUEL				
Total	470,798	100.0%	3,018	
Utility gas	209,989	44.6%	2,594	
Bottled, tank, or LP gas	7,033	1.5%	536	
Electricity	45,576	9.7%	1,341	
Fuel oil, kerosene, etc.	202,529	43.0%	2,603	
Coal or coke	409	0.1%	149	
Wood	493	0.1%	131	
Solar energy	36	0.0%	33	
Other fuel	2,734	0.6%	308	
No fuel used	1,999	0.4%	302	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

ACS Housing Summary

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

	2005-2009 ACS Estimate	Percent	MOE(±)	Reliability
OCCUPIED HOUSING UNITS BY VEHICLES AVAILABLE				
Total	470,798	100.0%	3,018	
Owner occupied				
No vehicle available	22,621	4.8%	995	
1 vehicle available	85,284	18.1%	1,762	
2 vehicles available	99,472	21.1%	1,781	
3 vehicles available	33,304	7.1%	1,074	
4 vehicles available	9,081	1.9%	592	
5 or more vehicles available	3,130	0.7%	351	
Renter occupied				
No vehicle available	85,808	18.2%	1,834	
1 vehicle available	93,457	19.9%	2,075	
2 vehicles available	32,336	6.9%	1,291	
3 vehicles available	4,952	1.1%	521	
4 vehicles available	948	0.2%	232	
5 or more vehicles available	406	0.1%	123	
Average Number of Vehicles Available	N/A		N/A	

Data Note: N/A means not available.

2005-2009 ACS Estimate: The American Community Survey (ACS) replaces census sample data. Esri is releasing the 2005-2009 ACS estimates, five-year period data collected monthly from January 1, 2005 through December 31, 2009. Although the ACS includes many of the subjects previously covered by the decennial census sample, there are significant differences between the two surveys including fundamental differences in survey design and residency rules.

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Reliability: These symbols represent threshold values that Esri has established from the Coefficients of Variation (CV) to designate the usability of the estimates. The CV measures the amount of sampling error relative to the size of the estimate, expressed as a percentage.

- High Reliability: Small CVs (less than or equal to 12 percent) are flagged green to indicate that the sampling error is small relative to the estimate and the estimate is reasonably reliable.
- Medium Reliability: Estimates with CVs between 12 and 40 are flagged yellow—use with caution.
- Low Reliability: Large CVs (over 40 percent) are flagged red to indicate that the sampling error is large relative to the estimate. The estimate is considered very unreliable.

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 5 minutes

Prepared by Robert Goman

Demographic Summary	Census 2010	2013	2018	2013-2018 Change	2013-2018 Annual Rate
Total Population	15,771	15,686	15,805	119	0.15%
Population 55+	3,896	4,096	4,576	480	1.55%
Median Age	40.0	40.5	41.1	0.6	0.29%
Households	5,896	5,872	5,925	53	0.18%
% Householders 55+	42.8%	45.6%	49.6%	4.0	1.70%
Owner/Renter Ratio	1.7	1.7	1.8	0.1	1.15%
Median Home Value	-	$703,332	$930,553	$227,221	5.76%
Average Home Value	-	$760,373	$939,878	$179,505	4.33%
Median Household Income	-	$114,475	$130,946	$16,471	2.73%
Median Household Income for Householder 55+	-	$93,166	$117,450	$24,284	4.74%

Population by Age and Sex

	Census 2010		2013		2018	
Male Population	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	1,653	100.0%	1,806	100.0%	2,106	100.0%
55-59	400	24.2%	506	28.0%	617	29.3%
60-64	345	20.9%	361	20.0%	467	22.2%
65-69	266	16.1%	286	15.8%	324	15.4%
70-74	193	11.7%	214	11.8%	250	11.9%
75-79	158	9.6%	156	8.6%	180	8.5%
80-84	141	8.5%	129	7.1%	120	5.7%
85+	150	9.1%	154	8.5%	148	7.0%
	Census 2010		**2013**		**2018**	
Female	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	2,243	100.0%	2,290	100.0%	2,470	100.0%
55-59	449	20.0%	515	22.5%	625	25.3%
60-64	386	17.2%	407	17.8%	474	19.2%
65-69	306	13.6%	319	13.9%	369	14.9%
70-74	255	11.4%	266	11.6%	282	11.4%
75-79	209	9.3%	213	9.3%	221	8.9%
80-84	259	11.5%	200	8.7%	175	7.1%
85+	379	16.9%	370	16.2%	324	13.1%
	Census 2010		**2013**		**2018**	
Total Population	**Number**	**% of Total**	**Number**	**% of Total Pop**	**Number**	**% of Total**
Total (55+)	3,898	32.4%	4,095	34.5%	4,576	37.0%
55-59	849	5.4%	1,021	6.5%	1,242	7.9%
60-64	731	4.6%	768	4.9%	941	6.0%
65-69	573	3.6%	604	3.9%	693	4.4%
70-74	449	2.8%	480	3.1%	532	3.4%
75-79	367	2.3%	369	2.4%	401	2.5%
80-84	400	2.5%	329	2.1%	295	1.9%
85+	529	3.4%	524	3.3%	472	3.0%
65+	2,318	14.7%	2,306	14.7%	2,393	15.1%
75+	1,296	8.2%	1,222	7.8%	1,168	7.4%

Data Note - A "-" indicates that the variable was not collected in the 2010 Census.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 5 minutes

Prepared by Robert Goman

2013 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	1,100	100%	697	100%	879	100%	2,676	100%
<$15,000	55	5.0%	53	7.6%	145	16.5%	253	9.5%
$15,000-$24,999	36	3.3%	37	5.3%	70	8.0%	143	5.3%
$25,000-$34,999	30	2.7%	15	2.2%	48	5.5%	93	3.5%
$35,000-$49,999	70	6.4%	69	9.9%	82	9.3%	221	8.3%
$50,000-$74,999	122	11.1%	120	17.2%	178	20.3%	420	15.7%
$75,000-$99,999	115	10.5%	71	10.2%	83	9.4%	269	10.1%
$100,000-$149,999	189	17.2%	92	13.2%	89	10.1%	370	13.8%
$150,000-$199,999	130	11.8%	66	9.5%	54	6.1%	250	9.3%
$200,000+	352	32.0%	175	25.1%	129	14.7%	656	24.5%
Median HH Income	$127,740		$93,253		$60,679		$93,166	
Average HH Income	$180,883		$151,297		$106,550		$148,760	

2018 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	1,323	100%	780	100%	837	100%	2,940	100%
<$15,000	49	3.7%	51	6.5%	119	14.2%	219	7.4%
$15,000-$24,999	26	2.0%	30	3.8%	49	5.9%	105	3.6%
$25,000-$34,999	28	2.1%	15	1.9%	44	5.3%	87	3.0%
$35,000-$49,999	63	4.8%	58	7.4%	69	8.2%	190	6.5%
$50,000-$74,999	94	7.1%	94	12.1%	132	15.8%	320	10.9%
$75,000-$99,999	148	11.2%	91	11.7%	102	12.2%	341	11.6%
$100,000-$149,999	249	18.8%	118	15.1%	109	13.0%	476	16.2%
$150,000-$199,999	189	14.3%	95	12.2%	65	7.8%	349	11.9%
$200,000+	476	36.0%	229	29.4%	148	17.7%	853	29.0%
Median HH Income	$150,781		$117,555		$76,031		$117,450	
Average HH Income	$227,433		$194,414		$137,150		$192,973	

Data Note: Income is reported for July 1, 2013 and represents annual income for the preceding year, expressed in current (2012) dollars, including an adjustment for inflation. Income is reported for July 1, 2018 and represents annual income for the preceding year, expressed in current (2017) dollars, including an adjustment for inflation.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 5 minutes

Prepared by Robert Goman

2013 Population 55+ by Race	Number	Percent	% Pop
Total	5,422	100.0%	34.6%
White Alone	4,968	91.6%	37.6%
Black Alone	112	2.1%	30.6%
American Indian Alone	6	0.1%	17.1%
Asian Alone	203	3.7%	17.9%
Pacific Islander Alone	0	0.0%	0.0%
Some Other Race Alone	86	1.6%	14.4%
Two or More Races	47	0.9%	13.5%
Hispanic Origin (Any Race)	364	6.7%	18.7%

Census 2010 Households and Age of Householder	Number	Percent	% Total HHs
Total	2,525	100.0%	42.8%
Family Households	1,440	57.0%	24.4%
Householder Age 55-64	692	27.4%	11.7%
Householder Age 65-74	392	15.5%	6.6%
Householder Age 75-84	246	9.7%	4.2%
Householder Age 85+	110	4.4%	1.9%
Nonfamily Households	1,085	43.0%	18.4%
Householder Age 55-64	270	10.7%	4.6%
Householder Age 65-74	257	10.2%	4.4%
Householder Age 75-84	277	11.0%	4.7%
Householder Age 85+	281	11.1%	4.8%

Census 2010 Occupied Housing Units by Age of Householder	Number	Percent	% Total HHs
Total	2,526	100.0%	42.8%
Owner Occupied Housing Units	1,798	71.2%	30.5%
Householder Age 55-64	715	28.3%	12.1%
Householder Age 65-74	507	20.1%	8.6%
Householder Age 75-84	378	15.0%	6.4%
Householder Age 85+	198	7.8%	3.4%
Renter Occupied Housing Units	728	28.8%	12.3%
Householder Age 55-64	248	9.8%	4.2%
Householder Age 65-74	142	5.6%	2.4%
Householder Age 75-84	145	5.7%	2.5%
Householder Age 85+	193	7.6%	3.3%

Data Note: A family is defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. Nonfamily households consist of people living alone and households that do not contain any members who are related to the householder. The base for "% Pop" is specific to the row. A Nonrelative is not related to the householder by birth, marriage, or adoption.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
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Demographic Summary	Census 2010	2013	2018	2013-2018 Change	2013-2018 Annual Rate
Total Population	194,677	195,142	198,781	3,639	0.37%
Population 55+	50,632	53,226	58,623	5,397	1.36%
Median Age	39.3	39.9	40.5	0.6	0.30%
Households	72,575	72,725	74,093	1,368	0.37%
% Householders 55+	43.1%	45.2%	48.2%	3.0	1.29%
Owner/Renter Ratio	1.4	1.4	1.4	0.0	0.00%
Median Home Value	-	$629,865	$852,654	$222,789	6.24%
Average Home Value	-	$706,169	$844,621	$138,452	3.65%
Median Household Income	-	$85,864	$100,543	$14,679	3.21%
Median Household Income for Householder 55+	-	$75,797	$91,667	$15,870	3.88%

Population by Age and Sex

	Census 2010		2013		2018	
Male Population	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	21,956	100.0%	23,442	100.0%	26,351	100.0%
55-59	5,687	25.9%	6,207	26.5%	6,789	25.8%
60-64	4,697	21.4%	5,067	21.6%	5,754	21.8%
65-69	3,472	15.8%	3,827	16.3%	4,599	17.5%
70-74	2,556	11.6%	2,789	11.9%	3,353	12.7%
75-79	2,201	10.0%	2,122	9.1%	2,348	8.9%
80-84	1,754	8.0%	1,738	7.4%	1,687	6.4%
85+	1,589	7.2%	1,692	7.2%	1,821	6.9%
	Census 2010		**2013**		**2018**	
Female	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	28,676	100.0%	29,784	100.0%	32,272	100.0%
55-59	6,249	21.8%	6,781	22.8%	7,305	22.6%
60-64	5,436	19.0%	5,744	19.3%	6,365	19.7%
65-69	4,235	14.8%	4,581	15.4%	5,300	16.4%
70-74	3,422	11.9%	3,629	12.2%	4,192	13.0%
75-79	3,031	10.6%	2,953	9.9%	3,157	9.8%
80-84	2,926	10.2%	2,616	8.8%	2,453	7.6%
85+	3,377	11.8%	3,480	11.7%	3,500	10.8%
	Census 2010		**2013**		**2018**	
Total Population	**Number**	**% of Total**	**Number**	**% of Total Pop**	**Number**	**% of Total**
Total (55+)	50,630	33.4%	53,225	34.9%	58,623	36.6%
55-59	11,935	6.1%	12,988	6.7%	14,094	7.1%
60-64	10,133	5.2%	10,810	5.5%	12,119	6.1%
65-69	7,707	4.0%	8,408	4.3%	9,899	5.0%
70-74	5,978	3.1%	6,418	3.3%	7,544	3.8%
75-79	5,232	2.7%	5,075	2.6%	5,505	2.8%
80-84	4,680	2.4%	4,354	2.2%	4,140	2.1%
85+	4,965	2.6%	5,172	2.7%	5,322	2.7%
65+	28,562	14.7%	29,427	15.1%	32,410	16.3%
75+	14,877	7.6%	14,601	7.5%	14,967	7.5%

Data Note - A "-" indicates that the variable was not collected in the 2010 Census.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

GOMAN+YORK
NOVEMBER 2014

Age 55+ Profile

120 Old Post Rd
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Prepared by Robert Goman

2013 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	13,819	100%	9,202	100%	9,847	100%	32,868	100%
<$15,000	873	6.3%	590	6.4%	1,388	14.1%	2,851	8.7%
$15,000-$24,999	632	4.6%	827	9.0%	1,262	12.8%	2,721	8.3%
$25,000-$34,999	845	6.1%	749	8.1%	1,221	12.4%	2,815	8.6%
$35,000-$49,999	1,219	8.8%	1,060	11.5%	1,151	11.7%	3,430	10.4%
$50,000-$74,999	1,622	11.7%	1,429	15.5%	1,430	14.5%	4,481	13.6%
$75,000-$99,999	1,426	10.3%	997	10.8%	894	9.1%	3,317	10.1%
$100,000-$149,999	2,354	17.0%	1,288	14.0%	890	9.0%	4,532	13.8%
$150,000-$199,999	1,441	10.4%	686	7.5%	536	5.4%	2,663	8.1%
$200,000+	3,407	24.7%	1,576	17.1%	1,074	10.9%	6,057	18.4%
Median HH Income	$104,339		$73,698		$48,335		$75,797	
Average HH Income	$153,984		$122,517		$90,290		$126,093	

2018 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	15,045	100%	10,702	100%	9,988	100%	35,735	100%
<$15,000	803	5.3%	596	5.6%	1,326	13.3%	2,725	7.6%
$15,000-$24,999	487	3.2%	735	6.9%	957	9.6%	2,179	6.1%
$25,000-$34,999	728	4.8%	740	6.9%	1,087	10.9%	2,555	7.1%
$35,000-$49,999	1,156	7.7%	1,071	10.0%	1,069	10.7%	3,296	9.2%
$50,000-$74,999	1,422	9.5%	1,391	13.0%	1,225	12.3%	4,038	11.3%
$75,000-$99,999	1,754	11.7%	1,321	12.3%	1,186	11.9%	4,261	11.9%
$100,000-$149,999	2,802	18.6%	1,713	16.0%	1,116	11.2%	5,631	15.8%
$150,000-$199,999	1,868	12.4%	1,020	9.5%	726	7.3%	3,614	10.1%
$200,000+	4,025	26.8%	2,113	19.7%	1,295	13.0%	7,433	20.8%
Median HH Income	$116,298		$88,863		$59,332		$91,667	
Average HH Income	$186,897		$152,307		$113,651		$156,066	

Data Note: Income is reported for July 1, 2013 and represents annual income for the preceding year, expressed in current (2012) dollars, including an adjustment for inflation. Income is reported for July 1, 2018 and represents annual income for the preceding year, expressed in current (2017) dollars, including an adjustment for inflation.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 13 minutes

Prepared by Robert Goman

2013 Population 55+ by Race	Number	Percent	% Pop
Total	68,040	100.0%	34.9%
White Alone	56,442	83.0%	39.7%
Black Alone	5,087	7.5%	34.2%
American Indian Alone	143	0.2%	18.4%
Asian Alone	2,756	4.1%	23.3%
Pacific Islander Alone	11	0.0%	9.6%
Some Other Race Alone	2,635	3.9%	13.9%
Two or More Races	966	1.4%	15.6%
Hispanic Origin (Any Race)	8,972	13.2%	17.9%

Census 2010 Households and Age of Householder	Number	Percent	% Total HHs
Total	31,283	100.0%	43.1%
Family Households	18,101	57.9%	24.9%
Householder Age 55-64	8,685	27.8%	12.0%
Householder Age 65-74	5,028	16.1%	6.9%
Householder Age 75-84	3,233	10.3%	4.5%
Householder Age 85+	1,155	3.7%	1.6%
Nonfamily Households	13,182	42.1%	18.2%
Householder Age 55-64	4,112	13.1%	5.7%
Householder Age 65-74	3,447	11.0%	4.7%
Householder Age 75-84	3,389	10.8%	4.7%
Householder Age 85+	2,234	7.1%	3.1%

Census 2010 Occupied Housing Units by Age of Householder	Number	Percent	% Total HHs
Total	31,281	100.0%	43.1%
Owner Occupied Housing Units	22,169	70.9%	30.5%
Householder Age 55-64	8,905	28.5%	12.3%
Householder Age 65-74	6,144	19.6%	8.5%
Householder Age 75-84	4,833	15.5%	6.7%
Householder Age 85+	2,287	7.3%	3.2%
Renter Occupied Housing Units	9,112	29.1%	12.6%
Householder Age 55-64	3,892	12.4%	5.4%
Householder Age 65-74	2,331	7.5%	3.2%
Householder Age 75-84	1,788	5.7%	2.5%
Householder Age 85+	1,101	3.5%	1.5%

Data Note: A family is defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. Nonfamily households consist of people living alone and households that do not contain any members who are related to the householder. The base for "% Pop" is specific to the row. A Nonrelative is not related to the householder by birth, marriage, or adoption.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 23 minutes

Prepared by Robert Goman

Demographic Summary	Census 2010	2013	2018	2013-2018 Change	2013-2018 Annual Rate
Total Population	1,280,138	1,285,824	1,313,850	28,025	0.43%
Population 55+	327,938	346,633	383,997	37,364	1.41%
Median Age	38.5	38.9	39.4	0.5	0.26%
Households	480,532	482,959	493,813	10,854	0.45%
% Householders 55+	42.0%	44.0%	47.1%	3.1	1.37%
Owner/Renter Ratio	1.0	1.0	1.0	0.0	0.00%
Median Home Value	-	$479,179	$650,510	$171,331	6.30%
Average Home Value	-	$568,406	$686,423	$118,017	3.85%
Median Household Income	-	$62,950	$76,657	$13,707	4.02%
Median Household Income for Householder 55+	-	$57,134	$69,130	$11,996	3.89%

Population by Age and Sex

	Census 2010		2013		2018	
Male Population	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	139,502	100.0%	149,114	100.0%	167,319	100.0%
55-59	36,286	26.0%	39,041	26.2%	41,761	25.0%
60-64	30,956	22.2%	33,226	22.3%	36,691	21.9%
65-69	22,612	16.2%	25,051	16.8%	29,744	17.8%
70-74	16,645	11.9%	18,223	12.2%	22,419	13.4%
75-79	13,563	9.7%	13,548	9.1%	15,592	9.3%
80-84	10,459	7.5%	10,353	6.9%	10,516	6.3%
85+	8,981	6.4%	9,672	6.5%	10,596	6.3%
	Census 2010		**2013**		**2018**	
Female	**Number**	**% of 55+**	**Number**	**% of 55+**	**Number**	**% of 55+**
Total (55+)	237,453	100.0%	197,519	100.0%	216,678	100.0%
55-59	42,429	17.9%	45,084	22.8%	47,600	22.0%
60-64	37,244	15.7%	39,843	20.2%	43,138	19.9%
65-69	28,713	12.1%	31,469	15.9%	37,024	17.1%
70-74	22,876	9.6%	24,534	12.4%	29,448	13.6%
75-79	19,701	8.3%	19,599	9.9%	22,058	10.2%
80-84	17,538	7.4%	16,415	8.3%	16,253	7.5%
85+	19,935	8.4%	20,575	10.4%	21,157	9.8%
	Census 2010		**2013**		**2018**	
Total Population	**Number**	**% of Total**	**Number**	**% of Total Pop**	**Number**	**% of Total**
Total (55+)	420,226	32.8%	346,631	34.3%	383,998	36.0%
55-59	78,715	6.1%	84,125	6.5%	89,361	6.8%
60-64	68,200	5.3%	73,069	5.7%	79,830	6.1%
65-69	51,325	4.0%	56,519	4.4%	66,768	5.1%
70-74	39,521	3.1%	42,756	3.3%	51,867	3.9%
75-79	33,264	2.6%	33,147	2.6%	37,650	2.9%
80-84	27,997	2.2%	26,768	2.1%	26,769	2.0%
85+	28,916	2.3%	30,247	2.4%	31,753	2.4%
65+	181,023	14.1%	189,437	14.7%	214,807	16.3%
75+	90,177	7.0%	90,162	7.0%	96,172	7.3%

Data Note - A "-" indicates that the variable was not collected in the 2010 Census.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 23 minutes

Prepared by Robert Goman

2013 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	92,994	100%	61,180	100%	58,445	100%	212,619	100%
<$15,000	9,714	10.4%	6,005	9.8%	10,193	17.4%	25,912	12.2%
$15,000-$24,999	5,645	6.1%	5,753	9.4%	8,852	15.1%	20,250	9.5%
$25,000-$34,999	7,041	7.6%	6,587	10.8%	7,022	12.0%	20,650	9.7%
$35,000-$49,999	10,995	11.8%	9,074	14.8%	7,379	12.6%	27,448	12.9%
$50,000-$74,999	13,840	14.9%	10,145	16.6%	8,972	15.4%	32,957	15.5%
$75,000-$99,999	10,321	11.1%	6,398	10.5%	5,348	9.2%	22,067	10.4%
$100,000-$149,999	14,875	16.0%	7,793	12.7%	4,959	8.5%	27,627	13.0%
$150,000-$199,999	7,560	8.1%	3,639	5.9%	2,277	3.9%	13,476	6.3%
$200,000+	13,001	14.0%	5,786	9.5%	3,443	5.9%	22,230	10.5%
Median HH Income	$73,179		$55,920		$40,316		$57,134	
Average HH Income	$113,965		$92,666		$69,820		$95,701	

2018 Households by Income and Age of Householder 55+

	55-64	Percent	65-74	Percent	75+	Percent	Total	Percent
Total	98,857	100%	72,140	100%	61,816	100%	232,813	100%
<$15,000	9,401	9.5%	6,661	9.2%	10,606	17.2%	26,668	11.5%
$15,000-$24,999	4,433	4.5%	5,387	7.5%	7,150	11.6%	16,970	7.3%
$25,000-$34,999	6,462	6.5%	7,147	9.9%	6,854	11.1%	20,463	8.8%
$35,000-$49,999	10,593	10.7%	9,737	13.5%	7,376	11.9%	27,706	11.9%
$50,000-$74,999	11,988	12.1%	9,975	13.8%	8,117	13.1%	30,080	12.9%
$75,000-$99,999	12,941	13.1%	8,947	12.4%	7,431	12.0%	29,319	12.6%
$100,000-$149,999	18,062	18.3%	10,869	15.1%	6,688	10.8%	35,619	15.3%
$150,000-$199,999	9,808	9.9%	5,522	7.7%	3,268	5.3%	18,598	8.0%
$200,000+	15,170	15.3%	7,895	10.9%	4,325	7.0%	27,390	11.8%
Median HH Income	$85,945		$66,085		$47,214		$69,130	
Average HH Income	$136,200		$111,712		$84,884		$114,987	

Data Note: Income is reported for July 1, 2013 and represents annual income for the preceding year, expressed in current (2012) dollars, including an adjustment for inflation. Income is reported for July 1, 2018 and represents annual income for the preceding year, expressed in current (2017) dollars, including an adjustment for inflation.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

Age 55+ Profile

120 Old Post Rd
120 Old Post Rd, Rye, New York, 10580,
Drive Time: 23 minutes

Prepared by Robert Goman

2013 Population 55+ by Race	Number	Percent	% Pop
Total	441,145	100.0%	34.3%
White Alone	285,754	64.8%	40.6%
Black Alone	100,257	22.7%	32.2%
American Indian Alone	1,384	0.3%	19.8%
Asian Alone	21,128	4.8%	25.9%
Pacific Islander Alone	142	0.0%	20.6%
Some Other Race Alone	23,183	5.3%	17.1%
Two or More Races	9,297	2.1%	20.1%
Hispanic Origin (Any Race)	74,484	16.9%	21.5%

Census 2010 Households and Age of Householder	Number	Percent	% Total HHs
Total	201,619	100.0%	42.0%
Family Households	114,945	57.0%	23.9%
Householder Age 55-64	56,958	28.3%	11.9%
Householder Age 65-74	32,378	16.1%	6.7%
Householder Age 75-84	19,283	9.6%	4.0%
Householder Age 85+	6,326	3.1%	1.3%
Nonfamily Households	86,674	43.0%	18.0%
Householder Age 55-64	30,146	15.0%	6.3%
Householder Age 65-74	23,734	11.8%	4.9%
Householder Age 75-84	20,543	10.2%	4.3%
Householder Age 85+	12,251	6.1%	2.5%

Census 2010 Occupied Housing Units by Age of Householder	Number	Percent	% Total HHs
Total	201,619	100.0%	42.0%
Owner Occupied Housing Units	123,716	61.4%	25.7%
Householder Age 55-64	52,066	25.8%	10.8%
Householder Age 65-74	35,049	17.4%	7.3%
Householder Age 75-84	25,716	12.8%	5.4%
Householder Age 85+	10,885	5.4%	2.3%
Renter Occupied Housing Units	77,903	38.6%	16.2%
Householder Age 55-64	35,037	17.4%	7.3%
Householder Age 65-74	21,063	10.4%	4.4%
Householder Age 75-84	14,111	7.0%	2.9%
Householder Age 85+	7,692	3.8%	1.6%

Data Note: A family is defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. Nonfamily households consist of people living alone and households that do not contain any members who are related to the householder. The base for "% Pop" is specific to the row. A Nonrelative is not related to the householder by birth, marriage, or adoption.

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018.

November 25, 2014

GOMAN+YORK
NOVEMBER 2014

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

Population		Households	
2010 Total Population	15,771	2013 Median Household Income	$114,475
2013 Total Population	15,686	2018 Median Household Income	$130,946
2018 Total Population	15,805	2013-2018 Annual Rate	2.73%
2013-2018 Annual Rate	0.15%		

	Census 2010		2013		2018	
Housing Units by Occupancy Status and Tenure	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total Housing Units	6,412	100.0%	6,379	100.0%	6,508	100.0%
Occupied	5,896	92.0%	5,872	92.1%	5,925	91.0%
Owner	3,726	58.1%	3,676	57.6%	3,840	59.0%
Renter	2,170	33.8%	2,196	34.4%	2,085	32.0%
Vacant	516	8.0%	507	7.9%	583	9.0%

	2013		2018	
Owner Occupied Housing Units by Value	**Number**	**Percent**	**Number**	**Percent**
Total	3,676	100.0%	3,840	100.0%
<$50,000	4	0.1%	0	0.0%
$50,000-$99,999	30	0.8%	1	0.0%
$100,000-$149,999	57	1.6%	8	0.2%
$150,000-$199,999	74	2.0%	33	0.9%
$200,000-$249,999	84	2.3%	58	1.5%
$250,000-$299,999	133	3.6%	56	1.5%
$300,000-$399,999	368	10.0%	70	1.8%
$400,000-$499,999	395	10.7%	179	4.7%
$500,000-$749,999	852	23.2%	366	9.5%
$750,000-$999,999	589	16.0%	1,592	41.5%
$1,000,000+	1,090	29.7%	1,477	38.5%
Median Value	$703,332		$930,553	
Average Value	$760,373		$939,878	

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018

April 13, 2014

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

Census 2010 Owner Occupied Housing Units by Mortgage Status	**Number**	**Percent**
Total	3,726	100.0%
Owned with a Mortgage/Loan	2,480	66.6%
Owned Free and Clear	1,246	33.4%

Census 2010 Vacant Housing Units by Status	**Number**	**Percent**
Total	516	100.0%
For Rent	155	30.0%
Rented- Not Occupied	8	1.6%
For Sale Only	53	10.3%
Sold - Not Occupied	37	7.2%
Seasonal/Recreational/Occasional Use	57	11.0%
For Migrant Workers	0	0.0%
Other Vacant	134	26.0%

Census 2010 Occupied Housing Units by Age of Householder and Home Ownership

		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	5,898	3,728	63.2%
15-24	76	11	14.5%
25-34	560	168	30.0%
35-44	1,241	697	56.2%
45-54	1,495	1,054	70.5%
55-64	963	715	74.2%
65-74	649	507	78.1%
75-84	523	378	72.3%
85+	391	198	50.6%

Census 2010 Occupied Housing Units by Race/Ethnicity of Householder and Home Ownership

		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	5,896	3,726	63.2%
White Alone	5,203	3,515	67.6%
Black/African American	133	35	26.3%
American Indian/Alaska	11	3	27.3%
Asian Alone	328	113	34.5%
Pacific Islander Alone	1	0	0.0%
Other Race Alone	145	31	21.4%
Two or More Races	75	29	38.7%
Hispanic Origin	497	160	32.2%

Census 2010 Occupied Housing Units by Size and Home Ownership

		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	5,897	3,726	63.2%
1-Person	1,595	760	47.6%
2-Person	1,529	1,044	68.3%
3-Person	904	588	65.0%
4-Person	1,087	735	67.6%
5-Person	554	427	77.1%
6-Person	165	128	77.6%
7+ Person	63	44	69.8%

Data Note: Persons of Hispanic Origin may be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

April 13, 2014

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

Population		Households	
2010 Total Population	194,677	2013 Median Household Income	$85,864
2013 Total Population	195,142	2018 Median Household Income	$100,543
2018 Total Population	198,781	2013-2018 Annual Rate	3.21%
2013-2018 Annual Rate	0.37%		

	Census 2010		2013		2018	
Housing Units by Occupancy Status and Tenure	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total Housing Units	78,349	100.0%	78,660	100.0%	79,864	100.0%
Occupied	72,574	92.6%	72,726	92.5%	74,093	92.8%
Owner	42,649	54.4%	41,999	53.4%	43,813	54.9%
Renter	29,925	38.2%	30,727	39.1%	30,280	37.9%
Vacant	5,774	7.4%	5,935	7.5%	5,771	7.2%

	2013		2018	
Owner Occupied Housing Units by Value	**Number**	**Percent**	**Number**	**Percent**
Total	41,997	100.0%	43,813	100.0%
<$50,000	100	0.2%	10	0.0%
$50,000-$99,999	496	1.2%	54	0.1%
$100,000-$149,999	774	1.8%	133	0.3%
$150,000-$199,999	1,274	3.0%	528	1.2%
$200,000-$249,999	1,487	3.5%	1,044	2.4%
$250,000-$299,999	1,950	4.6%	1,350	3.1%
$300,000-$399,999	4,471	10.6%	2,058	4.7%
$400,000-$499,999	5,174	12.3%	3,673	8.4%
$500,000-$749,999	10,148	24.2%	7,400	16.9%
$750,000-$999,999	5,231	12.5%	13,774	31.4%
$1,000,000+	10,892	25.9%	13,789	31.5%
Median Value	$629,865		$852,654	
Average Value	$706,169		$844,621	

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018

April 13, 2014

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

Census 2010 Owner Occupied Housing Units by Mortgage Status	**Number**	**Percent**
Total	42,649	100.0%
Owned with a Mortgage/Loan	28,737	67.4%
Owned Free and Clear	13,912	32.6%

Census 2010 Vacant Housing Units by Status	**Number**	**Percent**
Total	5,774	100.0%
For Rent	1,966	34.0%
Rented- Not Occupied	126	2.2%
For Sale Only	1,051	18.2%
Sold - Not Occupied	229	4.0%
Seasonal/Recreational/Occasional Use	845	14.6%
For Migrant Workers	1	0.0%
Other Vacant	1,563	27.1%

		Owner Occupied Units	
Census 2010 Occupied Housing Units by Age of Householder and Home Ownership	**Occupied Units**	**Number**	**% of Occupied**
Total	72,575	42,650	58.8%
15-24	1,301	142	10.9%
25-34	9,357	2,803	30.0%
35-44	14,386	7,328	50.9%
45-54	16,250	10,208	62.8%
55-64	12,797	8,905	69.6%
65-74	8,475	6,144	72.5%
75-84	6,621	4,833	73.0%
85+	3,388	2,287	67.5%

		Owner Occupied Units	
Census 2010 Occupied Housing Units by Race/Ethnicity of Householder and Home Ownership	**Occupied Units**	**Number**	**% of Occupied**
Total	72,576	42,650	58.8%
White Alone	57,264	37,915	66.2%
Black/African American	5,705	1,746	30.6%
American Indian/Alaska	191	43	22.5%
Asian Alone	3,590	1,696	47.2%
Pacific Islander Alone	29	4	13.8%
Other Race Alone	4,317	796	18.4%
Two or More Races	1,480	450	30.4%
Hispanic Origin	12,195	3,167	26.0%

		Owner Occupied Units	
Census 2010 Occupied Housing Units by Size and Home Ownership	**Occupied Units**	**Number**	**% of Occupied**
Total	72,576	42,650	58.8%
1-Person	20,823	10,607	50.9%
2-Person	20,707	13,321	64.3%
3-Person	11,301	6,733	59.6%
4-Person	10,926	6,912	63.3%
5-Person	5,402	3,447	63.8%
6-Person	1,991	1,069	53.7%
7+ Person	1,426	561	39.3%

Data Note: Persons of Hispanic Origin may be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

April 13, 2014

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

Population		Households	
2010 Total Population	1,280,138	2013 Median Household Income	$62,950
2013 Total Population	1,285,824	2018 Median Household Income	$76,657
2018 Total Population	1,313,850	2013-2018 Annual Rate	4.02%
2013-2018 Annual Rate	0.43%		

	Census 2010		2013		2018	
Housing Units by Occupancy Status and Tenure	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total Housing Units	511,672	100.0%	515,655	100.0%	526,562	100.0%
Occupied	480,532	93.9%	482,959	93.7%	493,814	93.8%
Owner	242,638	47.4%	240,160	46.6%	252,421	47.9%
Renter	237,894	46.5%	242,799	47.1%	241,393	45.8%
Vacant	31,140	6.1%	32,696	6.3%	32,749	6.2%

	2013		2018	
Owner Occupied Housing Units by Value	**Number**	**Percent**	**Number**	**Percent**
Total	240,051	100.0%	252,298	100.0%
<$50,000	1,410	0.6%	190	0.1%
$50,000-$99,999	6,567	2.7%	1,342	0.5%
$100,000-$149,999	6,306	2.6%	1,840	0.7%
$150,000-$199,999	8,407	3.5%	7,879	3.1%
$200,000-$249,999	10,573	4.4%	9,863	3.9%
$250,000-$299,999	14,379	6.0%	11,576	4.6%
$300,000-$399,999	39,260	16.4%	23,583	9.3%
$400,000-$499,999	41,834	17.4%	33,603	13.3%
$500,000-$749,999	59,270	24.7%	60,250	23.9%
$750,000-$999,999	19,574	8.2%	60,481	24.0%
$1,000,000+	32,471	13.5%	41,691	16.5%
Median Value	$479,179		$650,510	
Average Value	$568,406		$686,423	

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018

Housing Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

Census 2010 Owner Occupied Housing Units by Mortgage Status	**Number**	**Percent**
Total	242,638	100.0%
Owned with a Mortgage/Loan	167,449	69.0%
Owned Free and Clear	75,189	31.0%

Census 2010 Vacant Housing Units by Status	**Number**	**Percent**
Total	31,140	100.0%
For Rent	12,413	39.9%
Rented- Not Occupied	797	2.6%
For Sale Only	4,528	14.5%
Sold - Not Occupied	1,086	3.5%
Seasonal/Recreational/Occasional Use	3,301	10.6%
For Migrant Workers	5	0.0%
Other Vacant	9,029	29.0%

Census 2010 Occupied Housing Units by Age of Householder and Home Ownership		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	480,531	242,637	50.5%
15-24	10,797	1,293	12.0%
25-34	66,173	17,075	25.8%
35-44	94,295	42,446	45.0%
45-54	107,647	58,107	54.0%
55-64	87,103	52,066	59.8%
65-74	56,112	35,049	62.5%
75-84	39,827	25,716	64.6%
85+	18,577	10,885	58.6%

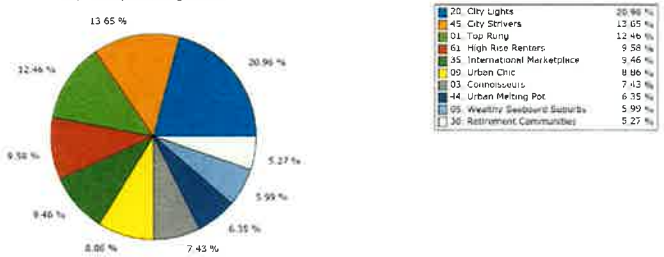
Census 2010 Occupied Housing Units by Race/Ethnicity of Householder and Home Ownership		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	480,532	242,638	50.5%
White Alone	285,600	177,262	62.1%
Black/African American	117,481	39,851	33.9%
American Indian/Alaska	2,072	525	25.3%
Asian Alone	24,091	12,223	50.7%
Pacific Islander Alone	203	50	24.6%
Other Race Alone	38,470	8,550	22.2%
Two or More Races	12,615	4,177	33.1%
Hispanic Origin	101,165	27,189	26.9%

Census 2010 Occupied Housing Units by Size and Home Ownership		Owner Occupied Units	
	Occupied Units	**Number**	**% of Occupied**
Total	480,531	242,638	50.5%
1-Person	140,255	58,207	41.5%
2-Person	134,804	73,259	54.3%
3-Person	79,960	40,738	50.9%
4-Person	68,520	39,343	57.4%
5-Person	34,130	19,454	57.0%
6-Person	13,165	6,999	53.2%
7+ Person	9,697	4,638	47.8%

Data Note: Persons of Hispanic Origin may be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

April 13, 2014

Top 10 Tapestry Segments



Top 10 Tapestry Segments:

20. City Lights

The City Lights segment is composed of diverse neighborhoods situated primarily in the Northeast. This dense urban market is a mixture of housing, household types, and cultures that all share the same city space. Households include families and singles, similar to the U.S. distribution by household type. With a median age of 38.5 years, the population is slightly older than that of the U.S. Compared to the U.S. population, there are fewer children and slightly more people aged 75 or older. The ethnic or racial diversity is slightly higher than the U.S. level, with higher ratios of Asian, Hispanic, and multiracial populations. City Lights residents earn a good living working in white collar and service occupations. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/20_city_lights.pdf

45. City Strivers

Residents of this young, relatively diverse urban market have a median age of 33.8 years and a 68 percent mix of family types, such as married couples, single parents, and other families. Nearly eight in ten residents are black. The median household income is $36,621. Some households receive Supplemental Security Income or public assistance income. Education attainment levels are below those of the U.S.; approximately 44 percent of residents aged 25 years and older have attended college. Approximately half of employed residents work in the service and health care industry sectors in the city. Twenty-two percent of the residents who are employed are government workers, employed primarily by the local government. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/45_city_strivers.pdf

01. Top Rung

Residents of Top Rung neighborhoods are mature, married, highly educated, and wealthy. The median age is 45.0 years; one-third of the residents are in their peak earning years of 45–64. More than 77 percent of these households are composed of married couples; half of them have children. Except for the presence of children, this is a low-diversity, monochromatic market. Top Rung, the wealthiest consumer market, represents less than 1 percent of all U.S. households. The median household income of $173,172 is more than three-and-one- half times that of the U.S. median. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/01_top_rung.pdf

61. High Rise Renters

High Rise Renters residents are a diverse mix of race and ethnicity. More than half of the residents are Hispanic, mainly from Puerto Rico or the Dominican Republic. Forty percent of the residents are black, 21 percent are white, and 7 percent are of two or more races. A higher-than-average proportion (28 percent) of other races is also represented. Many residents speak a language other than English. Household types are mainly single parent and single person; however, a higher-than-average proportion of other family households is also present. Their median age of 31.9 years is younger than the U.S. median. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/61_high_rise_renters.pdf

Lifestyle Report

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 23 minutes

Prepared by Robert Goman

35. International Marketplace

Located primarily in cities in "gateway" states on both U.S. coasts, International Marketplace neighborhoods are developing urban markets with a rich blend of cultures and household types. The population is young, with a median age of only 32 years. Approximately 70 percent of the households are families; 44 percent are married couples with children and single parents. The average family size is 3.7. International Marketplace is the second most diverse of the Tapestry segments. More than half of the total population is Hispanic; 11.6 percent is Asian, and 7 percent is of two or more races. A high proportion of immigrants, including recent arrivals, live in these neighborhoods. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/35_international_marketplace.pdf

09. Urban Chic

Urban Chic residents are professionals who live a sophisticated, exclusive lifestyle. More than half of these households are married-couple families, similar to the U.S. proportion. Fewer than half of them have children. Unlike the United States, there is a smaller proportion of single parents and a higher proportion of singles and shared households. The median age is 43 years; the diversity index is 48. A median household income of $91,298 enables residents of Urban Chic neighborhoods to live in style. They are well educated; more than half of residents aged 25 years and older hold a bachelor's or graduate degree; 80 percent have attended college. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/09_urban_chic.pdf

03. Connoisseurs

Residents of Connoisseurs neighborhoods are somewhat older, with a median age of 47.7 years. Approximately 70 percent of the population is married. Although residents appear closer to retirement than child-rearing age, 30 percent of the households are married couples with children living at home. Ethnic diversity is negligible. Connoisseurs are second in affluence only to the Top Rung segment. This market is well educated; 63 percent of the population aged 25 years and older hold a bachelor's or graduate degree. Employed residents earn wages from high-paying management, professional, and sales jobs. Many are self-employed; the rate is twice that of the national average. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/03_connoisseurs.pdf

44. Urban Melting Pot

Recently settled immigrants live in ethnically rich Urban Melting Pot neighborhoods. More than half of the population is foreign born; half of these have come to the U.S. in the last 10 years. The median age is 36.4 years, slightly younger than the U.S. median of 37.3. Distinctly diverse, more than one in four are Hispanic. Whites represent 47 percent of the population; Asians, 30 percent; and 6 percent are multiracial. Household types are equally diverse: 45 percent are married couple families; 30 percent are singles who live alone; single parents, other family types, and shared households also live in these neighborhoods. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/44_urban_melting_pot.pdf

05. Wealthy Seaboard Suburbs

Wealthy Seaboard Suburbs are older, established, affluent neighborhoods characteristic of U.S. coastal metropolitan areas. Two-thirds of the population aged 15+ years is married; more than half of the married couples have no children. The median age is 43.2 years. Ethnic diversity is low; most residents are white. Wealthy Seaboard Suburbs neighborhoods are affluent; the median household income is $98,852. Income is derived from a variety of sources; approximately 60 percent of the households receive supplemental income from interest, dividends, and rental properties; 23 percent collect retirement income. More than half of those who work hold professional or management positions. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/05_wealthy_seaboard_suburbs.pdf

30. Retirement Communities

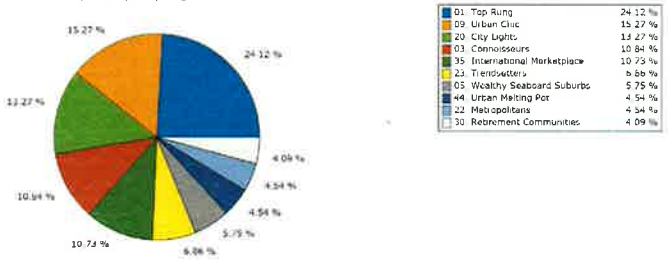
Most of the households in Retirement Communities neighborhoods are single seniors who live alone; a fourth is married couples with no children living at home. This older market has a median age of 50.9 years. One-third of the residents and 44 percent of householders are aged 65 years or older. Twenty-three percent of the population and 31 percent of householders are aged 75 years or older. Most of the residents are white. The median household income for Retirement Communities is $48,319, slightly below the U.S. median. Nearly half of the households earn income from interest, dividends, and rental properties; 45 percent receive Social Security benefits; and 26 percent receive retirement income. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/30_retirement_communities.pdf

Data Note: This report identifies neighborhood segments in the area, and describes the socioeconomic quality of the immediate neighborhood. The index is a comparison of the percent of households or population in the area, by Tapestry segment, to the percent of households or population in the United States, by segment. An index of 100 is the US average.
Source: Esri

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

Top 10 Tapestry Segments



Top 10 Tapestry Segments:

01. Top Rung

Residents of Top Rung neighborhoods are mature, married, highly educated, and wealthy. The median age is 45.0 years; one-third of the residents are in their peak earning years of 45–64. More than 77 percent of these households are composed of married couples; half of them have children. Except for the presence of children, this is a low-diversity, monochromatic market. Top Rung, the wealthiest consumer market, represents less than 1 percent of all U.S. households. The median household income of $173,172 is more than three-and-one- half times that of the U.S. median. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/01_top_rung.pdf

09. Urban Chic

Urban Chic residents are professionals who live a sophisticated, exclusive lifestyle. More than half of these households are married-couple families, similar to the U.S. proportion. Fewer than half of them have children. Unlike the United States, there is a smaller proportion of single parents and a higher proportion of singles and shared households. The median age is 43 years; the diversity index is 48. A median household income of $91,298 enables residents of Urban Chic neighborhoods to live in style. They are well educated; more than half of residents aged 25 years and older hold a bachelor's or graduate degree; 80 percent have attended college. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/09_urban_chic.pdf

20. City Lights

The City Lights segment is composed of diverse neighborhoods situated primarily in the Northeast. This dense urban market is a mixture of housing, household types, and cultures that all share the same city space. Households include families and singles, similar to the U.S. distribution by household type. With a median age of 38.5 years, the population is slightly older than that of the U.S. Compared to the U.S. population, there are fewer children and slightly more people aged 75 or older. The ethnic or racial diversity is slightly higher than the U.S. level, with higher ratios of Asian, Hispanic, and multiracial populations. City Lights residents earn a good living working in white collar and service occupations. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/20_city_lights.pdf

03. Connoisseurs

Residents of Connoisseurs neighborhoods are somewhat older, with a median age of 47.7 years. Approximately 70 percent of the population is married. Although residents appear closer to retirement than child-rearing age, 30 percent of the households are married couples with children living at home. Ethnic diversity is negligible. Connoisseurs are second in affluence only to the Top Rung segment. This market is well educated; 63 percent of the population aged 25 years and older hold a bachelor's or graduate degree. Employed residents earn wages from high-paying management, professional, and sales jobs. Many are self-employed; the rate is twice that of the national average. For additional information on this lifestyle, click here:
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Source: Esri

GOMAN YORK

Lifestyle Report

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 13 minutes

Prepared by Robert Goman

35. International Marketplace

Located primarily in cities in "gateway" states on both U.S. coasts, International Marketplace neighborhoods are developing urban markets with a rich blend of cultures and household types. The population is young, with a median age of only 32 years. Approximately 70 percent of the households are families; 44 percent are married couples with children and single parents. The average family size is 3.7. International Marketplace is the second most diverse of the Tapestry segments. More than half of the total population is Hispanic; 11.6 percent is Asian, and 7 percent is of two or more races. A high proportion of immigrants, including recent arrivals, live in these neighborhoods. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/35_international_marketplace.pdf

23. Trendsetters

On the cutting edge of urban style, Trendsetters residents are young, diverse, and mobile. More than half the households are singles who live alone or share the rent with a roommate. Families comprise the remainder. With a median age of 34.8 years, this segment is slightly younger than the U.S. median. Ethnically diverse, 13.7 percent of the residents are Asian and 23 percent are Hispanic; both percentages are well above those of the U.S. These residents are educated professionals who work in substantive jobs. Nineteen percent of the residents who are aged 25 years and older hold a graduate degree, 30 percent have earned a bachelor's degree, and 73 percent have attended college. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/23_trendsetters.pdf

05. Wealthy Seaboard Suburbs

Wealthy Seaboard Suburbs are older, established, affluent neighborhoods characteristic of U.S. coastal metropolitan areas. Two-thirds of the population aged 15+ years is married; more than half of the married couples have no children. The median age is 43.2 years. Ethnic diversity is low; most residents are white. Wealthy Seaboard Suburbs neighborhoods are affluent; the median household income is $98,852. Income is derived from a variety of sources; approximately 60 percent of the households receive supplemental income from interest, dividends, and rental properties; 23 percent collect retirement income. More than half of those who work hold professional or management positions. For additional information on this lifestyle, click here:
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44. Urban Melting Pot

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22. Metropolitans

Residents of Metropolitans communities prefer to live in older city neighborhoods. Approximately half of these households are singles who live alone or with others; 40 percent are married-couple families. One in four of the residents is aged 20–34 years; the median age is 37.1 years. Diversity is low; most of the population is white. Half of the residents who are employed work in professional or managerial positions. More than 77 percent of the population aged 25 years and older have attended college or completed a degree program. Thirty percent have earned a bachelor's degree, and 22 percent hold a graduate degree. The median household income is $54,926. For additional information on this lifestyle, click here:
http://www.esri.com/~/media/Files/Pdfs/data/esri_data/pdfs/tapestry-singles/22_metropolitans.pdf

30. Retirement Communities

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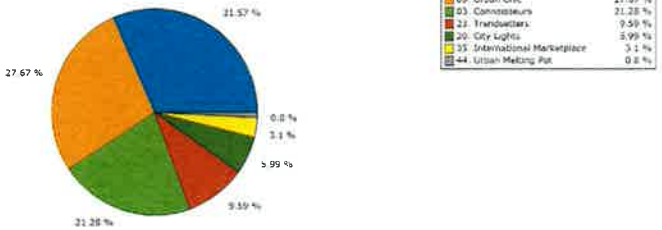
GOMAN+YORK
NOVEMBER 2014

Top 10 Tapestry Segments



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Lifestyle Report

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5 minutes

Prepared by Robert Goman

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April 13, 2014

GOMAN+YORK
NOVEMBER 2014

Market Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5, 13, 23 minutes

Prepared by Robert Goman

	0 - 5 minutes	0 - 13 minutes	0 - 23 minutes
Population Summary			
2000 Total Population	15,024	188,613	1,244,533
2010 Total Population	15,771	194,677	1,280,138
2013 Total Population	15,686	195,142	1,285,824
2013 Group Quarters	158	4,418	29,898
2018 Total Population	15,805	196,781	1,313,850
2013-2018 Annual Rate	0.15%	0.37%	0.43%
Household Summary			
2000 Households	5,743	71,508	469,699
2000 Average Household Size	2.60	2.60	2.60
2010 Households	5,896	72,575	480,532
2010 Average Household Size	2.65	2.62	2.60
2013 Households	5,872	72,725	482,959
2013 Average Household Size	2.64	2.62	2.60
2018 Households	5,925	74,093	493,813
2018 Average Household Size	2.64	2.62	2.60
2013-2018 Annual Rate	0.18%	0.37%	0.45%
2010 Families	4,089	47,872	315,302
2010 Average Family Size	3.26	3.22	3.23
2013 Families	4,060	47,854	316,078
2013 Average Family Size	3.26	3.22	3.22
2018 Families	4,071	48,461	321,151
2018 Average Family Size	3.26	3.23	3.23
2013-2018 Annual Rate	0.05%	0.25%	0.32%
Housing Unit Summary			
2000 Housing Units	5,990	73,982	490,221
Owner Occupied Housing Units	61.8%	56.4%	48.2%
Renter Occupied Housing Units	34.1%	40.2%	47.6%
Vacant Housing Units	4.1%	3.3%	4.2%
2010 Housing Units	6,412	78,349	511,672
Owner Occupied Housing Units	58.1%	54.4%	47.4%
Renter Occupied Housing Units	33.8%	38.2%	46.5%
Vacant Housing Units	8.0%	7.4%	6.1%
2013 Housing Units	6,379	78,660	515,655
Owner Occupied Housing Units	57.6%	53.4%	46.6%
Renter Occupied Housing Units	34.4%	39.1%	47.1%
Vacant Housing Units	7.9%	7.5%	6.3%
2018 Housing Units	6,508	79,864	526,562
Owner Occupied Housing Units	59.0%	54.9%	47.9%
Renter Occupied Housing Units	32.0%	37.9%	45.8%
Vacant Housing Units	9.0%	7.2%	6.2%
Median Household Income			
2013	$114,475	$85,864	$62,950
2018	$130,946	$100,543	$76,657
Median Home Value			
2013	$703,332	$629,865	$479,179
2018	$930,553	$852,654	$650,510
Per Capita Income			
2013	$61,544	$50,803	$38,559
2018	$76,101	$61,562	$45,805
Median Age			
2010	40.0	39.3	38.5
2013	40.5	39.9	38.9
2018	41.1	40.5	39.4

Data Note: Household population includes persons not residing in group quarters. Average Household Size is the household population divided by total households. Persons in families include the householder and persons related to the householder by birth, marriage, or adoption. Per Capita Income represents the income received by all persons aged 15 years and over divided by the total population.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography.

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2013 Households by Income			
Household Income Base	5,872	72,725	482,959
<$15,000	6.4%	7.1%	10.8%
$15,000 - $24,999	4.2%	6.6%	8.0%
$25,000 - $34,999	2.9%	7.7%	9.1%
$35,000 - $49,999	7.1%	9.8%	12.6%
$50,000 - $74,999	13.0%	13.5%	15.7%
$75,000 - $99,999	10.1%	10.9%	11.2%
$100,000 - $149,999	16.6%	15.8%	14.6%
$150,000 - $199,999	10.5%	8.7%	6.8%
$200,000+	29.0%	20.0%	11.2%
Average Household Income	$168,314	$135,087	$101,518
2018 Households by Income			
Household Income Base	5,925	74,093	493,813
<$15,000	5.2%	6.2%	10.1%
$15,000 - $24,999	2.9%	4.9%	6.1%
$25,000 - $34,999	2.5%	6.3%	8.1%
$35,000 - $49,999	5.7%	8.5%	11.5%
$50,000 - $74,999	9.3%	11.1%	13.1%
$75,000 - $99,999	11.4%	12.6%	13.3%
$100,000 - $149,999	18.6%	17.7%	16.9%
$150,000 - $199,999	12.6%	10.7%	8.5%
$200,000+	31.8%	21.9%	12.4%
Average Household Income	$207,993	$163,973	$120,756
2013 Owner Occupied Housing Units by Value			
Total	3,676	41,998	240,052
<$50,000	0.1%	0.2%	0.6%
$50,000 - $99,999	0.8%	1.2%	2.7%
$100,000 - $149,999	1.6%	1.8%	2.6%
$150,000 - $199,999	2.0%	3.0%	3.5%
$200,000 - $249,999	2.3%	3.5%	4.4%
$250,000 - $299,999	3.6%	4.6%	6.0%
$300,000 - $399,999	10.0%	10.6%	16.4%
$400,000 - $499,999	10.7%	12.3%	17.4%
$500,000 - $749,999	23.2%	24.2%	24.7%
$750,000 - $999,999	16.0%	12.5%	8.2%
$1,000,000 +	29.7%	25.9%	13.5%
Average Home Value	$760,373	$706,169	$568,406
2018 Owner Occupied Housing Units by Value			
Total	3,840	43,813	252,300
<$50,000	0.0%	0.0%	0.1%
$50,000 - $99,999	0.0%	0.1%	0.5%
$100,000 - $149,999	0.2%	0.3%	0.7%
$150,000 - $199,999	0.9%	1.2%	3.1%
$200,000 - $249,999	1.5%	2.4%	3.9%
$250,000 - $299,999	1.5%	3.1%	4.6%
$300,000 - $399,999	1.8%	4.7%	9.3%
$400,000 - $499,999	4.7%	8.4%	13.3%
$500,000 - $749,999	9.5%	16.9%	23.9%
$750,000 - $999,999	41.5%	31.4%	24.0%
$1,000,000 +	38.5%	31.5%	16.5%
Average Home Value	$939,878	$844,621	$686,423

Data Note: Income represents the preceding year, expressed in current dollars. Household income includes wage and salary earnings, interest dividends, net rents, pensions, SSI and welfare payments, child support, and alimony.
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2010 Population by Age			
Total	15,770	194,679	1,280,139
0 - 4	7.0%	6.2%	6.3%
5 - 9	8.9%	6.7%	6.4%
10 - 14	9.0%	6.8%	6.6%
15 - 24	9.9%	11.7%	12.9%
25 - 34	8.5%	12.6%	13.2%
35 - 44	15.3%	14.8%	14.1%
45 - 54	16.8%	15.3%	14.9%
55 - 64	10.0%	11.3%	11.5%
65 - 74	6.5%	7.0%	7.1%
75 - 84	4.9%	5.1%	4.8%
85 +	3.4%	2.6%	2.3%
18 +	70.1%	76.1%	76.5%
2013 Population by Age			
Total	15,685	195,142	1,285,822
0 - 4	6.4%	5.9%	6.0%
5 - 9	8.2%	6.6%	6.4%
10 - 14	9.5%	7.1%	6.7%
15 - 24	11.7%	12.2%	13.0%
25 - 34	7.9%	12.1%	12.9%
35 - 44	13.3%	13.8%	13.4%
45 - 54	16.8%	15.1%	14.6%
55 - 64	11.4%	12.2%	12.2%
65 - 74	6.9%	7.6%	7.7%
75 - 84	4.5%	4.8%	4.7%
85 +	3.3%	2.7%	2.4%
18 +	70.8%	76.4%	76.9%
2018 Population by Age			
Total	15,807	198,781	1,313,851
0 - 4	6.1%	5.8%	5.9%
5 - 9	7.8%	6.4%	6.2%
10 - 14	9.3%	7.1%	6.8%
15 - 24	12.2%	11.8%	12.5%
25 - 34	8.1%	11.7%	12.7%
35 - 44	11.5%	13.3%	13.0%
45 - 54	16.0%	14.4%	13.6%
55 - 64	13.8%	13.2%	12.9%
65 - 74	7.7%	8.8%	9.0%
75 - 84	4.4%	4.9%	4.9%
85 +	3.0%	2.7%	2.4%
18 +	71.6%	76.6%	77.2%
2010 Population by Sex			
Males	7,567	94,606	606,410
Females	8,204	100,071	673,728
2013 Population by Sex			
Males	7,564	95,201	610,686
Females	8,122	99,941	675,138
2018 Population by Sex			
Males	7,657	97,492	626,258
Females	8,148	101,289	687,592

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography

April 13, 2014

Market Profile

120 old post rd
120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
Drive Time: 5, 13, 23 minutes

Prepared by Robert Goman

	0 - 5 minutes	0 - 13 minutes	0 - 23 minutes
2010 Population by Race/Ethnicity			
Total	15,771	194,676	1,280,137
White Alone	85.2%	74.3%	55.6%
Black Alone	2.3%	7.5%	24.3%
American Indian Alone	0.2%	0.4%	0.5%
Asian Alone	6.8%	5.8%	6.0%
Pacific Islander Alone	0.0%	0.1%	0.1%
Some Other Race Alone	3.5%	9.0%	10.1%
Two or More Races	2.0%	3.0%	3.3%
Hispanic Origin	11.3%	23.9%	25.6%
Diversity Index	41.6	64.3	77.0
2013 Population by Race/Ethnicity			
Total	15,685	195,143	1,285,823
White Alone	84.2%	72.9%	54.7%
Black Alone	2.3%	7.6%	24.2%
American Indian Alone	0.2%	0.4%	0.5%
Asian Alone	7.2%	6.1%	6.3%
Pacific Islander Alone	0.0%	0.1%	0.1%
Some Other Race Alone	3.8%	9.7%	10.5%
Two or More Races	2.2%	3.2%	3.6%
Hispanic Origin	12.4%	25.7%	26.9%
Diversity Index	44.1	66.5	78.0
2018 Population by Race/Ethnicity			
Total	15,804	198,782	1,313,849
White Alone	82.5%	70.8%	53.3%
Black Alone	2.4%	7.8%	24.1%
American Indian Alone	0.2%	0.4%	0.6%
Asian Alone	8.0%	6.6%	6.9%
Pacific Islander Alone	0.0%	0.1%	0.1%
Some Other Race Alone	4.4%	10.8%	11.2%
Two or More Races	2.5%	3.5%	3.9%
Hispanic Origin	14.6%	28.8%	29.3%
Diversity Index	48.4	69.8	79.7
2010 Population by Relationship and Household Type			
Total	15,771	194,677	1,280,138
In Households	99.0%	97.7%	97.7%
In Family Households	86.1%	82.1%	82.2%
Householder	25.4%	24.6%	24.6%
Spouse	21.4%	19.1%	16.4%
Child	35.6%	30.7%	32.5%
Other relative	2.3%	4.9%	6.0%
Nonrelative	1.4%	2.9%	2.7%
In Nonfamily Households	12.9%	15.6%	15.5%
In Group Quarters	1.0%	2.3%	2.3%
Institutionalized Population	0.8%	0.6%	1.0%
Noninstitutionalized Population	0.2%	1.7%	1.3%

Data Note: Persons of Hispanic Origin may be of any race. The Diversity Index measures the probability that two people from the same area will be from different race/ethnic groups.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography.

April 13, 2014

GOMAN YORK

Market Profile

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120 Old Post Rd, Rye, New York, 10580, 5, 13, 23 DT
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2013 Population 25+ by Educational Attainment			
Total	10,069	133,304	872,305
Less than 9th Grade	2.1%	7.2%	7.6%
9th - 12th Grade, No Diploma	4.0%	5.0%	7.6%
High School Graduate	15.3%	21.2%	24.7%
Some College, No Degree	10.6%	12.3%	15.3%
Associate Degree	6.4%	5.3%	6.5%
Bachelor's Degree	33.7%	24.9%	20.7%
Graduate/Professional Degree	27.9%	24.1%	17.6%
2013 Population 15+ by Marital Status			
Total	11,902	157,048	1,040,062
Never Married	24.7%	30.8%	36.1%
Married	61.8%	54.8%	48.5%
Widowed	7.3%	6.6%	6.8%
Divorced	6.3%	7.7%	8.6%
2013 Civilian Population 16+ in Labor Force			
Civilian Employed	90.4%	91.1%	90.0%
Civilian Unemployed	9.6%	8.9%	10.0%
2013 Employed Population 16+ by Industry			
Total	6,666	95,209	591,245
Agriculture/Mining	0.2%	0.1%	0.1%
Construction	6.4%	6.6%	5.6%
Manufacturing	3.2%	4.9%	4.2%
Wholesale Trade	2.3%	2.5%	2.0%
Retail Trade	8.5%	9.2%	9.8%
Transportation/Utilities	2.6%	3.1%	4.6%
Information	4.8%	2.6%	2.5%
Finance/Insurance/Real Estate	21.5%	13.6%	11.2%
Services	48.2%	54.8%	56.4%
Public Administration	2.2%	2.6%	3.4%
2013 Employed Population 16+ by Occupation			
Total	6,664	95,210	591,244
White Collar	78.8%	67.5%	64.1%
Management/Business/Financial	28.1%	21.2%	16.8%
Professional	26.3%	23.9%	23.5%
Sales	15.8%	11.6%	10.8%
Administrative Support	8.6%	10.8%	13.0%
Services	13.4%	20.0%	22.1%
Blue Collar	7.8%	12.5%	13.8%
Farming/Forestry/Fishing	0.0%	0.1%	0.1%
Construction/Extraction	3.2%	5.3%	4.7%
Installation/Maintenance/Repair	1.5%	1.4%	2.0%
Production	0.5%	2.6%	2.6%
Transportation/Material Moving	2.7%	3.2%	4.4%

Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography.

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2010 Households by Type			
Total	5,897	72,576	480,531
Households with 1 Person	27.0%	28.7%	29.2%
Households with 2+ People	73.0%	71.3%	70.8%
Family Households	69.3%	66.0%	65.6%
Husband-Wife Families	58.5%	51.1%	43.7%
With Related Children	34.3%	26.1%	21.7%
Other Family (No Spouse Present)	10.8%	14.8%	21.9%
Other Family with Male Householder	2.8%	4.0%	5.0%
With Related Children	1.3%	1.8%	2.3%
Other Family with Female Householder	8.1%	10.8%	16.9%
With Related Children	4.6%	6.0%	10.1%
Nonfamily Households	3.6%	5.3%	5.2%
All Households with Children	40.3%	34.2%	34.4%
Multigenerational Households	1.9%	3.2%	5.0%
Unmarried Partner Households	3.3%	4.6%	5.4%
Male-female	2.8%	4.0%	4.7%
Same-sex	0.4%	0.6%	0.7%
2010 Households by Size			
Total	5,896	72,576	480,533
1 Person Household	27.1%	28.7%	29.2%
2 Person Household	25.9%	28.5%	28.1%
3 Person Household	15.3%	15.6%	16.6%
4 Person Household	18.4%	15.1%	14.3%
5 Person Household	9.4%	7.4%	7.1%
6 Person Household	2.8%	2.7%	2.7%
7 + Person Household	1.1%	2.0%	2.0%
2010 Households by Tenure and Mortgage Status			
Total	5,896	72,574	480,532
Owner Occupied	63.2%	58.8%	50.5%
Owned with a Mortgage/Loan	42.1%	39.6%	34.8%
Owned Free and Clear	21.1%	19.2%	15.6%
Renter Occupied	36.8%	41.2%	49.5%

Data Note: Households with children include any households with people under age 18, related or not. Multigenerational households are families with 3 or more parent-child relationships. Unmarried partner households are usually classified as nonfamily households unless there is another member of the household related to the householder. Multigenerational and unmarried partner households are reported only to the tract level. Esri estimated block group data, which is used to estimate polygons or non-standard geography.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography.

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

GOMAN YORK

Market Profile

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Top 3 Tapestry Segments				
	1.	Top Rung	Top Rung	City Lights
	2.	Urban Chic	Urban Chic	City Strivers
	3.	Connoisseurs	City Lights	Top Rung
2013 Consumer Spending				
Apparel & Services: Total $		$21,043,161	$214,578,681	$1,107,360,395
Average Spent		$3,583.64	$2,950.55	$2,292.87
Spending Potential Index		158	130	101
Computers & Accessories: Total $		$3,594,245	$35,789,453	$177,005,496
Average Spent		$612.13	$492.12	$366.50
Spending Potential Index		246	198	148
Education: Total $		$23,809,183	$238,553,726	$1,209,900,074
Average Spent		$4,054.70	$3,280.22	$2,505.18
Spending Potential Index		278	225	172
Entertainment/Recreation: Total $		$46,092,098	$453,258,425	$2,240,208,627
Average Spent		$7,849.47	$6,232.50	$4,638.51
Spending Potential Index		241	192	143
Food at Home: Total $		$63,861,629	$659,730,119	$3,426,697,578
Average Spent		$10,875.62	$9,071.57	$7,095.21
Spending Potential Index		216	180	141
Food Away from Home: Total $		$43,110,309	$439,390,644	$2,222,385,619
Average Spent		$7,341.67	$6,041.81	$4,601.60
Spending Potential Index		230	189	144
Health Care: Total $		$58,245,351	$570,430,339	$2,819,516,811
Average Spent		$9,919.17	$7,843.66	$5,838.00
Spending Potential Index		223	176	131
HH Furnishings & Equipment: Total $		$21,872,352	$215,281,628	$1,056,815,578
Average Spent		$3,724.86	$2,960.21	$2,188.21
Spending Potential Index		207	164	121
Investments: Total $		$56,917,095	$449,725,178	$1,687,220,723
Average Spent		$9,692.97	$6,183.91	$3,493.51
Spending Potential Index		467	298	168
Retail Goods: Total $		$303,506,741	$3,022,079,791	$15,038,417,554
Average Spent		$51,687.12	$41,554.90	$31,138.08
Spending Potential Index		214	172	129
Shelter: Total $		$240,936,105	$2,415,405,134	$12,207,097,382
Average Spent		$41,031.35	$33,212.86	$25,275.64
Spending Potential Index		252	204	155
TV/Video/Audio:Total $		$15,985,547	$164,919,984	$856,736,321
Average Spent		$2,722.33	$2,267.72	$1,773.93
Spending Potential Index		211	176	138
Travel: Total $		$28,946,598	$273,462,214	$1,295,737,578
Average Spent		$4,929.60	$3,760.22	$2,682.91
Spending Potential Index		269	205	146
Vehicle Maintenance & Repairs: Total $		$14,769,798	$145,734,314	$714,080,836
Average Spent		$2,515.29	$2,003.91	$1,478.55
Spending Potential Index		230	183	135

Data Note: Consumer spending shows the amount spent on a variety of goods and services by households that reside in the area. Expenditures are shown by broad budget categories that are not mutually exclusive. Consumer spending does not equal business revenue. Total and Average Amount Spent Per Household represent annual figures. The Spending Potential Index represents the amount spent in the area relative to a national average of 100.
Source: Consumer Spending data are derived from the 2010 and 2011 Consumer Expenditure Surveys, Bureau of Labor Statistics. Esri.
Source: U.S. Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2013 and 2018. Esri converted Census 2000 data into 2010 geography.

April 13, 2014

GOMAN+YORK
NOVEMBER 2014

McCarthy Appraisal / Consulting Svc. Inc.
1364 Rte 6, Carmel, New York 10512 (914)420-8757 apprbyedye@comcast.net

Alfred Weissman
c/o: HKP – Harfenist Kraut & Prsltein LLP
2975 Westchester Avenue
Suite 415
Purchase, NY 10577

January 9, 2014
RE: 120 Old Post Road, Rye, NY
Potential development - Proposed Property Tax Exposure

Dear Mr. Weissman:

As per your request through my conversations with your attorney, Jonathan Kraut, I am respectfully enclosing this report on the potential tax exposure on the proposed development plan located at above noted address. The documentation enclosed, illustrates both the current property taxes and an analysis for the proposed development. As you will see, there is a substantial increase in taxes from the current use. This analysis is based on the required methodology for apartments/condominiums and cooperatives in the New York State Real Property Tax Law.

The analysis and potential tax exposure is based on information received to date and based on the project reaching stabilization. We based our analysis on the following information, and if current proposal changes throughout the approval process, the valuation may change as well.

46 1 Bedroom with 1,215 square feet
89 2 Bedroom with 1,395 square feet
There will be 1.25 parking for each unit which will be included in the rental rates.

As can be seen from the enclosed, the rental income was established by gathering information from the most comparable properties in the market place. As this will be a new complex with several amenities, the market rental rates are assumed to be higher than typical within the City of Rye. However, they are included in the report for reference. Therefore we expanded our search to newer developed apartment complexes. The expenses, and capitalization rate were also derived from the market and reliable real estate publications. I will be happy to discuss this with you in further detail if necessary.

Sincerely

Edye McCarthy
Commercial Real Estate Appraiser/Consultant

Projected Market Value

First Assessment Year	2014		
File No.		E:\[weissman.xls]anal	
Parcel I.D. S-B-L	146.13-1-7	Date	01/20/15
Property Address	120 Old Post Road	Time	05:44 PM
Property Owner	Old Post Rd Assoc.	1bdrm	46
Property Representative	Kraut	2bdrm	89
Property Class		Total Sq.ft.	135

Sq.Ft	
1,215	
1,395	

INCOME / EXPENSE WORKSHEET

1bdrm		$2,800.00
2bdrm		$3,200.00
Assessment Year		2014
Tax Year		#N/A
Income		
Residential		1,545,600
Commercial		3,417,600
Owner Occupied Space		
Real Estate Tax Escalations		
Operating Escalation Income		
Other Operating Income		
- Vacancy/Collection	5.0%	248,160
= Effective Gross Income		4,715,040
Expenses		
Audit/Adjusted Expenses	30%	1,414,512
Management	5.0%	235,752
Amortized/Other Expense Adj.		
1		
2		
5		
= Total Expenses		1,650,264
Net Operating Income		3,064,776

EZ Expense Data Entry	$ Amounts
EXPENSES:	2014
a. Fuel	
b. Light and power	
c. Cleaning contract	
d. Wages and payroll	
e. Repairs and maintenance	
f. Management and administration	
g. Insurance (annual)	
h. Water and sewer	
i. Advertising	
j. Interior painting and decorating	
k. Amort. leasing and tenant impr.costs	
l. Miscellaneous expenses	
m. TOTAL EXPENSES	#N/A

VALUATION CONCLUSIONS

Assessment Year		2014	
Net Operating Income			$3,064,776	
Expense / Income Ratio			35%	
Capitalization Rate		9.00%		
Full Market Value			$34,053,067	
	per unit		$252,244.94	
Assessed Valuation		1.91%	143,100	
Equalized Value			$7,492,147	
Under/Over Assessed			$26,560,920	
AV should be			$650,414	$615,896

Total Tax Rate	$	946.93
value per unit	$	252,245

MLSNumb	PropertyTy	Status	StreetNum	StreetSuffi	ListPrice	ClosePrice	BathsTotal	BedsTotal	SqFtTotal	YearBuilt	DOM	City
94623	Rental	Sold	15	Street	$ 1,550	$ 1,450	1	2	980		14	Rye City
85417	Rental	Sold	42	Avenue	$ 1,200	$ 1,200	1	1	650	1949	84	Rye City
83638	Rental	Sold	50		$ 3,200	$ 2,800	3	3	1800	1981	101	Rye City
89367	Rental	Sold	4	Street	$ 1,500	$ 1,400	1	2	852	1954	33	Rye City
85011	Rental	Sold	1	Street	$ 1,600	$ 1,450	1	2	950	1954	58	Rye City
84862	Rental	Sold	181	Street	$ 1,100	$ 1,050	1	1	500	1954	17	Rye City
72750	Rental	Sold	181	Street	$ 1,450	$ 1,400	2	2	900	1954	33	Rye City
69716	Rental	Sold	645	Avenue	$ 2,500	$ 2,200	3	2	2000	1985	46	Rye City
70522	Rental	Sold	181	Street	$ 1,200	$ 1,200	1	1		1954	27	Rye City
69112	Rental	Sold	3		$ 1,050	$ 1,000	1	1	750	1954	41	Rye City
69081	Rental	Sold	5	Street	$ 1,495	$ 1,435	1	2	950	1942	24	Rye City
65915	Rental	Sold	181		$ 1,050	$ 975	1	1	500	1954	60	Rye City
68592	Rental	Sold	110		$ 2,450	$ 2,400	3	2	1300	1987	13	Rye City
63850	Rental	Sold	40		$ 3,500	$ 3,500	3	2	1930	1980	67	Rye City
55818	Rental	Sold	130		$ 1,500	$ 1,500	1	2	900	1953	56	Rye City
59558	Rental	Sold	14		$ 3,500	$ 3,300	3	3	2300	1988	15	Rye City
46316	Rental	Sold	10		$ 3,200	$ 3,000	3	2	1800	1989	160	Rye City
55081	Rental	Sold	181		$ 1,300	$ 1,250	1	1	700	1954	52	Rye City
55614	Rental	Sold	75		$ 3,100	$ 3,000	3	2	1950	1981	46	Rye City
56705	Rental	Sold	100		$ 1,250	$ 1,200	1	1	700	1955	29	Rye City
50653	Rental	Sold	130		$ 1,000	$ 1,000	1	1	700	1955	48	Rye City
50162	Rental	Sold	599	Avenue	$ 2,500	$ 2,350	3	2	1600	1989	10	Rye City
46106	Rental	Sold	6	Avenue	$ 1,800	$ 1,700	1	2	1000	1926	47	Rye City
40096	Rental	Sold	39	Avenue	$ 1,600	$ 1,500	1	2	900	1949	121	Rye City
41675	Rental	Sold	645	Avenue	$ 3,200	$ 3,200	7	2	2100	1987	94	Rye City

MARKET DATA

Apartment Site	1 Bedroom average	1 Bedroom price range	1 Bedroom Sq Ft	2 Bedroom / 1 Bath average	2 Bedroom / 1 Bath price range	2 Bedroom / 1 Bath Sq Ft	2 Bedroom / 2 Bath average	2 Bedroom / 2 Bath price range	2 Bedroom / 2 Bath Sq Ft
Avalon Green									
500 Town Green Drive, Elmsford, NY 10523 / 914-610-4306		NL	642	$ 2,038	2030-2045	700	$ 2,868	2855-2880	1192
	$ 2,025	1920-2130	679-702		n/a	n/a	$ 2,485	2485	1260
	$ 2,100	1995-2205	774-841		n/a	n/a	$ 2,750	2745-2755	1450
	$ 2,005	1985-2025	870		n/a	n/a		NL	1601-1721
		NL	885		n/a	n/a	$ 2,715	2715	1361-1372
	$ 2,313	2275-2350	969-990		n/a	n/a	$ 2,718	2705-2730	1362
	$ 2,575	2575	1076		n/a	n/a	$ 2,720	2715-2725	1421-1436
	$ 2,900	2300	1103		n/a	n/a		n/a	n/a
		NL	1205		n/a	n/a		n/a	n/a
Average:	$ 2,220			$ 2,038			$ 2,678		
Tallevrand Apartments									
1202 Crescent Drive, Tarrytown, NY 10591 / 914-449-1388	$ 1,805	1805	658	$ 2,018	2015-2020	828	$ 2,028	2025-2030	934
		NL	794	$ 2,183	2170-2195	971	$ 2,190	2180-2200	1064
Average:	$ 1,805			$ 2,100			$ 2,109		
Ridgeview Apartments									
32 Nob Hill Drive, Elmsford, NY 10523 / 914-610-4229	$ 1,637	1587-1687	658	$ 1,833	1833	828	$ 1,948	1925-1970	934 (1.5 bath)
Average:	$ 1,637			$ 1,833			$ 1,948		
Various Irvington Apartment Listings									
Irvington Village / South Eckar		n/a	n/a	$ 1,975	1975	NL, 7 Bath		n/a	n/a
111 North Broadway, Irvirgton, NY		n/a	n/a		n/a	n/a	$ 2,100	2100	NL
635 South Broadway, Irvington, NY		n/a	n/a	$ 3,100	3100	1300		n/a	n/a
Irvington, NY		n/a	n/a	$ 2,050	2050	900		n/a	n/a
Irvington, NY		n/a	n/a	$ 1,950	1950	NL		n/a	n/a
86 Main Street, Irvington, NY 10533	$ 1,250	1250	566		n/a	n/a		n/a	n/a
Irvington, NY		n/a	n/a		NL	1650		n/a	n/a
5 Eckar Street, Irvington, NY 10533		n/a	n/a	$ 1,975	1975	NL		n/a	n/a
106 Main Street, #1, Irvington, NY 10533		n/a	n/a	$ 2,750	2750	1000		n/a	n/a
106 Main Street, #2, Irvington, NY 10533		n/a	n/a	$ 2,200	2200	1000		n/a	n/a
90 S Broadway-carriage House, Irvington, NY 10533		n/a	n/a	$ 1,800	1800	1100		n/a	n/a
1 S Aster St, #303, Irvington, NY 10533	$ 2,600	2600	1150		n/a	n/a		n/a	n/a
1 S Aster St, Irvington, NY 10533		2500	850		n/a	n/a		n/a	n/a
1 S Aster St, Irvington, NY 10533		n/a	n/a		n/a	n/a	$ 3,250	3250	1150
24 S Eckar Street, Irvington, NY 10533		n/a	n/a	$ 2,000	2000	700		n/a	n/a
36 Hamilton Road, Apt 3, Irvington, NY 10533		n/a	n/a	$ 2,700	2700	1000		n/a	n/a
2 BR unit with hardwood floors throughout		n/a	n/a	$ 2,000	2000	850		n/a	n/a
UNFURNISHED in four-family private house		n/a	n/a	$ 1,800	1800	850		n/a	n/a
Average:	$ 1,925			$ 2,192			$ 2,675		
One City Place									
One City Place, White Plains, NY 10601 / 914-368-9177	$ 2,877	2401-3352	807	$ 4,056	3518-4593	1183	$ 4,222	3678-4765	947
	$ 3,071	2445-3697	526		n/a	n/a	$ 4,046	3415-4676	971
	$ 2,965	2376-3553	827		n/a	n/a	$ 3,588	3151-4024	1018
	$ 3,028	2577-3478	641		n/a	n/a	$ 4,232	3521-4943	1033
	$ 2,911	2363-3458	644		n/a	n/a	$ 4,350	3656-5044	1036
	$ 3,108	2477-3738	652		n/a	n/a	$ 3,587	2864-4310	1044
	$ 3,108	2477-3738	653		n/a	n/a	$ 3,834	3166-4502	1249
		n/a	n/a		n/a	n/a	$ 3,403	2771-4034	1271
Average:	$ 3,009			$ 4,056			$ 3,908		
Halstead White Plains Metro North									
34 South Lexington Avenue, White Plains, NY 10606 / 914-449-1355	$ 2,242	2153-2330	599	$ 2,816	2595-3037	988	$ 2,959	2717-3200	829
	$ 2,274	2124-2423	656		n/a	n/a	$ 3,271	2912-3629	1039
Average:	$ 2,258			$ 2,816			$ 3,115		
Avalon White Plains									
27 Barker Avenue, White Plains, NY 10601 / 914-368-7166	$ 2,185	2115-2255	678-711		n/a	n/a	$ 3,185	3185	1075
	$ 2,248	2110-2385	694-708		n/a	n/a	$ 3,205	3205	1193
	$ 2,258	2155-2360	723-726		n/a	n/a	$ 3,945	3945	1464
	$ 2,275	2255-2295	758		n/a	n/a	$ 3,995	3995	1473
	$ 2,280	2280	813		n/a	n/a	$ 4,080	4080	1533
	$ 2,500	2500	835		n/a	n/a		n/a	n/a
	$ 2,515	2515	858		n/a	n/a		n/a	n/a
Average:	$ 2,329						$ 3,682		

PROPERTY TAX PROJECTIONS

	Tax Rates 2014/2015	Current Property Taxes	Proposed Development 2014/2015 Property Taxes
CITY	$ 150.38	$ 21,519.38	$ 97,809.19
COUNTY	$ 187.92	$ 26,891.35	$ 122,225.72
SCHOOL	$ 561.33	$ 80,326.32	$ 365,096.65
COUNTY REFUSE	$ 17.61	$ 2,519.99	$ 11,453.78
BLIND BROOK SEWER	$ 29.69	$ 4,248.64	$ 19,310.78
	$ 946.93	$ 135,505.68	$ 615,896.12
Current Assessed Value	143,100		
Proposed Assessed value per analysis	650,414		

7/22/2014	2014 MUNICIPAL COUNTY TAX RATES FOR THE COUNTY GENERAL LEVY			
MUNICIPALITY	SWIS CODE	PARCELS	TAXABLE ASSESSED VALUE	TAX RATE PER $1,000
City of Mount Vernon	550800	11,281	151,232,793	101.980000
City of New Rochelle	551000	16,084	267,270,832	123.532000
City of Peekskill	551200	6,395	61,921,656	86.011050
City of Rye	551400	4,935	137,863,523	187.923444
City of White Plains	551700	14,088	276,979,095	100.990000
City of Yonkers	551800	36522	475,391,550	117.860000
Town of Bedford	552000	6,296	577,140,508	32.123240
Town of Cortlandt	552200	15,379	107,009,202	183.970000
Town of Eastchester	552400	9,286	104,755,180	248.241100
Town of Greenburgh	552600	28,629	547,521,601	105.209400
Town of Harrison	552800	6,975	135,255,052	211.545407
Town of Lewisboro	553000	5,822	302,173,880	33.875600
Town of Mamaroneck	553200	8,739	8,686,517,881	3.702300
Town of Mount Kisco	555600	2,796	300,589,735	17.534800
Town of Mount Pleasant	553400	13,982	142,780,965	230.323644
Town of New Castle	553600	6,703	1,065,375,856	17.475340
Town of North Castle	553800	4,793	116,236,017	155.863400
Town of North Salem	554000	2,482	146,582,255	33.102261
Town of Ossining	554200	10,169	257,517,106	58.713265
Town of Pelham	554400	3,691	2,698,331,757	3.676420
Town of Pound Ridge	554600	2,471	368,913,586	20.061500
Town of Rye	554800	11,091	6,141,245,975	3.650718
Town of Scarsdale*	555000	5,955	140,100,756	216.627300
Town of Somers	555200	9,184	497,081,609	26.568026
Town of Yorktown	555400	14,377	126,394,696	133.284000

	B	C	D	E	F	G
1	6/2/2014	**2014 SPECIAL DISTRICT TAX RATES (CITIES & TOWNS)**				
2	**MUNICIPALITY**	**DISTRICT CODE**	**SPECIAL DISRICT NAME**	**PARCELS**	**TAXABLE ASSESSED VALUE OR UNIT(S)**	**TAX RATE PER $1,000 OR CHARGE PER UNIT**
3		CS001	Hutchinson Valley County Sewer District	8,566	150,844,745.00	15.560000
4		CS002	Bronx River County Sewer District	2,715	42,537,257.00	15.560000
5	**City of Mount Vernon**	RF001	County Refuse Disposal District #1	11,281	159,791,272.00	9.020000
6		CR001	County Refuse District	16,057	291,474,408	11.541000
7		CS000	New Rochelle Sewer District	11,805	261,652,893	50.227000
8		CS001	Mamaroneck Sewer District	1,790	33,323,093	19.566000
9	**City of New Rochelle**	CS002	Hutchinson Valley Sewer District	2,463	40,206,103	20.292000
10		SD001	Peekskill County Sewer District	6,368	120,178,034	14.884500
11	**City of Peekskill**	CW001	County Refuse Disposal District #1	6,252	67,965,830	8.042400
12		TXREF *	County Refuse Disposal District #1	4,935	140,101,716	17.608906
13		TXBBS *	Blind Brook County Sewer District	4,326	140,390,701	29.685584
14	**City of Rye**	TXMVS	Mamaroneck Valley County Sewer District	609	19,114,965	29.808843
15		GA174	County Refuse Disposal District #1	14,079	296,332,440	9.140000
16		SB171	Bronx Valley County Sewer District	8,239	230,646,314	14.800000
17	**City of White Plains**	SM172	Mamaroneck Valley County Sewer District	5,862	176,588,595	15.530000
18		CW001	County Refuse Disposal District #1	36,461	557,425,596	10.900000
19		CS001	Bronx Valley Sewer District #1	19,525	367,021,443	17.710000
20		CS002	South Yonkers County Sewer District #2	3,628	90,891,529	18.380000
21		CS003	Central Yonkers Sewer District #3	3,629	70,329,069	20.700000
22		CS004	North Yonkers County Sewer District #4	4,007	82,741,311	19.540000
23	**City of Yonkers**	CS005	Saw Mill Valley County Sewer District #5	5,147	87,249,743	17.790000
24		AM001	Paramedic Dist. No. 1	6,268	583,338,785	0.571560
25		FD030	Bedford Village Fire District	2,063	226,232,257	4.142390
26		PD011	Bedford Village Park District	2,066	226,586,921	2.980040
27		LT010	Bedford Village Lighting Dist	494	41,430,220	0.352160
28		FD031	Bedford Hills Fire District	1,965	173,466,578	11.258570
29		PD012	Bedford Hills Park District	2,030	187,805,234	3.738480
30		LT011	Bedford Hills Light	937	48,441,685	0.724460
31		FD032	Katonah Fire District	2,224	168,938,149	7.613140
32		PD013	Katonah Park District	2,224	168,946,335	4.406220
33		LT012	Katonah Light District	930	50,485,830	0.565370
34		WD039	Cedar Downs Water District	84	3,342,402	13.413710
35		WD040	Consolidated Water District	2,463	126,313,346	12.124380
36		WD042	Farms Water District (Cap)	99	6,138,622	5.422060
37		WD041	Farms Water District (O&M)	95	5,350,673	9.324810
38		WD043	Old Post Road Water District	76	6,107,136	9.174680
39	**Town of Bedford**	FD033	Fire Protection District No. 1	79	14,704,401	4.934920
40		SD472	Ossining Sanitary Sewer	2,664	19,776,712	41.200000
41		SD473	Peekskill Sanitary Sewer	1,561	14,277,672	32.480000
42		CW495	County Refuse Disposal #1	14,825	109,964,035	17.350000
43		FD411	Montrose Fire District	1,881	16,719,912	48.180000
44		FD412	Verplank Fire District	862	4,567,636	58.230000
45		FD413	Mohegan Fire District	6,652	44,597,345	93.840000
46		WD430	Montrose Water District	868	5,805,329	23.620000
47		PK481	Cort. Cont. Village Park	253	1,360,810	31.900000
48		FD415	Furnace Dock Road Fire Protection	165	1,369,806	37.560000
49		FD416	Mt. Airy Quaker Br. Rd. Fire Protection	652	6,723,336	58.310000
50		FD418	Continental Village Fire Protection	617	3,205,851	48.680000
51		WD457	Cortlandt Consolidated Water District	9,094	62,733,622	20.070000
52		LT460	Montrose Lighting District	867	5,847,630	15.820000
53		LT461	Verplank Lighting District	856	3,914,988	7.160000

2014/2015 SCHOOL DISTRICT TAX RATES

10/15/2014 MUNICIPALITY	SCHOOL DISTRICT SWIS CODE	SCHOOL DISTRICT NAME	NUMBER OF PARCELS	TAXABLE ASSESSED VALUE	TAX RATE PER 1,000
City of Mount Vernon	550800	Mount Vernon City School District	11,281	124,801,238	880.150000000
City of New Rochelle	551000	New Rochelle City School District	16,071	266,740,126	728.684000000
City of Peekskill	551200	Peekskill City School District	6,060	56,845,845	668.773300000
	552203	Hendrick Hudson CSD	357	5,811,894	468.945100000
City of Rye	551400	Rye City School District	4,499	124,684,852	561.328000000
	554801	Rye Neck UFSD - Homestead	414	13,405,107	847.987786000
	554801	Rye Neck UFSD - Non-Homestead	22	307,671	1,096.677945000
City of White Plains	551700	White Plains City School District	14,080	278,335,896	600.220000000
City of Yonkers	551800	Yonkers City School District	36506	472,896,126	487.960000000
Town of Bedford	552002	Bedford CSD	3,962	403,149,715	134.178712000
	552001	Katonah-Lewisboro UFSD	1,957	174,104,003	193.318100000
	553801	Byram Hills CSD	31	2,166,550	139.619963000
Town of Cortlandt	552202	Croton-Harmon SD	3,813	31,839,113	1,145.540000000
	552202	Croton-Harmon Library	3,813	31,839,113	24.330000000
	552203	Hendrick Hudson CSD	5,324	38,570,674	994.740000000
	552203	Hendrick Hudson Library	5,324	38,570,674	19.880000000
	555401	Lakeland CSD	5,611	34,653,504	1,400.130000000
	552803	Putnam Valley CSD	512	2,585,340	1,316.870000000
	555402	Yorktown CSD	119	1,108,437	1,329.820000000
Town of Eastchester	552401	Eastchester UFSD	5,115	53,152,077	1,290.555400000
	552402	Tuckahoe UFSD	2,227	19,272,855	1,366.812100000
	552403	Bronxville UFSD	1,589	2,711,860,473	14.296000000
Town of Greenburgh	552601	UFSD of the Tarrytowns	3,129	44,554,911	722.383290196
	552602	Irvington UFSD	2,824	74,838,217	665.350589467
	552603	Dobbs Ferry UFSD	2,514	44,712,007	788.018621582
	552604	Hastings-On-Hudson UFSD	2,823	46,977,407	783.308914417
	552605	Ardsley UFSD	3,894	67,510,668	735.292598085
	552606	Edgemont UFSD	2,515	69,852,801	668.360130394
	552607	Greenburgh Central 7 SD	6,846	112,193,406	493.616733948
	552609	Elmsford UFSD	2,735	48,240,760	578.463934437
	553402	Potantico Hills CSD	553	27,961,069	279.170874921
	553405	Valhalla UFSD	796	14,218,174	585.584036601
Town of Harrison	552801	Harrison CSD	6,975	135,936,590	732.583659000
Town of Lewisboro	553000	Katonah-Lewisboro UFSD	5822	303,998,481	203.927000000
Town of Mamaroneck	553201	Mamaroneck UFSD	8,473	8,379,665,708	13.758120000
	555001	Scarsdale UFSD	266	345,726,253	16.020630000

2014 CITY/TOWN TAX RATES

7/22/2014 MUNICIPALITY	SWIS CODE	PARCELS	UNINCORPORATED XABLE ASSESSED VAL	UNINCORPORATED TAX RATE PER 1,000	GENERAL TAXABLE ASSESSED VALUE	GENERAL TAX RATE PER 1,000
City of Mount Vernon	550800	11,281			152,910,735	367.940000
City of New Rochelle	551000	16,084			268,901,252	202.593000
City of Peekskill*	551200	6,395			61,839,156	238.371600
City of Rye	551400	4,937			138,126,937	150.380000
City of White Plains	551700	14,080			276,979,095	196.140000
City of Yonkers	551800	36506			472,896,126	214.22
Town of Bedford	552000	6,296			577,191,217	19.827190
Town of Cortlandt**	552200	15,379	79,781,520	170.79000	106,988,706	31.830000
Town of Eastchester	552400	9,286	57,835,125	266.17400	104,760,180	33.441200
Town of Greenburgh	552600	28,629	291,103,075	194.89810	254,579,096	15.582900
Town of Harrison	552800	6,975			135,603,693	326.594970
Town of Lewisboro	553000	5,822			302,173,880	18.299330
Town of Mamaroneck	553200	8,739	3,696,089,147	3.62821	8,686,122,513	0.422350
Town of Mount Kisco	555600	2,796	*See Village Tax Rate Table*			
Town of Mount Pleasant	553400	13,982	107,445,134	112.563737	143,258,568	8.938931
Town of New Castle	553600	6,703			1,065,375,856	14.091754
Town of North Castle	553800	4,793			116,258,878	158.295000
Town of North Salem	554000	2,482			146,602,975	38.522407
Town of Ossining	554200	10,169	49,509,918	101.179222	258,552,497	12.315124
Town of Pelham	554400	3,691		**Homestead**	2,334,800,766	0.548500
				Non-Homestead	391,340,996	0.744500
Town of Pound Ridge	554600	2,471			368,913,586	13.666300
Town of Rye	554800	11,091		**Homestead**	4,656,961,386	0.043754
				Non-Homestead	1,528,272,027	0.063407
Town of Scarsdale	555000	5,955	*See Village Tax Rate Table*			
Town of Somers	555200	9,184			497,254,606	13.717295
Town of Yorktown	555400	14,377			126,394,411	147.318100

*There is also a City Library tax

Taxable Assessed value	Tax Rate Per 1,000
63,498,073	12.363000

**There is also a town library tax, which applies to the entire town except Village of Croton-on-Hudson.

Taxable Assessed Value	Tax Rate Per 1000
86,495,165	6.880000

Please note that the general town tax rate is charged throughout a town including villages, if any. The unincorporated tax rate is charged in town areas outside of villages in towns that have villages. Therefore, if you live in the unincorporated area of a town that has villages you must add the two rates together to compute your

FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

RYE

FAIRFIELD

HUDSON VALLEY

LONG ISLAND

TRAFFIC ACCESS & IMPACT STUDY

Age-Restricted Residential Development
120 Old Post Road
Rye, New York

Prepared for:
Alfred Weissman Real Estate, Inc.

November 2014

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Age-Restricted Residential Development
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PROJECT STAFF

Michael A. Galante
Executive Vice President/Principal-in-Charge

Mohamed El Saadani
Principal Engineer/Transportation

Steven T. Cipolla
Associate/Transportation

Donovan C. Gordon
Computer Graphics Specialist

FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

DAVID H. STOLMAN
AICP, PP
PRESIDENT

MICHAEL A. GALANTE
EXECUTIVE
VICE PRESIDENT

41 RUANE STREET
FAIRFIELD
CONNECTICUT 06824
203 255-3100
FAX: 203 254-2139

RYE, NEW YORK
914 967-6540

HUDSON VALLEY
845 297-6056

LONG ISLAND
516 364-4544

www.fpclark.com

email@fpclark.com

November 25, 2014

Mr. Alfred Weissman
Mr. Alan Weissman
Alfred Weissman Real Estate, Inc.
120 Old Post Road
Rye, New York 10580

Gentlemen:

As requested, we have completed this Traffic Study for the proposed development of the subject property located at 120 Old Post Road in Rye, New York. The proposal is to demolish the existing, but mostly vacant office building comprising 70,000 square feet and construct a 135-unit residential, age-restricted, development. Access will remain to Playland Access Drive, essentially at the same location, and immediately south of the unsignalized intersection with Old Post Road.

The results of this Traffic Analysis indicate a development of this type and size will generate 27 and 34 vehicle trip ends during a typical weekday morning and weekday afternoon peak hour, respectively. This is based on trip generation rates provided by the Institute of Transportation Engineers (ITE). For comparison purposes, the existing office building, if fully occupied with a variety of commercial tenants, could generate 109 and 104 vehicle trip ends during the same weekday morning and weekday afternoon peak hours, respectively. Therefore, the redevelopment of the subject property as a residential development will result in a significant reduction in site traffic, with a decrease of 82 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analyses indicate that area roadways, although certain roadways approaches to intersections experience short-term delays during peak hours, each location will continue to operate with no change in Level of Service, except for an overall decrease in Level of Service at the signalized intersection of Theodore Fremd Avenue and Playland Access Drive from "B" to "C" during the weekday morning peak hour. However, this change in Level of Service will result in an overall increase in average vehicle delay per vehicle of only 0.3 seconds, which is considered insignificant. The results of

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RYE, NEW YORK FAIRFIELD, CONNECTICUT

these analyses and a comparison between a background and combined conditions, which includes the proposed residential development, indicate that traffic control and pavement markings at each of these intersections should remain unchanged as no modifications are necessary to accommodate this residential development. Any approach with a Level of Service "F" will have a maximum increase in average delay of 7.2 seconds, which occurs during the morning peak hour.

This Traffic Study incorporates traffic related to a proposed residential development to be located on Theodore Fremd Avenue and potential development to be generated by Playland in the future.

Sincerely,

Michael A Galante, TD

Michael A. Galante
Executive Vice President

Enclosure

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SUMMARY

The purpose of this Traffic Report is to provide the City of Rye with a detailed analysis of potential impacts from this proposed development on adjacent roadways and nearby intersections in the designated Study Area. The proposal is to demolish the existing, but mostly vacant, office building comprising 70,000 square feet of space and construct an age-restricted residential development which will have 135 units. Access will remain the same from Playland Access Drive to the immediate south of the Old Post Road STOP sign-controlled intersection.

The Traffic Study is based on traffic volumes obtained in 2012 through 2014. These volumes were obtained by Frederick P. Clark Associates, Inc. and other Traffic Consultants for different nearby projects.

In this Traffic Study it addresses traffic conditions for existing, no-build and build peak hour volumes near the site. It includes the weekday morning and weekday afternoon peak hours. Under the no-build condition it includes other developments, as well as an appropriate growth rate.

The proposal is to demolish the existing, but mostly vacant, office building and construct the age-restricted development, as noted above. To estimate site traffic for the proposed development trip generation rates were obtained from the Institute of Transportation Engineers (ITE) in "Trip Generation," 9th Edition, published 2012. Based on these trip generation rates it is estimated a development of this type and size will generate 27 and 34 vehicle trip ends during the typical weekday morning and weekday afternoon peak hours, respectively. For comparison purposes the current 70,000 square-foot office building, if it was to be fully reoccupied, could generate 109 and 104 vehicle trip ends during the same weekday morning and weekday afternoon peak hours, respectively. Therefore, the proposed residential development would result in a decrease

in site traffic generation of 82 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. This is a significant reduction in site traffic generation potential directly related to the change in land use from an office building to a residential development.

The results of the capacity analysis for existing conditions indicate the Theodore Fremd Avenue/Playland Access Drive signalized intersections operates at an acceptable overall Level of Service "B" during peak hours. During the weekday morning peak hour motorists experience delays at the unsignalized intersection of Playland Access Drive /Playland Parkway/Medical Building, Old Post Road at Playland Access Drive and Old Post Road at Thruway Access Drive. All of the Study Area intersections operate at acceptable Levels of Service during the weekday afternoon peak hour. Similar results are found for 2016 background conditions. In both existing and background conditions analyses the office building located on the site is considered vacant.

Under a future combined condition, which includes the proposed residential development, each of these unsignalized intersections will continue to operate at acceptable Levels of Service, except for some Levels of Service "E" or "F" identified in a background condition. A comparison of the background and combined traffic conditions for each of these intersections indicate that Levels of Service will remain unchanged, except for change from an overall Level of Service "B" to "C" at the signalized intersection of Theodore Fremd Avenue at Playland Access Drive, with an insignificant overall delay due to the residential development of 0.3 seconds per vehicle during this one peak hour. Results of the analyses for the weekday afternoon peak hour indicate Levels of Service will remain the same at each of the unsignalized intersections and at each of the lane groups or approaches with minimal, if any, increase in average vehicle delay due to the proposed residential development.

Based on the results of these analyses it is recommended that the current traffic control and pavement markings at each of these locations remain unchanged. The analysis indicates that the added site traffic for a residential development is insignificant and will not change the overall operation of any of the intersections in the Study Area. In addition, there is a significant benefit of converting this office building to a residential development, which results in a significant decrease in site traffic generation during the key weekday morning and weekday afternoon peak hours.

The results of these analyses have been compared to field observations at each of these locations during both the weekday morning and weekday afternoon peak hours. It is noted that motorists do experience short-term delays at the Playland Parkway off ramp to Playland Access Drive and on the Playland Access Drive and Thruway Access Drive approaches to Old Post Road during peak hours. However, based on the results of this analysis each intersection should maintain STOP control. Any consideration for signalization, if warranted, at the Playland Parkway ramps to Playland Access Drive may actually result in an increase in delays, which could impact the mainline of Playland Parkway (southbound lanes).

At the Old Post Road intersection at Playland Access Drive and Thruway Access Drive it is likely that either location would meet the minimum standards for consideration for traffic signals.

INTRODUCTION

The purpose of this report is to provide the City of Rye with an analysis of current operations on the surrounding roadway network and nearby intersections and the potential impact of removing the existing 70,000 square-foot office building and constructing a 135 age-restricted residential unit development at 120 Old Post Road.

This analysis addresses traffic conditions surrounding the subject property for a typical weekday morning and weekday afternoon peak hour condition. It addresses traffic conditions along Playland Access Drive, Old Post Road, Theodore Fremd Avenue and the Access Ramps to Playland Parkway. It includes an evaluation of current and future background and combined traffic volumes at the nearby intersections for both the weekday morning and weekday afternoon peak hours.

Project Description

The existing office building comprises 70,000 square feet of gross floor area. At the time of the traffic counts, the building was mostly vacant, with minimal traffic generated throughout the day.

The proposal is to demolish this building and construct a 135-unit, age-restricted residential development. Access for the existing building will remain unchanged, with full access to Playland Access Drive.

EXISTING CONDITIONS

This section of the report describes the current traffic volumes obtained through actual manual traffic volume counts and volumes provided by others at nearby intersections. In this section of the report there is a description of existing roadway conditions, traffic control, site access, capacity analysis procedures and the results of these analyses.

Roadways

The site is located in the northwest corner of the T-type intersection of Playland Access Drive and Old Post Road. The following is a description of the roadways serving the subject property.

1. *Playland Access Drive* – This is a two-lane, County-maintained roadway, beginning to the northwest at the signalized intersection with Theodore Fremd Avenue. It intersects with the southbound ramps for Playland Parkway, provides access to the subject property and terminates at an unsignalized intersection with Old Post Road. It has a posted speed limit of 30 miles per hour, provides a double yellow centerline, curbs and paved shoulders in certain sections. Sidewalks are not provided on this roadway.

2. *Old Post Road* – It is a generally both a north-south and east-west, County-maintained roadway. This roadway begins to the southwest at a Y-type intersection with Boston Post Road (U.S. Route 1), continues in an easterly direction intersecting with Playland Access Drive, the Playland Parkway Northbound Ramps and continues to the northeast terminating again at T-type intersection with Boston Post Road (U.S. Route 1). The section of Old Post Road between the intersection of North Street and northerly intersection with Boston Post Road is a one-way, one-lane roadway limited to westbound movements.

The Old Post Road/southerly intersection with Boston Post Road intersection is controlled with a traffic signal, which is maintained by the City of Rye. Other intersections are controlled with STOP signs at the Playland Access Drive southbound and the Thruway Access Road southbound approaches. The westbound approach of Old Post Road at North Street is controlled with STOP signs on both approaches. The posted speed limit on this roadway is 30 miles per hour. It provides a double yellow centerline, curbing and sidewalks in certain sections.

3. *North Street* – North Street is a north-south, County-maintained roadway, which begins at the Old Post Road intersection immediately north of the Playland Parkway northbound ramps intersection. This road continues in a northerly direction intersecting with Theodore Fremd Avenue, providing an overpass over Interstate 95 and continuing north to the Hutchinson River Parkway. It is a two-lane road maintained by the County to the intersection of Harrison Avenue. From this intersection to the Parkway it is designated New York Route 127. For its entire length it provides a double yellow centerline. It has a posted speed limit of 30 miles per hour in the Study Area.

4. *Theodore Fremd Avenue* – This is an east-west, County-maintained roadway. It provides one travel lane in each direction and a center turning lane for its entire length between the Harrison Village/Town line to the west and the intersections with North Street to the northeast and ends at Purchase Street. It has a posted speed limit of 30 miles per hour, provides sidewalks generally along the southerly side for its entire length, with sidewalks in the vicinity of the North Street intersection on the northerly side. The intersections with North Street and Theodore Fremd Avenue are controlled with traffic signals, which are maintained by the City of Rye.

5. *Playland Parkway* – This is a generally north-south, limited-access arterial, beginning at Interchange 19 on the New England Thruway (Interstate 95) and terminating to the southeast at Playland, which is a County-owned Park. A full-movement interchange provides access to Playland Access Drive and Old Post Road/North Street near the site. Playland Parkway provides two travel lanes in each direction and is median divided to a point south of the Boston Post Road Overpass. There are bridges at Old Post Road and Boston Post Road providing continuous traffic flow on Playland Parkway.

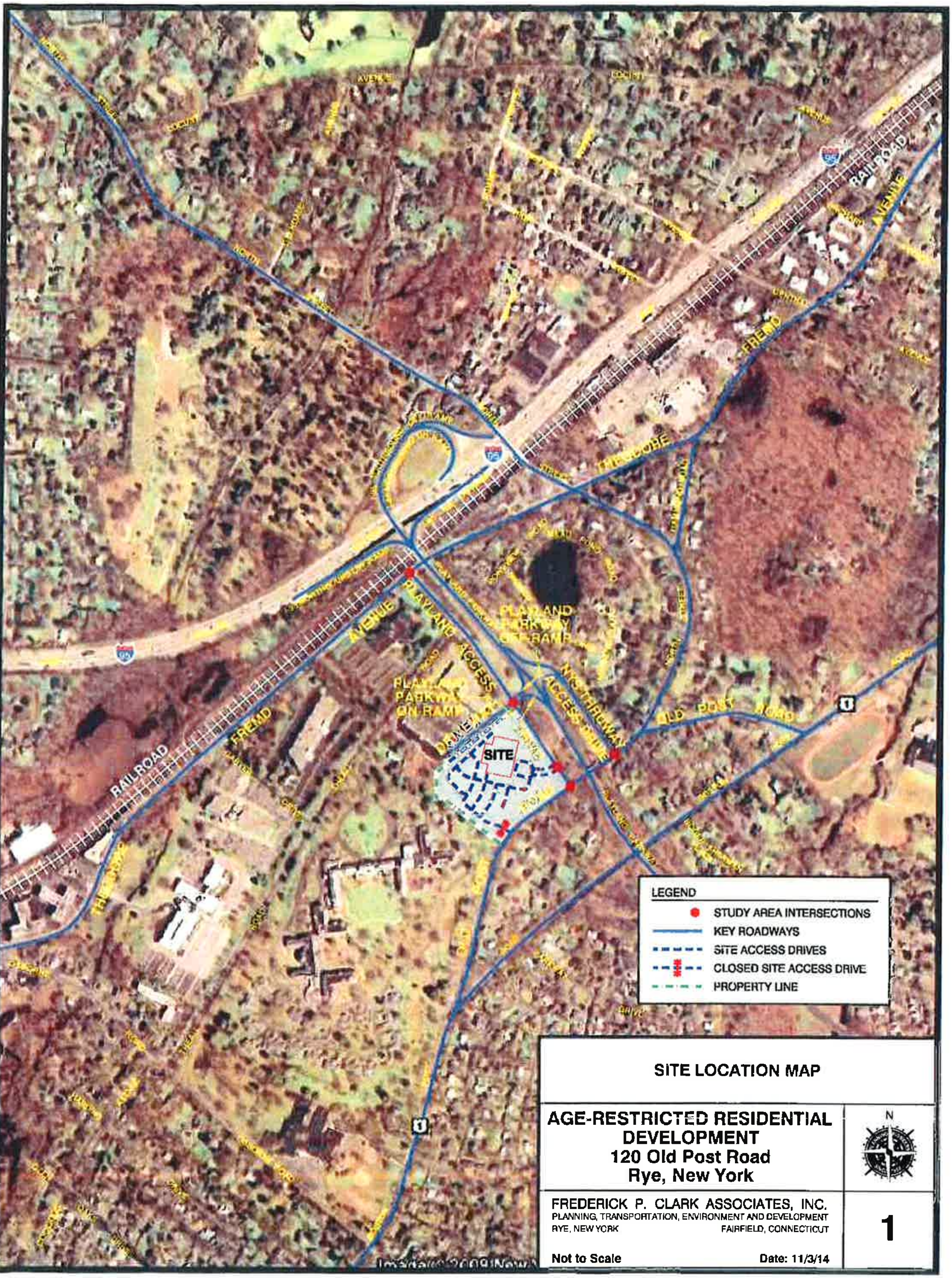
6. *New England Thruway (Interstate 95)* – This is a north-south, limited-access, Interstate Highway serving Westchester County. It provides three lanes in each direction and is median divided. The posted speed limit is 55 miles per hour for vehicles and 50 miles per hour for trucks. Access is provided to the Study Area via Interchange 19, which provides ramps in both directions on Interstate 95. These ramps connect directly to Playland Parkway, which provides direct to Playland Access Drive and Old Post Road.

Figure 1 provides a reference of the site location for all of the roads described above. Figure 2 provides the current street system characteristics for each of these roads, as described above. Photographs of the area roads are included in the Appendix of this report.

Traffic Volumes

To identify baseline conditions for area roads, 2014 traffic volumes available in the Traffic Study completed for the proposal to develop 150 North Street were used for the following intersections during the weekday morning peak hour:

- Theodore Fremd Avenue at Playland Access Drive;



SITE LOCATION MAP

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

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PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

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Date: 11/3/14

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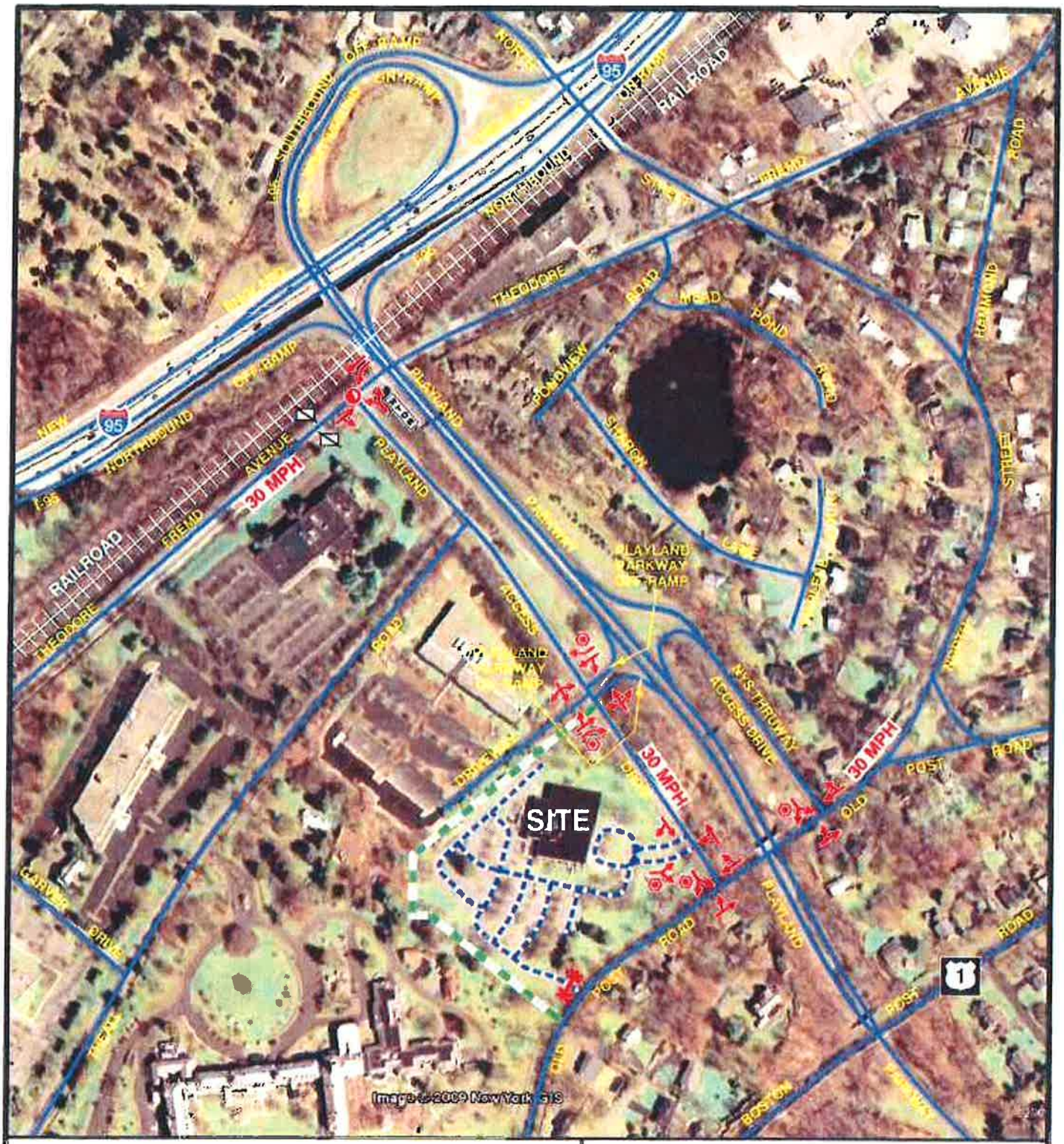

LEGEND

- TRAFFIC LANE
- TRAFFIC SIGNAL
- STOP SIGN
- NO TURN ON RED
- BUS STOP (BEE-LINE BUS #61)
- 00 MPH — SPEED LIMIT
- SITE ACCESS DRIVE
- CLOSED SITE ACCESS DRIVE
- PROPERTY LINE

CURRENT STREET SYSTEM CHARACTERISTICS

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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- Playland Access Drive at Playland Parkway Eastbound On/Off Ramps/Medical Office Building Access Drive; and,
- Old Post Road at Playland Parkway Northbound On/Off Ramps.

The 2012 existing traffic volumes from the Office to Hotel Building Conversion Traffic Study prepared by Frederick P. Clark Associates, Inc. were adjusted and balanced to the most recent traffic data for the site access drive. For the intersection of Old Post Road at Playland Access Road, manual turning movement counts were conducted by Frederick P. Clark Associates on Thursday, October 30, 2014 from 7:00 A.M. to 9:00 A.M. These volumes were adjusted where appropriate to the surrounding intersection volumes to generate the 2014 existing traffic volumes for a weekday morning peak hour. The highest volumes found at each intersection were used.

For the weekday afternoon peak hour existing traffic volumes for 2013 obtained from a Playland Traffic Study were used for the four Study Area intersections. The 2012 existing traffic volumes from the Office to Hotel Building Conversion Traffic Study prepared by Frederick P. Clark Associates, Inc. were adjusted, as needed, at the site frontage. A one percent growth rate was applied to these volumes to the baseline year, 2014.

Based on the results of the field surveys, the peak hour volumes were identified to occur during the following time periods:

- Weekday morning – Vary by intersection; and,
- Weekday afternoon – 4:45 to 5:45 P.M.

Old Post Road, east of Playland Parkway Northbound On/Off Ramps, had a two-way volume of 380 and 399 vehicles during the two peak hours noted above. On Old Post Road west of the same intersection the two-way volume was recorded at 878 and

699 vehicles during the same two peak hours. For the section of Old Post Road west of the Playland Access Drive the two-way volume was 665 and 417 vehicles during the two peak hours noted above. Playland Access Drive, north of Old Post Road the two-way volume was 541 and 512 vehicles during the two peak hours noted above

Theodore Fremd Avenue, west of the Playland Access Drive intersection had a two-way volume of 681 and 669 vehicles during the two peak hours noted above. For the section east of the Playland Parkway Access Drive the two-way volume was found to be 628 and 617 vehicles during the same peak hours noted above.

For reference purposes, the medical office building access drive intersection with Playland Access Drive had a driveway volume of 195 and 101 vehicles during the two peak hours. The site driveway had a two-way volume of 4 and 6 vehicles during the two peak hours. Table 1 provides a summary of the volumes noted above. Figures 3 and 4 show the peak hour volumes for the weekday morning and weekday afternoon peak hours, respectively. The field sheets for the 2014 traffic counts at the Old Post Road/Playland Access Road intersection are included in the Appendix of this report

Accident Experience

The latest available accident data was obtained from the City of Rye Police Department for a period beginning January 1, 2011 through December 31, 2013 for Playland Access Road and Old Post Road. For the intersection of Playland Access Road at Theodore Fremd Avenue, there were a total of 7 accidents recorded during this three-year period. Data indicates that 57 percent of the accidents were limited to only property damage and 43 percent involved injuries. The collision types were 86 percent involving a rear-end collision and 14 percent involved a left turn collision. The contributing factors were 44 percent unknown and 14 percent were driver fell asleep, pavement slippery, traffic control disregarded and driver inattention. It was found that 86 percent of the accidents occurred during daylight hours and 57 percent occurred on dry road conditions.

Table 1
2014 TWO–WAY TRAFFIC VOLUMES – PEAK HOURS
Age-Restricted Residential Development
120 Old Post Road
Rye, New York

LOCATION	VEHICLES	
	Weekday Morning	Weekday Afternoon
Playland Parkway Northbound On/Off Ramps, North of Old Post Road	800	606
Old Post Road, East of Playland Parkway Northbound On/Off Ramps	380	399
Old Post Road, West Playland Parkway Northbound On/Off Ramps	878	699
Playland Access Drive, North of Old Post Road	541	512
Old Post Road, East of Playland Access Drive	878	699
Old Post Road, West of Playland Access Drive	665	417
Office Building Access Drive, West of Playland Access Drive	4	6
Playland Access Drive, South of Office Building Access Drive	541	512
Playland Access Drive, North of Office Building Access Drive	541	510
Playland Parkway Southbound On/Off Ramp, East of Playland Access Drive	791	448
Medical Office Building Access Drive, West of Playland Access Drive	195	101
Playland Access Drive, South of Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive	541	507
Playland Access Drive, North of Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive	939	622
Playland Access Drive, South of Theodore Fremd Avenue	585	448
Theodore Fremd Avenue, West of Playland Access Drive	681	669
Theodore Fremd Avenue, East of Playland Access Drive	628	617

Table 1 Cont'd

Source:

1) 2014 traffic volumes from Tim Miller Associates, Inc. Traffic Study for 150 North Street were utilized for the Playland Parkway Southbound Ramps at Playland Access Drive, Theodore Fremd Avenue at Playland Access Drive and Playland Parkway Northbound On/Off Ramps at Old Post Road intersections for the weekday morning peak hour.
2) 2012 existing traffic volumes from the office to hotel building conversion traffic study prepared by Frederick P. Clark Associates, Inc. were adjusted and balanced to the Tim Miller Associates, Inc. volumes for the site access drive for the weekday morning peak hour.
3) Manual turning movement counts conducted by Frederick P. Clark Associates, Inc. on Thursday, October 30. 2014 from 7:00 A.M. to 9:00 A.M. at the Old Post Road/Playland Access Drive intersection.
4) 2013 existing traffic volumes with the park open from Playland, Year One Development Program, prepared by John Meyers Consulting, P.C., October, 2013, were utilized for the weekday afternoon peak hour. These volumes had a one percent growth rate applied to the baseline year, 2014.

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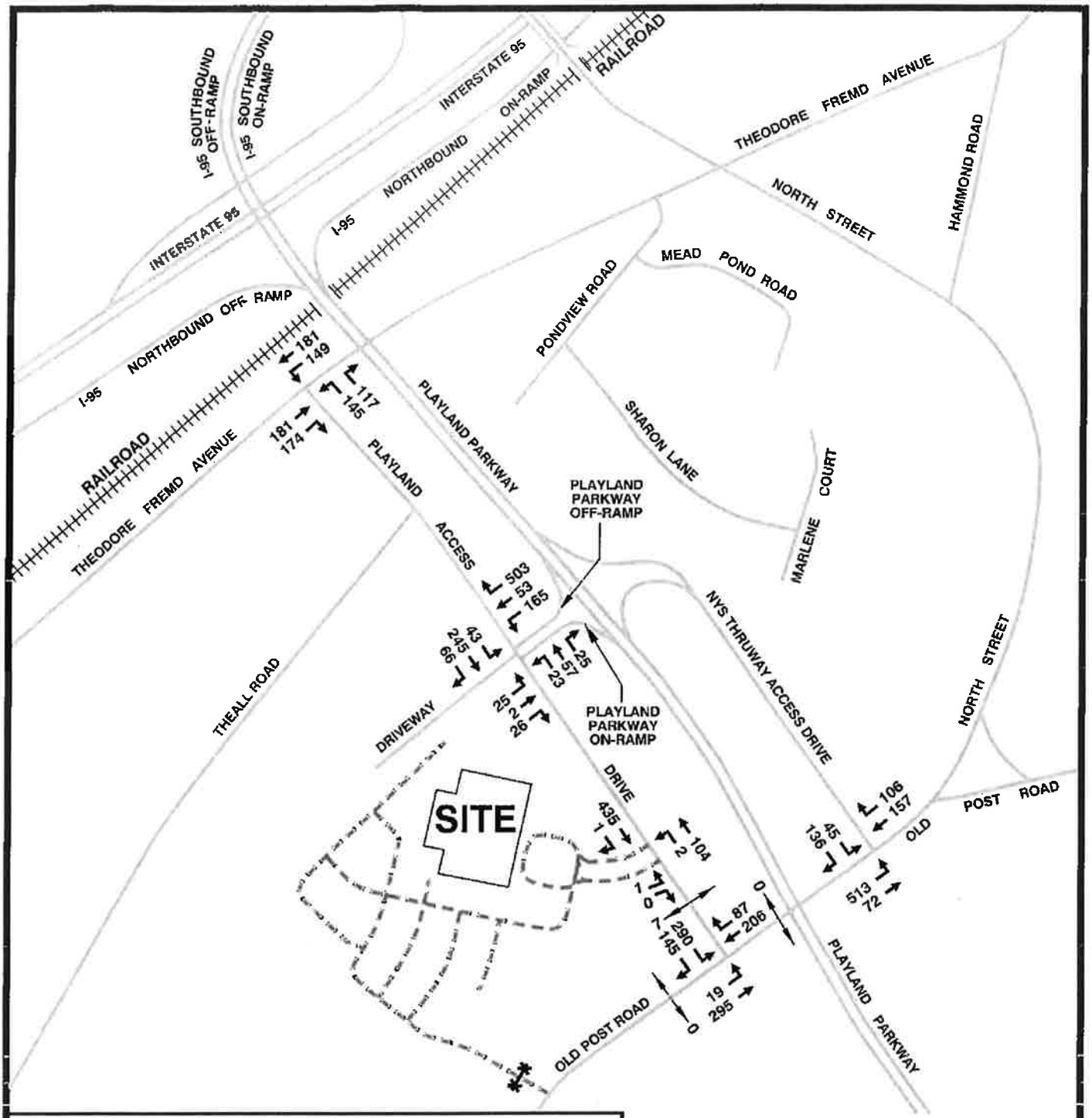

Notes:

1- The 2014 Traffic Volumes from Tim Miller Associates, Inc. Traffic Study for 150 North Street, were utilized for the Playland Parkway Southbound Ramps at Playland Access Drive, Theodore Fremd Avenue at Playland Access Drive and Old Post Road at New York State Thruway Access Drive intersections. Peak Hour of each intersection was used.

2- The 2012 Existing Traffic Volumes from the Office To Hotel Building Conversion Traffic Study prepared by Frederick P. Clark Associates, Inc. were adjusted and balanced to the Tim Miller Associates, Inc. volumes for the Site Access Drive.

3- Manual turning movement counts conducted by Frederick P. Clark Associates, Inc. on Thursday, October 30, 2014 from 7:00 to 9:00 A.M. for Old Post Road at Playland Access Road. Peak Hour of this intersection is utilized.

LEGEND

0 PEDESTRIAN TRAFFIC

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2014 EXISTING TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

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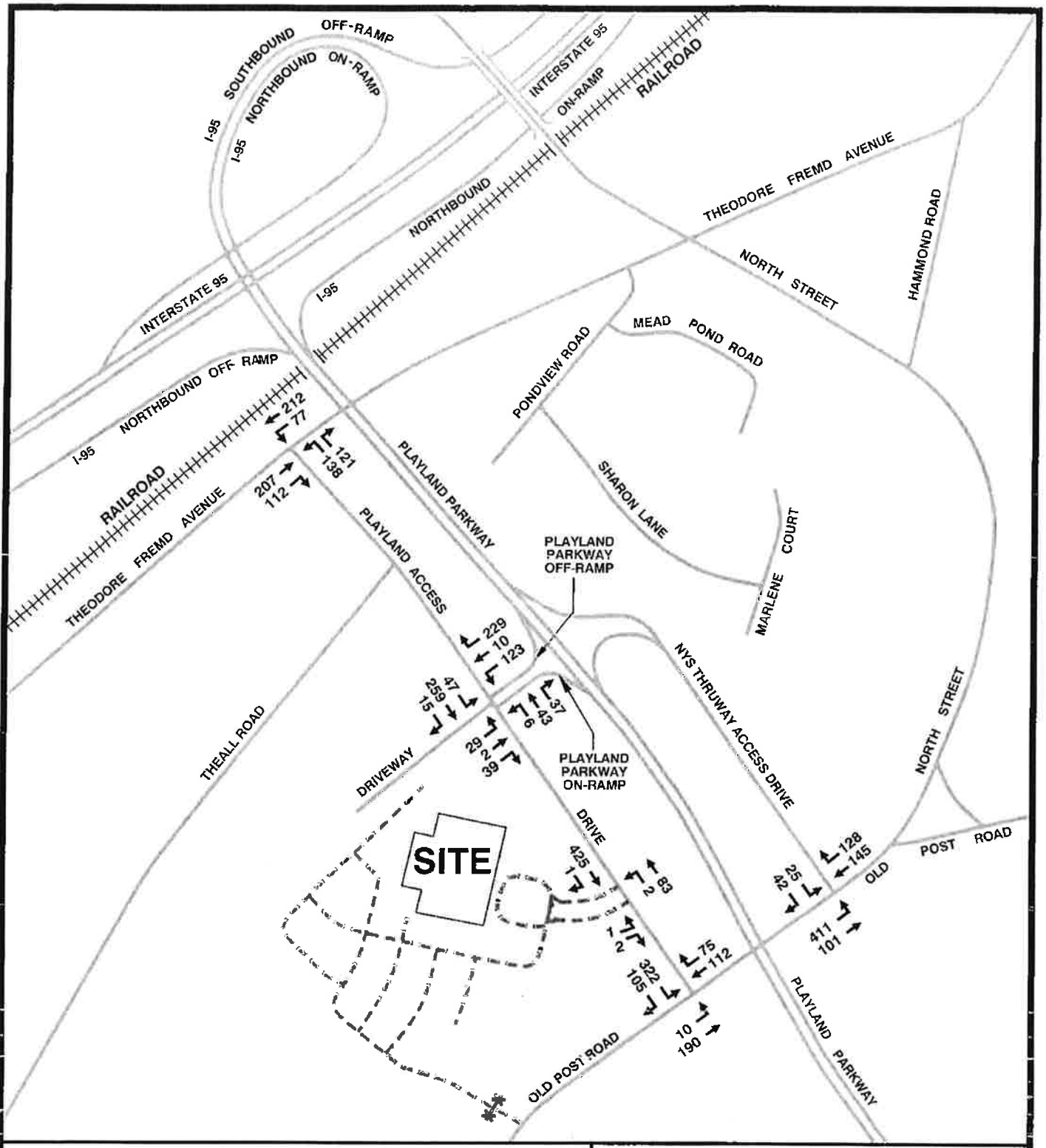

Notes:

1- 2013 Existing Traffic Volumes with the Park open from Playland, Year One Development Program, prepared by John Meyer Consulting, P.C. October, 2013, were utilized.

2- A one percent growth rate was applied to the baseline year, 2014.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2014 EXISTING TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR
(4:45 - 5:45 P.M.)

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

FREDERICK P. CLARK ASSOCIATES, INC.
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RYE, NEW YORK FAIRFIELD, CONNECTICUT

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For the section of Playland Access Road between Theodore Fremd Avenue and Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive, there were a total of 11 accidents recorded during this three-year period. Data indicates that 82 percent of the accidents were limited to only property damage and 18 percent involved injuries. The collision types were 55 percent involving a rear-end collision, 27 percent were right angle collisions and 9 percent involved left turn and right turn collision. The contributing factors were 55 percent driver inattention and 9 percent were following too closely, failure to grant right-of-way, unknown and view obstructed. It was found that all of the accidents occurred during daylight hours and 55 percent occurred on dry road conditions.

For the intersection of Playland Access Road at Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive, there were a total of 18 accidents recorded during this three-year period. Data indicates that 83 percent of the accidents were limited to only property damage and 17 percent involved injuries. The collision types were 44 percent involving a right angle collision, 21 percent involved left turn collision, 17 percent involved a rear-end collision and 6 percent involved right turn collision, sideswipe in the same direction and backing. The contributing factors were 38 percent for failure to grant right-of-way, 33 percent driver inattention, 11 percent were unknown and 6 percent involved pavement slippery, traffic control disregarded and unsafe backing. It was found that 89 percent of the accidents occurred during daylight hours and on dry road conditions. For the section of Playland Access Road between Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive and Site Access Drive, there were no recorded accidents.

For the intersection of Playland Access Road at Site Access Drive, there were no recorded accidents. For the section of Playland Access Road between Site Access Drive and Old Post Road, there were no recorded accidents.

For the intersection of Old Post Road at Playland Access Road, there were a total of 3 accidents recorded during this three-year period. Data indicates that all of the accidents were limited to only property damage. The collision types were 67 percent involving a rear-end collision and 33 percent involved a left turn collision. The contributing factors were 34 percent for following too closely and 33 percent were failure to grant right-of-way and traffic control disregarded. It was found that 67 percent of the accidents occurred during daylight hours and 33 percent occurred on dry road conditions. For the section of Old Post Road between Playland Access Road and Playland Parkway Northbound On/Off Ramps, there were no recorded accidents.

For the intersection of Old Post Road at Playland Parkway Northbound On/Off Ramps, there were a total of 3 accidents recorded during this three-year period. Data indicates that 67 percent of the accidents were limited to only property damage and 33 percent involved injuries. The collision types were 67 percent involving a rear-end collision and 33 percent involved a left turn collision. The contributing factors were 67 percent for following too closely and 33 percent were failure to grant right-of-way. It was found that all of the accidents occurred during daylight hours and on dry road conditions. Table 2 provides a more detailed summary of the accident data

Capacity Analysis Procedures

Capacity analysis procedures are provided in the Appendix of this report. The analyses follow a SYNCHRO computer model and information provided by the Transportation Research Board (TRB) and the Highway Capacity Manual (HCM) published in 2010.

Capacity Analysis Results

The results of the analysis for the Study Area intersections included in the designated Study Area are described below:

Table 2
ACCIDENT EXPERIENCE SUMMARY – PLAYLAND ACCESS ROAD/OLD POST ROAD
Age-Restricted Residential Development
120 Old Post Road
Rye, New York

ACCIDENT CHARACTERISTICS	PLAYLAND ACCESS ROAD												OLD POST ROAD					
	At Theodore Fremd Avenue		Between Theodore Fremd Avenue and Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive		At Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive		Between Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive and Site Access Drive		At Site Access Drive		Between Site Access Drive and Old Post Road		At Playland Access Road		Between Playland Access Road and Playland Parkway Northbound On/Off Ramps		At Playland Parkway Northbound On/Off Ramps	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Year																		
▪ 2011	5	72	0	0	8	45	0	0	0	0	0	0	2	67	0	0	1	33
▪ 2012	1	14	5	45	6	33	0	0	0	0	0	0	1	33	0	0	0	0
▪ 2013	1	14	6	55	4	22	0	0	0	0	0	0	0	0	0	0	2	67
▪ Total	7	100	11	100	18	100	0	0	0	0	0	0	3	100	0	0	3	100
Accident Severity																		
▪ Property Damage	4	57	9	82	15	83	0	0	0	0	0	0	3	100	0	0	2	67
▪ Injury	3	43	2	18	3	17	0	0	0	0	0	0	0	0	0	0	1	33
Collision Type																		
▪ Rear End	6	86	6	55	3	17	0	0	0	0	0	0	2	67	0	0	2	67
▪ Left Turn	1	14	1	9	4	21	0	0	0	0	0	0	1	33	0	0	1	33
▪ Right Turn	0	0	1	9	1	6	0	0	0	0	0	0	0	0	0	0	0	0
▪ Right Angle	0	0	3	27	8	44	0	0	0	0	0	0	0	0	0	0	0	0
▪ Sideswipe-Same Dir.	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0
▪ Backing	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0
Contributing Factor																		
▪ Following Too Closely	0	0	1	9	0	0	0	0	0	0	0	0	1	34	0	0	2	67
▪ Failure to Grant ROW	0	0	1	9	7	38	0	0	0	0	0	0	0	0	0	0	1	33
▪ Fell Asleep	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
▪ Pavement Slippery	1	14	1	9	1	6	0	0	0	0	0	0	1	33	0	0	0	0
▪ Traffic Control Disregard	1	14	0	0	1	6	0	0	0	0	0	0	1	33	0	0	0	0
▪ Driver Inattention	1	14	6	55	6	33	0	0	0	0	0	0	0	0	0	0	0	0
▪ Unknown	3	44	1	9	2	11	0	0	0	0	0	0	0	0	0	0	0	0
▪ View Obstructed	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
▪ Unsafe Backing	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0
Light Condition																		
▪ Daylight	6	86	11	100	16	89	0	0	0	0	0	0	2	67	0	0	3	100
▪ Dark Lit	1	14	0	0	2	11	0	0	0	0	0	0	1	33	0	0	0	0
Surface Condition																		
▪ Dry	4	57	6	55	16	89	0	0	0	0	0	0	1	33	0	0	3	100
▪ Wet	3	43	4	36	2	11	0	0	0	0	0	0	2	67	0	0	0	0
▪ Snow/Ice	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2 Cont'd

ACCIDENT CHARACTERISTICS	PLAYLAND ACCESS ROAD												OLD POST ROAD					
	At Theodore Fremd Avenue		Between Theodore Fremd Avenue and Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive		At Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive		Between Playland Parkway Southbound On/Off Ramp/Medical Office Building Access Drive and Site Access Drive		At Site Access Drive		Between Site Access Drive and Old Post Road		At Playland Access Road		Between Playland Access Road and Playland Parkway Northbound On/Off Ramps		At Playland Parkway Northbound On/Off Ramps	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Weather Conditions																		
▪ Clear	4	57	5	46	15	83	0	0	0	0	0	0	2	67	0	0	2	67
▪ Cloudy	1	14	1	9	3	17	0	0	0	0	0	0	0	0	0	0	1	33
▪ Rain	2	29	4	36	0	0	0	0	0	0	0	0	1	33	0	0	0	0
▪ Snow	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Rye Police Department

Notes: The latest accident data available is from January 1, 2011 to December 31, 2013.

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1. *Theodore Fremd Avenue at Playland Access Drive* – Results of the analysis of this signalized intersection indicate it is currently operating at an overall Level of Service "B" during both the weekday morning and weekday afternoon peak hours. It includes a fixed time westbound left turn leg, which should be modified.

2. *Playland Access Drive at Playland Parkway Eastbound On/Off Ramp/Medical Office Building Access Drive* – Results of the analysis of this unsignalized intersection indicate it is currently operating at a Level of Service "E" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

3. *Playland Access Drive at Office Building Access Drive* – Results of the analysis of this unsignalized intersection indicate it is currently operating at a Level of Service "B" or better during each peak hour analyzed.

4. *Old Post Road at Playland Access Drive* – Results of the analysis of this unsignalized intersection indicate it is currently operating at a Level of Service "F" and "D" or better during the weekday morning and weekday afternoon peak hours, respectively. This reflects conditions exiting from the STOP sign.

5. Old *Post Road at Thruway Access Drive* – Results of the analysis of this unsignalized intersection indicate it is currently operating at a Level of Service "F" and "D" or better during the weekday morning and weekday afternoon peak hours, respectively. This represents conditions exiting the ramp.

Table 3 provides a more detailed summary of the results of the analyses, as described above. This table includes the type of control, lane group/movement, description, the Level of Service, average vehicle per vehicle and the volume to capacity ratio. The capacity analysis worksheets are included in the Appendix of this report.

Table 3
2014 EXISTING CONDITIONS – MEASURE OF EFFECTIVENESS (MOE) – PEAK HOURS
Age-Restricted Residential Development
120 Old Post Road
Rye, New York

INTERSECTION	CONTROL TYPE	PHYSICAL UNITS	2014 EXISTING CONDITIONS			
			Weekday Morning		Weekday Afternoon	
			LOS/ Delay	V/C Ratio	LOS/ Delay	V/C Ratio
Theodore Fremd Avenue at Playland Access Drive	Traffic Signal	EB TR	B/18.2	0.48	B/17.6	0.40
		APP.	B/18.2	--	B/17.6	--
		WB L	B/11.4	0.28	A/9.2	0.14
		T	A/9.0	0.18	A/9.3	0.21
		APP.	B/10.1	--	A/9.3	--
		NB LR	C/33.3	0.55	C/33.2	0.54
		APP.	C/33.3	--	C/33.2	--
		Overall	B/19.6	--	B/19.5	--
Playland Access Drive at Playland Parkway Eastbound On/Off Ramp/Medical Office Building Access Drive	TWSC	EB L	E/37.1	0.33	C/17.5	0.19
		T	E/37.1	0.33	C/17.5	0.19
		R	E/37.1	0.33	C/17.5	0.19
		WB L	D/26.5	0.60	C/20.9	0.43
		T	D/26.5	0.60	C/20.9	0.43
		R	B/13.5	0.58	B/10.2	0.29
		NB L	A/0.2	0.02	A/0.1	0.01
		SB L	A/0.3	0.03	A/0.4	0.04
Playland Access Drive at Office Building Access Drive	TWSC	EB L	B/12.3	0.00	B/11.3	0.01
		R	A/0.0	0.00	B/11.3	0.01
		NB L	A/0.0	0.00	A/0.0	0.00
Old Post Road at Playland Access Drive	TWSC	EB L	A/0.2	0.02	A/0.1	0.01
		SB L	F/51.7	0.92	D/25.6	0.75
		R	F/51.7	0.92	D/25.6	0.75
Old Post Road at Thruway Access Drive	TWSC	EB L	A/4.9	0.46	A/3.9	0.38
		SB L	F/69.8	0.85	D/26.9	0.32
		R	F/69.8	0.85	D/26.9	0.32

Notes:

- Synchro 8.0 is used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- TWSC = Two-Way STOP Control.
- For TWSC Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).

Table 3 Cont'd

- ITE publication for Traffic Access and Impact Studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.
- V/C ratio indicates the amount of congestion for each Lane Group or Movement. Any V/C ratio greater than or equal to one indicates that the Lane Group or Movement is operating at above capacity.
- Physical Units consist of the following:
  1. Lane Group, Approach and Intersection Overall for Traffic Signal Controlled Intersections.
  2. Movements for TWSC Intersections.

NB = Northbound	EB = Eastbound	SB = Southbound	WB = Westbound
L = Left Turn	T = Through	R = Right Turn	APP. = Approach

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FUTURE TRAFFIC IMPACTS

In this section of the report there is a description of the background and combined traffic volumes for a 2016 condition at each of the intersections included in the designated Study Area for the weekday morning and weekday afternoon peak hours. It includes a description of site traffic generation, distribution and assignment of site traffic and results of capacity analyses for a background and combined condition. A comparison of the results of these analyses indicates the potential impact to area roads and intersections. Capacity analyses were conducted to determine impact and if any mitigation is needed.

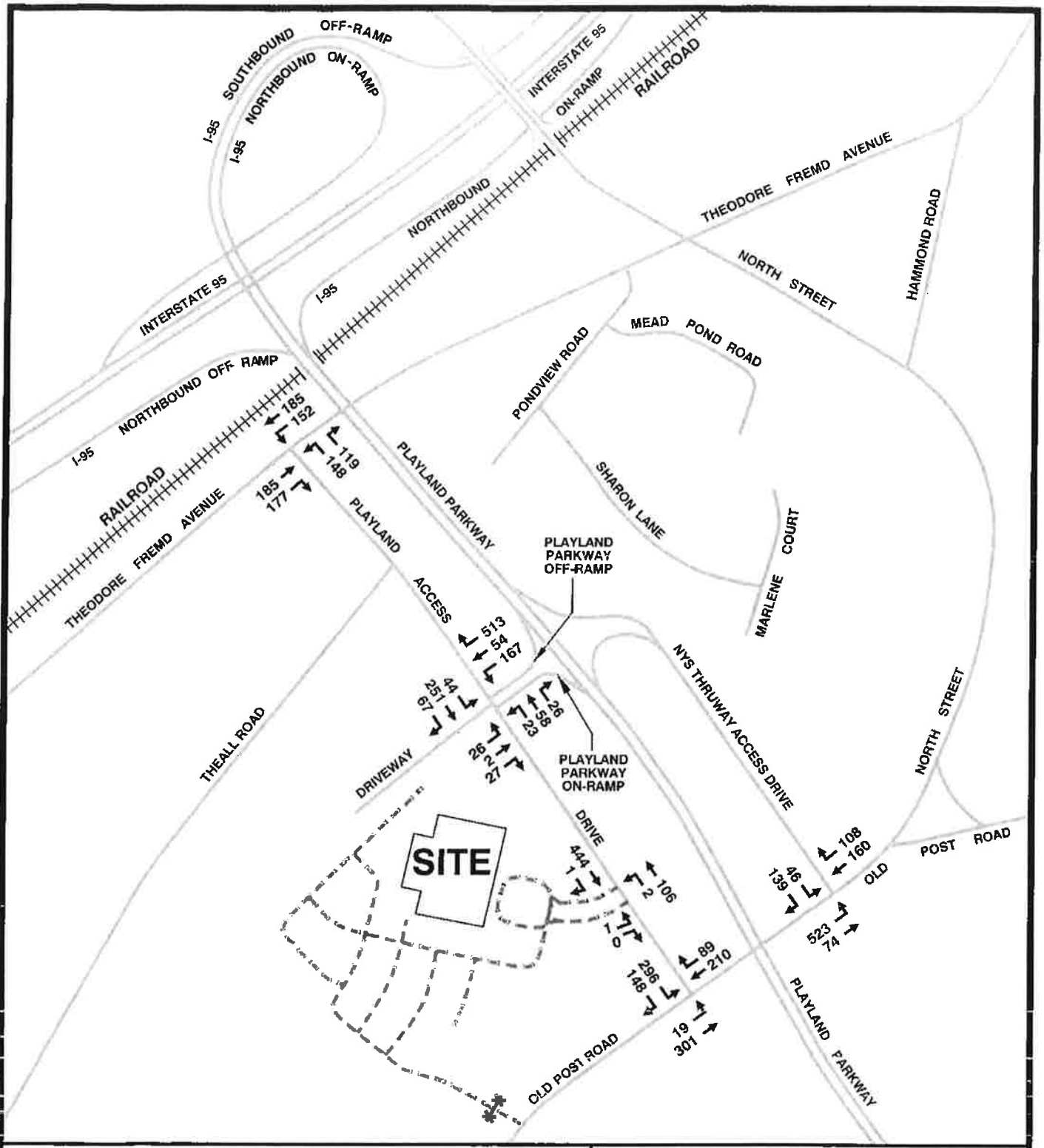
Background Traffic Volumes

The baseline traffic volumes for 2014 were expanded to reflect a 2016 condition by applying an annual growth rate of one percent. The volumes for this condition are graphically illustrated in Figures 5 and 6 for the peak hours noted above.

In addition to a general growth rate for traffic in the surrounding area, field observations and discussions with the City of Rye Planning department identified the following other developments:

- 58 Attached Senor Residential units at 150 North Street, Traffic Study prepared by Tim Miller Associates, Inc.;
- Year One Development Program, Playland, Traffic Study prepared by John Meyer Consulting, P.C. October, 2013; and,
- 5,000 square-feet of vacant office space located at 555 Theodore Fremd Avenue. This traffic is included in the growth rate.

For planning purposes no additional traffic was added during the weekday morning peak hour for the Year One Development Program, Playland. Figures 7 and 8



Note: An annual growth rate of one percent was employed to the horizon year 2016.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2016 PROJECTED TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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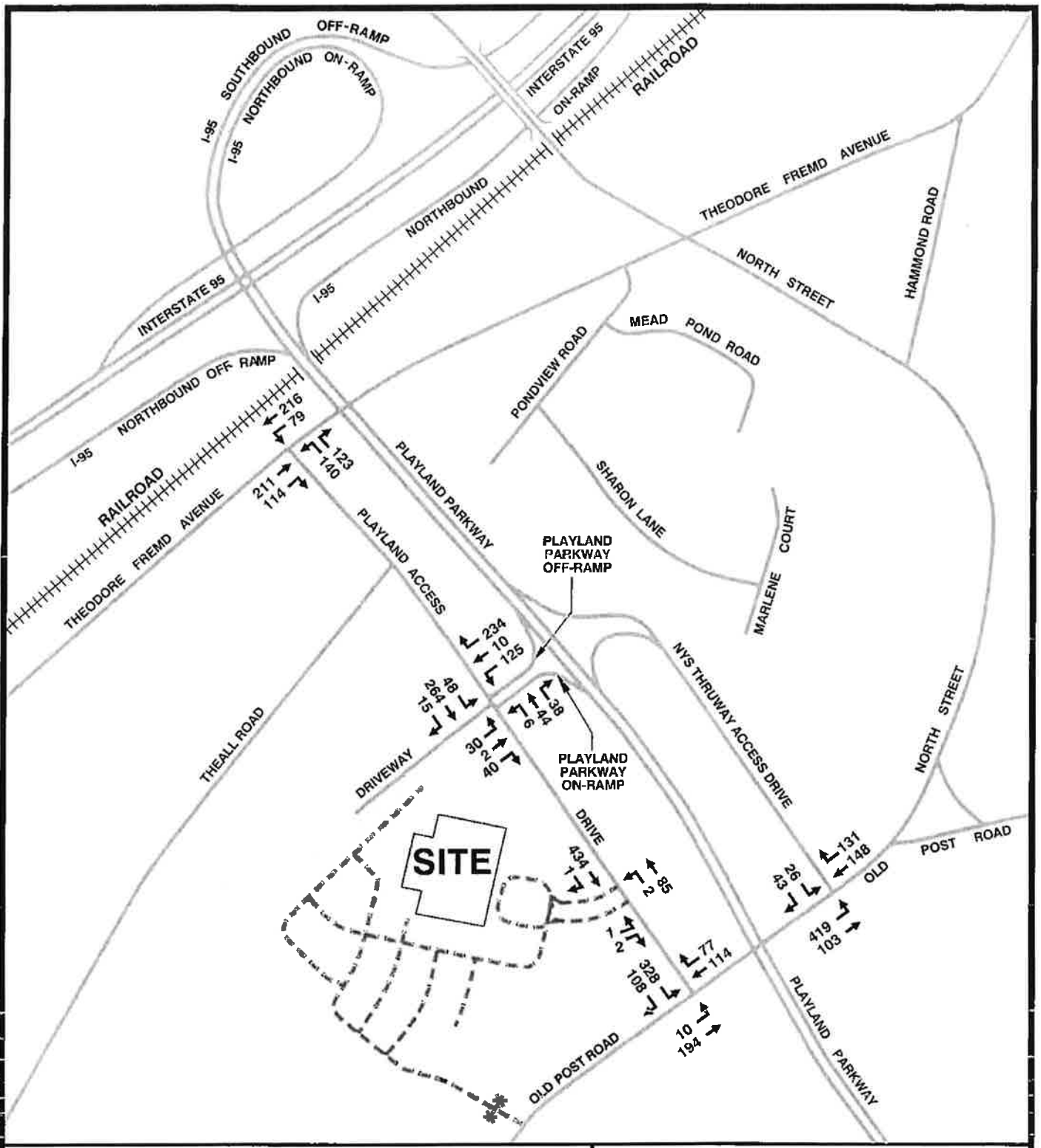

Note: An annual growth rate of one percent was employed to the horizon year 2016.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2016 PROJECTED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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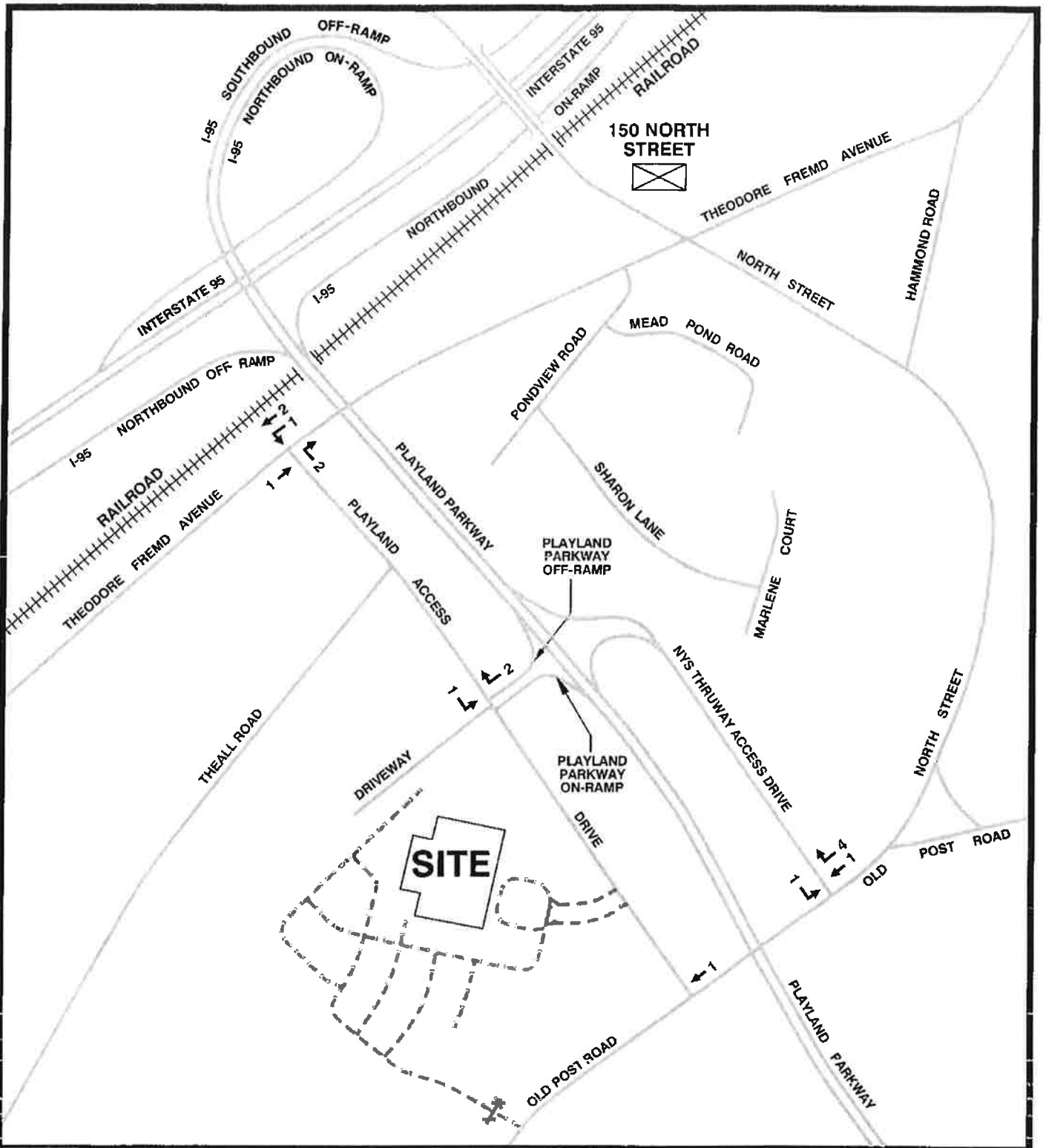

Notes: Other Developments include:

- 5,000 Square Feet vacant office space located at 555 Theodore Fremd Avenue. This traffic is included in the growth rate.
- 58 Attached Senior Residential Units located at 150 North Street from Traffic Study prepared by Tim Miller Associates.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

OTHER DEVELOPMENTS TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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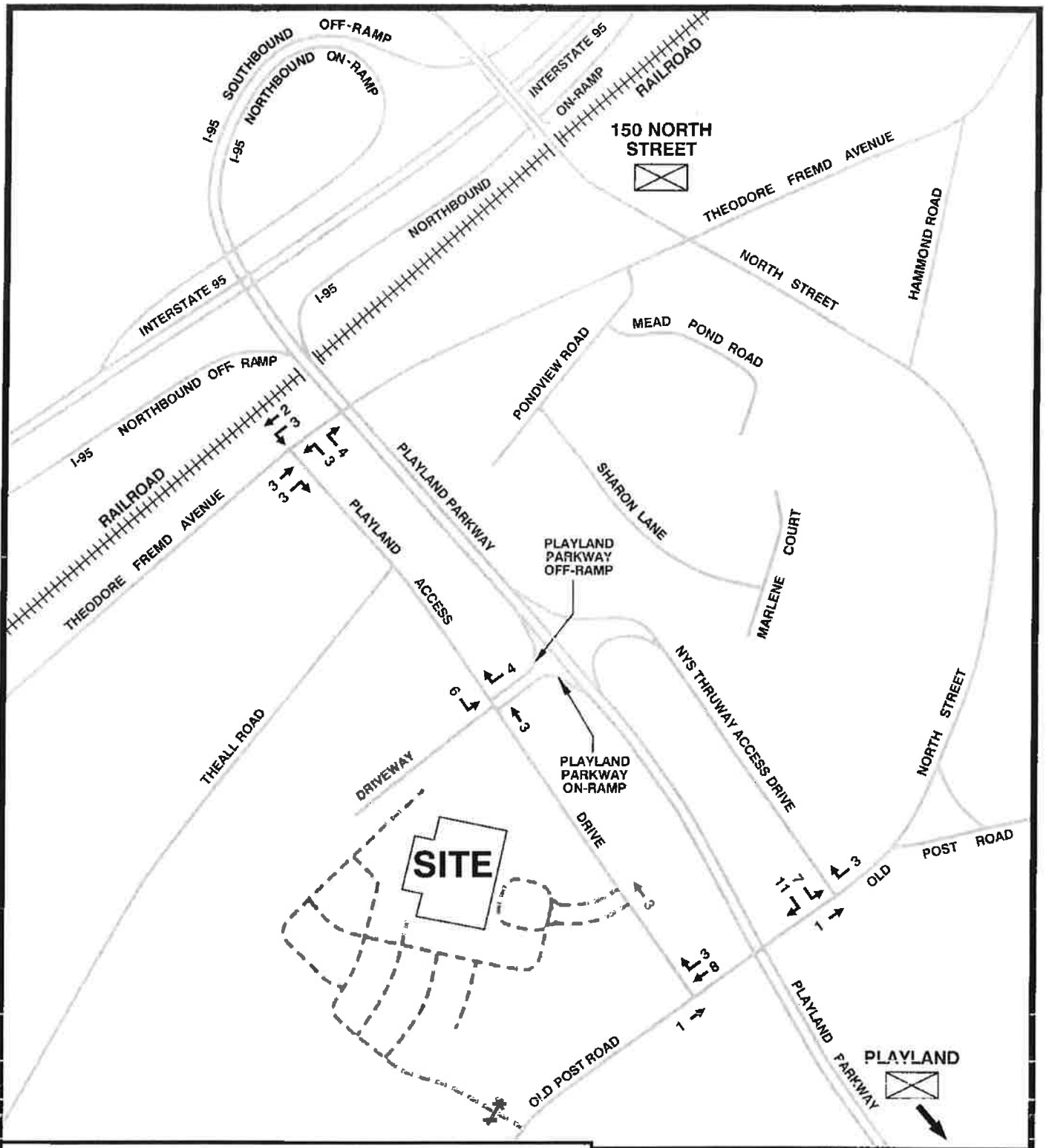

Notes: Other Developments include:

- 5,000 Square Feet vacant office space located at 555 Theodore Fremd Avenue. This traffic is included in the growth rate.
- 58 Attached Senior Residential Units located at 150 North Street from Traffic Study prepared by Tim miller Associates.
- Year One Development Program, Playland, Traffic Study prepared by John Meyer Consulting, P.C. October 2013.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

OTHER DEVELOPMENTS TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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File: G:\1760.004 120 Old Post Road, Rye\AutoCad\Figures\Fig 8

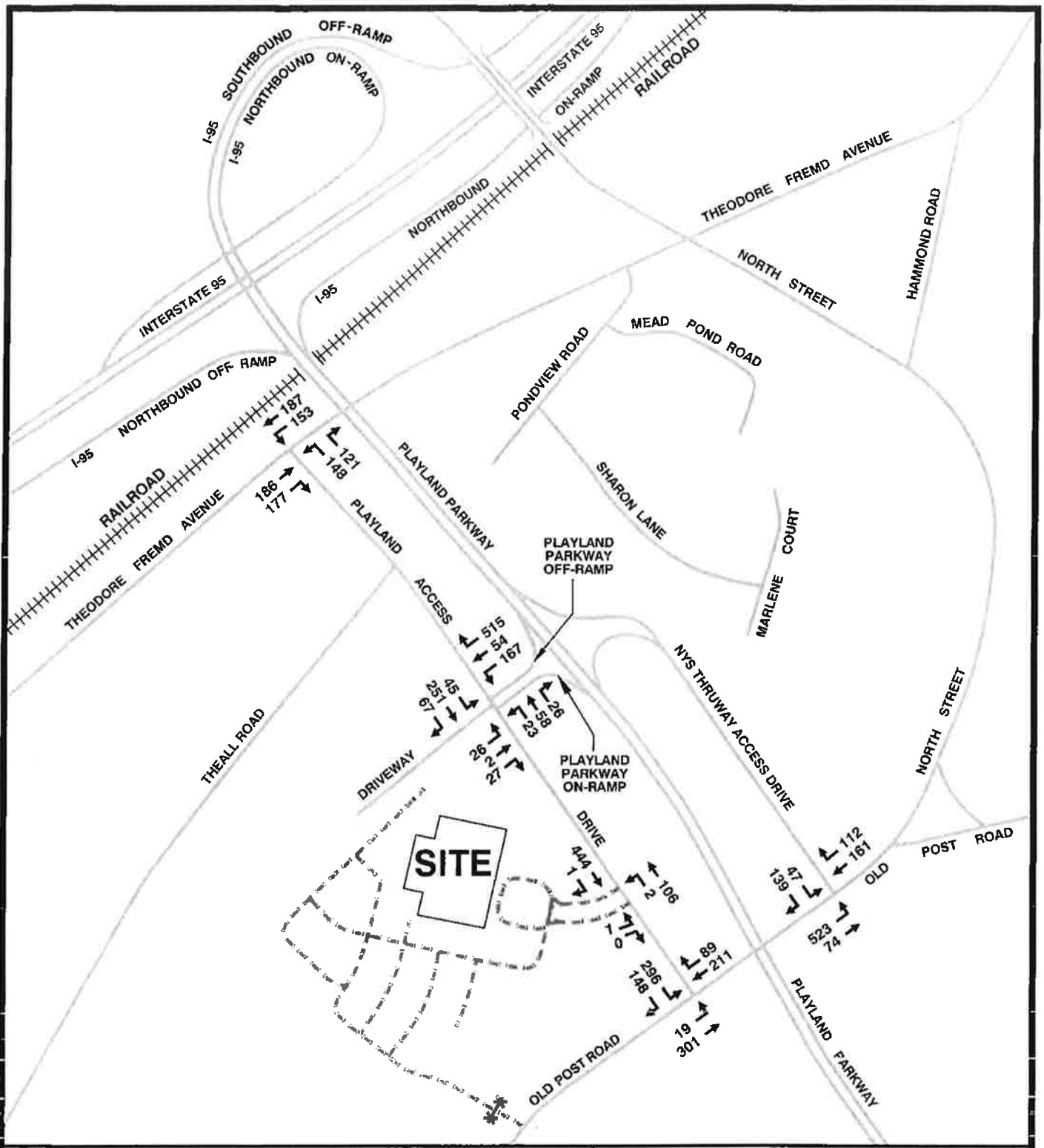
show the other development traffic volumes for each peak hour. Figures 9 and 10 graphically illustrate the 2016 background traffic volumes for area roads and include the growth rate and traffic related to the other developments. It is important to note that the senior residential development and Playland development are not approved applications.

Site Traffic Generation

To estimate the total number of vehicle trips for the proposed 135 age-restricted residential units, trip generation rates were obtained from the 9th Edition of "Trip Generation," published by the Institute of Transportation Engineers (ITE) in 2012. Using the Senior Adult Housing – Attached Code #252 and applying the average rates available, the expected site traffic is 27 and 34 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively.

The current office building comprises 70,000 square feet of gross floor area. The building is vacant, except for the Owners of the building offices, which currently generates 4 and 6 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively.

To estimate the total number of vehicle trips for this type of building fully occupied with a multi-tenant occupancy, trip generation rates were obtained from the 9th Edition of "Trip Generation," published by the Institute of Transportation Engineers (ITE) in 2012. Using the General Office Code #710 and applying the average rates available for this type of building, the expected estimate for total site traffic is 109 and 104 vehicle trip ends for the weekday morning and weekday afternoon peak hours, respectively. Comparing the current land use to the proposed age-restricted attached residential units, there will be a net decrease in site traffic of 82 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. Table 4 provides a more detailed breakdown of previous land use and proposed age-restricted attached residential units site traffic generation.



Note: The 2016 Background Traffic Volumes include the 2016 Projected Traffic Volumes and the Other Developments Traffic Volumes.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2016 BACKGROUND TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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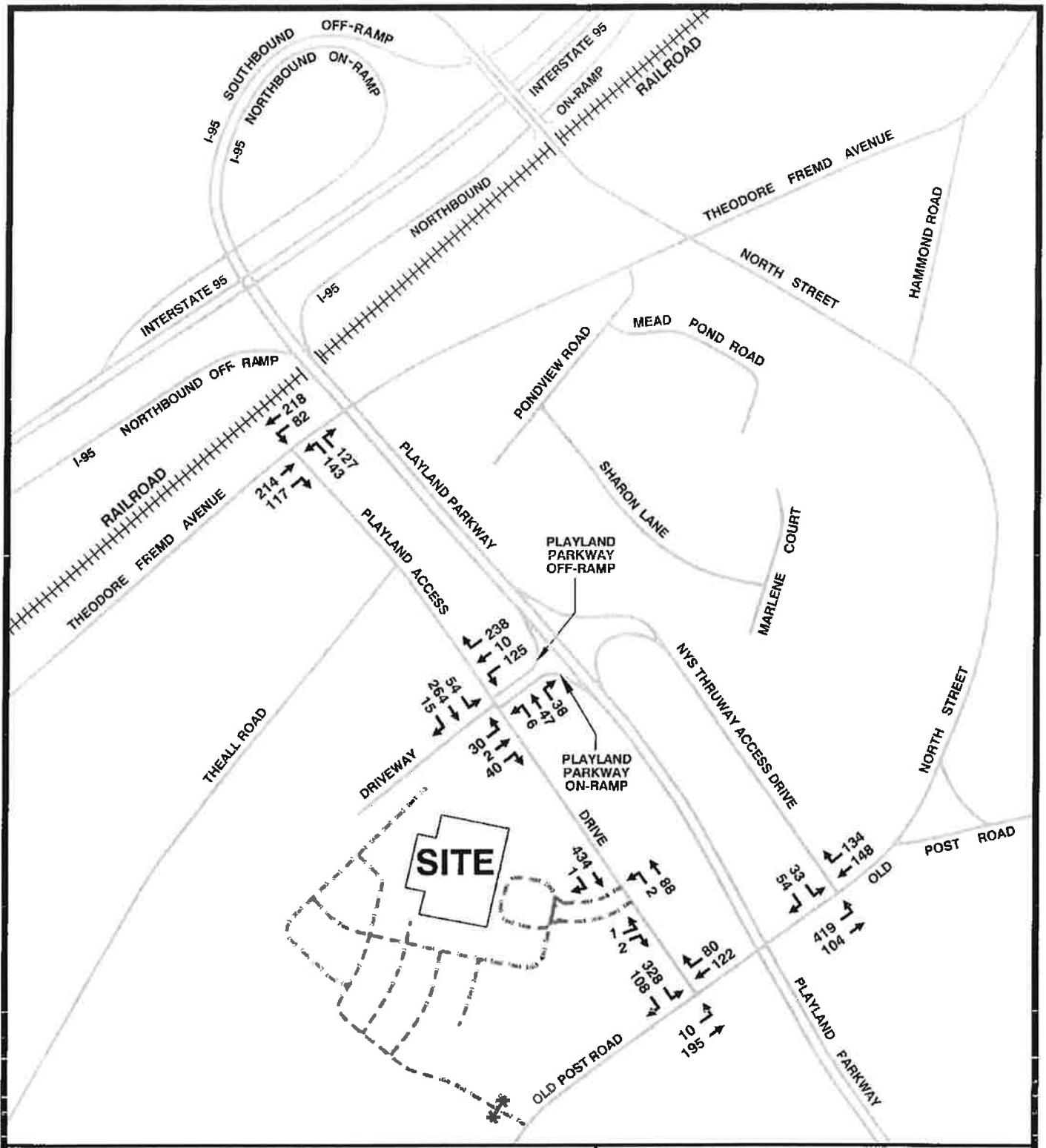

Note: The 2016 Background Traffic Volumes include the 2016 Projected Traffic Volumes and the Other Developments Traffic Volumes.

LEGEND

- SITE ACCESS DRIVE
- CLOSED SITE ACCESS DRIVE

2016 BACKGROUND TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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Table 4
SITE TRAFFIC GENERATION COMPARISON – PEAK HOURS
Age-Restricted Residential Development
120 Old Post Road
Rye, New York

PROPOSED LAND USE				
LAND USE	SIZE	TRAFFIC DIRECTION	VEHICLE TRIP ENDS	
			Weekday Morning	Weekday Afternoon
Senior Adult Housing – Attached	135 Dwelling Units	Enter	9	18
		Exit	18	16
		Total	27	34

Source: "Trip Generation," 9th Edition, published by the Institute of Transportation Engineers (ITE), 2012 using Senior Adult Housing – Attached, Code #252 average rates.

CURRENT LAND USE				
LAND USE	SIZE	TRAFFIC DIRECTION	VEHICLE TRIP ENDS	
			Weekday Morning	Weekday Afternoon
General Office Building	70,000 S.F.	Enter	96	18
		Exit	13	86
		Total	109	104

Source: "Trip Generation," 9th Edition, published by the Institute of Transportation Engineers (ITE), 2012 using General Office Building, Code #710 Average Rates.

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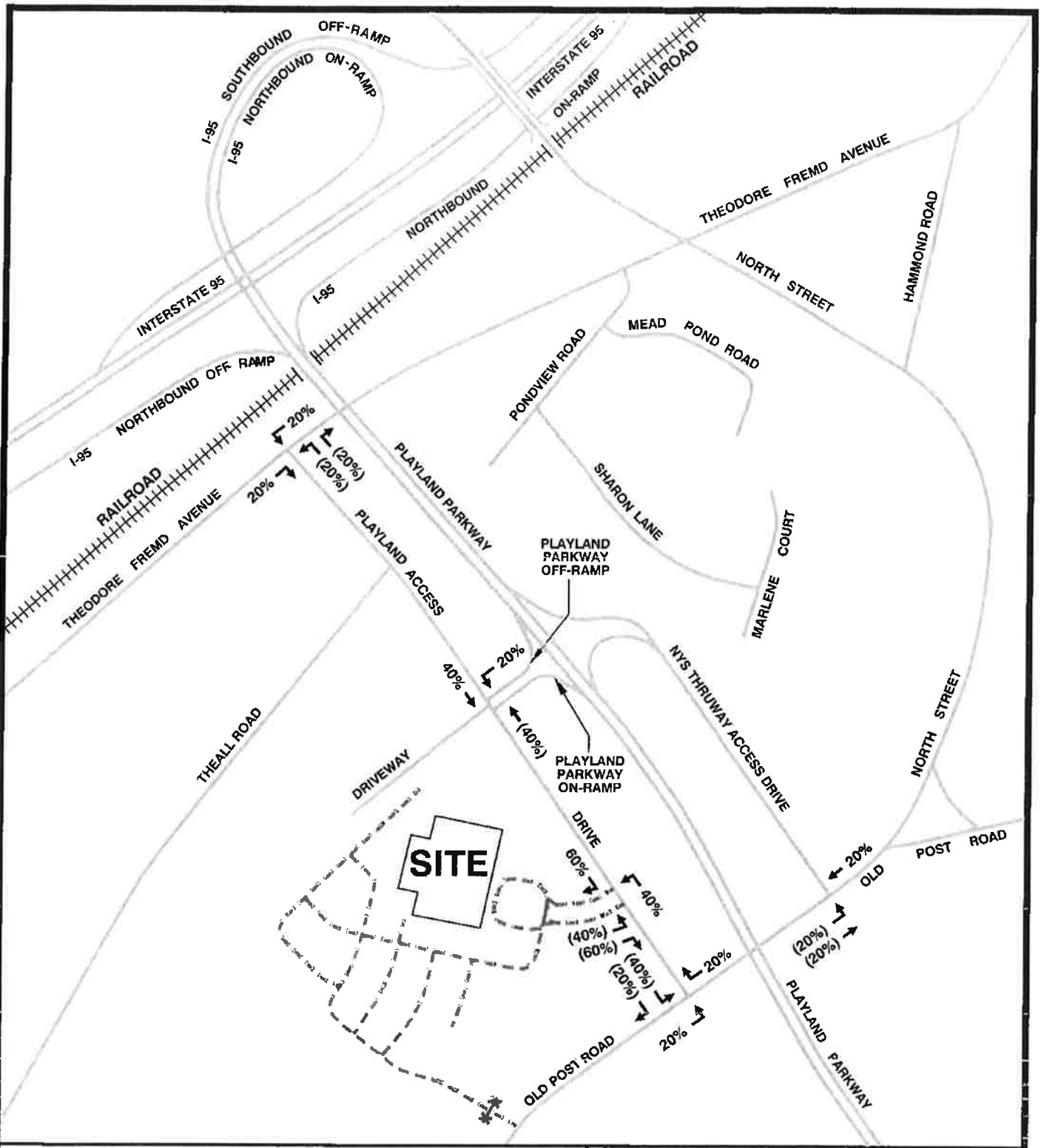
Site Traffic Distribution and Assignment

To develop the anticipated distribution patterns for the additional site traffic, an evaluation of current patterns at the site access drive and patterns for traffic conditions on area roads were analyzed. Based on the results of this analysis it was determined that for arrivals 60 percent of the site traffic will turn right into the subject driveway from Playland Access Drive. It is anticipated that 20 percent will arrive from the southbound off-ramp of Playland Parkway from Interstate 95, 20 percent from the southwest on Theodore Fremd Avenue and the remaining 20 percent from the northeast on Theodore Fremd Avenue. The remaining 40 percent arriving at the site driveway from the south on Playland Access Drive is expected to breakdown to 20 percent arriving from the northeast on Old Post Road and the remaining 20 percent arriving from the southwest on Old Post Road.

For exiting movements it was found that 60 percent of the site traffic will exit and turn right from the driveway to travel southbound on Playland Access Drive to the intersection with Old Post Road. At Old Post Road 40 percent will turn left to travel northeast on Old Post Road, 20 percent turning left onto the Playland Parkway northbound ramps and the remaining 20 percent continuing northeast on Old Post Road to North Street. The remaining 20 percent traveling southeast on Playland Access Drive will turn right onto Old Post Road to travel to Boston Post Road. For the exiting movements turning left at the access drive 40 percent of the site traffic will continue northwest on Playland Access Drive to Theodore Fremd Avenue, where 20 percent will turn left and the remaining 20 percent will turn right.

Figure 11 graphically shows the distribution patterns anticipated for the additional to be added to area roads during the peak hours. Figures 12 and 13 show the site traffic generation and assignment for the peak hours.



SITE TRAFFIC
Enter 00%
Exit (00%)

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

SITE TRAFFIC DISTRIBUTION

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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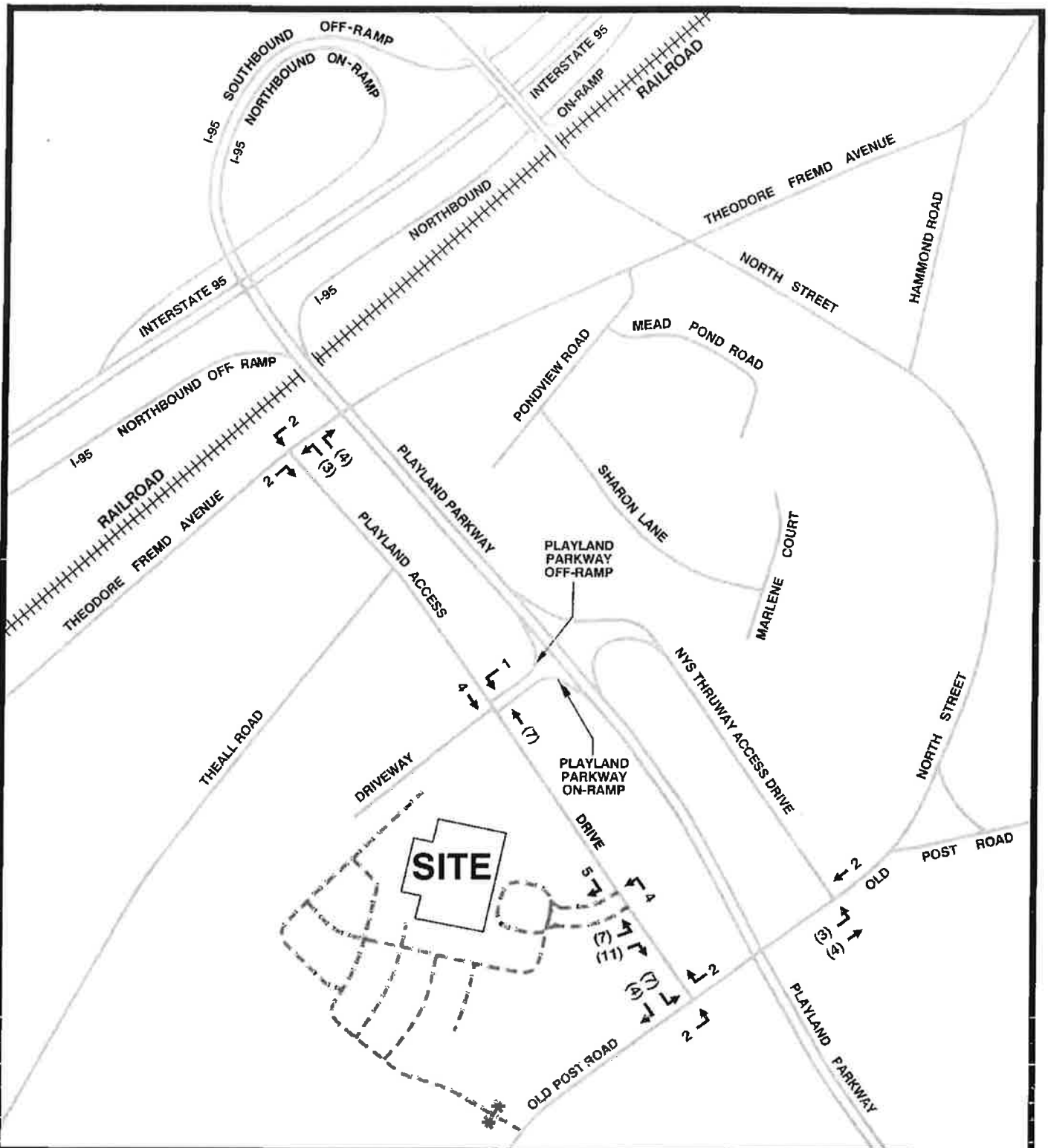

SITE TRAFFIC
Enter 9
Exit (18)
Total 27 Vehicle Trip Ends

LEGEND
SITE ACCESS DRIVE
CLOSED SITE ACCESS DRIVE

SITE TRAFFIC GENERATION AND ASSIGNMENT WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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12

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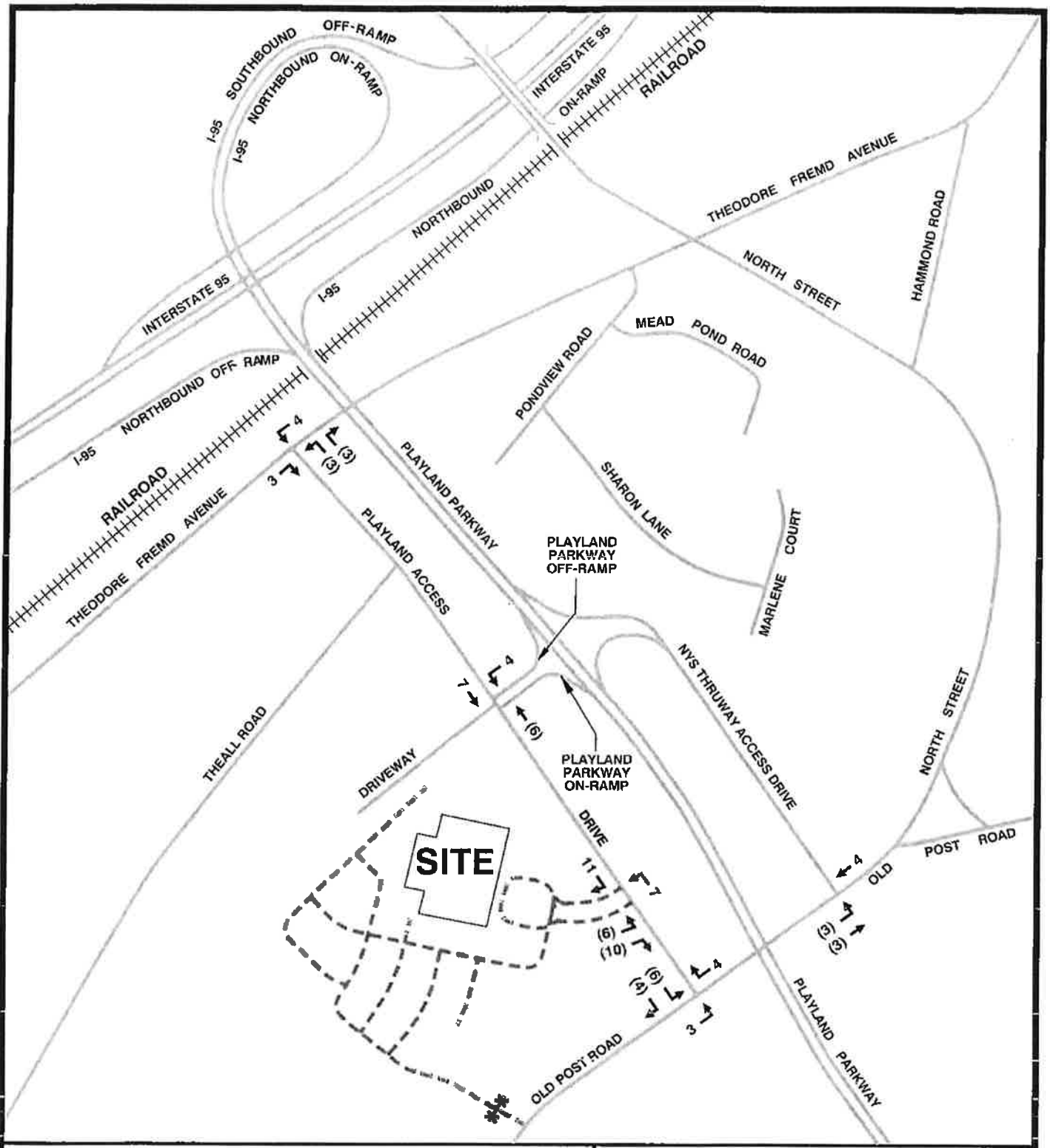

SITE TRAFFIC
Enter 18
Exit (16)
Total 34 Vehicle Trip Ends

LEGEND
SITE ACCESS DRIVE
CLOSED SITE ACCESS DRIVE

SITE TRAFFIC GENERATION AND ASSIGNMENT WEEKDAY AFTERNOON PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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Combined Traffic Volumes

The combined traffic volumes were developed by adding the residential-related traffic to the area roadways for both peak periods to develop a 2016 combined traffic volume condition. Results of this combination of volumes, with the background traffic volumes, which are previously described in this report, Figures 14 and 15, were prepared.

Capacity Analysis Results – Background and Combined Conditions

The following is a summary of the results of the analyses of the intersections included in this Study Area for both a background and combined condition for the four peak hours:

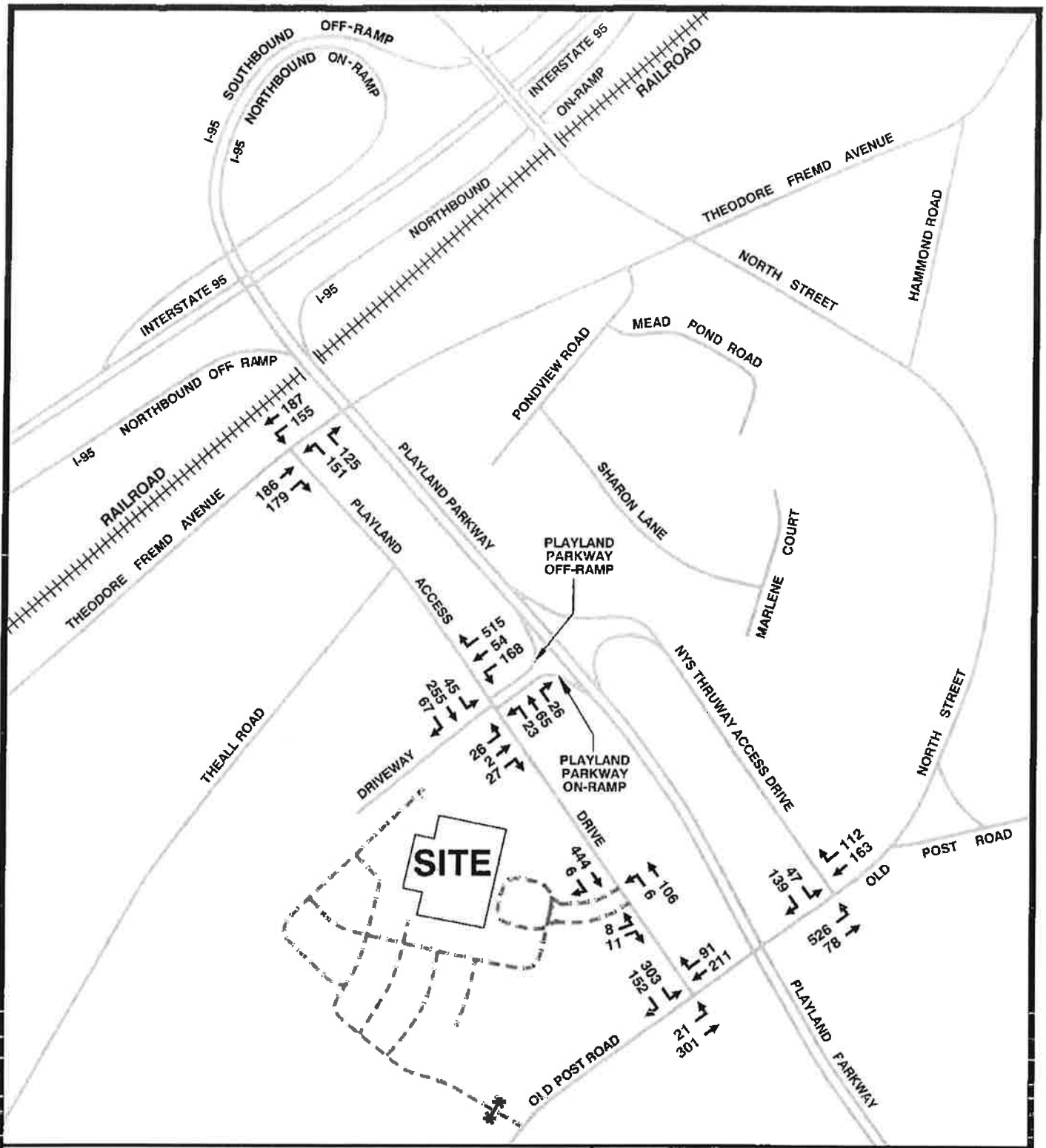
1. *Theodore Fremd Avenue at Playland Access Drive*

   Background – Results of the analysis of this signalized intersection indicate it will operate at an overall Level of Service "B" during both the weekday morning and weekday afternoon peak hours.

   Combined – Results of the analysis indicate this intersection will continue to operate the same overall Level of Service during the weekday afternoon peak hour. During the weekday morning peak hour there will be an acceptable change in Levels of Service from "B" to "C" with a change in average vehicle delay of 0.3 seconds.

2. *Playland Access Drive at Playland Parkway Southbound On/Off-Ramps/Medical Office Building Access Drive*

   Background – Results of the analysis of this unsignalized intersection indicate that for the critical movements on the ramp and access drive approaches to the intersection will operate at Level of Service "E" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively. The northbound and southbound critical movements on Playland Access Drive will operate at Level of Service "A" during both peak hours.



Note: The 2016 Combined Traffic Volumes include the 2016 Background Traffic Volumes and the Site Traffic Generation.

LEGEND

SITE ACCESS DRIVE

CLOSED SITE ACCESS DRIVE

2016 COMBINED TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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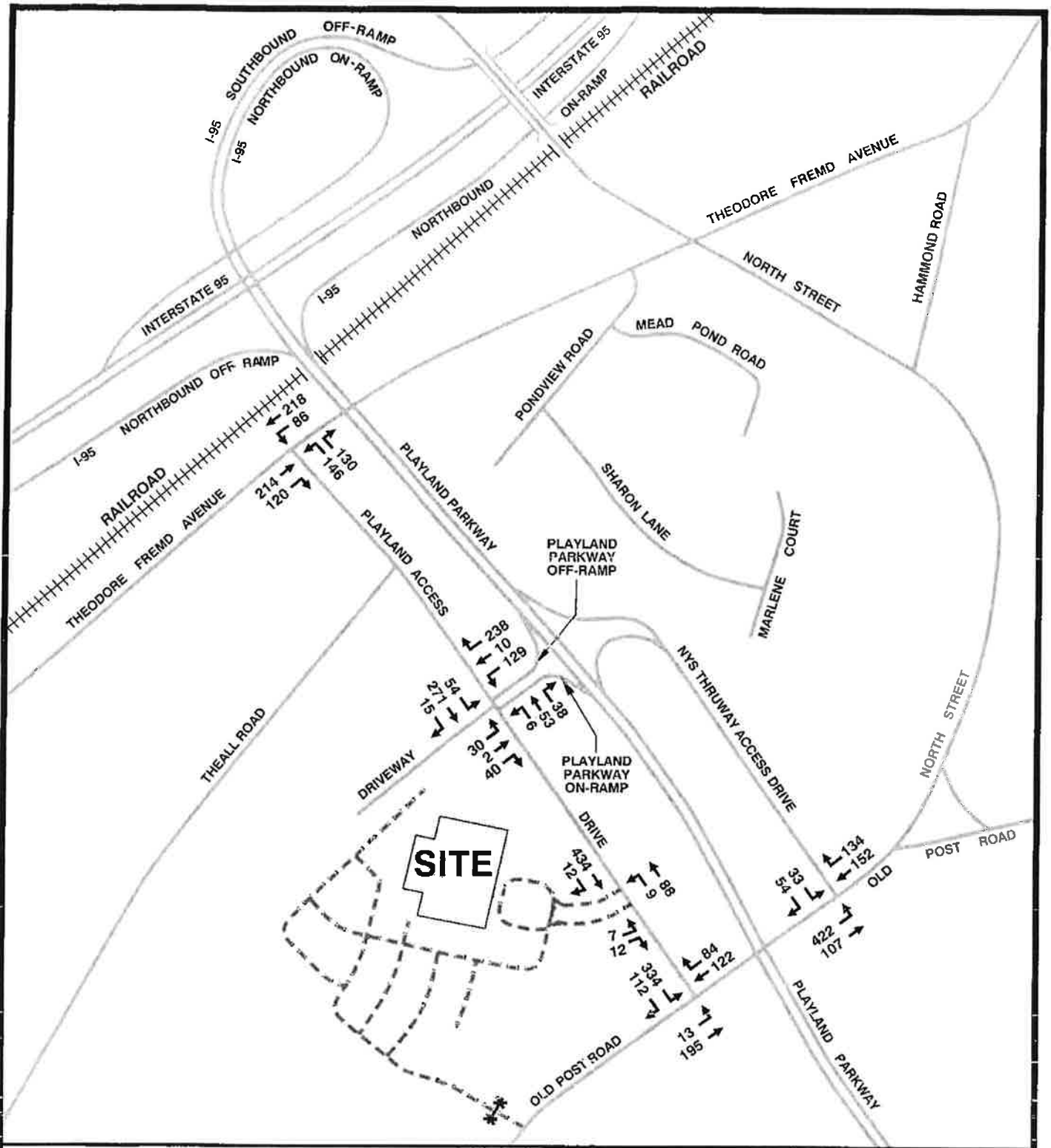

Note: The 2016 Combined Traffic Volumes include the 2016 Background Traffic Volumes and the Site Traffic Generation.

LEGEND

- SITE ACCESS DRIVE
- CLOSED SITE ACCESS DRIVE

2016 COMBINED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT
120 Old Post Road
Rye, New York

N

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Combined - Results of the analysis of this unsignalized intersection indicate that the Level of Service will remain the same for all movements with an increase in average vehicle delay of at most 1.5 seconds.

3. *Playland Access Drive at Office Building Access Drive*

Background – Results of the analysis indicate the critical movements will operate at Level of Service "B" or better during both peak hours.

Combined – Results of the analysis indicate critical movements at this intersection will continue to operate at Level of Service "B" or better during the two peak hours. The eastbound right turn movement will change from a Level of Service "A" to "B" during the weekday morning peak hour with an increase in average vehicle delay of 11.9 seconds.

4. *Old Post Road at Playland Access Drive*

Background – Results of the analysis indicate the critical movements on the southbound approach of Playland Access Drive (STOP sign approach) will operate at Level of Service "F" and "D" during the weekday morning and weekday afternoon peak hours, respectively. Results of the analysis indicate queue lengths totaling an average up to 13 vehicles during the peak hours.

Field observations of this intersection during the peak hours indicate similar vehicle queues and delays; however, these delays typically occur for less than 15 minutes during the peak hours.

Combined – Results of the analysis indicate that the critical movements on the southbound approach of this intersection will maintain the same Level of Service during both peak hours with an increase in average vehicle delay of at most 7.2 seconds. Reuse of the existing building will result in longer delays.

5. *Old Post Road at Thruway Access Drive*

Background – Results of the analysis of this unsignalized intersection indicate the critical southbound movements from the ramp are operating at Level of Service "F" and "D" during the weekday morning and weekday afternoon peak hours, respectively. The critical movements on Old Post Road are operating at Level of Service "A" during both peak hours.

Combined – Results of the analysis indicate that the critical movements on the southbound approach of this intersection will maintain the same Level of Service during both peak hours with an increase in average vehicle delay of at most 5.9 seconds. Again, reuse of the existing building will result in longer delays.

Table 5 provides a more detailed summary of the results of the analysis of each of these intersections with background and combined conditions. Capacity analysis worksheets are included in the Appendix of this report.

Findings

The purpose of this Traffic Report is to provide the City of Rye with a detailed analysis of potential impacts from this proposed development on adjacent roadways and nearby intersections in the designated Study Area. The proposal is to demolish the existing, but mostly vacant, office building comprising 70,000 square feet of space and construct an age-restricted residential development which will have 135 units. Access will remain the same from Playland Access Drive to the immediate south of the Old Post Road STOP sign-controlled intersection.

The Traffic Study is based on traffic volumes obtained in 2012 through 2014. These volumes were obtained by Frederick P. Clark Associates, Inc. and other Traffic Consultants for different nearby projects.

Table 5
2016 FUTURE CONDITIONS – MEASURE OF EFFECTIVENESS (MOE) AND IMPACT ASSESSMENT – PEAK HOURS
Age-Restricted Residential Development
120 Old Post Road
Rye, New York

INTERSECTION	CONTROL TYPE	STORAGE/ LINK LENGTH	PHYSICAL UNITS	2016 BACKGROUND CONDITIONS						2016 COMBINED CONDITIONS						PROJECT IMPACTS			
				Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning		Weekday Afternoon	
				LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	Deterio -ration in LOS	Project Delay (Seconds)	Deterio- ration in LOS	Project Delay (Seconds)
Theodore Fremd Avenue at Playland Access Drive	Traffic Signal	670	EB TR	B/18.5	0.49	229	B/17.9	0.42	216	B/18.6	0.49	231	B/17.9	0.42	218	No	0.1	No	0.0
		--	APP	B/18.5	--	--	B/17.9	--	--	B/18.6	--	--	B/17.9	--	--	No	0.1	No	0.0
		150	WB L	B/11.7	0.29	72	A/9.4	0.15	42	B/11.8	0.29	73	A/9.5	0.16	44	No	0.1	No	0.1
		260	T	A/9.0	0.18	86	A/9.3	0.21	100	A/9.0	0.18	86	A/9.3	0.21	100	No	0.0	No	0.0
		--	APP	B/10.2	--	--	A/9.3	--	--	B/10.3	--	--	A/9.4	--	--	No	0.1	No	0.1
		300	NB LR	C/33.8	0.56	243	C/33.9	0.56	244	C/34.2	0.57	250	C/34.2	0.58	250	No	0.4	No	0.3
		--	APP	C/33.8	--	--	C/33.9	--	--	C/34.2	--	--	C/34.2	--	--	No	0.4	No	0.3
		--	Overall	B/19.8	--	--	B/19.8	--	--	C/20.1	--	--	B/20.0	--	--	B – C	0.3	No	0.2
Playland Access Drive at Playland Parkway Eastbound On/Off Ramp/Medical Office Building Access Drive	TWSC	245	EB L	E/41.0	0.37	40	C/18.7	0.21	20	E/42.5	0.38	41	C/19.2	0.22	20	No	1.5	No	0.5
		245	T	E/41.0	0.37	40	C/18.7	0.21	20	E/42.5	0.38	41	C/19.2	0.22	20	No	1.5	No	0.5
		75	R	E/41.0	0.37	40	C/18.7	0.21	20	E/42.5	0.38	41	C/19.2	0.22	20	No	1.5	No	0.5
		350	WB L	D/28.1	0.63	103	C/22.6	0.46	58	D/29.4	0.64	108	C/23.9	0.48	63	No	1.3	No	1.3
		350	T	D/28.1	0.63	103	C/22.6	0.46	58	D/29.4	0.64	108	C/23.9	0.48	63	No	1.3	No	1.3
		50	R	B/13.8	0.59	**100**	B/10.3	0.30	32	B/14.0	0.60	**102**	B/10.4	0.31	33	No	0.2	No	0.1
		400	NB L	A/0.2	0.02	2	A/0.1	0.01	0	A/0.2	0.02	2	A/0.1	0.01	0	No	0.0	No	0.0
		485	SB L	A/0.3	0.03	3	A/0.4	0.05	4	A/0.3	0.03	3	A/0.4	0.05	4	No	0.0	No	0.0
Playland Access Drive at Office Building Access Drive	TWSC	130	EB L	B/12.4	0.00	0	B/11.4	0.01	0	B/11.9	0.04	3	B/11.8	0.04	3	No	0.0	No	0.4
		130	R	A/0.0	0.00	0	B/11.4	0.01	0	B/11.9	0.04	3	B/11.8	0.04	3	A – B	11.9	No	0.4
		110	NB L	A/0.0	0.00	0	A/0.0	0.00	0	A/0.0	0.01	0	A/0.1	0.01	1	No	0.0	No	0.1
Old Post Road at Playland Access Drive	TWSC	975	EB L	A/0.2	0.02	1	A/0.1	0.01	1	A/0.2	0.02	1	A/0.1	0.01	1	No	0.0	No	0.0
		110	SB L	F/58.9	0.96	**305**	D/28.6	0.79	**191**	F/66.1	0.99	**331**	D/31.2	0.81	**209**	No	7.2	No	2.6
		110	R	F/58.9	0.96	**305**	D/28.6	0.79	**191**	F/66.1	0.99	**331**	D/31.2	0.81	**209**	No	7.2	No	2.6
Old Post Road at Thruway Access Drive	TWSC	240	EB L	A/5.1	0.47	64	A/4.1	0.39	47	A/5.2	0.47	65	A/4.2	0.39	48	No	0.1	No	0.1
		925	SB L	F/91.1	0.94	201	D/33.0	0.44	53	F/97.0	0.96	208	D/34.2	0.45	54	No	5.9	No	1.2
		925	R	F/91.1	0.94	201	D/33.0	0.44	53	F/97.0	0.96	208	D/34.2	0.45	54	No	5.9	No	1.2

Notes:

- Synchro 8.0 is used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- TWSC = Two-Way STOP Control.
- For TWSC Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).
- ITE publication for Traffic Access and Impact Studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.

Table 5 Cont'd

- V/C ratio indicates the amount of congestion for each Lane Group or Movement. Any V/C ratio greater than or equal to one indicates that the Lane Group or Movement is operating at above capacity.
- Synchro 8.0 Macroscopic model is used for storage/queue analysis.
- The Queue Length rows show the 95th percentile maximum queue length in feet.
- The Queue Length is for each lane. The total queue length is divided by the number of lanes and the lane utilization factor.
- The 95th percentile queue is the maximum back of the queue with the 95th percentile traffic volumes.
- **Bolded** 95th percentile queue exceeds the storage available.
- Physical Units consist of the following:
    1. Lane Group and Intersection Overall for Traffic Signal Controlled Intersections.
    2. Movement for TWSC Intersections.

NB = Northbound EB = Eastbound SB = Southbound WB = Westbound
L = Left Turn T = Through R = Right Turn APP. = Approach

In this Traffic Study it addresses traffic conditions for existing, no-build and build peak hour volumes near the site. It includes the weekday morning and weekday afternoon peak hours. Under the no-build condition it includes other developments, as well as an appropriate growth rate.

The proposal is to demolish the existing, but mostly vacant, office building and construct the age-restricted development, as noted above. To estimate site traffic for the proposed development trip generation rates were obtained from the Institute of Transportation Engineers (ITE) in "Trip Generation," 9th Edition, published 2012. Based on these trip generation rates it is estimated a development of this type and size will generate 27 and 34 vehicle trip ends during the typical weekday morning and weekday afternoon peak hours, respectively. For comparison purposes the current 70,000 square-foot office building, if it was to be fully reoccupied, could generate 109 and 104 vehicle trip ends during the same weekday morning and weekday afternoon peak hours, respectively. Therefore, the proposed residential development would result in a decrease in site traffic generation of 82 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. This is a significant reduction in site traffic generation potential directly related to the change in land use from an office building to a residential development.

The results of the capacity analysis for existing conditions indicate the Theodore Fremd Avenue/Playland Access Drive signalized intersections operates at an acceptable overall Level of Service "B" during peak hours. During the weekday morning peak hour motorists experience delays at the unsignalized intersection of Playland Access Drive/ /Playland Parkway/Medical Building, Old Post Road at Playland Access Drive and Old Post Road at Thruway Access Drive. All of the Study Area intersections operate at acceptable Levels of Service during the weekday afternoon peak hour. Similar results are found for 2016 background conditions. In both existing and background conditions analyses the office building located on the site is considered vacant.

Under a future combined condition, which includes the proposed residential development, each of these unsignalized intersections will continue to operate at acceptable Levels of Service, except for some Levels of Service "E" or "F" identified in a background condition. A comparison of the background and combined traffic conditions for each of these intersections indicate that Levels of Service will remain unchanged, except for change from an overall Level of Service "B" to "C" at the signalized intersection of Theodore Fremd Avenue at Playland Access Drive, with an insignificant overall delay due to the residential development of 0.3 seconds per vehicle during this one peak hour. Results of the analyses for the weekday afternoon peak hour indicate Levels of Service will remain the same at each of the unsignalized intersections and at each of the lane groups or approaches with minimal, if any, increase in average vehicle delay due to the proposed residential development.

Based on the results of these analyses it is recommended that the current traffic control and pavement markings at each of these locations remain unchanged. The analysis indicates that the added site traffic for a residential development is insignificant and will not change the overall operation of any of the intersections in the Study Area. In addition, there is a significant benefit of converting this office building to a residential development, which results in a significant decrease in site traffic generation during the key weekday morning and weekday afternoon peak hours.

The results of these analyses have been compared to field observations at each of these locations during both the weekday morning and weekday afternoon peak hours. It is noted that motorists do experience short-term delays at the Playland Parkway off ramp to Playland Access Drive and on the Playland Access Drive and Thruway Access Drive approaches to Old Post Road during peak hours. However, based on the results of this analysis each intersection should maintain STOP control. Any consideration for signalization, if warranted, at the Playland Parkway ramps to Playland Access Drive may

actually result in an increase in delays, which could impact the mainline of Playland Parkway (southbound lanes).

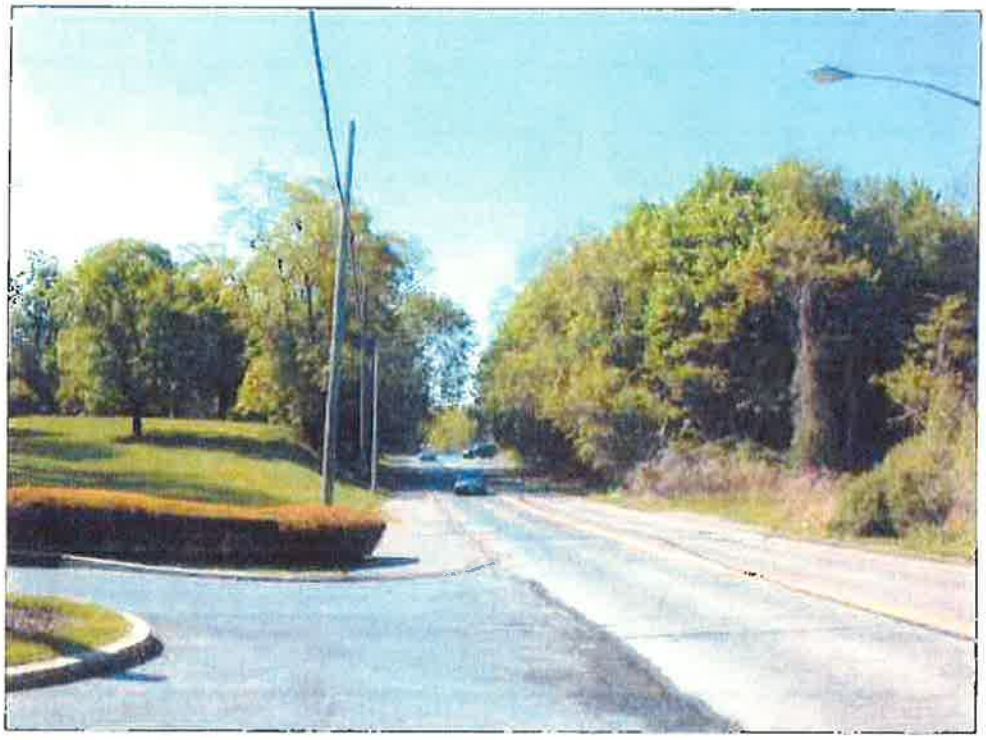
At the Old Post Road intersection at Playland Access Drive and Thruway Access Drive it is likely that either location would meet the minimum standards for consideration for traffic signals.

g:\760.004 120 old post road, rye\word\rye14-000.stc.doc: ev: td
11/3/14

APPENDIX

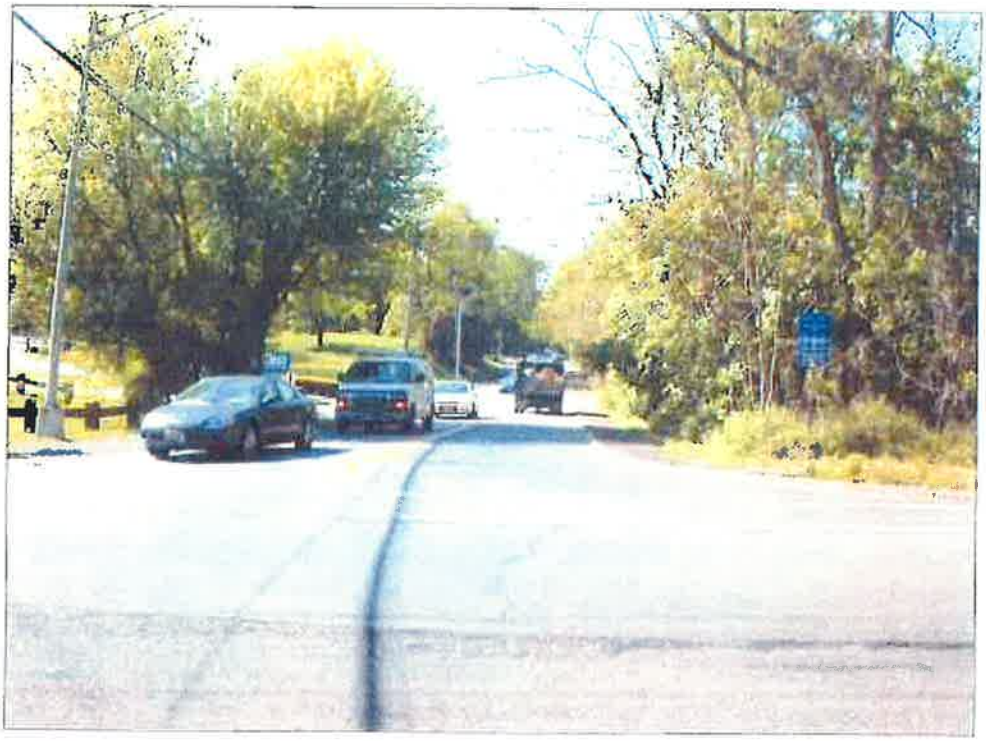
PHOTOGRAPHS

SITE ACCESS DRIVE AT PLAYLAND ACCESS DRIVE, LOOKING WEST



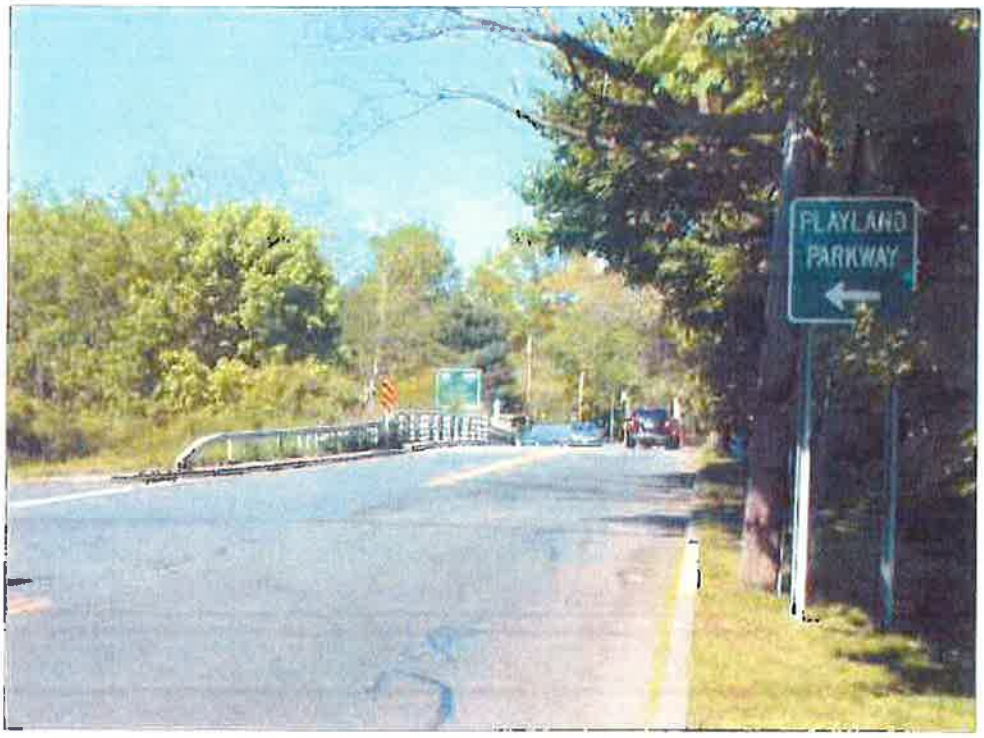
PLAYLAND ACCESS DRIVE AT SITE ACCESS DRIVE, LOOKING NORTH

PLAYLAND ACCESS DRIVE AT SITE ACCESS DRIVE, LOOKING SOUTH

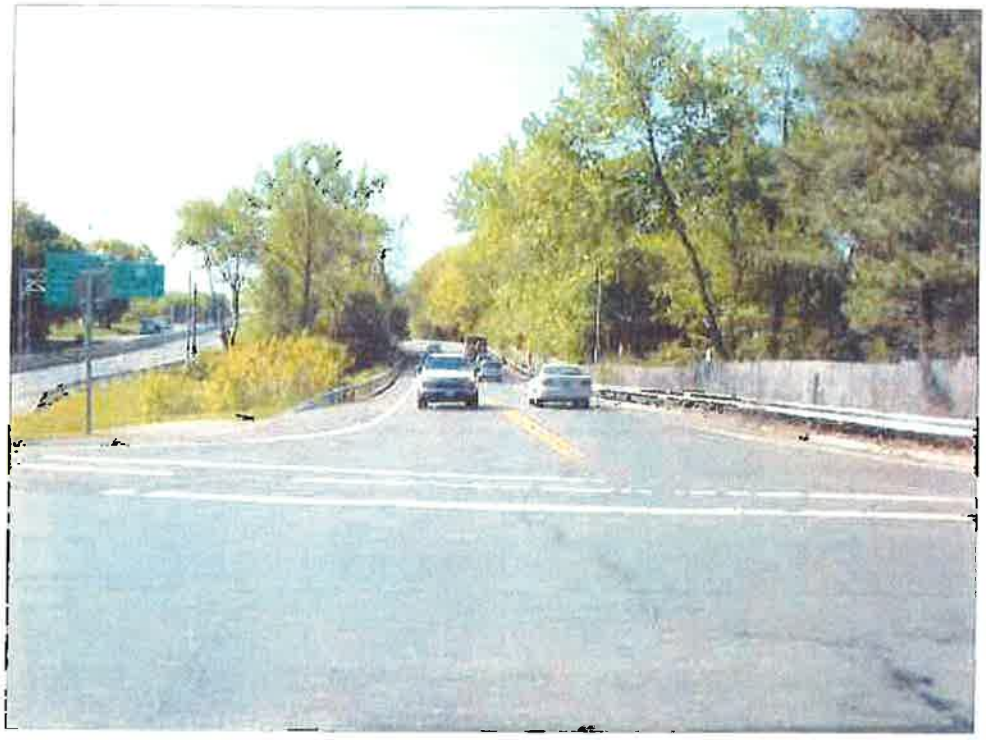


PLAYLAND ACCESS DRIVE AT OLD POST ROAD, LOOKING NORTH

**OLD POST ROAD AT PLAYLAND ACCESS DRIVE,
LOOKING WEST**



**OLD POST ROAD AT PLAYLAND ACCESS DRIVE,
LOOKING EAST**



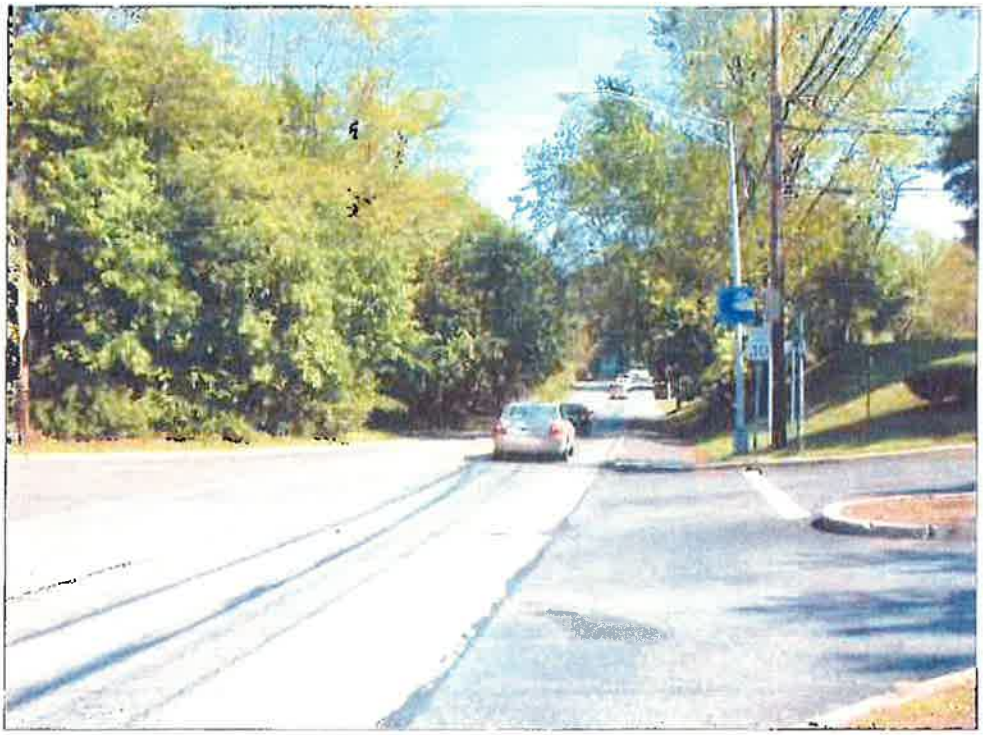
PLAYLAND PARKWAY NORTHBOUND ON/OFF RAMPS AT OLD POST ROAD, LOOKING NORTH

OLD POST ROAD AT PLAYLAND PARKWAY NORTHBOUND ON/OFF RAMPS, LOOKING WEST

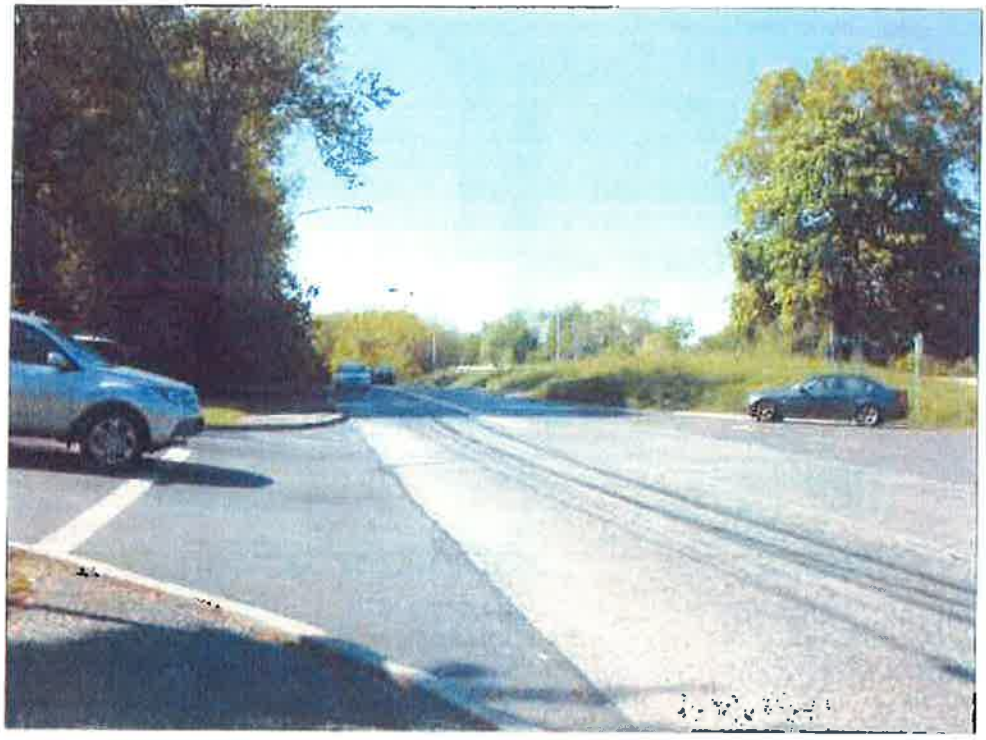
OLD POST ROAD AT PLAYLAND PARKWAY
NORTHBOUND ON/OFF RAMPS, LOOKING EAST

PLAYLAND PARKWAY SOUTHBOUND ON/OFF-RAMP
AT PLAYLAND ACCESS DRIVE, LOOKING EAST

MEDICAL OFFICE ACCESS DRIVE AT PLAYLAND ACCESS DRIVE, LOOKING WEST



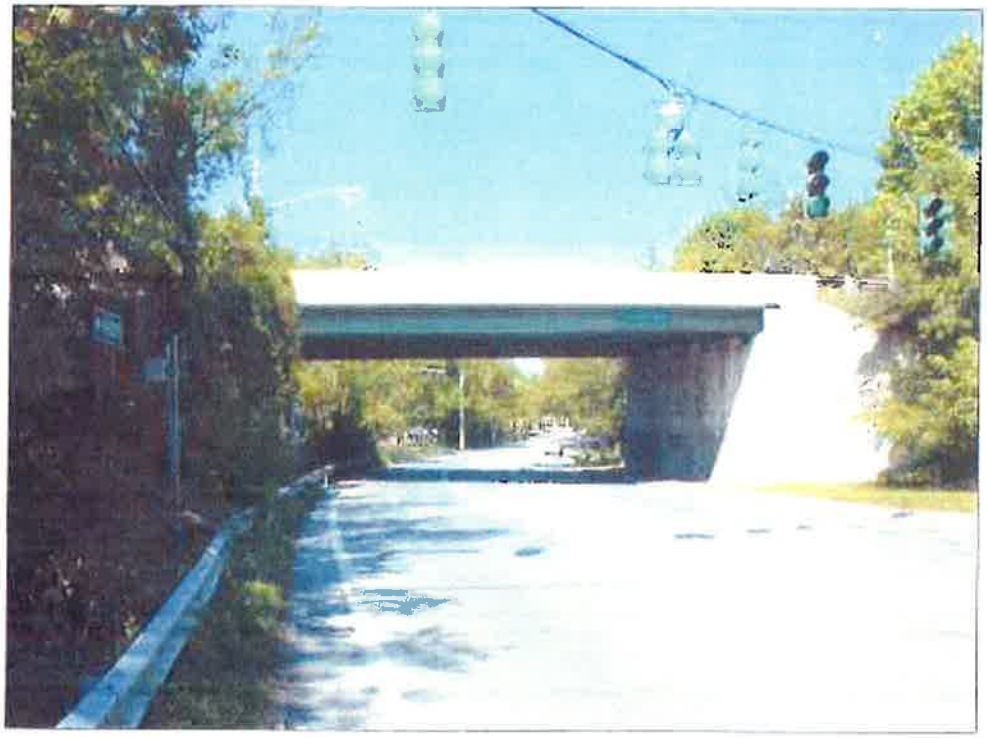
PLAYLAND ACCESS DRIVE AT MEDICAL OFFICE ACCESS DRIVE/ PLAYLAND PARKWAY SOUTHBOUND ON/OFF-RAMP, LOOKING SOUTH



PLAYLAND ACCESS DRIVE AT MEDICAL OFFICE ACCESS DRIVE/ PLAYLAND PARKWAY SOUTHBOUND ON/OFF-RAMPS, LOOKING NORTH

PLAYLAND ACCESS DRIVE AT THEODORE FREMD AVENUE, LOOKING SOUTH

THEODORE FREMD AVENUE AT PLAYLAND ACCESS DRIVE, LOOKING WEST



THEODORE FREMD AVENUE AT PLAYLAND ACCESS DRIVE, LOOKING EAST

CAPACITY ANALYSIS PROCEDURES

CAPACITY ANALYSIS PROCEDURES

Intersections – Four methods of analysis are needed to evaluate different kinds of intersections. These methods are based on procedures found in the Fifth Edition of the Highway Capacity Manual 2010 and are described below.

Signalized Intersections

This chapter's methodology applies to three-leg and four-leg intersections of two streets or highways where the signalization operates in isolation from nearby intersections.

Performance Measure – An intersection's performance is described by the use of one or more quantitative measures that characterize some aspect of the service provided to a specific road user group. Performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage ratio, pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is considered a performance measure. It is computed for the automobile, pedestrian, and bicycle travel modes.

Travel Modes – There are three methodologies that can be used to evaluate intersection performance from the perspective of motorists, pedestrians, and bicyclists. They are referred to as the automobile methodology, the pedestrian methodology, and the bicycle methodology.

Lane Groups and Movement Groups – A separate lane group is established to (a) each lane (or combination of adjacent lanes) that exclusively serves one movement and (b) each lane shared by two or more movements. The concept of movement groups is also established to facilitate data entry. A separate movement group is established for (a) each turn movement with one or more exclusive turn lanes and (b) the through movement (inclusive of any turn movements that share a lane).

LOS Criteria – LOS criteria for the automobile mode are different from those for the non-automobile modes. The automobile-mode criteria are based on performance measures that are field measurable and perceivable by travelers. The criteria for the non-automobile modes are based on scores reported by travelers indicating their perception of service quality.

Automobile Mode – LOS for Automobile Mode can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort

and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following describes each LOS.

Level of Service A – It describes operations with a control delay of 10.0 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B – It describes operations with control delay between 10 to 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicle stop than with LOS A.

Level of Service C – It describes operations with control delay between 20 to 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D – It describes operations with control delay between 35 to 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of Service E – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

The LOS thresholds established for automobile mode at a signalized intersection

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	≤ 1.0	>1.0
≤ 10	A	F
>10 to 20	B	F
>20 to 35	C	F
>35 to 55	D	F
>55 to 80	E	F
>80	F	F

Note: For approach-based and intersection-wide assessments, LOS is defined by control delay.

Two-Way STOP-Controlled Intersections (TWSC)

One typical configuration is a four-leg intersection, where the major street is uncontrolled, while the minor street is controlled by STOP signs. The other typical configuration is a three-leg intersection, where the single minor-street approach is controlled by a STOP sign.

Theoretical Basic – Gap-acceptance models begin with the recognition that TWSC Intersections give no positive indication or control to the driver on the minor street as to when it is appropriate to leave the stop line and enter the major street. The driver must determine when a gap on the major street is large enough to permit entry and when to enter, on the basis of the relative priority of the competing movements. This decision-making process has been formalized analytically into what is commonly known as gap-acceptance theory. Gap-acceptance theory includes three basic elements: the size and distribution (availability) of gaps on the major street, the usefulness of these gaps to the minor-street drivers, and the relative priority of the various movements at the intersection.

Critical Headway and Follow-Up Headway – The *critical headway* is defined as the minimum interval in the major street traffic stream that allows intersection entry for one minor-street vehicle. Thus, the driver's critical headway is the minimum headway that would be acceptable. Critical headway can be estimated on the basis of observations of the largest rejected and smallest accepted headway for a given intersection. The *follow-up headway* is defined as the time between the departure of one vehicle from the minor street

and the departure of the next vehicle using the same major-street headway, under a condition of continuous queuing on the minor street.

Base Critical Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE CRITICAL HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	4.1	4.1	5.3
U-turn from major	N/A	6.4 (wide) 6.9 (narrow)	5.6
Right turn from minor	6.2	6.9	7.1
Through traffic 0n major	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5* 2-stage, stage I: 5.5* 2-stage, Stage II: 5.5*
Left turn from minor	1-stage:7.1 2-stage, stage I: 6.1 2-stage, Stage II: 6.1	1-stage:7.5 2-stage, stage I: 6.5 2-stage, Stage II: 6.5	1-stage:6.4 2-stage, stage I: 7.3 2-stage, Stage II: 6.7

*Use caution; values estimated

Base Follow-up Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE FOLLOW-UP HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	2.2	2.2	3.1
U-turn from major	N/A	2.5 (wide) 3.1 (narrow)	2.3
Right turn from minor	3.3	3.3	3.9
Through traffic on major	4.0	4.0	4.0
Left turn from minor	3.5	3.5	3.8

Level Of Service Criteria – LOS for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turn. LOS is not defined for the intersection as a whole or for major-street approaches. LOS F is assigned to

the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

Automobile Mode – The methodology applies to TWSC intersections with up to three lanes (either shared or exclusive) on the major-street approaches and up to three lanes on the minor-street approaches (with no more than one exclusive lane for each movement on the minor-street approach). Effects from other intersections are accounted for only in situations in which a TWSC intersection is located on an urban street segment between coordinated signalized intersections. In this situation, the intersection can be analyzed by using the procedures in urban street segment.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	1.0	>1.0
0- 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

TURNING MOVEMENT COUNTS

AGE-RESTRICTED RESIDENTIAL DEVELOPMENT, 120 OLD POST ROAD, RYE, NY (#760.004)

FIELD DATA SUMMARY - Old Post Road at Playland Access Drive

Thursday		Eastbound - Old Post Road				Westbound - Old Post Road				Northbound				Southbound - Playland Access Drive					Last 4	Pedestrians (Approaches)		
30-Oct-14		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Total	Quarters	EB	WB	SB
7:00 AM	7:15 AM	4	31	0	35	0	5	5	10	0	0	0	0	49	0	14	63	108		0	0	0
7:15 AM	7:30 AM	2	28	0	30	0	12	13	25	0	0	0	0	60	0	45	105	160		0	0	0
7:30 AM	7:45 AM	3	55	0	58	0	27	23	50	0	0	0	0	57	0	43	100	208		0	0	2
7:45 AM	8:00 AM	4	80	0	84	0	47	20	67	0	0	0	0	67	0	47	114	265	741	0	0	2
8:00 AM	8:15 AM	2	72	0	74	0	49	23	72	0	0	0	0	66	0	30	96	242	875	0	0	0
8:15 AM	8:30 AM	30	74	0	84	0	49	20	69	0	0	0	0	82	0	36	118	271	986	0	0	5
8:30 AM	8:45 AM	3	69	0	72	0	46	22	68	0	0	0	0	75	0	32	107	247	1,025	0	0	0
8:45 AM	9:00 AM	6	54	0	60	0	21	24	45	0	0	0	0	90	0	30	120	225	985	0	0	3
AM Peak Hour Vol.		**19**	**295**	**0**	**314**	**0**	**191**	**85**	**276**	0	**0**	**0**	**0**	**290**	0	**145**	**435**	**1,025**		**0**	**0**	**7**
Peak Hour Factor					**0.93**				**0.96**				**#DIV/0!**				**0.92**	**0.95**				

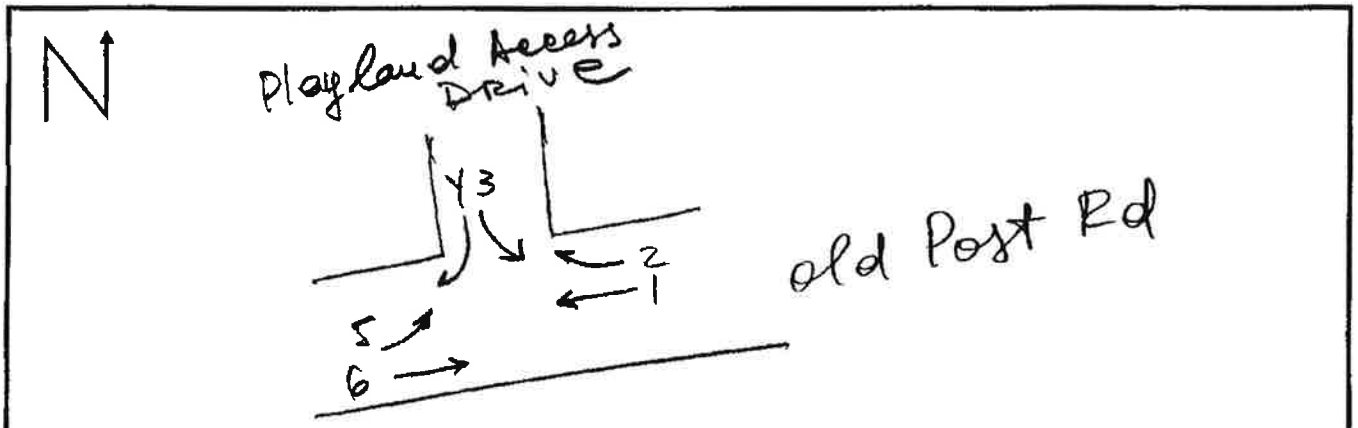
AMERICAN TRAFFIC INFORMATION, INC.

TURNING MOVEMENT COUNTS

ATI #14153

Location: # Old Post Rd & Playland Access Drive

Surveyor: _____ Day/Date: 10.30.14



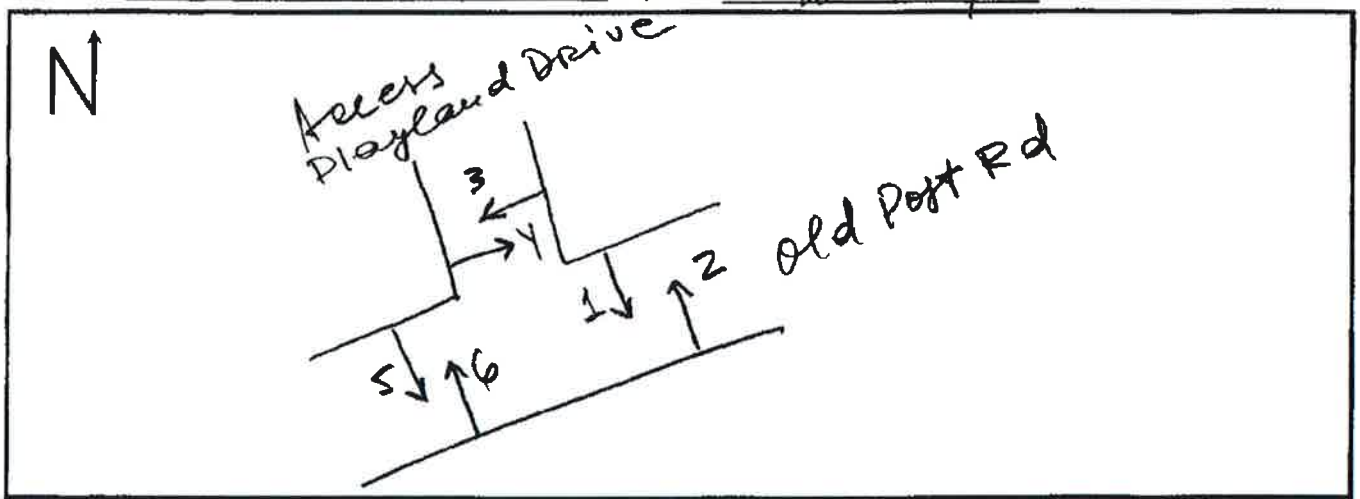
	Vehicle Movement Number											
Time	1	2	3	4	5	6	7	8	9	10	11	12
7:15	5	5	49	14	4	31						
7:30	12	13	60	45	2	28						
7:45	27	23	57	43	3	55						
8:00	47	20	67	47	4	80						
8:15	49	23	66	30	2	72						
8:30	49	20	82	36	10	74						
8:45	46	22	75	32	3	69						
9:00	21	24	90	30	6	54						
4:15												
4:30												
4:45												
5:00												
5:15												
5:30												
5:45												
6:00												

PEDESTRIAN COUNTS

[ATI #14153]

Location: **Old Post Road & Access Playland Drive**

Surveyors: _____ Day/Date: 10.30.14



Time	Movement Number 1	2	3	4	5	6	7	8	9	10	11	12
7:15	0	0	0	0	0	0						
7:30	0	0	0	0	0	0						
7:45	0	0	2	0	0	0						
8:00	0	0	1	1	0	0						
8:15	0	0	0	0	0	0						
8:30	0	0	4	1	0	0						
8:45	0	0	0	0	0	0						
9:00	0	0	0	3	0	0						
4:15												
4:30												
4:45												
5:00												
5:15												
5:30												
5:45												
6:00												

CAPACITY ANALYSIS WORKSHEETS

CAPACITY ANALYSIS WORKSHEETS

Existing Conditions

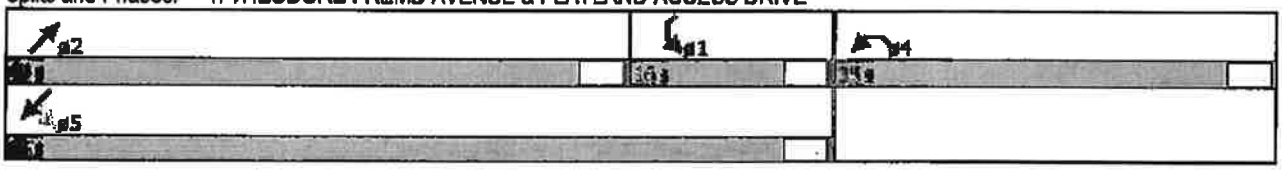
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	145	117	181	174	149	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.940		0.934			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1704	0	1740	0	1770	1863
Flt Permitted	0.973				0.410	
Satd. Flow (perm)	1704	0	1740	0	764	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			63			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	159	129	199	191	164	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	390	0	164	199
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		Max	Max
Act Effct Green (s)	31.0		45.0		61.0	61.0
Actuated g/C Ratio	0.31		0.45		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.55		0.48		0.28	0.18
Control Delay	33.3		18.2		11.4	9.0
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	33.3		18.2		11.4	9.0
LOS	C		B		B	A
Approach Delay	33.3		18.2			10.1
Approach LOS	C		B			B
Queue Length 50th (ft)	152		140		41	51
Queue Length 95th (ft)	236		223		70	83
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	528		817		586	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.55		0.48		0.28	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 19.6 — Intersection LOS: B
Intersection Capacity Utilization 53.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	43	245	66	23	57	25	25	2	26	165	53	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.968				0.850			0.850
Flt Protected		0.994			0.989			0.955			0.964	
Satd. Flow (prot)	0	1805	0	0	1783	0	0	1779	1583	0	1796	1583
Flt Permitted		0.994			0.989			0.955			0.964	
Satd. Flow (perm)	0	1805	0	0	1783	0	0	1779	1583	0	1796	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	48	275	74	26	64	28	28	2	29	185	60	565
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	397	0	0	118	0	0	30	29	0	245	565
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 50.3% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↱		↰	↱
Volume (veh/h)	43	245	66	23	57	25	25	2	26	165	53	503
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	48	275	74	26	64	28	28	2	29	185	60	565
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	92			349			1134	553	312	554	576	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	92			349			1134	553	312	554	576	78
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			57	99	96	54	85	42
cM capacity (veh/h)	1503			1209			65	418	728	406	405	983

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	398	118	60	245	565
Volume Left	48	26	28	185	0
Volume Right	74	28	29	0	565
cSH	1503	1209	179	406	983
Volume to Capacity	0.03	0.02	0.33	0.60	0.58
Queue Length 95th (ft)	2	2	34	96	95
Control Delay (s)	1.2	1.9	37.1	26.5	13.5
Lane LOS	A	A	E	D	B
Approach Delay (s)	1.2	1.9	37.1	17.4	
Approach LOS			E	C	

Intersection Summary			
Average Delay	12.3		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	435	1	2	104	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected				0.999	0.950	
Satd. Flow (prot)	1863	0	0	1861	1770	0
Flt Permitted				0.999	0.950	
Satd. Flow (perm)	1863	0	0	1861	1770	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	444	1	2	106	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	445	0	0	108	1	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.0% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	435	1	2	104	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	444	1	2	106	1	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			445		555	444
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			445		555	444
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1115		492	614

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	445	108	1
Volume Left	0	2	1
Volume Right	1	0	0
cSH	1700	1115	492
Volume to Capacity	0.26	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.2	12.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	12.3
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

CA-7

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	290	145	19	295	206	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.960	
Flt Protected	0.968			0.997		
Satd. Flow (prot)	1722	0	0	1857	1788	0
Flt Permitted	0.968			0.997		
Satd. Flow (perm)	1722	0	0	1857	1788	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)			7			7
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	315	158	20	317	215	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	473	0	0	337	306	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 62.7% ICU Level of Service B
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	290	145	19	295	206	87
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Hourly flow rate (vph)	315	158	20	317	215	91
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	625	267	312			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	625	267	312			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	28	79	98			
cM capacity (veh/h)	439	767	1241			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	473	338	305
Volume Left	315	20	0
Volume Right	158	0	91
cSH	512	1241	1700
Volume to Capacity	0.92	0.02	0.18
Queue Length 95th (ft)	278	1	0
Control Delay (s)	51.7	0.6	0.0
Lane LOS	F	A	
Approach Delay (s)	51.7	0.6	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	22.1		
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	45	136	513	72	157	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899				0.946	
Flt Protected	0.988			0.958		
Satd. Flow (prot)	1655	0	0	1785	1762	0
Flt Permitted	0.988			0.958		
Satd. Flow (perm)	1655	0	0	1785	1762	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	51	153	576	81	176	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	0	657	295	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	45	136	513	72	157	106
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	51	153	576	81	176	119
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1470	236	296			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1470	236	296			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	34	81	54			
cM capacity (veh/h)	76	803	1266			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	203	657	296
Volume Left	51	576	0
Volume Right	153	0	119
cSH	239	1266	1700
Volume to Capacity	0.85	0.46	0.17
Queue Length 95th (ft)	170	61	0
Control Delay (s)	69.8	9.5	0.0
Lane LOS	F	A	
Approach Delay (s)	69.8	9.5	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	17.7		
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

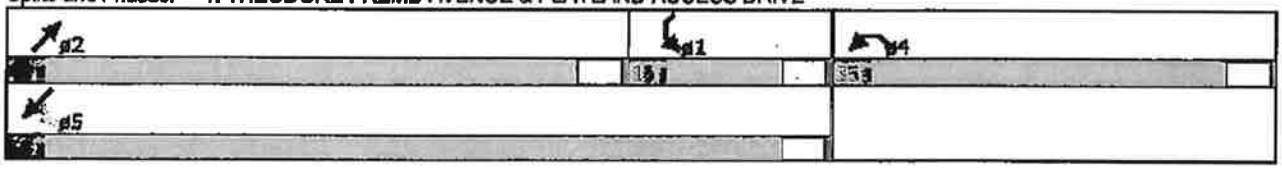
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	138	121	207	112	77	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.937		0.953			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1700	0	1775	0	1770	1863
Flt Permitted	0.974				0.459	
Satd. Flow (perm)	1700	0	1775	0	855	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			35			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	152	133	227	123	85	233
Shared Lane Traffic (%)						
Lane Group Flow (vph)	285	0	350	0	85	233
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		None	Max
Act Effct Green (s)	31.0		48.2		61.0	61.0
Actuated g/C Ratio	0.31		0.48		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.54		0.40		0.14	0.21
Control Delay	33.2		17.6		9.2	9.3
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	33.2		17.6		9.2	9.3
LOS	C		B		A	A
Approach Delay	33.2		17.6			9.3
Approach LOS	C		B			A
Queue Length 50th (ft)	150		132		20	61
Queue Length 95th (ft)	234		207		40	97
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	527		874		631	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.54		0.40		0.13	0.21

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 19.5 — Intersection LOS: B
Intersection Capacity Utilization 47.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	47	259	15	6	43	37	29	2	39	123	10	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.942				0.850			0.850
Flt Protected		0.993			0.996			0.955			0.956	
Satd. Flow (prot)	0	1839	0	0	1748	0	0	1779	1583	0	1781	1583
Flt Permitted		0.993			0.996			0.955			0.956	
Satd. Flow (perm)	0	1839	0	0	1748	0	0	1779	1583	0	1781	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	59	324	19	8	54	46	36	3	49	154	13	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	402	0	0	108	0	0	38	49	0	166	286
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 44.5% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	47	259	15	6	43	37	29	2	39	123	10	229
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	59	324	19	8	54	46	36	2	49	154	12	286
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	100			342			835	566	333	568	552	77
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100			342			835	566	333	568	552	77
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			81	99	93	60	97	71
cM capacity (veh/h)	1493			1217			192	414	709	388	422	984

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	401	108	88	166	286
Volume Left	59	8	36	154	0
Volume Right	19	46	49	0	286
cSH	1493	1217	466	390	984
Volume to Capacity	0.04	0.01	0.19	0.43	0.29
Queue Length 95th (ft)	3	0	17	52	30
Control Delay (s)	1.4	0.6	17.5	20.9	10.2
Lane LOS	A	A	C	C	B
Approach Delay (s)	1.4	0.6	17.5	14.1	
Approach LOS			C	B	

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	425	1	2	83	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.910	
Flt Protected				0.999	0.984	
Satd. Flow (prot)	1863	0	0	1861	1668	0
Flt Permitted				0.999	0.984	
Satd. Flow (perm)	1863	0	0	1861	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	443	1	2	86	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	444	0	0	88	3	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 32.4% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	425	1	2	83	1	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	443	1	2	86	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			444		534	443
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			444		534	443
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1116		506	615

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	444	89	3
Volume Left	0	2	1
Volume Right	1	0	2
cSH	1700	1116	573
Volume to Capacity	0.26	0.00	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.2	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	11.3
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	322	105	10	190	112	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.967				0.946	
Flt Protected	0.964			0.998		
Satd. Flow (prot)	1736	0	0	1859	1762	0
Flt Permitted	0.964			0.998		
Satd. Flow (perm)	1736	0	0	1859	1762	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	366	119	11	216	127	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	485	0	0	227	212	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.1% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	322	105	10	190	112	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	366	119	11	216	127	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	409	170	212			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	409	170	212			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	38	86	99			
cM capacity (veh/h)	594	874	1358			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	485	227	212
Volume Left	366	11	0
Volume Right	119	0	85
cSH	645	1358	1700
Volume to Capacity	0.75	0.01	0.13
Queue Length 95th (ft)	170	1	0
Control Delay (s)	25.6	0.5	0.0
Lane LOS	D	A	
Approach Delay (s)	25.6	0.5	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	13.5		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	25	42	411	101	145	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.916				0.937	
Flt Protected	0.982			0.961		
Satd. Flow (prot)	1676	0	0	1790	1745	0
Flt Permitted	0.982			0.961		
Satd. Flow (perm)	1676	0	0	1790	1745	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	29	48	472	116	167	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	0	588	314	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 57.5% ICU Level of Service B
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	25	42	411	101	145	128
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	29	48	472	116	167	147
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1301	240	314			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1301	240	314			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	74	94	62			
cM capacity (veh/h)	110	799	1246			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	77	589	314
Volume Left	29	472	0
Volume Right	48	0	147
cSH	240	1246	1700
Volume to Capacity	0.32	0.38	0.18
Queue Length 95th (ft)	33	45	0
Control Delay (s)	26.9	8.5	0.0
Lane LOS	D	A	
Approach Delay (s)	26.9	8.5	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

CAPACITY ANALYSIS WORKSHEETS

2016 Background Conditions

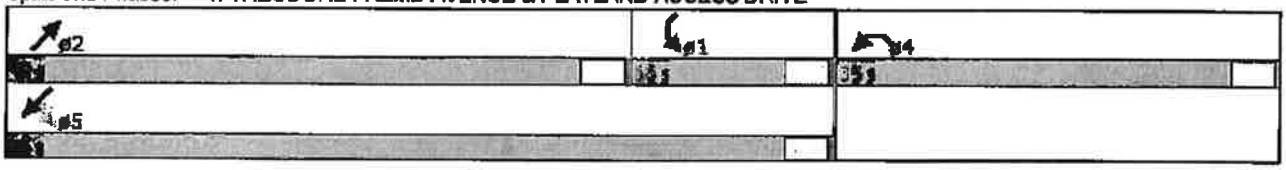
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	148	121	186	177	153	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.934			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1702	0	1740	0	1770	1863
Flt Permitted	0.973				0.402	
Satd. Flow (perm)	1702	0	1740	0	749	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			63			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	163	133	204	195	168	205
Shared Lane Traffic (%)						
Lane Group Flow (vph)	296	0	399	0	168	205
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		Max	Max
Act Effct Green (s)	31.0		45.0		61.0	61.0
Actuated g/C Ratio	0.31		0.45		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.56		0.49		0.29	0.18
Control Delay	33.8		18.5		11.7	9.0
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	33.8		18.5		11.7	9.0
LOS	C		B		B	A
Approach Delay	33.8		18.5			10.2
Approach LOS	C		B			B
Queue Length 50th (ft)	157		145		43	53
Queue Length 95th (ft)	243		229		72	86
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	527		817		579	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.56		0.49		0.29	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 54.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	251	67	23	58	26	26	2	27	167	54	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.967				0.850			0.850
Flt Protected		0.994			0.989			0.955			0.964	
Satd. Flow (prot)	0	1805	0	0	1781	0	0	1779	1583	0	1796	1583
Flt Permitted		0.994			0.989			0.955			0.964	
Satd. Flow (perm)	0	1805	0	0	1781	0	0	1779	1583	0	1796	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	51	282	75	26	65	29	29	2	30	188	61	579
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	0	120	0	0	31	30	0	249	579
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 51.1% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	45	251	67	23	58	26	26	2	27	167	54	515
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	51	282	75	26	65	29	29	2	30	188	61	579
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	94			357			1161	567	320	569	590	80
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	94			357			1161	567	320	569	590	80
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			51	99	96	53	85	41
cM capacity (veh/h)	1500			1201			60	410	721	396	397	980

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	408	120	62	248	579
Volume Left	51	26	29	188	0
Volume Right	75	29	30	0	579
cSH	1500	1201	166	396	980
Volume to Capacity	0.03	0.02	0.37	0.63	0.59
Queue Length 95th (ft)	3	2	40	103	100
Control Delay (s)	1.2	1.9	41.0	28.1	13.8
Lane LOS	A	A	E	D	B
Approach Delay (s)	1.2	1.9	41.0	18.1	
Approach LOS			E	C	

Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	51.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	444	1	2	106	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected				0.999	0.950	
Satd. Flow (prot)	1863	0	0	1861	1770	0
Flt Permitted				0.999	0.950	
Satd. Flow (perm)	1863	0	0	1861	1770	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	453	1	2	108	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	454	0	0	110	1	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.4% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	444	1	2	106	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	453	1	2	108	1	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			454		566	454
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			454		566	454
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1107		485	606

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	454	110	1
Volume Left	0	2	1
Volume Right	1	0	0
cSH	1700	1107	485
Volume to Capacity	0.27	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.2	12.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	12.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	296	148	19	301	211	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.960	
Flt Protected	0.968			0.997		
Satd. Flow (prot)	1722	0	0	1857	1788	0
Flt Permitted	0.968			0.997		
Satd. Flow (perm)	1722	0	0	1857	1788	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)			7			7
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	322	161	20	324	220	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	483	0	0	344	313	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	296	148	19	301	211	89
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Hourly flow rate (vph)	322	161	20	324	220	93
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	638	273	320			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	638	273	320			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	25	79	98			
cM capacity (veh/h)	431	761	1233			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	483	344	312
Volume Left	322	20	0
Volume Right	161	0	93
cSH	504	1233	1700
Volume to Capacity	0.96	0.02	0.18
Queue Length 95th (ft)	305	1	0
Control Delay (s)	58.9	0.6	0.0
Lane LOS	F	A	
Approach Delay (s)	58.9	0.6	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	25.1		
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	47	139	523	74	161	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899				0.945	
Flt Protected	0.987			0.958		
Satd. Flow (prot)	1653	0	0	1785	1760	0
Flt Permitted	0.987			0.958		
Satd. Flow (perm)	1653	0	0	1785	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	53	156	588	83	181	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	0	0	671	307	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	47	139	523	74	161	112
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	53	156	588	83	181	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1502	244	307			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1502	244	307			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	26	80	53			
cM capacity (veh/h)	71	795	1254			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	209	671	307
Volume Left	53	588	0
Volume Right	156	0	126
cSH	223	1254	1700
Volume to Capacity	0.94	0.47	0.18
Queue Length 95th (ft)	201	64	0
Control Delay (s)	91.1	9.7	0.0
Lane LOS	F	A	
Approach Delay (s)	91.1	9.7	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	21.5		
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

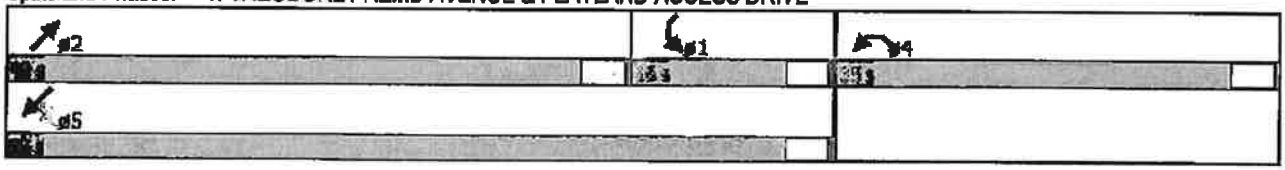
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	143	127	214	117	82	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.936		0.952			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1698	0	1773	0	1770	1863
Flt Permitted	0.974				0.447	
Satd. Flow (perm)	1698	0	1773	0	833	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			36			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	157	140	235	129	90	240
Shared Lane Traffic (%)						
Lane Group Flow (vph)	297	0	364	0	90	240
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		None	Max
Act Effct Green (s)	31.0		48.2		61.0	61.0
Actuated g/C Ratio	0.31		0.48		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.56		0.42		0.15	0.21
Control Delay	33.9		17.9		9.4	9.3
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	33.9		17.9		9.4	9.3
LOS	C		B		A	A
Approach Delay	33.9		17.9			9.3
Approach LOS	C		B			A
Queue Length 50th (ft)	157		139		22	63
Queue Length 95th (ft)	244		216		42	100
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	526		873		620	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.56		0.42		0.15	0.21

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 19.8 — Intersection LOS: B
Intersection Capacity Utilization 48.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	54	264	15	6	47	38	30	2	40	125	10	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.944				0.850			0.850
Flt Protected		0.992			0.997			0.955			0.956	
Satd. Flow (prot)	0	1837	0	0	1753	0	0	1779	1583	0	1781	1583
Flt Permitted		0.992			0.997			0.955			0.956	
Satd. Flow (perm)	0	1837	0	0	1753	0	0	1779	1583	0	1781	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	68	330	19	8	59	48	38	3	50	156	13	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	417	0	0	115	0	0	40	50	0	168	298
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 45.2% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	54	264	15	6	47	38	30	2	40	125	10	238
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	68	330	19	8	59	48	38	2	50	156	12	298
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	106			349			876	596	339	598	581	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			349			876	596	339	598	581	82
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			79	99	93	58	97	70
cM capacity (veh/h)	1485			1210			176	396	703	368	403	977

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	416	114	90	169	298
Volume Left	68	8	38	156	0
Volume Right	19	48	50	0	298
cSH	1485	1210	427	370	977
Volume to Capacity	0.05	0.01	0.21	0.46	0.30
Queue Length 95th (ft)	4	0	20	58	32
Control Delay (s)	1.6	0.6	18.7	22.6	10.3
Lane LOS	A	A	C	C	B
Approach Delay (s)	1.6	0.6	18.7	14.8	
Approach LOS			C	B	

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	434	1	2	88	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.910	
Flt Protected				0.999	0.984	
Satd. Flow (prot)	1863	0	0	1861	1668	0
Flt Permitted				0.999	0.984	
Satd. Flow (perm)	1863	0	0	1861	1668	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	452	1	2	92	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	453	0	0	94	3	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 32.9% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	434	1	2	88	1	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	452	1	2	92	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			453		548	453
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			453		548	453
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1107		496	607

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	453	94	3
Volume Left	0	2	1
Volume Right	1	0	2
cSH	1700	1107	565
Volume to Capacity	0.27	0.00	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.2	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	11.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	328	108	10	195	122	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.967				0.947	
Flt Protected	0.964			0.998		
Satd. Flow (prot)	1736	0	0	1859	1764	0
Flt Permitted	0.964			0.998		
Satd. Flow (perm)	1736	0	0	1859	1764	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	373	123	11	222	139	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	496	0	0	233	230	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	328	108	10	195	122	80
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	373	123	11	222	139	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	428	184	230			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	428	184	230			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	36	86	99			
cM capacity (veh/h)	578	858	1338			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	495	233	230
Volume Left	373	11	0
Volume Right	123	0	91
cSH	629	1338	1700
Volume to Capacity	0.79	0.01	0.14
Queue Length 95th (ft)	191	1	0
Control Delay (s)	28.6	0.4	0.0
Lane LOS	D	A	
Approach Delay (s)	28.6	0.4	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	14.9		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	33	54	419	104	148	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.916				0.936	
Flt Protected	0.981			0.962		
Satd. Flow (prot)	1674	0	0	1792	1744	0
Flt Permitted	0.981			0.962		
Satd. Flow (perm)	1674	0	0	1792	1744	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	38	62	482	120	170	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	0	602	324	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	33	54	419	104	148	134
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	38	62	482	120	170	154
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1330	247	324			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1330	247	324			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	64	92	61			
cM capacity (veh/h)	104	792	1236			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	100	601	324
Volume Left	38	482	0
Volume Right	62	0	154
cSH	226	1236	1700
Volume to Capacity	0.44	0.39	0.19
Queue Length 95th (ft)	53	47	0
Control Delay (s)	33.0	8.6	0.0
Lane LOS	D	A	
Approach Delay (s)	33.0	8.6	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

CAPACITY ANALYSIS WORKSHEETS

2016 Combined Conditions

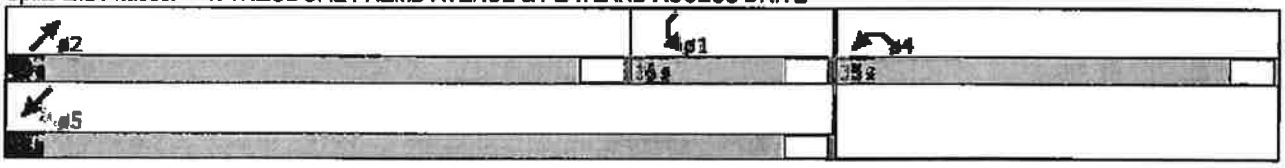
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	151	125	186	179	155	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.934			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1702	0	1740	0	1770	1863
Flt Permitted	0.973				0.400	
Satd. Flow (perm)	1702	0	1740	0	745	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			63			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	166	137	204	197	170	205
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	401	0	170	205
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		Max	Max
Act Effct Green (s)	31.0		45.0		61.0	61.0
Actuated g/C Ratio	0.31		0.45		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.57		0.49		0.29	0.18
Control Delay	34.2		18.6		11.8	9.0
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	34.2		18.6		11.8	9.0
LOS	C		B		B	A
Approach Delay	34.2		18.6			10.3
Approach LOS	C		B			B
Queue Length 50th (ft)	161		146		43	53
Queue Length 95th (ft)	250		231		73	86
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	527		817		577	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.57		0.49		0.29	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 55.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR`	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	255	67	23	65	26	26	2	27	168	54	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.969				0.850			0.850
Flt Protected		0.994			0.990			0.955			0.964	
Satd. Flow (prot)	0	1805	0	0	1787	0	0	1779	1583	0	1796	1583
Flt Permitted		0.994			0.990			0.955			0.964	
Satd. Flow (perm)	0	1805	0	0	1787	0	0	1779	1583	0	1796	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	51	287	75	26	73	29	29	2	30	189	61	579
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	413	0	0	128	0	0	31	30	0	250	579
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 51.5% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	45	255	67	23	65	26	26	2	27	168	54	515
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	51	287	75	26	73	29	29	2	30	189	61	579
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	102			362			1174	579	324	581	602	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102			362			1174	579	324	581	602	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			49	99	96	51	84	40
cM capacity (veh/h)	1490			1197			58	403	717	388	391	971

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	412	128	62	249	579
Volume Left	51	26	29	189	0
Volume Right	75	29	30	0	579
cSH	1490	1197	162	389	971
Volume to Capacity	0.03	0.02	0.38	0.64	0.60
Queue Length 95th (ft)	3	2	41	108	102
Control Delay (s)	1.2	1.8	42.5	29.4	14.0
Lane LOS	A	A	E	D	B
Approach Delay (s)	1.2	1.8	42.5	18.7	
Approach LOS			E	C	

Intersection Summary			
Average Delay	13.1		
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	444	6	6	106	8	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.998				0.922	
Flt Protected				0.997	0.979	
Satd. Flow (prot)	1859	0	0	1857	1681	0
Flt Permitted				0.997	0.979	
Satd. Flow (perm)	1859	0	0	1857	1681	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	453	6	6	108	8	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	459	0	0	114	19	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.7% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	444	6	6	106	8	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	453	6	6	108	8	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			459		577	456
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			459		577	456
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1102		476	604

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	459	114	19
Volume Left	0	6	8
Volume Right	6	0	11
cSH	1700	1102	543
Volume to Capacity	0.27	0.01	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.5	11.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	11.9
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	303	152	21	301	211	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.959	
Flt Protected	0.968			0.997		
Satd. Flow (prot)	1722	0	0	1857	1786	0
Flt Permitted	0.968			0.997		
Satd. Flow (perm)	1722	0	0	1857	1786	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)			7			7
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	329	165	23	324	220	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	494	0	0	347	315	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 65.8% ICU Level of Service C
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	303	152	21	301	211	91
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.96	0.96
Hourly flow rate (vph)	329	165	23	324	220	95
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	643	274	322			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	643	274	322			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	23	78	98			
cM capacity (veh/h)	427	760	1231			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	495	346	315
Volume Left	329	23	0
Volume Right	165	0	95
cSH	501	1231	1700
Volume to Capacity	0.99	0.02	0.19
Queue Length 95th (ft)	331	1	0
Control Delay (s)	66.1	0.7	0.0
Lane LOS	F	A	
Approach Delay (s)	66.1	0.7	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	28.5		
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	47	139	526	78	163	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899				0.945	
Flt Protected	0.987			0.958		
Satd. Flow (prot)	1653	0	0	1785	1760	0
Flt Permitted	0.987			0.958		
Satd. Flow (perm)	1653	0	0	1785	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	53	156	591	88	183	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	0	0	679	309	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 69.8%
ICU Level of Service C
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	47	139	526	78	163	112
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	53	156	591	88	183	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1516	246	309			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1516	246	309			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	24	80	53			
cM capacity (veh/h)	69	793	1252			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	209	679	309
Volume Left	53	591	0
Volume Right	156	0	126
cSH	218	1252	1700
Volume to Capacity	0.96	0.47	0.18
Queue Length 95th (ft)	208	65	0
Control Delay (s)	97.0	9.7	0.0
Lane LOS	F	A	
Approach Delay (s)	97.0	9.7	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	22.5		
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

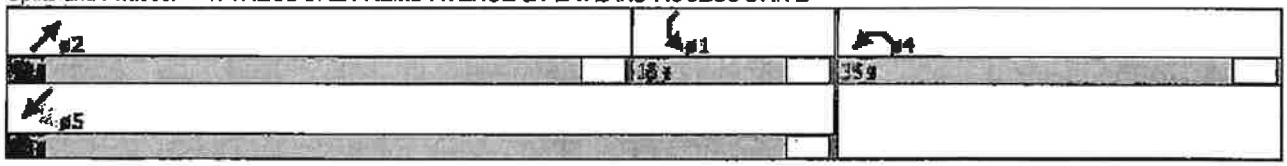
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	146	130	214	120	86	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	150	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.936		0.951			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1698	0	1771	0	1770	1863
Flt Permitted	0.974				0.444	
Satd. Flow (perm)	1698	0	1771	0	827	1863
Right Turn on Red		No		Yes		
Satd. Flow (RTOR)			37			
Link Speed (mph)	30		30			30
Link Distance (ft)	375		786			931
Travel Time (s)	8.5		17.9			21.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	160	143	235	132	95	240
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	367	0	95	240
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		2		1	5
Permitted Phases					5	
Detector Phase	4		2		1	5
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	35.0		49.0		16.0	65.0
Total Split (s)	35.0		49.0		16.0	65.0
Total Split (%)	35.0%		49.0%		16.0%	65.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max		Max		None	Max
Act Effct Green (s)	31.0		48.2		61.0	61.0
Actuated g/C Ratio	0.31		0.48		0.61	0.61

Lane Group	NWL	NWR	NET	NER	SWL	SWT
v/c Ratio	0.58		0.42		0.16	0.21
Control Delay	34.2		17.9		9.5	9.3
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	34.2		17.9		9.5	9.3
LOS	C		B		A	A
Approach Delay	34.2		17.9			9.4
Approach LOS	C		B			A
Queue Length 50th (ft)	161		140		23	63
Queue Length 95th (ft)	250		218		44	100
Internal Link Dist (ft)	295		706			851
Turn Bay Length (ft)					150	
Base Capacity (vph)	526		872		617	1136
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.58		0.42		0.15	0.21

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 20.0 Intersection LOS: B
Intersection Capacity Utilization 49.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: THEODORE FREMD AVENUE & PLAYLAND ACCESS DRIVE



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	54	271	15	6	53	38	30	2	40	129	10	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.947				0.850			0.850
Flt Protected		0.992			0.997			0.955			0.956	
Satd. Flow (prot)	0	1837	0	0	1759	0	0	1779	1583	0	1781	1583
Flt Permitted		0.992			0.997			0.955			0.956	
Satd. Flow (perm)	0	1837	0	0	1759	0	0	1779	1583	0	1781	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			484			289			91	
Travel Time (s)		12.8			11.0			6.6			2.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	68	339	19	8	66	48	38	3	50	161	13	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	426	0	0	122	0	0	40	50	0	173	298
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 45.8% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	54	271	15	6	53	38	30	2	40	129	10	238
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	68	339	19	8	66	48	38	2	50	161	12	298
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		997										
pX, platoon unblocked												
vC, conflicting volume	114			358			892	612	348	614	598	90
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	114			358			892	612	348	614	598	90
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			78	99	93	55	97	69
cM capacity (veh/h)	1475			1201			171	387	695	358	395	968

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	425	121	90	174	298
Volume Left	68	8	38	161	0
Volume Right	19	48	50	0	298
cSH	1475	1201	414	361	968
Volume to Capacity	0.05	0.01	0.22	0.48	0.31
Queue Length 95th (ft)	4	0	20	63	33
Control Delay (s)	1.6	0.5	19.2	23.9	10.4
Lane LOS	A	A	C	C	B
Approach Delay (s)	1.6	0.5	19.2	15.4	
Approach LOS			C	C	

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	434	12	9	88	7	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997				0.915	
Flt Protected				0.996	0.982	
Satd. Flow (prot)	1857	0	0	1855	1674	0
Flt Permitted				0.996	0.982	
Satd. Flow (perm)	1857	0	0	1855	1674	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	484			139	157	
Travel Time (s)	11.0			3.2	3.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	452	13	9	92	7	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	464	0	0	101	19	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.6% ICU Level of Service A
Analysis Period (min) 15

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	434	12	9	88	7	12
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	452	12	9	92	7	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			465		569	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			465		569	458
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1097		480	603

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	465	101	20
Volume Left	0	9	7
Volume Right	12	0	12
cSH	1700	1097	551
Volume to Capacity	0.27	0.01	0.04
Queue Length 95th (ft)	0	1	3
Control Delay (s)	0.0	0.8	11.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	11.8
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	334	112	13	195	122	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.966				0.945	
Flt Protected	0.964			0.997		
Satd. Flow (prot)	1735	0	0	1857	1760	0
Flt Permitted	0.964			0.997		
Satd. Flow (perm)	1735	0	0	1857	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	139			484	335	
Travel Time (s)	3.2			11.0	7.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	380	127	15	222	139	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	507	0	0	237	234	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 52.9% ICU Level of Service A
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	334	112	13	195	122	84
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	380	127	15	222	139	95
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	438	186	234			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	438	186	234			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	33	85	99			
cM capacity (veh/h)	570	856	1333			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	507	236	234
Volume Left	380	15	0
Volume Right	127	0	95
cSH	622	1333	1700
Volume to Capacity	0.81	0.01	0.14
Queue Length 95th (ft)	209	1	0
Control Delay (s)	31.2	0.6	0.0
Lane LOS	D	A	
Approach Delay (s)	31.2	0.6	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	16.3		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	33	54	422	107	152	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.916				0.937	
Flt Protected	0.981			0.962		
Satd. Flow (prot)	1674	0	0	1792	1745	0
Flt Permitted	0.981			0.962		
Satd. Flow (perm)	1674	0	0	1792	1745	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	589			335	220	
Travel Time (s)	13.4			7.6	5.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	38	62	485	123	175	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	0	608	329	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 60.3% ICU Level of Service B
Analysis Period (min) 15

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (veh/h)	33	54	422	107	152	134
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	38	62	485	123	175	154
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1345	252	329			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1345	252	329			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	63	92	61			
cM capacity (veh/h)	101	787	1231			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	100	608	329
Volume Left	38	485	0
Volume Right	62	0	154
cSH	221	1231	1700
Volume to Capacity	0.45	0.39	0.19
Queue Length 95th (ft)	54	48	0
Control Delay (s)	34.2	8.7	0.0
Lane LOS	D	A	
Approach Delay (s)	34.2	8.7	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

CITY COUNCIL AGENDA

NO. 8 DEPT.: City Manager's Office DATE: August 5, 2015

CONTACT: Marcus Serrano, City Manager

AGENDA ITEM: Discussion of the Inter-municipal Agreement with Westchester County for the monitoring of inflow and infiltration as part of the Westchester County Sewer District to comply with the schedule in the Long Island Sound Flow Monitoring Report.

FOR THE MEETING OF:
August 5, 2015
RYE CITY CODE,
CHAPTER
SECTION

RECOMMENDATION:

IMPACT: ☐ Environmental ☐ Fiscal ☒ Neighborhood ☐ Other:

BACKGROUND: Under the County Sewer Act, each municipality in a Westchester County Sewer District with a sanitary sewer system tributary to County facilities is required to maintain its system to prevent excessive inflow and infiltration from being discharged to the county trunk sewer system.

The Long Island Sound Flow Monitoring Report was prepared by the County pursuant to a requirement of the 2008 Order on Consent between the County and the New York State Department of Environmental Conservation (NYSDEC). The report shows that, during the 2 year study period, the average influent flow to each of the County's four sewage treatment plants discharging to Long Island Sound from the 11 municipalities was approximately 50% stormwater - inflow and infiltration – not sanitary sewage. The County wishes to resolve these ongoing violations of the County Sewer Act by entering into an Intermunicipal Agreement with each municipality affected that provides for actions needed to comply with the schedule in the Long Island Sound Flow Monitoring Report.

See attached Draft IMA and Long Island Sound Flow Monitoring Report.

THIS AGREEMENT, made the ____ day of _____ 201____ by and between:

THE COUNTY OF WESTCHESTER, a municipal corporation of the State of New York, having an office and place of business in the Michaelian Office Building, 148 Martine Avenue, White Plains, New York 10601
(hereinafter the "County")

and

THE _____, a municipal corporation of the State of New York, having an office and place of business at _____
(hereinafter the "Municipality")

WHEREAS, the Municipality owns and operates tributary sewer system(s) that use the County's trunk sewer system and are subject to the provisions of the Westchester County Environmental Facilities Sewer Act set forth in Chapter 824 of the Laws of Westchester County (the "County Sewer Act"); and

WHEREAS, the County Sewer Act limits the use of the County trunk sewer system and tributary systems to the discharge of sewage, industrial wastewater and other wastewater and specifically prohibits the introduction of groundwater, stormwater and excessive inflow and infiltration into the County trunk sewer system; and

WHEREAS, section 824.77 of the Sewer Act, entitled "Penalties for violation of prohibitions against the introduction of groundwater, stormwater and excessive inflow and infiltration; enforcement", provides for penalties for violations of sections 824.41, 824.61,824.71 and 824.72 of the Sewer Act. A copy of section 824.77 is attached hereto as Exhibit "A"; and

WHEREAS, section 824.371 subsection 1 of the County Sewer Act, entitled "Enforcement and penalties", provides for penalties for violations of Articles III to IX inclusive except for Article VIII of sections 824.381, 824.391 or 824.401 of Article XI of the County Sewer Act. A copy of section 824.371 is attached hereto as Exhibit "B"; and

WHEREAS, section 824.72 of the County Sewer Act states, among other things, that: "(e)xcessive infiltration and inflow means the quantity of flow entering the county sewer system which is greater than 150 gallons per capita per day for the population served by the tributary sewer systems located within a municipality's borders"; and

WHEREAS, the County conducted the "Long Island Sound Sanitary Sewer Districts Flow Monitoring Report" (dated September 2012, revised June 2013) in accordance with its obligations under an Order on Consent with the New York State Department of Environmental Conservation entered into in 2004 and amended in 2008, which requires among other things, the reduction of inflow and infiltration into the County trunk sewer system and its tributary systems (the "Flow Monitoring Report"); and

WHEREAS, the County asserts that its Flow Monitoring Report indicated that the Municipality has excessive inflow and infiltration entering the County's trunk sewer system that violates sections 824.41(2), 824.61(4), 824.71(1), 824.71(2), 824.72(5), 824.72(6), 824.72(7), 824.91(7) and 824.391 of the County Sewer Act; and

WHEREAS, the County's NYSDEC issued SPDES Permit for each sewage treatment plant, including the _____ WWTP, requires the County to enforce the County Sewer Act requirements to generally limit excessive inflow and infiltration reaching its facilities from municipal sanitary sewage collection systems; and

WHEREAS, the County and the Municipality enter into this agreement without admission to contributing to the aforesaid excessive inflow and infiltration and/or to violating the provisions of the County Sewer Act, the SPDES Permit, New York State Environmental Conservation Law and/or any other applicable law or regulation.

NOW THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. By September 1, 2015, the Municipality will submit to the Westchester County Department of Environmental Facilities (WCDEF) a proposed work plan for a Sewer System Evaluation Study (SSES) of their entire sanitary sewage collection system tributary to the County's trunk sewer system sufficient to identify sources of inflow or infiltration that when rehabilitated shall allow the Municipality to begin to comply with the flow limits of the County Sewer Act. The Municipality shall also develop a Capacity Management Operation Maintenance (CMOM) Program outline for its entire sanitary sewage collection system within the District.

2. By January 1, 2016 the Municipality will have prepared and submitted to their elected governing body a local law prohibiting stormwater and sump pump connections to sanitary sewers that includes an enforcement program and a requirement that a licensed plumber or professional engineer certify that there are no sump pumps, leaders, gutters or any

other stormwater connections to the sanitary sewer collection system and that a video inspection shows the sanitary sewer connection is free from visible defects as a pre-condition to the transfer of title of any real property in the Municipality that has a connection to its sewage collection system.

3. WCDEF shall coordinate its review of the Municipality's proposed SSES and CMOM program with the New York State Department of Environmental Conservation (NYSDEC) and shall submit any comments or requests for modifications to the Municipality by September 1, 2015. Where modifications are requested, the municipality and WCDEF agree to work together to address the comments. Once approved by NYSDEC, the Municipality shall commence the approved SSES and CMOM program.

4. The Municipality shall submit quarterly reports to WCDEF documenting its progress in completing its SSES and CMOM program, by the twentieth day following the end of a calendar quarter (Januarty 20th, April 20th, October 20th)..

5. The Municipality shall commence its CMOM program and provide a copy of same to WCDEF and NYSDEC on or before December 31, 2015.

6. The Municipality will complete its SSES and provide a copy of the SSES results with a remediation plan and schedule to WCDEF and NYSDEC on or before June 30, 2017.

7. Municipality shall submit to WCDEF and NYSDEC an approvable construction schedule based on the results and conclusions of the completed SSES on or before August 31, 2017. The Municipality shall commence construction within one hundred eighty (180) days of approval of the construction schedule by WCDEF and NYSDEC.

8. The County reserves the authority to act in its sole discretion to take any action(s) necessary, including enforcement actions against the Municipality pursuant to its authority under the County Sewer Act to eliminate excessive inflow and infiltration, should the milestones and obligation of the Municipality under this this Agreement not be met, in order to maintain compliance with the County's SPDES Permit.

9. The Municipality agrees to reimburse the County for that portion of any penalties or fines the County may incur in any NYSDEC enforcement action due to the failure of the Municipality to comply with any of the terms of this Agreement.

10. After the completion of the SSES, the County and the Municipality will work cooperatively to:

a. Develop and implement the most cost efficient implementation plan to remove the identified sources of inflow and infiltration sufficient to comply with the County Sewer Act;and
b. Apply for grants and/or consider other funding mechanisms to reduce the implementation program's costs.
c. Notwithstanding the foregoing, this Agreement does not obligate the County to develop and or commence an implementation plan or engage in the remedial work including any construction work.

11. The Municipality agrees:

(a) that it will provide a letter, acceptable to the County, advising that it maintains insurance coverage through a program of self-insurance; and

(b) that except for the amount, if any, of damage contributed to, caused by, or resulting from the negligence of the County, the Municipality shall indemnify and hold harmless the County, its officers, employees, agents, and elected officials from and against any and all liability, damage, claims, demands, costs, judgments, fees, attorneys' fees or loss arising directly or indirectly out of the performance or failure to perform hereunder by the Municipality or third parties under the direction or control of the Municipality; and

(c) to provide defense for and defend, at its sole expense, any and all claims, demands or causes of action directly or indirectly arising out of this Agreement and to bear all other costs and expenses related thereto.

12. The County agrees:

(a) that except for the amount, if any, of damage contributed to, caused by, or resulting from the negligence of the Municipality, the County shall indemnify and hold harmless the Municipality, its officers, employees, agents and elected officials from and against any and all liability, damage, claims, demands, costs, judgements, fees, attorneys' fees or loss arising directly or indirectly out of the performance or failure to perform hereunder by the County or third parties under the direction or control of the County and

(b) to provide defense for and defend, at its sole expense, any and all claims demands or causes of action directly or indirectly arising out of this Agreement and to bear all other costs and expenses related thereto.

13. All notices of any nature referred to in this Agreement shall be in writing and either sent by registered or certified mail postage pre-paid, or sent by hand or overnight courier, or sent by facsimile (with acknowledgment received and a copy of the notice sent by overnight courier), to the respective addresses set forth below or to such other addresses as the respective parties hereto may designate in writing. Notice shall be effective on the date of receipt.

To the County:

Commissioner
County of Westchester
Department of Environmental Facilities
270 North Avenue
New Rochelle, New York 10805

with a copy to:

County Attorney
Michaelian Office Building, Room 600
148 Martine Avenue
White Plains, New York 10601

To the Municipality:

14. This Agreement shall not be enforceable until signed by both parties and approved by the Office of the County Attorney.

15. This Agreement shall be construed and enforced in accordance with the laws of the State of New York.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

THE COUNTY OF WESTCHESTER

By_____
Commissioner of Environmental Facilities

(Insert Name of Municipality)

By_____

Approved as to form and
manner of execution:

_____
Senior Assistant County Attorney
County of Westchester

ACKNOWLEDGMENT

STATE OF _____)
) ss.:
COUNTY OF _____)

On the _____ day of _____ in the year 20__ before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Date: _____ _____
Notary Public

RPL § 309-a; NY CPLR § 4538

CERTIFICATE OF AUTHORITY
(Municipality)

I, _____, certify that I am the
(Officer other than officer signing contract)

_____ of the _____, a
(Title) (the "Municipality")

corporation duly organized and in good standing under the _____
(*Law under which organized, e.g., the New York Village Law, Town Law, General Municipal Law*)

named in the foregoing agreement; that _____
(Person executing agreement)

who signed said agreement on behalf of the Municipality was, at the time of execution

_____ of the Municipality and that said agreement
(Title of such person)

was duly signed for and on behalf of said Municipality by authority of its governing body, thereunto duly authorized and that such authority is in full force and effect at the date hereof.

_____
(Signature)

STATE OF NEW YORK)
) ss.:
COUNTY OF WESTCHESTER)

On the _____ day of _____in the year 20___ before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the officer described in and who executed the above certificate, and who being by me duly sworn did depose and say that he/she resides at _____ and that he/she is an officer of said municipal corporation; that he/she is duly authorized to execute said certificate on behalf of said municipal corporation; and that he/she signed his/her name thereto pursuant to such authority.

_____
Notary Public

Date: _____

EXHIBIT “A”

Sec. 824.77. - Penalties for violation of prohibitions against the introduction of groundwater, stormwater and excessive inflow and infiltration; enforcement.

1. It shall be a civil violation of this law to violate any of the provisions of sections 824.41 2.; 824.61; 824.71 and 824.72. Any person or municipality which violates these provisions of this chapter or any rule, regulation or standard promulgated thereto, or any order, except an order directing such person or municipality to pay a penalty by a specified date issued by the commissioner pursuant thereto, shall be subject to a penalty of not to exceed $25,000.00 per day for each violation. It shall be a separate violation under this section for each day that each violation may continue. If a municipality or person has been found to be liable, pursuant to this chapter, for three separate violations, it shall be subject to a maximum penalty of not to exceed $50,000.00 per day for each violation, upon its being found liable for the fourth, fifth or sixth violation. For each additional group of three subsequent violations, the maximum penalty shall continue to double (e.g. for violations seven through nine—a penalty of not to exceed $100,000.00). In no event shall a maximum penalty for any single violation exceed $200,000.00 per day. In addition, such person or municipality may be enjoined from continuing such violation. In any action for injunction brought pursuant hereto, any finding of the commissioner or his or her duly appointed hearing officer shall be prima facie evidence of the fact(s) found therein.

2. Penalties may be sued for and recovered by the county in any court of competent jurisdiction or they may be assessed by order of the commissioner pursuant to his or her authority under section 824.74 1. of this law.

(Added by L.L. No. 9-1991; amended by L.L. No. 16-1992)

EXHIBIT “B”

Sec. 824.371. - Enforcement and penalties.

1. A violation of the provisions of Articles III to IX inclusive except for Article VIII of this chapter or of sections 824.381, 824.391 or 824.401 of Article XI of this chapter shall be an offense, and each such violation may be punished by a fine not exceeding $1,000.00 or by imprisonment not exceeding 15 days, or by both such fine and imprisonment. In lieu of, or in addition to, such fine or imprisonment, or both, each such violation shall be subject to civil penalty not exceeding $1,000.00 for any one violation, to be recovered in an action or proceeding brought by the County Attorney in the name of the county in a court of competent jurisdiction. Each day of a continuing violation shall be subject to a separate fine, imprisonment or civil penalty.

2. In addition to the penalties prescribed in subsection 1. of this section, the County Attorney may maintain an action or proceeding in the name of the county in a court of competent jurisdiction to compel compliance with or restrain by injunction any violation of this chapter.

3. Where any violation of this chapter causes an expense to the county, such expense may, in the discretion of the commissioner, be separately collected by a civil suit against the violator, brought by the County Attorney in the name of the county in a court of competent jurisdiction.

4. The county shall annually publish in the area's largest daily newspaper a list of those significant industrial users which were not in compliance with any pretreatment standards or requirements contained in this chapter at least once during the previous 12 months. The notification shall also summarize any enforcement actions taken against the user(s) during the same 12 months.

(L.L. No. 12-1985, § 1; amended by L.L. No. 7-1993)

Westchester gov.com

Robert P. Astorino
County Executive

Office of the County Executive

Thomas J. Lauro, P.E.
Commissioner

Department of Environmental Facilities

Ms. Shohreh Karimipour, P.E.
NYS Department of Environmental Conservation
Region III Office
100 Hillside Avenue
Suite 1 W
White Plains, NY 10603-2860

June 13, 2013

RE: Submission of the Long Island Sound Sanitary Sewer Districts Flow Monitoring Program Report, Revised , June 2013, under the Order on Consent, dated December 30, 2008 (Case No. 3-20080730-65)

Dear Ms. Karimipour:

Enclosed please find one copy of the Long Island Sound Sanitary Sewer Districts Flow Monitoring Program Report, Revised June 2013, prepared as part of the Long Island Sound Wastewater Treatment Plant Improvement Program for the County of Westchester in accordance with Appendix "A" Schedule of Compliance", action item "18" of the above referenced Order on Consent. Submission of this revised final Report fulfills the County's obligation to submit a "flow reduction strategy" under the Order on Consent.

Should you require any additional information, please do not hesitate to contact me.

Very truly yours,

Thomas J. Lauro

Thomas J. Lauro, P.E.
Commissioner

TJL/ll, Encl.

cc: WO/Encl
Zackary D. Knaub, Esq., Regional Attorney, NYSDEC Region 3
Thomas Rudolph, P.E., NYSDEC
Cheryl Webber, P.E., Manager & Environmental Project Engineer III, NYSEFC
Shayne Mitchell, P.E., NYSDEC
Paul Kolakowski, P.E., NYSDEC
Jay Pisco, P.E., Commissioner, WCDPW
Robert Meehan, Esq., County Attorney
George Coley, P.E., First Deputy Commissioner, WCDEF
Jagdish Mistry, P.E. Director WWT, WCDEF
Karen Ramos, Esq., Associate County Attorney
James M. Gavin, P.E., Engineers Consortium, LLP
Leah Radko, P.E. WCDPW
Robert Funicello, Project Manager, WCDEF

REDUCE REUSE RECYCLE

Division of Solid Waste
Wastewater Treatment
Water Agency

270 North Avenue
New Rochelle, New York 10801 Telephone: (914) 813-5400 Fax: (914) 813-5460 Website: westchestergov.com

Westchester County, New York
Department of Public Works and Transportation
Department of Environmental Facilities

Westchester gov.com

Long Island Sound

Sanitary Sewer Districts

Flow Monitoring Program Report

September 2012

Revised June 2013

Savin Engineers, P.C.

REPORT

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DEPARTMENT OF ENVIRONMENTAL FACILITIES

LONG ISLAND SOUND
SANITARY SEWER DISTRICTS
FLOW MONITORING PROGRAM REPORT

SEPTEMBER 2012
REVISED JUNE 2013

SAVIN ENGINEERS, P.C.

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DEPARTMENT OF ENVIRONMENTAL FACILITIES

LONG ISLAND SOUND
SANITARY SEWER DISTRICTS
FLOW MONITORING PROGRAM REPORT

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DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
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LONG ISLAND SOUND SANITARY SEWER DISTRICTS FLOW MONITORING PROGRAM REPORT

1.0 EXECUTIVE SUMMARY

1.1 Background

Westchester County owns and operates four (4) wastewater treatment plants (WWTPs) that discharge to Long Island Sound (LIS). These four LIS WWTPs (Blind Brook, Mamaroneck, Port Chester and New Rochelle) operate in accordance with State Pollutant Discharge Elimination System (SPDES) Permits that are issued by the New York State Department of Environmental Conservation (NYSDEC).

In an effort to enhance the water quality of Long Island Sound, NYSDEC modified the LIS WWTP SPDES Permits to include new limits on nitrogen and other pollutants. Westchester County and NYSDEC negotiated an Order-On-Consent which was executed in December 2004. A revised Consent Order was executed in December 2008. The Order-On-Consent identified timelines and deliverables in order for Westchester County to meet the revised permit requirements.

The revised Order required work at two WWTPs (Mamaroneck and New Rochelle) to remove nitrogen, with a total project cost of $385M. In addition, the revised 2008 Order-on-Consent required the preparation of a Flow Reduction Strategy to address the reduction of Inflow/Infiltration (I/I) within the collection systems of the contributory municipalities.

This Flow Monitoring Program Report has been prepared to comply with this requirement of the Consent Order.

I/I in the Westchester County Sewer Districts is a significant problem, contributing up to 50% of the flow to the WWTPs. It is to be expected that the aging sewer systems will continue to

deteriorate and I/I will continue to increase.

The nitrogen treatment facilities were designed on the basis of an aggregate design flow of 54.8 MGD at all 4 LIS WWTPs. These design flows were based on existing flow levels, future developments within each sewer district, plus a 10% contingency. These design flows do not take into consideration any increase in flow due to changes in I/I within each sewer district. The assumption is that any deterioration in the system will be offset by any I/I removed by rehabilitation. Accordingly, the development of long term strategies to mitigate any additional I/I is necessary.

Westchester County began its Capacity, Management, Operation and Maintenance (CMOM) program of its trunk sewer system in 2004. The objective of the program is to inspect, evaluate and rehabilitate all County trunk sewers and manholes on a rotating basis. As of September 2012, the County has conducted CCTV inspection of 558,000 linear feet of trunk sewer and inspected over 2,100 manholes. Most of the trunk sewers and manholes in the four LIS sewer districts have been inspected. The County has already completed rehabilitation in sections of the Saw Mill Trunk Sewer and the Westlake Trunk Sewer, both of which are located in the Town of New Castle. Rehabilitation design is ongoing for other sections of trunk sewer and manholes in the LIS districts and other sewer districts in the County. The inspection and evaluation program is also ongoing.

However, a majority of the collection system is not owned by Westchester County, but owned by the local municipalities. There is currently no means to identify which municipalities in each Sewer District are responsible for I/I and to what extent.

The Westchester County Environmental Facilities Sewer Act defines excessive I/I as follows:

> Section 824.72.2 “Excessive Infiltration and Inflow means the quantity of flow entering the County sewer system which is greater than 150 gallons per capita per day”.

Therefore, the recommended strategy was to conduct a flow monitoring program that would

allow for quantification of per capita flows on a municipality-by-municipality basis to identify those municipalities with excessive I/I.

I/I has significant impacts on both the sewage collection system and the WWTPs including:

- decreased conveyance capacity in the piping system resulting in less capacity available for new development
- backups in and overflows from the sewer system
- increased pumping costs
- increased capital costs and operation and maintenance costs (O&M) at the WWTPs
- decreased treatment capability at the WWTPs, particularly at the new nitrogen facilities, possibly requiring additional capital expenditures.

More detailed background information can be found in ***1.0 Background***, starting on page 1-1 of the main report**.**

2.0 Program Description

The Long Island Sound Flow Monitoring Program included 82 flow meters deployed at strategic locations to isolate and measure flow rate from each of the 11 municipalities that discharge sewage into the four Long Island Sound Sanitary Sewer Districts (Blind Brook, Mamaroneck, New Rochelle, and Port Chester). A small area of North Castle discharges a negligible quantity of sewage to the Blind Brook District. The flow from North Castle is below the limits of the flow meters to obtain accurate measurements.

Twelve rain gages were also installed throughout the study area to measure rainfall. Flow and rainfall data were collected continuously over a two-year period from April 2009 through March 2011. The flow meters measured depth and velocity of the sewage at 15-minute intervals throughout the monitoring period. This data was used to calculate daily average flow rate for each municipality for each day during the 2-year monitoring period.

Census data from 2010 was used to estimate population in each of the 11 municipalities that

discharge into the Long Island Sound sewer districts. Per capita flow rates (gallons of sewage per person per day, gpcd) were calculated based on the flow rates and population estimates. An allowance for net influx of daytime commuters was incorporated into the per capita flow rates in accordance with provisions in the Environmental Facilities Sewer Act. North Castle was not included in the analysis because it discharges a negligible quantity of sewage into the Blind Brook Sewer District.

Refer to ***2.0 Program Description*** for more detailed information**.**

3.0 Study Area

The study area is comprised of the following four Westchester County sanitary sewer districts:

- Blind Brook Sanitary Sewer District,
- Mamaroneck Sanitary Sewer District,
- New Rochelle Sanitary Sewer District, and
- Port Chester Sanitary Sewer District.

Wastewater from these sewer districts flows through collector sewers owned and maintained by the local municipalities. The collector sewers discharge into the trunk sewers which are owned and maintained by Westchester County.

The following 12 municipalities are entirely or partially within the four sanitary sewer districts

Municipality	
Harrison	Pelham Manor
Larchmont	Port Chester
Mamaroneck (Village)	Rye
Mamaroneck (Town)	Rye Brook
New Rochelle	Scarsdale
North Castle	White Plains

Refer to ***3.0 – Study Area*** for additional information

4.0 Monitoring Locations

The borders of the municipalities and sewer districts were delineated on maps of the sewer districts provided by Westchester County. All sewers that crossed a municipal or sewer district boundary were also delineated. Key manholes were then identified where flow meters would be placed. The key manhole is the manhole located just downstream of the municipal boundary, through which the upstream sewage flows. The purpose of identifying these key manholes was to isolate flow from each municipality. The preferred key manhole was located just downstream of the municipal border. Ultimately, flow meters were installed in 82 key manholes throughout the 11 municipalities of the four LIS sewer districts.

Rain gages were installed throughout the LIS sewer districts in order to differentiate wet-weather flows from dry-weather flows. The rain gages were installed on flat rooftops of such places as municipal buildings, police stations, wastewater treatment plants, etc, in order to provide an open area, while also decreasing the potential for vandalism.

For additional information refer to ***4.0 Monitoring Locations.***

5.0 Flow Monitoring System

It was determined that the Teledyne ISCO (ISCO) combined flow monitoring and telemetry system would be well suited for this monitoring program. The system provided a combination of accuracy, dependability, analysis tools, diagnostic tools, and telemetry.

The Flow Module measures flow depth with a pressure transducer, and uses continuous wave Doppler technology to measure mean velocity. Both flow depth and velocity were recorded in fifteen-minute increments for the entire duration of the flow monitoring program.

The ISCO rain gage was used to record rainfall. It is a tipping bucket rain gage that records rainfall at increments of 0.01 inches. Rainfall was recorded at five-minute increments at each of

the twelve rain gage locations throughout the four LIS sewer districts for the duration of the flow monitoring program.

The use of wireless telemetry allowed for a daily check of all 82 flow meter and 12 rain gage sites from a remote location in minutes. The typical telemetry system consisted of a cellular modem module and an antenna which was either buried in the pavement adjacent to a manhole for street applications or installed nearby in the woods.

The modem module is factory-configured to deliver flow meter data to a remote server database. For the purposes of this monitoring program it was determined that a 24 hour data transmission interval would be used. This means that data was recorded at fifteen-minute intervals by the meter, 24 hours a day, seven days a week. The cell modem subsequently transmitted the data from the site directly to the dedicated server once every 24 hours.

For more detailed information, refer to ***5.0 Flow Monitoring System.***

6.0 Data QA/QC

Extensive steps were taken to ensure that the data collected was both accurate and reliable. Prior to meter installation, both office and field verifications of the proposed flow monitoring locations and equipment were conducted. These QA/QC checks included the following: municipal boundary and meter locations check; algorithm check; and comparison of official municipal boundaries against boundaries shown on the sewer system maps.

Once the flow meters were installed, field crews continued QA/QC efforts by conducting the field verification checks including routine site maintenance and telemetry spot checks.

Crews confirmed in the field that each of the 82 meter sites were installed in the correct manholes, in the correct lines.

A comparison was conducted of the County plant meters against the flow meters installed in the sewer system. In order to accomplish this task, Westchester County calibrated its meters at each

of the four LIS Wastewater Treatment Plants. The County plant meters were calibrated between May and August 2009. Once the calibrations were completed, the County provided the monthly flow data for each of the four LIS Plants. The daily average flow as measured by the County plant meters was in agreement with daily average plant flows calculated from the meters in the sewer system.

An additional check of the sewer system meters was undertaken by temporarily installing supplemental meters at each of the nine meter locations near the wastewater treatment plants (two meters at Mamaroneck, three each at New Rochelle and Blind Brook, and one meter at Port Chester) in order to further confirm meter accuracy. These supplemental meters were installed for a two month period between February 22, 2010 and April 20, 2010, in the same manholes as the original sewer system meters. All meters were the same make and model. During this two month period, the original meters continued to record data, which was then compared to the supplemental meter data collected during the same time period. The data from all nine supplemental meters tracked well with the original meters and was well within the level of accuracy of the metering equipment.

In addition to these nine supplemental meters, supplemental meters were also installed at an additional 19 locations, for a total of 28 of the 82 (34%) metering sites. Each of these supplemental meters also tracked well with their corresponding original locations. The data from each set of meters was well within the level of accuracy of the meters.

Additional information on QA/QC is detailed in ***6.0 Data QA/QC.***

7.0 Population Estimates

In order to determine the daily average per capita flow rate a population estimate for each municipality needed to be developed.

For populations for municipalities entirely within the LIS Sewer Districts, census data from 2010 was used, as provided by the Westchester County Department of Planning.

For populations for municipalities that also discharge to the Yonkers Joint Sewer District, population estimates were based on block and lot census tracts from the 2010 census and on individual house counts.

An allowance of 30 gallons per commuter in each municipality for each weekday was incorporated into all per capita flow rate calculations. This allowance was not incorporated into the weekend flow rate calculations.

Additional information is included in ***7.0 Population Estimates.***

8.0 Municipality Flow Rates

The main objective of this flow monitoring program was to determine which, if any, municipalities exceed the 150 gallons per capita per day flow rate limit. Daily average flow rates were calculated based on the combined 15-minute flow metering data for each municipality. The final per capita flow rates were then calculated by subtracting the commuter allowance for each municipality from the daily average flow rate (weekdays only), then dividing by the population estimate for that municipality.

Section 824.72.2 of the Westchester County Environmental Facilities Sewer Act states that "Excessive infiltration and inflow means the quantity of flow entering the County sewer system which is greater than 150 gallons per capita per day".

Figure ES-1 shows the results of the Flow Metering Program. The figure shows the number of days and percent of time each municipality exceeded the 150 gpcd. The monitoring program lasted for 730 consecutive days. All municipalities exceeded the 150 gpcd, ranging from a low of 12% of the days during the monitoring program to a high of 61% of the days during the monitoring program.

More information is included in ***8.0 Municipality Flow Rates.***

9.0 Flow Reduction Strategies

There are several methods that have been used successfully to reduce extraneous I/I into public sewer systems. These methods include identifying and reducing I/I from the public sewers such as defective manholes and defective sewers in the public domain. Effective I/I reduction programs also include identifying and reducing I/I from private sources such as basement sump pumps and roof leaders that discharge into public sewers, and rehabilitation of defective private service laterals. The various methods that can be used to identify and reduce I/I from public and private sources are described in more detail in ***9.0 Flow Reduction Strategies***.

10.0 Recommendations

Based on the findings of the flow monitoring program, all 11 municipalities that discharge wastewater into the Long Island Sound sewer districts, to varying degrees, exceed the 150 gpcd allowance in the Westchester County Environmental Facilities Sewer Act.

The overall flow reduction strategy would include the following sequential steps for each municipality as shown in the attached Proposed Schedule, Figure ES-2:

- ***Municipality Negotiations:*** It is recommended that Westchester County enter into negotiations with the 11 municipalities to get concurrence from each municipality to develop a program to address the excessive I/I in their sewer systems.

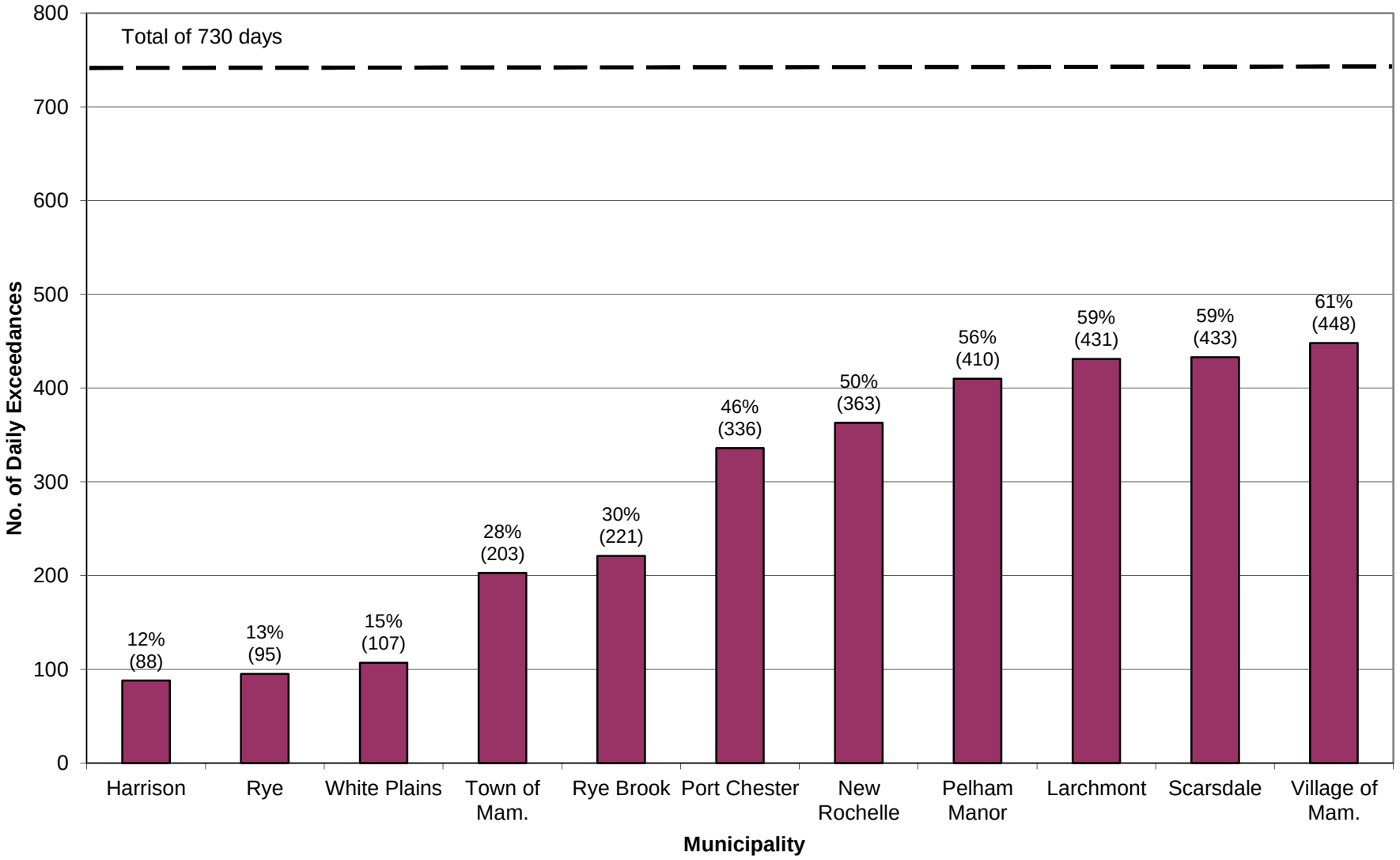
- ***Evaluation Program Development:*** Each municipality will develop municipality specific scope of the Evaluation Program which will entail flow metering, flow isolation, smoke testing, CCTV inspection, lateral inspection, house to house inspections and analysis of field data collected to identify a remedial program to reduce infiltration/inflow within each municipality. The Evaluation Program developed by each municipality should be submitted to Westchester County and NYSDEC for review.

- ***Evaluation Program Implementation:*** Each municipality will implement the Evaluation Program. Prepare a report for submittal to Westchester County and NYSDEC which identifies the necessary repairs, develop a construction cost estimate for the Program and outline the design and construction schedule for implementation.

Following the submittal of the Evaluation Program Report by the 11 municipalities, which will outline the extent, cost and schedule of the rehabilitation programs, Westchester County and NYSDEC will meet to review and discuss the reports and either accept the programs and associated schedules, or request modifications and/or clarifications. Final acceptance of all 11 programs and the associated schedules will be conveyed to the municipalities by Westchester County and NYSDEC by August 1, 2017.

Figure ES-1

Summary of Daily Exceedances



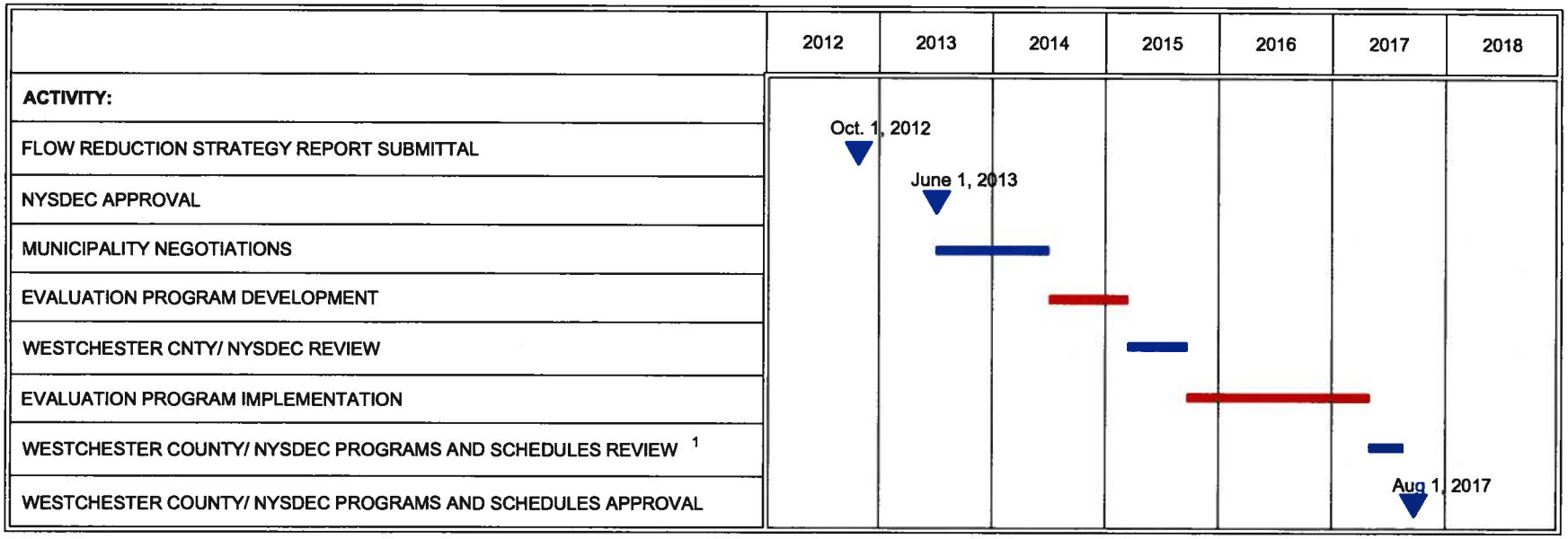
Savin Engineers, P.C.

WESTCHESTER COUNTY
DEPT. OF PUBLIC WORKS & TRANSPORTATION
DEPT. OF ENVIRONMENTAL FACILITIES

FIGURE ES-2

LONG ISLAND SOUND SEWER DISTRICTS
FLOW REDUCTION STRATEGY

PROPOSED SCHEDULE



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KEY

- WESTCHESTER COUNTY / NYSDEC ACTION
- MUNICIPALITY ACTION

REV. 4 5/14/2013

1. WESTCHESTER COUNTY AND NYSDEC WILL REVIEW AND DISCUSS ALL THE PROPOSED PROGRAMS AND IMPLEMENTATION SCHEDULES WHICH ARE SUBMITTED BY THE MUNICIPALITIES AND APPROVE EACH ONE, AS MODIFIED BY THE REVIEW PROCESS, BY AUGUST 1, 2017.

Savin Engineers, P.C.

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DEPARTMENT OF ENVIRONMENTAL FACILITIES

LONG ISLAND SOUND SANITARY SEWER DISTRICTS FLOW MONITORING PROGRAM REPORT

1.0 BACKGROUND

1.1 Introduction

Westchester County owns and operates four (4) wastewater treatment plants (WWTPs) that discharge to Long Island Sound (LIS). These four LIS WWTPs (Blind Brook, Mamaroneck, Port Chester and New Rochelle) operate in accordance with State Pollutant Discharge Elimination System (SPDES) Permits that are issued by the New York State Department of Environmental Conservation (NYSDEC).

In an effort to enhance the water quality of Long Island Sound, NYSDEC modified the LIS WWTP SPDES Permits to include new limits on nitrogen and other pollutants. Westchester County and NYSDEC negotiated an Order-On-Consent which was executed in December 2004. The Order-On-Consent identified timelines and deliverables in order for Westchester County to meet the revised permit requirements. Among the deliverables was the submittal of an Engineering Plan by December 24, 2006. That Engineering Plan identified recommended nitrogen removal projects at all four WWTPs, with total project costs of $505M.

Because of the costs involved, Westchester County re-negotiated the terms of the Consent Order. On December 30, 2008 a revised Consent Order was executed. The revised Order required work at two WWTPs (Mamaroneck and New Rochelle) to remove nitrogen, with a total project cost of $385M. In addition, the revised 2008 Order-on-Consent also had the following two requirements:

- Development of a Second Engineering Plan to address steps to be taken should the nitrogen removal work at New Rochelle and Mamaroneck not achieve the aggregate 12 month rolling average Total Nitrogen (TN) discharge limit stipulated in the 2008

Consent Order. This Second Engineering Plan was submitted to NYSDEC on December 31, 2011 and was approved by NYSDEC on March 12, 2012.

- Preparation of a Flow Reduction Strategy to address the reduction of Inflow/Infiltration (I/I) within the collection systems of the contributory municipalities.

This Flow Monitoring Program Report has been prepared to comply with the second requirement of the Consent Order.

1.2 Inflow and Infiltration (I/I)

Inflow – extraneous surface water entering the sewer system as a result of rainstorms. Examples of inflow sources are stormwater sewer system cross connections, leaking manhole covers, yard drain connections and roof leader connections.

Infiltration – extraneous groundwater entering the sewer system, usually a result of an aging, deteriorating collection system. Examples of infiltration sources are cracked or broken manhole walls, cracked or broken sewer pipes, offset joints, cracked or broken laterals and basement sump pumps.

I/I in the Westchester County Sewer Districts is a significant problem, contributing up to 50% of the flow to the WWTPs. It is to be expected that the aging sewer systems will continue to deteriorate and I/I will continue to increase.

The nitrogen treatment facilities were designed on the basis of an aggregate design flow of 54.8 MGD at all 4 LIS WWTPs. These design flows were based on existing flow levels, future developments within each sewer district plus a 10% contingency. These design flows do not take into consideration any increase in flow due to changes in I/I within each sewer district. The assumption is that any deterioration in the system will be offset by any I/I removed by rehabilitation. Accordingly, the development of long term strategies to mitigate any additional I/I

is necessary.

Westchester County has an existing, ongoing evaluation and rehabilitation program of its trunk sewer collection system throughout the County. However, a majority of the collection system is not owned by Westchester County, but owned by the local municipalities. The remaining sources of I/I are attributable to either: (1) that portion of the collection system owned by the local municipalities or (2) conditions on private property, including deteriorated lateral connections and/or illegal connections, which the local municipalities are responsible for correcting. There is currently no means to identify which municipalities in each Sewer District are responsible for I/I and to what extent.

The Westchester County Department of Environmental Facilities Sewer Ordinance defines excessive I/I as follows:

> Section 824.72.2 "Excessive Infiltration and Inflow means the quantity of flow entering the County sewer system which is greater than 150 gallons per capita per day".

Therefore, the recommended strategy in the Engineering Plan was to conduct a flow monitoring program that would allow for quantification of per capita flows on a municipality-by-municipality basis.

1.3 I/I Impacts

Why is I/I in the public sewer system an issue of concern and why is it important that it not be allowed to increase through further deterioration of the sewer system?

Generally, when I/I enters the collection system, it is conveyed to the WWTP where it is treated with the other sewage, meaning that it impacts both the collection system and the WWTP.

1.3.1 Collection System Impacts

The sanitary sewer collection systems in the Westchester County Sewer Districts, which are owned by the municipalities, are generally old and, other than the 2002 County rehabilitation

program, have not undergone any extensive repairs. I/I in the public sewers is not the only problem. There is a significant I/I contribution from leaking, privately owned laterals that connect private dwellings and businesses to the collection system, and from basement sump pumps.

Significant I/I problem within the collection system leads to the following:

- Conveyance capacity for sewage in the piping system is decreased as a result of I/I. This directly impacts the available capacity for new development.

- When the capacity of the sewers is exceeded, backups into private homes occur with basement flooding and the attendant property damage, health impacts and violation of NYSDEC and Westchester County Department of Health (WCDOH) regulations.

- Overflows from the sewer system to the receiving waters occur.

    - During significant rain events, sewage also overflows from manholes and flows down streets, eventually reaching receiving waters. These overflows are raw sewage overflows and have significant public health impacts on both property and receiving waters and are a violation of NYSDEC and WCDOH regulations. The worse the I/I problem, the more frequent the overflows.

    - Exfiltration of wastewater through defects in the sanitary sewer can occur, which could lead to contamination of groundwater and receiving waters.

    - In New Rochelle, these overflows occur at the Overflow Retention Facilities (ORFs) and are known as Sanitary Sewer Overflows (SSOs). Each event would have an associated Operation and Maintenance cost.

- Most sewer districts have numerous satellite pumping stations which pump the sewage to the WWTPs. The extraneous I/I, up to the pumping capacity of the station, is also pumped to the WWTP. There is a significant energy cost associated with such

additional pumping. (When the capacity of a pumping station is exceeded, backups and overflows, as outlined above, can occur).

1.3.2 Wastewater Treatment Plant Impacts

Generally, when the I/I reaches the WWTP, it receives the same treatment as sewage entering the plant. The impacts of I/I on the WWTP are as follows:

- Facilities Cost: (Capital) – A significant portion of capital cost of any future expansion can be attributed to providing treatment for future I/I flows.

- Treatment Cost (O&M) – The annual O&M cost at the WWTPs is significantly impacted by the need to treat the I/I.

- Energy Use – Energy consumption at the plants is impacted in direct proportion to the percent I/I in the flow. Since approximately 50% of flow at the 4 LIS WWTPs is I/I, accordingly, half the energy cost is to treat I/I.

- Permitted Flow Exceedence – Each WWTP has a SPDES Permit which specifies a flow limit. During wet weather periods when I/I is high, the flow limit can be exceeded, possibly resulting in a SPDES Permit violation.

- Percent Removal Violations – The SPDES Permit limit for CBOD and TSS is 25 and 30 mg/l respectively, and 85% removal for both. Excessive I/I dilutes the wastewater and makes it difficult to achieve 85% removal, resulting in SPDES Permit violations.

- Nitrogen Removal – The new Nitrogen Removal Facilities are being designed to treat the maximum monthly flow. No allowance is being included to account for increase in I/I quantities. Should the collection system continue to deteriorate and I/I increase, the facilities will be hydraulically overloaded, leading to incomplete treatment and associated SPDES Permit violations.

- Treatment Capacity – Each gallon of I/I robs the WWTP capacity to treat sanitary sewage. County WWTPs are severely site constrained. There is no additional space available to expand the plant to accommodate more I/I.

- Fines – Fines for violations of SPDES Permit limits can be as high as $37,500 per day per WWTP.

1.4 Flow Monitoring

The first step to identifying the municipalities with excessive I/I is to establish a Flow Monitoring Program which will isolate and quantify the flow from each municipality within each Sewer District. Utilizing population data, the average per capita flow for each day can then be determined.

The subsequent sections of this report detail the flow monitoring program and the results obtained.

2.0 PROGRAM DESCRIPTION

The objective of the flow monitoring program was to isolate and quantify wastewater flow from each municipality discharging into the four LIS sewer districts and to determine which municipalities were contributing excessive I/I. The daily flow rates, on a per capita basis, were then compared to the limit in the Westchester County Environmental Facilities Sewer Act.

Eighty two flow meters were deployed at strategic locations in the sewer system to isolate flow from each of the 11 municipalities. The monitoring was conducted continuously from April 2009 through March 2011. The program was based on a two-year monitoring period to include a wide range of weather conditions such as prolonged wet periods, intense rainfalls, prolonged dry periods, snow melt, high groundwater and low groundwater conditions. The flow meters collected measurements of both depth and velocity of the sewage every 15 minutes throughout the monitoring period. Daily average flow rates were calculated from the 15-minute data.

Twelve rain gages were installed in the study area to determine the impact of rainfall on flow rates. The rain gages were placed throughout the large study area to provide spatial coverage and to capture differences in rainfall volume and intensity in the different areas. The rain gages were the tipping bucket type and measured rainfall every five minutes in increments of 0.01 inches.

Census data from 2010 was used to estimate the population of each municipality within each LIS sewer district. Lot and block census data was used to estimate the population of each municipality that discharged into one of the Yonkers Joint Sewer Districts. The net influx of daily commuters was provided by the County Planning Department. An allowance was provided to account for the commuters when the per capita flow rates were calculated.

The calculated flow rates were used in conjunction with the population estimates and the commuter allowance to determine a per capita flow rate from each municipality. Daily average per capita flow rates were calculated for each day during the two-year period. The per capita flow rates were then used to determine which municipalities were discharging excessive I/I, defined as flow greater than 150 gallons per capita per day in the Westchester County Environmental Facilities Sewer Act.

3.0 STUDY AREA

3.1 Sewer Districts

The study area, shown in Figure 3-1, is comprised of the following four Westchester County sanitary sewer districts:

- Blind Brook Sanitary Sewer District,
- Mamaroneck Sanitary Sewer District,
- New Rochelle Sanitary Sewer District, and
- Port Chester Sanitary Sewer District.

Wastewater from these sewer districts flows through collector sewers owned and maintained by the local municipalities. The collector sewers discharge into the trunk sewers which are owned and maintained by Westchester County. The wastewater is treated at the County-owned wastewater treatment plant in each district. Treated effluent is discharged into the Long Island Sound. The effluent parameters at each wastewater treatment plant (such as biochemical oxygen demand, suspended solids, and nitrogen load) are governed by a permit issued by the New York State Department of Environmental Conservation. The permits also include requirements for flow rate at each treatment plant.

3.2 Municipalities in the Study Area

Figure 3-1 shows the 12 municipalities that are entirely or partially within the four sanitary sewers districts. A small portion of the Town of North Castle is in the Blind Brook Sewer District. That portion of the Town of North Castle discharges a negligible quantity of sewage into the Blind Brook District. The other 11 municipalities discharge into one or more of the four LIS Districts. Portions of Pelham Manor, Scarsdale, and White Plains also discharge sewage into

the Yonkers Joint Sewer Districts. Table 3-1 lists the municipalities and the sewer districts into which they discharge.

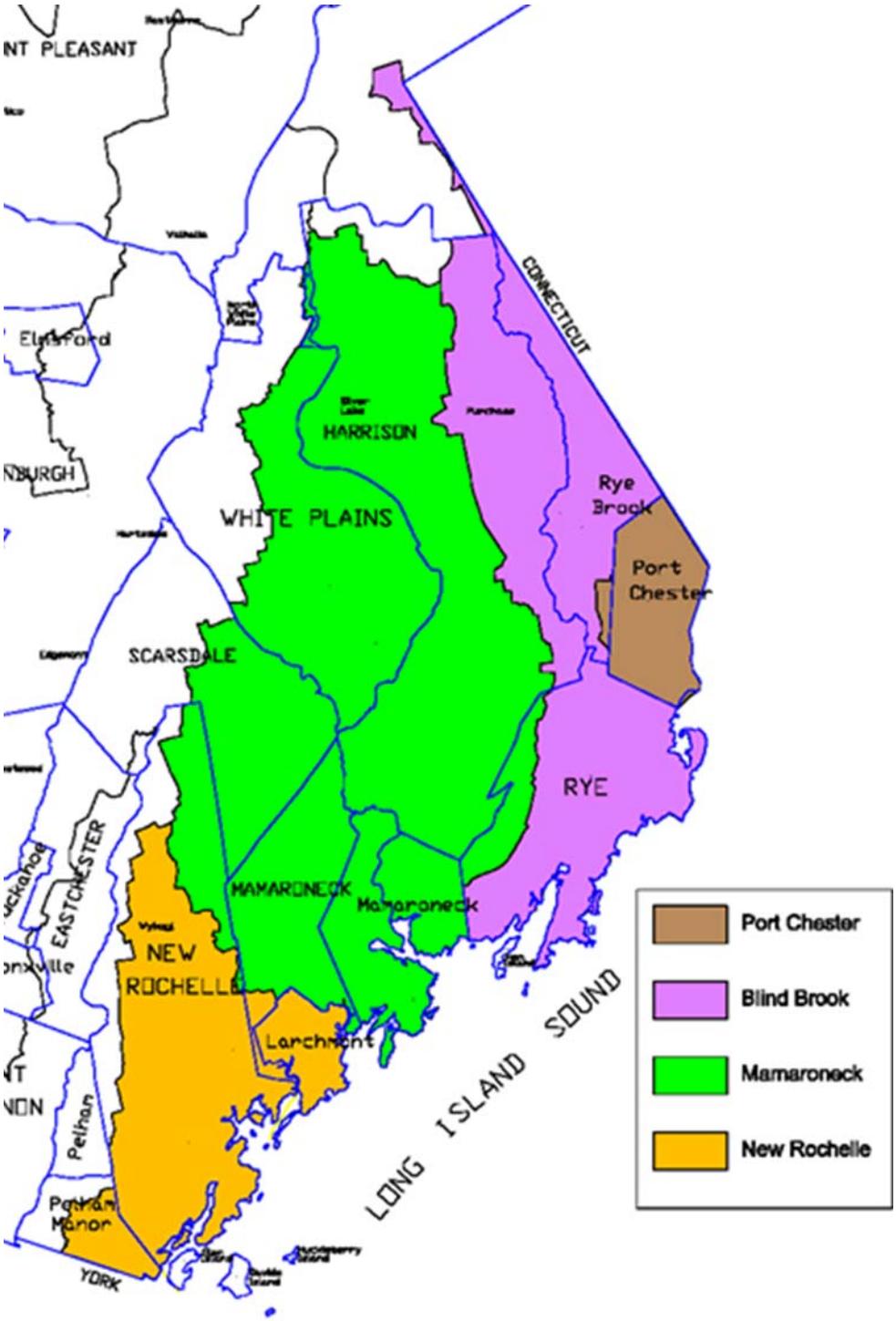
TABLE 3-1

MUNICIPALITIES IN THE LONG ISLAND SOUND SANITARY SEWER DISTRICTS

Municipality	Discharge Location (Sewer District)
Harrison	Blind Brook, Mamaroneck
Larchmont	New Rochelle
Mamaroneck (Village)	Blind Brook, Mamaroneck
Mamaroneck (Town)	Mamaroneck, New Rochelle
New Rochelle	Mamaroneck, New Rochelle
North Castle	Yonkers Joint
Pelham Manor	New Rochelle, Yonkers Joint
Port Chester	Port Chester
Rye	Blind Brook, Mamaroneck
Rye Brook	Blind Brook, Port Chester
Scarsdale	Mamaroneck, Yonkers Joint
White Plains	Mamaroneck, Yonkers Joint

Figure 3-1

Long Island Sound Sanitary Sewer Districts and Municipalities



4.0 MONITORING LOCATIONS

4.1 Flow Meter Locations

Westchester County provided four sets of photo aerial or GIS sewer maps, one for each of the four sewer districts to be monitored. The following table demonstrates the breakdown of municipalities in each of the four LIS sewer districts:

Blind Brook Sewer District	**Mamaroneck Sewer District**	**New Rochelle Sewer District**	**Port Chester Sewer District**
Harrison	Harrison		Port Chester
Mamaroneck (V)	Mamaroneck (V)	Pelham Manor	
Rye	Rye	Larchmont	
Rye Brook	New Rochelle	New Rochelle	Rye Brook
	Mamaroneck (T)	Mamaroneck (T)	
	Scarsdale		
	White Plains		

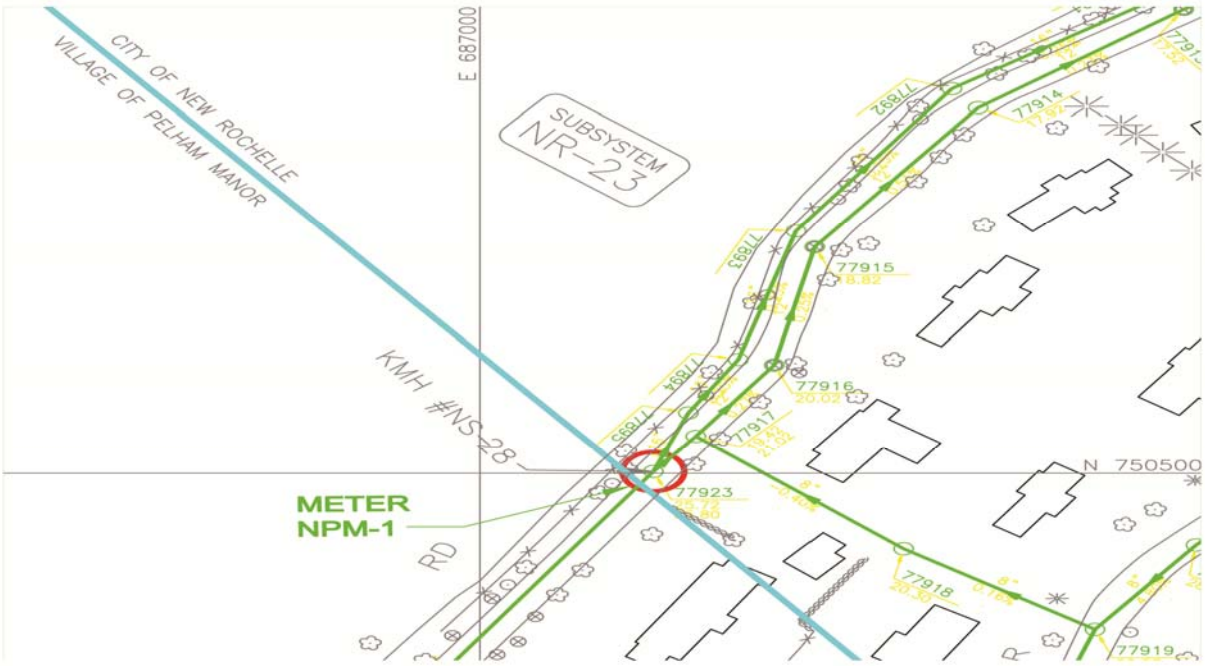
Since the maps are broken down by sewer district, there was no concern about sewers overlapping and thus, being monitored twice. For example, New Rochelle sewers in the

Mamaroneck sewer district are not shown on the New Rochelle sewer district maps and vice versa.

The borders of the municipalities and sewer districts were delineated on the maps. All sewers that crossed a municipal or sewer district boundary were also delineated. The key manholes where flow meters would be placed were identified. The key manhole is the manhole located just downstream of the municipal boundary, through which the upstream sewage flows.

The purpose of identifying these key manholes was to isolate flow from each municipality. The preferred key manhole was located just downstream of the municipal border. Field conditions at the selected sites were not always acceptable because of debris, poor hydraulic conditions, and other factors that were less suitable for flow meter installation. When this happened, alternate sites were investigated in manholes located just upstream or downstream of the original location. Care was taken not to place the meter in a manhole that included flow from another municipality. Ultimately, flow meters were installed in 82 key manholes throughout the 11 municipalities of the four LIS sewer districts. These 82 flow monitoring locations are summarized in Table 4-1.

The diagram below gives an example of one of the key manhole selections.



Here, the boundary between the Village of Pelham Manor and the City of New Rochelle can be seen. The sewer can be seen traveling in a northeasterly direction from Pelham Manor into New Rochelle. This key manhole was selected because it is the first manhole located just downstream of the sewer system boundary and would include all flow from Pelham Manor, but none from New Rochelle. If that manhole was found in the field to be buried, or inaccessible for some reason, and the location had to be relocated to a manhole farther downstream, the crew would have to be careful not to select a manhole too far downstream, as there is a line coming from the 4 o'clock direction that is entirely comprised of flow from New Rochelle.

Because flow travels from one municipality to another and ultimately discharges to the County wastewater treatment plant, flow algorithms were developed in order to isolate the upstream flows. Each algorithm added flows from meters located in the municipality that was being metered, and then subtracted flows from meters located in any upstream municipalities. An algorithm was created for each of the 11 municipalities being monitored, and then entered into the flow monitoring software program, Flowlink. Municipalities that are split between sewer districts would have a separate algorithm calculation for each sewer district. The final algorithm for those municipalities included the sum of all sewer district algorithms. The algorithms for each of the four sewer districts are shown in Tables 4-2 through 4-5.

Once all of the algorithms were incorporated into the flow monitoring software, Flowlink utilized the algorithm equations to calculate a single flow rate for each municipality. These eleven flow rates, one from each municipality, were then used to calculate the per capita flows for each municipality.

4.2 Rain Gage Locations

Rain gages were installed throughout the LIS sewer districts in order to differentiate wet-weather flows from dry-weather flows. A tipping bucket rain gage was used to record rainfall in increments of 0.01 inches, and an ISCO telemetry device was used to access rainfall data remotely. The rain gages were installed on flat rooftops of such places as municipal buildings, police stations, wastewater treatment plants, etc, in order to provide an open area, while also

decreasing the potential for vandalism.

In order to provide maximum coverage for the 11 municipalities, 12 locations were selected for the rain gage installations as shown in the following table:

Rain Gauge No.	**Rain Gauge Location**	**Nearby Municipalities**
1	New Rochelle WWTP	New Rochelle, Mamaroneck (T), Larchmont
2	Blind Brook WWTP	Rye Brook
3	Mamaroneck WWTP	Mamaroneck (V), Mamaroneck (T)
4	Port Chester WWTP	Port Chester, Rye Brook
5	Saxon Woods Golf Course	Mamaroneck (V), Scarsdale
6	Village of Rye Brook	Rye Brook
7	West Harrision DPW	Harrison, White Plains
8	Harrison Police Department	Harrison, Scarsdale, Rye
9	Drake Ave Fire Department	Pelham Manor
10	New Rochelle City Hall	New Rochelle, Mamaroneck (T)
11	Quaker Ridge Fire Department	New Rochelle, Rye
12	Purchase Fire Department	Harrison

The flow monitoring software was able to superimpose rainfall data on the hydrograph for each municipality.

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Table 4-1
Flow Monitor Locations

	Meter No.	MH No.	Location	SSES Map No.	Sewer District
1	BH-1	61546	Purchase St.	D10	Blind Brook
2	BH-2	61622	Easement	D11	Blind Brook
3	BH-3	61685	Bowman Ave.	C12	Blind Brook
4	BH-4	61742	Westchester Ave.	C13	Blind Brook
5	BH-5	61832	Lincoln Ave.	C15	Blind Brook
6	BH-6	62156	Easement WC Airport	B22	Blind Brook
7	BH-7	61531	Highland Pl.	D10	Blind Brook
8	BH-8	62104	Easement	C17	Blind Brook
9	BMV-1	60352	Brevoort Lane	B2	Blind Brook
10	BNC-1	62169	WC Airport	B24	Blind Brook
11	BR-1	61139	BB WWTP	C5	Blind Brook
12	BR-2	60002	BB WWTP	C5	Blind Brook
13	BR-3	61138	BB WWTP	C5	Blind Brook
14	BRB-1	61612	Easement	D11	Blind Brook
15	BRB-2	62031	Easement	C16	Blind Brook
16	MH-1	76737	Anderson Hill Rd.	D20	Mamaroneck
17	MH-10	72240	Grove St.	F9	Mamaroneck
18	MH-12	75071	Easement off Hutch. River Pkwy.	F16	Mamaroneck
19	MH-13	75385	Westchester Ave.	F19	Mamaroneck
20	MH-14	75397	Corporate Park Dr.	F19	Mamaroneck
21	MH-15	75440	Westchester Ave.	F20	Mamaroneck
22	MH-17	75545	Easement off Westchester Ave.	F21	Mamaroneck
23	MH-18	67139	Easement off Harrison Ave.	G6	Mamaroneck
24	MH-19	72193	Park Ave.	G7	Mamaroneck
25	MH-2	76737	Westchester Ave.	D20	Mamaroneck
26	MH-20	75117	Easement off Hutch. River Pkwy.	G16	Mamaroneck
27	MH-21	75149	Easement off Westchester Ave.	G17	Mamaroneck
28	MH-22	67994	Canterbury Rd. South	H4	Mamaroneck
29	MH-23	68019	Easement off Canterbury Rd. South	H4	Mamaroneck
30	MH-24	68078	Glendale Rd.	I5	Mamaroneck
31	MH-3	76484	Underhill Place	D21	Mamaroneck
32	MH-4	76594	Silver Lake Avenue	D22	Mamaroneck
33	MH-5	68120	Easement near Apawamis Golf Course	I6	Mamaroneck
34	MH-6	75559	Westchester Ave.	E21	Mamaroneck
35	MH-8	75586	Westchester Ave.	E22	Mamaroneck
36	MH-9	65320	Ellis Pl.	F10	Mamaroneck
37	MMT-3	68881	Fenimore Rd.	D5	Mamaroneck
38	MMT-4	68540	Norman Dr. (near Amtrak)	D3	Mamaroneck
39	MMT-5	65623	Baldwin Place	D4	Mamaroneck
40	MMT-6	68863	Baldwin Place	D4	Mamaroneck
41	MMV-1	73035	Mamaroneck Ave.	E10	Mamaroneck
42	MMV-2	65660	W. Boston Post Rd.	F6	Mamaroneck
43	MMV-3	65661	W. Boston Post Rd.	F6	Mamaroneck
44	MN-1	70060	Dennis Drive	B5	Mamaroneck
45	MN-2	69458	High Ridge Road	B2	Mamaroneck
46	MN-3	69434	Poplar Road	B2	Mamaroneck
47	MN-4	69940	Locust Ridge Rd	B3	Mamaroneck
48	MN-5	71025	Wilmot Rd.	B11	Mamaroneck
49	MR-1	68361	Hornidge Rd.	G6	Mamaroneck
50	MR-10	68067	Easement	I4	Mamaroneck
51	MR-11	68077	Glendale Rd.	I5	Mamaroneck
52	MR-12	68106	Hunter Lane	I5	Mamaroneck
53	MR-2	67621	Beaver Brook	H2	Mamaroneck
54	MR-3	67638	Bradford Ave.	H2	Mamaroneck
55	MR-4	67758	Park Ave.	H2	Mamaroneck
56	MR-5	67870	Beaver Brook	H3	Mamaroneck
57	MR-7	67979	Country Rd.	H4	Mamaroneck
58	MR-8	67946	Canterbury Rd. South	H4	Mamaroneck
59	MR-9	67991	Easement off Canterbury Rd. South	H4	Mamaroneck
60	MS-1	71022	Wilmot Rd.	B10	Mamaroneck
61	MS-2	71520	Fenimore Rd.	C6	Mamaroneck
62	MS-3	71588	Griffin Ave.	C7	Mamaroneck
63	MS-4	73753	Black Birch Lane	C13	Mamaroneck
64	MS-5	73915	Carolyn Avenue	C13	Mamaroneck
65	MS-6	70877	Easement off Weaver Street	B10	Mamaroneck
66	MS-7	73734	Easement off Black Birch Lane	D13	Mamaroneck
67	MS-8	73276	Mamaroneck Ave.	E13	Mamaroneck
68	MS-9	73667	Easement off Black Birch Lane	D13	Mamaroneck
69	MW-1	73237	Mamaroneck Ave.	E13	Mamaroneck
70	NL-1	81328	Easement off Oak Ave.	F4	New Rochelle
71	NMT-1	81561	Coolidge St.	E7	New Rochelle
72	NMT-2	81110	5th Ave.	E8	New Rochelle
73	NMT-3	81244	Easement off Emerson Ave.	E5	New Rochelle
74	NN-1	81220	NRWWTP	E4	New Rochelle
75	NN-2	78718	NRWWTP	E4	New Rochelle
76	NN-3	78729	NRWWTP	E4	New Rochelle
77	NN-4	81188	Barnard Rd	E8	New Rochelle
78	NPM-1	77923	Mt. Tom Rd.	B2	New Rochelle
79	NPM-2	77810	Shore Rd.	C2	New Rochelle
80	PPC-2	90063	Fox Island Rd.	3	Port Chester
81	PRB-1	90735	West St.	8	Port Chester
82	PRB-2	91306	Neuton Ave.	14	Port Chester

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Table 4-2
Blind Brook Sewer District Algorithms

Blind Brook Sewer District Flow Monitoring Locations

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
BMV	1	60352	B2	BR2	BMV1
	TOTAL FLOW INTO BBSD TREATMENT PLANT:				**BMV1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
BNC	1	62169	B24	BH8	BNC1
	TOTAL FLOW INTO BBSD TREATMENT PLANT:				**BNC1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
BH	1	61546	D10	BR1	BH1
BH	2	61622	D11	BR1	BH2
BH	3	61685	C12	BRB1	BH3
BH	4	61742	C13	BRB1	BH4
BH	5	61832	C15	BRB1	BH5-(BH8+BRB2)
BH	6	62156	B22	BH8	BH6
BH	7	61531	D10	BR1	BH7
BH	8	62104	C17	BH5	BH8-BH6-BNC1
	TOTAL FLOW INTO BBSD TREATMENT PLANT:				**BH1+…+BH5+BH7-BRB2-BNC1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
BR	1	61139	C5	BBWWTP	BR1-(BH1+BH2+BH7)-BRB1
BR	2	60002	C5	BBWWTP	BR2-BMV1
BR	3	61138	C5	BBWWTP	BR3
	TOTAL FLOW INTO BBSD TREATMENT PLANT:				**BR1+BR2+BR3-(BMV1+BH1+BH2+BH7+BRB1)**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
BRB	1	61612	D11	BR1	BRB1-(BH3+BH4+BH5)
BRB	2	62031 (out)	C16	BH5	BRB2
	TOTAL FLOW INTO BBSD TREATMENT PLANT:				**BRB1+BRB2-(BH3+BH4+BH5)**

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Table 4-3
Mamaroneck Sewer District Algorithms

Mamaroneck Sewer District Flow Monitoring Locations

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MN	1	70060	B5	MMT4	MN1-MS1-MS6
MN	2	69458	B2	MMT4	MN2
MN	3	69434	B2	MMT4	MN3
MN	4	69940	B3	MMT4	MN4
MN	5	71025	B11	MS1	MN5
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MN1+…+MN5-MS1-MS6**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MMT	3	68881	D5	MMV2	MMT3
MMT	4	68540	D3	MMV2	MMT4-MN1-(MS2+MS3)-(MN2+MN3+MN4)
MMT	5	65623	D4	MMV3	MMT5
MMT	6	68863	D4	MMV3	MMT6
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MMT3+…+MMT6-MN1-(MS2+MS3)-(MN2+MN3+MN4)**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MS	1	71022	B10	MN1	MS1-MN5
MS	2	71520	C6	MMT4	MS2
MS	3	71588	C7	MMT4	MS3
MS	4	73753	C13	MW1	MS4
MS	5	73915	C13+C14	MW1	MS5
MS	6	70877	B10	MN1	MS6
MS	7	73734	D13	MW1	MS7
MS	8	73276	E13	MW1	MS8
MS	9	73667	D13	MW1	MS9
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MS1+…+MS9-MN5**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MW	1	73237	E13	MH10	MW1-(MS4+MS5+MS7+…+MS9)-(MH1+…+MH3+MH6+MH8+MH12+…+MH15+MH17+MH20+MH21)
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MW1-(MS4+MS5+MS7+…+MS9)-(MH1+…+MH3+MH6+MH8+MH12+…+MH15+MH17+MH20+MH21)**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MH	1	76737 (DS)	D20	MW1	MH1
MH	2	75826	D20	MW1	MH2
MH	3	76484	D21	MW1	MH3-MH4
MH	4	76594	D21+D22	MH3	MH4
MH	5	68120	I6	MR11	MH5
MH	6	75559 (DS)	E21	MW1	MH6
MH	8	75586	E22	MW1	MH8
MH	9	65320	F10	MV3	MH9
MH	10	72240	F9	MMV2	MH10-(MW1+MMV1)
MH	12	75071	F16	MW1	MH12
MH	13	75385	F19	MW1	MH13
MH	14	75397	F19	MW1	MH14
MH	15	75449	F21	MW1	MH15
MH	17	75547	F21	MW1	MH17
MH	18	67154 (DS)	G6	MMV2	MH18-MMV4-(MR2+...+MR5+MN7+…+MR11)
MH	19	72193	G7	MMV2	MH19-MMV5
MH	20	75117	G16	MW1	MH20
MH	21	75149	G17	MW1	MH21
MH	22	67994	H4	MR9	MH22
MH	23	68019	H4	MR9	MH23
MH	24	68078	I5	MR11	MH24
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MH1+…+MH6+MH8+…+MH10+MH12+…+MH15+MH17+…+MH24-MW1-(MMV1+MMV4+MMV5)-(MR2+...+MR5+MN7+…+MR11)**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MMV	1	73035	E10	MH10	MMV1
MMV	2	65660	F6	MWWTP	MMV2-(MMT3+MMT4)-(MH10+MH18+MH19)-MR1
MMV	3	65661	F6	MWWTP	MMV3-(MMT5+MMT6+MH9)
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MMV1+…+MMV3-(MMT3+…+MMT6)-(MH9+MH10+MH18+MH19)-MR1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
MR	1	68361	G6	MMV2	MR1
MR	2	67621	H2	MH18	MR2
MR	3	67638	H2	MH18	MR3
MR	4	67758	H2	MH18	MR4
MR	5	67870	H3	MH18	MR5
MR	7	67979	H4	MH18	MR7
MR	8	67946	H4	MH18	MR8
MR	9	67991	H4 & I3	MH18	MR9-(MH22+MH23)
MR	10	68067	I4	MH18	MR10
MR	11	68077	I5	MH18	MR11-(MR12+MH5+MH24)
MR	12	68106	I5	MH18	MR12
	TOTAL FLOW INTO MSD TREATMENT PLANT:				**MR1+…+MR5+MR7+…+MR11-(MH5+MH22+…+MH24)**

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Table 4-4
New Rochelle Sewer District Algorithms

New Rochelle Sewer District Flow Monitoring Locations

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
NPM	1	77923	B2	NN2	NPM1
NPM	2	77810	C2	NN2	NPM2
	TOTAL FLOW INTO NRSD TREATMENT PLANT:				**NPM1+NPM2**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
NMT	1	81561	E7	NL1	NMT1
NMT	2	81110	E8	NN3	NMT2
NMT	3	81244	E5	NN1	NMT3-NL1
	TOTAL FLOW INTO NRSD TREATMENT PLANT:				**NMT1+NMT2+NMT3-NL1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
NL	1	81327	F4	NMT3	NL1-NMT1
	TOTAL FLOW INTO NRSD TREATMENT PLANT:				**NL1-NMT1**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
NN	1	81218	E4	NRWWTP	NN1-NMT3-~20 houses
NN	2	78719	E4	NRWWTP	NN2-NPM1-NPM2
NN	3	78729	E4	NRWWTP	NN3-NMT2
NN	4	81186	E8	NMT2	NN4
	TOTAL FLOW INTO NRSD TREATMENT PLANT:				**NN1+NN2+NN3+NN4-(NPM1+NPM2)-(NMT2+NMT3)**

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Table 4-5
Port Chester Sewer District Algorithms

Port Chester Sewer District Flow Monitoring Locations

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
PRB	1	90735	8	PPC2	prb1
PRB	2	91306	14	PPC2	prb2
	TOTAL FLOW INTO PCSD TREATMENT PLANT:				**prb1+prb2**

Municipality	Meter No.	MH No.	Sheet No.	Flows Into	Total Flow
PPC	2	90063	3	PC WWTP	PPC2
	TOTAL FLOW INTO PCSD TREATMENT PLANT:				**PPC2**

5.0 FLOW MONITORING SYSTEM

5.1 Introduction

To ensure that the flow and rainfall data would be accurate and reliable, thorough research into potential flow monitoring systems was conducted. All-inclusive flow monitoring and telemetry systems, as well as combinations of flow monitors from one manufacturer and compatible telemetry devices from another, were all investigated. Some of the criteria used to evaluate the equipment included, but was not limited to the following:

- Manufacturer's experience, both with flow monitoring in general, as well as with telemetry technology.
- Manufacturer's experience with large-scale flow monitoring programs.
- Software capabilities and analysis tools.
- Compatibility of various components (meters, modems, rain gages) from different manufacturers.
- Savin's experience with the manufacturer.

It was determined that the Teledyne ISCO (ISCO) combined flow monitoring and telemetry system would be well-suited for this monitoring program. This system provided a combination of accuracy, dependability, analysis tools, diagnostic tools, and telemetry.

5.2 Flow Monitors

The 2150 Flow Module measures flow depth with a pressure transducer, and uses continuous wave Doppler technology to measure mean velocity. The sensor transmits a continuous ultrasonic wave and measures the frequency shift of returned echoes reflected by air bubbles or

particles in the flow. Both flow depth and velocity were recorded in fifteen-minute increments for the entire duration of the flow monitoring program.

The 2150's area velocity probe is built on digital electronics, so the analog level is digitized in the sensor itself to overcome electromagnetic interference. The probe is also factory-calibrated for a 10-foot span at different temperatures. This built-in calibration eliminates drift in the level signal, providing long-term level stability that reduces recalibration frequency and completely eliminates span recalibration. This is a necessity for a program such as this due to both the quantity of meters as well as the telemetry technology being used.

Some of the standard features of the 2150 include:

- The 2150 is powered by two alkaline batteries within a 2191 Battery Module. This highly efficient power management extends battery life. The chemically resistant epoxy-encapsulated sensor withstands abuse, resists oil and grease fouling, and eliminates the need for frequent cleaning. The quick-connect sensor can be easily removed and interchanged in the field without requiring recalibration.

- Replaceable high-capacity internal desiccant cartridge and hydrophobic filter protect sensor reference from water entry and internal moisture.

- Pressure transducer vent system automatically compensates for atmospheric pressure changes to maintain accuracy.

- Up to four 2150 flow modules can be networked by stacking in order to build a compact, integrated system.

- Secure data storage. All data are continuously stored in flash memory to protect against loss in case of power failure.

- The 2150 measures shallow flow in small pipes. Its low-profile velocity sensor minimizes flow stream obstruction and senses velocity in flows down to 1 inch in depth. For sites

with low nighttime flows, flumes were installed to obtain accurate, reliable velocity readings.

5.3 Rain Gages

The ISCO 675 rain gage was used to record rainfall. It is a tipping bucket rain gage that records rainfall at increments of 0.01 inches. Rainfall was recorded at five-minute increments at each of the 12 rain gage locations throughout the four LIS sewer districts for the duration of the flow monitoring program.

5.4 Telemetry System and Data Collection

The use of wireless telemetry allowed for a daily check of all 94 sites from a remote location in minutes. The work orders could then be prioritized to provide field crew visits to the meters and gages requiring immediate attention. The typical telemetry system consists of a cellular modem module and an antenna which is either buried in the pavement adjacent to a manhole for street applications or installed nearby in the woods.

The ISCO 2103ci CDMA cellular modem module is factory-configured to deliver ISCO 2150 flow meter data to a remote server database. Data can also be downloaded from the server using an internet connection. Since the 2103ci modem module uses cell phone technology, a landline modem is not required.

The 2103ci automatically sends data via the internet to a designated server running ISCO Flowlink Pro software. The user-specified primary data transmission interval (5 minutes to 24 hours) can automatically change to a secondary interval when specific site conditions occur at the monitoring site. For the purposes of this monitoring program it was determined that a 24 hour data transmission interval would be used. This means that data is recorded at fifteen-minute intervals by the meter, 24 hours a day, seven days a week. The cell modem subsequently transmits the data from the site directly to the dedicated server once every 24 hours. The meter call-in times were staggered, so as not to overburden the server with calls.

5.5 Flowlink Software

The Flowlink software was designed for both the desktop computer in the office and for the laptop computer in the field. All data are stored in a standard Microsoft Access database that can be viewed in the office application or the field. The software assists field crews with meter configuration, equipment maintenance, and data collection. As a backup to the telemetry system, field crews were able to download data to their laptops as backup.

In the office, Flowlink eliminated the need to export data to a spreadsheet, such as Microsoft Excel, in order to create tables and hydrographs. Flowlink is an all-encompassing software tool. After being transmitted via telemetry from the meter site to the server, data is stored directly in the Flowlink software, thereby making the creation of tables and graphs accurate and reliable.

In addition to the tables and graphs that can be generated, Flowlink software provided several other tools that were beneficial for this program:

- Battery check: one of the biggest concerns with flow monitoring is loss of data due to battery consumption. With Flowlink, field crews could create one template to monitor the batteries at all 94 sites, and have it updated on a daily basis. Similar to an Excel spreadsheet, the columns could be sorted (in this case, by battery voltage) and the crews would create a daily work order of sites requiring battery replacement. This allows for batteries to be changed before voltage drops too far and the telemetry system for that site stops transmitting data.

- Reliability of velocity: Flowlink diagnostics allow the user to confirm whether the velocity is good, reliable data, or if the meter is experiencing a problem (i.e. fouling) and a field crew should be sent out to investigate. There are two velocity diagnostics that could be run concurrently, and again utilize the template function in Flowlink. These diagnostics are the signal strength and the spectrum strength, shown as percentages. The template was setup so that flow rate, level, velocity, signal strength and spectrum strength could be plotted together on one graph. The velocity signal measures the amount of particles in the waste stream. If a probe is fouled, then there are no particles to measure

velocity, and the signal strength drops dramatically. The velocity spectrum is a “noise level” reading/indicator. Smooth laminar flow would give higher percentages than choppy or turbulent flows.

6.0 DATA QUALITY ASSURANCE AND QUALITY CONTROL

6.1 Pre-installation Verification

As with any flow monitoring program, QA/QC of the meter data is of the utmost importance. Extensive steps were taken to ensure that the data collected was both accurate and reliable. Prior to meter installation, both office and field verifications of the proposed flow monitoring locations and equipment were conducted. These QA/QC checks included the following:

- Municipal boundary and meter locations check: as stated previously in this report, the key manholes were selected based on sewer system maps provided by the County. Savin's procedure for key manhole selection included locating and highlighting all municipal borders, locating any sewers flowing from one municipality into another, and then selecting the first manhole downstream of the municipal boundary as the key manhole. A senior engineer at Savin was responsible for locating these key manholes, and subsequently, four other engineers/office personnel followed the same protocols and located the same 82 key manholes.

- Algorithm check: the location of the flow meters was used to develop algorithms, which were used to calculate flow rate for each municipality. The flow rates were calculated using both Flowlink and by manual calculation to ensure there were no errors. Both methods provided the same results.

- Comparison of official municipal boundaries against boundaries shown on the sewer system maps. Municipal boundary reliability is extremely important when designating key manholes for flow monitoring. If the boundary is shown to be in the wrong location,

the flow meter could be installed in an incorrect manhole that is located in the wrong municipality. Municipal boundaries were cross-checked against the boundaries shown on the sewer maps and found to be in agreement.

- Pump station flows: Westchester County provided a list of all County-owned pump stations in the study area. A field crew conducted field investigations at each of these pump stations, as well as other local pump stations (found in the field by the crews) and confirmed the tributary area and discharge locations, and determined that there were no flows unaccounted for and that the flows had been attributed to the correct municipality.

- Significant industrial users: A list of facilities categorized as a significant industrial user was provided by the County. One of these significant industrial users was located within the LIS sewer districts and has an insignificant flow rate. Therefore, it was determined that there are no industrial facilities that discharge large quantities of wastewater that could skew the results.

6.2 Field Verification

Once the flow meters were installed, field crews continued QA/QC efforts by conducting the following field verification checks:

- Routine site maintenance: during all site visits, the field crew would check that the manual depth and velocity readings matched the flow meter's logger readings, and calibrate the meter, if necessary. Other routine maintenance included cleaning the sensors regularly, changing desiccant and ensuring that the cables were tied in place and that the sensors were firmly in place in the proper position.

- Telemetry spot check: During site visits, crews would download all data since the previous download to their computer. Since data was continuously being transmitted from each of the 94 sites to the servers, office personnel would randomly check that the data downloaded on the crew chief's computer matched data that was being transmitted to the servers. Data matched 100% of the time.

- Crews confirmed in the field that each of the 82 meters were installed in the correct manholes and in the correct lines. They also confirmed silt levels and probe offsets (if necessary) were calculated correctly in the Flowlink software.

6.3 Comparison to WWTP Meters

Once all of the boundaries and algorithms were checked and the meters were installed, a comparison was conducted between the County plant meters and the temporary meters installed in the sewers. In order to accomplish this task, Westchester County calibrated its meters at each of the four LIS Wastewater Treatment Plants. The County plant meters were calibrated between May and August 2009.

Once the calibrations were completed, the County provided the monthly flow data for each of the four LIS Plants. The daily average flow as measured by the County plant meters was then continuously compared to daily average plant flows calculated from the meters in the sewer system. The results of this comparison can be seen in the individual hydrographs for each plant in Figures 6-1 through 6-4. The meters correlated well with the plant meters.

6.4 Supplemental Meters

As a follow-up to the County plant meter comparison, an additional check of meters was conducted by installing supplemental meters at each of the nine sewer system meter locations (two at Mamaroneck, three each at New Rochelle and Blind Brook, and one at Port Chester) in order to further confirm accuracy. These supplemental meters were installed for a two-month period between February 22, 2010 and April 20, 2010, in the same manholes as the original plant meter sites. The data from all nine supplemental meters tracked well with the original meters. Sample hydrographs for one meter comparison at each wastewater treatment plant is included in Figures 6-5 through 6-8.

In addition to these nine supplemental meters, other supplemental meters were installed at an additional 19 locations, for a total of 28 of the 82 (34%) metering sites. Each of these supplemental meters also tracked well with the corresponding original meter.

Figure 6-1

Blind Brook WWTP - Sewer System and Plant Meter Comparison

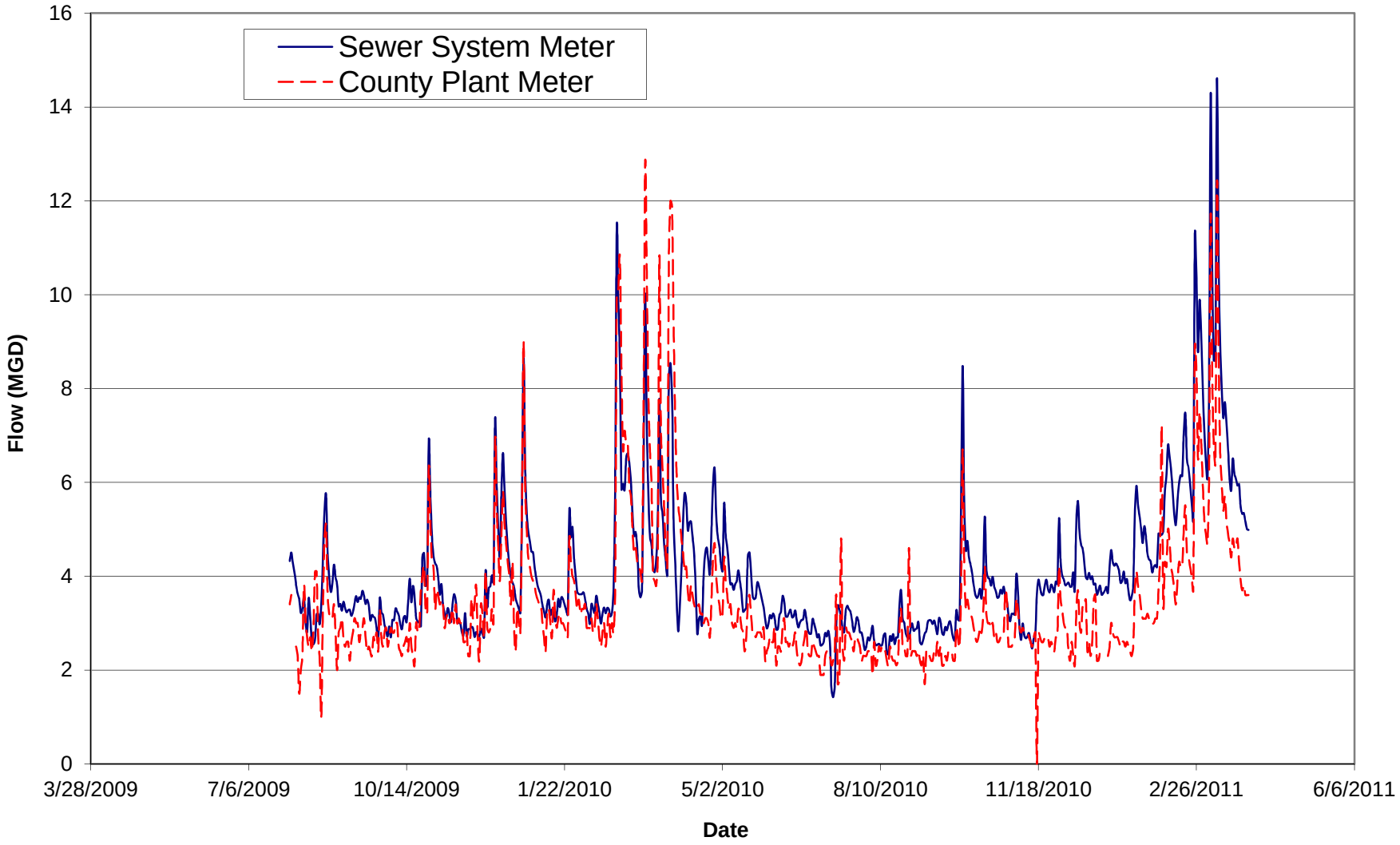


Figure 6-2
Mamaroneck WWTP - Sewer System and Plant Meter Comparison

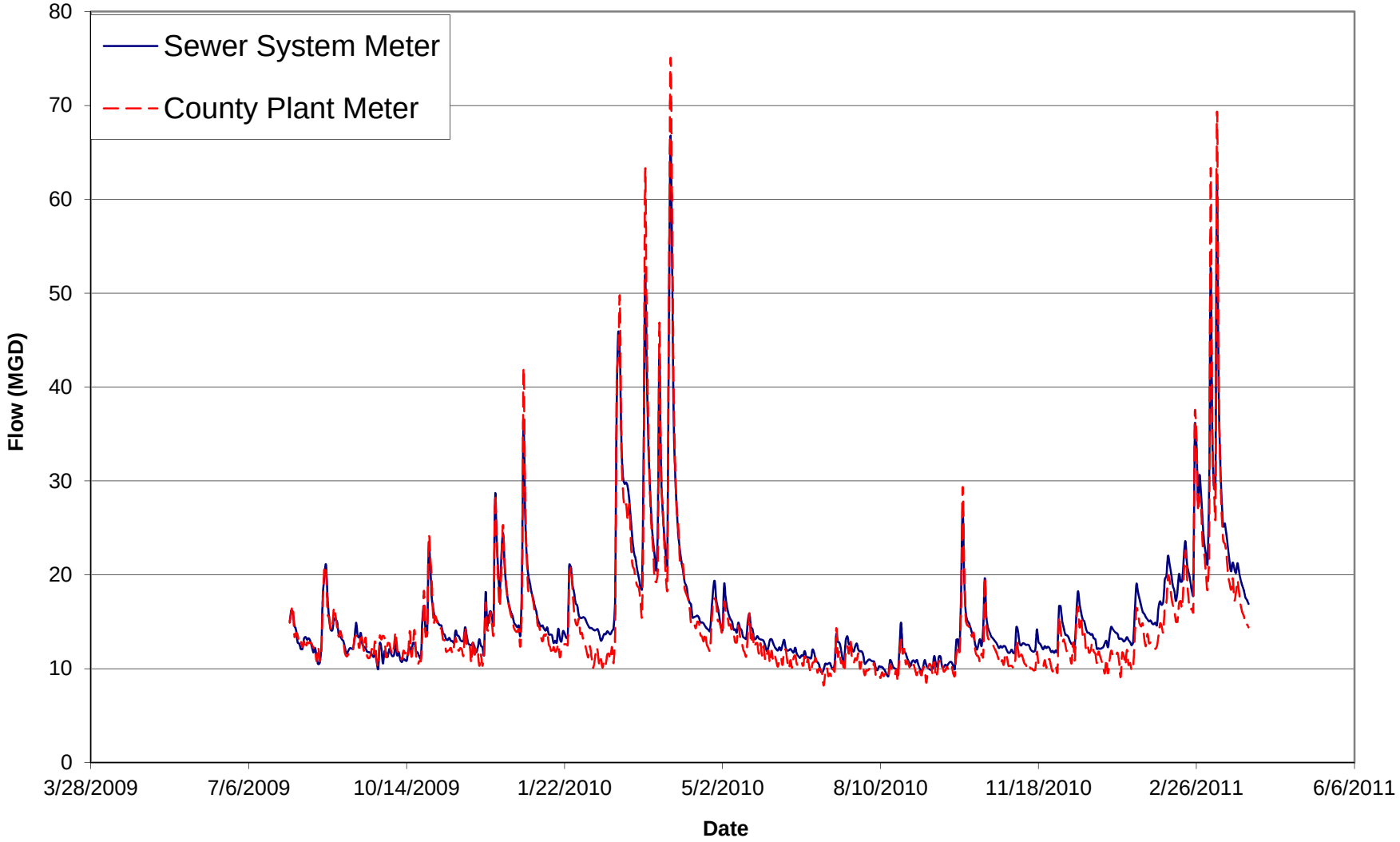


Figure 6-3

New Rochelle WWTP - Sewer System and Plant Meter Comparison

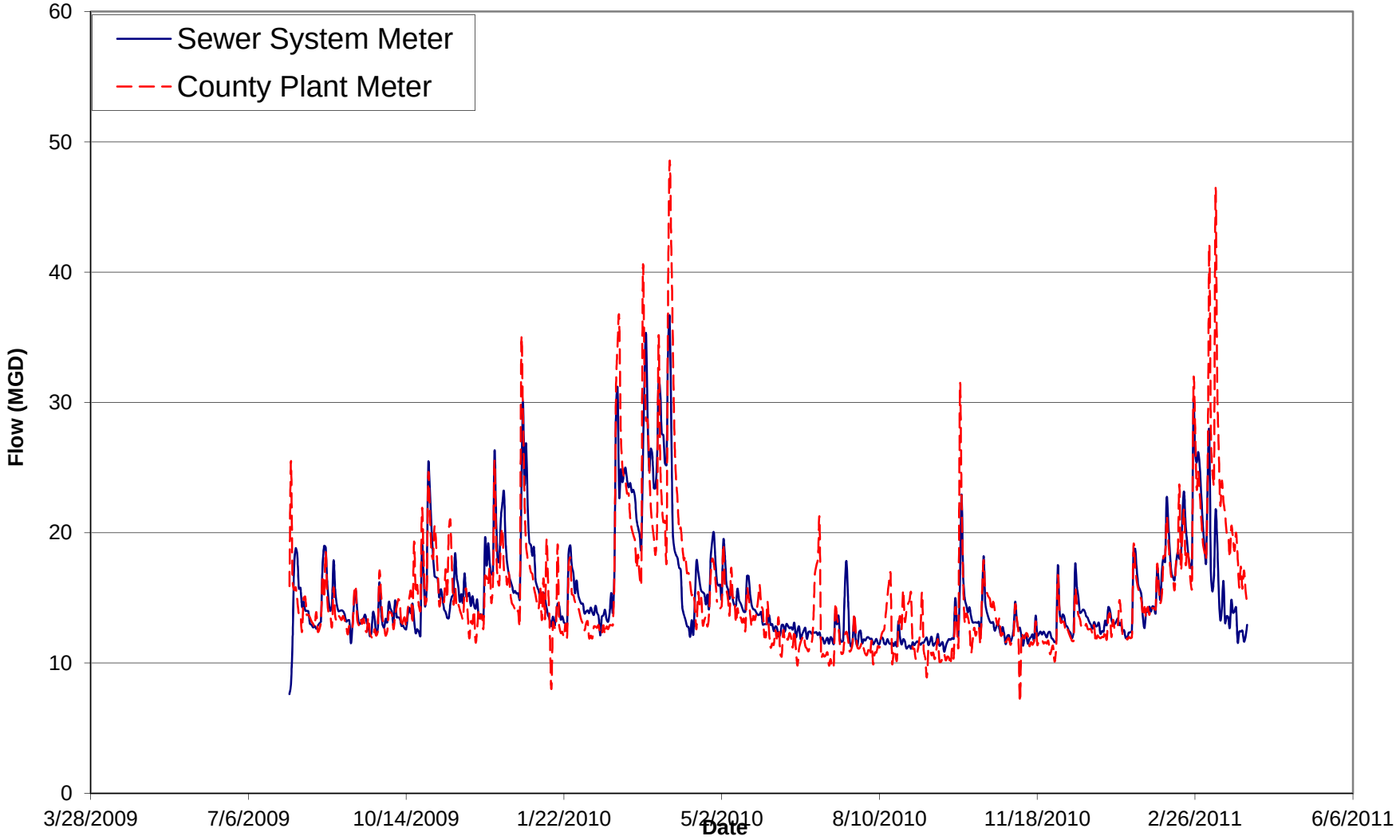


Figure 6-4

Port Chester WWTP - Sewer System and Plant Meter Comparison

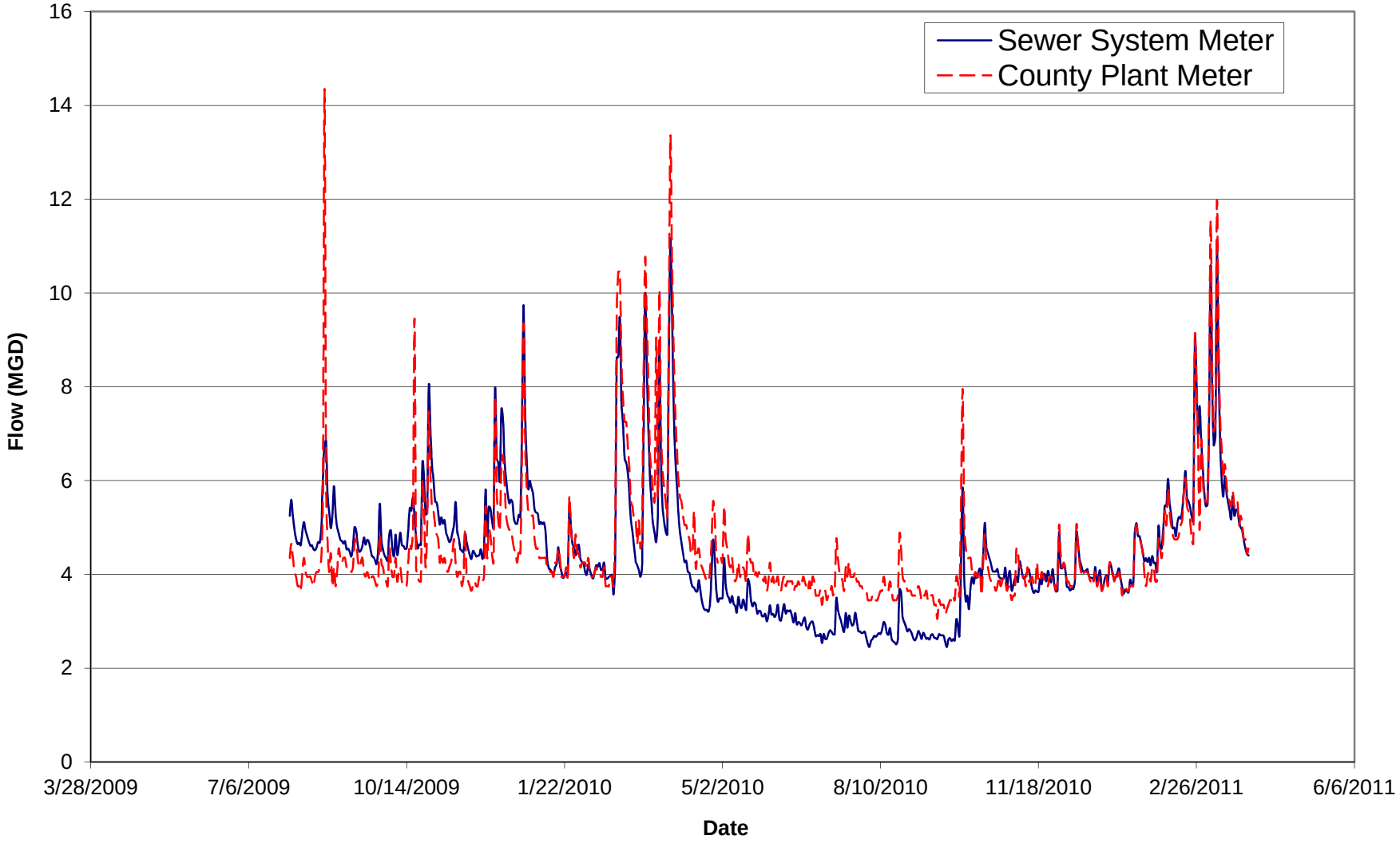


Figure 6-5

Blind Brook WWTP - Comparison with Supplemental Meters

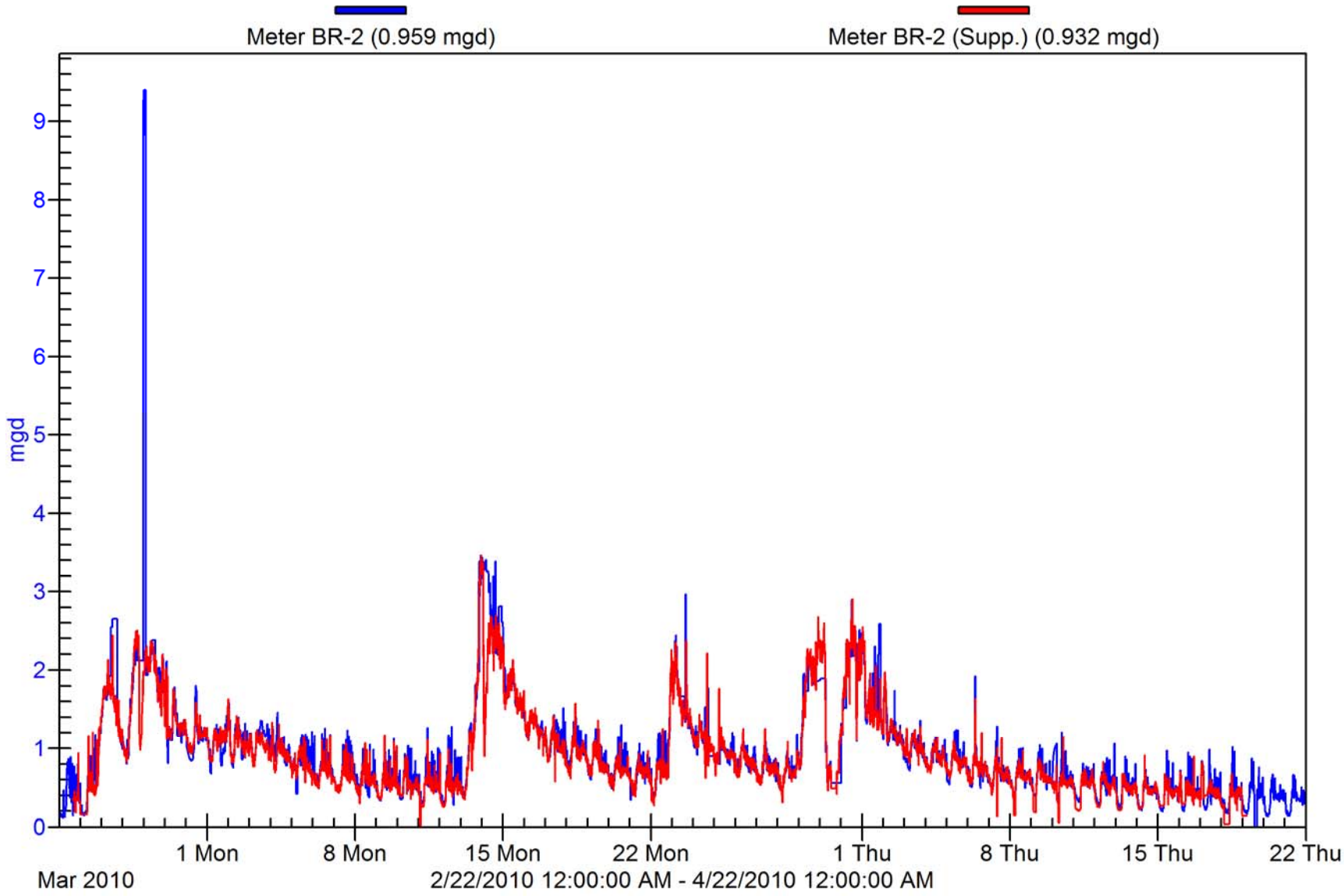


Figure 6-6

Mamaroneck WWTP - Comparison with Supplemental Meters

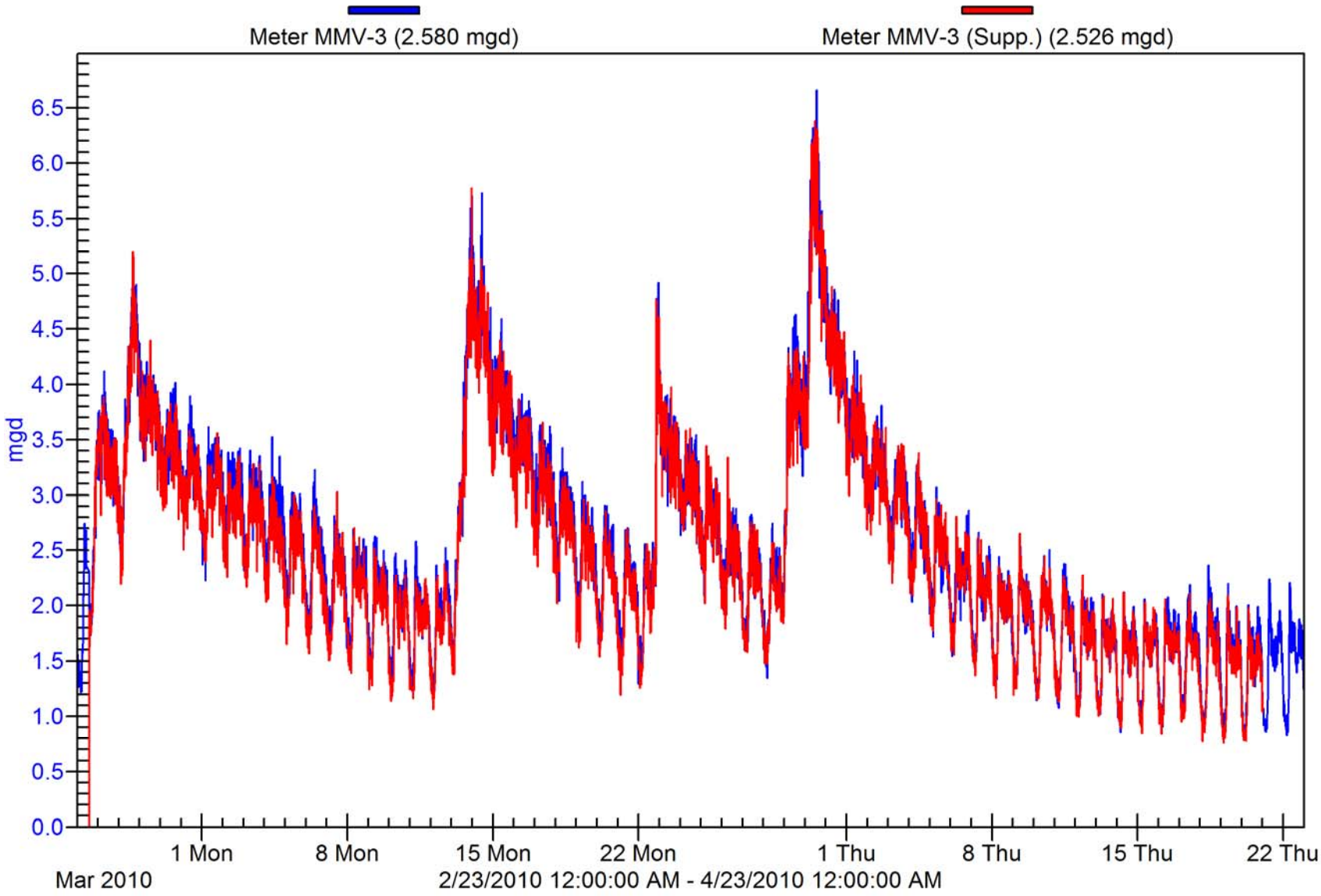


Figure 6-7

New Rochelle WWTP - Comparison with Supplemental Meters

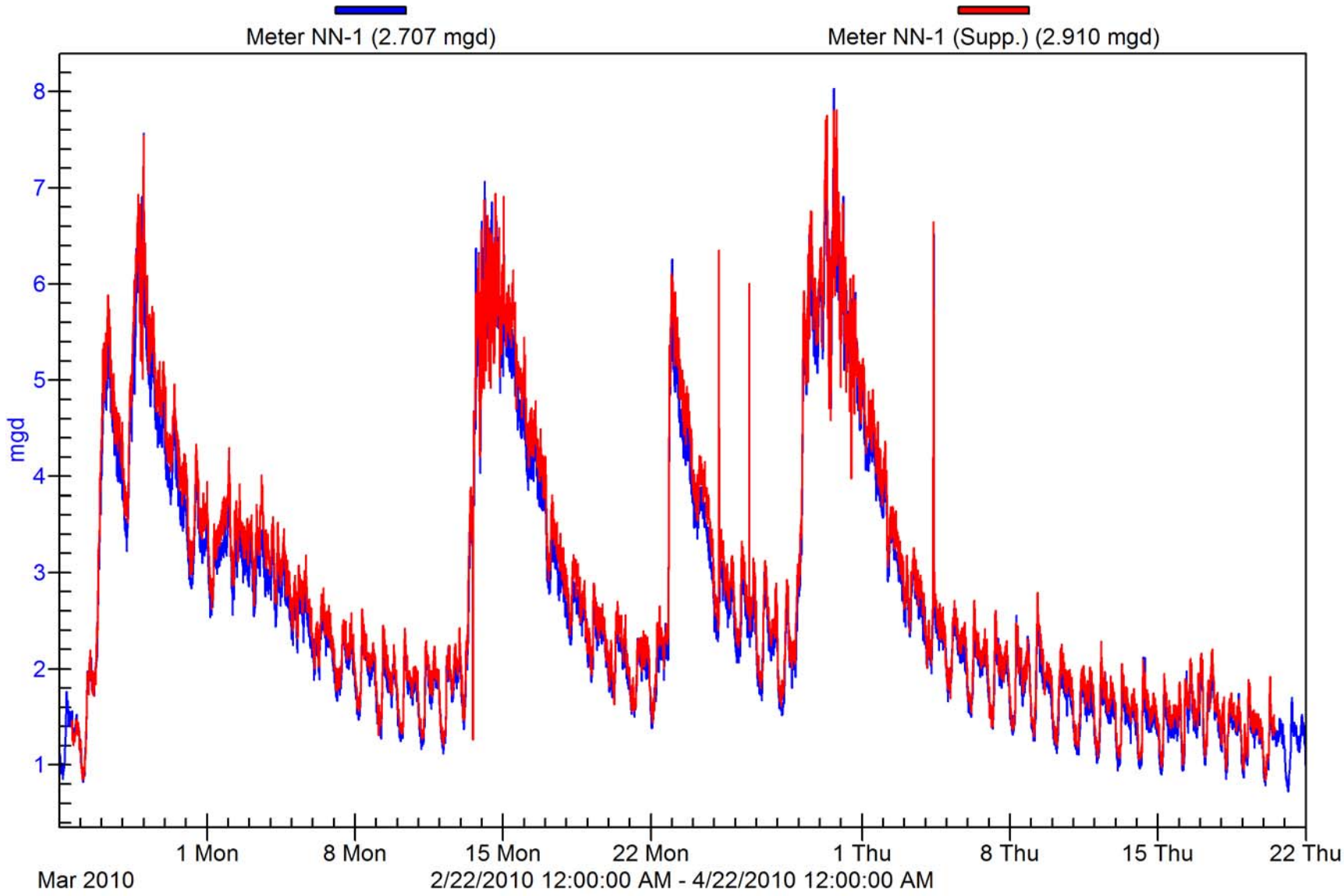
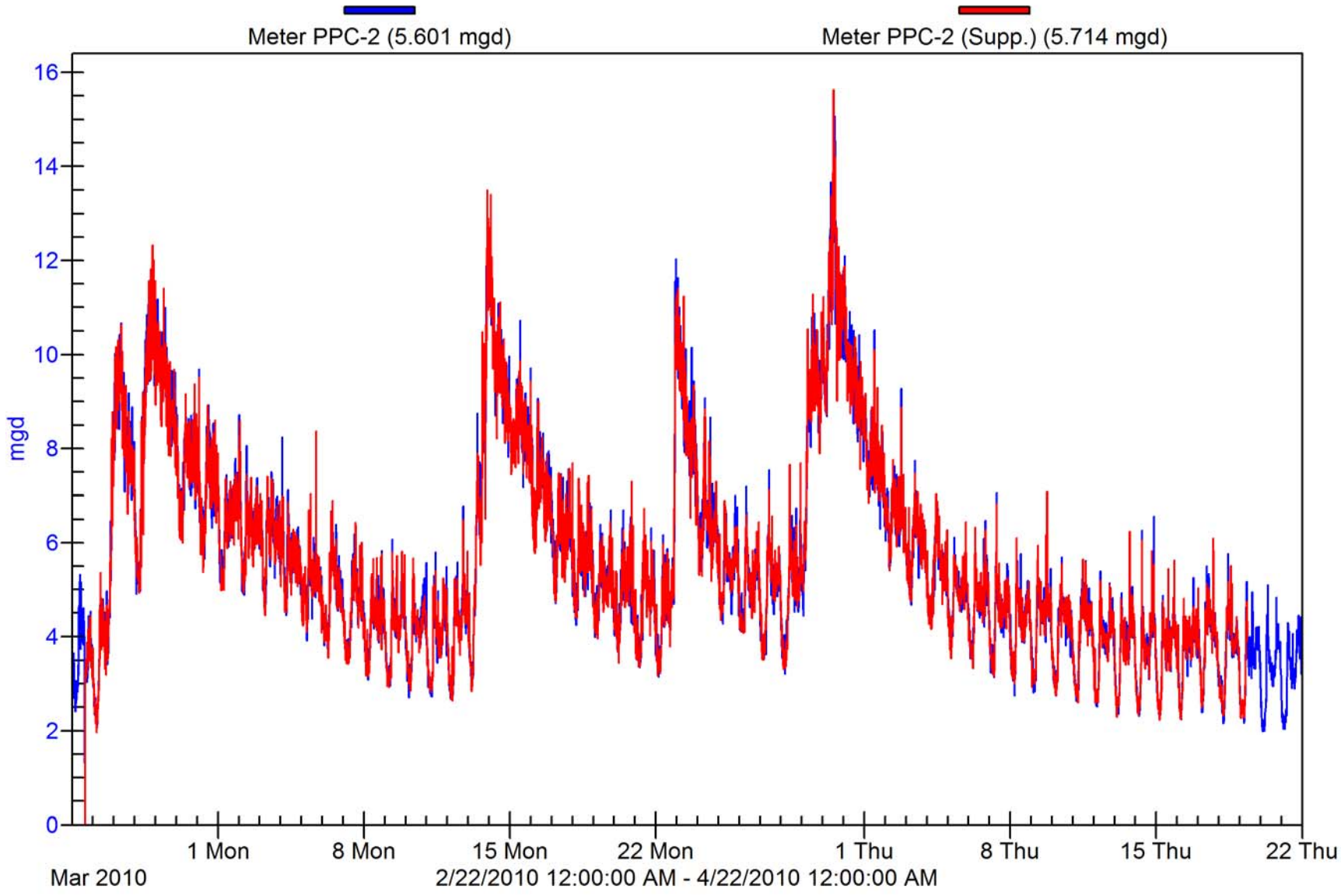


Figure 6-8

Port Chester WWTP - Comparison with Supplemental Meters



7.0 POPULATION ESTIMATES

7.1 Municipality Populations

Section 4 of this report detailed the steps taken to determine the flow rates for each of the 11 municipalities that discharge to the Long Island Sound sewer districts. The final component that was needed to determine the daily average per capita flow rates was a population estimate for each municipality. Table 7-1 shows that eight of the 11 municipalities discharge solely to one of the LIS treatment plants. The remaining three municipalities also discharge to one of the Yonkers Joint Sewer Districts. Therefore, two separate methodologies were necessary to determine the populations.

Populations for Municipalities Entirely Within the LIS Sewer Districts

The Westchester County Department of Planning provided 2010 census data to be used for population estimates for each of the eight municipalities that discharge solely within the confines of the four LIS sewer districts. Table 7-1 shows the population estimates used for each municipality.

Populations for Municipalities that also Discharge to the Yonkers Joint Sewer District

Since the population estimates from the Department of Planning are based on entire municipalities, these numbers could not be used for White Plains, Scarsdale and Pelham Manor, since a portion of each of these municipalities also discharge to the Yonkers Joint Sewer Districts. For these three municipalities, population estimates were based on block and lot census tracts and individual house counts.

The LIS sewer district and municipal boundaries were superimposed onto the census tract maps and the number of houses in each municipality outside of the LIS districts was counted. The *Westchester County Department of Planning Databook* also provides an average household size for each municipality in Westchester County. Once the total number of houses had been quantified for each municipality, that number was multiplied by the average household size (2.5 for White Plains, 2.9 for Pelham Manor and 3.1 for Scarsdale) to determine the population residing outside the LIS sewer district portion of that municipality. These numbers were used for the per capita flow rate calculations, and are summarized in Table 7-1.

7.2 Commuter Allowance

Section 824.72.3 of the Westchester County Environmental Facilities Sewer Act states that "Municipalities identified by the Westchester County Commissioner of Planning as having more than 1,000 additional daytime commuter residents, flow of 30 gallons per daytime commuter may be permitted at the discretion of the Commissioner of Department of Environmental Facilities upon application of the municipality". Table 7-2, provided by the Department of Planning, demonstrates that each of the 11 municipalities has at least 1,000 commuters on a daily basis. An allowance of 30 gallons per day per commuter in each municipality was incorporated into all weekday per capita flow rate calculations. This allowance was not incorporated into the weekend flow rate calculations.

For the eight municipalities discharging only within the LIS Sewer districts, this credit was a simple calculation: 30 gallons per day per commuter multiplied by the total number of commuters. The resulting flow rate, in gallons per day, was then subtracted from the daily average flow rate. The net flow rate was then divided by the total number of residents to obtain the final per capita flow rate for each municipality.

For the remaining three municipalities, a ratio of the population within the LIS sewer district to the total municipal population was taken, and applied to the total number of commuters. The estimated number of commuters was then used in the calculation described above to determine the per capita flow rate for these municipalities.

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DEPARTMENT OF ENVIRONMENTAL FACILITIES
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Table 7-1
Poulation Estimates

Municipality	**Population**
Port Chester	28,195
Rye Brook	9,599
New Rochelle	73,260
Larchmont	6,587
Town of Mamaroneck	10,698
Harrison	26,504
Rye	15,242
Village of Mamaroneck	18,456
Pelham Manor*	3,272
Scarsdale*	5,816
White Plains*	25,759

*Partial populations. Portion of population shown is for Long Island Sound sewer districts only. The balance of the population contributes to the Yonkers sewer district.

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Table 7-2
Daytime Populations for Municipalities in LIS Sewer Districts

Municipality	Primary Jobs			Workers			Daytime Population Difference	2009 Population	Daytime Population
	Total	Held by residents	Held by non-residents	Total	Work in municipality	Work outside of municipality			
White Plains	51,451	4,877	46,574	22,838	4,877	17,961	28,613	57,442	86,055
Harrison	22,649	1,393	21,256	8,048	1,393	6,655	14,601	26,504	41,105
Rye Brook	6,283	259	6,024	2,892	259	2,633	3,391	9,599	12,990
Rye (City)	7,415	659	6,756	4,344	659	3,685	3,071	15,242	18,313
Mamaroneck (Town)	10,450	1,415	9,035	8,779	1,415	7,364	1,671	29,154	30,825
Larchmont	2,773	165	2,608	1,676	165	1,511	1,097	6,587	7,684
Mamaroneck (Village)	7,614	1,007	6,607	6,574	1,007	5,567	1,040	18,456	19,496
Rye (Town)	15,812	2,625	13,187	15,046	2,625	12,421	766	45,238	46,004
Pelham Manor	2,199	120	2,079	1,827	120	1,707	372	5,464	5,836
Scarsdale	4,250	350	3,900	5,061	350	4,711	-811	17,755	16,944
Port Chester	8,017	1,347	6,670	9,373	1,347	8,026	-1,356	28,195	26,839
New Rochelle	22,072	5,732	16,340	26,761	5,732	21,029	-4,689	73,260	68,571

Prepared by Westchester County Department of Planning using US Census LED OnTheMap Version 4, 2008 data. 2009 Population is 2009 projected Census estimate.

8.0 MUNICIPALITY FLOW RATES

8.1 Per Capita Flow Rates

The main objective of this flow monitoring program was to determine which, if any, municipalities exceed the 150 gallons per capita per day flow rate limit. As stated previously in this report, the flow monitoring software took the 82 flow meters spread throughout the 11 municipalities and combined them, using the aforementioned flow algorithms, into 11 individual meter sites. This resulted in one flow rate for each municipality that would be used for all analyses.

Daily average flow rates were calculated based on the combined 15-minute flow metering data for each municipality. The final per capita flow rates were then calculated by subtracting the commuter allowance for each municipality from the daily average flow rate, then dividing by the population estimate for that municipality. The commuter allowance was only applied to weekday flow rates (Monday through Friday), and not weekend flow rates. Hydrographs for each of the 11 municipalities (based on the final per capita daily average flow rates with the commuter allowance) are shown in Appendix A.

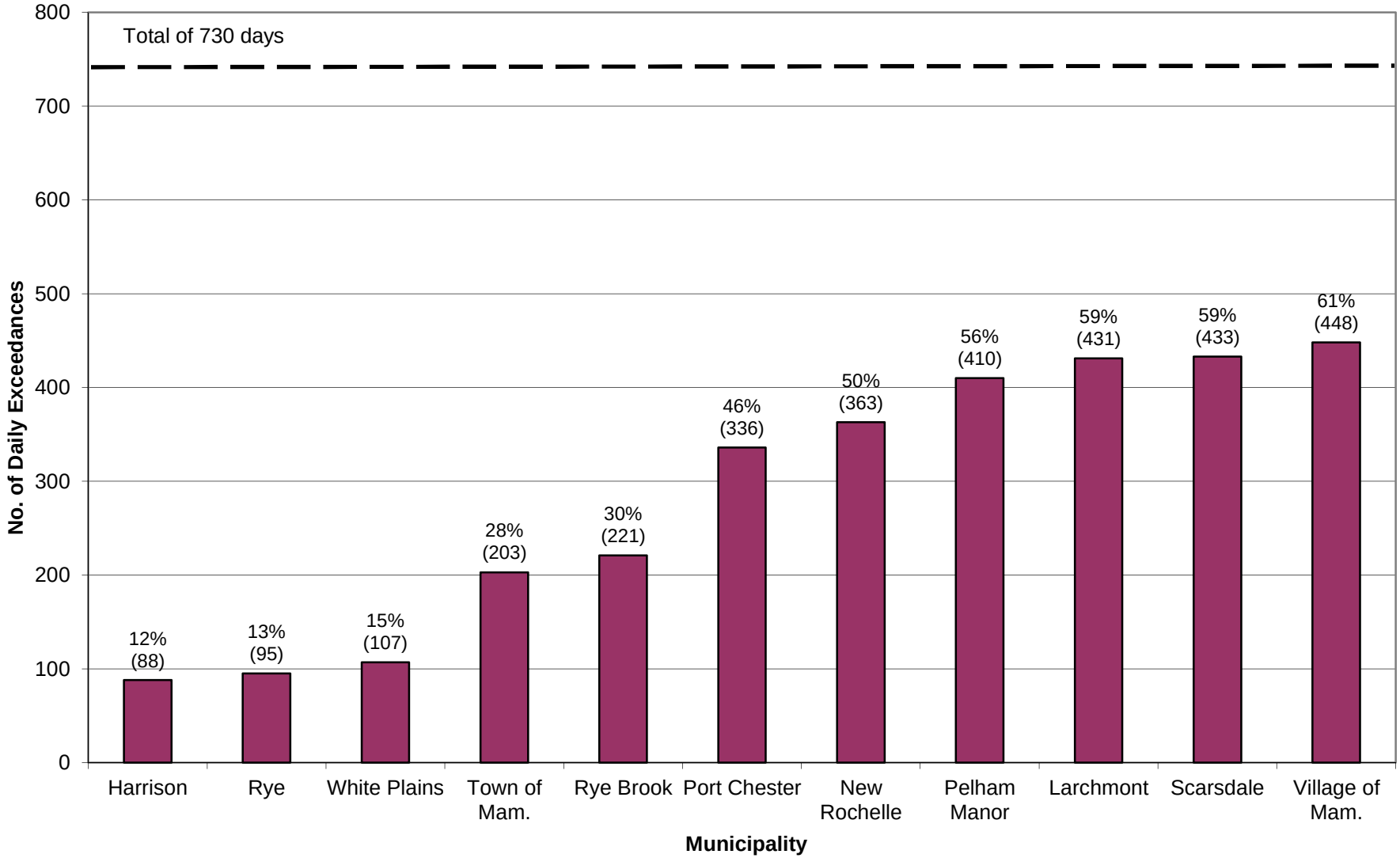
Appendix B contains rainfall graphs for each of the 12 rain gages. Rainfall was recorded over the course of the two-year monitoring period to ensure that the flow meter data was representative of various conditions such as prolonged dry periods, prolonged wet periods, snow melt, high groundwater, low groundwater, rainfalls of large and small volumes, and rainfalls of high and low intensity. Approximately 25 storm events were analyzed, with rainfall of 0.51” to 3.51”, a duration of 1 hour to 37 hours and return periods ranging from 0.2 years to 7.8 years.

8.2 Compliance with Westchester County Ordinance

Section 824.72.2 of the Westchester County Environmental Facilities Sewer Act states that "Excessive infiltration and inflow means the quantity of flow entering the County sewer system which is greater than 150 gallons per capita per day". Since this is an allotment per day, Section 824.21, paragraph 17 defines "day" as a calendar day from midnight to midnight. There is a text box on each of the 11 hydrographs in Appendix A that provides the total number of days that exceeded the 150 gpcd limit during the 730 day monitoring period. Each graph has a dark horizontal line at the 150 gpcd rate, therefore all flow rates above this line are in excess of the Sewer Act limit.

This data is further summarized in bar chart form in Figure 8-1. Each bar in the figure shows the total number of days and percentage of time that each municipality exceeded the 150 gpcd limit during the 730 day monitoring period. The 11 municipalities exceeded the limit between 12% and 61% of the time.

Figure 8-1
Summary of Daily Exceedances



9.0 FLOW REDUCTION STRATEGIES

9.1 Introduction

There are several methods that have been used successfully to reduce extraneous infiltration and inflow into public sewer systems. These methods include identifying and reducing I/I from the public sewers such as defective manholes and defective sewers in the public domain. Effective I/I reduction programs also include identifying and reducing I/I from private sources such as basement sump pumps and roof leaders that discharge into public sewers and rehabilitation of defective private service laterals. The various methods that can be used to identify and reduce I/I from public and private sources are described below.

9.2 Sewer System Evaluation Surveys

A sewer system evaluation survey (SSES) is a methodical step-wise approach to quantify sewage flow rates in a sewer system, identify areas of the system that have higher rates of infiltration and inflow, and to identify and quantify the specific defects that are the sources of the I/I. The I/I sources are then prioritized in terms of their relative I/I contribution. Rehabilitation methods and cost estimates are then developed for each specific I/I source. The steps in an SSES program are as follows:

9.2.1 Flow Monitoring

The first step in an SSES program is to conduct flow monitoring of the sewer system to quantify flow rates during dry weather and wet weather. Flow monitoring during dry weather allows determination of base flow (the normal sanitary sewage flow from residential, commercial, and industrial sources) and infiltration (flow from clean groundwater that enters the sewer system through defective sewers, defective laterals,

and defective manholes). Flow monitoring during wet weather allows determination of the direct inflow (clean rainwater that enters the sewer system from direct connections to catch basins, roof leaders and similar sources), indirect inflow (rainwater that enters the sewers from cross-connections with the storm sewers), and rainfall-derived infiltration and inflow (RDII, clean water that enters the sewers from sump pump discharges and other sources that are subject to increased groundwater levels from the rainfall).

In general, flow monitoring for SSES programs is conducted for 12 to 16 weeks, depending on the rainfall characteristics captured including the number of rainfall events, total rainfall, and rainfall intensity. Flow monitors are placed at key manholes to measure flow from sub-areas that consist of approximately 20,000 linear feet of sewer. Data is collected on a regular basis and analyzed to determine the various components such as daily average flow, peak daily flow, base flow, infiltration, inflow, and rainfall derived infiltration. The infiltration and inflow from each sub-area are prioritized in order to guide more detailed investigations to identify specific sources of infiltration and inflow.

9.2.2 Flow Isolation

Flow isolation, or nighttime weiring, is used to identify manhole-to-manhole sewer segments that exhibit higher rates of infiltration based on the flow monitoring data. Calibrated weirs are inserted in the downstream sewer segment during periods of low sanitary flow and dry weather. Flow isolation is done at night (typically between midnight and 6 am) so that there is minimal sanitary sewage present. It is also done during dry weather to eliminate the influence of rainfall. Instantaneous readings are taken from the weirs and used to calculate an infiltration rate in each sewer segment. The segments that have higher rates of infiltration are scheduled for closed circuit television inspection (CCTV).

9.2.3 Closed Circuit Television Inspection

The individual sewer segments that show higher rates of infiltration are inspected with CCTV. CCTV allows the operator to identify and quantify specific defects in the sewers that contribute to infiltration. For example, CCTV allows the operator to identify an

offset joint 47 linear feet from a reference manhole that is contributing three gallons per minute of infiltration. The CCTV inspection is digitally recorded on DVD with the operator's audio narrative description of his observations. The entire CCTV operation is done in accordance with standardized protocols developed by the National Association of Sewer Service Companies (NASSCO). The data gathered from CCTV inspection can be tabulated and prioritized for rehabilitation.

9.2.4 Manhole Inspection

Manhole inspection is used in sub-areas that exhibit higher rates of both infiltration and inflow. Defective manholes can contribute infiltration through leaking walls, leaking benches, defective connections to the sewers, and other similar sources. Defective manholes can contribute inflow from holes in the cover, cracks around the frame, and other similar sources. Manholes are usually inspected using a prescribed methodology developed by NASSCO, depending on the level of detail required. Data from the visual inspections is tabulated and prioritized for rehabilitation.

9.2.5 Smoke Testing

Smoke testing is used in sub-areas that exhibit higher rates of inflow to identify specific inflow sources such as roof leaders, catch basins, area drains, window well drains, and similar sources. A non-toxic smoke specifically developed for sewer system investigations is blown into the sanitary sewers. The smoke, which is under slight pressure, will be emitted from all open sources that are connected to the sanitary sewers. A field crew will observe all smoke emissions and document the ones from illicit sources such as roof leaders and storm drains. The field crew also characterizes the surrounding area (blacktop, grass, etc) so that a run off coefficient can be assigned. The drainage area of the inflow source is estimated. The quantity of inflow can be estimated from the drainage area, run off coefficient, and quantity of rainfall. The data is tabulated and prioritized for rehabilitation.

9.2.6 Dyed Water Testing

Dyed water testing is used to identify suspected inflow sources that did not emit smoke

during the smoke testing program. Suspected sources typically include roof leaders that discharge directly into the ground, driveway drains, roof drains, and other inflow sources that may be blocked with debris or standing water. The procedure consists of adding water mixed with a fluorescent dye to the suspected inflow source. The downstream sanitary and storm drain manholes are opened and observed for presence of the dyed water. If the dyed water shows in the sanitary manhole, it is concluded that the suspected inflow source is connected to the sanitary system. The field data is tabulated and prioritized for rehabilitation.

9.2.7 Dyed Water Flooding

Dyed water flooding is another technique used to identify and quantify inflow from cross-connections between the sanitary sewers and the storm drains. Typically, these cross-connections are discovered during smoke testing when a small amount of smoke is seen coming from a crack in the street or sidewalk, from a grassy area, or from a catch basin. Cross-connections occur when the sanitary sewer and storm drain are in close proximity and there are defects in both systems that allow the storm water to exfiltrate from the storm drain and enter the sanitary sewer. It is also possible that sewage can exfiltrate from the sanitary sewers and enter the storm sewers, causing contamination. Dyed water flooding consists of adding dyed water to the storm system and observing the sanitary system. If dyed water shows in the sanitary system, CCTV is used to identify the specific location in the sanitary sewer where the dyed water is entering. The amount of inflow from the cross connection is also estimated. Data is tabulated and prioritized for rehabilitation.

9.3 Sump Pump Disconnection

Sump pumps are used to discharge water that collects in low lying areas of residences, commercial establishments and industrial facilities, garages, and other similar locations. The water collected in the sump is usually due to high groundwater that leaks through the building foundation. The high groundwater levels can be due to snow melt in the spring, tidal influence, or rainfall that percolates through the soil. The sump pumps are supposed to discharge to the storm drains, on the ground surface, or into a dry well on the property. However, it is well known

that many sump pumps discharge directly into the sanitary sewers. During periods of sustained high groundwater, the sump pumps can run continuously for several days.

Sump pumps that discharge into the sanitary sewers should be disconnected and redirected to discharge to other locations. A visual inspection of the interior plumbing of a building can be conducted to determine if the sump pump is connected to the sanitary sewer. If the plumbing is behind a finished wall it may be necessary to activate the sump pump with dyed water and determine the discharge location by observing downstream sanitary and storm manholes, discharges at the curb, dry wells, and other locations.

9.4 Public and Private Lateral I/I

It is estimated that in many sewer systems, service laterals comprise approximately 50 percent of the total length of sewer. It has also been observed that a significant quantity of infiltration and RDII is directly attributable to defects in the service laterals. Service laterals are subject to the same defects as mainline sewers – poor construction methods, improper connections, deterioration of the joints connecting the individual segments, offset joints, cracks, root penetrations, etc. The public portion of the service lateral is usually considered from the connection to the mainline sewer up to the property line. The private portion of the lateral is usually considered from the property line up to the building.

Service laterals can also be inspected with CCTV equipment to identify defects and quantify infiltration. One method of CCTV consists of inserting the camera in the lateral cleanout. The camera is mounted on flexible rods that can be pushed through the lateral out to the mainline sewer. The other method of CCTV consists of launching the camera from the mainline sewer up the lateral. Both methods allow for identification of physical defects and sources of infiltration. The inspection can be digitally recorded similar to the CCTV of the mainline sewer.

9.5 Sewer System Rehabilitation

There are numerous methods and proprietary products available to replace or rehabilitate mainline sewers, private laterals, manholes, and inflow sources. Some of the more common methods are described below.

9.5.1 Mainline Sewer Rehabilitation

Excavation and Replacement

Sewers that are crushed or badly broken and have no structural integrity must be excavated and replaced. The entire sewer segment from manhole-to-manhole can be replaced if the condition warrants. Alternatively, if only a small section of pipe needs replacement the work can be limited to the location of the specific defect.

Pipe Bursting

Pipe bursting is a trenchless technology that is used to replace an entire manhole-to-manhole segment of sewer because it has significant structural defects, or to increase the size of the existing sewer to provide additional hydraulic capacity. Pipe bursting consists of inserting a device in the sewer that expands under hydraulic pressure and bursts the existing pipe. The old sewer is left in place and the new sewer is installed from a pit at one of the manholes.

Cured in Place Pipe Lining (CIPP)

Cured in place pipe lining is an established method to rehabilitate sewers with defects that lead to RDII. During this process, a resin-impregnated fabric is inserted into the existing pipe from a manhole. The fabric is cured with hot water, steam, or ultra violet light. The cured liner seals the inside of the existing pipe and prevents RDII from entering the system. The connections to the service laterals are opened with a cutting tool after the liner has cured. The annular spaces at the lateral connections and connections to the manholes are usually sealed with grout after the liner is installed to provide a completely sealed system.

CIPP can be used to rehabilitate the entire sewer segment and for small sections with individual defects. The segmental liners used for individual defects are called segmental liners and usually come in sections as short as four feet.

Grouting

Grouting is another established method used to seal sewer defects such as offset joints, circumferential cracks and fractures. During this process, the grouting device is inserted into the sewer along with a CCTV camera. The device is situated to surround and isolate the defect. A polymeric grout is then injected under pressure into the defect, providing a waterproof seal.

9.5.2 Service Lateral Rehabilitation

Most of the same methods used for mainline sewer rehabilitation are also used to rehabilitate service laterals. Excavation and replacement is used to repair laterals that have severe structural defects, such as crushed pipe or completely dislocated and offset joints. CIPP is used to rehabilitate laterals with cracks, fractures, breaks, and offset joints. The liners can be used to seal the lateral from the cleanout all the way to the mainline sewer, or from the mainline sewer up the lateral a few feet. Some of the lateral liners extend into the mainline sewer to provide a seal around the annular connection at the sewer-lateral interface. Grouting is also used either alone or prior to CIPP to seal offset joints, fractures, and connections to the sewer.

9.5.3 Manhole Rehabilitation

Manholes can be a significant source of RDII through defects such as cracked frames and covers, offset frames and covers, cracks in the walls, bench or trough, missing bricks and deteriorated mortar, and improper covers. Some of the rehabilitation methods are as follows:

Frame and Cover Rehabilitation

RDII can enter the manholes through improper covers such as a storm drain cover, a cover that is not the correct size, or a cover that is below grade and subject to ponding. Cracks in the frame and cover or an offset frame and cover can also be sources of RDII. Improper covers or covers that are the wrong size or cracked should be replaced with the

correct type of cover. Cracked frames and offset frames should be replaced or positioned correctly over the top of the manhole. Manholes that are below grade and allow RDII to enter through the cover or frame should be raised to the proper height.

Point Repairs

Point repairs are used to rehabilitate manholes with specific, individual defects such as missing bricks, localized cracks in the walls or bench, and open joints in precast manholes. Grout is used to repair the individual defects and prevent further RDII.

Manhole Lining

Lining of the entire manhole is used when the defects are widespread and point repairs are not appropriate. Liners can be cement, epoxy or polymer, or the cured in place type, similar to CIPP for sewers. Cement lining is used to seal the entire interior of the manhole to repair widespread cracks, missing mortar, and loose bricks. A cement lining is used when the manhole is not subject to corrosion from hydrogen sulfide. An epoxy or polymer liner is used to seal the interior of the manhole when corrosion is present. The cement and epoxy liners can be sprayed or brushed on the manhole walls. Cured in place liners are also used to seal the interior of manholes and to provide some structural support.

Manhole Replacement

Manholes that are severely defective and have lost their structural integrity need to be replaced. Typically these manholes are subject to severe and prolonged corrosion from hydrogen sulfide gas escaping from the wastewater. Methods to protect the interior of the manhole or reduce the corrosion should be incorporated into the replacement process.

9.5.4 Inflow Rehabilitation

In addition to defective manholes and sump pumps, inflow can enter the sewer system through direct sources such as roof leaders, catch basins, driveway drains, and similar sources. These inflow sources can be eliminated by removing the direct connection to the sewers and routing the discharge to the storm drains or to the ground. Catch basin

connections can be eliminated with a concrete plug. Roof leaders can be cut at ground level and directed to the surface or a dry well. Driveway drains, area drains and other similar inflow sources need to be disconnected, plugged, and directed to another appropriate discharge location.

9.6 Building Inspection and Certification

Another method to ensure that I/I from private sources is reduced or minimized is to enact a building inspection and certification program. Building owners would be required to have their property inspected by a competent individual such as a licensed plumber or professional inspector and certified that all sources of I/I have been eliminated. The program would include inspection of I/I sources such as sump pumps, roof leaders, roof drains, area drains, driveway drains, building laterals, and all other potential sources of I/I. If no sources of I/I are found, the property owner would have to provide certification to that effect. If any connections to the public sewers or defects causing I/I are found the program would require that the defects be removed or repaired within a specified time. After the repairs are made, the building owner would have to certify that the repairs were made and that the I/I sources have been eliminated.

9.7 Developer Offset Programs

A developer offset program could be used by the municipalities to reduce I/I from public and private sources. The County has an existing policy that includes reductions in I/I at a ratio of 3:1. The concept is based on any additional sewage generated from new residential, commercial or industrial developments would have to be offset by a reduction in I/I from the existing public and private sewers and properties. A specified quantity of I/I reduction based on additional sewage flow would be required. The developer would be required to provide the list of I/I sources to be removed, the estimated quantity of I/I that would be removed, a schedule for I/I rehabilitation, and a method for post-rehabilitation verification.

9.8 Educational Programs

Educational programs could be implemented by the municipalities to inform the public about the negative impacts of I/I on the operation and maintenance of the sewer system and wastewater treatment plants. It would be more cost-effective and environmentally sound to reduce I/I and

implement an ongoing maintenance program of the public and private sewers than to deal with the problems of increasing I/I.

Some of the negative impacts associated with the current I/I, and the certainty of increased I/I if the sewers are not properly maintained, include increased potential for basement backups and overflows from manholes into the streets and receiving waters; increased cost for operation, maintenance, and energy for pump station operation; requirement to increase the hydraulic capacity of the sewers and pump stations; ability of the treatment plants to effectively treat the sewage and comply with their permit conditions for effluent quality; costs associated with treating more clean water; costs associated with plant expansion, if feasible; and compliance with SPDES permit conditions for influent flow and nitrogen removal.

Some elements of a public education program might include the following:

- Public Outreach Meetings,
- Public Access Radio and TV spots,
- Newspaper Articles and Press Releases,
- Informational Flyers,
- School
- Web Site Discussions,
- Social Media Discussions.

A comprehensive public education program might include all of these elements, and others that are appropriate for the individual municipalities.

9.9 Local Law Changes

Some municipalities have existing laws or codes that do not allow for excessive I/I or do not allow any type of private inflow into the public sewers. Depending on the success of reducing I/I through other measures, it may be necessary for the municipalities to enhance existing laws or implement new laws or codes that require the building owners to reduce or eliminate all I/I sources. Municipalities should also consider adopting a user-fee program similar to those instituted in other municipalities.

10.0 RECOMMENDATIONS

Based on the findings of the flow monitoring program, all 11 municipalities that discharge wastewater into the Long Island Sound sewer districts exceed the flow limit specified in the Environmental Facilities Sewer Act. A substantial amount of the flow from each municipality is due to excessive I/I, which has a negative impact on both the collection systems and the wastewater treatment plants. Some of these impacts include the following:

- Reduction in conveyance capacity of the existing sewers, which impacts the available capacity for new development.
- Increased potential for sewage backups into basements.
- Increased potential for overflows from manholes into the streets and receiving waters.
- Increased operation and maintenance cost at the New Rochelle Sanitary Sewer Overflow Facilities.
- Increased energy cost and equipment maintenance at the pump stations.
- Increased potential for overflows at the pump stations.
- Reduced ability of the WWTPs to achieve 85% reduction in TSS and CBOD due to dilution of the raw sewage.
- Increase in nitrogen load at the WWTPs, possibly causing SPDES permit violations for nitrogen discharge.
- Hydraulic overload at the WWTPs, which also increases the potential for SPDES permit violations for flow rate and various treatment parameters.
- Increased costs for WWTP expansion and operating costs.
- Increased energy usage at the WWTPs.

The overall flow reduction strategy would include the following sequential steps for each municipality as shown in the attached Proposed Schedule, Figure 10-1:

- ***Municipality Negotiations:*** It is recommended that Westchester County enter into negotiations with the 11 municipalities to get concurrence from each municipality to develop a program to address the excessive I/I in their sewer systems.

- ***Evaluation Program Development:*** Each municipality will develop municipality specific scope of the Evaluation Program which will entail flow metering, flow isolation, smoke testing, CCTV inspection, lateral inspection, house to house inspections and analysis of field data collected to identify a remedial program to reduce infiltration/inflow within each municipality. The Evaluation Program developed by each municipality should be submitted to Westchester County and NYSDEC for review.

- ***Evaluation Program Implementation:*** Each municipality will implement the Evaluation Program. Prepare a report for submittal to Westchester County and NYSDEC which identifies the necessary repairs, develop a construction cost estimate for the Program and outline the design and construction schedule for implementation.

Following the submittal of the Evaluation Program Report by the 11 municipalities, which will outline the extent, cost and schedule of the rehabilitation programs, Westchester County and NYSDEC will meet to review and discuss the reports and either accept the programs and associated schedules, or request modifications and/or clarifications. Final acceptance of all 11 programs and the associated schedules will be conveyed to the municipalities by Westchester County and NYSDEC by August 1, 2017.

The Evaluation Program and Implementation Schedule should include the following:

1. **Evaluation Program Scope** - the specific locations in the collection system to be targeted for evaluation, the evaluation methodologies to be utilized, the manner in which public and private I/I will be addressed and any proposed parallel programs should all be detailed.

2. **Implementation schedule for the entire program** – the schedule for the entire I/I reduction program should be shown in as much detail as is feasible. The schedule should include, at a minimum, evaluation and quantification of excessive I/I, rehabilitation design, construction, post-rehabilitation verification, and any other parallel programs such as public education, local law changes, and other programs proposed by the municipality.

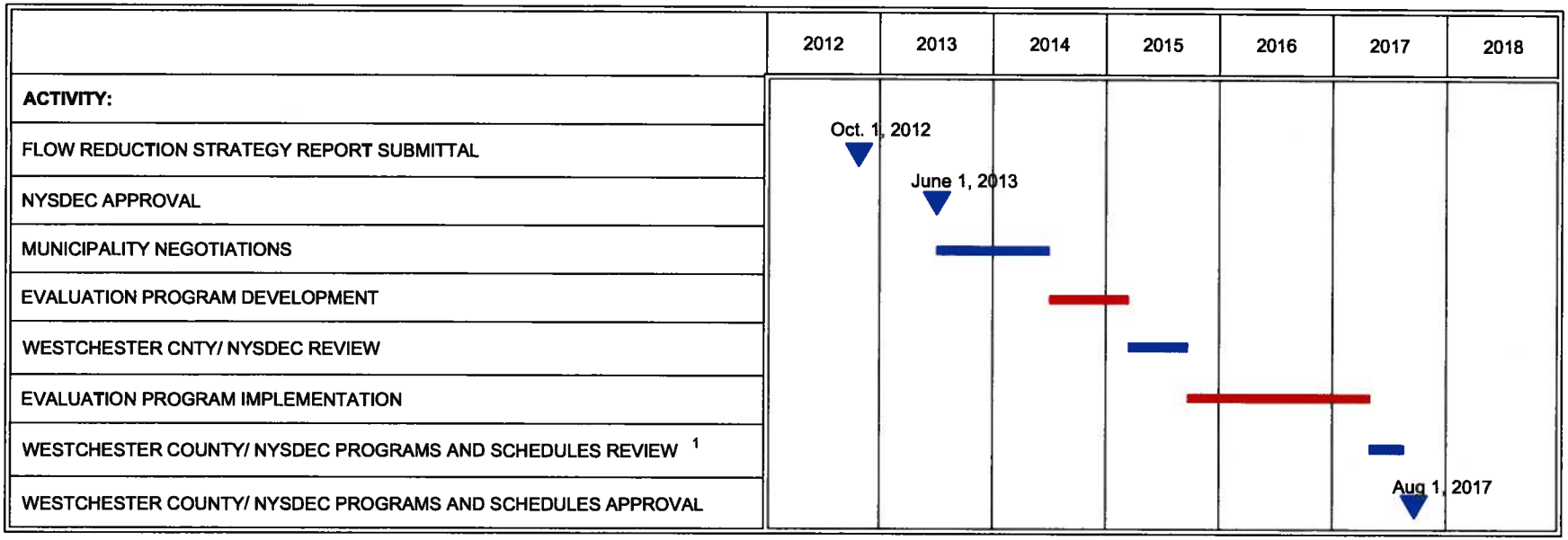
3. **Schedule for sewer rehabilitation construction** – each municipality should prepare a detailed schedule showing the anticipated start, duration, and completion of the rehabilitation construction. Individual phases of the program should be shown to the extent possible.

4. **Methods to be used for post-rehabilitation verification** – the Program Outline should include specific steps that each municipality will use to verify and certify that the excessive I/I has been reduced and that the municipality is in compliance with the Environmental Facilities Sewer Act.

WESTCHESTER COUNTY
DEPT. OF PUBLIC WORKS & TRANSPORTATION
DEPT. OF ENVIRONMENTAL FACILITIES

LONG ISLAND SOUND SEWER DISTRICTS
FLOW REDUCTION STRATEGY
FIGURE 10-1

PROPOSED SCHEDULE



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KEY

- WESTCHESTER COUNTY / NYSDEC ACTION
- MUNICIPALITY ACTION

REV. 4 5/14/2013

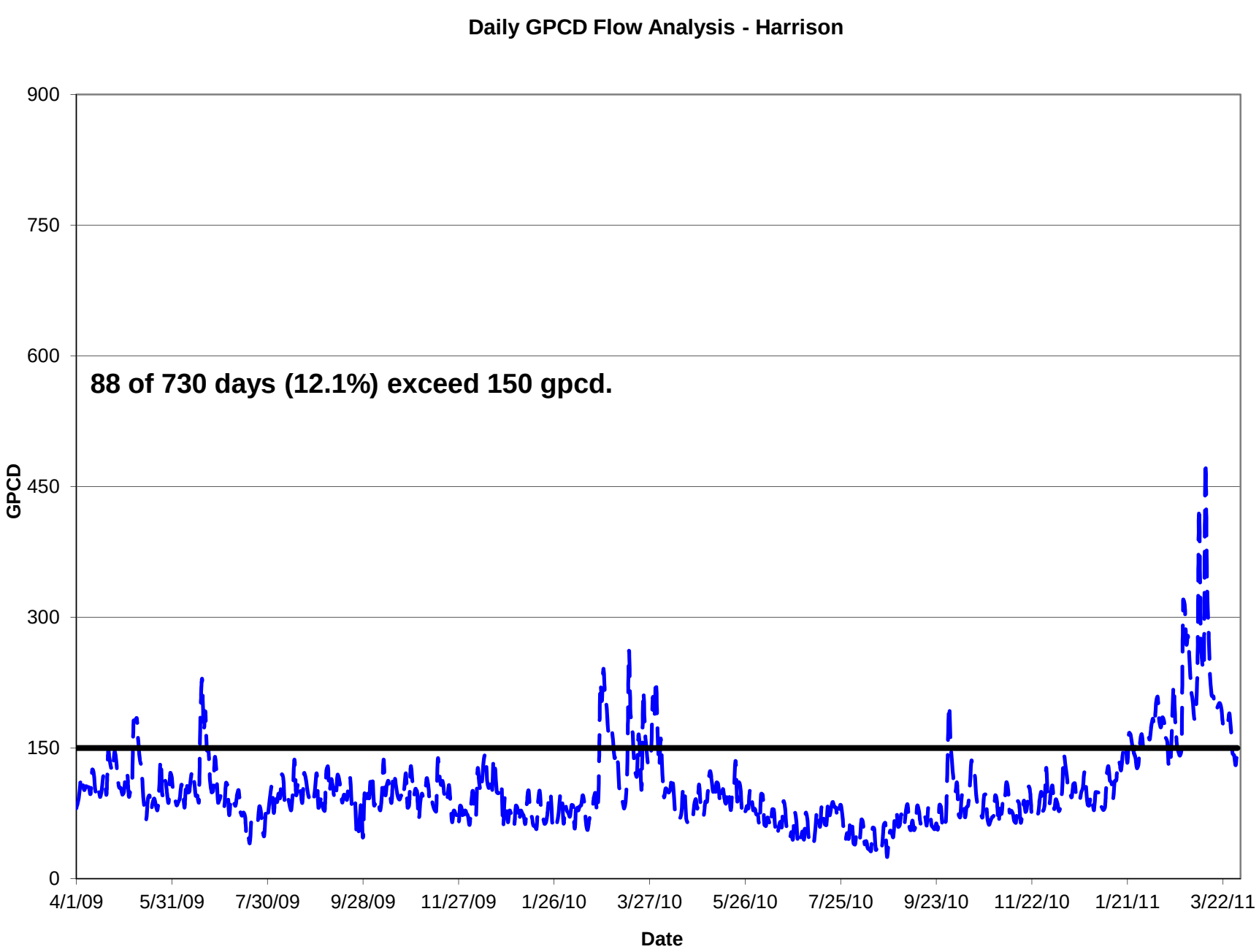
1. WESTCHESTER COUNTY AND NYSDEC WILL REVIEW AND DISCUSS ALL THE PROPOSED PROGRAMS AND IMPLEMENTATION SCHEDULES WHICH ARE SUBMITTED BY THE MUNICIPALITIES AND APPROVE EACH ONE, AS MODIFIED BY THE REVIEW PROCESS, BY AUGUST 1, 2017.

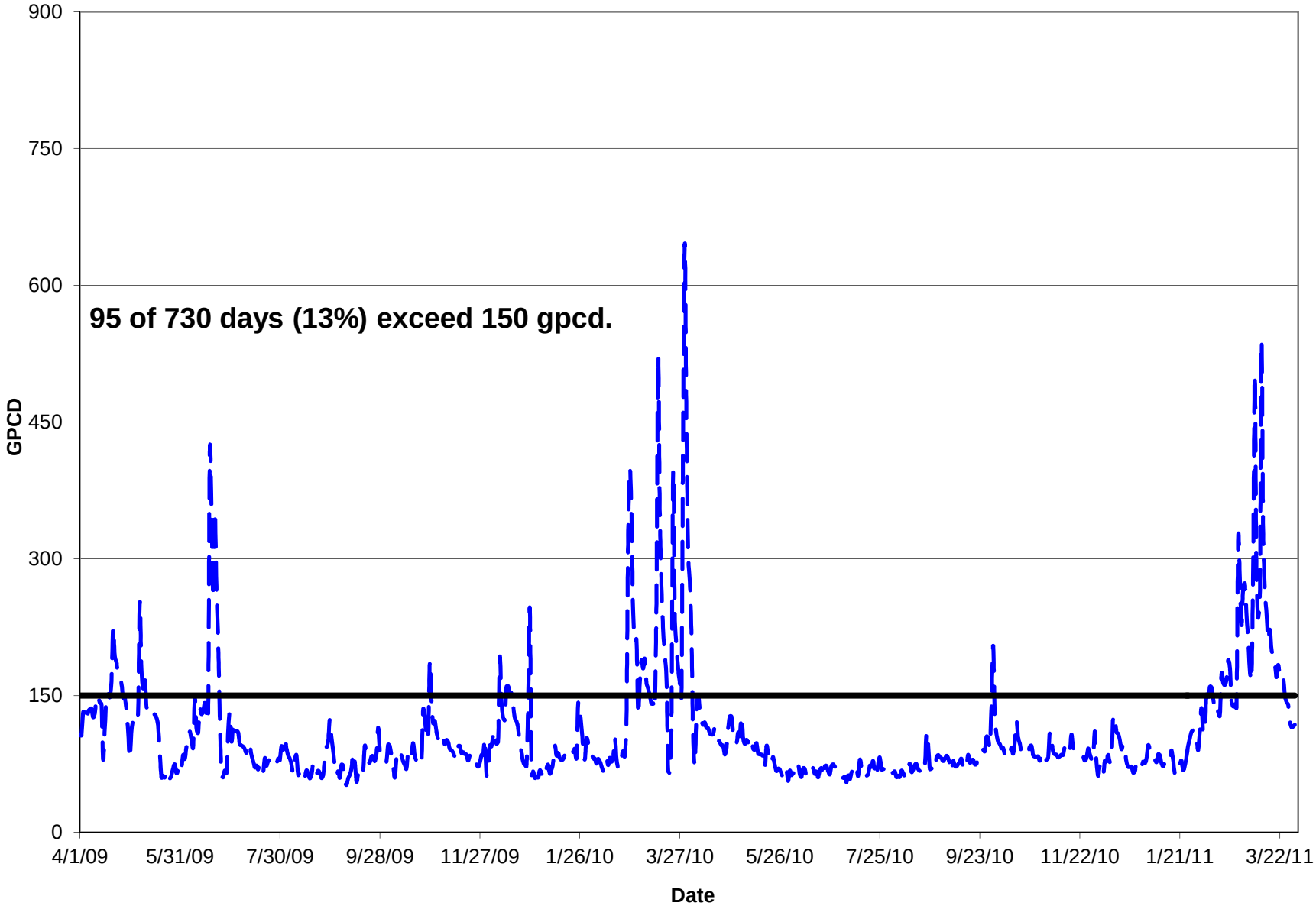
Savin Engineers, P.C.

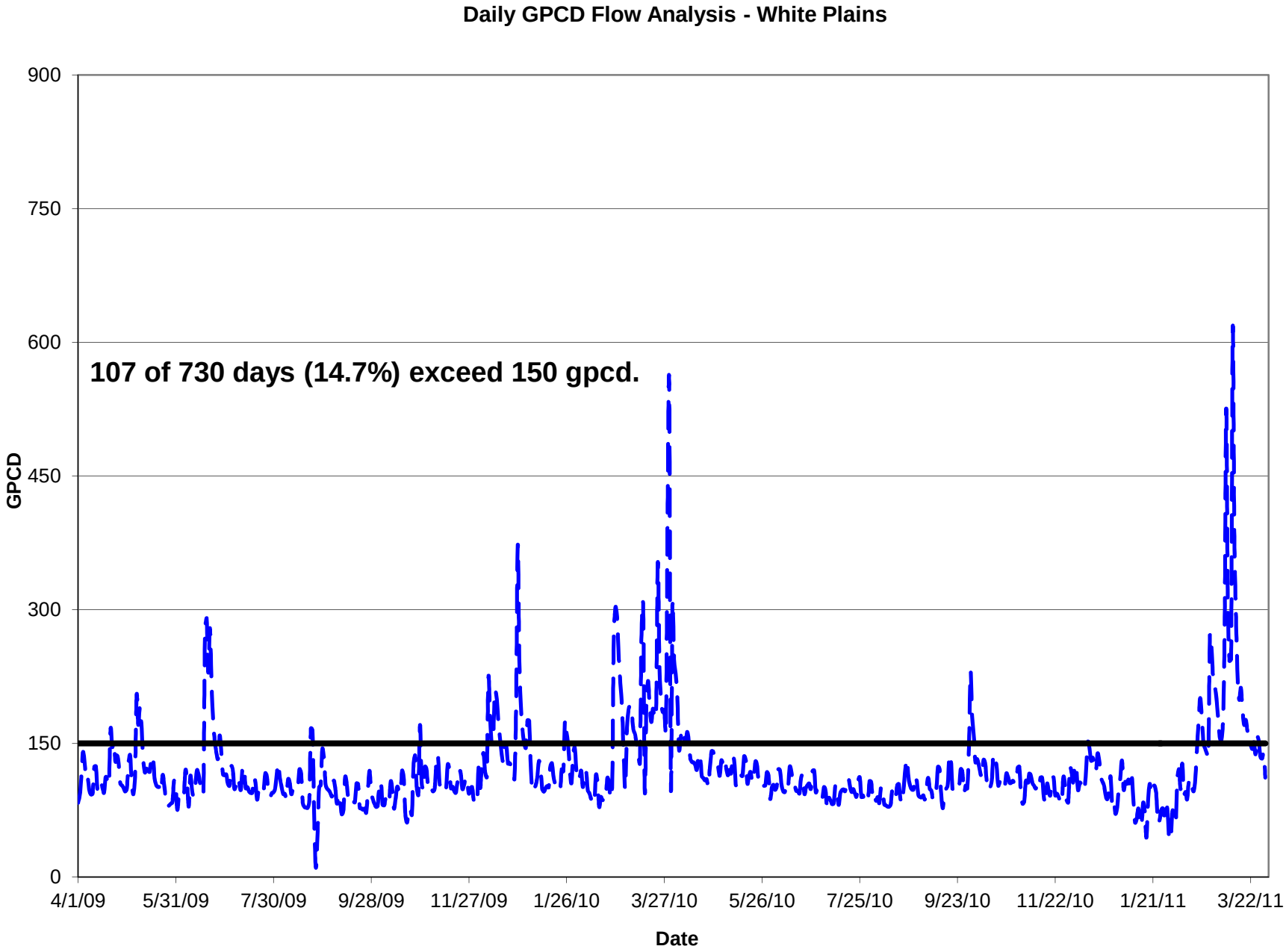
APPENDICES

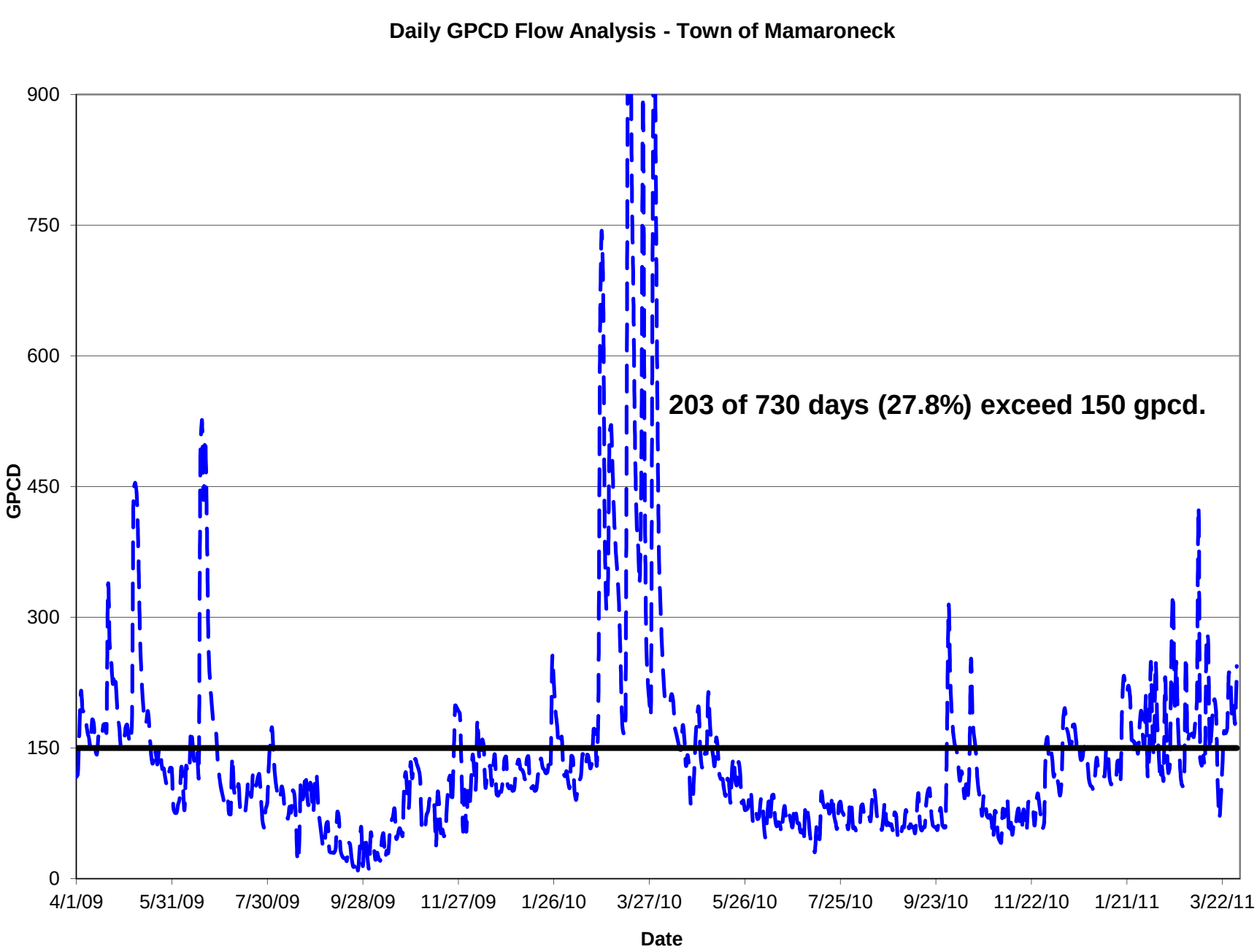
APPENDIX A

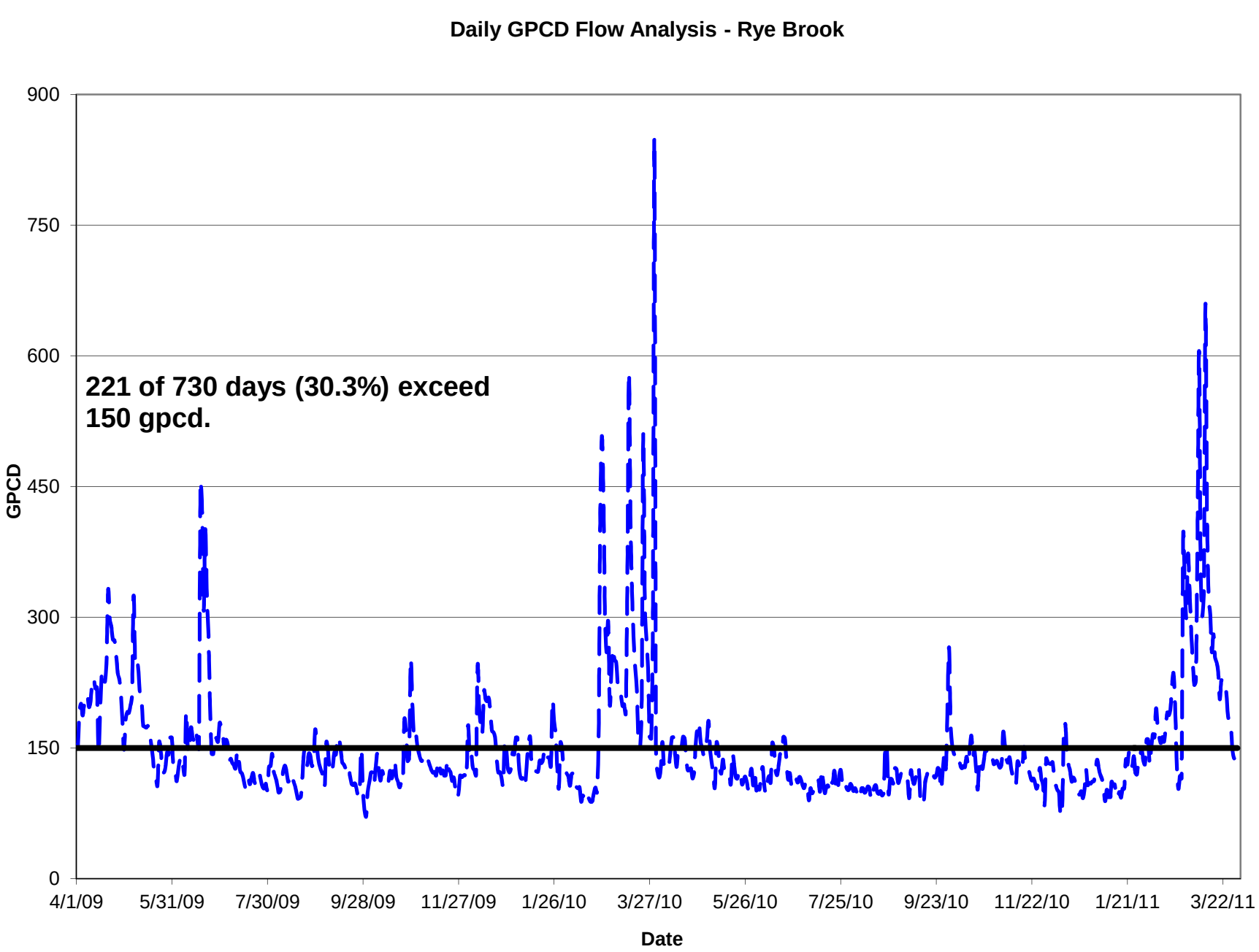
Daily Per Capita Hydrographs for LIS Municipalities

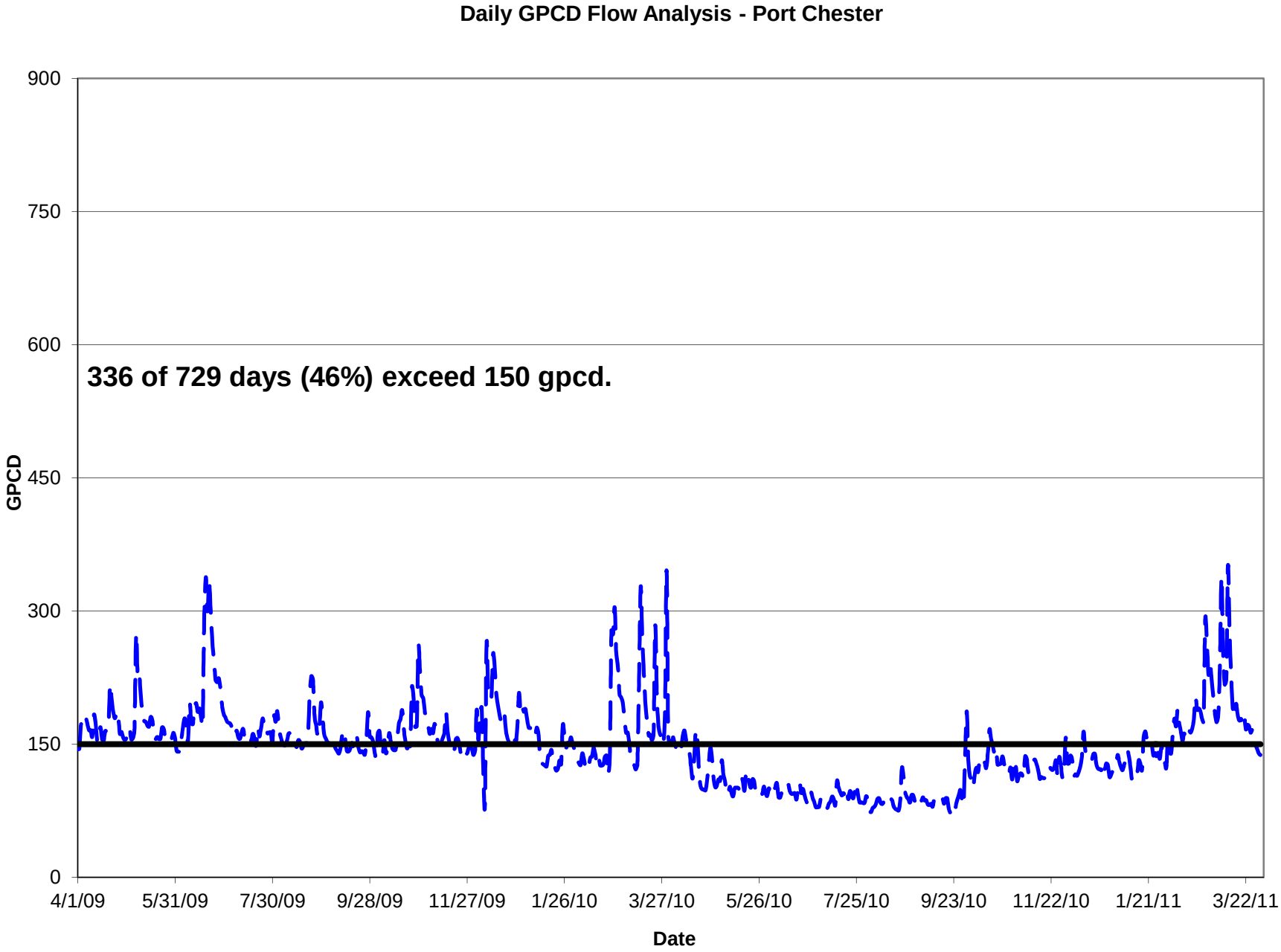

Daily GPCD Flow Analysis - Harrison
88 of 730 days (12.1%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

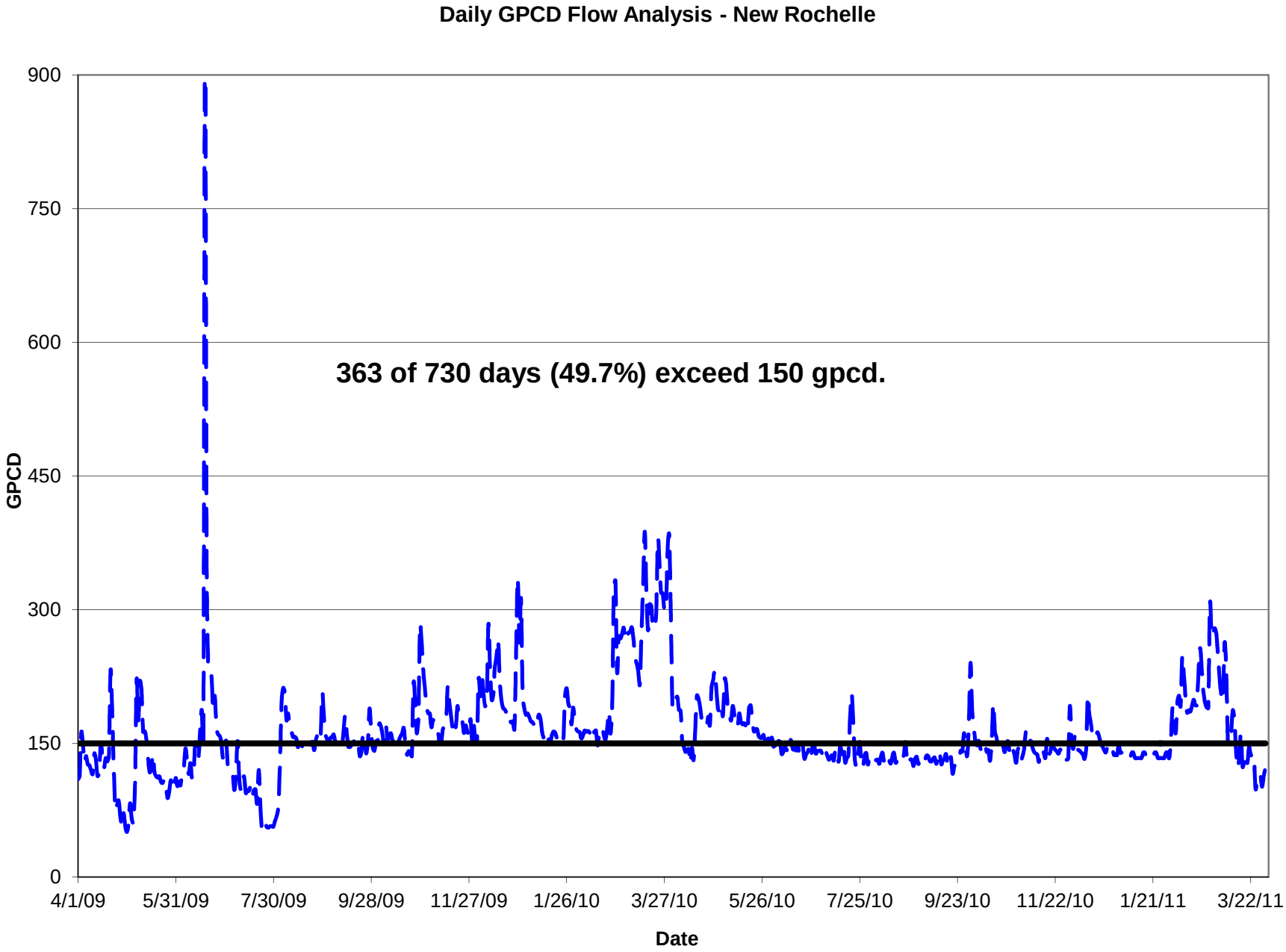

Daily GPCD Flow Analysis - Rye
95 of 730 days (13%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

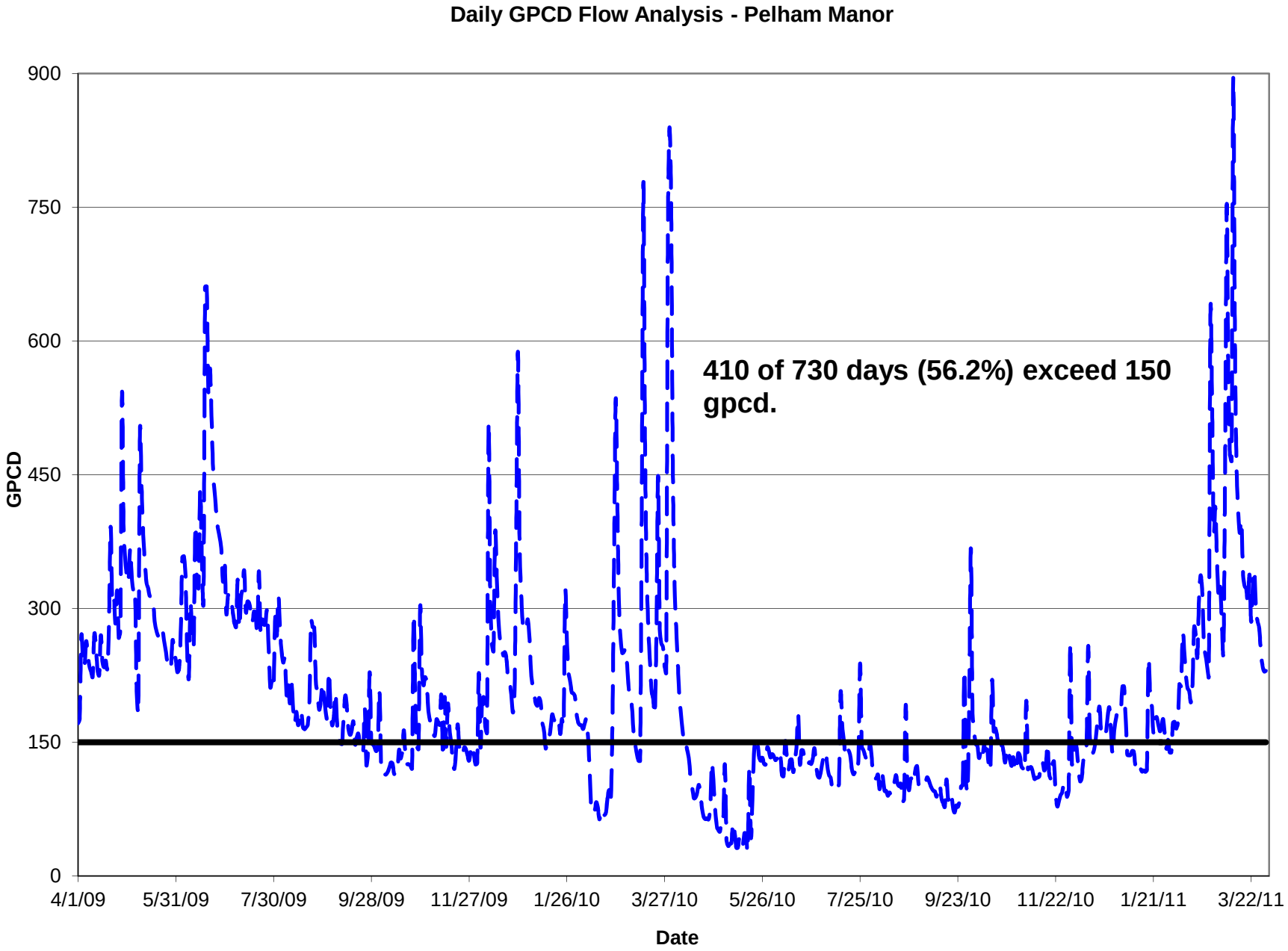

Daily GPCD Flow Analysis - White Plains
107 of 730 days (14.7%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

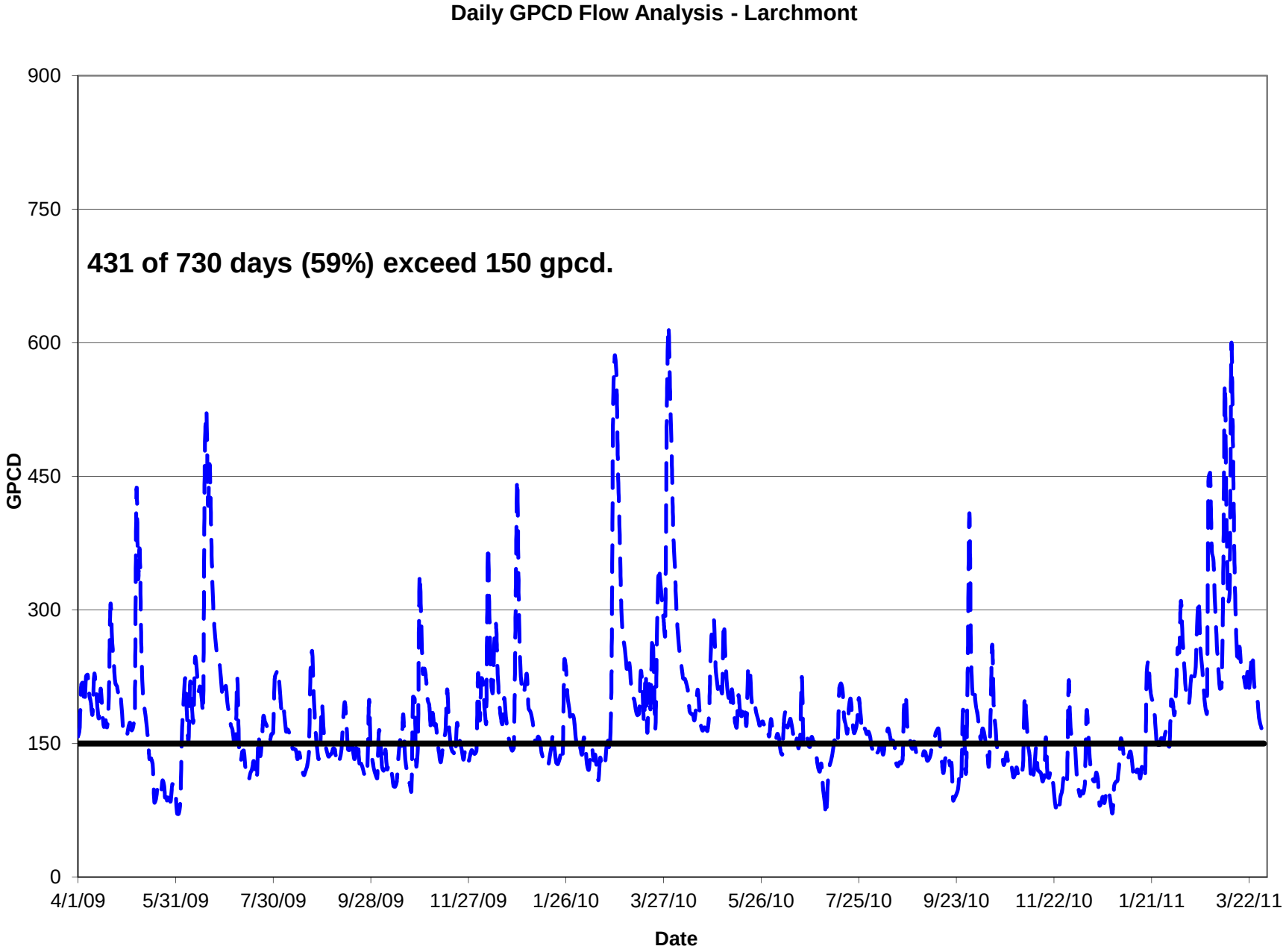

Daily GPCD Flow Analysis - Town of Mamaroneck
900
750
600
450
300
150
0
GPCD
203 of 730 days (27.8%) exceed 150 gpcd.
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

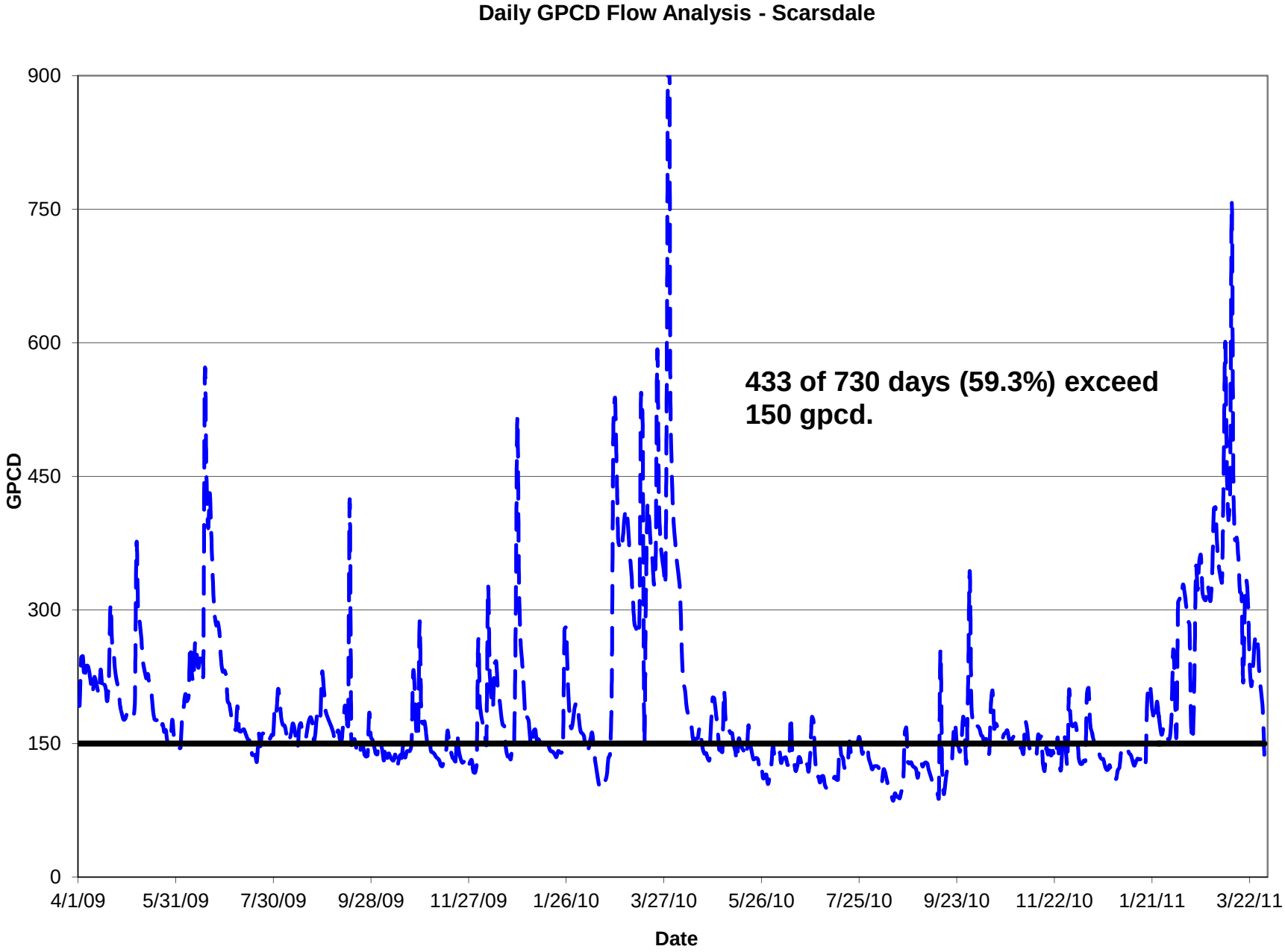

Daily GPCD Flow Analysis - Rye Brook
221 of 730 days (30.3%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

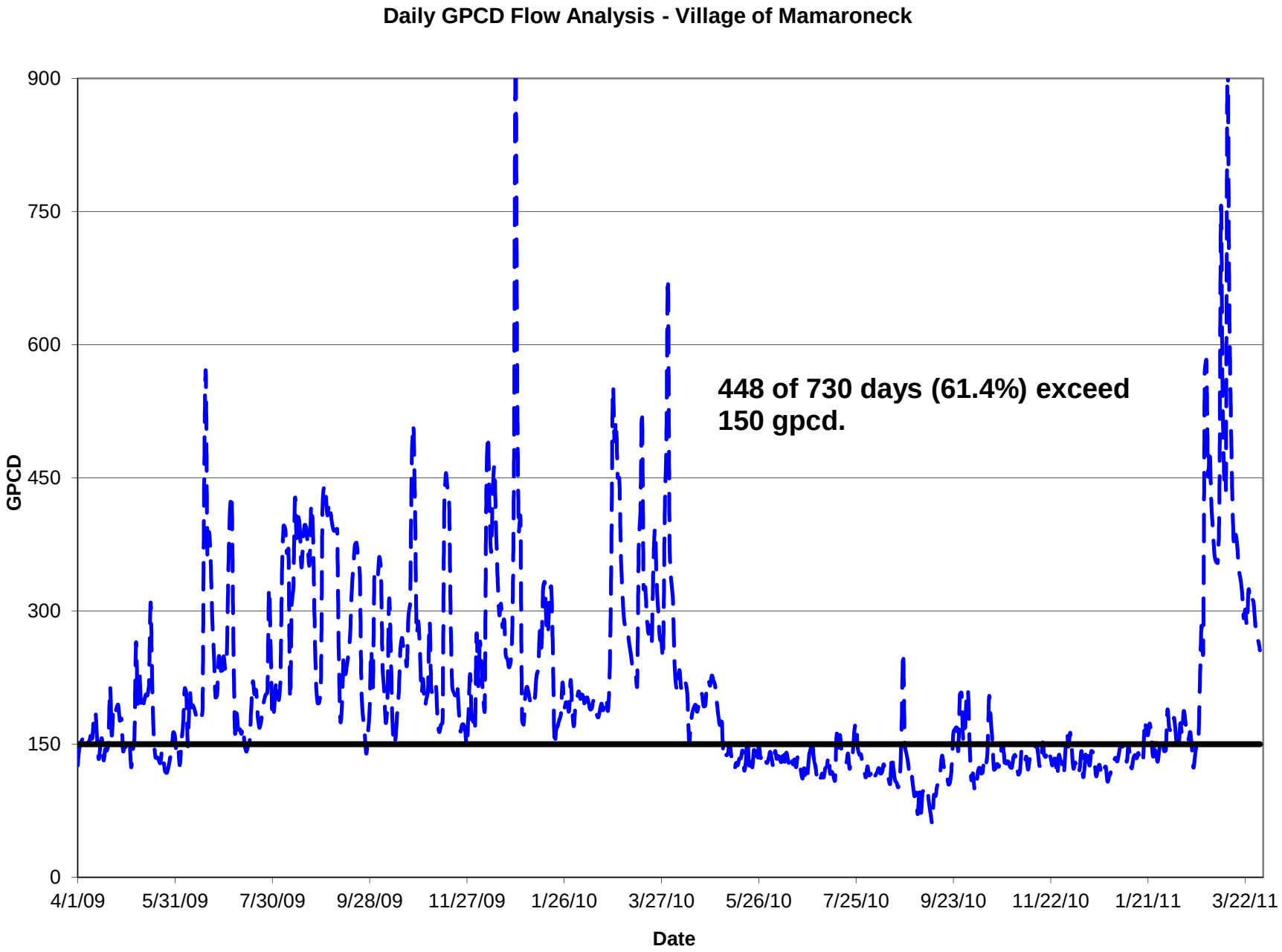

Daily GPCD Flow Analysis - Port Chester
336 of 729 days (46%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date


Daily GPCD Flow Analysis - New Rochelle
363 of 730 days (49.7%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date


Daily GPCD Flow Analysis - Pelham Manor
900
750
600
450
300
150
0
GPCD
410 of 730 days (56.2%) exceed 150 gpcd.
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

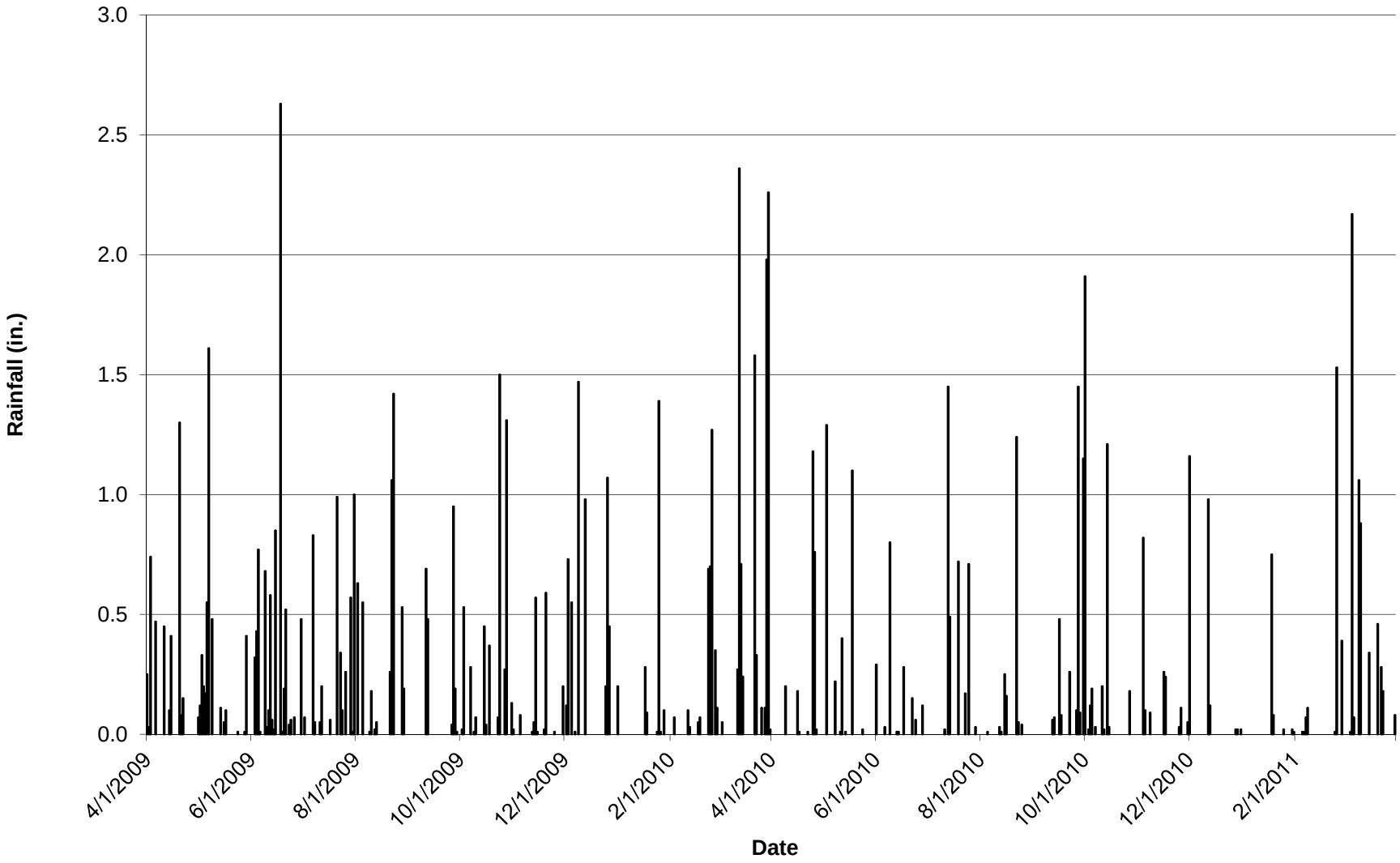

Daily GPCD Flow Analysis - Larchmont
431 of 730 days (59%) exceed 150 gpcd.
GPCD
900
750
600
450
300
150
0
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

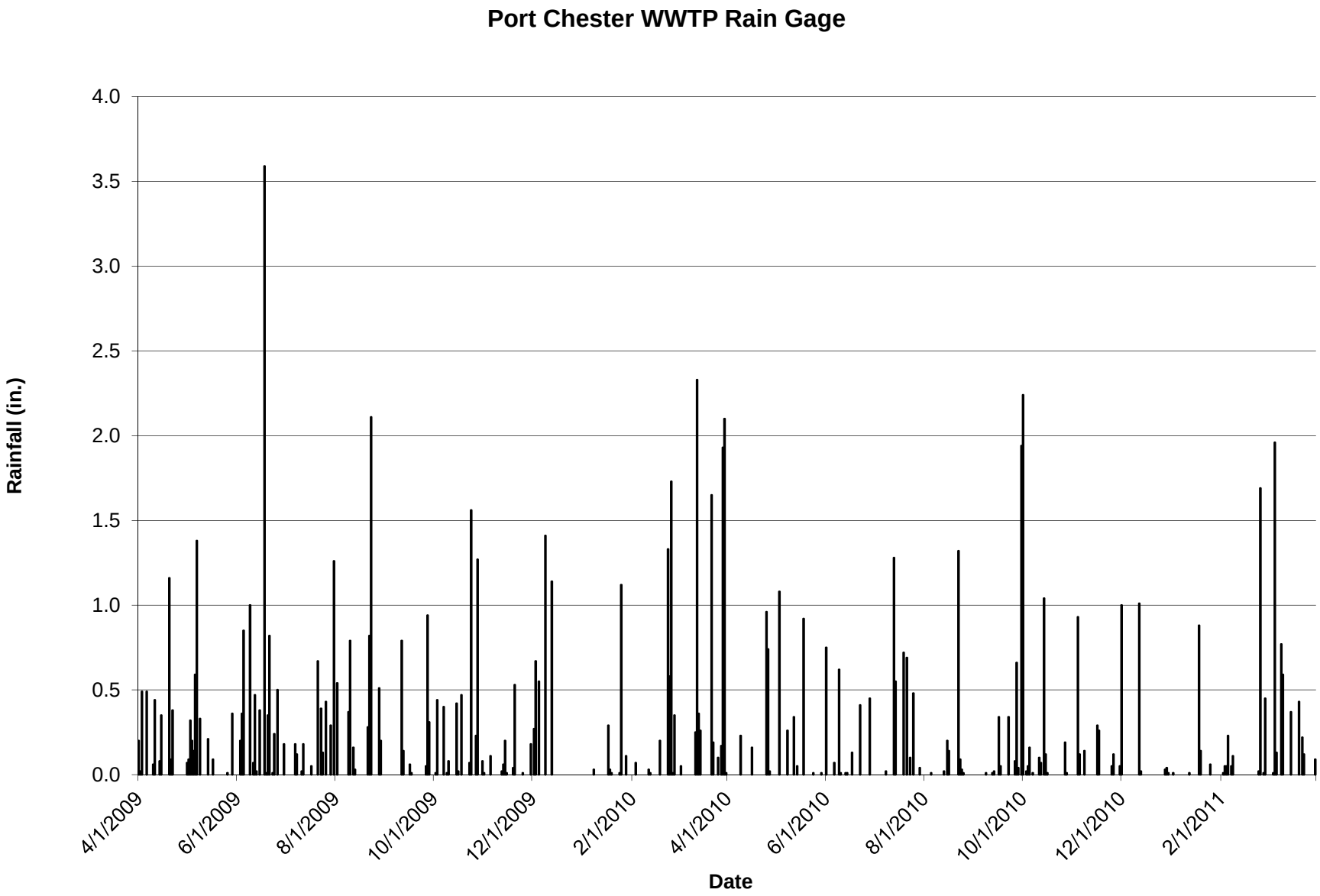

Daily GPCD Flow Analysis - Scarsdale
900
750
600
450
300
150
0
GPCD
433 of 730 days (59.3%) exceed
150 gpcd.
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

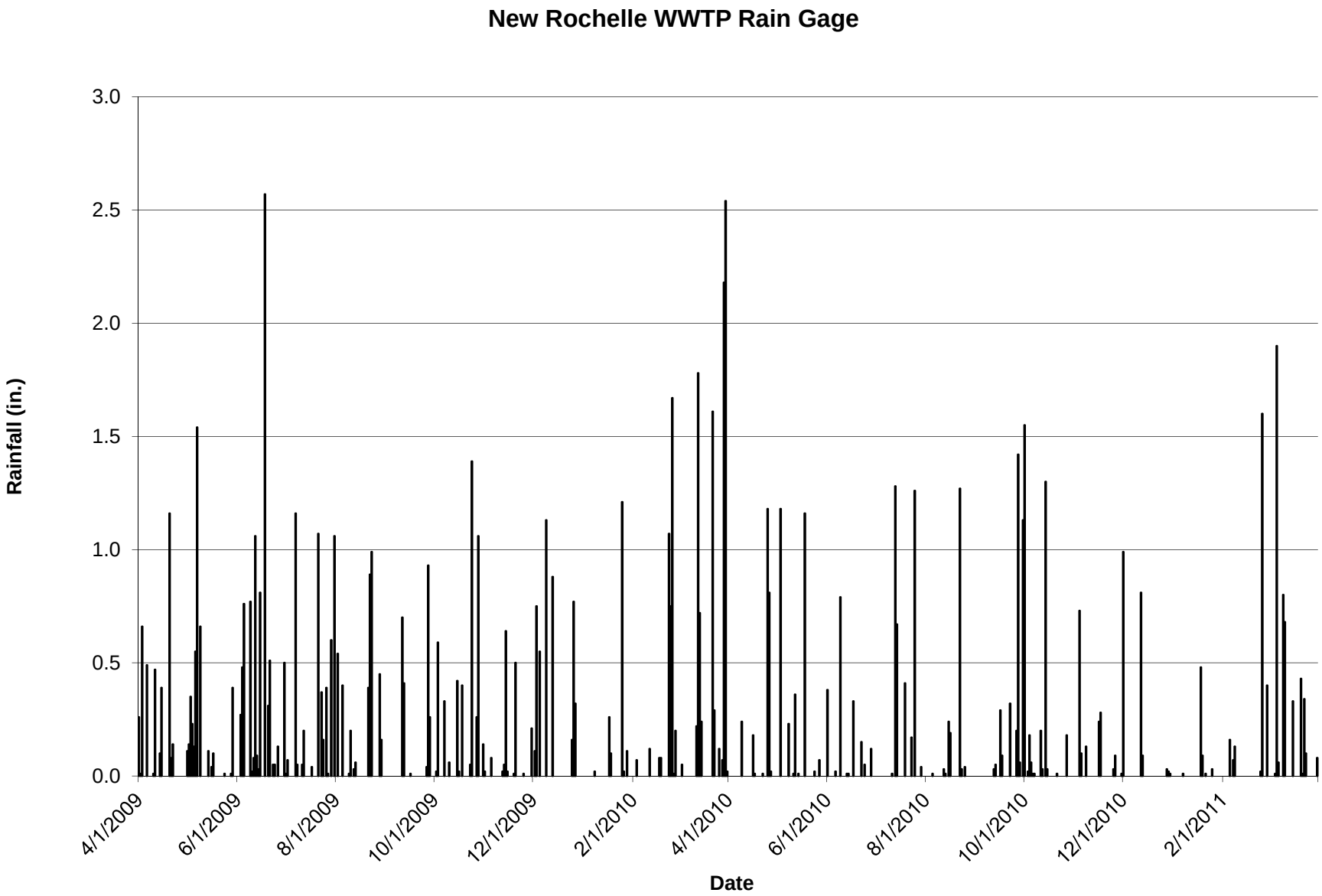

Daily GPCD Flow Analysis - Village of Mamaroneck
900
750
600
450
300
150
0
GPCD
448 of 730 days (61.4%) exceed
150 gpcd.
4/1/09
5/31/09
7/30/09
9/28/09
11/27/09
1/26/10
3/27/10
5/26/10
7/25/10
9/23/10
11/22/10
1/21/11
3/22/11
Date

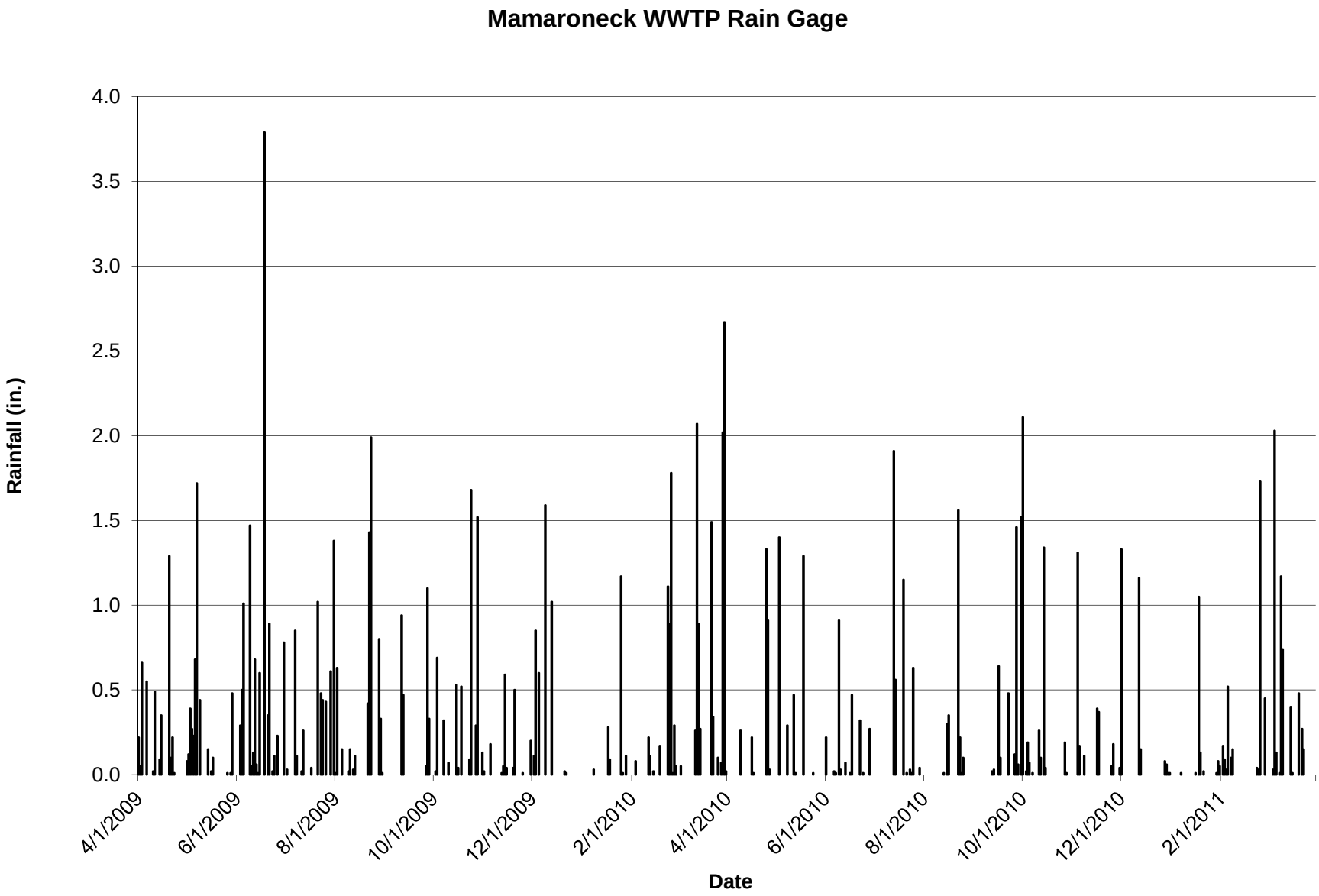
APPENDIX B

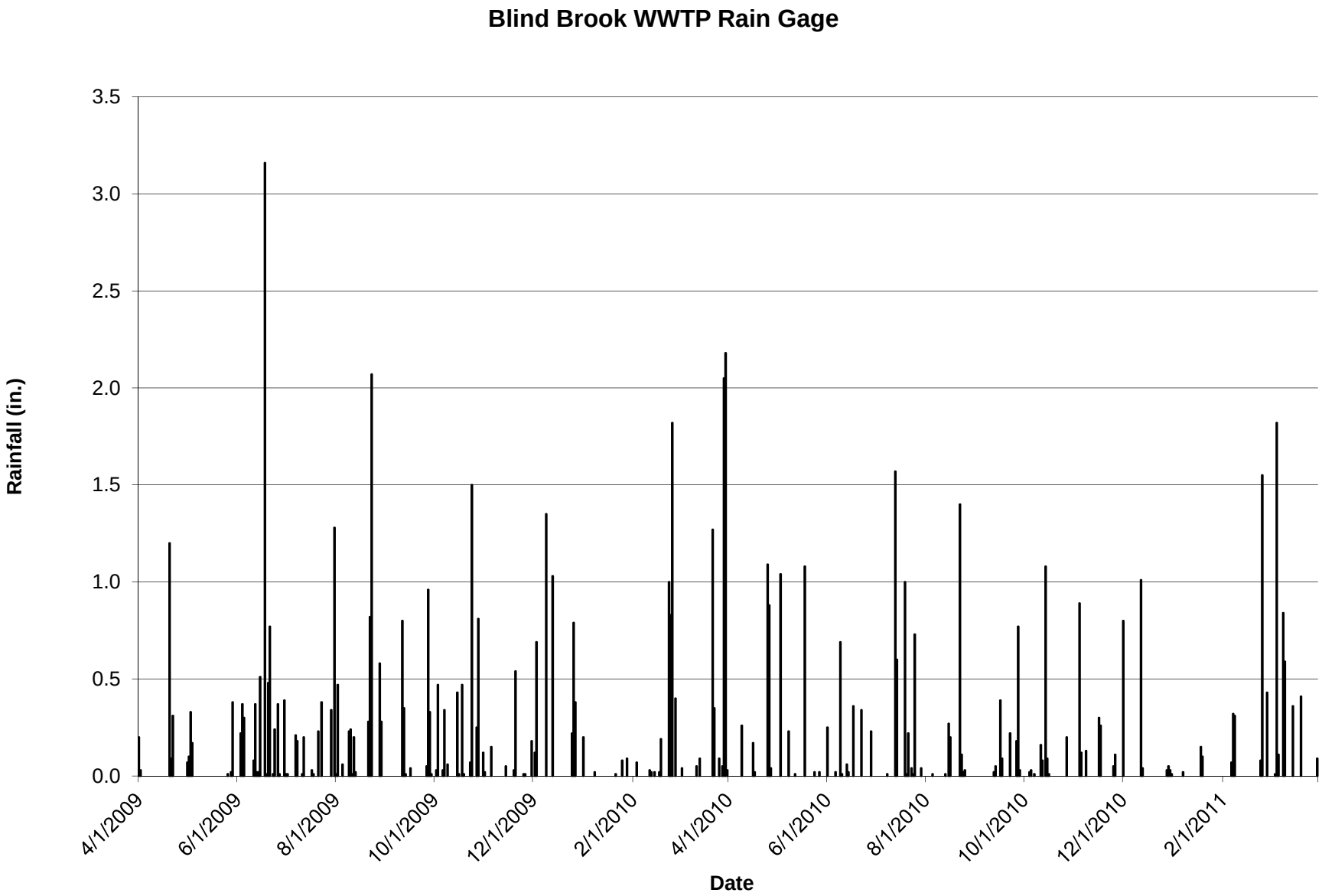
Rainfall Graphs

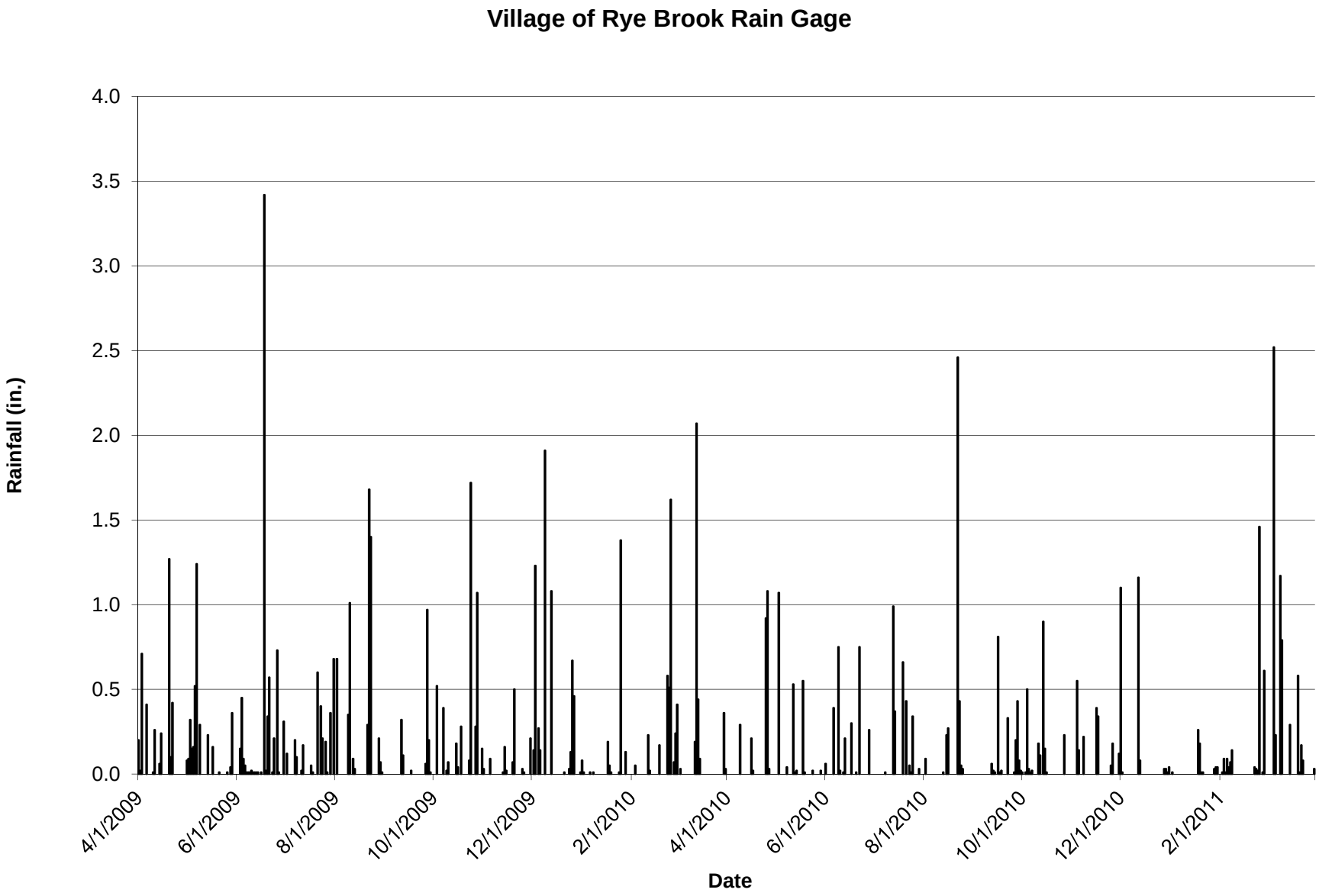

New Rochelle City Hall Rain Gage
Rainfall (in.)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

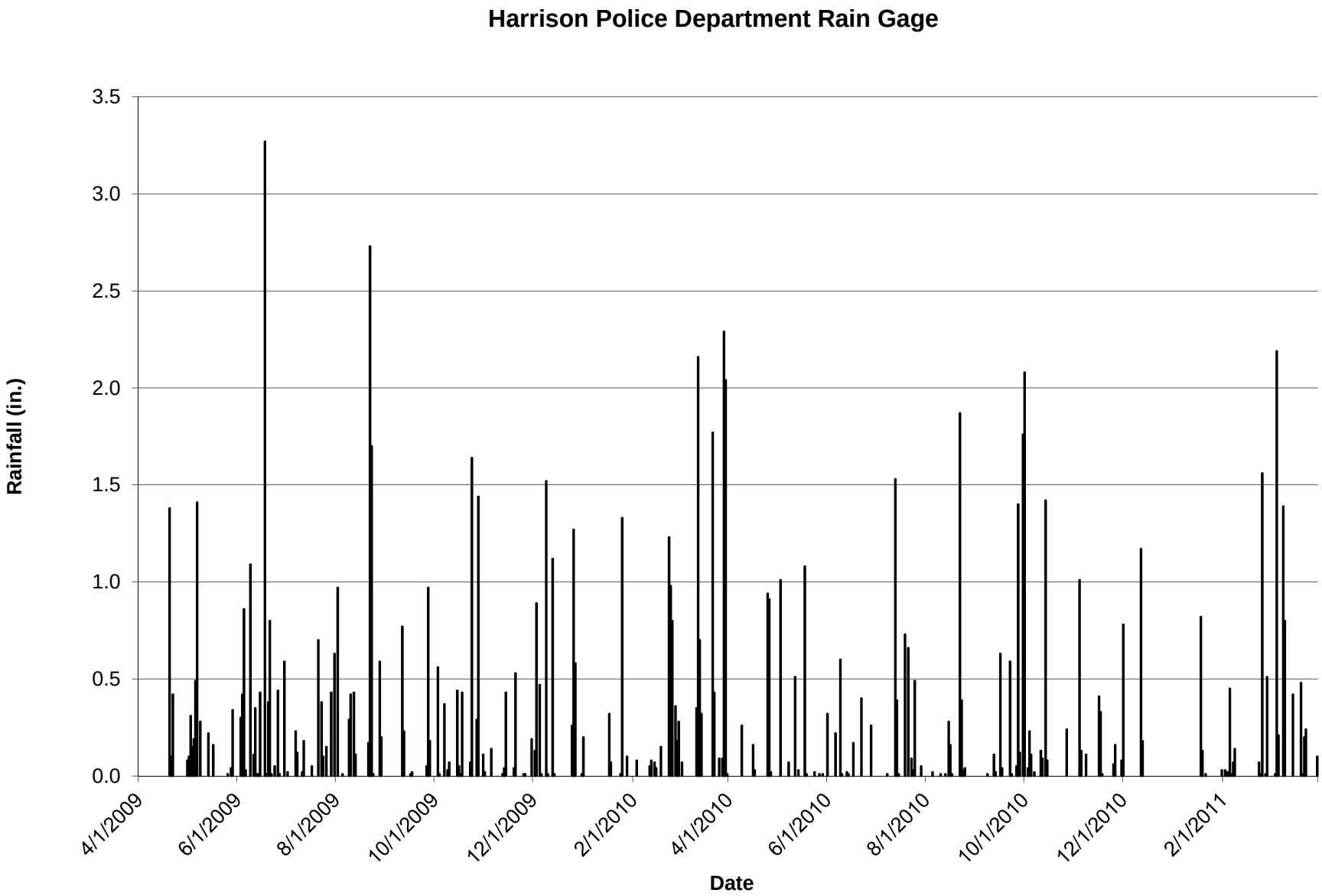

Port Chester WWTP Rain Gage
Rainfall (in.)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date


New Rochelle WWTP Rain Gage
Rainfall (in.)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

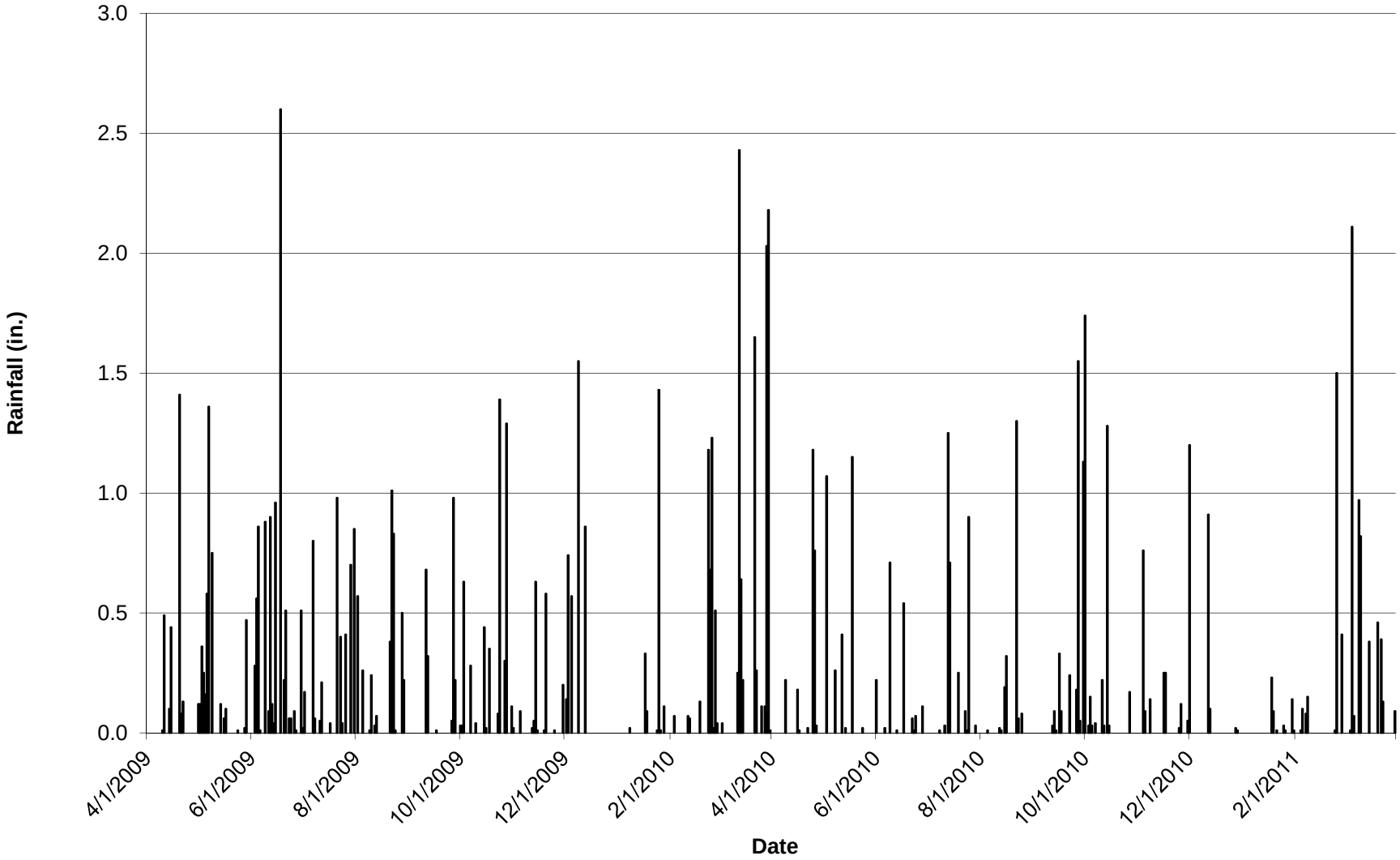

Mamaroneck WWTP Rain Gage
Rainfall (in.)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

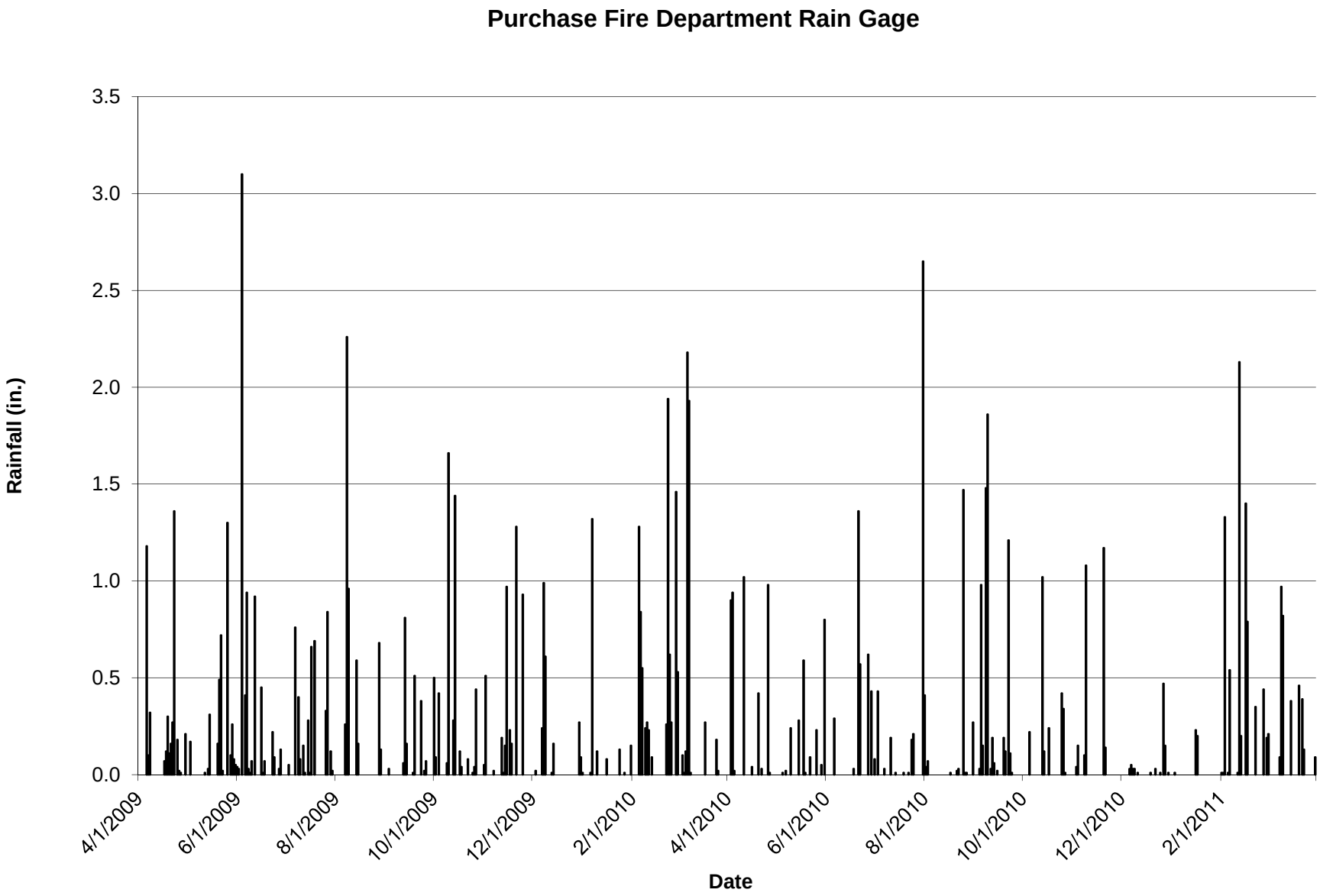

Blind Brook WWTP Rain Gage
Rainfall (in.)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

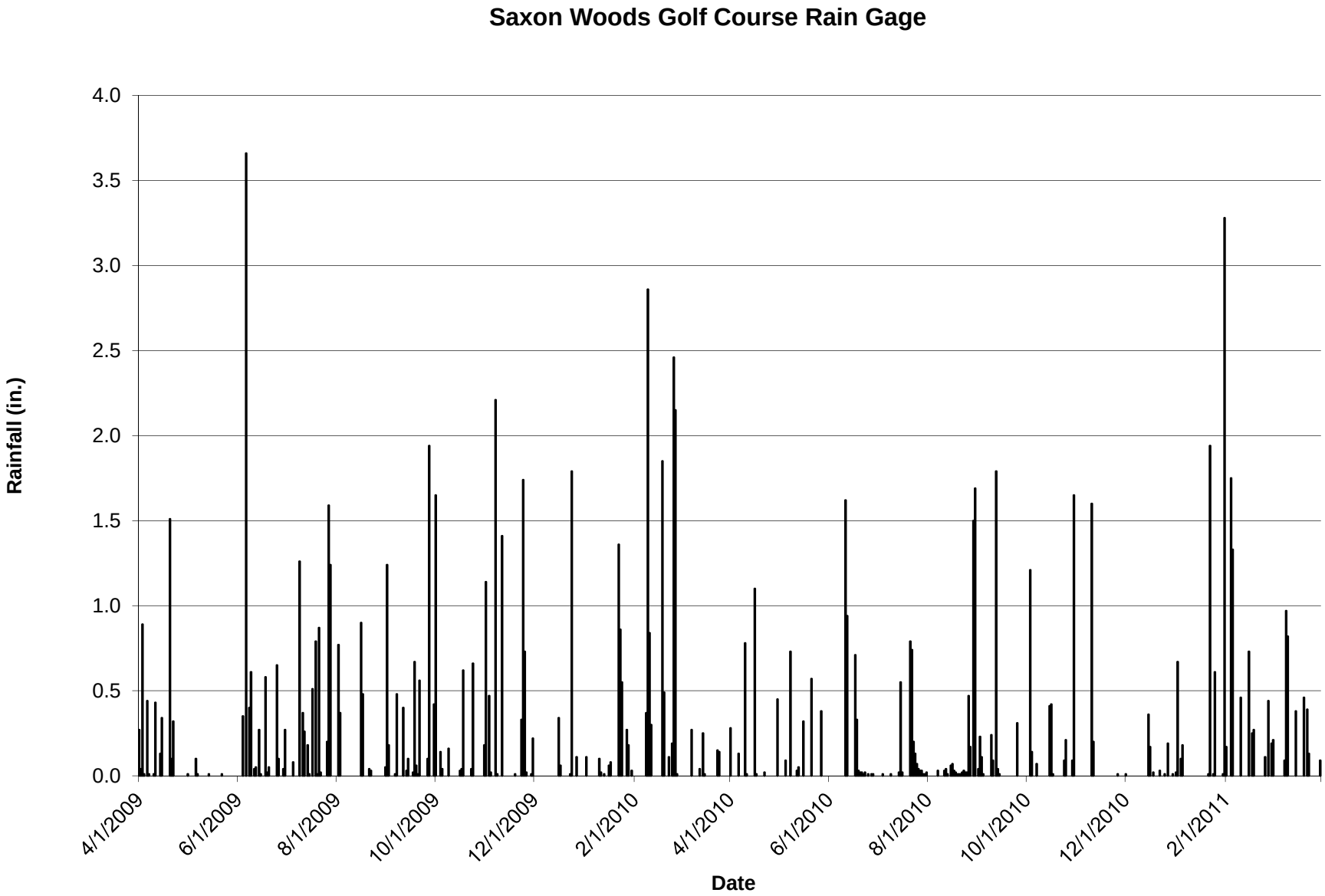

Village of Rye Brook Rain Gage
Rainfall (in.)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

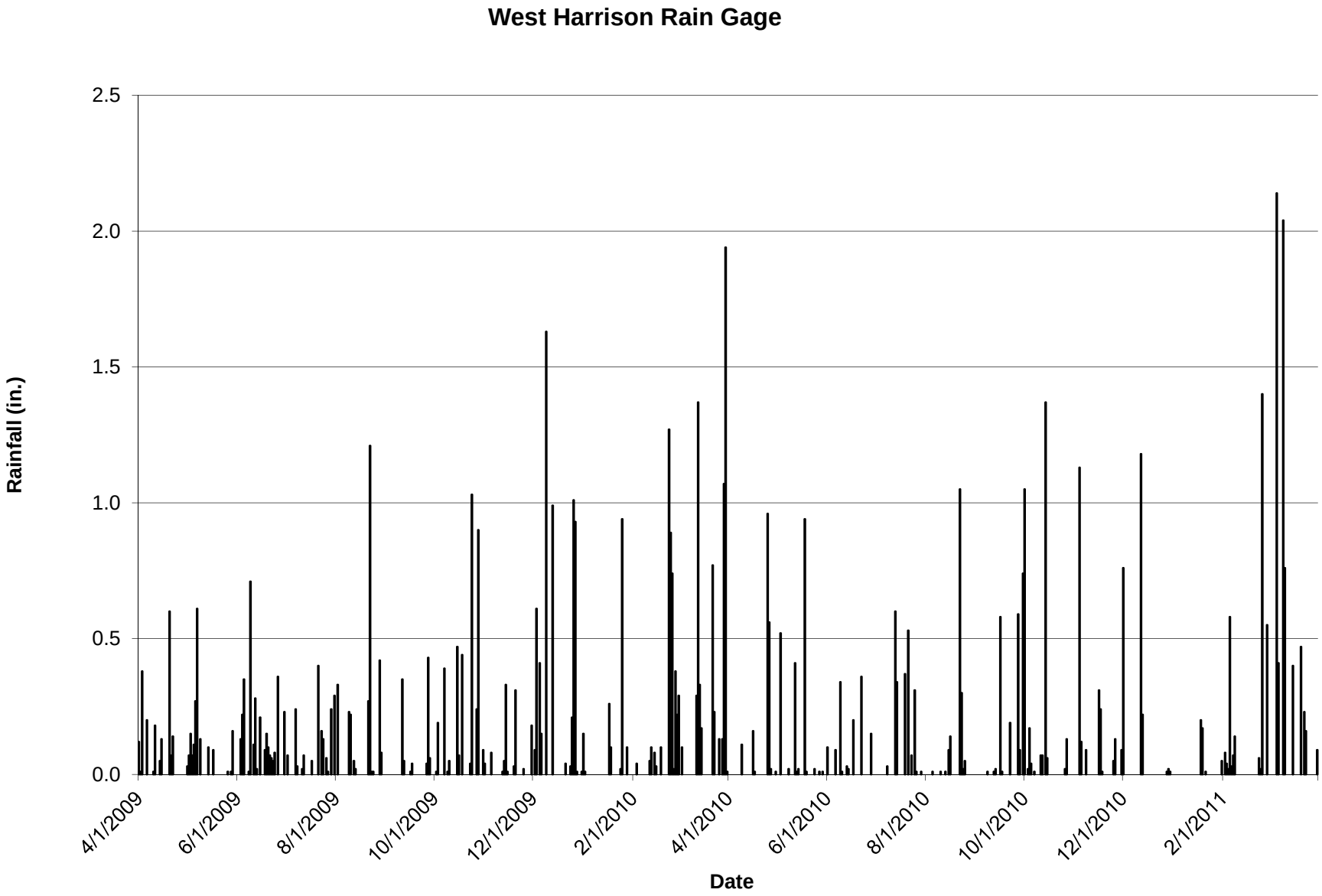

Harrison Police Department Rain Gage
Rainfall (in.)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

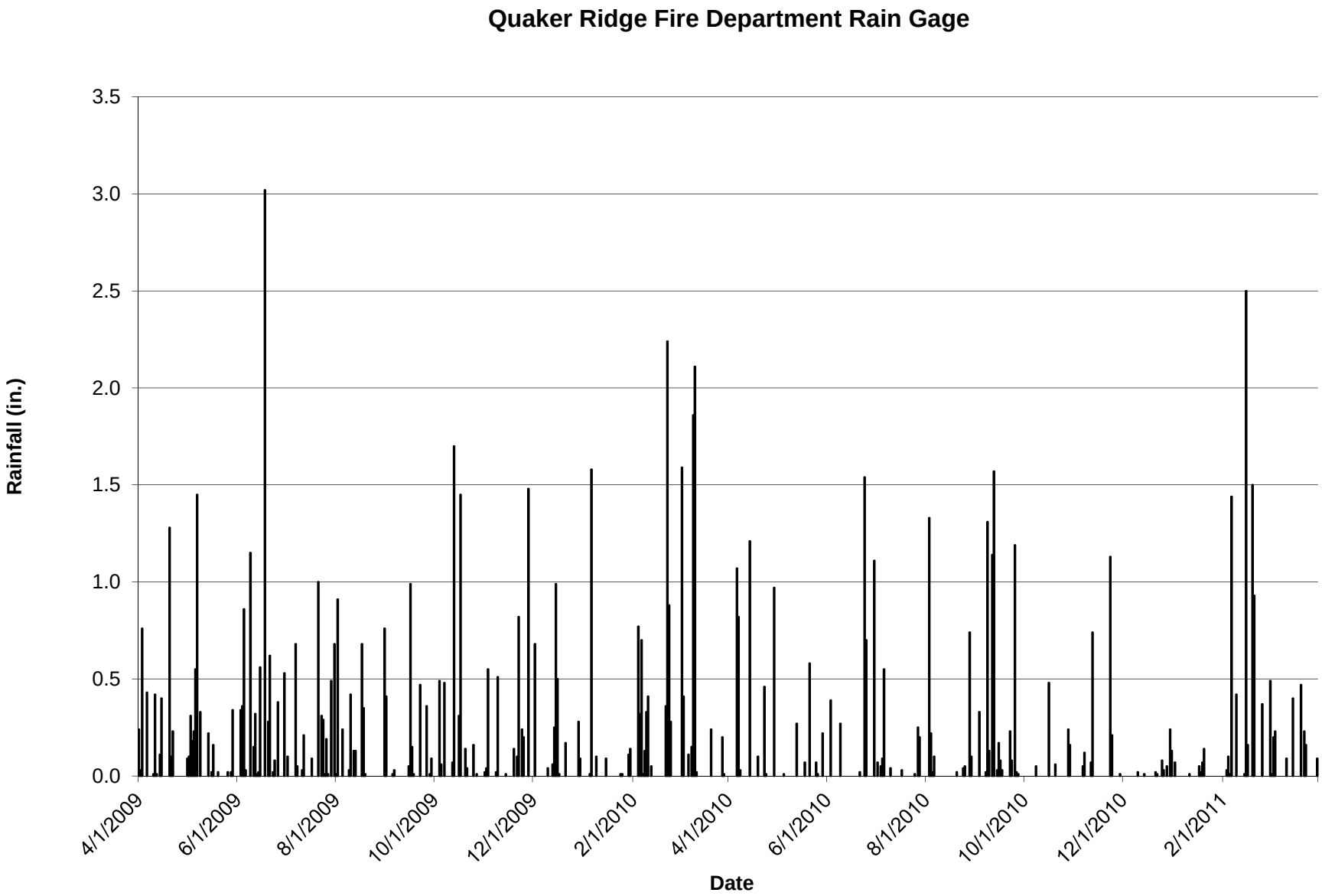
Drake Avenue Fire Department Rain Gage




Purchase Fire Department Rain Gage
Rainfall (in.)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date


Saxon Woods Golf Course Rain Gage
Rainfall (in.)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date


West Harrison Rain Gage
Rainfall (in.)
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date


Quaker Ridge Fire Department Rain Gage
Rainfall (in.)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4/1/2009
6/1/2009
8/1/2009
10/1/2009
12/1/2009
2/1/2010
4/1/2010
6/1/2010
8/1/2010
10/1/2010
12/1/2010
2/1/2011
Date

CITY COUNCIL AGENDA

NO. 10 DEPT.: FINANCE DATE: August 5, 2015

CONTACT: Joseph S. Fazzino, Deputy City Comptroller

ACTION: Adoption of the 2015/2016 tax levy and tax rate for the Rye Neck Union Free School District.

FOR THE MEETING OF:
August 5, 2015
RYE CITY CODE,
§C22-9(A)

RECOMMENDATION: That the City Council adopt the following resolution:

WHEREAS, the Rye Neck Union Free School District (District) has certified to the City of Rye Comptroller taxes in the amount of $11,937,087 to be raised on property within the District located in the City of Rye, with established tax rates of $879.285848 per $1,000 of taxable assessed value on homestead property and $1,137.207415 per $1,000 taxable assessed value on non-homestead property, for the fiscal year beginning July 1, 2015 and ending June 30, 2016, now, therefore, be it

RESOLVED, that in accordance with the provisions of the City Charter, the City Comptroller is commanded to levy and collect said taxes, subject to any further amendments or approvals required by the Rye Neck Union Free School District.

IMPACT: ☐ Environmental ☒ Fiscal ☐ Neighborhood ☐ Other:

BACKGROUND:

The Rye Neck Union Free School District has provided the City with the allocation of the tax levy and tax rates for the Town of Rye and City of Rye. A portion of the City's share of the tax levy is attributable to STAR exemptions, which will be paid by the State to the district. The above amounts and rates are subject to adjustments and adoption by the District at their next Board of Education meeting on August 26, 2015.

CITY COUNCIL AGENDA

NO. 11 DEPT.: City Manager DATE: August 5, 2015

CONTACT: Marcus Serrano, City Manager

AGENDA ITEM: Authorization for the City Manager to enter into an Intermunicipal Agreement with the County of Westchester for the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County.

FOR THE MEETING OF:
August 5, 2015
RYE CITY CODE,
CHAPTER
SECTION

RECOMMENDATION: That the Mayor and Council authorize the City Manager to enter into the agreement.

IMPACT: ☐ Environmental ☐ Fiscal ☐ Neighborhood ☐ Other:

BACKGROUND:

The purpose of the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County is to formalize operational procedures for Law Enforcement assistance to participating agencies. Each member agrees to make its police personnel and equipment available to the others, pursuant to the provisions of the New York State General Municipal Law Section 209-m, upon the occurrence of a condition beyond the scope of its police resources.

The Agreement is for a five-year period commencing July 31, 2015 through July 30, 2020.

See attached documentation.

Robert P. Astorino
County Executive

Department of Public Safety

George N. Longworth
Commissioner-Sheriff

June 22, 2015

Mayor Joseph A. Sack
City of Rye
1051 Boston Post Road
Rye, New York 10580

Dear Mayor Sack:

The current Mutual Aid and Rapid Response Inter-Municipal Agreement (IMA) between the City of Rye and the County of Westchester Department of Public Safety will expire on July 30, 2015. If you would like to continue participating, please sign and notarize the attached IMA. Also included are the Municipality's Acknowledgement and Certificate of Authority.

Once the paperwork is completed, please return all to me for processing. A fully executed electronic copy will be forwarded to you for your files.

If you have any questions, please contact me at (914) 864-7853 or email jkm3@westchestergov.com.

Sincerely,

DEPARTMENT OF PUBLIC SAFETY
Westchester County Police

George N. Longworth
Commissioner-Sheriff
By:

Joy K. Mathai

Joy K. Mathai
Director of Administrative Services

GNL/JKM/cs
Attachment

AGREEMENT made this day of , 2015 by and between:

THE COUNTY OF WESTCHESTER, a municipal corporation of the State of New York, having an office and place of business in the Michaelian Office Building, 148 Martine Avenue, White Plains, New York, 10601

(hereinafter referred to as the "County")

and

THE CITY OF RYE, a municipal corporation of the State of New York having an office and place of business at 1051 Boston Post Road, Rye, New York, 10580

(hereinafter referred to as a "City, Town or Village," as applicable)

WHEREAS, the purpose of the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County, New York (the "Plan") is to formalize operational procedures for Law enforcement assistance to participating agencies; and

WHEREAS, the Signatory Municipalities have executed the Plan by which each member agrees to make available its police personnel and equipment to the others upon the occurrence of a condition which is beyond the scope of its police resources; and

WHEREAS, due to prevailing world, national and local security situations, the ever increasing flow of intelligence, and actual threats directed against once

benign sites and facilities, the parties desire that the Plan be flexible and subject to review and revision as necessary in a timely manner; and

WHEREAS, the Signatory Municipalities desire, inter alia, to ratify the Agreement described herein and agree on the procedures for timely review and revision of the Plan; and

WHEREAS, said Plan is governed by and liabilities and costs are apportioned pursuant to the provisions of New York State General Municipal Law ("General Municipal Law") Section 209-m which provides, inter alia, that absent agreement to the contrary, the municipality receiving police aid (the "Requesting Municipality") shall reimburse the municipality providing such aid (the "Assisting Municipality") for any money paid by it for police salaries and other expenses incurred by it including damage to, or loss of, equipment and supplies.

NOW, THEREFORE, in consideration of the terms and conditions herein contained, the parties agree as follows:

FIRST: Definitions

(1) Chief Executive Officer: The officer within a Signatory Municipality who is authorized pursuant to General Municipal Law Section 209-m to request or grant a request for police assistance from another Signatory Municipality.

(2) Department Head: Any police chief, Commissioner or other official in command or acting command of the police department or police force of a Signatory Municipality.

(3) Requesting Municipality: Any Signatory Municipality requesting the assistance of the police force of another Signatory Municipality pursuant to the terms of this Agreement.

(4) Assisting Municipality: Any Signatory Municipality providing assistance to a Requesting Municipality pursuant to the terms of this Agreement.

(5) Emergency: Shall have its common dictionary definition.

(6) Signatory Municipality: All municipalities that have signed this Agreement, including the County.

SECOND: The Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County, New York and the Westchester County Arson Zone Plan (collectively the "Plan"), are annexed hereto and incorporated herein as Schedule "A". The Parties further agree to the Plan, as same may be amended from time to time in accordance with the review and revision procedures set forth in said Plan.

THIRD: This Agreement shall commence on July 31, 2015 (the "Commencement Date") and terminate on July 30, 2020, unless terminated sooner in accordance with the provisions hereof. Any prior agreement signed by

a party for this purpose shall be deemed terminated upon the commencement of this Agreement.

FOURTH: The Signatory Municipalities hereby agree to render appropriate police services to any Requesting Municipality whenever the Chief Executive Officer of that municipality deems the general public interest requires it. All such requests for assistance shall be made by the Chief Executive Officer or Department Head of the Requesting Municipality and granted by the Chief Executive Officer or Department Head of each Assisting Municipality as set forth in the Plan.

FIFTH: The cost of police services provided pursuant to this Agreement shall be paid by the Requesting Municipality subject to the following exceptions:

(a) The police services provided by the County shall be without cost to the Requesting Municipality.

(b) The police services provided by each Assisting Municipality shall be reimbursed as provided in Section 209-m of the General Municipal Law, as same may be amended, except as provided above in Paragraph (a).

(c) The Requesting Municipality shall reimburse the County and each Assisting Municipality for all liability for damages arising out of acts performed by the Assisting Municipality in rendering aid. In addition, the Requesting Municipality shall provide defense for and defend, at its sole expense, any and all claims, demands or causes of action directly or indirectly resulting from the

rendering of aid by the County and each Assisting Municipality. Notwithstanding the foregoing, the Requesting Municipality shall not be liable for any damages resulting from any intentional wrongs or reckless conduct by the police force of the Assisting Municipality.

(d) The requesting Municipality shall reimburse the County and each Assisting Municipality for all expenses incurred pursuant to the provisions of Section 207-c of the General Municipal Law, as same may be amended, and for any award of compensation made pursuant to the Workers' Compensation Law for salaries and expenses paid to officers of the County and each Assisting Municipality who are injured while rendering assistance to the Requesting Municipality pursuant to the Agreement.

SIXTH: Any party to this agreement may withdraw at any time, upon thirty (30) days written notice to each of the other parties, and thereafter such withdrawing party shall no longer be a party to this Agreement; but this Agreement shall continue to exist among the remaining parties.

SEVENTH: (a) The Westchester County Chiefs of Police Association ("WCCOPA") shall be responsible for the administration and future amendments or revision of the Plan. Administration shall entail, but not be limited to, the development of an organized effort, identification of county-wide special equipment, and interface with auxiliary services and agencies for the development of protocols and assumed responsibilities.

(b) A sub-committee of the WCCOPA will review the Plan at least once a year and formulate recommendations for amendments or revisions as necessary.

EIGHTH: The rights and obligations set forth in this Agreement shall be binding upon and shall inure to the benefit of each municipality which has executed this Agreement with the County.

NINTH: As to any signatory municipality, this Agreement shall not be enforceable until signed by both parties and all applicable legal approvals have been obtained.

TENTH: If any term or provision of this Agreement is held by a court of competent jurisdiction to be invalid or void or unenforceable, the remainder of the terms and provisions of this Agreement shall in no way be affected, impaired, or invalidated, and to the extent permitted by applicable law, any such term, or provision shall be restricted in applicability or reformed to the minimum extent required for such to be enforceable. This provision shall be interpreted and enforced to give effect to the original written intent of the parties prior to the determination of such invalidity or unenforceability.

ELEVENTH: In addition to the aforementioned General Municipal Law Section 209-m, this Agreement shall be subject to any applicable laws, rules and regulations.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

THE COUNTY OF WESTCHESTER

By_____
George N. Longworth
Commissioner - Sheriff

THE CITY OF RYE

By_____
Joseph A. Sack
Mayor

Approved by the Westchester County Board of Legislators on the 11th day of May, 2015.

Approved by the Board of Acquisition and Contract of the County of Westchester on the 18th day of June, 2015.

Approved as to form and
manner of execution:

_____
Assistant County Attorney
County of Westchester
S/O/DPS/Police Mutual Aid 2015/Police IMA.doc

MUNICIPALITY'S ACKNOWLEDGEMENT

STATE OF NEW YORK)

) ss.:

COUNTY OF WESTCHESTER)

On this _____ day of _____, 2015, before me personally came _____

_____, to me known, and known to me to be the _____ of ___

_____, the municipal corporation described in and which executed the within instrument, who being by me duly sworn did depose and say that he/she, the said _____

resides at _____and that he/she is the _____ of said municipal corporation.

_____

Notary Public County

CERTIFICATE OF AUTHORITY
(Municipality)

I, _____, certify that I am the
(Officer other than officer signing contract)

_____ of the _____
(Title) (*Name of Municipality*)

(the "Municipality") a corporation duly organized in good standing under the _____

_____
(*Law under which organized, e.g., the New York Village Law, Town Law, General Municipal Law*)

named in the foregoing agreement that _____ who signed said
(*Person executing agreement*)

agreement on behalf of the Municipality was, at the time of execution _____of
(Title of such person),

the Municipality, that said agreement was duly signed for on behalf of said Municipality by

authority of its _____thereunto duly authorized,
(*Town Board, Village Board, City Council*)

and that such authority is in full force and effect at the date hereof.

_____
(Signature)

STATE OF NEW YORK)
ss.:
COUNTY OF WESTCHESTER)

On this ___ day of _____, 2015, before me personally came _____
_____ whose signature appears above, to me known, and know to be the
_____ of _____
_____,
(*Title*)
the municipal corporation described in and which executed the above certificate, who being by me duly sworn did depose and say that he, the said _____
resides at _____, and that
he/she is the _____ of said municipal corporation.
(*Title*)

_____
Notary Public County

SCHEDULE "A"

SEE ATTACHED

THE MUTUAL AID AND RAPID RESPONSE PLAN FOR THE POLICE DEPARTMENTS OF WESTCHESTER COUNTY, NEW YORK

PURPOSE

To establish procedures for the Police Departments of Westchester County to provide the uninterrupted delivery of police service during those situations that exceed the resources of any individual Department.

BACKGROUND

It is the responsibility of the police to be prepared and guided when dealing with major incidents whether they are criminal in nature or natural disasters. rapid response and sound planning can often prevent loss of life, damage to property and prevent an incident from escalating.

POLICY

It is the policy of the Police Departments of Westchester County to promptly provide Mutual Aid and Rapid Response in the form of manpower and equipment under the County Mutual Aid and Rapid Response Plan, (hereinafter referred to as the "Plan") upon the request of any participating agency.

DEFINITIONS

1. Mutual Aid and Rapid Response Incident: An incident requiring activation of the Mutual Aid and Rapid Response is defined as a major incident or occurrence which necessitates a Police Department, within Westchester County, to summons immediate wide scale assistance.

2. Major Incidents: Means any event, generally of an emergency nature, that involves actual or potential personal injury or property damage arising from a natural disaster, manmade disaster, civil disturbance or terrorist action.

3. Natural Disaster: Means those incidents in which the forces of nature threaten the lives, safety or property of numerous persons; i.e., floods, hurricanes, earthquakes, explosions, tornadoes, landslides, drought, infestation or significant snowfall/blizzard.

4. Manmade Disaster: Means incidents in which the forces of man threaten the lives, safety or property of numerous persons; i.e., nuclear/radiological accidents, chemical spills, major railroad accidents or aircraft crashes.

5. Civil Disturbance: Means an action by any group that poses a substantial threat to peace, life or property or any tumultuous or violent activity that creates a Grave risk of causing public alarm.

6. Terrorist Action: Is defined as a politically motivated, hostile action taken by a person or group whose intent is the commission of violent acts designed to instill fear, communicate a message and/or demand some governmental action.

7. Requesting Agency: A Police Department located within the geographical confines of the County of Westchester that is requesting Mutual Aid from other police agencies, which are signatories to the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County, New York.

8. Responding Agency: A Police Department located within the geographical confines of the County of Westchester that is responding to a request for Mutual Aid from other police agencies, which are signatories to the Mutual Aid and Rapid Response Plan for the Police Departments of Westchester County, New York.

9. Zone Coordinator: Each Zone of response will designate a Zone Coordinator, who shall be responsible for coordinated Zone response; e.g., response to locations outside of Westchester County as well as coordination of mock activations of the Plan.

10. Incident Command System: The accepted system to be utilized to coordinate multi-agency responses to incidents.

11. Incident Commander: Is defined as the highest ranking member of the requesting Department at the scene, or his/her designee.

12. Inner Perimeter: Is defined as the immediate area of containment around an incident site.

13. Outer Perimeter: Is defined as the peripheral control area surrounding the inner perimeter, providing a safe zone for access to or egress from the inter perimeter as well as defining the limit of access by unauthorized persons.

14. Staging Area: Is defined as a location selected generally within the outer perimeter to facilitate arriving resources and personnel responding for assignments.

15. Command Post: Is defined as the post from which the Incident Commander and his staff coordinate the Department's response to a major emergency.

LEGAL CONSIDERATIONS

16. General Municipal Law §209-M. Outside service by local police; civil disturbance control.
    A. (Subdivision 2). Notwithstanding the provisions of any general, special or local law, or any county, city or village charter, the Chief Executive Officer of a local government, whenever he deems that the public interest

requires it, may request the Chief Executive Officer of any other local government to detail, assign and make available for duty and use in the local government for which the request is made, any part of the forces, equipment and supplies of the Police Department, police force or parkway police force of the local government of which the request is made. The Chief Executive Officer of the local government of which the request is made is hereby authorized and empowered to grant the request so made.

B. (Subdivision 3). A local government may, by local law, delegate to the Chief of Police of its Police Department or police force, the powers hereby granted to the Chief Executive Officer to request and grant police assistance.

C. (Subdivision 4). If the Chief Executive Officer of any such local government is absent or disabled, the Chief of Police of the local government may make any such request or may grant any such request, as the case may be.

D. (Subdivision 5). The local government receiving police aid pursuant to this Section shall assume the liability for all damages arising out of any act performed in rendering such aid and shall reimburse the assisting local government of any monies paid by it for salaries or for other expenses incurred by it including damage to or loss of equipment and supplies. As assisting local government may assume such loss, damage expenses or cost for such equipment and supplies and donate such services to the receiving local government. While engaged in duty and rendering such services in such local government, the Officers and members of such Police Department or police force shall have the same powers, duties, rights, benefits, privileges and immunities as if they were performing their duties in the local government in and by which they are normally employed.

ZONES OF RESPONSE

17. County-Wide participants shall consist of the following Departments:

	Department	Rapid Response	Delayed Response
A.	Metropolitan Transportation Authority Police Department;	Four (4)	Ten (10)
B.	New York State Police;	Eight (8)	Twelve (12)
C.	New York City Department of Environmental Protection;	Three (3)	Ten (10)
D.	Westchester County Department of Public Safety	Eight (8)	Twenty (20)
	TOTALS:	Twenty-Three (23)	Fifty-Two (52)

18. When a County-Wide participant requests assistance to this Plan, they will become a member of any Zone in which they have the need for assistance.

A. E.g., assistance for an event at Tibbett's Brook Park, a County park, the Westchester County Department of Public Safety will be a member of Zone "B" for the purpose of requesting aid.

B. For an event at the Croton/Harmon Train Station, the Metropolitan Transportation Authority Police Department will be a member of Zone "A" for the purpose of requesting aid.

19. When a County-Wide participant receives a request for assistance under this Plan, they will become a member of the Zone from which the request for assistance is being made and will respond accordingly.

20. Zone "A" (ADAM) shall consist of the following Departments:

	Department	Rapid Response	Delayed Response
A.	Bedford (Town);	One (1)	Two (2)
B.	Briarcliff (Village);	One (1)	Two (2)
C.	Buchanan (Village);	Zero (0)	One (1)
D.	Croton-on-Hudson (Village);	One (1)	One (1)
E.	Lewisboro (Town);	Zero (0)	Zero (0)
F.	Mt. Kisco (Village);	One (1)	Two (2)
G.	Mount Pleasant (Town);	One (1)	Three (3)
H.	New Castle (Town);	One (1)	Three (3)
I.	North Castle (Town);	One (1)	Two (2)
J.	North Salem (Town);	Zero (0)	Zero (0)
K.	Ossining (Town);	Zero (0)	Zero (0)
L.	Ossining (Village);	Two (2)	Eight (8)
M.	Peekskill (City);	Four (4)	Seven (7)
N.	Pleasantville (Village);	One (1)	Two (2)
O.	Pound Ridge (Town);	Zero (0)	Four (4)
P.	Sleepy Hollow (Village);	One (1)	Three (3)
Q.	Somers (Town);	Zero (0)	Zero (0)
R.	Yorktown (Town).	One (1)	Five (5)

21. TOTALS: Sixteen (16) Forty-five (45)

22. Zone “B” (BAKER) shall consist of the following Departments:

	Department	Rapid Response	Delayed Response
A.	Ardsley (Village);	One (1)	Three (3)
B.	Dobbs Ferry (Village);	One (1)	Three (3)
C.	Elmsford (Village);	One (1)	Three (3)
D.	Greenburgh (Town);	Three (3)	Twelve (12)
E.	Hastings-on-Hudson (Village);	One (1)	Three (3)
F.	Irvington (Village);	Zero (0)	Three (3)
G.	Scarsdale (Village);	Two (2)	Four (4)
H.	Tarrytown (Village);	One (1)	Three (3)
I.	White Plains (City).	Five (5)	Ten (10)
J.	Yonkers (City);	Five (5)	Ten (10)
	TOTALS:	Twenty (20)	Fifty-Four (54)

23. Zone “C” (CHARLIE) shall consist of the following Departments:

	Department	Rapid Response	Delayed Response
A.	Bronxville (Village);	One (1)	Three (3)
B.	Eastchester (Town);	Two (2)	Five (5)
C.	Harrison (Town);	Two (2)	Eight (8)
D.	Larchmont (Village);	One (1)	Two (2)
E.	Mamaroneck (Town);	Two (2)	Two (2)
F.	Mamaroneck (Village);	Two (2)	Four (4)
G.	Mt. Vernon (City);	Four (4)	Ten (10)
H.	New Rochelle (City);	Four (4)	Six (6)
I.	Pelham (Village);	One (1)	Four (4)
J.	Pelham Manor (Village);	One (1)	Three (3)
K.	Port Chester (Village);	Three (3)	Five (5)
L.	Rye (City);	Two (2)	Four (4)
M.	Rye Brook (Village);	One (1)	Three (3)
N.	SUNY Purchase	One (1)	Two (2)
O.	Tuckahoe (Village).	One (1)	Five (5)
	TOTALS:	Twenty-eight (28)	Sixty-six (66)

LEVELS OF RESPONSE

24. **Alert Notification**: A situation exists of serious proportions and Departments within the Zone of Alert should prepare to send the minimum pre-arranged manpower (rapid response) to the identified location. **DO NOT RESPOND AT THIS TIME!**

25. **Pre-Zone Response:** (Approximately eight (**8**) uniformed officers). A situation exists that requires additional police resources but does not require a full Zone response. The Westchester County Department of Public Safety will respond with the minimum pre-arranged manpower for a rapid response to the identified location.

    Note: The Westchester County Department of Public Safety is prepared to initiate Incident Command System protocols if requested to do so by the requesting agency.

26. **Level One (1) Response**: (Approximately forty five (**45**) uniformed officers). Departments within the Zone of Alert are requested to immediately dispatch, the minimum pre-arranged manpower for a rapid response to the identified location.

27. **Level Two (2) Response**: (Approximately sixty five (**65**) uniformed officers). A second Zone is being requested to dispatch the minimum pre-arranged manpower for a rapid response to the identified location.

    Note: The second Zone of response will be identified by the requesting agency.

28. **Level Three (3) Response**: (Approximately ninety (**90**) uniformed officers). Departments from all Zones are requested to dispatch the minimum pre-arranged manpower for a rapid response to the identified location.

29. **Level Four (4) Response**: (Approximately two hundred twenty (**220**) uniformed officers). Departments from all Zones are requested to dispatch the maximum number of pre-arranged manpower (delayed response) to the identified location.

ACTIVATION OF THE PLAN

30. All requests for assistance under the Plan will be made via the Westchester County Hot Line System (Hot Line).

31. The following are example announcements to be followed when activating the Plan via the Hot Line:

Alert Notification [Prepare Only]:

Station (number and jurisdiction) announcing an Alert Notification. A situation exists that **may** require a mutual aid response. Specifically, there is a _____ (nature of the incident). Departments in Zone ____ should prepare to dispatch the pre-arranged rapid response to this jurisdiction. **NO NOT RESPOND AT THIS TIME!**

Pre-Zone Response:

Station (number and jurisdiction) to the Westchester County Department of Public Safety, a situation exists requiring a mutual aid Pre-Zone Response. Specifically, there is a _____ (nature of incident) we are requesting the Westchester County Department of Public Safety send its pre-arranged rapid response. The scene is located at _____ (specific address). The designated staging area is located at _____ (specific address). At this time _____ (rank & name) is in command and the Command Post is located at _____ (specific address).

Level One (1) Response [One Zone]:

Station (number and jurisdiction) to all stations on the Hot Line, a situation exists within this jurisdiction requiring a mutual aid Level One (1) Response. Specifically, there is a _____ (nature of incident) we are requesting rapid response from Zone _____.
The scene is located at _____ (specific address).
The designated staging area is located at _____ (specific address). At this time _____ (rank & name) is in command and the Command Post is located at _____ (specific address).

Level Two (2) Response [Two Zones]:

Station (number and jurisdiction) to all stations on the Hot Line, a situation exists within this jurisdiction requiring a mutual aid Level 2 Response. Specifically, there is a _____ (nature of incident) we are requesting rapid response from Zones ____ and _____. The scene is located at _____ (specific address). The designated staging area is located at _____ (specific address). At this time _____

(rank & name) is in command and the Command Post is located at _____ (specific address).

Level Three (3) Response [All Zones]:

Station (number and jurisdiction) to all stations on the Hot Line, A situation exists within this jurisdiction requiring a mutual aid Level 3 Response. Specifically, there is a _____ (nature of incident) we are requesting rapid response from all Zones. The scene is located at _____ (specific address). The designated staging area is located at _____ (specific address). At this time _____ (rank & name) is in command and the Command Post is located at _____ (specific address).

Level Four (4) Response [All Zones]:

Station (number and jurisdiction) to all stations on the Hot Line, A situation exists within this jurisdiction requiring a mutual aid Level 4 Response. Specifically, there is a _____ (nature of incident) we are requesting all available uniform personnel amounting to a delayed response from all Zones. The scene is located at _____ (specific address). The designated staging area is located at _____ (specific address). At this time _____ (rank & name) is in command and the Command Post is located at _____ (specific address).

DUTIES OF REQUESTING AGENCY

32. Identify the nature and location of the incident.

33. Identify the location of the Command Post.

34. Identify the Staging Area or location of response.

35. Identify the Incident Commander or any change in command.

36. Identify any and all specialized equipment with which responding officers should be equipped.

37. Memorialize the name, rank and command of responding officers.

38. Commence internal Departmental mobilization.

DUTIES OF RESPONDING AGENCY

39. Authorize only the designated pre-arranged number of UNIFORMED officers specific to the level of alert to respond.

40. Proceed directly to the location of requested response or the Staging Area as directed.

RESPONSIBILITIES AT THE SCENE OF THE INCIDENT

41. The Incident Commander designated by the requesting agency shall be in charge at the scene of the incident.

42. Uniformed officers detailed to the incident shall follow the direction of the Incident Commander.

43. However, where the provided assistance involves the loan of a Specialized Weapons and Tacticals (SWAT), hostage negotiation, bomb disposal or canine unit, the Commander of that specialized unit shall be responsible for implementation of the specific mission, as determined by the Incident Commander of the requesting agency.

44. When taking law enforcement actions at the scene of the incident, including use of force, uniformed officers from the responding agency shall at all times adhere to their agency policies and procedures and utilize only those weapons and tactics that they have been trained and deemed qualified to use.

45. Uniformed officers on loan from the responding agency at an emergency site shall regularly apprise the Command Post concerning the continued status of the emergency, line-of-duty injuries or their need for relief.

DEPLOYMENT OF RADIO INTREROPERABLITY SYSTEM (RIOS) VEHICLES:

46. A Radio Interoperability System (RIOS) vehicle shall be deployed to the scene of all formal mutual aid requests:

    Zone A: Westchester County DPS RIOS vehicle
    Zone B: Greenburgh PD RIOS vehicle
    Zone C: Mt. Vernon PD RIOS vehicle

47. Should the assigned RIOS vehicle be unavailable, the Westchester County DPS RIOS vehicle shall be requested. Should the Westchester County DPS RIOS be unavailable, the nearest available RIOS vehicle shall be requested.

RELEASE OF PERSONNEL

48. The Incident Commander or his/her designee shall authorize release of personnel from all responding agencies.

POST OCCURRENCE REPORTINGS

49. Within thirty (30) days of any activation of the Plan, the Chief Executive Officer of the Requesting Agency shall prepare or cause to be prepared, a memorandum including a summary of the facts and circumstances surrounding the Incident, comments related to the effectiveness of the Plan and recommendations for modification of the Plan and submit same for the review of the Executive Board of the Westchester County Chiefs of Police Association.

50. Within thirty (30) days of receipt of the aforementioned memorandum, the Executive Board of the Westchester County Chiefs of Police Association will make a determination if modification to the Plan is necessary.

ANNUAL TRAINING

51. In order to maintain an appropriate level of readiness, annual training will be conducted.

ANNUAL REVIEW AND REVISION

52. A sub-committee of the Westchester County Chiefs of Police Association will review the Plan at least once a year and formulate recommendations for revisions as the need arises.

Updated October 29, 2013

WESTCHESTER COUNTY
ARSON ZONE PLAN

FIRE INVESTIGATION PROTOCOLS

Revised: April 2010

Introduction

Westchester County, through the Arson Task Force, is restructuring and updating the Arson Zone Plan. The original Arson Zone Plan, begun in 1981, has worked very well in some areas of the county. This program has countywide application and serves as a comprehensive system for the investigation of all suspicious fires in Westchester County. The implementation of standardized call-out procedures and report writing is necessary.

The primary goal of the revised Arson Zone Plan remains the same as originally written some twenty-nine years ago – to provide local Fire and Police Chiefs, upon request, trained experts to assist in the determination of the cause and origin of suspicious fires. Additional goals are to bring together, into teams, police and fire professionals who are trained in fire investigation in order to realize the benefits of skills in cause and origin matters, as well as to assist in the subsequent criminal investigations.

The primary objectives of the Arson Zone Protocols are:

Establish a quality service to assist chiefs in the determination of cause and origin of suspicious fires throughout the county.

Establish requirements of police and fire professionals engaged as Cause and Origin Team members.

Establish call-out procedures and dispatches for Cause and Origin Teams.

Establish forms and report writing procedures for Cause and Origin Teams.

Team Structure

The Arson Zone Plan will be 5 Zones (see attached list). This will enhance the determination of Cause and Origin of suspicious fires and assist in the successful arrest and prosecution of arson cases in Westchester County.

The Cause and Origin Teams, one in each zone, will consist of at least four (4) fire investigators and no more than six (6) fire investigators appointed by the Executive Board of the Arson Task Force. The Executive Board may also appoint no more than two (2) adjunct members to each Zone Team.

Administration

Area Deputy Fire Coordinators:

Two (2) Area Deputy Fire Coordinators will be responsible for the administration of Fire Investigation services in the Northern and Southern sections of the county. These Area Deputy Fire Coordinators will be responsible for the provision and the coordination of Fire Investigation services on scene, securing and coordinating additional or special resources to assist in the work of the Cause and Origin Teams, interagency relationships, education programs to the emergency services and other groups, coordination among the teams, recruitment of team members and other functions as assigned by the Fire Coordinator and Executive Board of the Arson Task Force to support the efforts of this program.

Zone Directors:

The Police and Fire agencies will nominate Arson Zone Directors, who will be appointed with the approval of the Executive Board of the Arson Task Force. There will be two directors for each regional Zone, one from a law enforcement agency and one from a fire agency.

Cause and Origin Team Members

Qualifications

All Cause and Origin Team Members (Fire Investigators) shall hold certification for the Fire Behavior/Arson Awareness, Principles of Fire Investigation, and the 80-hour Fire-Arson Investigation Course. Each of these programs are prepared and presented through instructors qualified by the New York State Office of Fire Prevention and Control. If New York State certifications are not held, the individual will satisfactorily document and demonstrate competence to the Area Deputy Fire Coordinators in accordance with the standards reflected in the National Fire Protection Association (NFPA) 921 Guidelines.

All Cause and Origin Team Members (Adjunct Fire Investigators) shall hold certification for the Fire Behavior/Arson Awareness and Principles of Fire Investigation courses. The Adjunct Investigator will abide by the guidelines as set forth in these protocols. In addition, Adjunct Investigators will be required to complete the 80-hour Fire-Arson Investigation Course within 18 months of their conditional appointment as a Fire Investigator when filling a vacancy to the Zone Team. If New York State certifications are not held, the individual will satisfactorily document and demonstrate competence to the Area Deputy Fire Coordinators in accordance with the standards reflected in the National Fire Protection Association (NFPA) 921 Guidelines.

All Cause and Origin Team members must attend at least one Fire Investigation Seminar annually. This may be on a local, state or national level.

Additional course work should include, and not be limited to: Fire/Arson Investigation Seminar, Fire Investigative Photography, Interviewing Techniques for the Fire Investigator, Fire Scene Evidence Collection, Electrical Fire Cause Determination I, Electrical Fire Cause Determination II, and Juvenile Firesetter Intervention Program Seminar. Each of these programs are prepared and presented through instructors qualified by the New York State Office of Fire Prevention and Control.

All Cause and Origin Team members will attend quarterly team meetings with the Area Deputy Fire Coordinator and Arson Zone Directors.

All candidates for Cause and Origin Team membership will be required to submit to the Westchester County Arson Task Force Executive Board a recommendation from the Chief Officer of his/her law enforcement or fire agency for appointment to the Cause and Origin Team (see attached form).

All candidates must be active members of police or fire departments who have been recommended for participation in this program by the chief of their department.

Members of the Cause and Origin Teams will adhere to the Code of Ethics which is appended to this document. Members whose actions deviate from this Code of Ethics or who do not follow the performance and participation standards will be subject to removal as a team member. Concerns about a member's actions will be brought to the Area Deputy Fire Coordinator who will, in turn, discuss the issue with the Fire Coordinator. If it is felt that further action is warranted, the matter will be discussed with and referred to the Executive Board of the Arson Task Force for further action.

Requirements

Be at least 21 years of age, a career or volunteer firefighter and/or police officer and physically capable of performing the tasks and responsibilities associated with the Cause and Origin Teams.

Have a working knowledge of current Fire Service practices, tools and procedures, and have a basic understanding of the New York State Fire Reporting System.

Must have a valid New York State driver's license and have transportation in order to fulfill the responsibilities as a Cause and Origin Team member.

Must submit proof to the Arson Task Force Executive Board that a criminal background check by the New York State Division of Criminal Justice Services was conducted through the Westchester County Department of Public Safety.

Notification and Response of Cause & Origin Team Members

All requests for services by a Cause and Origin Team from fire services and/or law enforcement agencies will be requested through the Westchester County Department of Emergency Services (60 Control). This does not dispense or eliminate a responding investigator's obligation to notify their department that they have been requested by "60 Control" to respond as a member of the Cause and Origin Team.

The "60 Control" dispatcher will identify the location of the incident, and ascertain from the Incident Commander, or their designee, if the C&O Team is to respond directly to the scene or if the Team should respond to a nearby staging area. The dispatcher will also try to obtain additional details relative to the incident that will be pertinent to the Cause and Origin Team.

After a request for fire investigation assistance has been received, the Cause and Origin Team will be activated by "60 Control". The dispatchers will notify all Members of the applicable Cause and Origin Team and the Area Deputy Fire Coordinator responsible for the area where the incident is located. Team activation will follow the

guidelines enumerated in DES Communication Division Policy & Procedure titled "C&O Team Paging/Notification Policy". When receiving notification, the Zone Cause and Origin Team members will call "60 Control" to advise the dispatcher of their availability and gather details concerning the situation. All members will phone "60 Control" at (914) 231-1905.

In the event that there is insufficient response by members of the local Cause and Origin Team to a request for assistance within ten (10) minutes, a second request will be transmitted as per (C) above.

In the event that there is insufficient response by the members of the local Cause and Origin Team to a request for services within this second ten (10) minutes, the dispatcher will then contact the respective Area Deputy Fire Coordinator and follow his instructions. If the Area Deputy Fire Coordinator cannot be contacted, then the dispatcher will contact the second Area Deputy Fire Coordinator. If both Coordinators cannot be reached within 10 minutes, the dispatcher will implement the Communicator ™ notification procedure as enumerated in "C&O Team Paging/Notification Policy". If the respective Zone Team is unavailable, the dispatcher will then transmit a page-out request for services of another adjacent Cause and Origin Team in accordance with a pre-established "move-up" protocol as monitored by "60 Control". Also, if circumstances warrant, the Fire Incident Commander, who according to state law is in charge of the fire scene, may always request through "60 Control" the additional services of another team.

Cause and Origin Team members will respond to the investigation following notification of their superiors. If equipment vans (Zone vehicle) are established to support the field operations of the Cause and Origin Team in the county, at least one member will be detailed to the van as a driver. The Team will respond directly to the scene unless a staging area has been indicated by the I.C., as per B above.

Upon arrival at the scene, the Cause and Origin Team members will meet in order to designate a Team Leader.

Notification of the District Attorney

The Area Deputy Fire Coordinator will, as soon as possible, notify the Duty Assistant in the District Attorney's Office through the Westchester County Department of Public Safety Services at (914) 864-7700 in the following instances: (1) cases involving casualty loss in excess of $1 million; (2) cases involving death; (3) explosion(s); and (4) acts of terrorism. In the event that the Area Deputy Fire Coordinator is not on scene, then the Cause and Origin Team Leader will ensure this notification is made.

Responsibilities of Team Leader

In the absence of the Area Deputy Fire Coordinator, the Cause and Origin Team Leader will be responsible for directing the investigation/determination of cause and origin of fires when the team is requested. In directing the investigation, the Cause and Origin

Team Leader will ensure the preservation of evidence at the scene for the subsequent collection by the investigating police agency or laboratory.

The Cause and Origin Team Leader will also be responsible for the coordination and production of the Cause and Origin Team reports, and the timely submission of these reports and all addenda, photographs, notes, etc., to the Area Deputy Fire Coordinator.

The Cause and Origin Team, in consultation with the Area Deputy Fire Coordinator, the Cause and Origin Team Leader or Fire Incident Commander may utilize a New York State certified K-9 arson/accelerant dog as a resource. The responsibility and the liability of the dog's actions at a fire investigation scene will be held to the dog handler and the sponsoring agency.

Investigations

The Area Deputy Fire Coordinator has the overall responsibility for the coordination of the fire investigation when on scene. In the Coordinator's absence, the Cause and Origin Team Leader will assume these responsibilities.

The Area Deputy Fire Coordinator, or the Cause and Origin Team Leader for each investigation, will delegate responsibilities to the participating Cause and Origin Team members in order to make the best use of the talents of the team members and resources. The following shall be required:

An *Investigation Summary Report* will be completed in all instances.

An *Investigation Field Notes Form* will be completed for all structural fires.

An *Investigation Narrative Report* will be completed for all structural fires. This report, in addition to the *Investigation Field Notes Form*, will allow the investigators to explain their findings and conclusions. This form will be filed within 72 hours of the completion of the incident.

Preservation of a video and/or photographic record of the scene, including a Photo Log.

Evidence collection and maintenance of records concerning the chain of evidence custody.

A master log will be kept at the Department of Emergency Services for Fire Investigation incident numbers. When the Cause and Origin Team is activated, the dispatcher will issue the Area Deputy Fire Coordinator or the Cause and Origin Team Leader an incident number for the report.

Cause and Origin Team folders will be given to each member with all required paperwork for an investigation.

Upon completion of the investigation, the Team Leader is responsible to forward all investigative reports, photographs, addendums, notes, and other relevant reports to the

Area Deputy Fire Coordinator. This shall be done within 72 hours of the completion of the investigation.

The Area Deputy Fire Coordinator is responsible to review all reports for completeness and accuracy and effect any corrections necessary with the Team Leader and Investigators that responded to the call. These reports will then be placed into a case folder for retention in the designated filing location at the Department of Emergency Services.

All reports and materials generated during the course of the investigation are done so on behalf of the Department of Emergency Services and will be retained in the normal course of business as required.

Reports

Forms for Report Writing

Each investigation folder will contain the following reports:

Westchester County Arson Task Force – Investigation Summary Report (1 page, 5 carbon copies)

Westchester County Arson Task Force – Investigation Narrative Report (1 to multiple pages, as needed, depending on incident)

Westchester County Arson Task Force – Investigation Field Notes Form (6 pages)

Westchester County Arson Task Force – Interview Sheet (1 page)

Westchester County Arson Task Force – Fire Scene Sketch (1 page)

Westchester County Arson Task Force – Vehicle Sheet (Short Form) (1 page)

Westchester County Arson Task Force – Vehicle Sheet (Detail) (3 pages)

Westchester County Arson Task Force – Photo Log Sheet (1 page)

Westchester County Arson Task Force – Evidence Sheet (1 page)

Westchester County Arson Task Force – Body Sketch Sheet (1 page)

Westchester County Arson Task Force – Consent to Search Form (1 page)

Report Filing

Non-Incendiary Fires

The *Investigation Summary Report* is to be filed in all incident investigations, even when the cause and origin of the fire is determined to be non-incendiary. The distribution of the *Investigation Summary Report* will be as follows:

The original *(white sheet)* will be submitted by the Team Leader to the F.D. Incident Commander.

The Team Leader will give the *blue sheet* to the Local Police Agency.

The Team Leader will forward the remaining sheets (yellow, green, pink and gold) to the Area Deputy Fire Coordinator for dissemination, as noted below.

The *yellow sheet* of the report is retained in a binder at the Department of Emergency Services.

The *green sheet* of the report will be retained in the case folder at the Department of Emergency Services.

The *pink sheet* of the report will be forwarded to the Office of the District Attorney, Attention: Arson Coordinator, Richard J. Daronco Courthouse, 111 Dr. Martin Luther King Jr. Blvd., White Plains, NY 10601.

The *gold sheet* of the report will be retained by the Area Deputy Fire Coordinator (C&O) who covers that Zone, in which the incident occurred.

The *Investigation Field Notes Form* will be filed for all structural fires. This form will be forwarded to the Area Deputy Fire Coordinator for inclusion in the case folder.

The *Investigation Narrative Report* will be filed for all structural fires. This will assist to note the circumstances of the incident that may require additional explanation of actions and facts found during the scene exam that lead the investigation team to its final conclusion.

In all instances the appropriate additional reports and forms utilized by the Team will be completed when necessary.

All reports and forms generated during the course of the investigation will be forwarded to the Area Deputy Fire Coordinator for inclusion in the case folder. Copies of any reports or forms will only be disseminated by WCDES staff pursuant to their protocols, and with the approval of the Area Deputy Fire Coordinator.

Incendiary Fires

The *Investigation Summary Report*, the *Investigation Field Notes Form*, and the *Investigation Narrative Report*, along with the all other appropriate reports and forms used by the Team, will be submitted in all cases where there is a determination that the cause and origin of the fire is incendiary.

The distribution of the *Investigation Summary Report* will be the same as in IX, A, 1, above.

All reports and forms generated during the course of the investigation will be forwarded to the Area Deputy Fire Coordinator for inclusion in the case folder.

Because the fire has been determined to be incendiary in nature, a crime of suspected arson has allegedly been committed and the information in all reports and addenda is confidential and now part of a criminal investigation.

A single copy of all generated reports, photographs, etc., will be forwarded by the Area Deputy Fire Coordinator, or his designee, to both the Local Police Agency and the Westchester County District Attorney's Office. The FD Incident Commander will only receive the original (white sheet) of the *Investigation Summary Report* for the department's records. No other copies are to be disseminated without the consent of the Area Deputy Fire Coordinator and the District Attorney's Office.

Should the FD Incident Commander want to review the other reports generated in the investigation, they will need to contact the Area Deputy Fire Coordinator to arrange a time to do so.

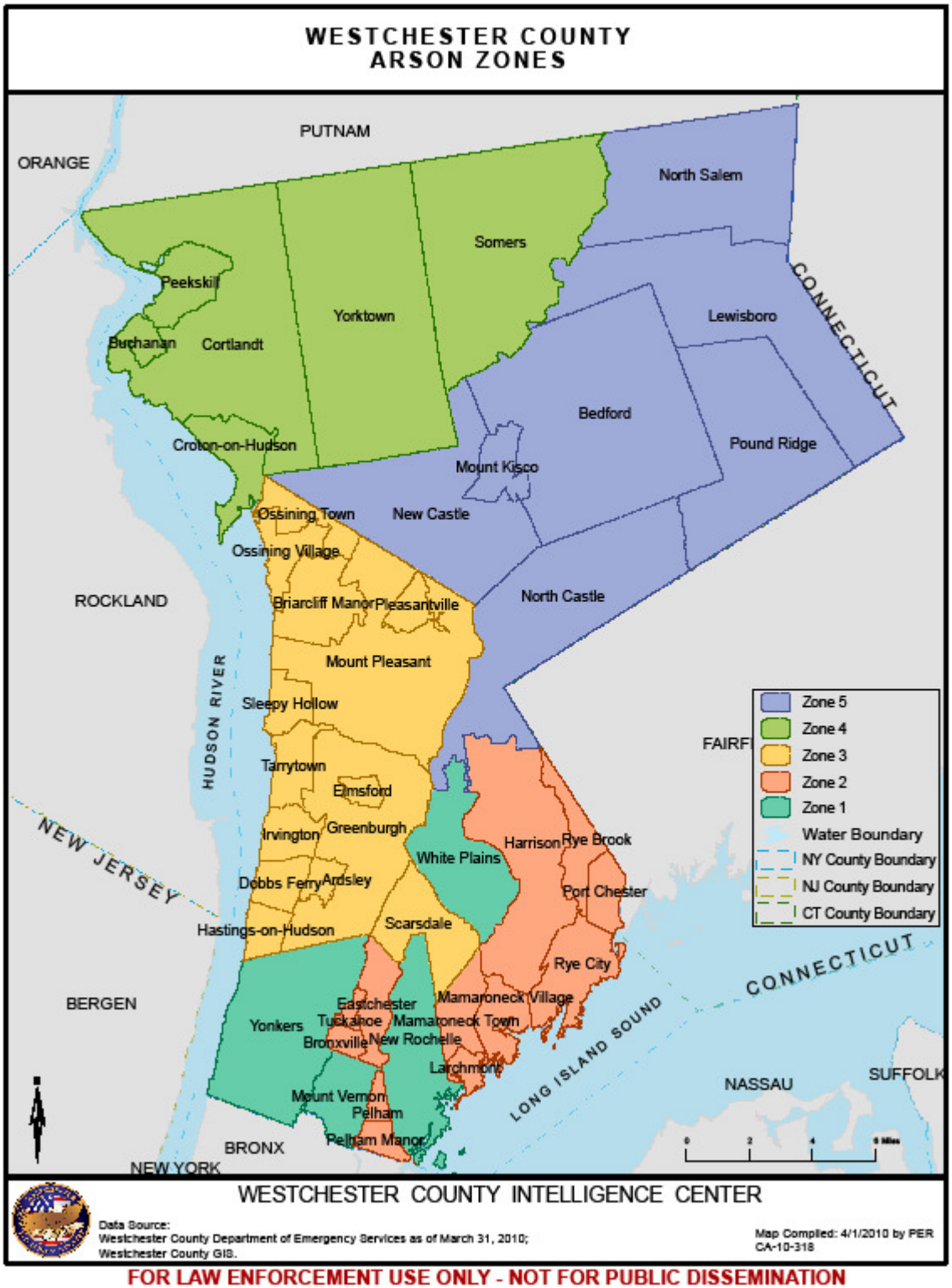
Cause and Origin Zone Listing

Fire Dept. #	*F.D. Name*	*Zone #*	*Police Dept.*
229	Mount Vernon	1	Mount Vernon
230	New Rochelle	1	New Rochelle
251	White Plains	1	White Plains
252	Yonkers	1	Yonkers
210	Eastchester	2	Eastchester, Bronxville, Tuckahoe
216	Harrison	2	Harrison
222	Larchmont	2	Larchmont
223	Mamaroneck Twn	2	Mamaroneck Town
224	Mamaroneck Vill	2	Mamaroneck Village
239	Port Chester	2	Port Chester, Rye Brook
241	Purchase	2	Harrison
235	Pelham	2	Pelham
236	Pelham Manor	2	Pelham Manor
242	Rye	2	Rye City
250	West Harrison	2	Harrison
266	Rye Brook	2	Rye Brook
263	Archville	3	Mount Pleasant
201	Ardsley	3	Ardsley
205	Briarcliff	3	Briarcliff, Mt. Pleasant, Ossining Town New Castle
209	Dobbs Ferry	3	Dobbs Ferry
211	Elmsford	3	Elmsford, Greenburgh
212	Fairview	3	Greenburgh
215	Greenville	3	Greenburgh
217	Hartsdale	3	Greenburgh
218	Hastings	3	Greenburgh

Fire Dept. #	*F.D. Name*	*Zone #*	*Police Dept.*
219	Hawthorne	3	Mount Pleasant
220	Irvington	3	Irvington, Greenburgh
231	Sleepy Hollow	3	Sleepy Hollow, Mount Pleasant
233	Ossining	3	Ossining Village, Ossining Town
237	Pleasantville	3	Pleasantville, Mount Pleasant
238	Pocantico Hills	3	Mount Pleasant
243	Scarsdale	3	Scarsdale
246	Tarrytown	3	Tarrytown, Greenburgh
247	Thornwood	3	Mount Pleasant
248	Valhalla	3	Mount Pleasant
255	Buchanan	4	Buchanan
213	Continental Vill	4	Cortlandt NYSP, Peekskill
208	Croton	4	Croton, Cortlandt NYSP
226	Mohegan	4	Cortlandt NYSP, Peekskill, Yorktown
227	Montrose	4	Cortlandt NYSP, Peekskill
234	Peekskill	4	Peekskill
244	Somers	4	Somers NYSP
249	Verplanck	4	Cortlandt NYSP, Peekskill
253	Yorktown	4	Yorktown
202	Armonk	5	North Castle
258	Banksville	5	North Castle
203	Bedford Hills	5	Bedford
204	Bedford Village	5	Bedford
206	Chappaqua	5	New Castle, Mt. Pleasant
207	Croton Falls	5	Somers NYSP
214	Goldens Bridge	5	Somers NYSP
221	Katonah	5	Bedford
225	Millwood	5	Ossining Town, New Castle

Fire Dept. #	*F.D. Name*	*Zone #*	*Police Dept.*
228	Mount Kisco	5	Mount Kisco, New Castle, Bedford
232	North White Plains	5	North Castle
240	Pound Ridge	5	Somers NYSP
245	South Salem	5	Somers NYSP
256	Vista	5	Somers NYSP

Westchester County Cause & Origin Zone Map



CODE OF ETHICS

I will, as an arson investigator, regard myself as a member of an important and honorable profession.

I will conduct both my personal and official life so as to inspire the confidence of the public.

I will regard my fellow investigators with the same standards as I hold for myself. I will never betray a confidence nor otherwise jeopardize their investigation.

I will regard it my duty to know my work thoroughly. It is my further duty to avail myself of every opportunity to learn more about my profession.

I will avoid alliances with those whose goals are inconsistent with an honest and unbiased investigation. I will make no claim to professional qualifications, which I do not possess.

I will share all publicity equally with my fellow investigators, whether such publicity is favorable or unfavorable.

I will be loyal to my superiors, to my subordinates and to the organization I represent.

I will bear in mind always that I am a truth-seeker, not a case-maker; that it is more important to protect the innocent than to convict the guilty.

Westchester County Arson Zone Plan, Police / Fire Directors

Zone #1

Police Zone Director:	Mount Vernon – Chief Barbara Duncan
Fire Zone Director:	Yonkers

Zone #2

Police Zone Director:	Port Chester – Chief Joseph Krzeminski
Fire Zone Director:	

Zone #3

Police Zone Director:	Mount Pleasant – Chief Lou Alagno
Fire Zone Director:	Fairview – Chief Robert Mauro

Zone #4

Police Zone Director:	Peekskill – Chief Eugene Tumolo
Fire Zone Director:	Buchanan – Robert Outhouse, Ex-Chief

Zone #5

Police Zone Director:	Mount Kisco – Chief Steven Anderson
Fire Zone Director:	Chappaqua – Frank Nestro, Ex-Chief

Westchester County Arson Zone Plan – Adjunct Investigator Guidelines

This is a probationary position.

All your actions are subject to evaluation.

The position is for learning only.

You are to work under the supervision and direction of the on scene investigators.

Unless directed by the scene Team Leader you are not to enter a crime scene for any reason.

You are required to meet the same response standards set for Fire Investigators.

The Area Deputy Fire Coordinator may recommend the termination of your position as an adjunct investigator.

You will work within the guidelines set in the WESTCHESTER COUNTY ARSON ZONE PLAN - FIRE INVESTIGATION PROTOCOLS.

I have read the above and both understand and agree to abide by these guidelines.

Adjunct Name:_____

Adjunct Signature:_____ Date:_____

Adjunct's Department(s):_____

Area Deputy Coordinator Signature:_____

Westchester County Cause and Origin Team – Member Data Sheet

Name: _____ Zone # _____

Social Security #:_____

Police/Fire Dept. _____

Work Address: _____

_____ Zip: _____

Work Phone #: _____

Home Address: _____

_____ Zip: _____

Home Phone #: _____

E-mail address _____

Cell Phone #: _____

Pager #: _____

Attached is proof of the referenced applicant's completion of the following programs:

Fire Behavior/Arson Awareness _____

Principals in Fire Investigation _____

80-Hour Fire/Arson Investigation _____

Date Information Obtained: _____

Area Deputy Fire Coordinator: _____

Westchester County Cause and Origin Team
Appointment Form – Zone #1

To: Westchester County Arson Task Force
Executive Committee
C/O Department of Emergency Services
4 Dana Road
Valhalla, New York 10595

From: Police Zone Director – Zone #1: _____
(Signature)

AND

Fire Zone Director – Zone #1: _____
(Signature)

Re: CAUSE AND ORIGIN TEAM MEMBER – APPROVAL OF APPOINTMENT TO THE CAUSE AND ORIGIN TEAM

Attached please find the resume of Police/Fire Officer _____ to be considered for approval by the Executive Committee of the Westchester County Arson Task Force. Approval is sought to add this individual to the Cause and Origin Team operating in Zone #1. This Police/Fire officer has all of the required training set forth in the Westchester County Arson Plan Fire Investigation Protocols and proof of such (copies of training certificates) is attached. A completed Data Sheet must be attached to this form for each Cause and Origin Team Member submitted for consideration by the Westchester County Arson Task Force Executive Committee.

A. This is an *original appointment* to the Cause and Origin Team in Zone #1, the total number of team members shall not exceed six.

B. This is a *replacement appointment.* The addition of Police/Fire Officer _____

Serves as a replacement for Police/Fire Officer _____ operating as a member of the Cause and Origin Team in Zone #1.

C. The new configuration of the Cause and Origin Team in Zone #1 is as follows:

1511 _____ 1514 _____

1512 _____ 1515 _____

1513 _____ 1516 _____

The approval of the Police/Fire Chief of the agency to which this Cause and Origin Team Member belongs is indicated below:

_____, _____
(Chief of Department) Police/Fire Department

Written approval for the above referenced individual to serve as a member of the Cause and Origin Team will be issued by the Arson Task Force Executive Committee and sent to the Police and Fire Zone Directors. Applicants who do not meet the minimum criteria, as set forth in the Arson Zone Plan Fire Investigation Protocols will not be considered for appointment to the Cause and Origin Teams.

Westchester County Cause and Origin Team
Appointment Form – Zone #2

To: Westchester County Arson Task Force
Executive Committee
C/O Department of Emergency Services
4 Dana Road
Valhalla, New York 10595

From: Police Zone Director – Zone #2: _____
(Signature)

AND

Fire Zone Director – Zone #2: _____
(Signature)

Re: CAUSE AND ORIGIN TEAM MEMBER – APPROVAL OF APPOINTMENT TO THE CAUSE AND ORIGIN TEAM

Attached please find the resume of Police/Fire Officer _____ to be considered for approval by the Executive Committee of the Westchester County Arson Task Force. Approval is sought to add this individual to the Cause and Origin Team operating in Zone #2. This Police/Fire officer has all of the required training set forth in the Westchester County Arson Plan Fire Investigation Protocols and proof of such (copies of training certificates) is attached. A completed Data Sheet must be attached to this form for each Cause and Origin Team Member submitted for consideration by the Westchester County Arson Task Force Executive Committee.

A. This is an *original appointment* to the Cause and Origin Team in Zone #2, the total number of team members shall not exceed six.

B. This is a *replacement appointment.* The addition of Police/Fire Officer _____

Serves as a replacement for Police/Fire Officer _____ operating as a member of the Cause and Origin Team in Zone #2.

C. The new configuration of the Cause and Origin Team in Zone #2 is as follows:

1521 _____ 1524 _____

1522 _____ 1525 _____

1523 _____ 1526 _____

The approval of the Police/Fire Chief of the agency to which this Cause and Origin Team Member belongs is indicated below:

_____, _____
(Chief of Department) Police/Fire Department

Written approval for the above referenced individual to serve as a member of the Cause and Origin Team will be issued by the Arson Task Force Executive Committee and sent to the Police and Fire Zone Directors. Applicants who do not meet the minimum criteria, as set forth in the Arson Zone Plan Fire Investigation Protocols will not be considered for appointment to the Cause and Origin Teams.

Westchester County Cause and Origin Team
Appointment Form – Zone #3

To: Westchester County Arson Task Force
Executive Committee
C/O Department of Emergency Services
4 Dana Road
Valhalla, New York 10595

From: Police Zone Director – Zone #3: _____
(Signature)

AND

Fire Zone Director – Zone #3: _____
(Signature)

Re: CAUSE AND ORIGIN TEAM MEMBER – APPROVAL OF APPOINTMENT TO THE CAUSE AND ORIGIN TEAM

Attached please find the resume of Police/Fire Officer _____ to be considered for approval by the Executive Committee of the Westchester County Arson Task Force. Approval is sought to add this individual to the Cause and Origin Team operating in Zone #3. This Police/Fire officer has all of the required training set forth in the Westchester County Arson Plan Fire Investigation Protocols and proof of such (copies of training certificates) is attached. A completed Data Sheet must be attached to this form for each Cause and Origin Team Member submitted for consideration by the Westchester County Arson Task Force Executive Committee.

A. This is an *original appointment* to the Cause and Origin Team in Zone #3, the total number of team members shall not exceed six.

B. This is a *replacement appointment.* The addition of Police/Fire Officer _____

Serves as a replacement for Police/Fire Officer _____ operating as a member of the Cause and Origin Team in Zone #3.

C. The new configuration of the Cause and Origin Team in Zone #3 is as follows:

1531 _____ 1534 _____

1532 _____ 1535 _____

1533 _____ 1536 _____

The approval of the Police/Fire Chief of the agency to which this Cause and Origin Team Member belongs is indicated below:

_____, _____
(Chief of Department) Police/Fire Department

Written approval for the above referenced individual to serve as a member of the Cause and Origin Team will be issued by the Arson Task Force Executive Committee and sent to the Police and Fire Zone Directors. Applicants who do not meet the minimum criteria, as set forth in the Arson Zone Plan Fire Investigation Protocols will not be considered for appointment to the Cause and Origin Teams.

Westchester County Cause and Origin Team
Appointment Form – Zone #4

To: Westchester County Arson Task Force
Executive Committee
C/O Department of Emergency Services
4 Dana Road
Valhalla, New York 10595

From: Police Zone Director – Zone #4: _____
(Signature)

AND

Fire Zone Director – Zone #4: _____
(Signature)

Re: CAUSE AND ORIGIN TEAM MEMBER – APPROVAL OF APPOINTMENT TO THE CAUSE AND ORIGIN TEAM

Attached please find the resume of Police/Fire Officer _____ to be considered for approval by the Executive Committee of the Westchester County Arson Task Force. Approval is sought to add this individual to the Cause and Origin Team operating in Zone #4. This Police/Fire officer has all of the required training set forth in the Westchester County Arson Plan Fire Investigation Protocols and proof of such (copies of training certificates) is attached. A completed Data Sheet must be attached to this form for each Cause and Origin Team Member submitted for consideration by the Westchester County Arson Task Force Executive Committee.

A. This is an *original appointment* to the Cause and Origin Team in Zone #4, the total number of team members shall not exceed six.

B. This is a *replacement appointment.* The addition of Police/Fire Officer _____

Serves as a replacement for Police/Fire Officer _____ operating as a member of the Cause and Origin Team in Zone #4.

C. The new configuration of the Cause and Origin Team in Zone #4 is as follows:

1441 _____ 1444 _____

1442 _____ 1445 _____

1443 _____ 1446 _____

The approval of the Police/Fire Chief of the agency to which this Cause and Origin Team Member belongs is indicated below:

_____, _____
(Chief of Department) Police/Fire Department

Written approval for the above referenced individual to serve as a member of the Cause and Origin Team will be issued by the Arson Task Force Executive Committee and sent to the Police and Fire Zone Directors. Applicants who do not meet the minimum criteria, as set forth in the Arson Zone Plan Fire Investigation Protocols will not be considered for appointment to the Cause and Origin Teams.

Westchester County Cause and Origin Team
Appointment Form – Zone #5

To: Westchester County Arson Task Force
Executive Committee
C/O Department of Emergency Services
4 Dana Road
Valhalla, New York 10595

From: Police Zone Director – Zone #5: _____
(Signature)

AND

Fire Zone Director – Zone #5: _____
(Signature)

Re: CAUSE AND ORIGIN TEAM MEMBER – APPROVAL OF APPOINTMENT TO THE CAUSE AND ORIGIN TEAM

Attached please find the resume of Police/Fire Officer _____ to be considered for approval by the Executive Committee of the Westchester County Arson Task Force. Approval is sought to add this individual to the Cause and Origin Team operating in Zone #5. This Police/Fire officer has all of the required training set forth in the Westchester County Arson Plan Fire Investigation Protocols and proof of such (copies of training certificates) is attached. A completed Data Sheet must be attached to this form for each Cause and Origin Team Member submitted for consideration by the Westchester County Arson Task Force Executive Committee.

A. This is an *original appointment* to the Cause and Origin Team in Zone #5, the total number of team members shall not exceed six.

B. This is a *replacement appointment.* The addition of Police/Fire Officer _____

Serves as a replacement for Police/Fire Officer _____ operating as a member of the Cause and Origin Team in Zone #5.

C. The new configuration of the Cause and Origin Team in Zone #5 is as follows:

1451 _____ 1454 _____

1452 _____ 1455 _____

1453 _____ 1456 _____

The approval of the Police/Fire Chief of the agency to which this Cause and Origin Team Member belongs is indicated below:

_____, _____
(Chief of Department) Police/Fire Department

Written approval for the above referenced individual to serve as a member of the Cause and Origin Team will be issued by the Arson Task Force Executive Committee and sent to the Police and Fire Zone Directors. Applicants who do not meet the minimum criteria, as set forth in the Arson Zone Plan Fire Investigation Protocols will not be considered for appointment to the Cause and Origin Teams.

Addenda

- Westchester County Arson Task Force – Investigation Summary Report (1 page, 5 carbon copies).
- Westchester County Arson Task Force – Investigation Field Notes Form (6 pages)
- Westchester County Arson Task Force – Investigation Narrative Report (1 page to multiple pages, as needed, depending upon the incident)
- Westchester County Arson Task Force – Interview Sheet (1 page)
- Westchester County Arson Task Force – Fire Scene Sketch (1 page)
- Westchester County Arson Task Force – Vehicle Sheet (Short Form) (1 page)
- Westchester County Arson Task Force – Vehicle Sheet (Detail) (3 pages)
- Westchester County Arson Task Force – Photo Log Sheet (1 Page)
- Westchester County Arson Task Force – Evidence Sheet (1 page)
- Westchester County Arson Task Force – Body Sketch Sheet (1 page)
- Westchester County Arson Task Force – Consent to Search Sheet (1 page)