

Avalon Bay Harrison

Town/Village of Harrison, Westchester
County, New York

LEAD AGENCY

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1. Executive Summary

A. DESCRIPTION OF PROPOSED ACTION

This Draft Environmental Impact Statement (“DEIS”) analyzes the potential adverse impacts and proposed mitigation associated with the proposed redevelopment by AvalonBay Communities, Inc. (the “Applicant”) of an approximately 3.79 acre site on Halstead Avenue in the Town/Village of Harrison (the “Town/Village”) as a mixed-use project (the “Project”) with 143 multi-family residential units (including seven affordable units that comply with HUD’s Affirmatively Furthering Fair Housing “AFFH” rule) in three multi-story buildings, approximately 27,000 square feet of commercial space on the ground floor of the three residential buildings, structured parking in two of the three buildings, including a garage with 475 spaces for use by Metro-North Commuter Railroad (“MNR”) customers (the “Commuter Parking Garage”), and utilities and infrastructure improvements, including an underground stormwater management system. The Project also includes the following related actions: adoption by the Town/Village of a new Transit Oriented Development zoning district (“TOD District”); rezoning of the Project site (the “Site”) to the new TOD District; and TOD special exception permit approval, site plan approval, subdivision approval, and Architectural Review Board approval of the Project.

B. REQUIRED APPROVALS AND PERMITS

Project reviews and approvals are listed in the table below.

Table 1-1 Project Approvals and Reviews

Involved Agency	Approval/Review
Harrison Town/Village Board	<ul style="list-style-type: none"> • Adoption of TOD District (Zoning Ordinance Amendment) • Rezoning of Site to TOD District (Zoning Map amendment) • TOD Special Exception Use Approval • Abandonment of a portion of the Halstead Avenue right-of-way, and approval of conveyance of such portion to the Applicant
Harrison Planning Board (Lead Agency)	<ul style="list-style-type: none"> • Recommendation on Zoning Ordinance and Zoning Map amendments



	<ul style="list-style-type: none"> • TOD Special Exception Use approval • Site Plan approval • Subdivision approval
Harrison Architectural Review Board	Architectural approval
Harrison Engineering Department	Land Development Permit
MTA/MNR	<p>Review and approval of the Project, including design and/or construction methods such as:</p> <ul style="list-style-type: none"> • steel erection • crane placement during lifts • utility relocation and protection • drainage/stormwater <p>Review and approval of design of the Commuter Parking Garage)</p> <p>Entry Permit (for work proximate to railroad right-of-way)</p> <p>MTA Board approval of Project</p>
Westchester County Health Department	Sanitary and water supply approval
Westchester County Department of Public Works	Street opening permit; GML 239-f building approval (frontage on County Road)
NYS Department of Environmental Conservation	Stormwater Pollution Prevention Plan ("SWPPP") approval
Interested Agency	Review
Westchester County Planning Board	GML 239-m referral (General Municipal Law advisory review)
NYS Office of Parks Recreation and Historic Preservation	Cultural resources review
Harrison Building Department	Building Permit

C. INVOLVED AND INTERESTED AGENCIES

The list of involved and interested agencies for the project includes:

Lead Agency:

Planning Board of the Town/Village of Harrison
 Harrison Municipal Building
 1 Heineman Place
 Harrison, New York 10528



Interested/Involved Agencies:

Harrison Town/Village Board
1 Heineman Place
Harrison, New York 10528

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MTA
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Westchester County Department of Planning
Westchester County Planning Board
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White Plains, NY 10601-4704

Westchester County Department of Transportation
148 Martine Avenue
White Plains, NY 10601-4704

Westchester County Department of Public Works
148 Martine Avenue
White Plains, NY 10601-4704

Westchester County Department of Health
25 Moore Avenue
Mount Kisco, NY 10549
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12207

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

New York State Office of Parks Recreation and Historic Preservation
HP Field Services Bureau
Pebbles Island
P.O. Box 189
Waterford, NY 12188-0189



D. SUMMARY OF SIGNIFICANT IMPACTS AND PROPOSED MITIGATION MEASURES

1. Land Use and Zoning

Potential Impacts

The proposed Project includes 143 units of multi-family housing (including seven affordable units that comply with HUD's Affirmatively Furthering Fair Housing "AFFH" rule) and approximately 27,000 square feet of commercial space. The proposed multifamily residential, commercial, parking, and open space uses are consistent with the existing Town/Village central business district ("CBD") uses. The Town/Village Comprehensive Plan indicates that "a key goal" of the comprehensive planning process "is for the CBD to accommodate a wide mix of business types as well as residential uses." The proposed Project would be contextually consistent with the zoning districts that are located in and around the CBD.

The Site is currently in the PB (Professional Business) zoning district ("PB District") of the Town/Village. The proposed action includes the establishment of a new TOD District, which would encompass the Site. The proposed TOD District regulations include specific zoning controls that would promote the goals and objectives of the district. The parking ratios for office, retail, and retail services in the TOD District are proposed to be reduced compared to other districts. The proposed regulations provide for shared parking (including of the commuter parking spaces in the Commuter Parking Garage) and reduced minimum dimensions of parking spaces. The regulations require streetscape improvements, publicly accessible open space, and bicycle parking racks or lockers. The proposed dimensional requirements allow for higher density and heights than currently allowed in the PB District. The higher density and heights facilitate the mix of uses proposed for the Project which includes multi-family residential, commercial (retail and restaurant), and commuter parking.

Mitigation Measures

The proposed Project would reinforce the CBD by introducing commercial uses to the northern side of Halstead Avenue, which currently exist only on the southern side. In addition the multi-family residences would complement the multi-family uses that already exist in the CBD, consisting primarily as apartments above existing storefronts. Given the proposed Project's consistency with the land use recommendations contained in the Town/Village Comprehensive Plan, no mitigation measures are required.



The proposed TOD District zoning for the Site has dimensional requirements and standards designed to permit desired and appropriate uses that complement the character of the CBD and achieve the objectives of the Comprehensive Plan. Given the Project's consistency and compatibility with the land use and zoning recommendations contained in the Town's Comprehensive Plan and with the other mixed use zoning districts located in the CBD, no mitigation measures are required.

2. Visual Resources and Community Character

Potential Impacts

The Project would consist of three buildings of varying heights from 62 feet up to approximately 75 feet. The visual character of the proposed development would be different from the existing conditions. The Project would replace the four existing on-site at-grade asphalt parking lots containing 260-spaces and the 1.05 acre centrally located informal open space area (which is not classified as parkland) with three mixed-use buildings, including a parking garage and two landscaped publicly accessible plazas. New streetscaping would be installed along Halstead and Harrison Avenues. The Project has been designed as a "Transit Oriented Development" that physically connects and integrates with the MNR Harrison Station by providing structured commuter parking, and attractive new housing opportunities, restaurants and retail venues for commuters.

Mitigation Measures

The Site would contain a greater concentration of building mass than the existing condition. The Project would be a more extensive development of the Site than the existing condition, with three buildings of varying heights of up to approximately 75 feet, and would cause some limited shadow impacts. The proposed buildings would not adversely impact any significant public views and therefore no mitigation is required.

3. Natural Resources

Potential Impacts

No New York State or federally-listed endangered or threatened plant species have been identified on the Site. The Project would include two landscaped plazas and street trees along Halstead Avenue.

Mitigation Measures

No significant adverse impacts to ecological resources on or adjacent to the Site are anticipated to result from implementation of the Project, since the Site would continue to be primarily developed and support landscaped habitats. No mitigation is required.



4. Wetlands and Waterbodies

Potential Impacts

The Site is currently a paved parking lot and a central informal park and sitting area which is known as Jilly Flowers Park, although it is not dedicated parkland. The Site is located in a built environment within a downtown center and does not contain any natural features including wetlands, wetland buffers, waterbodies, watercourses, or floodplains. There are wetlands within $\frac{1}{4}$ of a mile of the Site located on the eastern end of Halstead Avenue along the Beaver Swamp Brook. Floodplains are also located within a $\frac{1}{4}$ mile of the Site in proximity to the Brentwood Brook to the west and in proximity to the Beaver Swamp Brook to the east. The Project would not directly affect these wetlands or floodplains, or any other wetlands, waterbodies, watercourses, or floodplains near the Site. Storm drainage patterns would not be altered and the flood risks of the nearby Beaver Swamp Brook and Brentwood Brook would not be increased.

Mitigation Measures

Potential short-term impacts due to construction would be mitigated through the implementation of a Sediment and Erosion Control Plan. No long-term impacts are anticipated. Therefore, no long-term mitigation measures are proposed.

5. Geology – soils, topography, and steep slopes

Potential Impacts

The entirety of proposed construction would be located in areas mapped as Uf soils. Approximately 35,000 cubic yards of soils would be removed from the Site. It is estimated that a total of 1,950 truckloads of soils (4-5 truckloads each day), with each truckload carrying approximately 18-22 tons of material, would be required. All soils would be removed in compliance with applicable federal, State, and local codes. The majority of the construction would be constructed on slopes 0 to 15 percent.

The removal of rock by blasting would be performed in accordance with all applicable federal, State, and local codes (Town/Village Code Chapter 135: Explosives and Blasting). During construction, careful attention would be paid to the adjacent property owners and any adjacent structures would be monitored during activities to ensure that there is no impact from blasting operations.

Mitigation Measures

By phasing the Project, the total amount of land disturbed at any time would be reduced. The removal of rock by blasting would be performed in accordance with all applicable federal, State, and Town/Village codes and comply with MNR requirements.



All disturbed soils would be re-used to the extent practicable. Excavated soil found to be unsuitable for reuse would be removed from the Site and disposed of in accordance with all applicable laws. Suitable soils for use under the driveway, walk, and plaza areas would be brought to the Site as needed.

6. Cultural, Archeological, and Historical Resources

Potential Impacts

The New York State Historic Preservation Office has confirmed that the Project “will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.” No additional cultural resources investigation is required.

Mitigation Measures

No mitigation is required.

7. Fiscal

Potential Impacts

Based on an estimated assessed value of \$592,556, the total annual property taxes from the Project to all taxing jurisdictions would be approximately \$781,579, almost 100% greater than the taxes currently generated. Since the Site is currently tax-exempt (except for Refuse Disposal District assessments), the generation of taxes from the Site would be a net positive contribution to the tax bases of the Town/Village and other taxing jurisdictions.

Mitigation Measures

The Project would result in a net positive impact for the taxing jurisdictions, including the Harrison Central School District, the Town/Village and Westchester County. No mitigation is required.

8. Community Facilities

Schools

Potential Impacts

School children generation data was collected from local rental apartment facilities, which were all constructed relatively recently, with rents similar to anticipated rents at the Project. Based on the multipliers from these similar communities, the Project would generate between four and ten school-age children. It is anticipated that the Project would generate approximately \$445,012 in property taxes for the Harrison Central School District. Assuming four to ten new public school students, the proposed Project would result in an annual cost to the Harrison Central School District of between \$87,092 to \$217,730, which would yield a net tax benefit to the district of between \$227,282 and \$357,920 per year.



Mitigation Measures

Four to ten new school children would increase Harrison Central School District enrollment by approximately 0.3%. This increase is not considered significant. Given this, and the net tax benefit, no mitigation is required.

Police/Fire/EMS

Potential Impacts

The impacts to the Town/Village Emergency Medical Service ("EMS") and Fire and Police Departments as a result of the additional population from the new residences and the commercial uses would be insignificant, and adequately mitigated by additional revenues from the Project.

Mitigation Measures

Any adverse impacts to Town/Village EMS and Fire and Police Departments would be offset by the taxes generated by the Project. No other mitigation measures are required.

The proposed residential buildings would contain fire suppression sprinklers and all Project construction, including parking garages, would comply with local and State building codes.

Open Space/Recreation

Potential Impacts

The majority of the existing Site is surface parking lots with an approximately 1.05 acre publicly accessible open space located approximately in the middle of the Site. The open space is isolated and bounded by the railroad tracks, Halstead Avenue and parking lots. The open space is not dedicated parkland and is not a significant source of open space or recreation for the Town/Village.

The Project includes constructing two landscaped publicly accessible plazas (the West plaza is approximately 6,500 square feet and the East plaza is approximately 7,500 square feet) that will connect the Harrison MNR Station platform with Halstead Avenue. These plazas would contain pedestrian amenities, such as benches, planters, trees, decorative pavement, passive open space, and bicycle racks.

Mitigation Measures

Although the existing open space area would be eliminated, it would be replaced with two publicly accessible plazas and a passive landscaped open space area. The new publicly accessible open space areas would be easily accessible via Halstead Avenue and would provide critical pedestrian links to the Station. It is anticipated that the new publicly accessible open space areas would better serve the Town/Village's open space needs. No other mitigation measures are required.



Solid Waste

Potential Impacts

Based on New York State Department of Environmental Conservation (“NYSDEC”) standard residential solid waste multipliers, at full build out, new residents of the Project would generate approximately 5 pounds per person per day of solid waste. The residents would produce approximately 536,550 pounds per year. Solid waste and recyclables would be stored on-site in compliance with all applicable codes, and removed by licensed carters to be disposed of or recycled at licensed facilities.

Mitigation Measures

The amount of new solid waste is not anticipated to overburden municipal facilities or create adverse impacts. No mitigation is required.

9. Traffic

Potential Impacts

It is anticipated that 55 to 60 percent of potential residents of the Project would take mass transit to and from work. The Project is conservatively expected to generate 57 new vehicle trips during the AM Peak Hour and 139 new vehicle trips during the PM Peak Hour for the residential and retail uses.

During the AM Peak Hour, it is anticipated that there would be 16 new commuter trips due to the additional commuter space in the parking garage, of which 6 would be drawn from the existing drop-off/pick-up activity, for a net increase of 10 commuter trips. During the PM Peak Hour, there would be 37 new commuter parkers that would be drawn from existing drop-off/ pick-up traffic of which 16 would be the existing drop-off/pick-up activity, resulting in a net increase of 21 trips.

With the added traffic from the Project and the increase in commuter parking trips there would be only a slight increase in overall intersection delays in the vicinity, generally on the order of 1.4 seconds or less, with one exception. The exception is during the PM Peak Hour at the Halstead Avenue and Harrison Avenue intersection where overall delays would increase by 6.4 seconds compared to the “No-Build” condition (in which the Project is not implemented), mainly due to the added delays on the westbound through/right-turn movement which is projected to operate at LOS “F”. At the unsignalized intersections, including the new Project driveway intersections, the minor street turning movements would operate at LOS “C” or better during the AM and PM Peak Hours.

Mitigation Measures

The Project would not have a significant impact during the AM Peak Hour as delays would increase by 2.5 seconds or less at the signalized intersections. During the PM Peak Hour, the added Project traffic at the Halstead Avenue and Harrison Avenue intersection would result in a significant increase in delay



on the westbound through/right-turn movement. To mitigate that impact, it is recommended that the signal timings be adjusted to provide additional green time to the westbound approach. With this modification, the overall intersection delays would increase by only 1.1 seconds and operations will be similar to the "No-Build" condition.

At the unsignalized intersections, including the new Project driveway intersections, the minor street turning movements will operate at LOS "C" or better during the AM and PM Peak Hours.

10. Stormwater Management

Potential Impacts

The Project would not result in adverse impacts or detrimental changes to the quality of stormwater runoff discharged from the Site. No increases in peak rates of runoff would occur due to the Project.

Mitigation Measures

Stormwater runoff would be managed on-site by a proposed internal storm collection system. The system would convey runoff to a proposed underground stormwater management area located centrally on the Site, which would be designed to control the peak flows from the Site so that rates are equal or less than the predevelopment peak flow rates for all studied storm events. In addition to proposed site drainage infrastructure, it is proposed to upgrade the existing storm system along Halstead Avenue from the Site to its intersection with Oakland Avenue.

A detailed Sediment and Erosion Control Plan ("S&E Control Plan") would mitigate short-term construction impacts. The S&E Control Plan would include descriptive specifications concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. All of the sediment and erosion controls provided would be designed in accordance with the New York Standards and Specifications for Erosion and Sediment Control, dated August 2005.

11. Utilities

Water Supply

Potential Impacts

The estimated domestic average daily demand from the Project would be 37,117 gallons per day (gpd) for all of the proposed uses. The proposed residential buildings and the garage would contain fire suppression sprinklers. It is anticipated that one separate fire/domestic lateral would be installed from the existing 12" water main in Halstead Avenue to each of the proposed buildings. No on-site water tanks or booster pump stations would be needed.



Mitigation Measures

Since the water supply is currently available and sufficient capacity exists to service the Project, no mitigation measures are required.

Sanitary Sewer

Potential Impacts

The estimated sewage generation from the Project would be 33,405 gpd with a peak flow of 95 gallons per minute (gpm) utilizing industry standards. A downstream capacity analysis indicated that the Parsons Street and Oakland Avenue sewer systems have adequate capacity to serve the Project without any infrastructure upgrades.

Mitigation Measures

No upgrades would be needed to Town/Village sewer facilities to serve the Project. Since sanitary service is currently available and sufficient capacity exists to service the Project, no mitigation measures are required.

Electricity

Potential Impacts

The Proposed Action will increase electrical usage at the site. It is anticipated that the Proposed Action will be serviced by Consolidated Edison and the site lies within a developed corridor that service can be easily obtained. The electric service will tie into the existing electric lines located in Halstead Avenue. Existing on-site utility service connections will be abandoned, and utility facilities serving the rail platform from Halstead Avenue will be reviewed as necessary. It is proposed to remove the eastern half of overhead high-voltage wires on the site and place them underground to allow for construction of the parking garage.

Mitigation Measures

It is anticipated that no upgrades will be needed to service the project. The existing electric facilities located along Halstead Avenue will be suitable for the development.

Telecommunications and Cable

Potential Impacts

The Project Site will have high speed internet, fiber cable and phone service to the buildings with Wifi hotspots in the amenity areas.



Mitigation Measures

It is anticipated that no upgrades will be needed to service the project. The existing telephone and cable facilities along Halstead Avenue will be suitable for the development.

Gas

Potential Impacts

Gas service would be provided to the Project Site by tying into the existing underground gas line on Halstead Avenue and all work will be coordinated with Consolidated Edison.

Mitigation Measures

It is anticipated that no upgrades will be needed to service the project. The existing gas facilities along Halstead Avenue will be suitable for the development.

12. Noise

Potential Impacts

The new uses would not generate significant noise. The proposed Project would result in a combination of residential, commercial, and parking garage uses on land that is currently used primarily for parking lots. The Project would introduce a new source of noise (compared with open space), but the proposed uses would be consistent with the uses identified in the 2013 Town/Village Comprehensive Plan as well as with surrounding land uses.

Construction related sound levels experienced by the sensitive receptors in the Site vicinity would be a function of distance. No receptor would be exposed to the same sound levels over an extended period of time, because equipment is utilized in different locations as construction progresses. Occasional noise levels at the Site property line are projected to range between 65 dBA and 90 dBA, depending on the actual location of construction equipment at any given time. These elevated noise levels would be sporadic during the construction period.

Mitigation Measures

Construction noise impacts would be temporary. The Project would comply with the noise requirements of Chapter 177 of Town/Village Code, and would use best management practices during construction. Post-construction, the Project would not significantly increase ambient noise levels in the vicinity. No mitigation measures are required.



13. Air

Potential Impacts

The Site is located in a maintenance area for Carbon Monoxide (CO), although the background CO concentration is relatively small, less than 1% and 15% of the respective 1-hour and 8-hour National Ambient Air Quality Standards. .

The Project may require emergency generators, and would require boilers, or other fuel burning sources. The specific equipment parameters, such as the number of units, size, and location, would be determined when building design progresses.

Construction activities associated with grading and excavation on the Site could result in temporary air quality impacts. The construction period would extend up to 33 months. Any required permits from NYSDEC Division of Air Resources would be obtained.

Mitigation Measure

Long term impacts to air quality are not anticipated due to the Project, therefore, no long term mitigation measures are required. Short term impacts to air quality due to construction are expected but would be temporary (during the 33 month period). Construction would be conducted in accordance with approved site plans and in accordance with all applicable federal, State and Town/Village codes. Specific mitigation measures for short term impacts during construction would include prohibition of excessive construction equipment idling, outfitting all construction equipment and vehicles with appropriate features to limit exhaust fumes, wetting and stabilizing soils to suppress dust generation, and covering trucks carrying solid and other dry materials.

14. Hazardous Materials

Potential Impacts

The proposed Project would include the removal of the existing surface parking lots. Phase I and Phase II Environmental Site Assessments performed for the Site confirm that existing environmental conditions would not restrict the redevelopment of the Site as a mixed-use facility.

Mitigation Measures

Impacts due to hazardous materials are not anticipated. Certain soils excavated as part of construction activities may not be considered unrestricted clean fill. A soil management plan would be implemented for construction of the Project.



15. Construction

Potential Impacts

The Project would be constructed in three phases within a timeframe of approximately 33 months. Commercial and mixed-use buildings along Halstead and Harrison Avenues may experience elevated noise levels, fugitive dust and emissions at occasional periods during the construction phases. Construction will commence with the expansion of existing Lot # 2 east to Lot #3 to accommodate approximately 134 parking spaces. When added to the 126 spaces in Lot # 1, this will provide a total of approximately 260 parking spaces. The Commuter Parking Garage will then be constructed, after which, 260 of the 584 parking spaces will be made available for commuter parking while construction of the balance of the project commences.

All construction delivery vehicles will be directed to use I-95 to access the site and to enter and exit I-95 at Exit 19 and use Halstead Avenue to travel to and from the site.

Mitigation Measures

Construction will be conducted in accordance with the approved site plan and in accordance with all applicable federal, State, and local codes and MNR requirements. Impacts from construction will be temporary and would be mitigated through the management of the construction process.

E. SUMMARY OF ALTERNATIVES

Three alternative concepts for redevelopment of the Site (Alternatives B through D) were analyzed, along with the "No Action" alternative. The alternatives are compared with the Proposed Action, at a level of detail sufficient to generally compare potential impacts. Table 4-1 summarizes the comparison of the Proposed Action with the "No Action" Alternative and Alternatives B through D.

Alternative A: "No Action"

The "No Action" Alternative is required by the SEQRA regulations to be described in a draft environmental impact statement. The "No Action" alternative assumes that no new development would occur on the Site. In this scenario, the existing parking lots would remain and would continue to be used for commuter parking. While this alternative would have less potential impacts than the Proposed Action, it would not yield any of the benefits of the Project including additional tax revenue and improved access to the MNR Harrison Station.

Alternative B: Alternative Plan under the Existing Zone

This alternative envisions redevelopment of the Site under current PB District regulations. The plan for this alternative would include construction of a two-story residential building with an 11,000 square foot



leasing office/amenity use, 5,000 of retail space, 38 apartment units and 114 parking spaces in a surface parking lot located at the rear of the building. This alternative would also include a separate two-story parking garage with 260 parking spaces for use by MNR commuters. Based on existing tax rates, the estimated amount of taxes that would be generated from this alternative would be approximately \$404,454.

Alternative C: Development under traditional zoning controls (not employing TOD principles)

Alternative C assumes development under traditional zoning controls that do not employ Transit-Oriented Development (TOD) principles such as transitional parking ratios, shared parking, and a focus on pedestrian or alternative transportation modes. Alternative C would include 126 residential rental apartments and 28,000 square feet of retail space in a four-story mixed use building. A separate three-story parking garage would also be constructed on the Site and would contain a total of 404 parking spaces with 260 spaces for MNR commuters, 100 spaces for residents, and 44 spaces for the retail use. An additional 58 residential and 50 retail parking spaces would be provided in a surface lot at the rear of the mixed use building. No open space would be provided in Alternative C. Based on existing tax rates, the estimated amount of taxes that would be generated from this alternative is approximately \$688,664.

Alternative D: Alternative Plan Based on Identified Significant Environmental Impacts

In the Applicant's opinion, the proposed Project would not result in any significant adverse impacts. All potential impacts identified in this DEIS would not be significant and, where appropriate, would be mitigated to the maximum extent practicable. It is also the Applicant's opinion that the Project would benefit the CBD more than the alternatives. Therefore, no alternative plan based on identified environmental impacts has been developed for the Site.

Summary of Alternatives:

The "No Action" alternative would not yield any of the benefits of development. Alternative B (Alternative Plan under the Existing Zone) and C (Development under traditional zoning controls, not employing TOD principles) are development scenarios. However, neither alternative would maximize potential benefits. Since no significant adverse impacts are expected as a result of the Project, a plan for Alternative D (Alternative Plan based on identified significant environmental impacts) was not developed.



2. Description of Proposed Action

A. INTRODUCTION

This Draft Environmental Impact Statement (the “DEIS”) analyzes the potential significant adverse impacts and proposed mitigation associated with the proposed redevelopment by AvalonBay Communities, Inc. (the “Applicant”) of an approximately 3.79 acre site on Halstead Avenue in the Town/Village of Harrison (the “Town/Village”) as a mixed-use project with 143 multi-family residential units divided between three multi-story buildings, 27,000 square feet of commercial space on the ground floor of the three residential buildings, structured parking in two of the three buildings, including a garage with 475 spaces for use by Metro-North Commuter Railroad (“MNR”) customers, to be owned by Metropolitan Transportation Authority (the “Commuter Parking Garage”, and utilities and infrastructure improvements, including an underground stormwater management system (the “Project”). The Proposed Action also includes the following related actions: adoption by the Town/Village of a new Transit Oriented Development zoning district (“TOD District”); rezoning of the Project site to the new TOD District; and TOD special exception permit approval, site plan approval, and Architectural Review Board approval of the Project, and subdivision of the Site to create a separate lot on which the Commuter Parking Garage would be located (the Project and all such actions together, the “Proposed Action”). The conceptual site plan of the Project is in Appendix C and Exhibit 1 displays the regional location of the Project.

Site Location and Ownership

The Project site (the “Site”) is located in the southern portion of the Town/Village, fronting on Halstead Avenue and within the Central Business District (Section 18, Block 182, Lots 12 and 15). The Site is 3.79 acres in size and currently contains 260 parking surface spaces within four parking lots on 2.50 acres of impervious asphalt. The Project Site contains 1.05 acres of open space, which is surrounded by the MNR right-of-way to the rear, parking lots on both sides, and Halstead Avenue to the front. In addition, there is 0.24 acres of undeveloped land that acts as a landscaped buffer strip surrounding the parking lots. The Site is presently owned by the Metropolitan Transportation Authority (the “MTA”). In March, 2015, the Applicant, MTA, MNR, and the Town/Village entered into a Joint Development Agreement (the “JDA”) pursuant to which the parties agreed to perform certain preliminary planning and other activities necessary to formulate the Proposed Action. The JDA provides that MTA, MNR and the Applicant will upon conclusion of the review of the Proposed Action under the State Environmental Quality Review Act (“SEQRA”) and grant by the Town/Village of the necessary Project approvals, enter into a Land



Regional Location

Harrison, New York

Avalon at Harrison

Source: GIS Westchester County; BingMaps



Disposition and Development Agreement for the sale of the Site to the Applicant (except the parcel on which the Commuter Parking Garage will be located, which will be retained by MTA), and construction by the Applicant of the Project.

Existing Zoning

The Site is located in the PB (Professional Business) zoning district (“PB District”). Dimensional regulations of the PB District include 50% maximum coverage for multiple dwelling buildings, minimum 50 foot lot width, 20 foot yard rear and side setbacks, 35 feet (or 2 stories) maximum height, and minimum of 600 square feet of habitable floor area for dwelling units. See Chapter 3A, Land Use and Zoning for more detail on the existing zoning.

B. DESCRIPTION OF PROPOSED ACTION

1. Residential Component

A 143 apartment complex is proposed to replace the existing surface parking facilities. There will be 136 market-rental apartment units, while the remaining 7 units will be affordable units that comply with HUD’s Affirmatively Furthering Fair Housing “AFFH” rule meeting Westchester County affordable housing requirements. . The breakdown of the types of units is provided below. The units will be distributed between the three structures to be constructed on the Site. There will be 179 spaces of residential parking located in Building A and C (See Exhibit 2, Site Plan).

Proposed Residential Units			
1 Bedroom	2 Bedroom	3 Bedroom	Total
76	59	8	143

2. Commercial Component

The Project includes 27,000 square feet of commercial (retail and/or restaurant) space, currently anticipated to be in three separate spaces of 8,000, 7,000, and 12,000 square feet (“SF”). The commercial spaces will be designed to accommodate future modifications to meet tenant needs. There will be 109 parking spaces allocated for the commercial uses within the development located in Buildings A and C. Surface parking spaces will be located behind Building A for retail use.

3. Parking Component

The Project contains a total of 751 parking spaces of which 584 parking spaces in the Commuter Parking Garage in Building C, of which 475 spaces will be designated for MNR customer parking, and 109 spaces will be for residents and the commercial uses: and 167 spaces at-grade and in a parking garage in

GENERAL NOTES

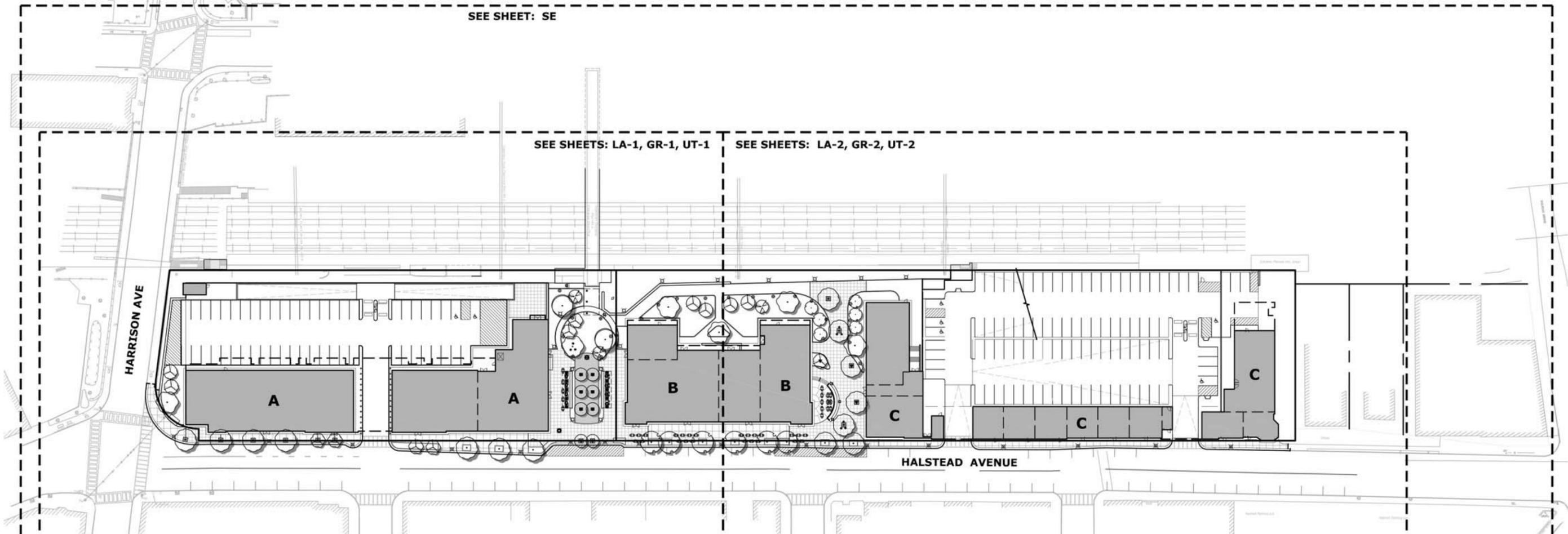
- BOUNDARY AND TOPOGRAPHIC INFORMATION IS BASED UPON A MAP PREPARED BY WELSH ENGINEERING & LAND SURVEYING P.C. ENTITLED "TOPOGRAPHIC & BOUNDARY SURVEY AND LOT LINE CORRECTION - HARRISON STATION", SCALE 1"=20', DATED: APRIL 8, 2016. SEE SHEETS 1-4.
- MILONE & MACBROOM INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, NEW YORK - 2005", AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.
- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "DIG SAFELY NEW YORK", 1-800-968-7962. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
- ALL PROPOSED UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION AND SIZE OF ELECTRIC, TELEPHONE, CABLE TELEVISION, AND GAS ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES. CERTAIN PORTION OF OVERHEAD ELECTRICAL UTILITY SERVICES TO REMAIN ABOVE GROUND, REFER TO PLANS FOR THAT INFORMATION.
- ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL, AND BE SEEDED WITH GRASS, AS SHOWN ON THE PLANS. ALL DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION AREA SHALL BE REPAIRED IN ACCORDANCE WITH TOWN OF HARRISON REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
- ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF HARRISON REQUIREMENTS AND TO THE

- APPLICABLE SECTIONS OF THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ALL GUTTERS AND ROOF DRAINS SHALL BE TIED INTO THE PROPOSED STORM DRAINAGE SYSTEM.
 - THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH UTILITIES IMPACTED BY THIS PROJECT INCLUDING DEMOLITION AND NEW WORK. ALL UTILITY WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF EACH UTILITY COMPANY HAVING JURISDICTION IN THE PROJECT AREA. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
 - THE PROPOSED BUILDINGS ARE TO BE CONNECTED TO PUBLIC WATER AND SANITARY SEWER.
 - ALL RETAINING WALLS IN EXCESS OF 4 FT. EXPOSED HEIGHT SHALL BE DESIGNED BY A NEW YORK STATE PROFESSIONAL ENGINEER AND BE ACCOMPANIED BY A CONSTRUCTION DETAIL AND CROSS SECTION VIEW SHOWING MATERIALS TO DESCRIBE THE PROPOSED WALL DESIGN AND AESTHETICS, AND CALCULATIONS. ALL DESIGN MATERIALS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.
 - THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROLS UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
 - THE CONTRACTOR IS RESPONSIBLE FOR SECURING WORK AREA.
 - COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITEE.

EROSION CONTROL NOTES

- SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER.
- THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MODIFIED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND THE TOWN'S DESIGNATED REPRESENTATIVE AS NECESSITATED BY CHANGING SITE CONDITIONS.
- ALL DEWATERING WASTE WATERS SHALL BE DISCHARGED IN A MANNER WHICH MINIMIZES THE DISCOLORATION OF THE RECEIVING WATERS.
- THE SITE SHOULD BE KEPT CLEAN OF LOOSE DEBRIS, LITTER, AND BUILDING MATERIALS SUCH THAT NONE OF THE ABOVE ENTER WATERS OR WETLANDS.
- A COPY OF ALL PLANS AND REVISIONS, AND THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE MAINTAINED ON-SITE AT ALL TIMES DURING CONSTRUCTION.

\\vhb\proj\WhitePlains\291626\AvalonBay-Harrison\graphics\FIGURES\InDesignFiles\29162600_OverallSitePlan_11_1_16.rvt



Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

Overall Site Plan

Source: Milone & MacBroom



Building A, of which 115 will be for residents of the development, and 52 spaces will be designated for patrons of the commercial uses.

There will also be pedestrian access from the Commuter Parking Garage to the Harrison Metro-North Station.

4. Site Access

The Site is located prominently on Halstead Avenue in the downtown of the Town/Village. Vehicular access to Project parking will be provided via three driveways off Halstead Avenue. Access to the Building A parking will be from one driveway off Halstead Avenue that provides access to the basement residential parking and ground floor retail parking. Two driveways off Halstead Avenue will provide vehicular access to the Building C Commuter Parking Garage.

Pedestrian access to retail establishments will be from Halstead Avenue. Pedestrian access to the residential units is provided through a lobby for each building located off public plazas. The Harrison Metro-North Railroad Station will be accessible to the public from the Commuter Parking Garage located in Building C, or from the public plazas which connect Halstead Avenue to the station entrance. Additionally, pedestrian access to the Site will also be available from the north via the existing MNR station overpass walkway. Taxi stands will be located at the entrance to each of the public plazas to further facilitate access to the station. The taxi stands will be located in the parking lane on Halstead Avenue so will not impede traffic.

5. Architectural Design, Landscaping, and Open Space

The Project design takes cues from existing storefronts opposite Halstead Avenue, and is intended to complement and complete the Halstead Avenue streetscape. The scale is mitigated by dividing the mass of the proposed buildings into visually and materially distinct parts. Materials have been selected that relate to the scale, color and textures of existing buildings and compliment the established character of the downtown. Brick, stone, horizontal siding, stucco and asphalt shingles provide the visual and tactile richness appropriate for the pedestrian scale, particularly at sidewalk level. The use of dormers and steep-slope roofs further soften the Project's street profile and visual scale. Parking is pushed behind and below the buildings to visually screen it from the street, while maintaining easy access to the Project retail spaces as well as nearby retail uses.

The Project includes constructing two landscaped public plazas that will connect the Harrison Metro-North Railroad Station platform with Halstead Avenue. These plazas will contain pedestrian amenities, such as benches, planters, trees, decorative pavement and bicycle racks. The plazas will provide pedestrian connections to Halstead Avenue so that train passengers will not need to walk through a parking lot to get to the street. Residents of the Project will use the plazas to access the train station and Halstead Avenue. The plazas will also be designed to provide a safe and inviting waiting area for



train passengers and respite for local workers and visitors shopping at the adjacent retail uses. Visually, the plazas will offer breaks in the building wall, visual appeal, and an indication of where to enter the Metro-North Railroad Station.

6. Related Actions

In December, 2015, the Applicant, with MTA's consent, submitted a petition (the "Petition") to the Town/Village for amendments to the Town/Village Zoning Ordinance creating the new TOD District, and if the amendments are adopted, rezoning of the Site to TOD District. The Petition also requests that the Town/Village Board discontinue as a public street an 11 foot wide portion of Halstead Avenue in front of the Site, and authorize the conveyance of the former road-bed to the Applicant for redevelopment as part of the Project. The Project will require Town/Village Board approval for the following: adoption of TOD District (Zoning Ordinance Amendment), rezoning of Site to TOD District (Zoning Map amendment), TOD Special Exception Use Approval, abandonment of a portion of the Halstead Avenue right-of-way, and approval of conveyance of such portion to the Applicant. Subdivision and site plan approvals will be required from the Planning Board. Additional approvals are listed below in Table 2-1.

C. PROJECT PURPOSE, NEED AND BENEFITS

The Project will activate the northern side of Halstead Avenue, supporting current businesses while also enticing others to locate in the Central Business District. The Project will advance the goal of the 2013 Comprehensive Plan of the Town/Village to "continue to promote development of an attractive and appealing downtown CBD which has distinctive character and which achieves a high standard of pedestrian and urban amenities." (Town/Village Comprehensive Plan, pg. 83)

The population of Westchester County and the Town/Village is growing and the housing market remains tight, especially for rentals, which constitute only 38.1% of the homes in the County¹. The housing in the Town/Village and the County is of an older vintage, the majority of which was built before 1960. As noted in the Town/Village's Comprehensive Plan, 70.9% of the housing units in the Town/Village were built in 1969 or earlier. It is also important to note that the production of new housing units in the County and in the Town/Village has been low. Only 131 housing units were constructed between 2005 and 2010. This represents only 1.5% of the total housing units in the Town/Village, according to the Comprehensive Plan. This limits the overall supply of housing.

There is a need to increase the supply of housing in Westchester, especially multi-family housing. "Transit-Oriented Development" is in high demand within the County, as housing preferences are

¹ Selected Housing Characteristics, 2010-2014 American Community Survey 5-Year Estimates.



shifting towards living in walkable communities that are in close and easy proximity of transit as well as services and amenities (Comprehensive Plan, pg.21-22).

In addition, the Project is specifically addressed in the 2013 Comprehensive Plan.

“On the northern side of Halstead, the streetscape is interrupted by two parcels totaling about 3.5 acres, which contain the Metro-North train station commuter surface parking lots and a small area of public open space, known as Jilly Flowers Park. At this area, the Town and Metro-North Railroad are jointly advancing the development of the two parcels for a potential transit-oriented development (TOD) project that could potentially include residential, retail and municipal uses, pedestrian plazas, a new parking structure and associated streetscape improvement,” (Town/Village of Harrison Comprehensive Plan, pg. 80).

D. PROJECT APPROVALS AND REVIEWS

Under SEQRA, involved agencies are those which have approval authority over a proposed action. Interested agencies are those other agencies that have an interest in a proposed action, but not an approval. Project reviews and approvals by involved agencies and reviews by interested agencies are listed in Table 2-1, below.

Table 2-1 Project Approvals and Reviews

Involved Agency	Approval/Review
Harrison Town/Village Board	<ul style="list-style-type: none"> • Adoption of TOD District (Zoning Ordinance Amendment) • Rezoning of Site to TOD District (Zoning Map amendment) • TOD Special Exception Use Approval • Abandonment of a portion of the Halstead Avenue right-of-way, and approval of conveyance of such portion to the Applicant
Harrison Planning Board (Lead Agency)	<ul style="list-style-type: none"> • Recommendation on Zoning Ordinance and Zoning Map amendments • TOD Special Exception Use approval • Site Plan approval • Subdivision approval
Harrison Architectural Review Board	Architectural approval
Harrison Engineering Department	Land Development Permit
MTA/MNR	Review and approval of the Project, including design and/or construction methods such as: <ul style="list-style-type: none"> • steel erection • crane placement during lifts • utility relocation and protection



	<ul style="list-style-type: none"> • drainage/stormwater Review and approval of design of the Commuter Parking Garage) Entry Permit (for work proximate to railroad right-of-way) MTA Board approval of Project
Westchester County Health Department	Sanitary and water supply approval
Westchester County Department of Public Works	Street opening permit; GML 239-f building approval (frontage on County Road)
NYS Department of Environmental Conservation	Stormwater Pollution Prevention Plan ("SWPPP") approval
Interested Agency	Review
Westchester County Planning Board	GML 239-m referral (General Municipal Law advisory review)
NYS Office of Parks Recreation and Historic Preservation	Cultural resources review
Harrison Building Department	Building Permit

The list of involved and interested agencies for the Project includes:

Lead Agency:

Planning Board Town/Village of Harrison
 Harrison Municipal Building
 1 Heineman Place
 Harrison, NY 10528

Interested/Involved Agencies:

Harrison Town/Village Board
 1 Heineman Place
 Harrison, NY 10528

Harrison Town/Village Architectural Review Board
 1 Heineman Place
 Harrison, NY 10528

Harrison Building Department
 1 Heineman Place
 Harrison, NY 10528



Harrison Central School District
50 Union Avenue
Harrison, NY 10528

Harrison Fire Department
206 Harrison Avenue
Harrison, NY 10528

Harrison Emergency Medical Services
P.O. Box 68
Harrison, NY 10528

Harrison Police Department
1 Heineman Place
Harrison, NY 10528

MNR
420 Lexington Avenue, 11th Floor
New York, NY 10170

MTA
2 Broadway, 4th Floor
New York, NY 10004

Westchester County Department of Health
25 Moore Avenue
Mount Kisco, NY 10549

Westchester County Department of Planning
Westchester County Planning Board
148 Martine Avenue, Room 432
White Plains, NY 10601-4704
Westchester County Department of Public Works
148 Martine Avenue
White Plains, NY 10601-4704

New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12207

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561



New York State Office of Parks Recreation and Historic Preservation
HP Field Services Bureau
Peebles Island
P.O. Box 189
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Poughkeepsie, NY 12603

Notices only:
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3. Environmental Impacts and Mitigation Measures

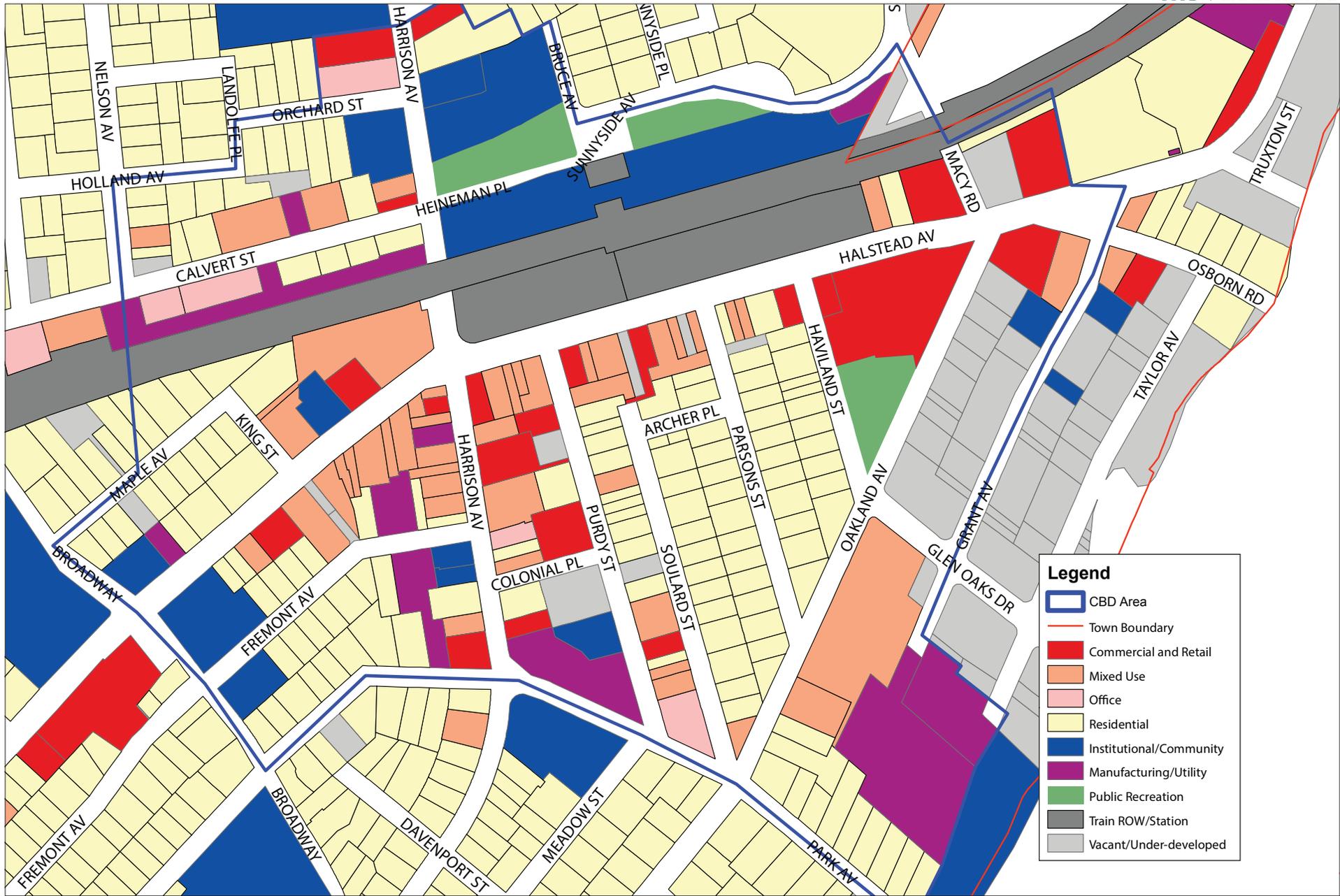
A. LAND USE AND ZONING

1. Land Use

a) Existing Conditions

The Harrison Central Business District (“CBD”), as defined in the 2013 Comprehensive Plan (see Exhibit 3A-1 CBD Land Use Map), encompasses the area between the intersection of Broadway and Halstead Avenue to the west; Orchard Street and Harrison Avenue to the north; Grant and Halstead Avenues to the east and Park Avenue and Harrison Avenue to the south.

The Central Business District is characterized by a range of residential, retail, restaurant, mixed commercial, parking, institutional, industrial and park uses (2013 Comprehensive Plan, pg. 77). Mixed-use buildings found within the CBD contain residential apartment units or offices above first floor commercial uses. The mixed-use buildings tend to range between two- and four-stories in height. The ground-floor uses are mostly retail or restaurants. The east-west Halstead Avenue corridor serves as the traditional “main street” of Harrison’s downtown. Along Halstead Avenue, there are mostly mixed-used buildings, with some residences and community uses scattered in between, including the Harrison Senior Citizen Center and St. Gregory’s Church. Harrison Avenue, another corridor within the CBD, primarily contains commercial and mixed-uses. Residential uses located along Harrison Avenue are multi-family apartments. The Harrison Fire Department is also located on Harrison Avenue.



Avalon at Harrison

Town of Harrison, New York

Existing Land Use

Source: Town of Harrison, Comprehensive Plan, Prepared by BFJ Planning



Table 3A-1 Land Uses in CBD Measured in Acres

Land Use	Acreage
Residential	21.76
Commercial and Retail	5.98
Transportation/Utility	194.95
Institutional and Community Uses	6.79
Manufacturing and Industrial	2.97
Mixed-Use	9.25
Natural Preserves	2.47
Office	1.25
Parks and Public Recreation	2.08
Vacant/Under-developed	4.99

Source: Westchester County GIS

North of Halstead Avenue, the Harrison Public Library, Town/Village Hall, the Sollazzo Center and Ma Riis Park shape the civic center area within the Central Business District. Mixed commercial, industrial and preserved open space (the “project Home Run” site) are located in the area east of Oakland Avenue. As noted in the Comprehensive Plan, the commuter parking lots on both sides of the Harrison Metro-North Train Station are a significant land use in the Central Business District.

The side streets that branch off of Halstead Avenue, such as Parsons and Soulard Street, consist of mostly two-family attached dwellings. However, there are some single-family residences along these streets. Multi-family apartment buildings are located along the eastern side (Newport Towers) and also the western side (Marion Court Condominiums) of Halstead Avenue.

Surrounding the Central Business District are mainly residential neighborhoods that consist of single, two, and multi-family homes.

b) Potential Impacts

The proposed Project will include 143 units of multi-family housing and 27,000 square feet of commercial space. The proposed multifamily residential, commercial, parking, and open space uses are consistent with the existing CBD uses. The Comprehensive Plan mentions that “a key goal expressed during the comprehensive planning process is for the CBD to accommodate a wide mix of business types as well as residential uses,” (2013 Comprehensive Plan, pg. 83). The Project will continue to promote and integrate various uses in order to heighten the activity and vibrancy of the Central Business District.

The proposed Project will activate the northern side of Halstead Avenue, supporting current businesses while also enticing others to locate in the Central Business District. “There are several vacant lots along Halstead Avenue – as well as the Metro-North parking lot – which act to break



up the urban fabric and disrupt the pedestrian continuity," (2013 Comprehensive Plan, pg. 80). The implementation of the Project will fill in these gaps and reinforce the CBD by having commercial and retail uses on both sides of Halstead Avenue.

The proposed Project aims to achieve this goal by replacing the void in the downtown's urban fabric created by the large surface parking lots by adding commercial spaces and multi-family residences in the CBD. The Site will contain two courtyards that will be connected to two proposed plazas. These plazas will have direct access to the Metro-North Station, establishing fluid pedestrian circulation between Halstead Avenue and the Station.

The proposed Project will be contextually consistent with the zoning districts that are located around the perimeter of the CBD. The residential uses that are located around the perimeter of the CBD include single-family, two-family and multi-family residences. The proposed Project will contain multi-family residences, at a higher density than the single-family and two-family residential neighborhoods that surround the downtown, but similar to a number of existing multi-family buildings that exist in the area. Given the Site's location at the Metro-North Train Station in the Central Business District, and its proposed residential and commercial uses, the Project will be compatible with the surrounding mixed use CBD and the residential uses outside of the Central Business District (Exhibit 3A-2, CBD Zoning Map).

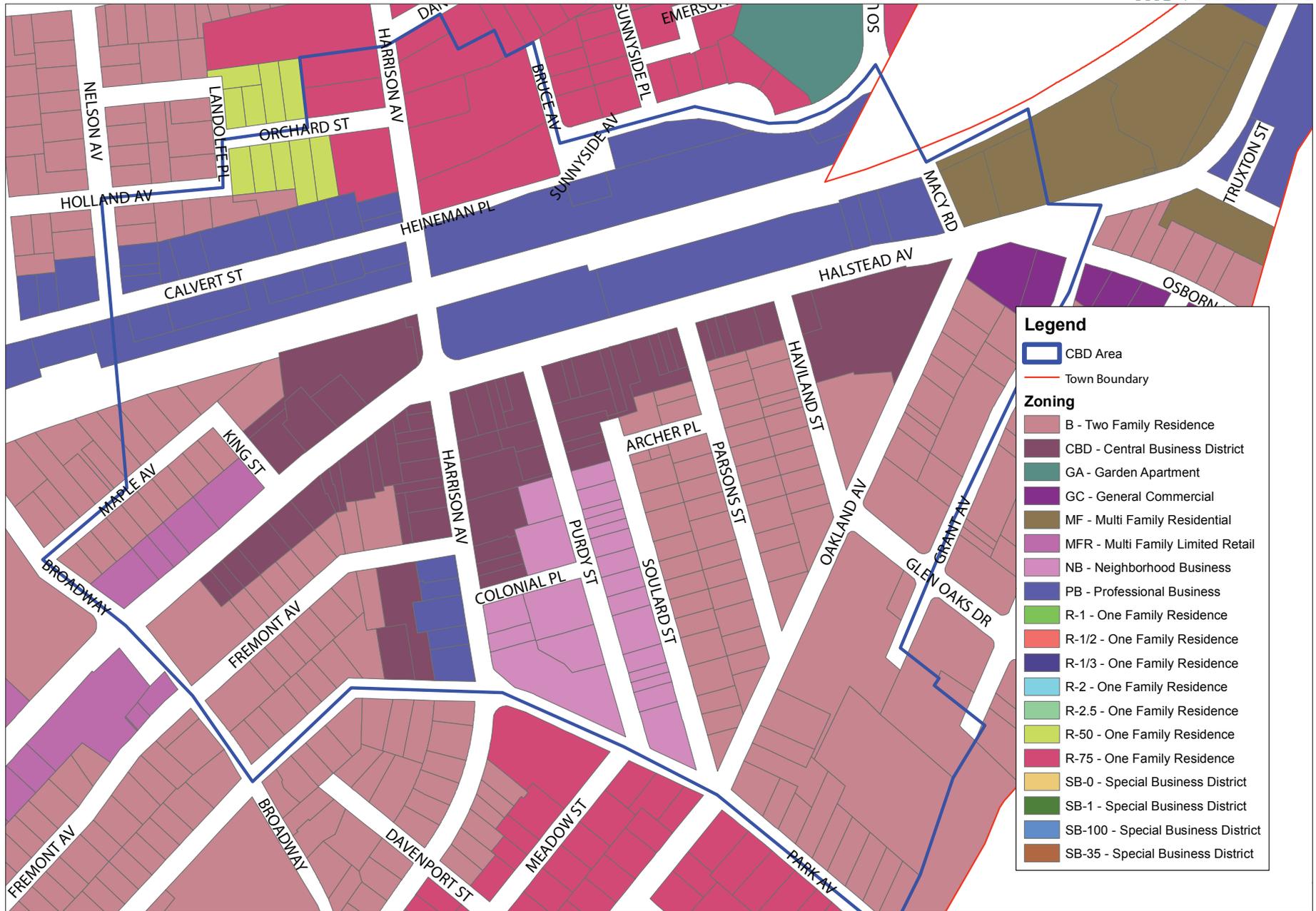
c) Mitigation Measures

The proposed Project will reinforce the CBD by having commercial uses on both sides of Halstead Avenue, which currently is only found on the southern side of Halstead Avenue. In addition the multi-family units proposed will complement the multi-family uses that already exist in the Central Business District. Given the proposed Project's consistency with the land use recommendations contained in the Town's Comprehensive Plan, no additional mitigation measures are required.

2. Zoning

a) Existing Conditions

As stated previously, the Site is located in the Central Business District (Exhibit 3A-2, CBD Zoning Map). There are a total of four commercial zoning districts in the CBD. The Professional Business District is centered on the Town/Village Hall and the train station, and allows for professional offices and office support services with limited retail activities and no restaurants. The second zoning district within the CBD is the Central Business zoning district ("CB District"). This zoning district is located south of the rail line, along both Halstead and Harrison Avenues. The CB District allows a variety of retail and service uses in the downtown. The Neighborhood Business zoning district ("NB District") is located on Harrison Avenue, south of Colonial Street



Legend

- CBD Area
- Town Boundary

Zoning

- B - Two Family Residence
- CBD - Central Business District
- GA - Garden Apartment
- GC - General Commercial
- MF - Multi Family Residential
- MFR - Multi Family Limited Retail
- NB - Neighborhood Business
- PB - Professional Business
- R-1 - One Family Residence
- R-1/2 - One Family Residence
- R-1/3 - One Family Residence
- R-2 - One Family Residence
- R-2.5 - One Family Residence
- R-50 - One Family Residence
- R-75 - One Family Residence
- SB-0 - Special Business District
- SB-1 - Special Business District
- SB-100 - Special Business District
- SB-35 - Special Business District



Avalon at Harrison

| Town of Harrison, New York

Existing Zoning

Source: Town of Harrison, Comprehensive Plan,
Prepared by BFJ Planning



eastward to Soulard Street. This district provides for retail businesses and service uses supporting local needs. The fourth commercial zoning district is the General Commercial zoning district ("GC District"), which provides for general retail businesses and services but excludes restaurants, and is located on the eastern edge of the CBD, along the south side of Osborn Street.

The largest residential zoning district in the CBD is the Two Family Residence District ("B District"). In addition, there are also R-75 and R-50 One-Family Residence Districts. There is a Multifamily Residence District ("MF District"), which contains the Newport Towers development. Finally, there is Multifamily Limited Retail district ("MFR District") which provides for residential uses in conjunction with offices and retail businesses and services. Marion Court Condominiums, with retail on the ground floor, is located in this district.

Residential neighborhoods mainly surround the Central Business District. The residential neighborhoods that border the CBD consist of R-75, B, MFR, MF, and Garden Apartment Districts. The R-75 District permits single-family residences. The B District allows for two-family residences. The MFR and MF Districts allow for multi-family dwelling units. The Garden Apartment District is north of the Site and permits multi-family dwelling units.

The Site is located in the PB District. This zoning district provides for professional offices and office support services with limited retail activities. Specifically, the PB District allows for the following uses;

- Public library, police station, fire station, Town Hall or municipal service buildings;
- Nonprofit clubs, fraternal, social, educational or philanthropic organizations;
- Job printing;
- Professional business and financial offices;
- Public off-street parking;
- Retail Service establishments; and
- Scientific research excluding manufacturing.

The PB District also allows for the following Special Exception uses:

- Dwelling units over first floor nonresidential use;
- Church, synagogue or similar place of worship;
- Public utility structure or right-of-way including offices;
- Private parking garage;
- Public parking garage;
- Secretarial, business, trade, or schools; and
- Telephone exchange.



The dimensional requirements of the PB District include 50% maximum coverage for multiple dwellings; 50 foot lot width; 20 foot side yard setback when adjoining a residential district; a 20 foot rear yard setback; minimum 600 square foot habitable floor area for dwelling units; and a 35 foot/ 2 story maximum height.

b) Potential Impacts

Transit Oriented Development District

The purpose of the TOD District is to encourage well-integrated, mixed-use, moderate density development within walking distance of the Harrison Train Station, County Bee-Line bus stops and other transit resources and facilities (a "TOD Development"), which:

- Provides an alternative to traditional development by emphasizing mixed use pedestrian oriented development;
- Encourages development that provides for a pedestrian oriented environment that encourages and facilitates walking, bicycling, and transit use;
- Creates an identity in the Central Business District that promotes pedestrian activity, human interactions, commercial enterprise and safety;
- Reduces automobile dependency and roadway congestion by locating multiple destination and trip purposes within walking distance of one another;
- Improves access to Metro-North Rail services, including enhanced intermodal connections;
- Provides for adequate off-street parking for commuters, residents and tenants of development within parking facilities of high quality design, that are screened and hidden to the extent practicable so that in no instance are large expanses of street frontage dominated by parking areas or structures;
- Manages parking and vehicular access by utilizing shared parking and driveway access to avoid pedestrian conflicts;
- Provide street level business uses that are consistent with the character of the Harrison Central Business District;
- Provides a range of housing options for people of varied income and at different stages of life; and
- Incorporates open spaces, plazas and other design features that create an inviting environment that encourages use and exploration by residents and visitors alike.



Permitted and Special Exemption Uses of the TOD District

The proposed TOD District will allow for a “TOD Development” having the following Permitted (P) and Special Exception Uses (SE) uses:

- Residential Uses - Dwelling units – SE
- Residential Community Facilities - Public library, police station, fire station, Town Hall or municipal service building - P
- General Community Facilities
 1. Bus passenger shelter - SE
 2. Public passenger transportation station or terminal - SE
 3. Public utility structure or right-of-way, including offices - SE
 4. Public park or plaza - P
 5. Public off-street parking lot or garage – SE
- Business Uses
 1. Private off-street parking lot or garage - SE
 2. Retail store - SE
 3. Restaurant - SE
 4. Delicatessen - SE
 5. Professional and business office and financial institution - SE
 6. Theater - SE
 7. Art gallery - SE
 8. Dance and martial arts studio - SE
 9. Bakery - SE
 10. Coffee Shop - SE
- Accessory Uses
 1. Customary accessory use incidental to a permitted use on the same premises - P
 2. Retail service or wholesale trade only as an incidental activity to a permitted use - P
 3. Signs pursuant to Article VIII - P
 4. Kiosks – P



Dimensional Requirements of the TOD District

The dimensional regulations for the proposed TOD District will be as follows:

Minimum Lot Area	2.0 acres
Minimum (Lot Area) Per Dwelling Unit	1,000 SF
Maximum Lot Coverage	95%
Maximum Lot Coverage for Multiple Dwellings	50% ^(a)
Front	No Requirement
Side	
Adjoining a Residence District	No Requirement, but if provided, 10'
Adjoining a Business District	No Requirement, but if provided, 10'
Rear Yard	No Requirement
Habitable Floor Area	600 SF
Buffer Strips	No Requirement
Height	
Feet	50' ^(b)
Stories	4 ^(c)
Floor Area Ratio	1.25

(a) Applies to buildings in the TOD District used exclusively for multifamily residential use. A TOD Development is subject to the 95% coverage requirement.

(b) The maximum height of a TOD Development on the Site shall be 75 feet. In the TOD District, necessary architectural features such as roof parapets shall be permitted to exceed the maximum height, subject to the approval of the Planning Board and Architectural Review Board, and in accordance with the provisions of §235-23 A of the Town Zoning Ordinance.

(c) The maximum number of stories for a TOD Development on the Site shall be 5 stories. Any level of a parking structure that is more than ½ of its clear height below the average finished grade around the structure, for at least ½ of its length, shall be considered a cellar.

The proposed TOD District regulations include specific zoning controls that will promote the goals and objectives of the district. The parking ratios for office, retail, and retail services are proposed to be reduced from the parking ratios that currently apply to these uses in other districts. There are provisions for shared parking and reducing the minimum dimensions of parking spaces, and for the shared use of the MTA commuter parking spaces. The zoning requires streetscape improvements, public open space, and bicycle parking racks or lockers. The proposed dimensional requirements allow for higher density and heights than currently allowed in the PB District. The higher density and heights help achieve the mix of uses necessary



to achieve the goals of the district, which includes multi-family residential, commercial, and commuter parking (see Appendix D for the proposed TOD District regulations).

The proposed TOD District zoning will be compatible and comparable to the surrounding CB District and MFR District within the Central Business District. The CB District is located directly across from the Site. Both the CB District and MFR District allow for mixed residential and commercial uses, and both allow for higher building heights and densities than the single and two-family districts. While the CB District and MFR District do not employ some of the proposed TOD District parking provisions such as shared use parking or reduction in parking space dimensions, the permitted uses and density are similar.

As a result, there will be no negative impacts of the proposed zoning on the Town's zoning pattern and on the zoning of nearby properties within and immediately adjacent to the Central Business District.

c) Mitigation Measures

The proposed TOD District zoning for the Site has dimensional requirements and standards designed to permit desired and appropriate uses that meet the character of the Central Business District and the objectives of the Comprehensive Plan. Given the Proposed Action's consistency and compatibility with the land use and zoning recommendations contained in the Town's Comprehensive Plan and with the other mixed use zoning districts located in Harrison's Central Business District, no additional mitigation measures are required.

3. Policy Documents

a. Existing Conditions

i. Village/Town of Harrison 2013 Comprehensive Plan

The Project is consistent with the applicable goals and objectives of the 2013 Comprehensive Plan. A goal in the 2013 Comprehensive Plan for the Central Business District is to "continue to promote development of an attractive and appealing downtown CBD which has distinctive character and which achieves a high standard of pedestrian and urban amenities." In addition, the Comprehensive Plan provides that a key goal of the CBD is to "accommodate a wide mix of business types as well as residential uses (Town/Village of Harrison Comprehensive Plan, pg. 83). The implementation of the Project will



significantly contribute to the realization of these goals (Exhibit 3A-3, Development Sites Map).

The Project is specifically outlined in the 2013 Comprehensive Plan.

“On the northern side of Halstead, the streetscape is interrupted by two parcels totaling about 3.5 acres, which contain the Metro-North train station commuter surface parking lots and a small area of public open space, known as Jilly Flowers Park. At this area, the Town and Metro-North Railroad are jointly advancing the development of the two parcels for a potential transit-oriented development (TOD) project that could potentially include residential, retail and municipal uses, pedestrian plazas, a new parking structure and associated streetscape improvement,” (Town/Village of Harrison Comprehensive Plan, pg. 80).

The Project is also included in the Summary of Recommendations for the CBD (Comprehensive Plan, pg. 106).

The Project includes the construction of 143 units of multi-family housing and 27,000 square feet of commercial space. There will be two pedestrian plazas, a new Commuter Parking Garage, and associated streetscape improvements.

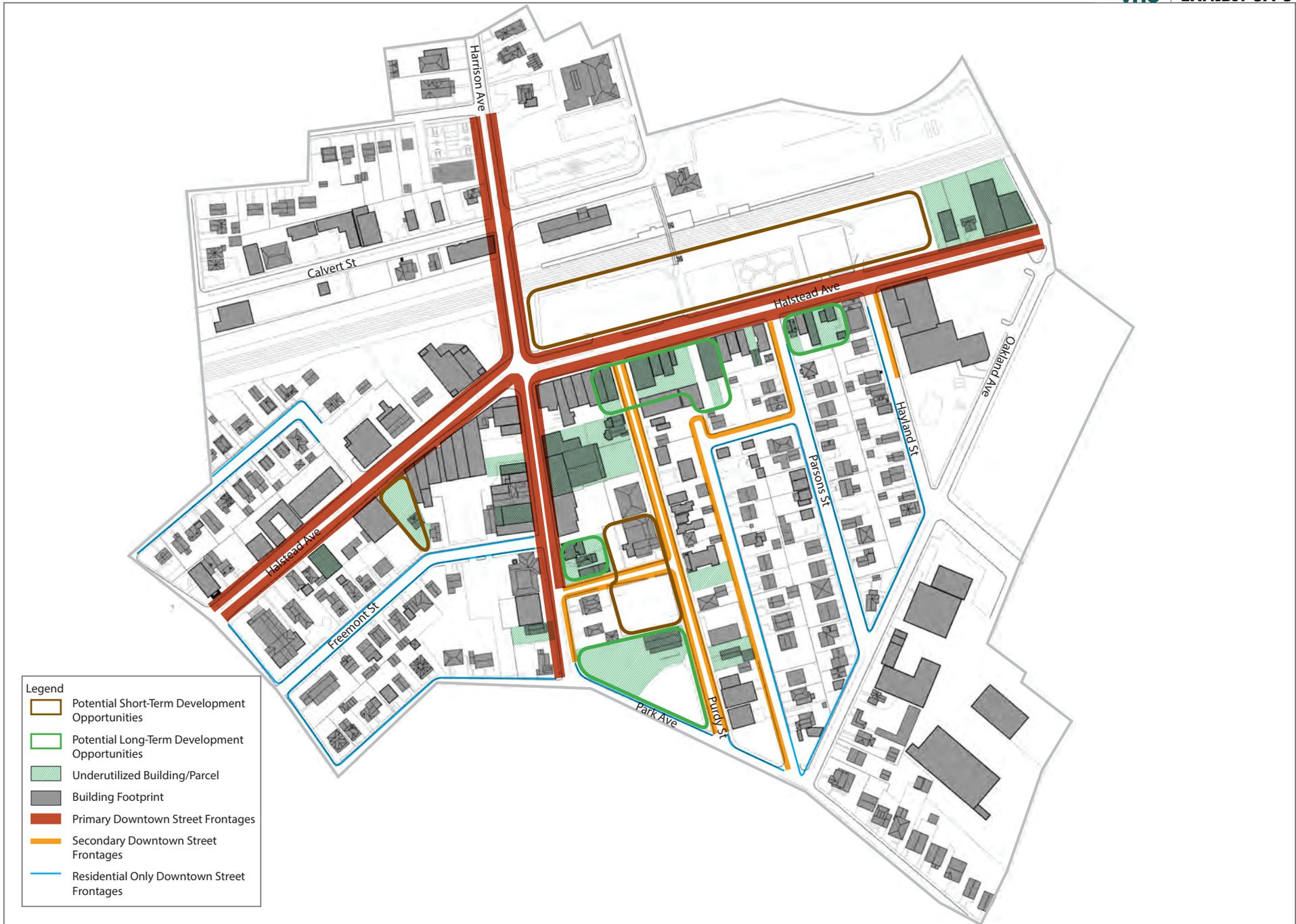
ii. Westchester 2025/Patterns

Adopted by the Westchester County Planning Board in 2008, the Westchester 2025 plan reviews the County’s planning policies in the context of the challenges facing the region today. The plan identifies land use policies and provides a context for a planning partnership between the County and its 45 municipalities. Westchester 2025 is intended to show residents and municipalities the importance of working together.

The plan was amended in January 2010 by the adoption by the Westchester County Planning Board of the “Context and Policies” for the plan. This portion of Westchester 2025 lays out general policies and goals for regional planning efforts.

The following policies of Westchester 2025 are supported by the Project:

1.) Channel development to centers: The proposed Project is located within the Central Business District of the Town/Village. Redevelopment within the CBD will contribute to fostering growth and activity in the center of the Town.



Avalon at Harrison

Town of Harrison, New York

Potential Development Sites

Town of Harrison, Comprehensive Plan,
Prepared by BFJ Planning



2.) Enhance transportation corridors: The development will contribute to establishing Harrison as a significant transportation node in Westchester County, especially with its Metro-North Commuter Railroad accessibility to New York City.

4.) Nurture economic climate: The proposed Project will provide additional jobs within the Central Business District, including construction and permanent jobs. The Project will also add economic activity to the CBD.

6.) Support development and preservation of permanently affordable housing: Seven of the residential units in the proposed Project will be affordable "AFFH" housing units that meet County requirements, thereby contributing to needed affordable housing in Westchester County.

7.) Support transportation alternatives: The Site has the infrastructure to enhance multiple modes of transportation. The Project will ease accessibility for pedestrians as it will continue the street grid layout. Several bus lines also currently stop at the Harrison Metro-North Station, including Route 5 and 61 of the Westchester Bee-Line.

15.) Track and respond to trends: Regionally, revitalization of municipal downtowns has been a continuing trend in Westchester County. Following recent development in downtowns such as the City of White Plains and the Village of Port Chester, Harrison is also attempting to attract additional residences and activity in its downtown. This Project follows that trend.

Patterns for Westchester:

"Patterns for Westchester" (1996) is an adopted plan of the Westchester County Planning Board. Only the "Assumptions and Policies" sections of "Patterns for Westchester" have been replaced by the policies of Westchester 2025. "'Patterns' offers a policy framework to guide the County Planning Board on matters relating to the county's physical development. It provides a range of strategies to help the county and municipal government nurture environmental health, economic growth and the quality of life in Westchester," (pg. iii). The development of the Project would be consistent with the strategies identified for housing and transportation in "Patterns".

C. Housing: The Project is consistent with several strategies of "Patterns" regarding affordable housing and density, including the recommendation to "encourage a range of housing types that are affordable to renters and home buyers, with each municipality addressing its needs for affordable housing as



well as a share of the regional need.” The Project helps meet the County’s need for affordable housing as it includes 7 units that will be designated as Affirmatively Furthering Fair Housing (AFFH) units.

Another strategy in the housing section is to “provide affordable housing in land use regulation - provide for and encourage mixed use development (housing over stores and residential components of office parks).” The mixed-use Project is consistent with this strategy.

D. Transportation: Multiple transportation strategies discussed in “Patterns” will be incorporated into the Project, including providing access to centers and developed corridors. “Concentrated centers are intended to be focal points of development...better coordination and links among cars, buses, rail and para-transit options are required to encourage inter-modal, efficient travel,” (pg. 59). The Project is in an area identified as a local center, and will assist in reaching these goals as it promotes multiple modes of transportation, including by rail and bus.

Other transportation strategies the Project supports include maintaining transportation infrastructure, and relieving congestion. When the Project is completed, it is anticipated that MNR ridership will increase, which in turn will help to support maintenance and capital improvements to railroad infrastructure.

iii. 2015 Westchester County Multi-jurisdictional Hazard Mitigation Plan

Westchester County and 42 participating municipalities developed the Westchester County Multi-Jurisdictional Hazard Mitigation Plan (“WCHMP”). The WCHMP includes countywide analysis and assessment of hazards and risks within those communities. The document represents an update of the 2005 multi-hazard mitigation plan. The WCHMP is a plan for County owned property as well as an update of single- and multi-jurisdictional hazard mitigation plans developed previously by the participating Westchester municipalities. The Town/Village of Harrison was a participating municipality.

The WCHMP identifies two brooks located near the Site, Brentwood Brook and Beaver Swamp Brook, as flood hazard areas. According to the WCHMP the flooding area for Beaver Swamp Brook occurs along Oakland Avenue from the Metro-North Railroad to the City of Rye boundary. Many of the buildings experience inundation and basement flooding. Most of



the area is within a 1% annual chance flood zone. The area has flooded nine or 10 times over the past decade, with inundation beginning at four inches of rainfall and basement flooding beginning at two inches of rainfall. Flooding is exacerbated by constrictions in the stream channel from bridges and bridge abutments, especially the bridge on the Boston Post Road in Mamaroneck Village. Flooding inundation depths reach to approximately two feet and last approximately 48 hours (pg. 9.29-6).

Brentwood Brook is of concern in residential areas. Brentwood Brook often floods and is adjacent to two local schools (Harrison Avenue Elementary School and Louis M. Klein Middle School).

While both brooks are in close proximity of the Site, the Site is not within the associated flood zones. The Project will not affect the storm drainage patterns or increase the flood risk of these two brooks. The Project will not increase the flooding risks identified in the WMHMP for the Town/Village. Please see Section 3D and 3J for more information on flooding and stormwater.

iv. The Third Regional Plan for NY, NJ and CT Metropolitan Area, Regional Plan Association, 1996

The Third Regional Plan ("A Region at Risk") discusses five campaigns to enhance the quality of life in the region. The campaigns that are relevant for the Project are "Centers" and "Mobility".

Centers focus on encouraging growth in centers and regional downtowns. The Project contributes to the objectives of Centers by focusing development in the Central Business District and not in the less population dense areas of the Town.

Mobility calls for commitment and investment to improve and maintain the transportation system of the region. Locating this redevelopment proximate to the Harrison Train Station provides an incentive for residents and commercial space employees to utilize public transit. Thus, this Project will increase ridership and demand for train trips, and on the Westchester Bee-Line Buses that stop at the Station.



v. FEMA National Flood Insurance Program

According to the FEMA Flood Mapper, the Site is not located in a flood zone and therefore the FEMA National Flood Insurance Program does not apply to the Site.

vi. NYSDEC Stormwater Management Program

The New York State Municipal Separate Storm Water Sewer Systems (MS4s) program is applicable to this Site. The Project will include upgrades to the existing storm water system through the implementation of stormwater management practices and will require a Storm Water Pollution Prevention Plan approved by the Town/Village and NYSDEC.

vii. NYSDEC Climate Action Plan

The New York State Climate Action Council Interim Report was adopted in November 2010. It calls for reducing greenhouse emissions in New York State. The component of the report that is relevant to the Project is the "Transportation and Land Use Sector Policy Option". Greenhouse Gas ("GHG") emissions can be reduced through the implementation of multiple policy options outlined within the report. As recommended in the report, investment in transit and the practice of smart growth practices can assist in the reduction of GHG emissions and contribute towards a low-carbon future. With the Site being located within the Central Business District, transit accessibility is improved and vehicle miles traveled are reduced. The proposed development employs the smart growth principle of transit oriented development as a result of the Site being located adjacent to the Harrison Train Station. Another policy in the Climate Action Plan is for New York State to promote and assist municipalities in developing/redeveloping priority growth center by encouraging compact, mixed-use, walkable/bikable development in existing centers of activity (pg. 7-24). This policy is supported by the Project as a result of the development including mixed residential and commercial uses, the Site's proximity to the Harrison Train Station, and the Site's location within the Central Business District.

b. Potential Impacts

The Project promotes and incorporates many of the relevant goals and objectives of applicable policy documents. As provided in detail above for each policy document, the Project is consistent with the goals and objectives of the policy documents, including encouraging growth in urban centers, encouraging mixed uses, and enhancing multi-modal transportation



access. The Project will assist in achieving these goals, as it is a transit-oriented development located in the Central Business District. In addition, the Project is specifically identified in the 2013 Town/Village Comprehensive Plan.

c. Mitigation Measures

The Project advances the relevant goals of the identified policy documents. The Project will contribute to the revitalization of a downtown center and is specifically identified as a Town/Village objective in the 2013 Comprehensive Plan. Therefore, no mitigation measures are required.



8. Short and Long Term Impacts, Cumulative Impacts, and Other Associated Environmental Impacts

The Project will use energy resources including electricity and fossil fuels. Anticipated levels of consumption, as well as some strategies to reduce energy consumption are described in Chapter 3P, Greenhouse Gas Emission, Energy Conservation, Green Buildings and Sustainability, and summarized below. Many energy efficient factors and components of the Project meet “green technology” building standards and objectives, and will all help to reduce energy use in the long term and short term.

The Project will meet the basic requirements and comply with the New York State Energy Conservation Construction Code and standards. The Project will incorporate efficient mechanical equipment, insulated roofs, insulated exterior wall, insulated foundations, and windows that are insulated and have a low emissivity coating.

The Applicant is committing to either a LEED certification or Energy Star Certification. In addition, the following measure will be implemented in the Project:

Water Conservation Measures

- Water Sense technology plumbing fixtures will be used to minimize water usage.
- Energy Star compliant appliances will be provided.
- Landscaping with native plants will occur where possible.

Air Quality Measures

- Low VOC paints and sealants will be used to improve air quality index.

Material Conservation Measures

- Pre-fabricated floor and roof trusses will be used to minimize material waste and on-site debris.



Energy Saving Measures

- A combination of LED and CFL lighting will be used to minimize electric usage.
- High efficiency tankless water heaters will be installed in every apartment to provide on demand hot water to save on energy consumption.
- Energy Star compliant appliances will be provided in every residential apartment.
- Each apartment will have its own HVAC zone with its own equipment and thermostat.
- Insulation of R-38 will be installed as well as an insulation sheathing panel of R-6.6 to reduce heat loss in the winter and heat gain in the summer.
- The windows will be double paned, insulating glass for winter heating and low emissivity for summer cooling, and rated for a Sound Transmission Class ("STC") of at least STC-30.



7. Growth Inducing Impacts

Chapter 3 of the DEIS describes potential impacts that could result from the Proposed Action. This section describes the potential for the Project to generate secondary impacts. The proposed Project is expected to result in the generation of approximately 294 residents as well as jobs for the management/maintenance/security of the residential and commercial components of the Project, and for the retail and restaurant uses. An increase of 294 residents would result in an approximately 1.1 percent increase in the Town/Village's population (based on the Town/Village's 2010 population of 27,472) if all of these residents were new to Harrison.

The residents of the Project would expand the market for local businesses, including retail and service providers. Perhaps more significantly, the Project would support the Town/Village's overall development objectives as presented in the Comprehensive Plan, thereby contributing to the vitality of the downtown. In particular, new residential and commercial resources within the Central Business District would encourage the productive reuse of nearby properties.



6. Irreversible and Irretrievable Commitment of Resources

The proposed Project would require the commitment and consumption of a variety of resources that would be made unavailable for future use. Construction materials such as concrete, timber, steel, brick, wood, paint and topsoil would be consumed. The operation of construction equipment would also involve the consumption of fossil fuels. The components of the completed Project would require the usage of electricity and fossil fuels for lighting, heating and cooking, and water for landscaping and domestic use. The construction period would also require a temporary commitment of workers. Upon completion, a commitment of labor would be required to manage the residences and maintain the property, and for the retail and restaurant uses. However, the short term and long term commitment of labor is a beneficial impact to the community and economy.



5. Adverse Environmental Impacts that Cannot Be Avoided

The construction and operation of the proposed Project would result in certain short term and long term adverse environmental impacts that cannot be avoided. The anticipated impacts have been identified and discussed in the previous subject chapters and are summarized below. All significant adverse impacts related to the Project would be mitigated to the maximum extent practicable.

Adverse impacts that cannot be avoided by the Project are as follows:

Short Term Impacts

Short term impacts related to the Project would generally be related to construction activities. Unavoidable adverse impacts occurring in the short term include: traffic generation from construction workers and deliveries, noise and air quality impacts from construction activities and traffic.

Construction activities on-site would occur only during the hours permitted under Section 177-2.F of the Town/Village Code. Traffic volumes on local roadways would increase as a result of material deliveries and the commuting of construction workers. However, construction workers generally arrive and depart before the weekday peak hours. Air quality would be impacted by exhaust and emissions from construction equipment and fugitive dust. A Sediment and Erosion Control Plan would be employed to mitigate potential impacts from erosion as a result of construction activities.

The construction period for the Project is estimated to be approximately 33 months. The construction will take place in here two phases: Phase 1 will include the Commuter Parking garage, east plaza, Building C and Building B, and Phase 2 will include Building A and the west plaza. It is estimated that a total of 1,950 truckloads of soil (four to five truckloads each day), with each truckload carrying approximately 18 cubic yards (18 to 22 tons) of material, would be required to carry out the construction. It is expected that the construction of the project will have an average of 100 workers on the site with a maximum of 125 workers during the period of heaviest activity. It is anticipated that the majority of the worker trips to and from the site will occur before the AM and PM peak highway hours. It is estimated that there will be approximately 60 trips arriving or departing in the peak hours. This is the same or less than what the development is projected to



generate at full build-out. Since the development is not projected to have a significant adverse impact at full build-out, the same would be true for construction traffic.

Long Term Impacts

Potential long term adverse impacts would result from the operation of the Project. Impacts would be mitigated to the maximum extent practicable. While the impacts listed below are unavoidable, they are not significant. Potential long term impacts include:

- The visual character of the proposed Project would be different from the existing conditions. Overall, the character would change from primarily parking lots to mixed use buildings consistent with the character of the surrounding downtown area.
- Based on data gathered from several of the Applicant's existing apartment communities and other comparable multi-family residential developments located in municipalities surrounding the Town/Village, the Project could generate from 4-10 public school-age children. The increase in Town/Village population would increase the demand for services and facilities incrementally. It is anticipated that the property taxes generated by the Project would mitigate any adverse impacts. The Project is conservatively expected to generate 57 new vehicle trips during the AM Peak Hour and 139 new vehicle trips during the PM Peak Hour for the residential and retail uses. During the AM Peak Hour, it is anticipated that there would be 16 new commuter trips due to the additional commuter space in the parking garage, of which 6 would be drawn from the existing drop-off/pick-up activity, for a net increase of 10 commuter trips. During the PM Peak Hour, there would be 37 new commuter parkers that would be drawn from existing drop-off/ pick-up traffic of which 16 would be the existing drop-off/pick-up activity, resulting in a net increase of 21 trips.
- The proposed Project would result in increased demand for water and sanitary sewer. The Town/Village Engineer and the Westchester Joint Water Works have indicated that sufficient capacity exists to service the Project.



4. Alternatives

A. ALTERNATIVE A: NO ACTION

The “No Action” Alternative is required by the SEQRA regulations to be described in a draft environmental impact statement. The No Action alternative assumes that no new development would occur on the Site. In this scenario, the existing parking lots would remain and would continue to be used for commuter parking. While this alternative would have less potential impacts than the Project, it would not incur any of the benefits of development including additional tax revenue and improved access to the MNR Harrison Station or the revitalization of the downtown CBD as called for in the Town’s Comprehensive Plan. Table 4-1 provides a comparison of specific characteristics and potential impacts as compared to the Project and the other alternatives.

B. ALTERNATIVE B: ALTERNATIVE PLAN UNDER THE EXISTING ZONING

This alternative is the redevelopment of the Site under the current regulations of the PB (Professional Business) District. Dimensional regulations of the PB District include 50% maximum coverage for multiple dwelling buildings, minimum 50 foot lot width, 20 foot yard rear and side setbacks, 35 feet (or 2 stories) maximum height, and minimum of 600 square feet of habitable floor area for dwelling units. This alternative (see Exhibit 4-1, Alternative B, Alternative Plan Under the Existing Zoning) includes construction of a two-story residential building with a 11,000 square foot leasing office/amenity space, 38 apartment units, 5,000 square feet of retail space, and 114 parking spaces in a surface parking lot located at the rear of the building. This alternative also includes a separate two-story parking garage with 260 parking spaces for use by MNR commuters. See Table 4-1 for a comparison of alternatives with the Project.

This alternative would generate fewer residents, public school children and vehicle trips, thereby creating fewer potential adverse impacts to schools and traffic. However, this alternative would also generate less tax revenue than the Project. Alternative B would only provide 260 parking spaces for MNR commuters, the same as currently provided. The Project provides 475 commuter parking spaces, encouraging further MNR use and lessening the number of commuter cars parked on nearby streets. Although the Project would include more parking spaces, the building facades along Halstead Avenue would present as mixed use buildings with ground floor retail and residential uses on the above ground floors. Project parking garages would not be visible from the street. Alternative B would include a



stand-alone parking garage, which would break up the cohesiveness of the mixed use and commercial buildings along Halstead Avenue in the downtown area.

Alternative B would not include landscaped, publicly accessible plazas. This alternative would not take advantage of its downtown location adjacent to the train station by providing the amount of retail space that would provide the level of economic activity that the Town/Village is seeking. While Alternative B would create a new residential population in the Central Business District likely to frequent downtown businesses, the Project would provide a larger residential population, thereby further strengthening the downtown.

It is the Applicant's opinion that the benefits of Alternative B do not outweigh its potential impacts in comparison with the Project and do not fulfill one of the primary objectives of the Project, which is to activate the northern side of Halstead Avenue, supporting current businesses while also enticing others to locate in the Central Business District. Furthermore, the reduction in the number of apartments and retail space would render this alternative financially infeasible for the Applicant.

C. ALTERNATIVE C: DEVELOPMENT UNDER TRADITIONAL ZONING CONTROLS (NOT EMPLOYING TOD PRINCIPLES)

Alternative C assumes development under traditional zoning controls that do not employ Transit-Oriented Development (TOD) principles such as transitional parking ratios, shared parking, and a focus on pedestrian or alternative transportation. See Exhibit 4-2, Alternative C, Development Under Traditional Zoning Controls. Alternative C would generate 126 residential rental apartments and 28,000 square feet of retail space in a four-story mixed use building. A separate three-story parking garage would also be constructed on the Site and would contain a total of 404 parking spaces with 260 spaces for MNR commuters, 100 spaces for residents, and 44 spaces for the retail use. An additional 58 residential and 50 retail parking spaces would be provided in a surface lot at the rear of the mixed use building. This alternative would not provide landscaped plazas. See Table 4-1 for a comparison of alternatives with the Project.

The benefits of this alternative include slightly fewer new residents and school children and lower building height than the Project. However, this alternative would provide significantly fewer commuter parking spaces (260 commuter spaces with Alternative C compared to 475 commuter spaces with the Project). As such, Alternative C would not encourage additional MNR commutation and would not alleviate an existing commuter parking deficit. This alternative would not further the goals of the Town/Village Comprehensive Plan which recommends TOD development at this location, including public amenities such as plazas and open space.

Although the Project would include more parking spaces, the building facades along Halstead Avenue would present as mixed use buildings with ground floor retail and residential uses on the above ground



floors. Parking would not be visible from the street. Alternative C would include a stand-alone parking garage, which would break up the cohesiveness of the mixed use and commercial buildings along Halstead Avenue in the downtown area.

It is the Applicant’s opinion that the benefits of Alternative C do not outweigh its potential impacts in comparison with the Project.

D. ALTERNATIVE D: ALTERNATIVE PLAN BASED ON IDENTIFIED SIGNIFICANT ENVIRONMENTAL IMPACTS

In the Applicant’s opinion, the Project would not result in any significant adverse environmental impacts. All potential impacts identified in this DEIS are not considered significant and are mitigated to the maximum extent practicable. Any unavoidable impacts, such as increased water use and sewer demand, would result from any development on the Site of habitable residential or commercial uses. It is also the Applicant’s opinion that the Project provides more benefits than alternatives, such as increased tax revenue, additional commuter parking spaces (and therefore greater opportunity for increased railroad commutation), publicly accessible open space, and greater secondary economic benefits to the Central Business District.

Table 4-1 Comparison of Project Alternatives

	Project	Alternative A: No Action (Existing Conditions)	Alternative B: Alternative Plan Under the Existing Zoning (Professional Business District) Exhibit 4-1	Alternative C: Development under traditional zoning controls (not employing TOD principles) Exhibit 4-2
Gross Building Area (SF)	3 mixed use buildings Retail/commercial: 27,000 sf	N/A (all surface parking lots)	1 residential building Leasing office/amenity: 11,000 sf 1 parking garage Retail/commercial: 5,000 sf	1 mixed use building 1 parking garage Retail/commercial: 28,000 sf Leasing office/amenity: 3,000 sf
# Residential Units	143 multi-family apartments 76 1-BR 59 2-BR 8 3-BR	0	38 multi-family apartments 20 1-BR 16 2-BR 2 3-BR	126 multi-family apartments 67 1-BR 52 2-BR 7 3-BR

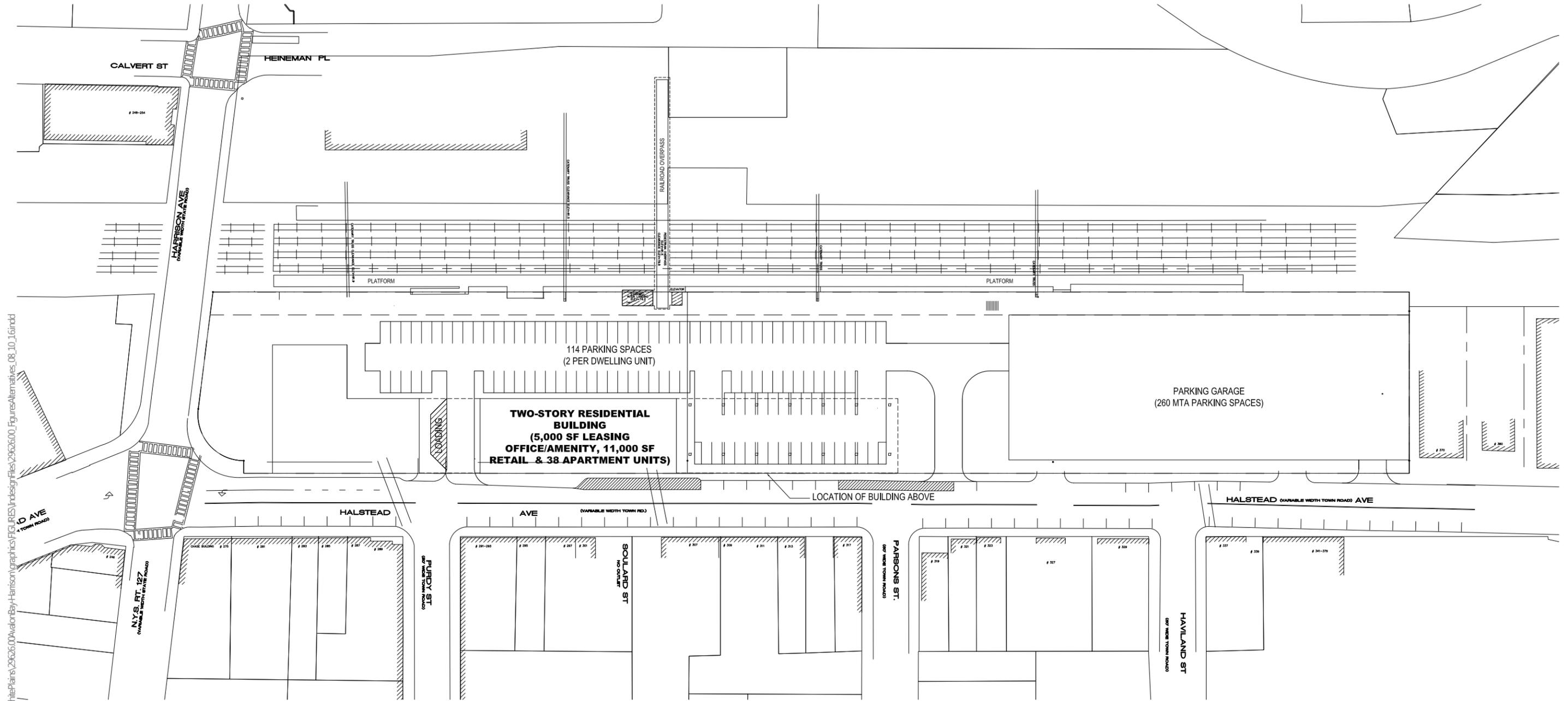


Table 4-1 Comparison of Project Alternatives (cont'd)

	Project	Alternative A: No Action (Existing Conditions)	Alternative B: Alternative Plan Under the Existing Zoning (Professional Business District) Exhibit 4-1	Alternative C: Development under traditional zoning controls (not employing TOD principles) Exhibit 4-2
# Parking Spaces	769 ¹ MTA: 475 Residents: 186 Commercial: 108	260 among 4 parking lots MTA: 260	374 (1 parking garage, 1 surface lot) MTA: 260 Residents: 77 Commercial: 37	512 (1 parking garage, 1 surface lot) MTA: 260 Residents: 158 Commercial: 94
Impervious Area (AC)	3.4 acre (90% of site)	2.5 acres (66% of site)	>3.4 acres (>90% of site)	>3.4 acre (>90% of site)
Building Height	4-5 stories	0 stories	2 stories (35 feet)	3-4 stories
Net New Trip Generation (Peak Hour)	57 AM / 139 PM	0 AM/ 0PM	11 AM / 16 PM	53 AM / 137 PM
Tax Generation	\$781,579	\$979	\$207,692	\$688,664
Residential Population¹	294 ²	0	78	259
School-age Children²	10	0	3	9
Open Space	2 publicly accessible plazas and ±10,000 sf open space	±1 acre open space area	Potentially 1 publicly accessible plaza	Potentially 1 publicly accessible plaza
Domestic Water Demand	36,746 gpd	0	8,500 gpd	27,000 gpd
Sewage Generation	33,405 gpd	0	7,725 gpd	24,580 gpd
Cut/Fill	Cut: 28,500 cy Fill: 1,000 cy Net: 27,500 cy Cut	0	Cut: 10,000 cy Fill: 5,000 cy Net: 5,000 cy Cut	Cut: 10,000 cy Fill: 5,000 cy Net: 5,000 cy Cut

¹Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, Total Persons in Units, 5+ Units-Rent, More than \$1,100, 1 BR and 2 BR).

²Based on multipliers from comparable projects. See Chapter 3H Community Services.



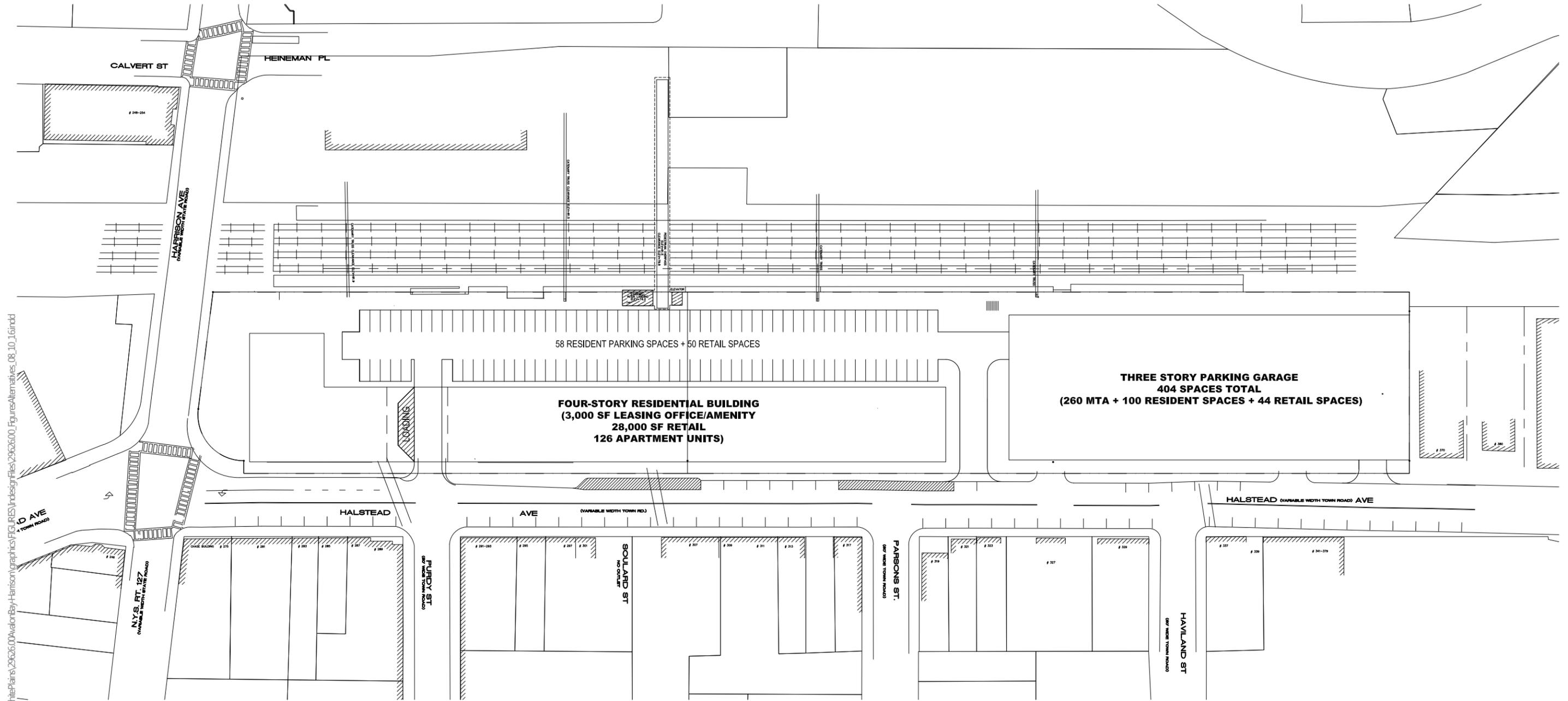
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Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

Alternative B:
Alternative Plan Under the Existing Zoning

Source Perkins Eastman



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Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

**Alternative C:
Development Under Traditional
Zoning Controls**

Source Perkins Eastman



P. GREENHOUSE GAS EMISSIONS, ENERGY CONSERVATION, GREEN BUILDING AND SUSTAINABILITY

1. Existing Conditions

Global warming is recognized by scientists around the world as a public health and environmental concern. As atmospheric concentrations of greenhouse gases (“GHG”) rise globally, temperatures on earth are increasing. Human impacts on the climate system include increasing concentrations of atmospheric GHG (e.g., carbon dioxide, hydrofluorocarbons and their substitutes, methane, and nitrous oxide), through agriculture, burning of fossil fuels, and use of resources.

In an effort to address the rising concern and awareness of the potential negative impacts of global warming and GHG emissions, NYSDEC, under the *Greenhouse Gas Emissions Policy* issued on July 15, 2009, took the lead on assessing and potentially mitigating for impacts related to GHG emissions from new developments. As identified in the NYSDEC policy, GHG emissions from development projects include mobile and immobile sources. Mobile GHG sources are not permanent components of the Project. Stationary sources of GHG are permanently part of the Project and emissions from those sources are classified as direct or indirect. Direct emissions are GHG emissions from fuel that is consumed at the Site. Indirect emissions are associated with energy expended at the Site but are purchased from a utility. The NYSDEC GHG policy requires identification of feasible measures to minimize both mobile and stationary sources of GHG emissions generated as a result of a project.

The Site currently contains 260 parking spaces within four parking lots on 2.50 acres of impervious asphalt. Vehicles traveling to and from the parking lots are currently the primary source of GHG emissions. Electricity to light the parking lots is an indirect stationary GHG source.

2. Potential Impacts

The Project will meet all applicable New York State building codes including the New York State Energy Conservation Construction Code. The New York State Energy Conservation Construction Code regulates the design and construction of energy-efficient building envelopes and the installation of energy-efficient mechanical, lighting and power systems. The Code establishes minimum requirements for energy-efficient buildings.

The Project will require the use of electricity for lighting and air conditioning, natural gas for cooking, heat, and hot water, and water for drinking, laundry, and sanitation. The Project will implement the following energy saving measures, several of which are listed in the NYSDEC *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement* as “measures that can increase energy efficiency, reduce energy demand, and reduce GHG emissions from proposed projects”:



Water Conservation Measures

- Water Sense technology plumbing fixtures will be used to minimize water usage.
- Energy Star compliant appliances will be provided.
- Landscaping with native plants will occur where possible.

Air Quality Measures

- Low VOC paints and sealants will be used to improve air quality index.

Material Conservation Measures

- Pre-fabricated floor and roof trusses will be used to minimize material waste and on-site debris.

Energy Saving Measures

- A combination of LED and CFL lighting will be used to minimize electric usage.
- High efficiency tankless water heaters will be installed in every apartment to provide on demand hot water to save on energy consumption.
- Energy Star compliant appliances will be provided in every residential apartment.
- Each apartment will have its own HVAC zone with its own equipment and thermostat.
- Insulation of R-38 will be installed as well as an insulation sheathing panel of R-6.6 to reduce heat loss in the winter and heat gain in the summer.
- The windows will be double paned, insulating glass for winter heating and low emissivity for summer cooling.

As an energy-efficient planning consideration, the Project is located directly adjacent to the Harrison Metro-North Station and in the downtown, with neighborhood shopping area accessible to pedestrians, thereby reducing vehicular trips. In addition, bicycle parking will also be integrated into the plans.

The Project will have a recycling program as required by law which will include the recycling of paper, plastic, and glass.

The Applicant proposes to achieve Energy Star or United States Green Building Council's Leadership in Energy and Environmental Design ("LEED") certification.

Energy Star is a U.S. Environmental Protection Agency voluntary program that promotes energy efficiency in building performance. In order to be eligible for energy star certification, a building must earn an energy star score of 75 or higher through the program. A rating of 75 indicates that a building performs better than at least 75 percent of similar buildings nationwide. Certification is given on an annual basis and information submitted during the certification process must be verified by a licensed Professional Engineer or Registered Architect.



LEED is a certification program offered by the U.S. Green Building Council that rates a building's energy efficiency based on design, construction, operation and maintenance. Similar to Energy Star, a building must earn points to achieve different levels of certification for the various LEED certification programs.

The energy conservation building features and systems of the Project will be determined as Project design advances through the site plan approval process. The Applicant will provide the Town documentation that the Project meets the certification requirements of the Energy Star or LEED certification programs.

Greenhouse Gas Sources

The Project will increase the GHG emissions that will be generated from the Site from both mobile and stationary sources.

The mobile sources of the Project will include the following GHG sources:

- Vehicles and traffic to and from the Site for the residential and commercial uses as well as the 475 commuter parking lot.

The Project will increase the total AM Peak Hour and PM Peak Hour traffic by 73 new trips during the AM Peak Hour and 176 new trips during the PM Peak Hour.

The stationary sources of the Project will include the following GHG sources:

- Electrical use for lighting, cooling, and cooking.
- Natural gas for heating of buildings and hot water.

The Project will use natural gas for heat, hot water, and cooking fuel. Natural gas emits the least amount of carbon dioxide emissions compared to other fuels types such as oil, propane, or coal.

Specific preliminary measures to decrease the GHG emissions of the Project include:

- A combination of LED and CFL lighting will be used to minimize electric usage.
- High efficiency tankless water heaters will be installed in every apartment to provide on demand hot water to save on energy consumption.
- Energy Star compliant appliances will be provided in every residential apartment.
- Each apartment will have its own HVAC zone with its own equipment and thermostat.
- Insulation of R-38 will be installed as well as an insulation sheathing panel of R-6.6 to reduce heat loss in the winter and heat gain in the summer.
- The windows will be double paned, insulating glass for winter heating and low emissivity for summer cooling.



The specific design and emissions reduction measures through the implementation of the measures outlined above will be determined as Project design advances through the site plan approval process.

Transit Oriented Development

The Project will be a Transit Oriented Development (“TOD”), which by design reduces the GHG emissions and provides long term sustainability compared to a traditional single family suburban subdivision development. The Project includes 143 units of residential housing and 27,000 square feet of retail/commercial space. The mixed use Project is located directly adjacent to the Harrison Metro-North Station and a Westchester County Bee-line bus stop. The Site is located in Harrison’s downtown, with neighborhood shopping area accessible to pedestrians, thereby reducing vehicular trips to and from work as well as the need to drive to retail establishments. Bicycle parking will also be integrated into the plans. Walking, bicycling, and public transportation reduce the amount of vehicles miles traveled and therefore the amount of GHG emissions that would otherwise be produced if the Project was not located near public transportation or in a downtown setting. TOD promotes long term sustainability by reducing household driving, creating walkable communities, increasing public transportation ridership, and supporting economic development of the downtown.

3. Mitigation Measures

While there will be additional GHG emissions as a result of the Project, the emissions will be less than a traditional single family subdivision with a similar number of homes due to the location of the Site, which reduces the overall amount of vehicles miles traveled. In addition, the Applicant is committed to incorporating energy saving measures in the Project design that will minimize the increase in future GHG emissions. The Applicant intends for the Project to obtain either Energy Star or LEED certification. The specific energy saving measures will be determined as Project design advances through the site plan approval process but, at a minimum, will include the measures identified above. The GHG emission due to the implementation of the Project is not expected to significantly impact regional GHG and therefore no mitigation measures are necessary.



O. CONSTRUCTION

1. Potential Impacts

The construction and completion of the Project will consist of three phases within a timeframe of approximately 33 months (see Table 3O-1 below). Phase I will include all of the infrastructure work (site preparation, earthwork, utilities, building foundations, and building superstructures). It will also include the construction of the Commuter Parking Garage, Building B, Building C, and the East Plaza. The Commuter Parking Garage and partial occupancy of Building C will take place approximately 18 months after the start of the Project. The remaining portion of Building C will be completed two months after the Commuter Parking Garage opens (or 20 months after the start of the Project). One month after the completion of Building C, Building B will be completed (or 21 months after the start of the Project). After the completion of all of the buildings in Phase I, the East Plaza will be finalized.

The components of Phase II will include Building A and the West Plaza. Associated infrastructure work of these components (site preparation, earthwork, utilities, building foundations, and building superstructures) is also part of Phase II. Site work for Phase II will began immediately upon the opening of the Commuter Parking Garage in Phase I (18 months). After the completion of Building A, the West Plaza will be finalized. The duration of the construction period for Phase II is 15 months (33 months from the start of the overall Project).

Table 3O-1 Construction Phasing Plan

Development Component	Construction Phase	Timeline from start of project
Commuter Parking garage	Phase I	18 months
Building B	Phase I	21 months
Building C	Phase I	18 months (partial); 20 months (remaining portion)
East Plaza	Phase I	21 months
Building A	Phase II	33 months
West Plaza	Phase II	33 months
Halstead Avenue; final pavement and sidewalk installations	Phase III	After completion of Phase II

There will also be a third phase of construction. This phase consists of completing of Halstead Avenue roadwork and installing final pavement and sidewalks.

Construction staging will occur on-site. Construction access will be primarily from Halstead Avenue. Existing on-street parking will be blocked off along Halstead Avenue starting at the beginning Phase I.



Fill will be transported to and from the Site as appropriate via construction vehicles using Halstead Avenue via Harrison Avenue.

Commercial and mixed-use buildings along the opposite sides of Halstead and Harrison Avenues may experience elevated noise levels, fugitive dust and emissions at occasional periods during the construction phases. The Applicant anticipates that these short-term impacts would be mitigated through the management of the construction process.

The construction phasing plan is shown on Exhibit 3O-1, displaying each component of the Project and its corresponding phase. The preliminary construction sequence is described below.

Phase 1 (approximately 21 months and approximately 2.5 acres of disturbance):

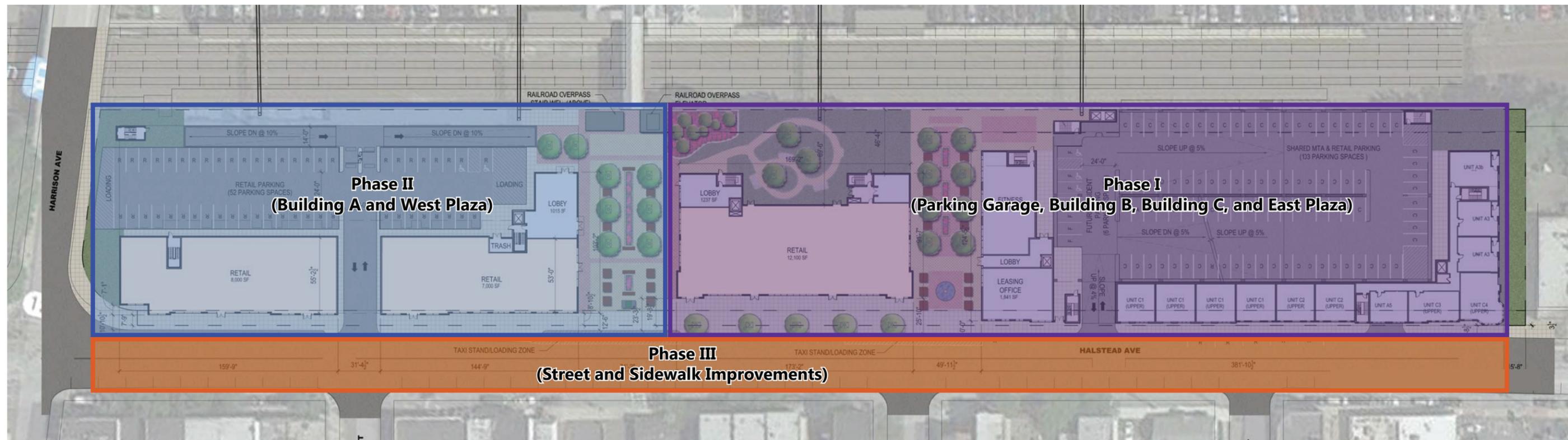
1. Preconstruction meeting with the Town/Village
2. Installation of perimeter erosion controls
3. Clear vegetation as necessary
4. Installation of remaining erosion controls
5. Abandon and replace existing utilities as necessary
6. Mass excavation for Buildings B and C, parking garage, and stormwater management area
7. Install stormwater management system
8. Install foundation and superstructure for Buildings B and C and parking garage
9. Install plaza infrastructure
10. Removal of erosion controls

Phase 2 (approximately 15 months and approximately 1.5 acres of disturbance):

1. Installation of perimeter erosion controls
2. Clear vegetation as necessary
3. Installation of remaining erosion controls
4. Abandon and replace existing utilities as necessary
5. Mass excavation for Building A
6. Installation of foundation and superstructure for Building A
7. Installation of plaza infrastructure
8. Removal of erosion controls

Phase 3 (approximately 2 months and approximately 0.7 acres of disturbance):

1. Perform roadway widening of Halstead Avenue
2. Installation of final paving and sidewalks



- Phase I
- Phase II
- Phase III

SPACE LABEL DEFINITIONS

- A = AVALONBAY
- C = COMMUTER
- R = RETAIL
- F = FUTURE RESIDENT

Avalon at Harrison

Town of Harrison, New York

30-1 Construction Phasing Plan

Source: Perkins Eastman



As part of the site plan submission, the Applicant will submit a detailed sequencing plan. At a minimum, the sequencing plan shall identify the start and completion dates for the following items:

- Installation of sediment and erosion controls as shown on the Sediment and Erosion Control Plan
- Clearing and grubbing
- Installation of temporary diversion berms and sediment basins per the Stormwater Pollution Prevention Plan
- Implementation of the maintenance and traffic control plan for Halstead Avenue
- Earthwork and rock removal operations
- Building foundations and superstructures
- Installation of utilities
- Installation of walls, curbs, driveways, and plazas
- Landscaping and site restoration
- Stabilization of the site in accordance with landscaping and site layout plans
- Maintenance and continued inspection of erosion and sediment controls

Earthwork

The Project will require significant excavations to install basement levels for Building A, Building C, the Commuter Parking Garage and parking garage in Building A, and the on-site stormwater management facility. Boring tests performed at the Site indicate the presence of shallow ledge across the majority of the Site. Accordingly, it is anticipated that significant rock removal will be necessary to complete the proposed Project, that blasting will be performed, and that material will need to be removed from the Site. The Applicant will obtain an Entry Permit from MTA/MNR for work in close proximity to rail facilities.

Construction Traffic

Site-generated traffic as a result of construction workers is not anticipated to significantly impact traffic volumes, as arrival and departure from a work site generally occurs before the weekday AM and PM peak hours. It is anticipated that there will be between 4-5 truckloads each day of material leaving the Site. Construction will commence with the expansion of existing Lot #2 east to Lot #3 to accommodate approximately 134 parking spaces. When added to the 126 spaces in Lot #1, this will provide a total of approximately 260 parking spaces. The Commuter Parking Garage will then be constructed, after which, 260 of the 584 parking spaces will be made available for commuter parking while construction of the balance of the project commences.

All construction delivery vehicles will be directed to use I-95 to access the Site and to enter and exit I-95 at Exit 19 and use Halstead Avenue to travel to and from the Site.



Existing Utilities

It is anticipated that the majority of existing on-site utilities will be abandoned and not reused. Prior to the start of construction, investigations will be performed to determine whether there are existing utilities from Halstead Avenue serving the rail facilities. It is proposed to remove the eastern half of overhead high-voltage wires on the Site that service MTA/MNR and place them underground to allow for construction of the Commuter Parking Garage. This work will be designed and executed in consultation with the MTA/MNR.

Erosion and Sedimentation

Construction activities can create the potential for the transportation of sediment in stormwater flows. A Stormwater Pollution Prevention Plan and Sediment and Erosion Control Plan will be prepared and implemented for the Site to mitigate potential impacts. See Chapter J Stormwater Management.

Rock Removal Plan

In addition to the sequencing plan, the Applicant would submit a rock removal plan that will include the following elements:

- The contractor shall prepare and submit for review/approval a detailed blasting plan and schedule to include safety procedures and measures to be implemented prior to commencement of any blasting activities.
- To the extent possible/practical, the contractor shall remove rock via mechanical means (e.g., ripping and hoe ram techniques).
- Depending on the nature and quality of bedrock encountered, it is conceivable that both hoe ramming and blasting techniques could be needed for site development. In either case, vibration energy caused by these methods can be predicted. The U.S. Bureau of Mines has established the standard by which peak particle velocity and vibration frequency can be correlated to potential damage to different types of structures. The Applicant will keep the combination of PPV and frequency below those potential damage thresholds both by design and by field verification using portable seismographs during bedrock excavation events.
- If blasting is required, it shall be the responsibility of the owner and his contractor(s) to notify the fire marshal of the blasting schedule and any changes to that schedule.



- If blasting is required, it shall be the responsibility of the owner and his contractor(s) to provide advance notice to neighbors/property owners within the distance of blasting activities as required by local and state regulations.
- If blasting is required, blasting depths shall not exceed 16-foot cuts.

2. Mitigation Measures

Construction will be conducted in accordance with approved site plan and in accordance with all applicable federal, State, and local codes. Impacts from construction will be temporary (during the 33 month construction period) and will conclude when the Project is completed. This is a temporary, construction-related unavoidable impact. Approximately 35,000 cubic yards of soils will be removed from the Site. All soils will be removed in compliance with applicable federal, State, and local codes. Please see Chapter 3N, Hazardous Materials, for additional information on soil removal from the Site.

If blasting is required, as part of the building permit application, a blasting plan would be submitted to the Town/Village for review and approval.

During the construction phases of development, to minimize or eliminate adverse impacts due to equipment noise or air quality, all construction equipment used on-site will be inspected periodically to ensure that properly functioning muffler systems are used in accordance with the NYSDEC Best Management Practice for reducing noise. While on the Site, equipment would not be permitted to idle unnecessarily, and construction activities would be limited to hours permitted under Chapter 177 of the Town/Village Code. Based on these measures, the temporary increases in noise levels due to construction equipment usage and construction traffic will be minimized.

The earthwork and rock removal operations have the potential to impact adjacent properties and natural resources. These impacts would be mitigated through the use of sediment and erosion controls in accordance with an approved Sediment and Erosion Control Plan and SWPPP.

Controls would be inspected in accordance with permit requirements and maintained and/or replaced as per *New York Standards and Specifications for Erosion and Sediment Control*, dated August 2005 as amended.

In addition to the implementation of sediment and erosion controls and sequencing as described above, the following Best Management Practices would be adhered to for construction:

- The construction Site will be kept clear of debris and litter at all times.
- Fuel stored on Site must have a dual containment system to prevent the accidental discharge of material.



- All stockpiles are to be protected through the use of siltation fence barriers and hay bales to prevent loss of material during rain events. Stockpiles left on Site longer than 30 days shall be stabilized with temporary vegetation as required per the *New York State Stormwater Management Design Manual* dated January 2015.
- The generation of dust from exposed soils and the rock crushing operation will be minimized by the use of water as necessary. Dust control will be provided through appropriate techniques, thus reducing air and water pollution and improving on-site working conditions. Methods to control dust include minimizing the area of the Site that is subject to disturbance at any time and limiting the movement of trucks and construction equipment. The contractor shall set up a temporary wheel wash on the tracking pads exiting the Site to accommodate heavy truck traffic during mass earthwork activities. This wash should serve to control the amount of mud tracking.
- During the transportation of excavated materials from the Site, all dump trucks will be covered by tarps to reduce the exposure of the exported loads to wind erosion. The use of mulch barriers or other temporary covers on exposed soil areas will also help to reduce dust levels. During dry weather conditions, spraying water on unpaved areas subject to heavy construction vehicle traffic will also help control dust. Access to the Site during construction will use stabilized construction entrances (i.e., a layer of 2-inch broken stone), which reduce the transport of mud by construction vehicles from the construction site onto public roads. All paved areas shall be swept as specified in the notes in the plan set.
- The dumping of oil or other chemicals to the storm drainage system or ground is forbidden. All hazardous materials or waste oils will be disposed of off-site at an approved location.
- Construction activities would be limited to occur between the hours of 8:00 AM to 8:00 PM on weekdays and between 10:00 AM to 8:00 PM on weekends, per Chapter 177 of the Town/Village Code.
- Truck traffic will be limited to roads that are suitable for truck traffic and will not be permitted on adjacent residential streets. Traffic controls will be utilized at the exit to the Site.
- Construction waste and demolition material will be separated to the extent practicable and recycled. Disposal of the construction debris will be the responsibility of the demolition contractor. Any debris will be disposed of in accordance with all applicable local, State, and federal regulations. A disposal site will be identified as the Project moves forward. At the preconstruction meeting with the Town/Village, the demolition contractor will identify the disposal site(s).



- Ingress and egress to/from the Site is via Halstead Avenue. A suitable path for dump trucks will be determined depending on the disposal facility for the construction and demolition debris.
- If there is a need to import fill into the Site, a testing protocol will be developed to confirm that the fill is clean. Testing documentation would be provided to the Town/Village.



N. HAZARDOUS MATERIALS

1. Existing Conditions

A Phase I and Phase II Environmental Site Assessment ("ESA") were completed for the Site by AECOM in February 2010 (Appendix I). A Phase II ESA was also completed in June 2014 by Triton Environmental, Inc (Appendix I)¹. According to the Phase I ESA, there are twelve Recognized Environmental Condition ("REC") sites located within 150 feet of the Site. Sanborn Fire Insurance Maps indicate that there was a coal storage/distribution facility on the Site during the early 20th century prior to its current use as four surface parking lots. The easternmost portion of the Site was reportedly used as an oil/waste recycling center by the Town/Village during the 1990s. Of the 12 REC sites, five are dry cleaners, including Paul's (Moy) Dry Cleaners, located at 368 Halstead Avenue, immediately east of the Site and was reported to have used/or spilled tetrachloroethene.

Six soil samples were taken and analyzed in the 2010 Phase II ESA. Three of the six soil samples slightly exceeded the New York Soil Clean Up – Unrestricted Use standards (the more restrictive standards) for nickel, mercury, and zinc. There were no exceedances regarding soil results compared to the New York State Residential and Restricted Residential criteria. The only exceedance of former NY Technical Administrative Guidance Memorandum Recommended Soil Cleanup Objectives criteria was mercury at 0.24 mg/kg, which slightly exceeded the criteria of 0.1 mg/kg.

According to the Phase I ESA "the environmental conditions and soil sample results detected at the [Site] would not restrict the future use of the [Site] as a mixed-use commercial, residential or municipal property"².

The 2014 Phase II ESA built upon the earlier testing and included additional soil and groundwater sampling.

The 2014 Phase II ESA determined that there are a total of five areas of concern ("AOCs") at the Site. These AOCs include:

- AOC 1 - Former Coal Yard;
- AOC 2 - Reported Oil / Waste Recycling Center;
- AOC 3 - Former Lumber Yard;
- AOC 4 - Potential Impacts from Historical Building Materials;

¹ Environmental Site Assessment Phase II, Metro-North Lot, June 2014. Prepared by Triton Environmental, Inc.

² Phase I Environment Site Assessment, Metro-North Railroad Harrison Station Development Lot, February 2010. Prepared by AECOM.



- AOC 5 - Potential Impacts from Off-Site Sources including Railroad Operations.

Soils

The soils testing conducted for the 2014 Phase II report yielded the following results:

- Diesel Range Organics ("DRO") – Diesel range organics is any synthetic and/or naturally occurring organic compound that happens to be in the same boiling point range as diesel fuel or diesel oil. DRO have been detected at the Site at concentrations ranging from 23.7 to 407 mg/kg. There are no established NYSDEC Soil Cleanup Objectives ("SCOs") for DRO.
- Volatile Organic Compounds ("VOCs") – Trace concentrations of VOCs were detected in five of the 16 soil samples which have been collected at the Site (including 2-butanone, acetone, benzene, and xylenes). The concentrations of VOCs were below the most stringent (Unrestricted Use) SCOs.
- Polynuclear Aromatic Hydrocarbons ("PAHs") – Low concentrations of PAHs have been detected in five of the 16 soil samples collected. The concentrations of PAHs were below the most stringent (Unrestricted Use) SCOs.
- Metals – Low concentrations of several metals have been detected in Site soils. The concentrations of total chromium exceeded the Unrestricted Use and Residential Use SCOs when compared against the SCO for trivalent chromium. To further evaluate these elevated detections of chromium, six samples were collected throughout the Site and analyzed specifically for hexavalent chromium. Hexavalent chromium was detected in two of the six samples (ENV-3A and ENV-5A), both located on the west side of the Site and potentially being associated with the reported historic coal yard use on the Site. Hexavalent chromium was detected in one sample at a concentration which exceeded the Unrestricted Use, but not the Residential or Restricted Residential SCOs. Mercury and zinc were also detected in at least one sample at concentrations which exceeded the Unrestricted Use, but not the Residential or Restricted Residential SCOs.
- Pesticides – The pesticide 4-4-DDE was detected in one sample at a concentration below the most stringent (Unrestricted Use) SCO.
- Polychlorinated biphenyls ("PCBs") – PCBs were detected in three samples at concentrations ranging from 0.0754 and 0.127 mg/kg in the northeast of the Site adjacent to the Metro North Railroad (HS-3, HS-3A, and HS-3B). Concentrations of PCBs exceeded the Unrestricted Use SCO of 0.1 mg/kg in one sample (HS-3A); however, concentrations were below the Residential and Restricted Residential SCOs.



Groundwater

A total of three groundwater samples were collected on the Site. One well had a detection of DRO. There are no established NYSDEC groundwater criteria for DRO; however, the presence of petroleum in groundwater at the Site triggers a requirement to report the condition to the NYSDEC. Halogenated VOCs (and derivatives of dry cleaning solvents) were also detected in the groundwater sample collected from TW-3. The concentrations of cis-1,2-dichloroethylene and tetrachloroethylene exceeded the applicable NYSDEC Technical and Operational Guidance criteria. The apparent source of the solvents is an off-site drycleaner. Groundwater at the Site is not used (and will not be used) for drinking water or process water purposes. As such, there is no risk of ingestion or dermal contact.

2. Potential Impacts

The proposed Project includes the dismantling and removal of the existing surface parking lots. As mentioned in the Phase I and Phase II ESAs, existing environmental conditions would not restrict the redevelopment of the Site as mixed-use facility.

Despite the fact that the soil conditions across the majority of the Site comply with the NYSDEC Residential and Restricted Residential use standards, certain levels of contaminants are present above background (unrestricted) levels. Therefore, soils which are excavated for the construction of the Project may not be considered unrestricted clean fill. Excess soils which are generated during construction of footings, drainage features and utilities may require disposal as a regulated waste if beneficial reuse cannot be arranged. The 2010 and 2014 ESAs determined the DRO, VOC, PAH, metals, pesticides, and levels to be relatively low. A soil management plan will be developed for the construction of the Project.

Groundwater at the Site is will not be used for drinking water or process water purposes. However, three recommendations were specified for future development:

1. Further evaluation of the PCBs detected in the groundwater samples should be undertaken to confirm that concentrations comply with NYSDEC and US EPA cleanup objectives.
2. The presence of petroleum in Site soil and groundwater should be reported to NYSDEC.
3. The presence of the solvents (cis-1,2-dichloroethylene and tetrachloroethylene) in the groundwater appears to be the result of an off-site source. A sub-slab venting system is recommended for any future structures constructed on the Site.



3. Mitigation Measures

Impacts due to hazardous materials are not anticipated. Best management practices for handling and disposing any potential hazardous materials will be implemented, including following proper protocol in handling and disposing of these materials. As described above, certain soils excavated as part of construction activities may not be considered unrestricted clean fill. A soil management plan will be implemented for construction of the Project. The proposed Project will be connected to the Town/Village's municipal water supply, and will not draw groundwater for any purpose. A sub-slab venting system will be installed as part of the Project.



M. AIR

1. Existing Conditions

Background

The 1990 Clean Air Act Amendments ("CAAA") resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, non-attainment and maintenance areas depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective U.S. Environmental Protection Agency ("EPA") National Ambient Air Quality Standards ("NAAQS"); non-attainment areas are those where concentrations exceed the NAAQS. A maintenance area is an area that used to be non-attainment, but in which air quality has improved to attainment levels. After 20 years of clean air quality, maintenance areas can be re-designated to attainment.

The Site is located in Westchester County, New York, which is an attainment area for particulate matter, sulfur dioxide, lead, and nitrogen dioxide; a maintenance area for carbon monoxide; and a nonattainment area for ozone.

Air Quality Standards

The EPA has established the NAAQS to protect the public health. Table 3M-1 presents the NAAQS for carbon monoxide ("CO"), particulate matter ("PM_{2.5}" and "PM₁₀") and ozone for the study area.



Table 3M-1 National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour	None	None
	35 ppm (40 mg/m ³)	1-hour	None	None
Particulate Matter 2.5	12.0 µg/m ³	Annual	15.0 µg/m ³	Annual
	35.0 µg/m ³	24-hour	35.0 µg/m ³	24-hour
Particulate Matter 10	150.0 µg/m ³	24-hour	150.0 µg/m ³	24-hour
Ozone	0.075 ppm (147 µg/m ³)	8-hour	0.075 ppm (147 µg/m ³)	8-hour

NYSDEC maintains an air quality monitoring system that collects concentrations of various pollutants within the State. These monitoring data were used to define the existing air quality levels, or background concentrations, within the Site and the study area. Background concentrations are ambient pollution levels from other stationary, mobile, and area sources.

A review of NYSDEC monitoring data indicates that the closest CO monitoring site is Queens College. The latest monitoring data that has been validated is for the year 2015. The 2015 maximum one-hour and eight-hour average CO concentrations are 1.9 and 1.4 parts per million (ppm), respectively at the Queens College monitoring site. These values are consistent with the study area's CO maintenance area status.

For PM_{2.5}, the closest monitoring site is White Plains. The 24-hour PM_{2.5} NAAQS is based upon the average of the 98th percentile over the most recent three years. The 24-hour PM_{2.5} background value (the 98th percentile) over the most recent three years of data (2013-2015) was 18.36 micrograms per cubic meter (µg/m³). The annual PM_{2.5} background value was 7.6 µg/m³. Similarly, the 24-hour PM₁₀ background value was 40 µg/m³ and is based on the Queens College monitoring data and represents the second highest value. These values are much less than the 1-hour and 8-hour NAAQS. The background values are presented in Table 3M-2.

On June 15, 2005, the USEPA revoked the one-hour ozone standard for most areas in the country. . Therefore, only the eight-hour ozone NAAQS applies. Westchester County is designated as an eight-hour ozone nonattainment area, which has been classified as moderate.



NYSDEC and the USEPA guidance address air quality modeling and review criteria for analyses prepared pursuant to the CAAA. The CAAA requires that a development project not:

- Cause any new violation of the NAAQS;
- Increase the frequency or severity of any existing violations; or
- Delay attainment of any NAAQS.

Table 3M-2 Air Quality Monitoring Concentrations¹

		Background Concentrations		NAAQS	
Pollutant	Monitoring Location	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	Queens College	1.4 ppm	8-hour	9 ppm	8-hour
		1.9 ppm	1-hour	35 ppm	1-hour
Particulate Matter 2.5	White Plains	7.6 µg/m ³	Annual	12.0 µg/m ³	Annual
		18.3 µg/m ³	24-hour	35.0 µg/m ³	24-hour
Particulate Matter 10	Queens College	40 µg/m ³	24-hour	150.0 µg/m ³	24-hour

¹ Represents 2015 NYDEC Monitoring Data.

2. Potential Impacts

Mobile Sources

The Site is located in a maintenance area for CO. Violation of the CO standard set by the NAAQS has become increasingly infrequent. This is due to a number of factors. Primarily, the vehicular emission rates of CO have decreased and will continue to decrease with the passage of time due to newer vehicles with better emission controls¹. Additionally, the CO background concentration in the Westchester County area has decreased with time². Vehicle trips generated by the Project are not expected to be significant, with only 73 new trips during the AM peak hour and 176 new trips during the PM peak hour.

¹ "Transportation Air Quality Facts and Figures" *Vehicle Emissions*, Federal Highway Administration. January 2006. <https://www.fhwa.dot.gov/environment/air_quality/publications/fact_book/page15.cfm>

² New York Department of Environmental Conservation, *New York State Ambient Air Quality Reports*, Multiple Years.



Considering the three controlling factors for the determination of CO impact - project traffic, background concentration, and emission rates - it is highly unlikely for the Project to cause significant CO impacts. The CO emission rates of vehicles will decrease over time, and the background CO concentration is a relatively small, less than 1% and 15% of the respective 1-hour and 8-hour NAAQS. Therefore, it is not expected that there will be any adverse impacts to the regional CO levels.

Stationary Sources

The Project may require emergency generators, and will require boilers, or other fuel burning sources. The specific equipment parameters, such as the number of units, size, and location, will be determined when building design progresses. All required permits from NYSDEC Division of Air Resources will be applied for as required. When the details of the fuel-burning stationary source equipment (such as emergency generators) are determined, the Applicant will submit the appropriate permit application to NYSDEC, which will include the noise and air quality mitigation measures (such as acoustic enclosures and exhaust silencers) necessary to meet the NYSDEC requirements.

Construction Air Quality Impacts

Construction activities associated with grading and excavation on the Site could result in temporary air quality impacts. Air quality in the area is not expected to be substantially affected by Project construction because of the temporary nature of the construction and the confined construction area. The construction period is expected to extend up to 33 months.

Construction vehicles will emit criteria air pollutants through their engine exhaust. Emissions from the operation of construction machinery would mostly contain particulate matter. The impacts from construction vehicles are expected to be minimal because excessive idling of construction equipment engines will be prohibited. All construction equipment and vehicles will be outfitted with appropriate features to limit exhaust fumes.

There is also the potential for fugitive dust to be created during the construction period due to site preparation activities, including removal of existing parking lots and vegetation and site grading. Fugitive dust emissions will be mitigated by wetting and stabilizing soils to suppress dust generation. Other dust suppression methods would include the spraying of soil stockpiles during dry periods and covering trucks carrying solid and other dry materials.

3. Mitigation Measures

Long term impacts to air quality are not anticipated due to the Project, therefore, no long term mitigation measures are required. The development's location adjacent to the Harrison Metro-North Railroad Station and within a downtown area is expected to reduce vehicle trips, thereby lessening the potential for air quality impacts due to mobile sources. Any stationary sources associated with the



Project will comply with appropriate State and local regulations. Any required air permits will be obtained.

Short term impacts to air quality due to construction are expected but will be temporary (during the 33 month period) and will cease upon Project completion. Construction will be conducted in accordance with approved site plans and in accordance with all applicable federal, State and Town/Village codes. It is anticipated that nearby properties will experience temporary fugitive dust and an elevation in vehicle emissions from construction vehicles throughout occasional periods during construction of the proposed Project. This is a temporary, unavoidable impact.

Specific mitigation measures for short term impacts during construction include prohibition of excessive construction equipment idling, outfitting all construction equipment and vehicles with appropriate features to limit exhaust fumes, wetting and stabilizing soils to suppress dust generation, and covering trucks carrying solid and other dry materials.



L. NOISE

1. Existing Conditions

Existing ambient noise conditions at the Site reflect surrounding land uses. As described previously (see Chapter 3.A, Land Use and Zoning), predominant land uses in the central business district include: residential, retail, restaurant, mixed commercial, parking lots, institutional, industrial and park uses. The Site currently contains a surface parking lot and open space. The Site is located adjacent to Metro-North Railroad tracks. Ambient noise at the Site comes primarily from Metro-North Railroad and from vehicular traffic on Halstead Avenue.

Sensitive noise receptors are facilities and uses that are dependent upon a state of serenity and quiet, or are uses that are particularly sensitive to noise levels. Land uses that are typically considered to be sensitive noise receptors include: residences, schools, hospitals, churches, libraries and certain types of outdoor recreation areas such as nature preserves.

The Site is located in a central business district where most of the uses are commercial and residential; however, there are some sensitive receptors within ¼-mile of the Site that would potentially be subject to noise impacts. Sensitive noise receptors include Ma Riis Park, Town Hall, Harrison Public Library, Sollazzo Recreation Center, Wilding Park, Harrison Senior Citizens Center, Parsons Memorial School, St. Gregory's Church, All Saints Church, and Harrison Presbyterian Church.

The Town/Village has a local noise ordinance (Chapter 177 of Town/Village Code) which puts limitations on construction equipment noise, operation of landscaping equipment and other potential noise sources. For construction equipment, Section 177-2.F. of the Town/Village Code provides that:

No person shall perform, nor hire, direct, permit, allow or license another to perform, any construction work, or erect, demolish, assemble, alter, install or equip any building or structure, private or public highway, road, premise, park, utility line or other property, including but not limited to related activities such as land clearing, grading, earthmoving, excavating, filling and landscaping, performed outside of a fully enclosed structure after 8:00 p.m. or before 7:30 a.m. on weekdays or before 10:00 a.m. on weekends and national and state holidays, unless the Town Building Inspector determines that there is an imminent danger to life or property.



2. Potential Impacts

a) Significant New Noise Sources

The new uses proposed on the Site will not generate significant noise. The proposed Project would result in a combination of residential, commercial, and parking garage uses on land that is currently used primarily for parking lots. The Project will introduce a new source of noise (compared with open space), but the proposed uses are consistent with the uses identified in the 2013 Town/Village Comprehensive Plan as well as with surrounding land uses. The primary sources of new or increase in noise would be automobiles, traffic, car alarms, and related parking garage noise as well as HVAC and mechanical equipment. Project traffic and traffic related noise from automobiles, traffic, car alarms and the parking garage will not significantly increase ambient noise levels within the vicinity of sensitive receptors and will adhere to Chapter 177 of Town/Village Code. New uses including the HVAC and mechanical equipment on the Site will adhere to Chapter 177 of Town/Village Code and will not significantly increase ambient noise levels within the vicinity of sensitive receptors.

b) Noise in Relation to Metro-North Railroad Operations

The Site is located adjacent to the Metro-North Railroad and the Harrison Metro-North Station. Approximately 230 trains pass through the station on a regular weekday. Using the US Department of Housing and Urban Development (“HUD”) Day/Night Noise Level calculator, the outdoor noise level from the trains is approximately 66.5 decibels, slightly higher than the recommended 65 decibel average outdoor noise level.

The new residences on the Site would be sensitive receptors. The residential component of the Project will be constructed to attenuate exterior noise levels in accordance with the New York State Uniform Fire Prevention and Building Code. To mitigate the noise from the adjacent train tracks, construction will include double-glazed windows, and insulation.

c) Construction Noise

Local ambient daytime noise levels would temporarily increase in the Site vicinity during construction of the proposed Project. Noise generated during construction will be primarily from the exhaust of diesel engines that power equipment. Since noise during construction is a temporary impact, it will cease upon completion of the Project. Noise levels of construction equipment likely to be used are summarized in the table below.



Table 3L-1 Noise Levels of Construction Equipment

Equipment	Noise Level (dBA)				
	50 Feet	100 Feet	200 Feet	400 Feet	800 Feet
Cement Trucks	91	85	79	73	67
Front Loaders	79	73	67	61	55
Graders	85	79	73	67	61
Bulldozers	80	74	68	62	56
Pickup Trucks	60	54	48	42	36
Back hoes	85	79	73	67	61
Concrete Mixers	85	79	73	67	61
Pneumatic Rock Breaker	91	85	79	73	67
Hydraulic Rock Breaker	95	89	83	77	71

Sources: BBN, 1971, NYSDEC, 1974, NYPA, 1986

Typical site average sound levels for construction are presented in Tables 3L-2 and 3L-3. Table 3L-2 reflects the average sound level when all of the construction equipment is operating on the Site at the same time, and Table 3L-3 reflects the average sound level when only minimal equipment is in operation. Construction noise levels are never steady in nature, but fluctuate depending upon the number and type of equipment in use at any given time.

Table 3L-2 Typical Site Average Noise Levels by Construction Activity (dBA) All Equipment at Site

Construction Phase	Noise Level (dBA)				
	50 Feet	100 Feet	200 Feet	400 Feet	800 Feet
Excavation	89	83	77	71	65
Foundation	77	71	65	59	53
Erection	84	78	72	66	60
Restoration/Finishing	89	83	77	71	65

Source: BBN, 1971



Table 3L-3 Typical Site Average Noise Levels by Construction Activity (dBA) Minimum Amount of Equipment Required at Site

Construction Phase	Noise Level (dBA)				
	50 Feet	100 Feet	200 Feet	400 Feet	800 Feet
Excavation	71	65	59	53	47
Foundation	77	71	65	59	53
Erection	72	66	60	54	48
Restoration/Finishing	74	68	62	56	50

Source: BBN, 1971

The impact of construction noise depends upon the specific construction activity and equipment used, as well as receptor distance from the construction site. The noisiest period of construction will occur during site clearing and grading activities, when sections of the Site are prepared for building. Such noise could be intrusive, but would have limited duration.

To the average person, an ambient noise level increase of 2 to 3 decibels (dBA) is barely perceptible; an increase of 5 dBA is noticeable; and an increase of 20 dBA or more is perceived as a dramatic change. Noise impacts are considered to be significant if the increase is more than 5 dBA, which is likely to generate sporadic complaints from the community. An increase of more than 10 dBA is likely to generate more widespread complaints.

Construction related sound levels experienced by the sensitive receptors in the Site vicinity will be a function of distance. No receptor will be exposed to the same sound levels over an extended period of time, because equipment is utilized in different locations as construction progresses. Occasional noise levels at the Site property line are projected to range between 65 dBA and 90 dBA, depending on the actual location of construction equipment at any given time. These elevated noise levels would be sporadic during the construction period. Noise levels actually experienced on a nearby property would be expected to be lower, accounting for distance from the noise source and other attenuating factors.

It is anticipated that nearby properties will experience temporary elevated noise levels at occasional periods during construction of the proposed Project. This is a temporary, construction-related, unavoidable impact.

Construction activities on the Project Site will adhere to the limitations in Chapter 177 of Town/Village Code.



3. Mitigation Measures

Construction noise impacts will be temporary, and will be eliminated when construction is complete. Construction activities would be limited to the hours of 8:00 AM to 8:00 PM on weekdays and between 10:00 AM to 8:00 PM on weekends, per Chapter 177 of Town/Village Code.

The Project will comply with Chapter 177 of Town/Village Code, and will use best management practices during construction. Construction activities and the operation of construction equipment are an expected and required consequence of any new construction project and cannot be avoided. To minimize or eliminate adverse impacts due to equipment noise during the construction phases of the Project, all construction equipment used on the Site will be inspected periodically to ensure that properly functioning muffler systems are used on all equipment in accordance with the NYSDEC Best Management Practice for reducing noise. While on the Site, equipment would not be permitted to idle unnecessarily, and construction activities would be limited to hours permitted under Chapter 177 of Town/Village Code. Based on these measures, the temporary increases in noise levels due to construction equipment usage and construction traffic will be minimized.

Post-construction, the Project is not anticipated to significantly increase ambient noise levels in the vicinity.

The new residential units facing the railroad tracks will be constructed with double-glazed windows rated for a Sound Transmission Class ("STC") of at least STC-30, and acoustic barrier insulation. It is anticipated that these mitigation measures will alleviate railroad noise inside the residential units.



K. UTILITIES

1. Water

a) Existing Conditions

The Project Site and existing development is serviced by the Westchester Joint Water Works (WJWW) which is operated by the Town of Harrison in conjunction with the Town/Village of Mamaroneck.¹ The water source is Kensico Reservoir which is part of the New York City water system (the WJWW purchases the water from the New York City system).²

A 12-inch water main is located along the north curb of Halstead Avenue (see Exhibit K-1 Utilities Plan) with a working pressure of 80 pounds per square inch (psi). Westchester Joint Water Works has indicated that this is a feeder main for the City of Rye. Three fire hydrants are located on or adjacent to the Site along the northern sidewalk of Halstead Avenue: one to the west of the intersection of Halstead Avenue and Harrison Avenue; one located across from Parsons Street; and one located across from Haviland Street. Westchester Joint Water Works performed flow tests of the hydrants at Parsons Street and Haviland Street on February 24, 2016. These tests indicated an available 6,000 gallons per minute (gpm) at 20 psi.

b) Potential Impacts

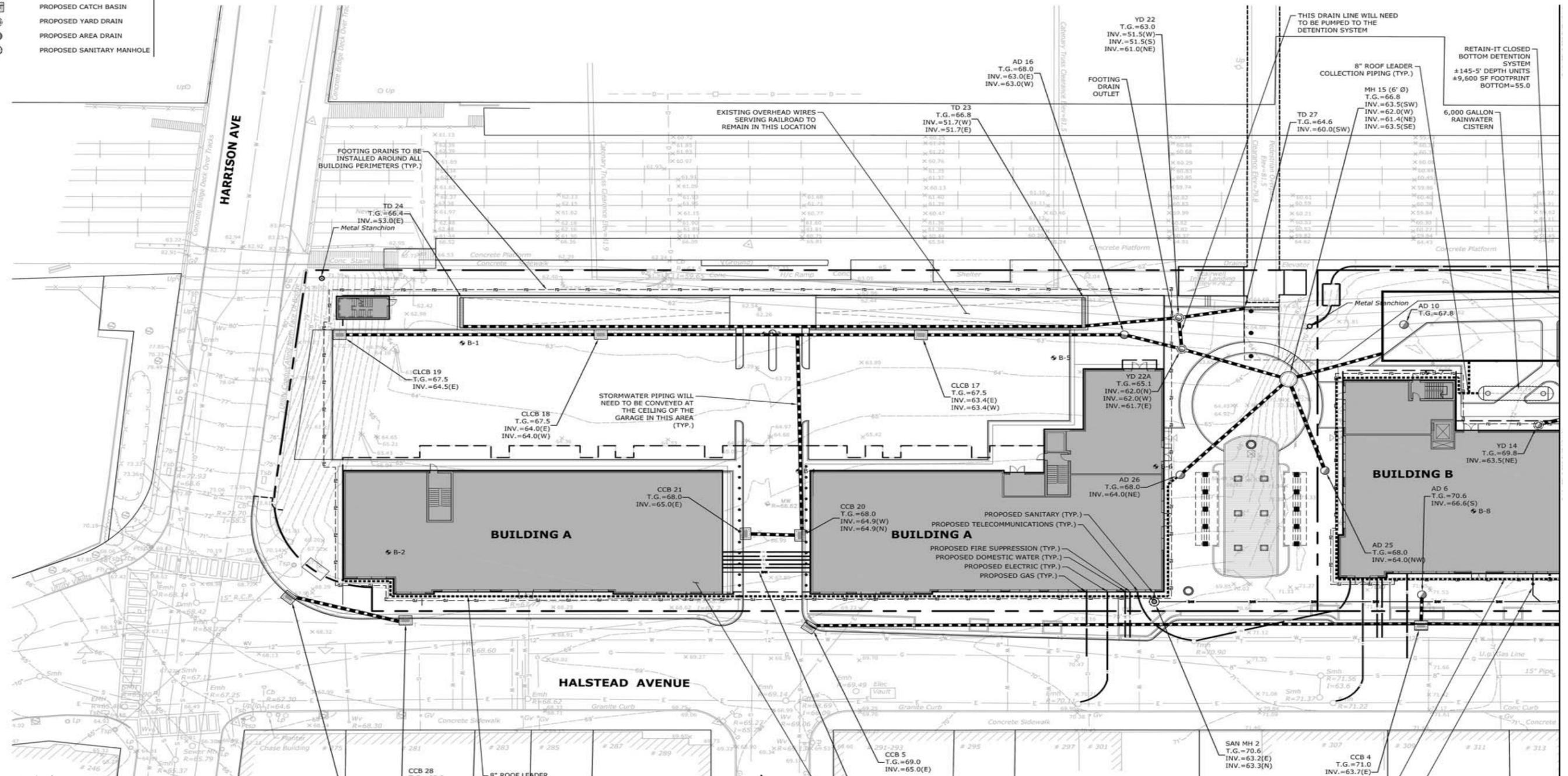
The estimated domestic average daily demand from the Project Site will be 37,117 gallons per day (gpd) collectively among all of the proposed uses (143 apartments consisting of 215 bedrooms, 27,000 square feet of retail space, and associated amenities and leasing office). The estimated average daily domestic water demands from the project Site are listed in the table below. This demand was determined by multiplying the estimated wastewater generation from the development by 10% to adjust for water consumption.

1 BFJ Planning. 2013. Town/Village of Harrison Comprehensive Plan, December 2013 Draft.

2 Ibid.

UTILITIES LEGEND

- PROPOSED STORM PIPE
- PROPOSED GAS
- PROPOSED SANITARY PIPE
- PROPOSED ELECTRIC
- PROPOSED ROOF DRAIN
- PROPOSED DOMESTIC WATER
- PROPOSED FOOTING DRAIN
- PROPOSED FIRE PROTECTION
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED YARD DRAIN
- PROPOSED AREA DRAIN
- PROPOSED SANITARY MANHOLE
- PROPOSED TELECOMMUNICATIONS



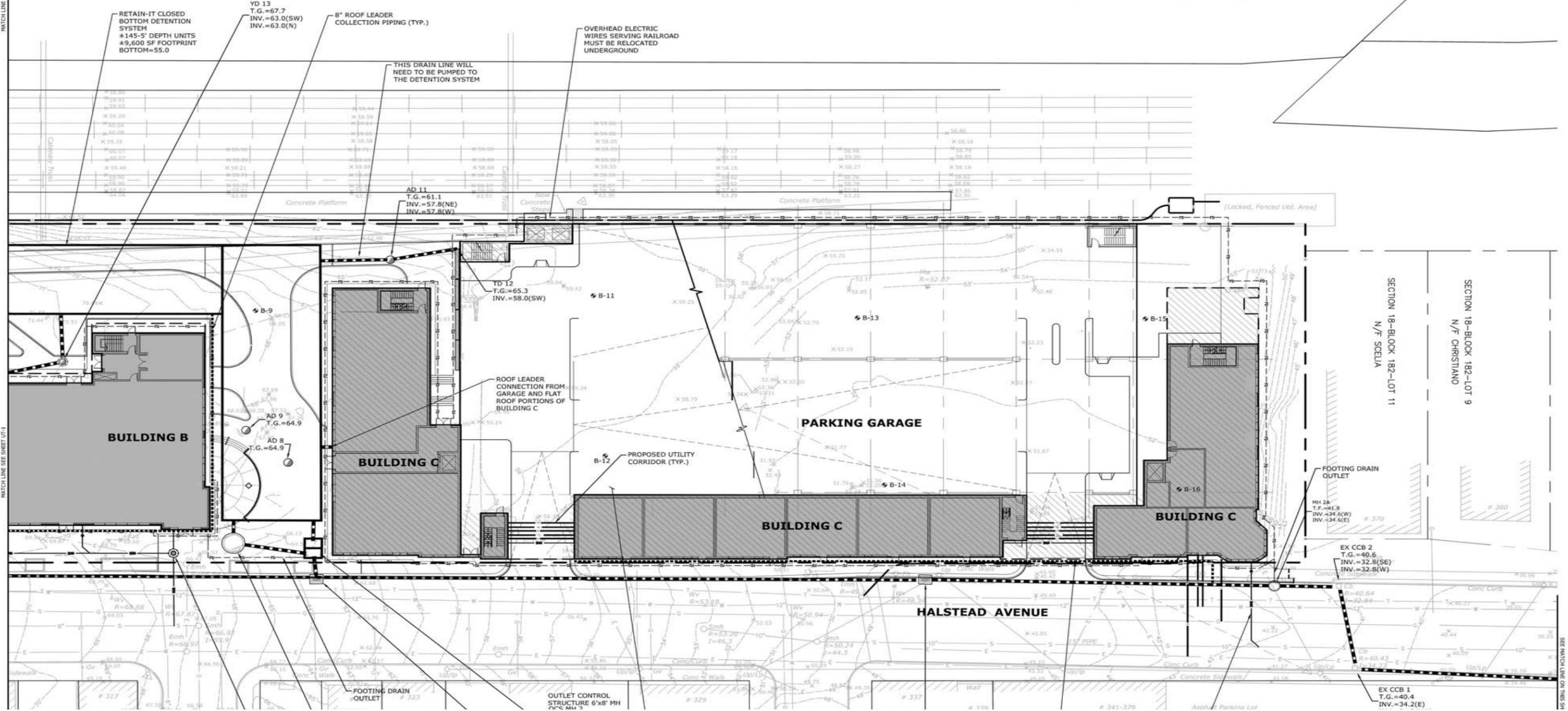
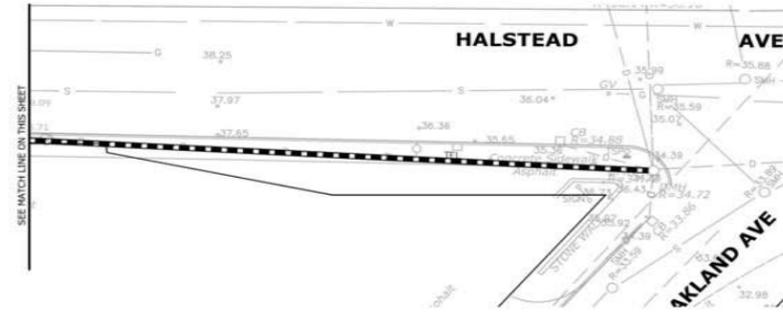
Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

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UTILITIES LEGEND

- PROPOSED STORM PIPE
- PROPOSED SANITARY PIPE
- PROPOSED ROOF DRAIN
- PROPOSED FOOTING DRAIN
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED YARD DRAIN
- PROPOSED AREA DRAIN
- PROPOSED SANITARY MANHOLE
- PROPOSED GAS
- PROPOSED ELECTRIC
- PROPOSED DOMESTIC WATER
- PROPOSED FIRE PROTECTION
- PROPOSED TELECOMMUNICATIONS



Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

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Table 3K-1 – Daily Domestic Water Demands

Item	Daily Domestic Water Demands (gpd)
Residential	26,015
Retail	2,305
Restaurant	7,700
Fitness	660
Office	66
Total	36,746

The proposed residential building would contain fire suppression sprinklers. The estimated required fire demand for the sprinklers and hydrants will be determined by the Fire Protection Engineer³ during final Site Plan development. It is anticipated that one separate fire/domestic lateral will be installed from the 12" main in Halstead Avenue to each of the proposed buildings. It is anticipated that no on-site water tanks or booster pump stations will be needed.

A preliminary assessment, based on similar projects, concluded that supply is sufficient to meet the domestic and fire demands for the Project. Final design demands for domestic and fire will be provided by the mechanical, electrical, and plumbing engineer for review by the Building and Engineering Departments prior to construction.

c) Mitigation Measures

Since the water supply is currently available and sufficient capacity exists to service the Project, no mitigation measures are proposed for water supply. However, water saving fixtures will be utilized within the proposed structures, such as low flow toilets, high-efficiency plumbing fixtures and fittings in kitchens and baths.

The Westchester Joint Water Works will need to review the Project's estimated water demands and will decide if upgrades to the existing network are necessary.

³ Fire Protection Engineer is a mechanical engineer that specializes in sprinkler and support pumping system design



2. Sewer

a) Existing Conditions

The Site and existing development in the vicinity is served by Mamaroneck Sewer District. Service laterals on the Site are the responsibility of the property owner. Collection mains in the street are maintained by the Town of Harrison.

There are no sanitary sewer facilities located on-site. Three separate networks of town-managed sanitary sewer main facilities exist in Halstead Avenue along the frontage of the Site. Along the western frontage of the Site, there is a gravity 8" sewer main beginning between Purdy Street and Parsons Street that conveys wastewater to the west and then to the south down Harrison Avenue. A second gravity 8" sewer main begins between Purdy Street and Parsons Street that conveys wastewater to the east and then to the south down Parsons Street. A third gravity 10" sewer main begins near Haviland Street that conveys wastewater to the east and then to the south down Oakland Avenue. All three lines ultimately discharge into the same ±30" county-managed sewer interceptor.

b) Potential Impacts

The estimated sewage generation for the proposed development is 33,405 gpd with a peak flow of 95 gpm utilizing industry standards. Flow monitoring was performed on the three separate sanitary sewer networks between the Site and the 30" county-managed sewer interceptor. A sharp and sudden spike in the flow meter results of the Harrison Avenue sewer network during rainfall events indicates the likely presence of direct stormwater connections to this sewer network from development within the vicinity of the Site. No direct stormwater connections to sanitary sewer networks exist from the Site. It is not anticipated that direct stormwater connections into the Parsons Street or Oakland Avenue sewer networks from development in the area based on flow monitoring results. The results from the flow monitoring were then compared with wastewater generation estimates prepared for the proposed development. A downstream capacity analysis indicated that the Parsons Street and Oakland Avenue sewer systems have adequate capacity to serve the Project without any infrastructure upgrades.

c) Mitigation Measures

It is anticipated that no upgrades will be needed to town sewer facilities to serve the Project. Since the sanitary service is currently available and sufficient capacity exists to service the Project, no site specific mitigation measures are proposed for sanitary service. However, as typically recommended by Westchester County, sanitary discharge from the Site will need to be mitigated at a ratio of 3:1 by providing system flow reductions for Inflow and Infiltration



(I&I). The Applicant and project engineer will meet with the Town of Harrison Engineer and Department of Public Works (DPW) to identify any applicable sanitary system segments associated with the Project that require rehabilitation either through reconstruction, lining and assess the reductions possible for each project. The Applicant will work with the Town Engineer and DPW to further investigate each project area and perform an assessment of reduction potential.

3. Electricity

a) Existing Conditions

Railroad catenary trusses carry overhead high-voltage wires serving the rail facilities exist along the northern end of the Project Site. Underground electric facilities owned by Consolidated Edison exist along the southern side of Halstead Avenue fronting the Site. A network of underground electric facilities serve the current Site's lighting and rail platform. Electric manholes exist along the southern edge of the Site across from the railroad pedestrian bridge.

b) Potential Impacts

The Project will increase electrical usage at the Site. It is anticipated that the Project will be serviced by Consolidated Edison and the Site lies within a developed corridor that service can be easily obtained. The electric service will tie into the existing electric lines located in Halstead Avenue. Existing on-site utility service connections will be abandoned, and utility facilities serving the rail platform from Halstead Avenue will be reviewed as necessary. It is proposed to remove the eastern half of overhead high-voltage wires on the Site and place them underground to allow for construction of the parking garage. Full mechanical and electrical design of the proposed building will be finalized closer to construction.

c) Mitigation Measures

It is anticipated that no upgrades will be needed to service the Project. The existing electric facilities located along Halstead Avenue will be suitable for the development.

4. Telecommunications and Cable

a) Existing Conditions

The Site is not serviced by telecommunications or cable. Currently, there is an existing underground telecommunications line owned by Verizon located along the northern side of Halstead Avenue.



b) Potential Impacts

The Project Site will have high speed internet, fiber cable and phone service to the buildings with Wifi hotspots in the amenity areas.

c) Mitigation Measures

It is anticipated that no upgrades will be needed to service the Project. The existing telephone and cable facilities along Halstead Avenue will be suitable for the development.

5. Gas

a) Existing Conditions

An underground gas line owned by Consolidated Edison exists along the northern side of Halstead Avenue. The Site is currently not serviced by gas.

b) Potential Impacts

Gas service would be provided to the Project Site by tying into the existing underground gas line on Halstead Avenue and all work will be coordinated with Consolidated Edison.

c) Mitigation Measures

It is anticipated that no upgrades will be needed to service the Project. The existing gas facilities along Halstead Avenue will be suitable for the development.



J. STORMWATER MANAGEMENT

1. Existing Conditions

Stormwater quantity and quality controls have been analyzed following procedures set forth in the New York State *Stormwater Management Design Manual* (the "Manual") dated January 2015 prepared for the New York State Department of Environmental Conservation. The Manual provides guidelines for stormwater site planning as well as selection and design of stormwater management practices ("SMPs") using the "Five-Step Process for Stormwater Site Planning and Practice Selection" as described in Chapter 3 of the Manual.

The proposed Project provides an opportunity to improve the quality of the stormwater runoff generated on-site and reduce potential pollutant discharges into the receiving water bodies.

a) Drainage Infrastructure

There are various existing catch basins collecting stormwater runoff within the Site. The westernmost parking lot on the Site drains south-to-north toward the railroad platform where runoff is collected by a series of catch basins and discharged under the tracks to a receiving drainage system in the parking lot north of the railroad tracks. Stormwater runoff from Halstead Avenue in this area drains onto the Site and through this parking lot. The second parking lot from the west contains two catch basins that discharge stormwater runoff to dry wells. Jilly Flowers Park contains a series of catch basins that collect runoff and discharge it through the on-site retaining walls. The eastern parking lot has no drainage infrastructure. Runoff from this parking lot drains overland to the Halstead Avenue gutter.

The stormwater runoff from the Site discharging under the tracks is conveyed through an existing drainage system within the parking lot north of the railroad tracks. Based upon a review of available mapping, this system drains to the east to Macy Road and south from there to the intersection of Halstead Avenue and Oakland Avenue. Runoff from the eastern portion of the Site generally drains to the gutter of Halstead Avenue where it is captured by catch basins and conveyed toward the intersection of Halstead Avenue and Oakland Avenue. Runoff from all parts of the Site ultimately combines at this intersection and drains south down Oakland Avenue and then to the east into Beaver Swamp Brook. This section of Beaver Swamp Brook is approximately 9,000 feet north of its confluence with Mamaroneck Harbor. The Site's drainage area represents approximately 0.25 percent of the overall 1,530 acres of watershed area tributary to the Beaver Swamp Brook.



A small portion of the western frontage of the Site drains toward the intersection of Halstead Avenue with Harrison Avenue. The drainage network in this intersection drains to the west down Halstead Avenue.

Due to the relatively small size of the tributary watershed area, land use in the area was determined from field survey. Land use types included forested, grassed or open space, and impervious (paved) cover. Soil types in the overall watershed were determined from the Natural Resources Conservation Service ("NRCS") database for Westchester County, New York. For this analysis, the overall watershed was determined to contain entirely urban land. A review of the areas surrounding the Site indicated the likely presence of underlying type "D" hydrologic soils. According to NRCS, "D" soils are poorly drained soils and are considered to have a very slow infiltration rate when thoroughly wet.

b) Hydrologic Study

A detailed hydrologic study was prepared to determine the existing peak rates of runoff from the Site during the 1-, 2-, 10-, 25-, 50-, and 100-year storm events. The predevelopment peak flow rates are the basis for determining stormwater management requirements for the proposed Project. The results of the hydrologic analysis of existing conditions are demonstrated in the Stormwater Pollution Prevention Plan as are the input computations and model output.

2. Potential Impacts

The Site is currently operated as a commuter parking facility and is heavily trafficked by pedestrians. As a result, most of the lawn areas consist of compacted soil with minimal vegetative growth. The Project will result in approximately 90% of the Site being covered with impervious surfaces while the Site is currently approximately 70% impervious. The impervious cover will consist of a combination of buildings, walkways, parking areas, and pedestrian plazas.

The Project is characterized as a "redevelopment project," as described and outlined in Chapter 9 of the Manual. The existing impervious area on the Site has little to no water quality infrastructure. The Site will be redeveloped with new surfaces from which runoff will be controlled and treated with stormwater management systems. Construction of the Project will disturb the majority of the Site.

a) Drainage Infrastructure

The Project would not result in adverse impacts or detrimental changes to the quality of stormwater runoff discharged from the Site. No increases in peak rates of runoff would occur due to the Project.



Stormwater runoff will be managed on site by a proposed internal stormwater collection and management system designed in accordance with the Manual, which will meet all applicable WQv and other (Channel Protection Volume, Overbank Flood, and Extreme Storm) regulatory requirements. An initial screening of SMPs was performed to select the most appropriate practice for the Project. Infiltration practices will not be used because of the poorly drained soils and shallow depth to bedrock. Surface practices will not be used due to size constraints. Therefore, a proprietary manufactured stormwater treatment device (Contech StormFilter media filtration chamber or approved equal) is proposed as the most appropriate SMP for the Project.

The system will convey runoff to a proposed stormwater management (detention) area located centrally on the Site, which will be designed to control the peak flows from the proposed development to rates that are equal or less than the predevelopment peak flow rates for all studied storm events. In addition to proposed on-site drainage infrastructure, it is proposed to upgrade the existing storm system along Halstead Avenue from the Site to its intersection with Oakland Avenue. This will consist of constructing seven new drainage structures along the northern gutter of Halstead Avenue and approximately 1,100 linear feet of pipe to hydraulically connect the site to Oakland Avenue.

Post construction water quality measures or Best Management Practices ("BMPs") consist of deep sump catch basins, pretreatment water quality chambers, and detention storage. A detailed description of each water quality feature proposed for the Project is included in the Stormwater Pollution Prevention Plan.

The proposed post construction BMPs and sediment and erosion control measures will provide quantity and quality control of the stormwater discharged into the Town's drainage system. The BMPs will be strategically combined in series, thereby forming a stormwater management system that accomplishes multiple stormwater management objectives such as pollutant removal and peak flow attenuation.

In addition to the BMPs described above, a detailed Sediment and Erosion Control Plan ("S&E Control Plan") will mitigate the short-term impacts of the Project during construction. The S&E Control Plan will include descriptive specifications concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. All of the sediment and erosion controls provided will be designed in accordance with the New York Standards and Specifications for Erosion and Sediment Control, dated August 2005.

The proposed drainage system will not reuse any of the limited existing drainage systems on-site. The existing drainage facilities adjacent to the railroad tracks will remain but will have their tributary drainage areas significantly reduced.



b) Hydrologic Study

A hydrologic analysis of post development conditions was performed, with and without the proposed stormwater detention area. As part of the overall hydrologic study for the Site, the proposed flows were compared to the existing flows. Below is a summary of the predevelopment and post development peak flow rates from the Site at the two hydrologic analysis points.

Table 3J-1 Analysis of Predevelopment and Post development Peak Flow Rates

Analysis Point A: Halstead / Oakland						
Peak Flow Rates (cfs*)						
Storm Frequency (years)	1	2	10	25	50	100
Existing Conditions	10.7	13.1	20.9	25.8	31.0	37.0
Proposed Conditions W/Out Detention	11.8	14.2	21.9	26.7	31.8	37.7
Proposed Conditions With Detention	0.5	0.6	7.3	14.3	19.9	36.6
Analysis Point B: Halstead / Harrison						
Peak Flow Rates (cfs*)						
Storm Frequency (years)	1	2	10	25	50	100
Existing Conditions	0.4	0.5	0.7	0.8	1.0	1.2
Proposed Conditions	0.4	0.4	0.6	0.8	0.9	1.1

*cfs = cubic feet per second

c) Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan (“SWPPP”) is required to be prepared in compliance with the NYSDEC general permit for discharges from construction activity (Permit No. GP-0-15-002) (See Appendix P, SWPPP).

The proposed stormwater management system will be designed according to the Town/Village’s standards to provide adequate pipe capacity to convey the 10-year storm event. A gutter flow analysis will be performed on the storm drainage systems in the roadway to ensure adequate spacing and inlet capacity for the 10-year storm event. In addition, the outlet pipe from the proposed outlet control structure of the stormwater management area will be sized with adequate capacity to convey the 100-year storm event. There will be no drainage connection from the Site under the railroad tracks. All storm drainage computations and models are included in the SWPPP.

No stormwater impacts to the railroad tracks are expected from the proposed Project.



d) Future Maintenance

The proposed stormwater management facilities on the Site would be owned and maintained by the Applicant.

Long-term maintenance requirements for the stormwater management area include the removal of litter and accumulated debris. Access to the area will be from the pedestrian plaza between the buildings.

3. Mitigation Measures

a) Stormwater Management Design

A detailed S&E Control Plan will mitigate the short-term impacts of the Project during construction. The Sediment and Erosion Control Plan will include descriptive specifications concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. All of the sediment and erosion controls will be designed in accordance with the New York Standards and Specifications for Erosion and Sediment Control, dated August 2005.

The stormwater management system provides peak flow mitigation for the 1, 2, 10, 25, 50, and 100 year storms. A summary of the peak flow rates under existing and proposed conditions is provided in Table 3J-1. Existing hydrologic conditions of the Site will be maintained after construction. This will be achieved by maintaining the postdevelopment peak flows at the same rates or below the predevelopment peak flows, thus providing zero net increase in peak flow rates as a result of the Project. The ultimate discharge points from the Site will be the same under existing and proposed conditions.

The proposed stormwater management system will be designed to convey the required 10-year storm event. This system will convey the runoff from the developed area to the proposed stormwater management area. The system will use several BMPs designed in series for stormwater management. Stormwater runoff from the Site will be collected and conveyed via a subsurface pipe. The system will include catch basins with 2-foot sumps that trap coarse sediment. Proprietary water quality chambers will be utilized prior to the discharge to the proposed stormwater management area. These systems will pretreat the stormwater to increase the removal of suspended solids, debris, and floatables prior to the final discharge from the Site.

The stormwater management system will incorporate a proprietary manufactured stormwater treatment device (Contech StormFilter media filtration chamber or approved equal). Based on the performance criteria outlined in Chapter 6 of the manual, the stormwater management (detention) area will therefore be designed as a proprietary underground filtration system. The



required retention volume for the system was estimated based on requirements in Chapter 4 of the manual. The manual states that adequate volume should be provided to retain 90 percent of all rainfall events in the area, which equates to storm events equal to 1.5 inches or less. Chapter 6 states that storage for 75% of the WQv must be provided for filtration systems. Therefore, the stormwater management (detention) area will be designed to retain 75% of the rainfall amount of 1.5 inches.

b) Sediment and Erosion Control

The construction areas will be surrounded by geotextile sediment filter fence. A construction entrance will be provided along with several temporary topsoil stockpile areas encircled with sediment filter fencing. In addition, erosion control blankets will be installed on critical slopes to protect the newly created slopes until permanent vegetation can be established. Inlet protection will be provided for each catch basin and yard drain inlet to prevent sediment from entering the stormwater system during construction.

Temporary diversion berms and swales will be provided to direct the stormwater runoff to temporary sediment traps during construction. The swales will include stone check dams to slow potential erosive velocities. The soil and erosion controls will be modified with the changing grades on site to ensure the protection of the surrounding areas.



I. TRAFFIC AND TRANSPORTATION

1. Existing Conditions

a) Description of Existing Roadways

Evaluation of the potential traffic impacts associated with the Project requires a thorough understanding of the existing roadway system in the vicinity of the Site.

The Site is located immediately adjacent to the MNR Harrison Station, which is part of the MNR New Haven Line. MNR provides fast, frequent service between Grand Central Terminal in New York City and Stamford, CT on the New Haven Line. There are 103 trains that stop at the Harrison Station each weekday (49 southbound trains that terminate at the Grand Central Terminal, and 54 northbound trains that terminate in Stamford CT). In addition, there are 75 daily trains on weekends and holidays, (37 southbound; 38 northbound). Peak express service between the MNR Harrison Station and Grand Central Terminal takes 40 minutes or less.

Recent surveys of a similar TOD development (Hudson Park) in Yonkers reveal a peak overnight parking demand of less than 1 vehicle per occupied unit, which is approximately 2/3 of what would be generated by a typical (non-TOD) project of this type based on Institute of Transportation Engineers (“ITE”) data. Surveys of peak-hour traffic activity at the Hudson Park development reveal that development is generating only 14 trips per 100 units in the AM Peak Hour and only 16 trips per 100 units in the PM Peak Hour, which is approximately 1/3 of what would typically be generated by a development of this type (based on ITE data). Considered together, these surveys indicate that the car has become a luxury for most TOD residents, as opposed to a necessity. Residents who do own a vehicle do so more for leisure use than for daily commuting purposes. As such, it is expected that a substantial portion of Project traffic (as much as 50%) will be made by train or other non-auto mode. For conservative purposes, a 33% TOD credit was applied. A detailed explanation of the residential Project trip calculation is provided in the Traffic Impact Study in Appendix O.

From a vehicular perspective, the Site is located on Halstead Avenue (a major road for east-west travel through this part of the Town/Village), just east of Harrison Avenue in the center of the downtown business district. Regional access is provided by Interstate Route 95 (I-95) at Exit 19 via Playland Parkway and Halstead Avenue as well as by the Hutchinson River Parkway via Harrison Avenue.



The existing conditions observed in the study area include an inventory of these and other roadways and intersection geometry, on-street parking, bus stop locations and traffic control devices. This information is provided below.

Roadways

Interstate Route 95 (New England Thruway)

Interstate Route 95, known as the New England Thruway within Westchester County, is classified as an interstate principal arterial and is under the jurisdiction of the New York State Department of Transportation (“NYSDOT”). The nearest interchange providing regional access to the Site is Exit 19 (Playland Parkway). I-95 has three travel lanes in each direction and has a posted speed limit of 55 miles per hour (mph). Parking is prohibited and there are no bus stops or traffic control devices (signals, stop or yield signs) on the highway. The roadway is in generally fair condition.

Hutchinson River Parkway

The Hutchinson River Parkway is a north-south, principal arterial expressway and runs from the Bronx through Westchester County into Connecticut where it continues as the Merritt Parkway (CT Route 15). In the vicinity of the Site, the parkway provides two travel lanes per direction and has an interchange with NYS Route 127 (North Street/Harrison Avenue), providing regional access to the Project. The Hutchinson River Parkway has a posted speed limit of 55 mph and is under the jurisdiction of the NYSDOT. Parking is prohibited and there are no bus stops or traffic control devices (signals, stop or yield signs) on this section of the highway. The roadway is in generally fair condition.

Halstead Avenue (County Route 54)

Halstead Avenue is a Westchester County roadway (CR 54) that is classified as a minor arterial and connects NYS Route 120 (Purchase Street) in Rye to the east with Mamaroneck to the west. Within the study area, Halstead Avenue provides one travel lane in each direction with additional turning lanes provided at the intersections with Harrison Avenue (NYS Route 127), Oakland Avenue and Osborne Road. Halstead Avenue has a posted speed limit of 30 miles per hour (mph). Within the study area, sidewalks are provided on both sides of the road except for a 70-foot long section in front of the main Harrison Station parking lot. On-street parking is provided on both sides of the road west of Macy Road. There is a bus stop on the corner of Halstead Avenue with Harrison Avenue, Purdy Street and Macy Road. Traffic signals are provided at Harrison Avenue, Macy Road, Oakland Avenue and Osborne Road.



The pavement is in generally fair condition with clearly visible signs of surface distress in some areas. The County is proposing to repave a portion of Halstead Avenue (from the Harrison/Mamaroneck line to Haviland Street) that will replace substandard areas of asphalt paving. The repaving project is to include drainage improvements, installation of new curb cuts and replacement of pavement markings and traffic signal loops. The project is funded and bids were due on July 27. Construction is scheduled for the fall of 2016.

Harrison Avenue (NYS Route 127)

Harrison Avenue, designated as NYS Route 127, is a State minor arterial roadway that connects White Plains in the north to Boston Post Road in Mamaroneck in the south. Within the study area, Harrison Avenue provides one travel lane in each direction with additional turning lanes provided at its intersection with Halstead Avenue. The pavement is in generally good condition and Harrison Avenue has a posted speed limit of 30 mph. Within the study area, sidewalks are provided on both sides of the roadway. On-street parking is generally provided on the west side of the road. There are bus stops on the corners of Harrison Avenue with Heineman Place/Calvert Street and on Harrison Avenue southbound approaching Halstead Avenue. Traffic signals are provided at Halstead Avenue, and Heineman Place/Calvert Street.

Osborne Road

Osborne Road is a two-lane, minor arterial that extends from Halstead Avenue in a southeasterly direction to Boston Post Road (US Route 1) in Rye. South of Boston Post Road, the roadway continues as Oakland Beach Road to its terminus at Forest Avenue. The pavement is in generally fair to good condition and the posted speed limit is 30 mph. Within the study area, sidewalks are provided on both sides of the road. On-street parking is provided on the north side of the road. Traffic signals are provided at Halstead Avenue and Boston Post Road.

Oakland Avenue

Oakland Avenue is a local roadway that extends from Halstead Avenue in a southwesterly direction to its terminus in a residential area to the west of Park Avenue. One travel lane is provided in each direction with an additional turning lane provided at its signalized intersection with Halstead Avenue. The pavement is in generally fair to good condition. Within the study area, sidewalks are provided on the west side of the road. On-street parking is generally provided on the south side of the road. There is a bus stop on the corner of Oakland Avenue and Halstead Avenue. A traffic signal is provided at Halstead Avenue and a stop sign is provided at Park Avenue.



Macy Road

Macy Road is a two-lane, north/south local roadway that is classified as a major collector. Macy Road connects Sunnyside Avenue to Halstead Avenue and crosses under the MNR tracks where the vertical clearance is 8' 9". The pavement is in generally fair condition and a sidewalk is provided on the west side of the roadway adjacent to the LaVigna Brothers Garage. A limited amount of on-street parking is provided on the west side of Macy Road by Halstead Avenue. A traffic signal is provided at Halstead Avenue and a stop sign is provided at Sunnyside Avenue/South Road.

Heineman Place/Calvert Street

Heineman Place is a two-lane, east/west local roadway that is classified as a major collector. Heineman Place extends from its intersection with Sunnyside Drive and Bruce Avenue in the east to Harrison Avenue in the west. To the west of Harrison Avenue, the roadway continues as Calvert Street. The pavement is in generally good condition and sidewalks are provided along both sides of the roadway. On-street parking is provided on the south side of the road. A traffic signal is provided at Halstead Avenue, as are bus stops.

Intersections

Nine intersections were identified in the adopted Scope as requiring detailed analysis and are shown on Exhibit 3I-1. A brief description of each intersection is provided below.

- 1) Halstead Avenue (CR 54) and Harrison Avenue (NYS 127)

At this four-way signalized intersection, the Halstead Avenue approaches and the southbound Harrison Avenue approach each provide an exclusive left turn lane and a shared through/right turn lane. The northbound Harrison Avenue approach has one shared left-turn/through/right-turn lane. The intersection is controlled by a four-phase traffic signal. Pedestrian crosswalks and pedestrian displays are provided on each leg of the intersection.

- 2) Halstead Avenue (CR 54) and Purdy Street/Surface Lot # 1

Halstead Avenue provides one lane in each direction at this unsignalized intersection with Purdy Street and the driveway to parking Lot #1. Purdy Street is a one-way southbound roadway with one receiving lane. The Lot #1 driveway has a wide, 40-foot approach to the intersection which is generally utilized as two lanes (a shared left-turn/through lane and an exclusive right-turn lane). A Stop sign is provided on the Lot #1 approach. A crosswalk is provided on the



Avalon Bay, Harrison | Harrison, New York

- LEGEND**
-  Site Location
 -  Study Locations

**Exhibit 3I-1
Study Locations**

Source Town of Harrison ESRI



west leg of Halstead Avenue. In the future, with the Project, this driveway will be improved and provide access to a new parking structure.

3) Halstead Avenue (CR 54) and Surface Lot # 2 (MTA)

Halstead Avenue provides one lane in each direction at this unsignalized "T" intersection with the driveway to parking Lot #2. The Lot #2 driveway approach has one shared left-turn/right-turn lane. A crosswalk is provided on the west leg of Halstead Avenue. In the future, with the Project, this driveway will be closed.

4) Halstead Avenue (CR 54) and Surface Lot #3

Halstead Avenue provides one lane in each direction at this unsignalized "T" intersection with the driveway to parking Lot #3. The Lot #3 driveway approach has one shared left-turn/right-turn lane. Crosswalks are not provided at this intersection. In the future, with the Project, this driveway will be closed.

5) Halstead Avenue (CR 54) and Haviland Street/Surface Lot # 4

Halstead Avenue provides one lane in each direction at this unsignalized, four-legged intersection with Haviland Street and the driveway to parking Lot #4. Haviland Street is a one-way southbound roadway with one receiving lane. The Lot #4 driveway approach has one shared left-turn/through/right-turn lane. A Stop sign is provided on the Lot #4 approach. A crosswalk is provided on the east leg of Halstead Avenue. In the future, with the Project, this driveway will be closed.

6) Halstead Avenue (CR 54) and Macy Road/Oakland Avenue

At this four-way signalized intersection, the Halstead Avenue eastbound approach and the southbound Macy Road approach each provide one shared left-turn/through/right-turn lane. The northbound Oakland Avenue approach has a shared left-turn/through lane and an exclusive right-turn lane. The westbound Halstead Avenue approach has an exclusive left-turn lane and a shared through/right-turn lane. The intersection is controlled by a multi-phase traffic signal that operates as part of a coordinated system with the signals at the adjacent Osborne Road and Newport Towers intersections. Pedestrian crosswalks are provided on the Macy Road and Oakland Avenue intersection legs.



7) Halstead Avenue (CR 54) and Osborne Road

The eastbound approach of Halstead Avenue at this signalized "T" intersection provides one through lane and a channelized right-turn lane. The westbound Halstead Avenue approach has one shared left-turn/through lane and a through lane. Osborne Road has one northbound shared left-turn/right-turn lane. The intersection is controlled by a multi-phase traffic signal coordinated with the adjacent intersections. Crosswalks are not provided at this intersection.

8) Halstead Avenue (CR 54) and Newport Towers Driveway

The Newport Towers Driveway has one southbound shared left-turn/right-turn lane at this signalized "T" intersection. Halstead Avenue has one eastbound through lane and two westbound through lanes. The traffic signal at this intersection is coordinated with the signals at the adjacent Osborne Road and Oakland Avenue/Macy Road intersections. Crosswalks are not provided at this intersection.

9) Harrison Avenue and Heineman Place/Calvert Street

At this four-way, signalized intersection, each approach provides one shared left-turn/through/right-turn lane. The intersection is controlled by a two-phase traffic signal. Pedestrian crosswalks and displays are provided on each leg.

b) Parking

The available off-street and on-street parking in the vicinity of the Site was inventoried, and is described below.

Off-street parking

The Site currently consists of four surface parking lots (Lots #1 to #4) on the Site owned and maintained by the MTA with a cumulative total of 260 parking spaces. All parking spaces are metered except for approximately 50 spaces in Lot #1 which provide free, two-hour parking for patrons of the commercial businesses along Halstead Avenue. Free parking is provided in all lots after 6 PM, on weekends and holidays. Table 3I-1 summarizes the number of parking spaces provided in the four lots.



Table 3I-1 - Existing Parking Inventory - Project Site

Parking Lot	Parking Spaces
Parking Lot #1	126
Parking Lot #2	38
Parking Lot #3	33
Parking Lot #4	63
Total	260

Note: Parking inventory based on surveys conducted in April 2016.

The Town/Village operates a parking lot on the northern side of the MNR railroad tracks, opposite of the Site. This parking area is restricted to permit holders and is accessed from Sunnyside Avenue and Calvert Street. This parking area also includes reserved spaces for employees of the Town/Village Municipal Building. A smaller (20-space) parking lot is located adjacent to Sunnyside Avenue to the east of the Town/Village Municipal Building. Free two-hour parking is permitted in this lot from 7am to 7pm.

A municipal lot with access from Harrison Avenue and Fremont Street and located to the south of Halstead Avenue provides free two-hour parking from 8am to 6pm.

On-street parking

Free on-street parking is generally permitted along both sides of Halstead Avenue between Oakland Avenue/Macy Road and Harrison Avenue. On the northern side of Halstead Avenue, there are 36 diagonal parking spaces between the Lot #1 driveway and the Lot #4 driveway. A parallel parking area is provided to the east of Lot #4, extending to approximately 130 feet to the west of the Macy Road/Oakland Avenue intersection. Parallel parking is also provided on the south side of Halstead Avenue. There are some portions along Halstead Avenue where parking is prohibited, such as in front of the funeral parlor at the southeastern corner of the intersection of Halstead Avenue and Haviland Street and at bus stop locations. Parking regulations for Halstead Avenue include one-hour parking permitted from 8am to 6pm, except on Saturday, Sunday, and holidays and no parking is allowed from 3am to 6am.

Along Harrison Avenue near its intersection with Halstead Avenue, restricted parking (one hour between 8am and 6pm; no parking from midnight to 6:00 am) is permitted on the west side of the street to the south of the intersection. Parking is not permitted along the east side of the street. To the north of the intersection, extending to Heineman Place/Calvert Street, parking is not permitted along either side of Harrison Avenue.

Free parking is available on the side streets in the vicinity of the Site. On both sides of Purdy Street near its intersection with Halstead Avenue, parking is limited to two hours



from 7am to 7pm (on all days) except for an area on the west side near Halstead Avenue where parking is limited to 15 minutes. On both sides of Parsons Street, parking is limited to two hours from 8am to 6pm on all days. In some areas, generally in the residential area to the south of Archer Place, these restrictions exclude Saturday, Sunday, and holidays. On Haviland Street, parking is limited to two hours from 7am to 7pm on both sides of the street.

c) Existing Traffic Conditions

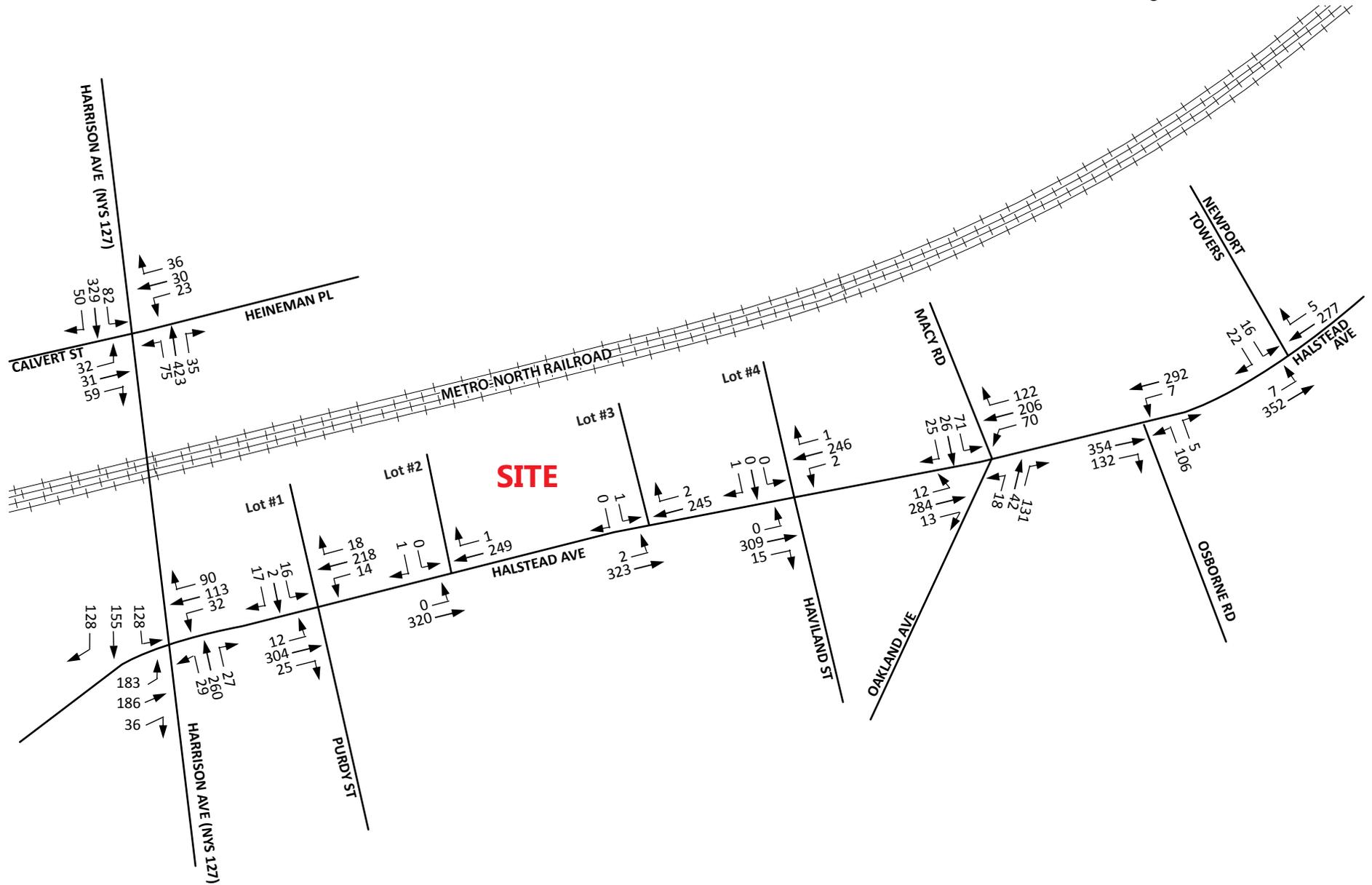
To assess existing traffic conditions in the vicinity of the Site, peak period manual turning movement traffic volume counts were recorded at the following nine study intersections in April 2016 (see Exhibit 3I-1):

1. Halstead Avenue (CR 54) and Harrison Avenue (Route 127)
2. Halstead Avenue (CR 54) and Purdy Street/Surface Lot # 1
3. Halstead Avenue (CR 54) and Surface Lot # 2 (MTA)
4. Halstead Avenue (CR 54) and Surface Lot # 3
5. Halstead Avenue (CR 54) and Haviland Street/Surface Lot # 4
6. Halstead Avenue (CR 54) and Macy Road/Oakland Avenue
7. Halstead Avenue (CR 54) and Osborne Road
8. Halstead Avenue (CR 54) and Newport Towers Driveway
9. Harrison Avenue and Heineman Place/Calvert Street

The counts included tallies of vehicles and pedestrians and were conducted on a typical weekday on Wednesday, April 13, 2016 during the morning peak period (6:45 to 9:00 AM) and the evening peak period (4:45 to 7:15 PM). The counts were tabulated and traffic passing through these intersections was determined to be greatest from 8:00 to 9:00 AM and 5:15 to 6:15 PM, the AM and PM Peak Hours. The AM and PM Peak Hour Existing traffic volumes are depicted on Exhibits 3I-2 and 3I-3, respectively. Overall, the PM Peak Hour volumes are approximately 10 percent higher than the AM Peak Hour volumes.

The traffic counts also included vehicles turning into and out of the four existing MTA lots. A review of this activity revealed that activity peaked at the MTA lots from 6:45 to 7:45 AM and from 6:15 to 7:15 PM. Activity during these hours at the MTA lots was almost twice MTA lot activity during the AM Peak Hour (8:00 to 9:00 AM) and more than twice MTA lot activity during the PM Peak Hour (5:15 to 6:15 PM).

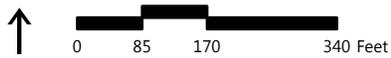
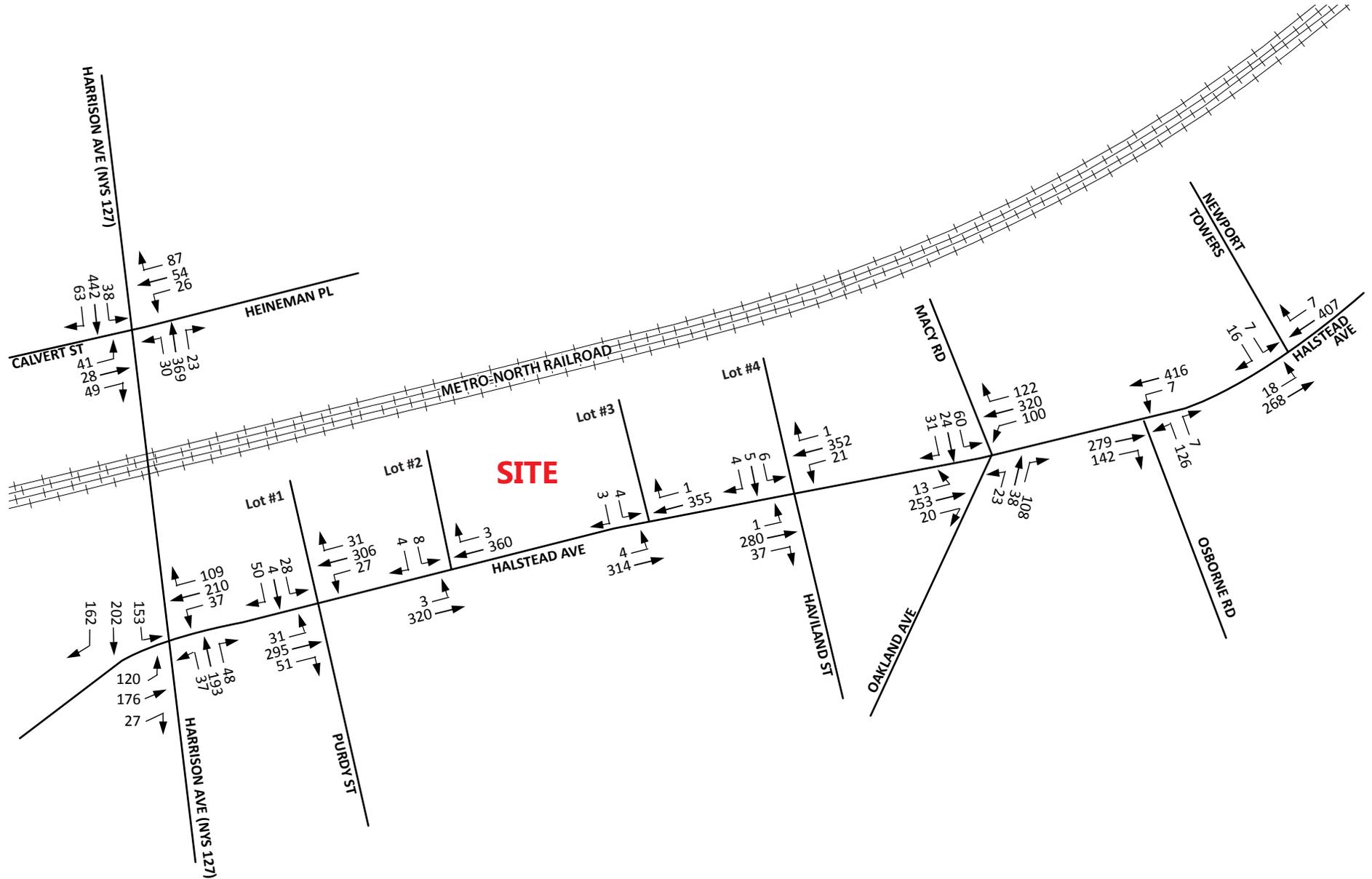
To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for the existing traffic volume conditions. The intersection capacity analyses were based on the evaluation criteria contained in the 2010 Highway



Avalon Bay, Harrison

Harrison, New York

Exhibit 3I-2
Existing Traffic Volumes
AM Peak Hour



Avalon Bay, Harrison

Harrison, New York

Exhibit 3I-3
Existing Traffic Volumes
PM Peak Hour



Capacity Manual (“HCM”). As documented in the HCM, intersection performance is influenced by a number of factors, including: traffic demand; lane configurations; lane widths; turning restrictions; roadway grades; speeds; and signal phasing and timing settings for signalized intersections. The existing physical roadway characteristics and signal phasing and timing settings at the signalized study intersections were determined by collecting field measurements.

Synchro 9 software was used to model the study intersections based on the parameters mentioned above. Synchro 9 software is widely used by traffic engineering professionals, is approved for use by the NYSDOT, and is consistent with the procedures in the HCM.

Capacity analyses results are reported using a variety of performance measures, including “Level of Service” (“LOS”). The level of service designation is an index based on the average control delay experienced by a vehicle traveling through the intersection. Similar to a report card, LOS designations are letter-based, ranging from A to F, with LOS A representing the best operating condition (lowest vehicle delays) and LOS F representing the worst operating condition (highest vehicle delays).

LOS is reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection, and the LOS can be reported for individual turning movements, approaches, or for the intersection as a whole. For unsignalized intersections, the most critical lane group delay on each approach is typically reported and the overall intersection LOS is not calculated. Thus the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway. As such, LOS is reported only for left-turns from the main street and for all movements from the side street.

The results of the capacity analyses for the AM and PM Peak Hours for the Existing traffic conditions are summarized in Table 3I-2. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix O.

As indicated in Table 3I-2, under existing conditions, the signalized intersection of Halstead Avenue and Harrison Avenue currently operates at an overall level of service (LOS) “D” during the AM and PM Peak Hours. LOS “E” is experienced on the westbound through/right-turn movement during both peak hours. The four other signalized intersections currently operate at an overall LOS “C” or better during the peak hours.

At the unsignalized intersections, the minor street turning movements operate at LOS “C” or better during each peak hour.



Table 3I-2 Existing Intersection Levels of Service Summary

Intersection	Approach	Lane Group	Existing Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) & Harrison Avenue (Route 127)	EB	L	D	41.3	D	38.7
		TR	D	45.3	D	43.8
	WB	L	D	35.1	C	34.7
		TR	E	60.1	E	72.6
	NB	LTR	D	41.7	D	40.6
	SB	L	C	22.0	C	23.5
		TR	C	25.6	C	31.7
Intersection			D	39.6	D	43.7
Halstead Avenue (CR 54) and Purdy Street/Surface Lot # 1 (unsignalized)	EB	LTR	A	0.4	A	0.9
	WB	LTR	A	0.6	A	0.9
	SB	LT	C	15.1	C	19.3
		R	A	9.9	B	10.9
Halstead Avenue (CR 54) and Surface Lot # 2 (MTA) (unsignalized)	EB	LT	A	0.0	A	0.1
	WB	TR	A	0.0	A	0.0
	SB	LR	B	10.3	B	14.0
Halstead Avenue (CR 54) and Surface Lot # 3 (unsignalized)	EB	LT	A	0.1	A	0.1
	WB	TR	A	0.0	A	0.0
	SB	LR	B	13.2	B	12.6
Halstead Avenue (CR 54) and Haviland St/Surface Lot # 4 (unsignalized)	EB	LTR	A	0.0	A	0.0
	WB	LTR	A	0.1	A	0.6
	SB	LTR	A	9.7	C	15.3
Halstead Avenue (CR 54) and Macy Road/Oakland Avenue	EB	LTR	D	36.6	D	35.4
	WB	L	A	0.3	A	0.6
		TR	A	1.9	A	3.3
	NB	LT	D	45.8	D	46.4
		R	A	5.7	A	3.4
	SB	LTR	D	51.3	D	48.2
	Intersection			C	21.3	B



Table 3I-2 Existing Intersection Levels of Service Summary (cont'd.)

Intersection	Approach	Lane Group	Existing Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) and Osborne Road	EB	T	A	3.4	A	3.0
		R	A	0.6	A	0.6
	WB	LT	A	6.6	A	7.9
	NB	LR	D	39.3	D	40.4
	Intersection		A	8.5	A	9.9
Halstead Avenue (CR 54) and Newport Towers Driveway	EB	LT	A	1.5	A	1.1
	WB	TR	C	29.1	C	29.9
	SB	LR	E	66.8	D	44.5
	Intersection		B	16.6	B	19.0
Harrison Avenue and Heineman Place/Calvert Street	EB	LTR	D	38.6	D	38.9
	WB	LTR	C	33.8	D	38.6
	NB	LTR	B	13.6	A	9.7
	SB	LTR	B	10.5	B	10.1
	Intersection		B	16.5	B	16.5

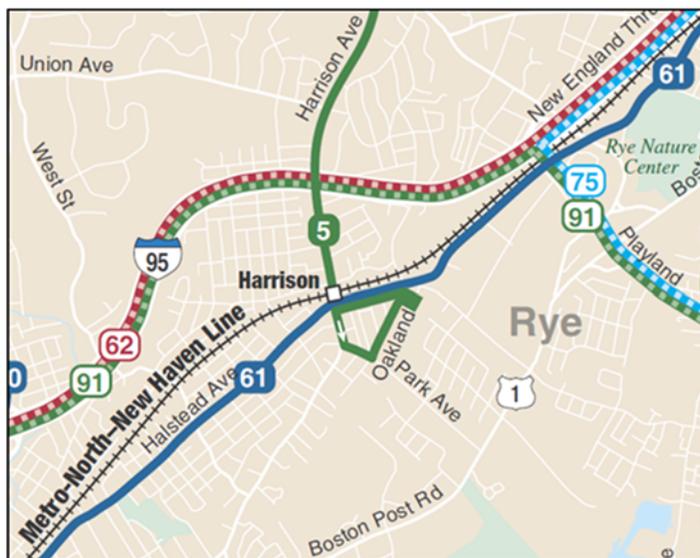
d) Public Transportation

The Project is afforded convenient access to public transit, including rail and bus service. The MNR Harrison Station is directly adjacent to the Site. The New Haven line provides service between Grand Central Terminal in New York City and New Haven, CT. Connections to Amtrak service are also available along the New Haven line at the New Rochelle and Stamford, CT stations. There are 103 MNR trains each weekday on the New Haven line between New York City and the Harrison Station (49 southbound trains, 54 northbound trains). On weekends and holidays, there are 75 trains each day (37 southbound; 38 northbound). Peak express service to and from Grand Central Terminal takes 40 minutes or less. It is a 30 minute train ride from Harrison, NY to Stamford, CT.

Westchester County runs the Bee-Line Bus system within the study area. Routes #5 and #61 each have stops located along Halstead Avenue. Bus stops are located adjacent to the Site on the north side of Halstead Avenue (between Harrison Avenue and the Lot#1 driveway) and on the south side of Halstead Avenue (to the east of Purdy Street).

Route #5 provides service between Harrison and Yonkers with 28 buses each weekday (13 southbound buses from Harrison to Yonkers; and 15 northbound buses). On Saturdays, there are a total of 23 buses (12 southbound and 11 northbound buses). Route #5 does not operate in Harrison on Sundays.

Route #61 provides service between the Bronx and Port Chester with 40 buses each weekday (20 northbound; 20 southbound) and 20 buses on Saturdays (10 northbound; 10 southbound). Route #61 does not operate on Sundays.



Map of Westchester Bee-Line Bus system in the Harrison area



e) Other Road Users

As noted above, pedestrians were counted at each study intersection. Observations indicate that the majority of pedestrians were rail commuters walking to and from the Harrison Station. As such, pedestrian activity was concentrated in the areas surrounding the Harrison train station with the highest activity occurring at the Halstead Avenue and Harrison Avenue intersection (a total of 108 pedestrians observed during the AM Peak Hour and 94 pedestrians during the PM Peak Hour) and at the Harrison Avenue and Heineman Avenue/Calvert Street intersection (66 pedestrians during the AM peak hour; 76 PM pedestrians). Another significant source of pedestrian activity is the Town/Village’s commercial downtown, which is centered primarily along Halstead Avenue from the Harrison Shopping Center to Murray’s Ice Cream (a distance of approximately 900 feet on either side of Harrison Avenue) and on Harrison Avenue from Halstead Avenue to Fremont Street. The pedestrian peak hour volumes at each intersection are summarized in Table 3I-3 below.

Table 3I-3 Summary of Pedestrian Peak Hour Volumes

Intersection	Pedestrian Volumes	
	AM Peak Hour	PM Peak Hour
1. Halstead Avenue and Harrison Avenue (Route 127)	108	94
2. Halstead Avenue and Purdy Street/Surface Lot # 1	71	62
3. Halstead Avenue and Surface Lot # 2	54	57
4. Halstead Avenue and Surface Lot # 3	13	11
5. Halstead Avenue and Haviland Street/Surface Lot # 4	38	61
6. Halstead Avenue and Macy Road/Oakland Avenue	40	36
7. Halstead Avenue and Osborne Road	13	3
8. Halstead Avenue and Newport Towers Driveway	24	26
9. Harrison Avenue and Heineman Place/Calvert Street	66	76

Although bicycles were not specifically counted, bicyclists were observed riding to and from the train station. Bicycle storage facilities are provided on both sides of train station. There were no observed bicycle lanes or shared lanes provided along roadways in the vicinity of the Site.

Approximately 4% of vehicles observed travelling on Halstead Avenue, Harrison Avenue and Oakland Avenue were either trucks making deliveries to local businesses or buses. There were no observed truck restrictions on the streets although it is noted that a clearance of 8’-9” under the railroad on Macy Road is posted with warning signs.



f) School Bus Transportation

The Harrison Central School District provides bus transportation to those public and private school students that meet the School District's distance eligibility requirements. Busing is provided for students attending Parsons Elementary School (kindergarten through 5th grade) who reside more than 0.5 miles from the school. For students in grades 6 through 12 attending either Louis M. Klein Middle School or Harrison High School, busing is provided for students who live more than 1 mile from the school. School District residents attending private schools located within a 15-mile radius are also eligible for transportation.

The Site is within 0.5 miles of the Parsons Elementary School. The front door of the middle school is under 1 mile from the intersection of Halstead Avenue with Parsons Street, so the western 2/3 of the Site is within 1 mile of the middle school. The Site is 2 miles from the high school.

In the vicinity of the Site, the nearest school bus stops are located along Halstead Avenue at Oakland Avenue/Macy Road (middle school and high school students), at Newport Towers (Parsons Elementary School students) and at Broadway (high school students).

g) Crash Analysis

Historical crash data for the study intersections was obtained from NYSDOT for the latest available three-year period from January 1, 2013 to December 31, 2015. The data were reviewed and tabulated according to location, crash severity (fatalities or injuries), crash type (rear-end, right-angle, etc.) and contributing factors. During the three-year period, a total of 33 crashes occurred at the 9 study locations, as shown in Table 3I-4. Of the 33 crashes, 10 incidents resulted in injuries and there were no fatalities. Three crashes involved pedestrians (each occurring at or near the intersection of Halstead Avenue with Harrison Avenue) and there were no crashes that involved bicyclists. A detailed breakdown of the crash data is provided in the Traffic Impact Study in Appendix O.



Table 3I-4 Summary of 3-year Crash History

Intersection	2013	2014	2015	Total 2013 to 2015
1. Halstead Avenue and Harrison Avenue (Route 127)	6	3	2	11
2. Halstead Avenue and Purdy Street/Surface Lot # 1	1	0	2	3
3. Halstead Avenue and Surface Lot # 2	0	0	0	0
4. Halstead Avenue and Surface Lot # 3	0	0	0	0
5. Halstead Avenue and Haviland Street/Surface Lot # 4	2	0	0	2
6. Halstead Avenue and Macy Road/Oakland Avenue	1	3	4	8
7. Halstead Avenue and Osborne Road	2	0	1	3
8. Halstead Avenue and Newport Towers Driveway	1	1	1	3
9. Harrison Avenue and Heineman Place/Calvert Street	1	0	2	3
Total	14	7	12	33

As shown in Table 3I-4, 14 crashes occurred in 2013, 7 crashes in 2014 and 12 crashes in 2015. In the three-year period, the highest number of crashes occurred at the intersection of Halstead Avenue and Harrison Avenue with a total of 11 crashes. Three of the crashes at this location involved pedestrians (2 crashes in 2013, 1 in 2014). In two of the pedestrian crashes, the pedestrians were crossing at midblock locations and were not in a crosswalk.

Driver inattention was cited in 12 of the crashes and backing unsafely was a contributing factor in 8 crashes, which generally involved vehicles pulling into or out of parking spaces along Halstead Avenue.

None of the intersections or roadways in the study area appear to have a crash history that is higher than would be expected for similar facilities.

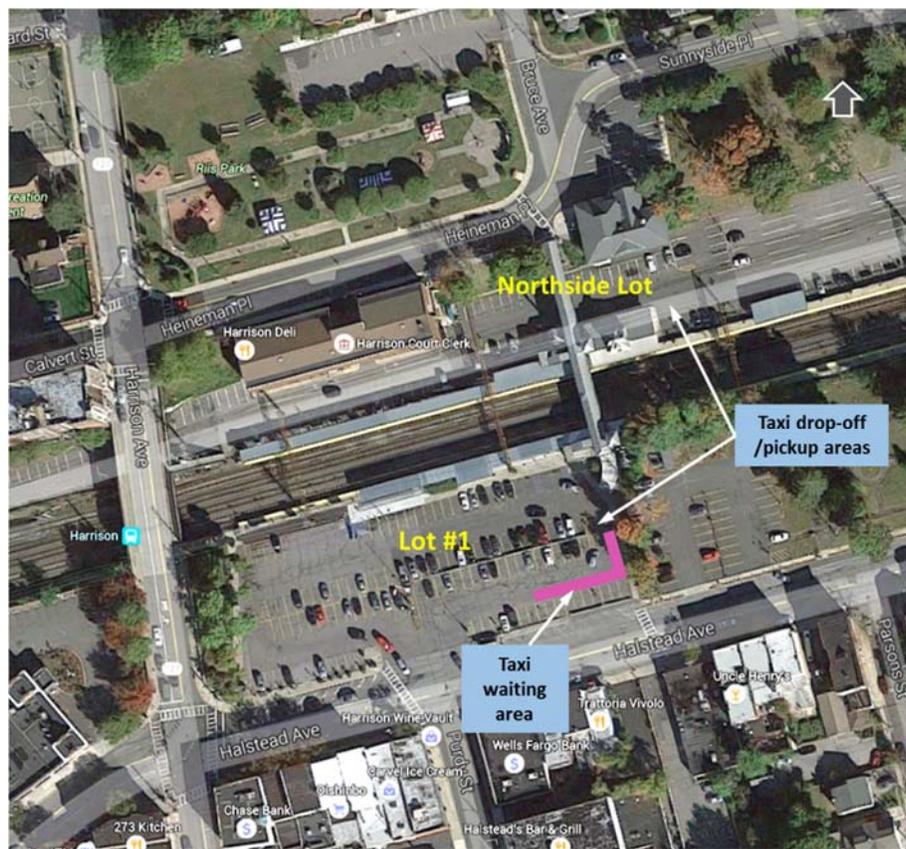
h) Taxi Cab Circulation

Traffic counts of the taxi activity at the Harrison station were conducted on Friday April 8, 2016. The surveys included counting the number of taxis that entered the station parking areas (Lot #1 and the northside lot) and observations of the taxi stand queues in Lot #1. The counts were conducted during the PM peak period (5:00 to 7:30 PM) which typically has more taxis waiting to pick-up fares than during the morning peak period where queuing is typically less as most of the morning trips are for dropping off passengers. The majority of the taxi trips were in Lot #1 with a total of 28 taxis during the 2 ½ hour survey period. During the PM Peak Hour (5:15 to 6:15 PM) there were a total of 10 taxi trips in Lot #1. In the northside lot, a total of 8 taxi trips

occurred during the entire survey period with 4 of these trips occurring during the PM Peak Hour.

In Lot #1, the taxis wait for passengers in a designated area along the southeastern perimeter of the lot, as shown in Exhibit 3I-4. The maximum observed queue of taxis during the PM Peak Hour in Lot #1 was 4 taxis.

Exhibit 3I-4 - Taxi Waiting Area



Base Map Source: Google Maps

2. Potential Impacts

a) No Build Traffic Conditions

The “No-Build condition” represents the future traffic conditions that can be expected to occur, if the Project does not materialize. Traffic growth is typically a function of the expected land development, economic activity and changes in demographics in the region. To estimate the



rate at which traffic can be expected to grow during the study period, both historical growth and planned area developments were reviewed and considered, as described below.

Background Traffic Growth

A review of historical data provided by NYSDOT indicates that traffic activity has been relatively unchanged between 2005 and 2014. To provide a conservative analysis, an increase in background traffic of 2 percent per year was assumed. The existing traffic volumes were increased to the year 2019 (when the Project is anticipated to be completed) by a total of 6 percent to represent the grown volumes. The grown volumes during the AM and PM Peak Hours are shown on Exhibits 3I-5 and 3I-6.

Planned Vicinity Developments

The Town/Village Planning Board provided information on proposed vicinity developments in the area. A total of three developments were identified, as indicated below in Table 3I-5.

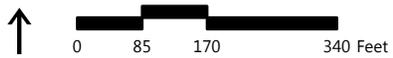
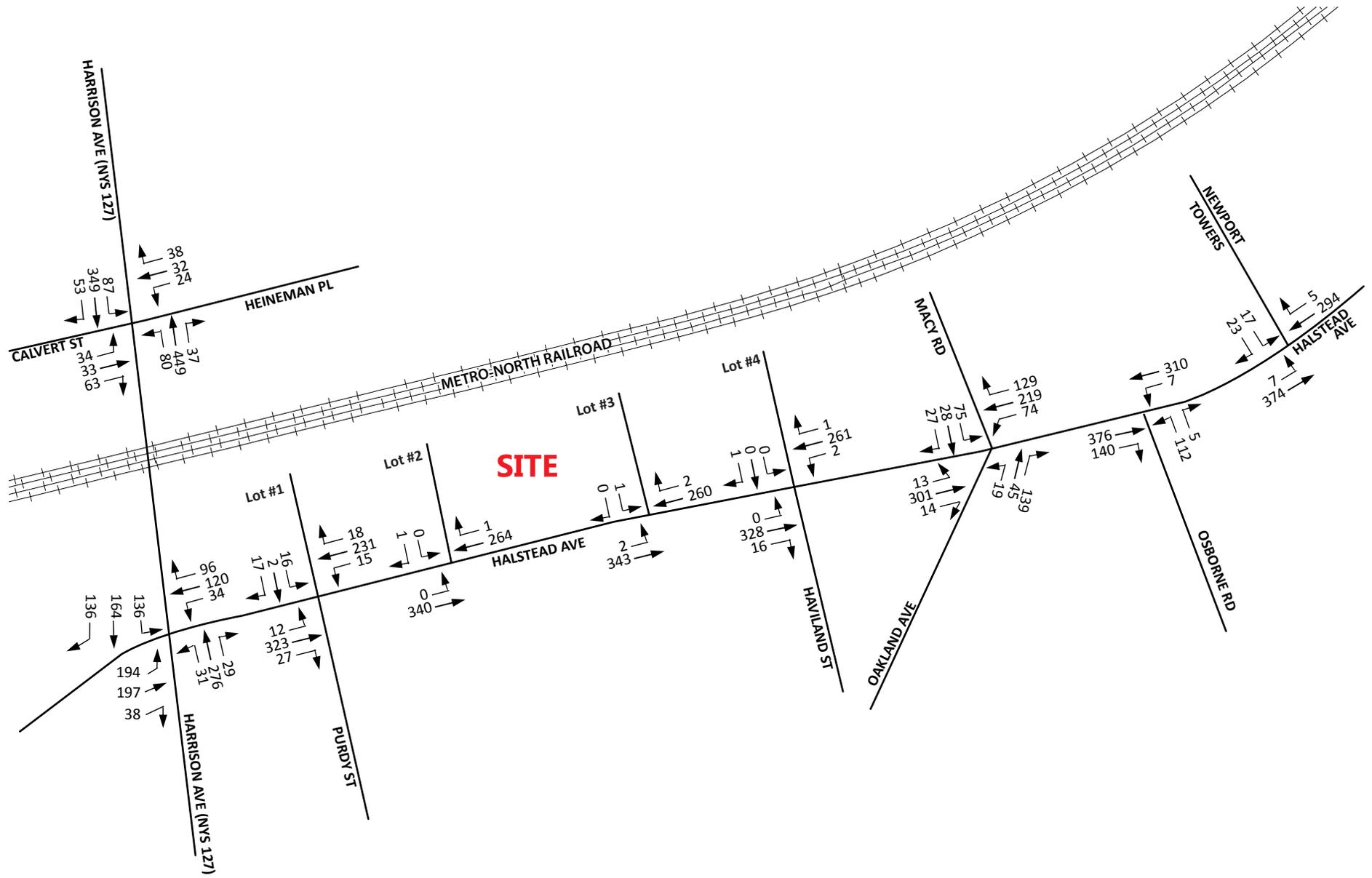
Table 3I-5 - Vicinity Developments

Development	Type	Size	AM Peak Hour Trips	PM Peak Hour Trips
241-247 Halstead Avenue	Residential	19 units	4	5
	Retail	3,000 sf	3	11
550 Halstead Avenue	Residential	36 units	8	10
Harrison Playhouse Lofts	Residential	42 units	9	12
	Retail	3,261 sf	3	12

The traffic volumes associated with the above developments were estimated using standard trip generation methodology, as no traffic studies were readily available. Altogether, the 3 developments are projected to generate only a few trips during the peak hours as indicated in Table 3I-5 above. These developments will add only a handful of trips to the study area intersections, as shown graphically on Exhibits 3I-7 and 3I-8.

The vicinity development volumes were added to the grown volumes resulting in the future No-Build AM Peak Hour and PM Peak Hour traffic volumes shown on Exhibits 3I-9 and 3I-10.

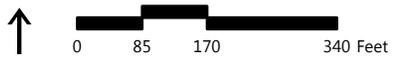
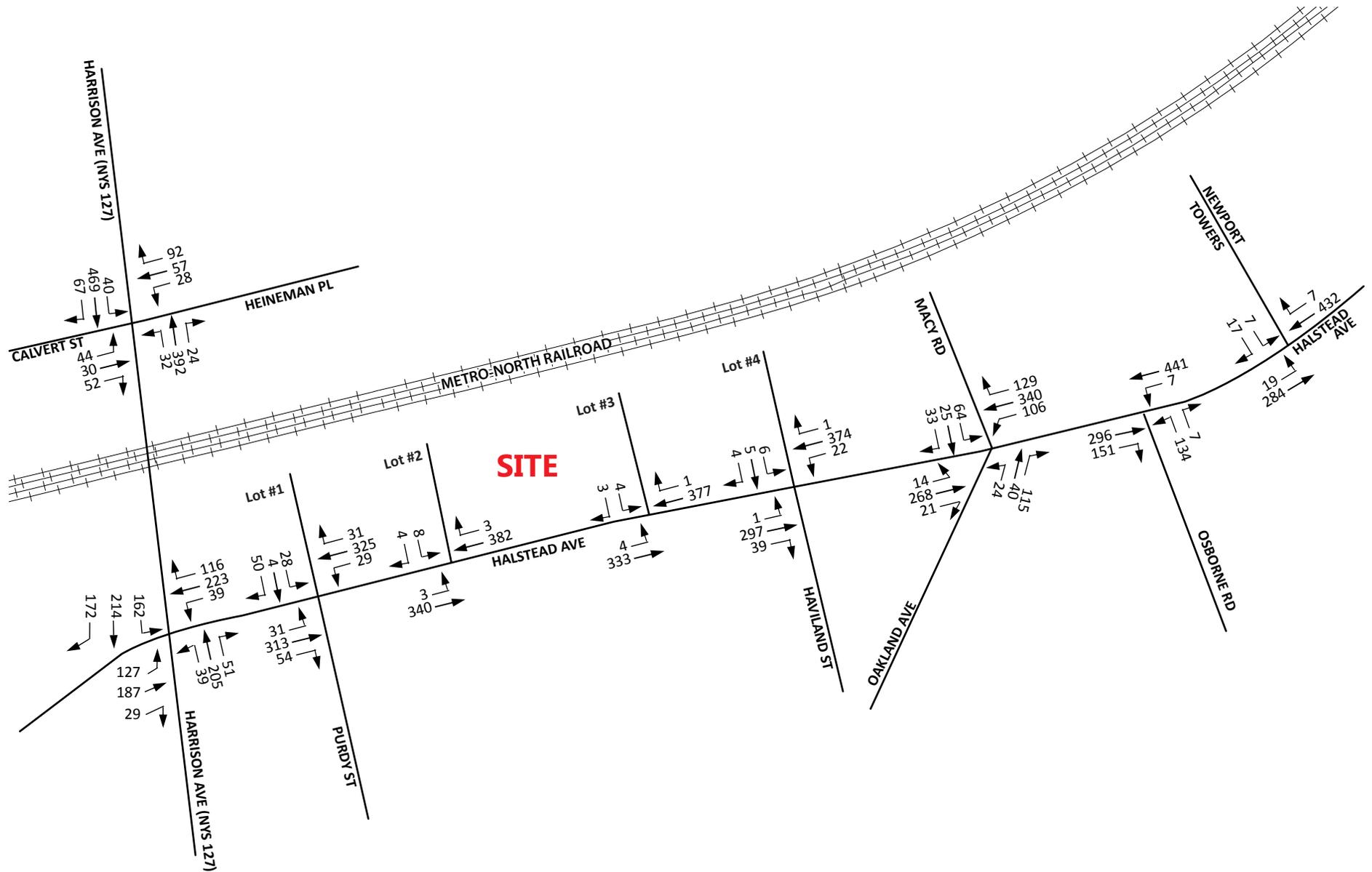
To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for the No-Build condition. The intersection capacity analyses were conducted using Synchro 9 software to model the study intersections and based on the existing physical roadway characteristics, traffic controls and signal phasing and timing settings. The results of the capacity analyses for the AM and PM Peak Hours for the No-Build condition are summarized in Table 3I-6. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix O.



Avalon Bay, Harrison

Harrison, New York

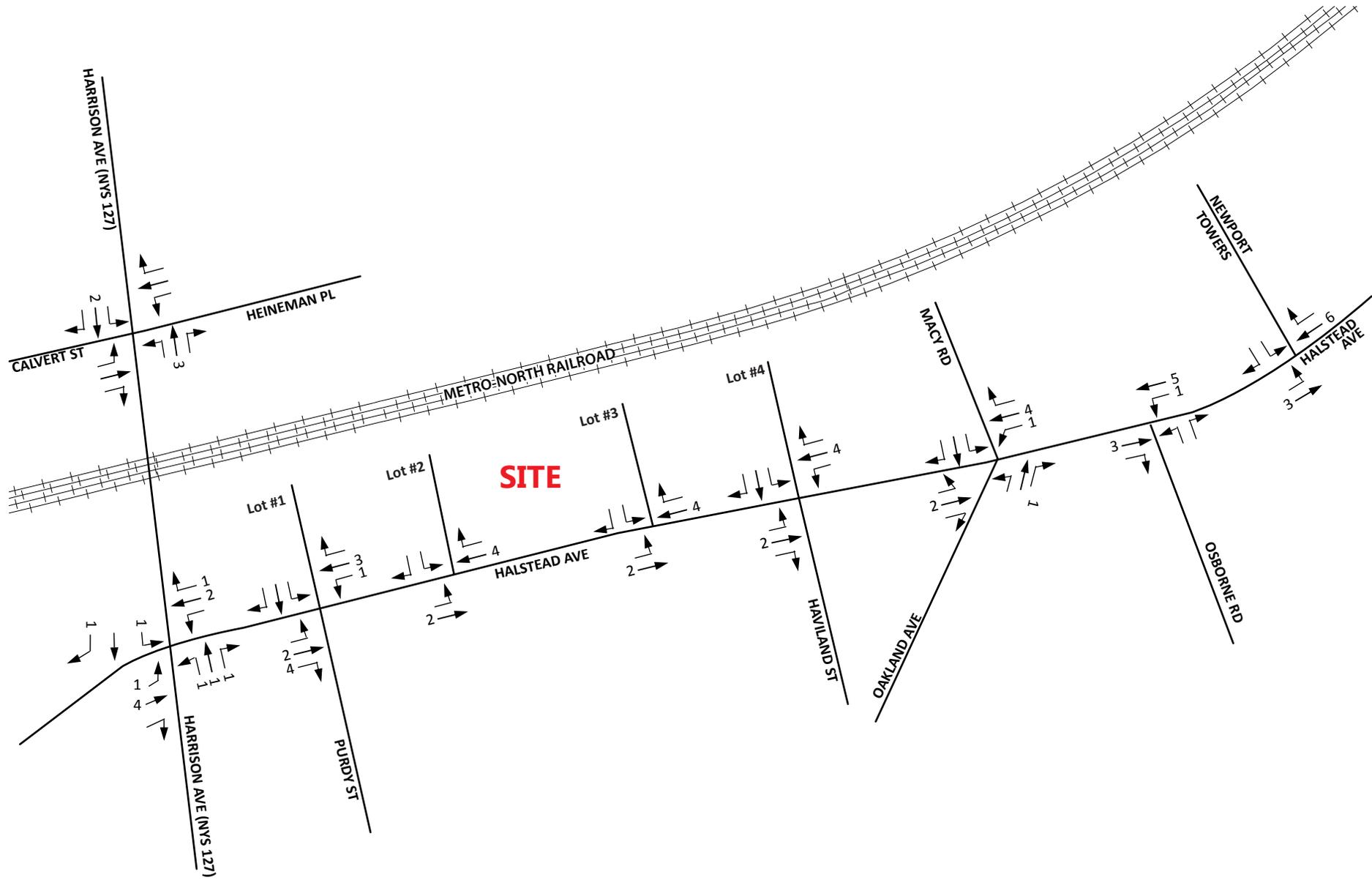
**Exhibit 3I-5
Grown Traffic Volumes
AM Peak Hour**



Avalon Bay, Harrison

Harrison, New York

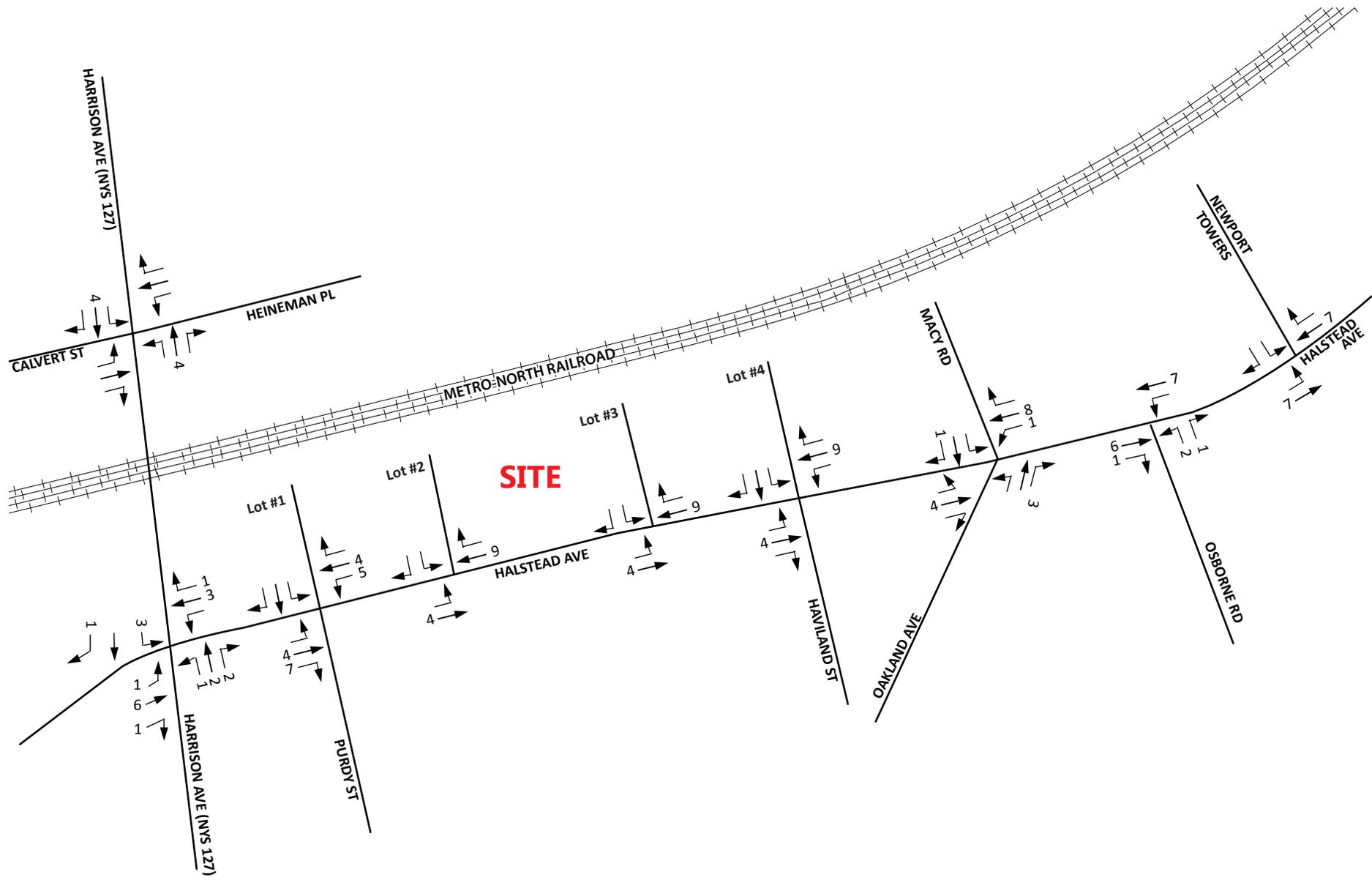
Exhibit 3I-6
Grown Traffic Volumes
PM Peak Hour



Avalon Bay, Harrison

Harrison, New York

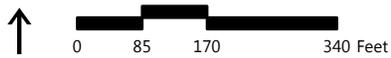
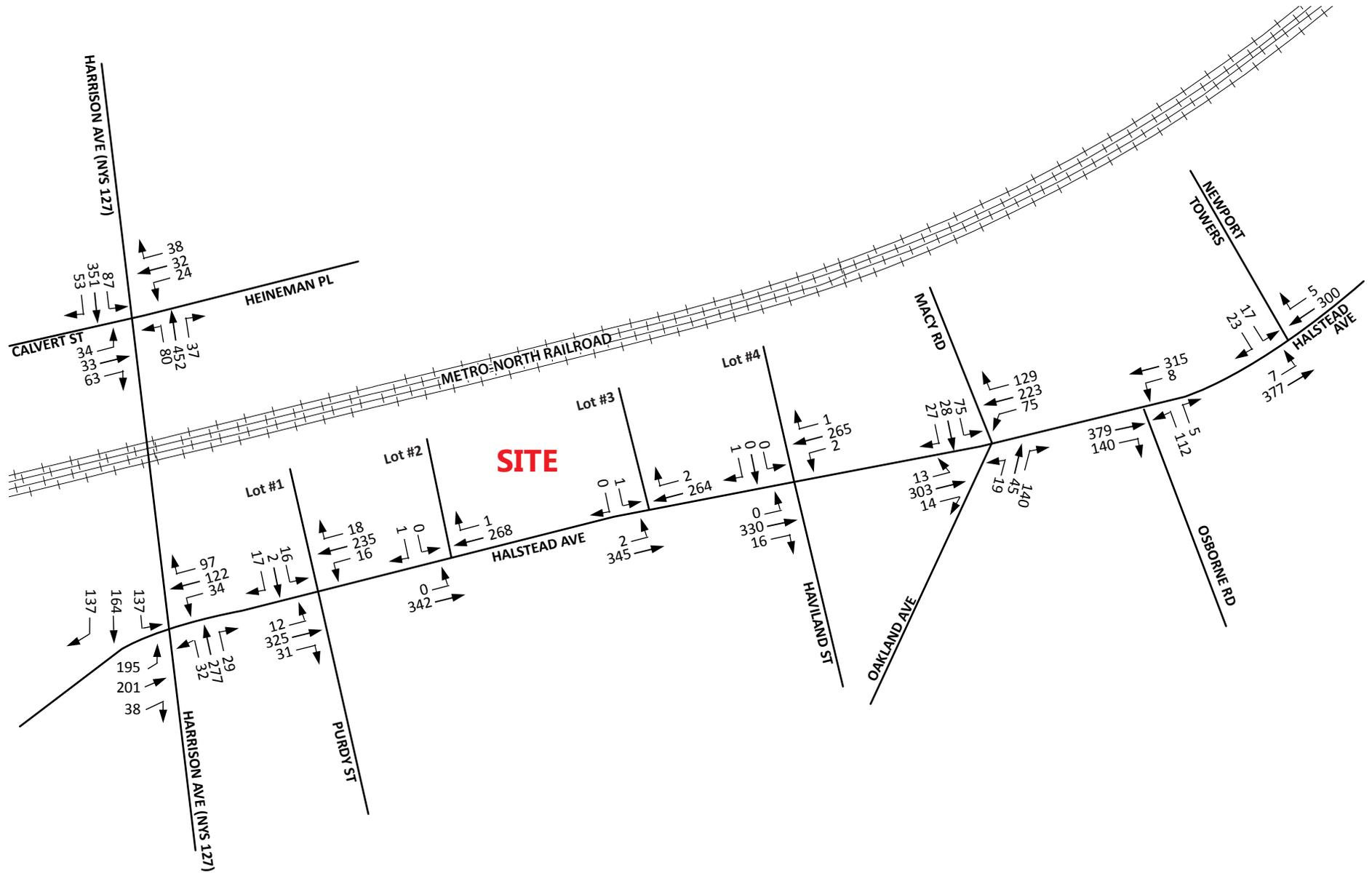
Exhibit 3I-7
Vicinity Development Traffic Volumes
AM Peak Hour



Avalon Bay, Harrison

Harrison, New York

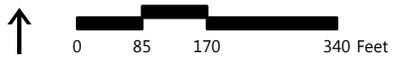
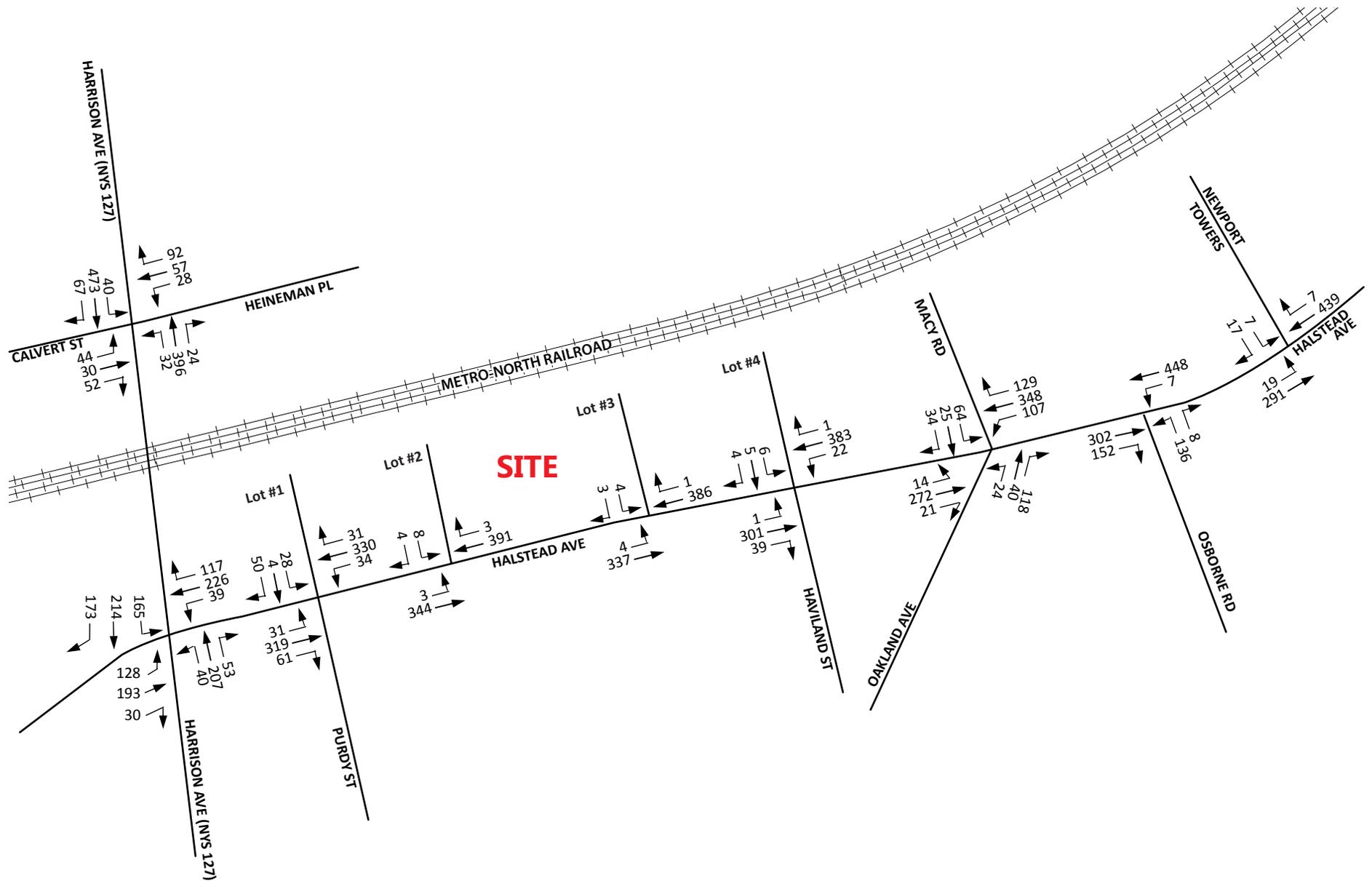
Exhibit 3I-8
Vicinity Development Traffic Volumes
PM Peak Hour



Avalon Bay, Harrison

Harrison, New York

Exhibit 3I-9
No-Build Traffic Volumes
AM Peak Hour



Avalon Bay, Harrison

Harrison, New York

Exhibit 3I-10
No-Build Traffic Volumes
PM Peak Hour



Table 3I-6 Future No-Build Intersection Levels of Service Summary

Intersection	Approach	Lane Group	No-Build Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) & Harrison Avenue (Route 127)	EB	L	D	42.8	D	39.3
		TR	D	48.2	D	45.9
	WB	L	C	35.0	C	34.7
		TR	E	62.3	E	79.8
	NB	LTR	D	45.2	D	43.2
	SB	L	C	23.2	C	24.6
		TR	C	27.1	D	35.3
	Intersection			D	41.9	D
Halstead Avenue (CR 54) and Purdy Street/Surface Lot # 1 (unsignalized)	EB	LTR	A	0.4	A	0.9
	WB	LTR	A	0.6	A	1.0
	SB	LT	C	16.0	C	21.6
		R	A	10.0	B	11.1
Halstead Avenue (CR 54) and Surface Lot # 2 (MTA) (unsignalized)	EB	LT	A	0.0	A	0.1
	WB	TR	A	0.0	A	0.0
	SB	LR	B	10.5	B	14.7
Halstead Avenue (CR 54) and Surface Lot # 3 (unsignalized)	EB	LT	A	0.1	A	0.1
	WB	TR	A	0.0	A	0.0
	SB	LR	B	13.7	B	13.1
Halstead Avenue (CR 54) and Haviland St/Surface Lot # 4 (unsignalized)	EB	LTR	A	0.0	A	0.0
	WB	LTR	A	0.1	A	0.6
	SB	LTR	A	9.9	C	16.2
Halstead Avenue (CR 54) and Macy Road/Oakland Avenue	EB	LTR	D	37.9	D	36.8
	WB	L	A	0.3	A	0.7
		TR	A	2.1	A	3.6
	NB	LT	D	46.2	D	46.8
		R	A	7.1	A	4.5
	SB	LTR	D	53.2	D	49.6
	Intersection			C	22.1	B



Table 3I-6 Future No-Build Intersection Levels of Service Summary (cont'd)

Intersection	Approach	Lane Group	No-Build Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) and Osborne Road	EB	T	A	3.5	A	3.1
		R	A	0.7	A	0.6
	WB	LT	A	6.6	A	8.0
	NB	LR	D	39.7	D	41.1
	Intersection		A	8.5	B	10.1
Halstead Avenue (CR 54) and Newport Towers Driveway	EB	LT	A	1.6	A	1.2
	WB	TR	C	29.5	C	30.5
	SB	LR	E	68.7	D	44.6
	Intersection		B	17.0	B	19.3
Harrison Avenue and Heineman Place/Calvert Street	EB	LTR	D	39.4	D	40.4
	WB	LTR	C	34.1	D	39.5
	NB	LTR	B	15.3	B	10.3
	SB	LTR	B	11.4	B	10.8
	Intersection		B	17.7	B	17.2

As indicated in Table 3I-6, under No-Build conditions with the forecast increases in traffic volumes, there will be a slight increase in the overall delay at the five signalized intersections, generally on the order of 3.4 seconds or less. At the signalized intersection of Halstead Avenue and Harrison Avenue, delays on the westbound through/right-turn movement will continue to operate at existing levels of service (LOS "E"), however, during the PM Peak Hour the delays on this lane-group will increase by 7.2 seconds compared to existing conditions.

At the unsignalized intersections, the minor street turning movements will continue to operate at LOS "C" or better during each peak hour with only minor increases in delay of up to 2.3 seconds.

b) Build Traffic Conditions

The Project is a mixed-use TOD project adjacent to the Harrison Station and will have 143 residential units divided between three multi-story buildings, 27,000 square feet of commercial retail space on the ground floor of the three residential buildings, structured parking in two of the three buildings (Building A and Building C), including 475 parking spaces used for MNR commuter parking to replace the current 260 parking spaces in the existing surface lots. The



Project will have two publicly accessible pedestrian plazas which will connect the Harrison Station entrances to Halstead Avenue. Taxi stands will be located along Halstead Avenue at the entrance to each of the plazas to facilitate access to the station.

The future traffic conditions with the Project (the "Build condition") were developed by estimating the trips associated with the residential and retail components as well as new commuter trips related to the additional commuter spaces. The trip generation projections are described below.

Residential and Retail Trip Generations

To evaluate the traffic impact of the Project, it is necessary to determine the traffic volumes expected to be generated by the residential and retail components. A review was undertaken of the available trip generation data sources, including the reference published by ITE, *Trip Generation Manual, Ninth Edition*. This widely utilized reference source contains trip generation rates for related uses: "Mid-Rise Apartment" (Land Use Code 223) and "Shopping Center" (Land Use Code 820).

Due to the Project's location adjacent to the Harrison Station and the Bee-Line bus stops along Halstead Avenue, a TOD credit was applied to the ITE residential trip generations. The ITE trip generations are typically based on studies of developments that are suburban in nature and are not located near mass transit facilities. Surveys of mass transit usage by residents of two similar residential developments located adjacent to train stations (Hudson Park in Yonkers and the former Avalon on the Sound development in New Rochelle) indicate that 55 to 60 percent of residents in these developments take mass transit to and from work. It is anticipated that the Project will have similar mass transit usage, however, to be conservative, a 33 percent TOD credit was applied to the residential trips. No reductions were taken for the retail trips, although it is anticipated that a good portion of the trips will be non-vehicular, that is, many of the retail trips will be pedestrian-based and/or will be internally generated from the residential component.

The resulting new trips from the Project are summarized in Table 3I-7.



Table 3I-7 - Project Trip Generations

Project Component	AM Peak Hour			PM Peak Hour		
	Total Trips	Mass-Transit Credit	New Trips	Total Trips	Mass-Transit Credit	New Trips
Residential (143 units)	46	15	31	58	19	39
Retail (27,000 sf)	26	0	26	100	0	100
Total Project Trips	72	15	57	158	19	139

Source: ITE Trip Generation Manual, Ninth Edition.

As noted in the table, the Project is conservatively expected to generate 57 new trips during the AM Peak Hour and 139 new trips during the PM Peak Hour.

MTA Commuter Parking Trip Generations

The existing Lots #1 to #4 provide parking for 260 vehicles. Approximately 50 of these parking spaces provide free, two-hour shopper parking; the remaining 210 spaces are metered commuter spaces. The new 584-space garage within Building C of the Project will have 475 spaces for commuters, a net increase of 265 commuter parking spaces over the existing commuter parking in Lots #1 to 4. It is expected that the greater number of spaces will attract new commuter parkers to the Site. As discussed hereafter, it is anticipated that some of these new parkers will be drawn from the existing private vehicle drop-off and pick-up trips at the Harrison Station driven by the fact that there is currently not sufficient commuter parking available.

The new commuter trips were developed based on the existing trip rates at the parking lot driveways during the AM and PM Peak Hours. It is noted that in the morning, the commuter parking lots fill up prior to the AM Peak Hour and in the PM, the commuter exiting peak occurs after the PM Peak Hour. During the AM Peak Hour, the counted commuter volumes represent 53 percent of the earlier commuter lot peak hour volumes. During the PM Peak Hour, the counted volumes from the commuter lots represent only 40 percent of the later commuter peak hour volumes.

The new commuter trips drawn from the existing drop-off/pick-up activity were based on surveys conducted within the 4 commuter lots during the PM peak period which included tallies of the number of private vehicles picking up or dropping off passengers. The new commuter parking trips are shown in Table 3I-8.



Table 3I-8 - New Commuter Trips

	AM Peak Hour	PM Peak Hour
New Commuter Parking <i>(net increase of 265 spaces)</i>	16	37
Trips drawn from existing drop-off/pick-up activity	6	16
Net Increase in Commuter Trips	10	21

As shown in Table 3I-8, during the AM Peak Hour, it is anticipated that there will be 16 new commuter trips, of which 6 will be drawn from the existing drop-off/pick-up activity, for a net increase of 10 commuter trips. During the PM Peak Hour, 16 of the 37 new commuter parkers will be drawn from existing drop-off pick-up traffic, resulting in a net increase of 21 trips.

Trip arrival and departure patterns, which show how the newly-generated trips identified in Tables 3I-7 and 3I-8 will travel to and from the Site, were determined based on a review of the existing roadway network, existing traffic patterns and proposed access to the Project. The trip origin and destination percentages for project-generated trips are shown in Table 3I-9.

Table 3I-9- Trip Origins and Destinations

Trip Origin/Destination	Percent of Site Traffic
Halstead Avenue from/to the east	31
Halstead Avenue from/to the west	26
Harrison Avenue (NYS Route 127) from/to the north	18
Harrison Avenue (NYS Route 127) from/to the south	6
Osborne Road from/to the south	10
Macy Road from/to the north	4
From/to Local streets	5

The four driveways to the existing parking lots will be closed and three new driveways will be constructed to provide access to the two new parking structures. Access to the Building A parking garage will be via a driveway opposite Purdy Street (at the location of the existing Lot #1 driveway). The Commuter Parking Garage in Building C will have two driveways; one driveway located to the west of Haviland Street (near the current Lot #3 driveway location) and a second driveway to the east of Haviland Street. Each of the new driveways will have one entering lane and one exiting lane permitting all movements.

The residential, retail and commuter trip distribution assignments at the driveways were based proportionately on the number of parking spaces set aside for each use within the two parking structures. The residential and retail parking spaces are located in both the Building A parking garage and Building C Commuter Parking Garage while all of the commuter spaces are located



in the Commuter Parking Structure. The trip distributions were then applied to the Project trips shown in Tables 3I-7 and 3I-8 and the resulting volumes were assigned to the local roadway network.

Taxi waiting areas and an area for private motorists to drop passengers off will be provided curbside on the north side of Halstead Avenue between Purdy Street and Haviland Street. The level of this activity (taxi and drop-off/pick-up) was surveyed and evaluated and these areas were determined to be sufficient to accommodate the projected activity.

As previously discussed, because of the additional commuter parking spaces provided, 6 trips which in the AM Peak Hour are currently drop-off trips are expected to become commuter trips and, similarly, 16 trips which in the PM Peak Hour are currently pick-up trips are also expected to become commuter trips. These trips were reassigned to the adjacent street system to reflect the fact that they would be traveling to and from the Commuter Parking Garage in Building C instead of Lot #1.

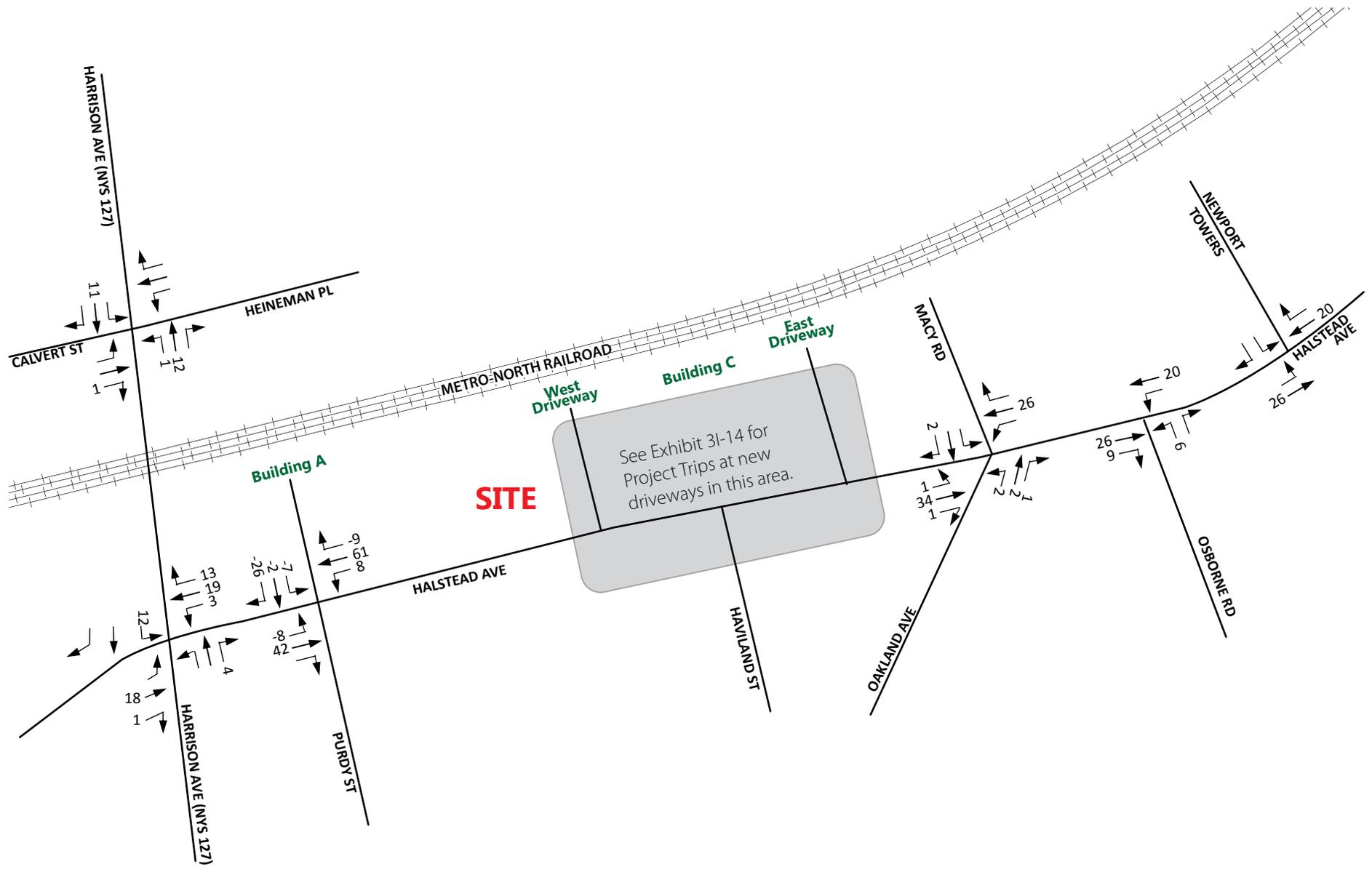
Similarly, existing taxi trips documented to arrive and depart from Lot # 1 that will be relocated curbside on Halstead Avenue were reassigned to the adjacent street system to reflect this change. Likewise, the existing commuters documented to arrive and depart from Lot #s 1 through 4 and who will be relocated to the Commuter Parking Garage were reassigned to the adjacent street system to reflect the fact that they would be traveling to and from the Commuter Parking Garage.

Finally, approximately half of the vehicles documented to currently arrive and depart the 50, free, 2-hour parking spaces in Lot #1 were similarly reassigned to the Commuter Parking Garage while the remaining vehicles currently using the free spaces were assumed to continue to travel to and from the driveway opposite Purdy Street.

Combined, these reassigned trips were added to previously-discussed new retail, residential and commuter trips with the resulting net Project-generated volumes shown on Exhibits 3I-11 and 3I-12.

The project-generated volumes were added to the No-Build condition traffic volumes shown on Exhibits 3I-9 and 3I-10 resulting in the Build condition traffic volumes for the AM and PM Peak Hours shown on Exhibits 3I-13 and 3I-14.

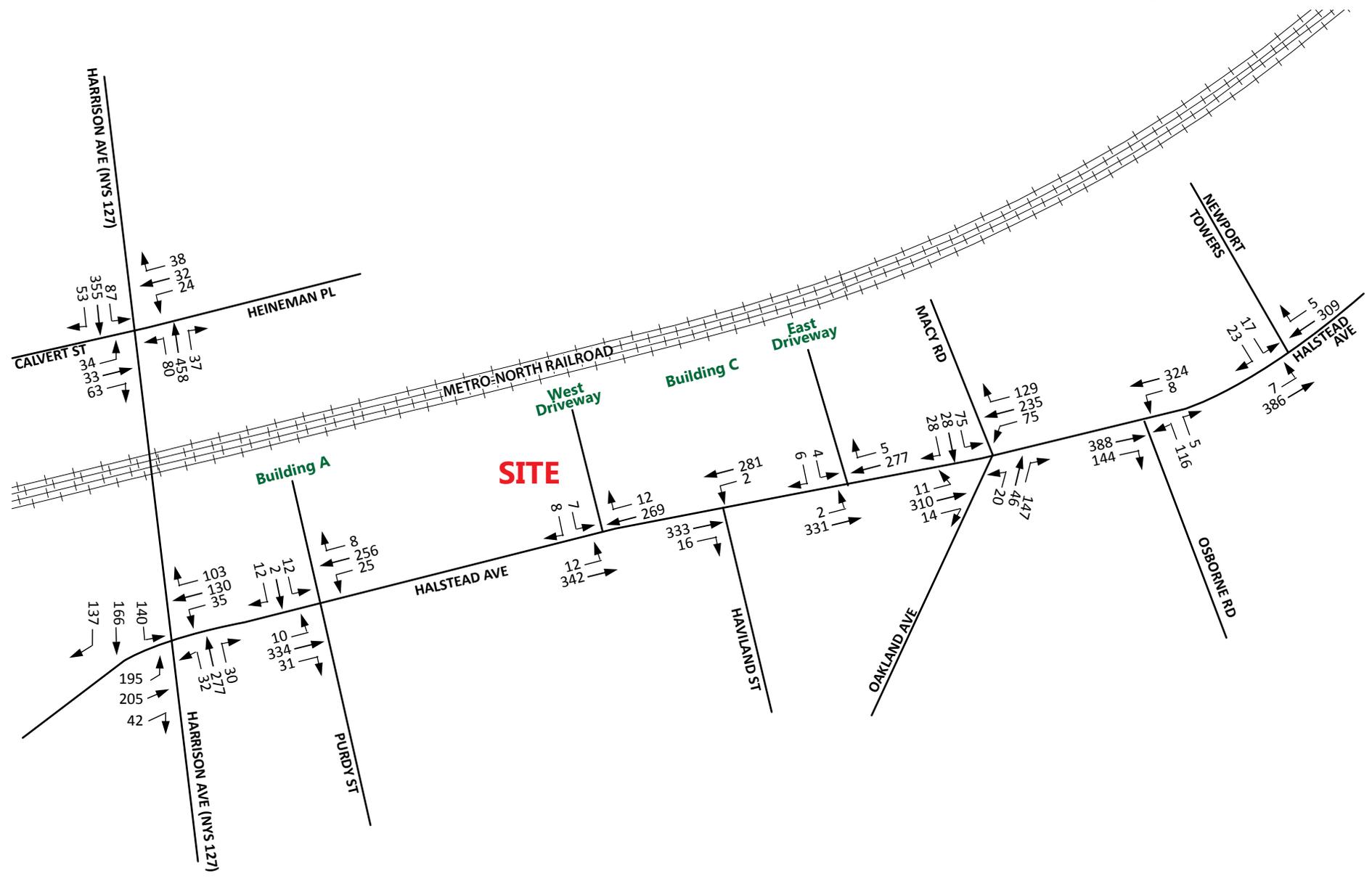
To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for the Build condition. The intersection capacity analyses were conducted using Synchro 9 software to model the study intersections and based on the existing physical roadway characteristics and signal phasing and timing settings. The results of the capacity analyses for the AM and PM Peak Hours for the Build condition are summarized in



Avalon Bay, Harrison

Harrison, New York

Exhibit 3I-12
Net Project Generated Volumes
PM Peak Hour



Avalon Bay, Harrison

Harrison, New York

**Exhibit 3I-13
Build Traffic Volumes
AM Peak Hour**



Table 3I-10. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix O.

Table 3I-10 Build Intersection Levels of Service Summary

Intersection	Approach	Lane Group	Build Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) & Harrison Avenue (Route 127)	EB	L	D	43.4	D	39.3
		TR	D	50.2	D	47.9
	WB	L	C	34.8	C	34.8
		TR	E	64.8	F	103.6
	NB	LTR	D	46.3	D	43.8
	SB	L	C	23.9	C	25.5
		TR	C	27.8	D	35.5
	Intersection			D	43.3	D
Halstead Avenue (CR 54) and Purdy Street/Building A Driveway (unsignalized)	EB	LTR	A	0.3	A	0.6
	WB	LTR	A	0.9	A	1.2
	SB	LTR	B	13.9	B	18.8
Halstead Avenue (CR 54) and Building C West Driveway (unsignalized)	EB	LT	A	0.4	A	0.6
	WB	TR	A	0.0	A	0.0
	SB	LR	B	12.2	C	16.8
Halstead Avenue (CR 54) and Haviland St (unsignalized)	EB	TR	A	0.0	A	0.0
	WB	LT	A	0.1	A	0.9
Halstead Avenue (CR 54) and Building C East Driveway (unsignalized)	EB	LT	A	0.1	A	1.0
	WB	TR	A	0.0	A	0.0
	SB	LR	B	11.3	B	14.9
Halstead Avenue (CR 54) and Macy Road/Oakland Avenue	EB	LTR	D	38.2	D	39.4
	WB	L	A	0.3	A	0.8
		TR	A	2.2	A	4.0
	NB	LT	D	46.4	D	47.4
		R	A	8.3	A	4.6
	SB	LTR	D	53.6	D	49.6
	Intersection			C	22.3	C



Table 3I-10 Build Intersection Levels of Service Summary (cont'd.)

Intersection	Approach	Lane Group	Build Condition			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
Halstead Avenue (CR 54) and Osborne Road	EB	T	A	3.5	A	3.1
		R	A	0.7	A	0.7
	WB	LT	A	6.6	A	8.1
	NB	LR	D	39.9	D	41.4
	Intersection		A	8.6	B	10.0
Halstead Avenue (CR 54) and Newport Towers Driveway	EB	LT	A	1.6	A	1.3
	WB	TR	C	29.7	C	30.8
	SB	LR	E	68.7	D	44.6
	Intersection		B	17.0	B	19.2
Harrison Avenue and Heineman Place/Calvert Street	EB	LTR	D	39.4	D	40.5
	WB	LTR	C	34.1	D	39.5
	NB	LTR	B	15.6	B	10.6
	SB	LTR	B	11.5	B	11.0
	Intersection		B	17.8	B	17.3

As shown in Table 3I-10, under the Build condition with the added traffic from the Project and the increase in commuter parking trips, with one exception, there will be only a slight increase in overall delays, generally on the order of 1.4 seconds or less. The exception is during the PM Peak Hour at the Halstead Avenue and Harrison Avenue intersection where overall delays will increase by 6.4 seconds compared to the No-Build condition, mainly due to traffic added to the westbound through/right-turn movement and the elimination of the bus pull off at that location, which is projected to precipitate a change in LOS to "F".

At the unsignalized intersections, including the new Project driveways, the minor street turning movements will operate at LOS "C" or better during the AM and PM Peak Hours. Vehicles on the major streets at unsignalized intersections will experience LOS "A" conditions, with delays on the order of 1 second or less.

c) On-Site Traffic Circulation

The Project will have two parking structures. The Building A garage will have 167 parking spaces on two levels, one level located below grade and one level at-grade. Access will be via a full-movement driveway on Halstead Avenue opposite Purdy Street. Retail parking will be located on the ground (street) level parking area behind the stores with 52 parking spaces provided.



The residential parking will be located on the lower level and will have 115 parking spaces. Access to the residential parking area will be through the retail parking area via a gated entry for permit holders only.

In Building C, the Commuter Parking Garage will consist of five above-grade levels with the main access through the western driveway of the structure. A total of 45 retail parking spaces will be located on the ground level with access through the western driveway to the structure. A total of 64 resident parking spaces will also be located in the Commuter Parking garage and which will be accessed from either the eastern or western garage driveways, which will be connected. The Commuter Parking garage will also provide parking for bicycles. This will include 30-40 bike racks with their final location and restriction of access/security to be determined.

Two pedestrian plazas will lead through the development from the train station to the sidewalk on the north side of Halstead Avenue. Taxi waiting areas will be designated along this sidewalk to meet passengers walking to/from the station. The 5 parking spaces in the curbside parking area along the north side of Halstead Avenue between the two Building C driveways will be designated for 15-minute parking during the weekday evening peak commuter periods to provide a "kiss and ride" area for motorists waiting to pick-up train passengers.

d) Potential Impacts to Character of Surrounding Streets

The Project will provide an active street front on the north side of Halstead Avenue. Although the south side of the street is developed with an active sidewalk and street front stores, the north side is currently a series of angled parking spaces which back out into Halstead Avenue. The existing sidewalk does not connect across the entire front of the Site, including across the four driveways.

With the Project, the number of driveways will be reduced from 4 to 3, and the sidewalks will extend the length of the Site from west to east and will be activated by the construction of street front stores. The pedestrian plazas will also deliver commuters to the street. This will have a positive impact on the character on Halstead Avenue. Further, the projected traffic increases are modest and will not have a significant impact on the character of the other nearby streets.

e) Parking Analysis

The Project will have 143 residential units and 27,000 square feet of commercial/retail space. Structured parking will be provided in Building A and Building C, providing parking for the Project's residential and retail components as well as for MTA commuters, as noted in Table 3I-11.



Table 3I-11- Proposed Parking

	Parking Spaces Provided		
	Building A	Building C	Total
Resident	115	64	179
Retail	52	45	97
MTA Commuter	0	475	475
Total	167	584	751

As shown in Table 3I-11, the Building A garage will have 115 residential parking spaces and 52 spaces for retail patrons. The Building C Commuter Parking Garage will contain 475 commuter spaces, 64 residential spaces and 45 spaces for retail patrons. The MTA commuter parking spaces will be available for use by non-commuters between the hours of 4:00 PM and 4:00 AM weekdays and 24 hours on weekends.

A parking analysis has been conducted to identify the peak parking demand for each component of the development (residential, retail and commuters) and with shared parking of the commuter spaces by the retail patrons and commuters. The analysis is based on data and prepared using software provided in the Urban Land Institute's report, *Shared Parking* (Second Edition, 2005).

Shared parking is a concept that optimizes parking capacity by allowing complementary land uses to share spaces at different times, rather than having separate spaces for each land use. Shared parking is often a fundamental part of downtown areas with public parking (including areas with TOD districts) as the same parking facility can serve several different destinations within walking distance.

The MTA commuter parking spaces and retail/commercial parking spaces are considered complementary in that their peak periods do not occur at the same time. The peak demand for commuter parking occurs on weekdays, while the peak periods for retail and other commercial uses (such as restaurants) generally occur on weekday evenings or weekends. The 179 residential parking spaces are reserved for residents and would not be available for other users, therefore the residential parking demand was calculated separately.

The shared parking analysis for the Project involves applying appropriate monthly, daily and hourly adjustments to each component's parking ratio to determine the maximum parking demand. The recommended parking ratios for retail and residential uses contained in the *Shared Parking* report were adjusted to reflect the proposed TOD zoning requirements. The commuter parking ratio was established to equal the 475 provided spaces, which conservatively assumes that at some point during each weekday, all 475 spaces will be fully occupied by commuters. Hourly variation rates were then applied to the parking rates to identify the temporal parking



demand for the Project’s retail and residential components. The hourly variations for the commuter parking demand were derived from 2016 parking surveys conducted in Greenwich, CT at a commuter parking garage located adjacent to the Greenwich Metro-North Railroad station. Each component’s peak parking demand during the weekday midday, weekday evening and weekend midday periods is provided in Table 3I-12. A detailed table with the hourly breakdown for each use is provided in the Traffic Impact Study provided in Appendix O.

Table 3I-12- Peak Parking Demand for Individual Project Components

Project Component	Parking Spaces Provided	Parking Demand					
		Weekday Midday 12 pm		Weekday Evening 6 pm		Weekend Midday 2 pm	
		Demand	Surplus	Demand	Surplus	Demand	Surplus
Residential	179	109	70	157	22	117	62
Retail	97	44	53	40	57	54	43
Commuter	475	470	5	399	76	29	446

Bold type indicates peak demand for each project component.

As shown in Table 3I-12, for the three time periods shown, the commuter parking peak demand occurs around noon on a weekday (470 spaces parked) while the retail peak demand occurs on a weekend (54 spaces) when the commuter demand is low.

A shared parking analysis was conducted which combines the hourly parking demand for the retail and commuter parkers. The analysis evaluated the parking demand during the periods when the commuter parking lot is available for use by shoppers and other visitors to the area. On a weekday, the MTA commuter spaces are available for all users between 4 PM and 4 AM; on a weekend, the commuter lot is available at all times. The shared parking analysis evaluates the hourly demand from 4:00 PM to 12:00 AM on a weekday and from 10:00 AM to 10:00 PM on a weekend. The analysis showing the periods of peak demand on a weekday and a weekend is summarized in Tables 3I-13 and 3I-14 and detailed parking analysis tables are provided in the Traffic Impact Study in Appendix O.

Table 3I-13 - Weekday Shared Parking Demand (4 pm to 12 am)

	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	12am
Land Use									
Retail/Commercial	46	42	40	38	33	27	16	5	0
MTA Commuter	456	432	399	314	233	90	24	5	0
Total Parking Demand	502	474	439	352	266	117	40	10	0
Parking Spaces Provided	572	572	572	572	572	572	572	572	572
Surplus Parking	70	98	133	220	306	455	532	562	572



Table 3I-14 - Weekend Shared Parking Demand (10 am to 10 pm)

	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm
Land Use													
Retail/Commercial	35	40	48	52	54	54	52	49	43	41	36	29	20
MTA Commuter	43	48	43	38	29	19	10	5	2	0	0	0	0
Total Parking Demand	78	88	91	90	83	73	62	54	45	41	36	29	20
Parking Spaces Provided	572	572	572	572	572	572	572	572	572	572	572	572	572
Surplus Parking	494	484	481	482	489	499	510	518	527	531	536	543	552

As shown in Table 3I-13, the weekday maximum demand for the shared use of the MTA commuter parking spaces occurs at 4:00 PM with a total of 502 parked vehicles between the retail and commuter parking areas. During this period, there is a surplus of 70 parking spaces. The parking demand decreases after 4 PM when the commuter parkers are exiting the garage. The weekend maximum demand, shown in Table 3I-14, occurs at 12 PM with a total of 91 vehicles parked. The weekend demand is much lower than the weekday demand due to the lack of commuter parking activity. On weekends there is a minimum surplus of 481 parking spaces at all times.

f) Parking Impacts

The Project will provide sufficient parking to meet the needs of the residents and retail/commercial patrons. In addition, 475 commuter parking spaces will be provided, an increase of 265 spaces over the existing 210 commuter spaces provided in Lots #1 to #4. The MTA parking spaces will be available to non-commuters from 4:00 PM to 4:00 AM on weekdays and all day on weekends. The shared parking analysis indicates that there will be a surplus of parking during peak periods which will benefit local businesses as it will provide additional parking for shoppers and other visitors to the downtown area.

The Project will not have a significant impact on parking in the areas surrounding the Site. The Project will have more than sufficient parking for retail patrons so that any new retail patrons drawn to the area will be able to park in the new parking areas and will not impact the existing parking supply, whether it be on-street parking or off-street parking in municipal or private lots. The additional commuter parking spaces may draw from some existing on-street commuter parking nearby (where possible), which would improve the overall parking situation.

g) Public Transportation Demand

It is anticipated that many of the Project’s residents will utilize MNR and the County Bee-Line bus services due to their convenience and location adjacent to the Project. The Project includes



pedestrian plazas which will provide efficient public access to the Harrison Station from Halstead Avenue. It is estimated that the Project will add 15 riders to MNR trains during the AM and PM Peak Hours and as many as 30 riders during the peak commuter hours. A detailed explanation of the residential project trip calculation, including the project's new rail commuters, is provided in the Traffic Impact Study in Appendix O. The addition of these riders is not expected to have a significant impact on train service.

h) Crash Analysis Issues

The crash analysis discussed in Section 3I-1g indicates that there weren't a significant number of crashes that occurred during the three-year study period. The two most prevalent contributing factors that were identified were driver inattention (cited 12 times) and backing unsafely (cited 8 times). The "backing unsafely" accidents mainly involved vehicles pulling into or out of the angled parking spots along Halstead Avenue. This condition will be eliminated, which should result in a reduction of crashes.

i) Pedestrian and Bicycle Circulation

The Project will have two landscaped, publicly accessible pedestrian plazas which will connect the Harrison Station entrances to Halstead Avenue. The plazas will also provide access to the lobbies of Buildings A, B and C. Pedestrian access to the lobbies of Buildings A and C is also available from the parking garages.

The Project is also expected to add 5 peak hour trips to the sidewalks surrounding the street as pedestrians walk to and from nearby businesses. A detailed explanation of the residential Project trip calculation, including the new pedestrian trips, is provided in the Traffic Impact Study in Appendix O. Parking for cyclists will be provided on-site and there will also be the occasional cyclist added to the surrounding roadways, although cycling is expected to be more of a recreational activity.

j) Relocation of Existing Taxi Cab Operation

The taxi operations will be modified with the redevelopment of the Site. As described in Section 3I-1h, a taxi pick-up/drop-off area is provided in Lot #1. This area will be relocated to Halstead Avenue where two taxi stands are being proposed. The taxi stands will be located adjacent to the pedestrian plaza connections to the train station and have been sized to provide sufficient storage during peak periods, based on the taxi queuing surveys described in Section 3I-1h. The surveys indicate a maximum observed queue of 4 taxis. The new taxi stands will provide storage for 7 taxis.



k) Streetscape Improvements

With the Project, the sidewalk on the north side of Halstead Avenue will be extended the full length of the Site and street furniture (such as benches, trash receptacles, lighting) and street trees will be added or upgraded. Sidewalks along Halstead will vary in width from 9 feet to 23 feet.

l) Construction Parking and Traffic Impacts

Construction will commence with the expansion of existing Lot #2 east to Lot #3 to accommodate approximately 134 parking spaces. When added to the 126 spaces in Lot #1, this will provide a total of approximately 260 parking spaces. The Commuter Parking Garage will then be constructed, after which, 260 of the 584 parking spaces will be made available for commuter parking while construction of the balance of the Project commences.

All construction delivery vehicles will be directed to use I-95 to access the site and to enter and exit I-95 at Exit 19 and use Halstead Avenue to travel to and from the site.

3. Mitigation Measures

The analyses indicate that the Project will not have a significant impact during the AM Peak Hour as delays will increase by 2.5 seconds or less at the signalized intersections. During the PM Peak Hour, the added Project traffic at the Halstead Avenue and Harrison Avenue intersection will result in a significant increase in delay on the westbound through/right-turn movement. To mitigate the Project's impact, it is recommended that the signal timings be adjusted to provide additional green time to the westbound approach. With this modification, the increase in delay on the westbound approach will be mitigated and overall, the intersection delays will increase by only 1.1 seconds and operations will be similar to the No-Build condition. The other signalized intersections will operate at acceptable LOS "C" or better, however, it is noted that a minor signal timing adjustment would reduce the eastbound delays at the Halstead Avenue and Oakland Avenue/Macy Road intersection.

Under the Build condition, at the unsignalized intersections, including the new Project driveway intersections, the minor street turning movements will operate at LOS "C" or better during the AM and PM Peak Hours. Vehicles on the major streets at unsignalized intersections will experience LOS "A" conditions, with delays on the order of 1 second or less.



H. COMMUNITY SERVICES

It is projected that the 143 multi-family rental units at the Site would generate approximately 294 new residents to the Town/Village (see Table 3H-1 Total Resident Population Projections below). This would increase the population of the Town/Village by approximately 1.1 percent from 27,472¹ to 27,766 assuming all of the residents of the proposed Project are new Harrison residents.

Table 3H-1 Total Resident Population Projections

Unit Type	Number of units	Multiplier	Total projected persons
1-Bedroom	76	1.67	126.92
2-Bedroom	59	2.31	136.29
3-Bedroom	8	3.81	30.48
Total	143		293.69

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, Total Persons in Units, 5+ Units-Rent, More than \$1,100, 1 BR, 2 BR and 3 BR)

1. Police Services

a) Existing Conditions

The Town/Village has one police station located at 650 North Street. This is approximately 2.5 miles from the Site. The Harrison Police Department contains 66 members with a Patrol Divisions, Traffic Division, and Detective Division. The Police Department has not responded to a request for information regarding average response times to the Site and project concerns (see letter in Appendix L).

b) Potential Impacts

The Project is projected to have approximately 294 residents as noted in Table 3H-1. If all of these residents were new to Harrison, the population of the Town/Village would increase approximately 1.1% based on the Town/Village's 2010 population of 27,472.

Assuming the 294 residents are new to the Town/Village, this population increase would likely result in a proportionate increase in demand for police services, which could mean an increase of 0.588 police personnel, 58.8 square feet of facility space, and 0.18 vehicles, according to

¹ Source: U.S. Census, 2010



standard planning multipliers published in the Urban Land Institute's Development Assessment Handbook². These projected increases are not considered significant.

Access to the Project is provided from Halstead Avenue. Vehicles will enter the parking garages via three curb cuts along Halstead Avenue. The buildings can also be accessed through the plazas. The MNR Harrison Station can be accessed via the plazas as well. It is anticipated that access to the Project will be adequate for police functions.

c) Mitigation Measures

The additional population projected from the new residences is not anticipated to create a significant adverse impact to the Harrison's Police Department. Adequate emergency access will be provided to the Project. It is anticipated that any adverse impacts to the Harrison Police Department would be offset by the taxes generated by the Project. Therefore, no other mitigation measures are required.

2. Fire Services

a) Existing Conditions

The Site is located within Town/Village Fire District No. 2, which is serviced by the Harrison Fire Department. The Harrison Fire Department is located at 206 Harrison Avenue, which is approximately 600 feet from the Site. According to a letter from the Harrison Fire Department dated June 1, 2016 (see Appendix M for letter), the Harrison Fire Department currently consists of 1 Chief of the Department, 2 Assistant Chiefs, a Captain, Lieutenants and 52 Firefighters. The apparatus of the Harrison Fire Department includes three engines (1,500 GPM; 500 gallon tanks), one tower ladder (95 feet), one light rescue truck, Chief vehicles, and one utility vehicle.

The average response time to the Site is approximately 2 minutes after dispatch.

As of June 1, 2016, there were 309 total alarms reported by the Harrison Fire Department in 2016, which averages to approximately 62 incidents per month.

b) Potential Impacts

The Project is expected to increase the population of the Town/Village by approximately 1.1%. This population increase would likely result in a proportionate increase in service demand for fire and emergency medical services. Based on the planning standards published in the Urban

² Model Factors for Social Impact Analysis (Police), Development Impact Assessment Handbook. Urban Land Institute, 1994.



Land Institute's Development Assessment Handbook, the increase in population could result in an increased demand of 0.49 fire personnel, 73.5 square feet of facility space, and 0.06 additional vehicles.

According to the Harrison Fire Department (see Appendix M for letter dated June 1, 2016), potential impacts due to the Project include increases in commercial alarm fire calls, elevator related calls, training and equipment needs, and demand from neighboring fire departments for mutual aid. The Applicant met with the Fire Department on July 26, 2016 to discuss concerns outlined in Fire Department's letter, including access, fire lanes, type of construction, and water supply.

The proposed residential buildings will contain fire suppression sprinklers and will adhere to all local and State building and fire prevention codes. Standpipes will be installed in the stair towers, as per code. The garages and retail portion of the buildings will be non-combustible, Type 1A construction. Residential floors will be wood framed, Type 5A construction with NFPA 13 sprinkler protection.

Water supply, including extra demand from fire flow, is anticipated to be adequate. See Chapter 3K, Utilities, for additional discussion of water flow to the Project Site. The Applicant will work with the Fire Department on the location of fire hydrants throughout the Site.

The Project includes two taxi stand/loading zone areas on Halstead Avenue. The Fire Department stated that they will be able to utilize these areas in lieu of designated fire lanes.

The garage located in Building A contains one vehicular entrance and has open access on the ground floor and gated access to the basement residential parking level. The parking gates will be breakaway and detachable and are designed to be driven through in an emergency situation. The gates will also automatically raise during a power outage or fire alarm situation. The Fire Department will be able to access the MTA elevator tower through the Building A surface parking lot. The Fire Department has reviewed the proposed access and confirmed that the access is adequate for their needs and their ladder truck will be able to fit under the building. The Commuter Parking Garage in Building C contains two entrances and is mostly open access with a portion of the lowest level gated. The residences will be accessed via lobbies located off the plazas as well as lobbies in the garages. As agreed upon with the Fire Department, Knox Boxes will be provided at each building entry lobby to provide access for the Fire Department. Each building will also have one elevator sized for a 24" x 84" stretcher. The rear of Building A and the middle of Building B will be accessible from the plazas. The roofs are proposed to be sloped. The Fire Department stated that they do not need access to sloped roofs. If flat roofs become part of the design, roof access will be provided via a hallway hatch.



c) Mitigation Measures

The additional population projected from the new residences is not anticipated to create a significant adverse impact to the Harrison Fire Department. The proposed residential building will contain fire suppression sprinklers and all construction will adhere to local and state building codes. Property taxes to the Fire Department are expected to exceed costs of service to the Project. The Applicant will continue its coordination with the Fire Department to address any other items of concern.

3. Emergency Services

a) Existing Conditions

Harrison Emergency Medical Services ("EMS") provides emergency medical services to the Town/Village, area highways including I-95, I-287, Hutchinson River Parkway and I-684, as well as Westchester County Airport. Harrison EMS employs 56 Paramedics and Emergency Medical Technicians, two Lieutenants and a Chief of Operations. Harrison EMS has five ambulances and two rapid response fly cars and are located at the compound with the police station on the corner of Pleasant Ridge Road and North Street. There were 3,200 calls for service in 2015.

Harrison EMS estimates a response time from their headquarters to the Site of 4 minutes, and 8 to 10 minutes if responding from a hospital. The nearest hospitals to the Site are White Plains Hospital, which is approximately six miles from the Site, and Greenwich Hospital, which is approximately eight miles from the Site.

b) Potential Impacts

The Project would increase the population of the Village/Town by 1.1%, assuming all of the residents of the proposed development are new Harrison residents.

This additional population would likely result in a proportionate increase in service demand for fire and emergency medical services. Based on standard planning multipliers, the Project could impact the Harrison EMS with an additional 10.73 EMS calls per year and a demand for 0.04 EMS Full-Time personnel, and 0.01 EMS vehicles³. These impacts would not be significant. Additional taxes generated from the Project are anticipated to cover the cost of additional Harrison EMS services.

³ Model Factors for Social Impact Analysis (Fire and Emergency Medical Services), Development Impact Assessment Handbook. Urban Land Institute, 1994.



In their letter dated May 27, 2016 (see Appendix N), Harrison EMS expresses concern regarding the potential for increased call volume due to the Project.

To address Harrison EMS concerns, each building and garage will have one elevator sized to accommodate a 24" x 84" stretcher and will include Public Access Defibrillators.

c) Mitigation Measures

The additional population projected from the new residences is not anticipated to create a significant adverse impact to the Harrison EMS. As requested, one elevator per building and garage will be able to accommodate a stretcher. It is anticipated that any adverse impacts to Harrison EMS will be offset by the taxes generated by the Project. No other mitigation measures are proposed.

4. Solid Waste

a) Existing Conditions

Household garbage is collected twice a week. Central Business District garbage is collected four times a week. Recycling is collected once a week. All sanitation collection is curb-side only. Solid waste from Harrison is delivered to Brockway Place Transfer Station in White Plains.

b) Potential Impacts

Based on Environmental Protection Agency 2013 average residential solid waste, at full build out, new residents of the Project would generate approximately 4.4 pounds (lbs) per person per day of solid waste. Given a projected Project population of 294 persons, the residents would produce approximately 472,164 lbs per year (equal to 294 persons X 4.4 lbs/day X 365 days/year); or 236 tons per year.

Ground level trash and recycling collection areas with dumpsters will be located in each building. Maintenance staff will place the dumpsters by the curb or within a designated area in the parking garages for pickup and disposal by the municipal trash collection or a contracted trash collection company. Maintenance staff will return the dumpsters to the trash collection areas after pickup.

c) Mitigation Measures

The amount of new solid waste is not anticipated to overburden municipal facilities or create adverse impacts. In accordance with local regulations, the proposed Project will participate in the Town and County recycling programs. By maintaining proper storage techniques and



regular collection of solid waste and recyclables by licensed carters to be disposed of or recycled at licensed facilities, no adverse impacts are anticipated, and therefore no mitigation is required.

5. Recreation and Open Space

a) Existing Conditions

There are approximately 1,500 acres of public and private open space resources in the Town/Village. Ma Riis Park is located on the opposite side of the MNR Harrison Station. The Solazzo Recreation Center, also located on the opposite side of the MNR Station, contains outdoor basketball courts. Wilding Park, located at the intersection of Oakland Avenue and Haviland Street, is also in close proximity to the Site.

Project Home Run, a brownfield remediation project by the Town on an 18 acre site is located less than half a mile from the Site. The project will include recreation amenities (proposed baseball field, multi-purpose field, walking trails, gazebo, restrooms, and parking).

The Site consists of a 1.05 acre informal, centrally-located open space known as "Jilly Flowers Park." This open space area is not dedicated parkland.

Table 3H-2 Parks and Open Space

Type of Park	Name of Park	Acreage in Harrison	Subtotal
Municipal Parks	Veteran's Memorial Park	23	
	Passidomo Park	48	
Smaller Town-Operated Recreational facilities	Wilding Park	1	
	Ma Riis Park	2	
	Pettijohn Park	1	
	Bernie Guagnini Brentwood Park	3.4	
	Emilio Scatenato Congress Park Playground	2	
	West Harrison Community Center	1.4	
	Rose Avenue Tot Lot	0.22	
	Jilly Flowers Park	1	
	Amelia Earhart Park	1	
			84.02



Table 3H-2 Parks and Open Space (cont'd)

Type of Park	Name of Park	Acreage in Harrison	Subtotal
Other Open Space			
Municipally owned open space	Nike Site	22	
	West Street Site (East side)	23	
	Klingenstein Property	17.5	
	Land that adjoins Brentwood Youth Memorial Park	16	
	Land adjoining Passidomo Park	43	
	Site at Emerson Avenue and South road	4.3	
	Land adjoining Veterans Memorial Park	16	
	West side of West Street	13.8	
	Beaver Swamp Brook – Project Home Run	18	
Private Recreation Sites	Apawanis Country Club	67	
	Brae Burn Country Club	152	
	Century Country Club	181	
	Old Oaks Country Club	186	
	Westchester Country Club	328	
	Willow Ridge Golf Club	122	
	Country Club at Purchase	196	
Total			1489.62

Source: Town/Village of Harrison Comprehensive Plan, December 19, 2013

b) Potential Impacts

The majority of the existing Site is surface parking lot with an open space area located approximately in the middle of the Site which is approximately one acre in size and contains passive recreational amenities including mown grass, benches and walking paths. The area is owned by the MTA and open to the public, however, it is isolated and bounded by the railroad tracks, Halstead Avenue and parking lots. The open space area is not considered a Town park and is not a significant source of open space or recreation for the Town/Village. The Harrison



Comprehensive Plan recommends improvement of the area “as part of the Metro-North TOD project to offer an inviting, accessible and well-supervised open space to the public, in the interest of enhancing the entire downtown experience.”

The Project includes constructing two landscaped publicly accessible plazas that will connect the MNR Harrison Station platform with Halstead Avenue. These plazas will contain pedestrian amenities, such as benches, planters, trees, decorative pavement and bicycle racks (See Appendix H Landscape Plans). The plazas will provide pedestrian connections to Halstead Avenue so that train passengers will not need to walk through a parking lot to get to the street. Residents of the Project will use the plazas to access the train station and Halstead Avenue. The plazas will also be designed to provide a safe and inviting waiting area for train passengers and respite for local workers and visitors shopping at the adjacent retail uses. Visually, the plazas will offer breaks in the building wall and visual appeal, and will indicate where to enter the train station.

A publicly accessible open space area enhanced with landscaping, mown grass, pavers, benches and other amenities, will be located between the plazas and adjacent to the railroad tracks. This open space area will provide passive recreation for residents of the Project and will offer another area of respite for train passengers, shoppers, workers and others.

This open space is not expected to satisfy all recreational needs of the new residents. The new residents will utilize existing open space and recreation facilities throughout the Town/Village. The new residents, however, will increase the population by only approximately 1.1 percent which is not anticipated to create significant additional demand for parks and recreation services.

c) Mitigation Measures

The existing open space area will be replaced with two publicly accessible plazas and a passive open space area. The new publicly accessible open space will be easily accessible via Halstead Avenue and will provide critical pedestrian links to the MNR Harrison Station. As a result, it is anticipated that the new public open space will better serve the needs of train passengers, pedestrians, visitors and new residents than the existing open space. The increase in the population of the Town/Village is not anticipated to create significant demand for parks and recreation services. Therefore, no mitigation is required.

The proposed regulations of the new TOD Zoning District would require at least five percent of the project site be devoted to public open space areas, pedestrian plazas or other pedestrian oriented spaces. The Project meets this proposed requirement.



6. Schools

a) Existing Conditions

The Site is located in the Harrison Central School District, which serves a 26-square mile area with a total residential population of approximately 27,785 people in both the Town/Village and a portion of the Town of North Castle. Six schools currently serve the district as shown in Table 3H-3 along with the current enrollment (2014-15) of each school. Students generated by the Project would attend Parsons Memorial School, the Louis M. Klein Middle School and the Harrison High School. Parsons Memorial School is located at 200 Halstead Avenue, approximately 0.2 miles from the Site. Louis M. Klein Middle School is located at 50 Union Avenue, approximately 1 mile from the Site. Harrison High School is located at 255 Union Avenue, approximately 2 miles from the Site. Response to the inquiries to the Harrison Central School District regarding enrollment, capacities and potential impacts to the School District has not yet been received (see letter in Appendix L).

Enrollments for the past ten years are shown in Table 3H-3, below. As shown in the table, enrollment in the district has remained steady with only minor fluctuations over the past ten years.

Table 3H-3 Harrison Schools Enrollment History

School Name	Grade Levels	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
Harrison Avenue School	K-5	524	500	480	480	460	459	470	492	514	523
Parsons Memorial School	K-5	433	460	467	464	460	488	473	493	499	478
Purchase School	K-5	468	447	443	437	412	387	364	370	333	309
Samuel J. Preston School	K-5	322	326	342	328	344	345	337	331	319	323
Louis M. Klein Middle School	6-8	812	779	787	808	826	858	862	806	815	822
Harrison High School	9-12	975	968	963	1,003	1,037	1,004	1,013	1,041	1,062	1,085
Total Enrollment		3,534	3,480	3,482	3,520	3,539	3,541	3,519	3,533	3,542	3,540



Source: NYSED Student Information Repository System (SIRS), except for 2015/2016 data which are from The Westchester Putnam School Boards Association publication Facts & Figures, 2016

The total Harrison Central School District budget for 2015-2016 was \$109,280,120. Approximately 91.6% of the cost per pupil is paid by local tax levy; the remainder of the budget is paid through State aid or other sources.

The budget includes costs for administrative, program and capital costs. Approximately 77 percent of the total budget, or \$83,874,808, is allocated for program costs. Based on a student population of 3,540, the instructional costs per pupil is approximately \$23,693, of which 91.6% or \$21,703 is paid by local tax levy.

Table 3H-4 Program Costs and Tax Levy Per Pupil

A Program Costs (77% of total budget)	B Enrollment (2015-16)	C Program Cost Per Pupil (A÷B)	D % Paid by Local Tax Levy	E Per Pupil Program Costs Paid by Local Tax Levy (CxD)
\$83,874,808	3,540	\$23,693	91.6%	\$21,703

b) Potential Impacts

Data from a variety of multi-family rental projects in Westchester County were analyzed to evaluate the projected number of school children from the proposed residential units. These data are from developments with similar bedroom count mixes (i.e., primarily one- and two-bedroom units with a limited number of three-bedroom units in some of the development) and similar rental prices. It is anticipated that the Project will appeal primarily to young professionals and empty nesters working in the general area, or retirees who have sold a single family home and wish to remain in the area, either full time or seasonally.

Data were collected from five rental apartment projects all constructed relatively recently, with similar rents to the Project in order to provide school generation information for use in this analysis. One City Place in White Plains (a 311-unit apartment building consisting of primarily one- and two-bedroom units with a small number of three-bedroom units) generated nine public school children. Bank Street Commons (a 505-unit apartment building complex consisting of approximately 50% one-bedroom and 50% two-bedroom and located adjacent to the White Plains MNR Station) generated 13 public school children. One City Place resulted in 0.029 public school children per unit, while Bank Street Commons generated 0.026 public school children per unit.



Also analyzed were several of the Applicant's existing communities. Avalon Green I in Elmsford had seven total school children (public and private) in 105 units (consisting of one- and two-bedroom units). Avalon Willow in Mamaroneck had 15 total school children (public and private) in 227 units (consisting of one- and two-bedroom units). The Avalon in Bronxville had seven total children (public and private) in 100 units (consisting of one-, two- and three-bedroom units). These three projects gave very consistent results, ranging from 0.06 to 0.07 school children per unit.

The two developments in the Harrison Central School District that are most similar to the Project were not considered comparable for various reasons. Park Knoll Cooperative in West Harrison is an existing two-story (ownership, garden apartment style) multifamily residential development with a total of 227 units in 15 buildings. According to the Harrison Central School District's Transportation Office⁴, 24 students live in this development. The 24 students in 227 units would result in a multiplier of 0.10 school children per unit. Although it is a multifamily development, it is ownership, and not rental, residential, and is not new construction. Also in the Harrison Central School District, 337 Halstead Avenue is a new project with eight rental units in the downtown, near the Site. It is not considered comparable since it is much smaller in scale. However, similar to the Proposed Action, 337 Halstead Avenue was developed in conjunction with a commercial use and is located in the downtown area close to the MNR Station. According to the Harrison Central School District's Transportation Office⁵, there were no students at 337 Halstead Avenue during the 2014-15 school year.

Using the multipliers from the similar projects, the Proposed Action would generate between four and ten school-age children (see Table 3H-5).

4 E-mail correspondence with Maria Poleski, Transportation Supervisor, Harrison Central School District 4/28/15.

5 E-mail correspondence with Maria Poleski, Transportation Supervisor, Harrison Central School District 5/4/15.



Table 3H-5 Projected Public School Children Based on Comparable Developments

Project	School District	Generation Rate (child/per unit)	Number of Units at Proposed Project	Potential School Children
One City Place	White Plains School District	0.029	143	4
Bank Street Commons	White Plains School District	0.026	143	4
Avalon Willow	Mamaroneck Union Free SD	0.070	143	10
Avalon Green I	Elmsford Union Free SD	0.070	143	10
The Avalon	Bronxville Union Free SD	0.060	143	9
<i>Range based on similar projects</i>				4-10 school age children

Ten new students in the school district represents a 0.3% increase in current enrollment and equates to approximately one student per grade. It is anticipated that the Harrison Central School District would not be adversely impacted by this minor increase in enrollment.

As identified in Chapter 3G, Fiscal Impacts, it is anticipated that the Project would generate approximately \$445,012 in property taxes for the Harrison Central School District. Applying the per pupil instructional cost of \$21,773 paid by local property taxes to the estimated four to ten new public school students results in an additional cost of between \$87,092 to \$217,730 to the Harrison Central School District. The net tax benefit to the district would therefore be between \$227,282 and \$357,920 per year.

c) Mitigation Measures

The potential impact of four to ten new school children into the Harrison Central School district (an increase in district enrollment of approximately 0.3%) is not considered significant, therefore no mitigation is proposed. The Project is estimated to generate between \$227,282 and \$357,920 per year annually in surplus taxes to the school district.



G. FISCAL IMPACTS

1. Existing Conditions

The Site is currently owned by the Metropolitan Transportation Authority, a tax-exempt public authority, and therefore does not currently generate real property taxes, except the assessment for Refuse Disposal, which is paid by the MTA. The current taxes paid for the Refuse Disposal District are \$979, as identified in Table 3G-1.

Table 3G-1 Existing Taxes

Parcel	Assessed Value (AV)	Tax Rate per \$1,000 AV	Existing Taxes for Refuse Disposal
0182.-12	\$20,450	19.182088	\$392
0182.-15	\$30,620	19.182088	\$587
Total			\$979

2. Potential Impacts

Taxes

Based on the Applicant's estimated assessed value of \$592,556, the total annual property taxes from the Project to all taxing jurisdictions would be approximately \$781,579, as shown on Table 3G-2 Tax Projections. Of this total, approximately 43 percent (or \$336,574) of the total property taxes are County and Town/Village taxes, and the Refuse Disposal assessment, and 57% (\$445,005) of the total property taxes would be paid to the Harrison Central School District. Since the Site is currently tax-exempt, the generation of taxes from the Site would be a net positive contribution to the Town/Village tax base.



Table 3G-2 Tax Projections

District	Assessed Value (AV)	Tax Rate per \$1,000 AV	Projected Taxes
Town/Village of Harrison	\$592,556	338.857618	\$200,792
Westchester County	\$592,556	209.964738	\$124,416
Refuse Disposal	\$592,556	19.182088	\$11,366
Total County & Town/Village Taxes			\$336,574
Harrison Central School District	\$592,556	750.991954	\$445,005
Total			\$781,579

Source for tax rates: Town/Village of Harrison Tax Assessor

Note: Assessed Value is based on a 7% cap rate, which yields a market value of \$37,034,750, and the current equalization rate which is 1.6%.

School Taxes/Costs

Potential impacts to schools are described in Chapter 3H, Community Services. Applying the per pupil instructional cost of \$21,773 paid by local property taxes to the estimated 4 to 10 new public school students generated by the Project indicates that the proposed Project could result in an additional cost of between \$87,092 to \$217,730 to the Harrison Central School District. Based on these estimated costs, and estimated tax revenues of \$445,005, the Project would result in a net tax benefit to the school district of between \$227,282 and \$357,920 per year.

Job Generation

The proposed Project would also contribute to the local workforce through the generation of temporary and permanent jobs. Within the anticipated construction period of 18 months (Phase 1) to 33 months (Phase 2), the Project would generate a substantial amount construction jobs. Once completed, the commercial component of the Project is expected to generate approximately 68 permanent retail jobs¹. Additionally, the Commuter Parking Garage is expected to create operations, maintenance, and management jobs. Permanent jobs will also be created on-site for residential component property management, maintenance, concierge services, and other building services.

Resident Spending Patterns

Consumers in the Town/Village spend approximately 15.8 percent of their after tax available income on retail purchases such as apparel, services, entertainment, recreation, personal care products, and furniture. The 143 new households can be expected to have disposal income available to be spent on these categories identified in Table 3G-3 below.

¹ Development Impact Assessment Handbook, Urban Land Institute, 1994.



**Table 3G-3 Average Household Budget Expenditures
Select Project Groups - 2015**

Product Group	Per Household*	Per 143 Households
Food Away from Home	\$4,919	\$703,417
Apparel and Services	\$3,483	\$498,069
Entertainment and Recreation	\$4,903	\$701,129
Household Furnishings and Equipment	\$2,592	\$370,656
Personal Care Products and Services	\$1,143	\$163,449
Total	\$17,040	\$2,436,720

Source: Esri Household Budget Expenditures forecasts for 2015 and 2020, consumer spending data are derived from the 2011 and 2012 Consumer Expenditures, Bureau of Labor Statistics.

*Study Area include households within a half mile radius of the Project Site.

The Project would result in greater economic activity in the Town/Village. The proposed 143 multi-family housing units would provide an additional evening and weekend population of new residents with disposable incomes. Some of this income can be captured in the Town/Village and will support existing businesses within Harrison and the commercial component of the Project, and may create demand for additional retail and commercial development. Based on the current spending patterns of residents within a half mile (incorporates the entire Central Business District) of the Site, the new residents are anticipated to spend a total of \$2,436,720 on common disposable income expenditures, including apparel, entertainment, restaurants, recreation, personal care and household items.

The disposable income will support the commercial component of the Project, and commercial and retail establishments along Harrison Avenue, Halstead Avenue and generally within the Central Business District.

The Applicant anticipates that the costs of development of the seven (7) affordable units of the Project will be subsidized by a grant from Westchester County, which will in turn require the Applicant to maintain the units as qualified "AFFH" units affordable to households with income at or below sixty percent (60%) of the Westchester County Area Median Income for a period of fifty (50) years. The Applicant may also seek financial assistance from the County of Westchester Industrial Development Agency in the forms of exemptions from sales and use tax, and mortgage recording tax, for all eligible components of the Project except the Commuter Parking Garage, but to date no application for such assistance has been made.

3. Mitigation Measures

The Project would result in a net positive impact for the taxing districts, including the Harrison Central School District, the Town/Village and Westchester County. The development is anticipated to generate a combined total of \$781,579 in annual property taxes, which is almost 100% greater than the taxes generated at the currently tax-exempt Site.



The estimated annual tax surplus from the Project for the school district is between approximately \$227,282 to \$357,920 per year using the estimate of four to ten new students generated by the Project. The final amount will depend on the actual number of school children residing in the development. The economic benefits to the Town/Village include tax revenues and other positive impacts to the local economy including employment during construction, at the commercial/retail spaces, and at the Commuter Parking Garage. The overall result of the proposed Project would be a net positive fiscal benefit to the Town/Village, County, other taxing districts and the school district.



F. CULTURAL, ARCHEOLOGICAL AND HISTORIC RESOURCES

1. Existing Conditions

Cultural resources are the historic and archeological resources on the site. The existing conditions of this Project Site consists of four (4) surface parking lots (2.5 acres) mostly utilized by MNR patrons. The lots are north of Halstead Avenue and east of Harrison Avenue, open space area (1.05 acres) and landscaped buffer strips surrounding the parking lots (0.24 acres).

The New York State Office of Parks, Recreation, and Historic Preservation (NY SHPO) defines Archaeological Sensitivity Areas that are based on the presence of an identified archaeological site plus a ½ mile buffer. If more than one site is present, each site has its own buffer and these buffers ultimately form larger sensitivity areas as they overlap with one another.

The Project Site is not located in an existing historic district, however it is located within an archaeological area of sensitivity as defined by NY SHPO based on the presence of previously reported archaeological sites within at least ½ mile of the Project Site. An inventory of identified historic areas within a half mile buffer of the Project Site has also been conducted. Within this half mile buffer, the inventoried historic areas include:

- Harrison US Post Office (NR #90NR02440)
- Archeological Survey (Survey #035R5852) – Phase IA Archeological Investigation of the Beaver Swamp Brook project Area
- Parsons Memorial School (USN #11905.0000034; eligible)
- New 16" Water Transmission Line (16PR00493; project closed)

There were also two projects listed in the inventory that were not eligible:

- Harrison Library (USN #11905.000044)
- Bridge NH 21.91 (USN #11905.000028)

The NY SHPO site file check was conducted on February 8 and May 4, 2016 and on-line map research using the ESRI USGS Historic Map Collection, the Map Collection of the New York City Public Library, the Westchester County Archives and Westchester Historical Society web sites was performed between May 4 and 19, 2016.

The proposed depth of disturbance below present grade will range from approximately 5 feet to 11 feet. Utilities and infrastructure will include an underground stormwater management system in addition to sanitary, water, gas, telecommunications, and electrical services. The utilities will interconnect with existing services.



NY SHPO assigned the project number 16PR03773, and on June 1, 2016, provided a comment letter which stated in part “based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation’s opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.” (the “No Effects Letter”). A copy of the letter can be found in Appendix J.

Results of the Literature Review

No previous cultural resources survey has been done of the Project footprint or the Project parcels in general. The Project area’s extreme southwest corner lies within an Area of Archaeological Sensitivity that is triggered by the presence of NY SHPO Unique Site Number (USN) 11949.000106, the Beaver Brook Prehistoric Site. According to CRIS, the site form for the property is missing and there does not appear to be an associated survey report. Within 1000 feet of the Project Site, Eugene Boesch completed a survey entitled “Phase IA Archaeological Investigation of the Beaver Swamp Brook Project Area, Town of Harrison, Westchester County, New York” (03SR53852). That report also is not within the CRIS electronic archive.

Relevant Phase I Environmental Site Assessment findings identified a coal storage and distribution facility that occupied the Site during the early 20th century prior to the Project Site’s current use as a parking lot. The easternmost portion of the parking lot was used as an oil and waste recycling center by Harrison during the mid to late 1990s.

The Site has been previously disturbed in the historic period and details of its historic use can be found in Appendix K. A 1872 Beers atlas sheet illustrates the original subdivision in the area and the presence of the then in-use Harrison Depot within the railroad right-of-way and the Harrison Hotel. By 1881, Bromley and Bromley¹ show the railroad depot still on the south side of the tracks. They illustrate a ‘store’ in approximately the location of the original Harrison Hotel. The 1901 Bromley map still shows the station and for the first time, buildings are present at the east end of the project area north of Halstead. According to a Phase 2 Environmental Site Assessment (ESA) by about 1911, the western end of the Project Site hosted the railroad depot and the central area had a church, a coal yard, and two one-story buildings. According to the ESA, a lumber and shingle store was present in the eastern one-third. At some point between 1911 and 1919, the coal yard and the church were razed.

The subsequent Hopkins² sheet dated 1929-1930 clearly shows the creation of parking spaces to service the railroad passengers and the original layout of Jilly Flowers park area. The Harrison Station had been removed from the south side of the railroad tracks and a new station constructed north of the tracks, outside of the project area. According to Kennedy, the Harrison Station building was raised approximately 50 feet above its original elevation in 1926 with further modifications made in 1970. By

¹Atlas of Town of Harrison and Town of Rye, Westchester County Archives, George W. Bromley and Walter S. Bromley, 1881.

²Atlas of Town of Harrison and City of Rye, Westchester County Archives, G.M. Hopkins, 1929.



1929-1930, the buildings north of Halstead at the east end of the project area shown on the 1901 map sheet are gone. Buildings were present, however, east of the project boundary.

Based on the walkover, it is apparent that much of the area has been recontoured (see Photographs located in Appendix K). Historic aerial coverage presented in Google Earth indicates the size of open space area was reduced by half between 12/30/2004 and 11/24/2006 to accommodate a small parking lot on the park's west side. This parking lot lies at a higher elevation than the main commuter parking lot to its west. The new lot and open space area are both at the same elevation while the parking lots to the east have been terraced lower.

2. Potential Impacts

According to NY SHPO's No Effects Letter (dated June 7, 2016), based on the background and literature review conducted, the "project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places." It is recommended that further archaeological and building/structures investigation are not necessary.

The Harrison Station was located at the south side of the railroad tracks and was removed from the south side of the railroad tracks and a new station constructed north of the tracks, outside of the project area. According to Kennedy³, the Harrison Station building was raised approximately 50 feet above its original elevation in 1926 with further modifications made in 1970. The exterior of the building is made of brick and stone. The site is not listed as an historical site but is considered National Registered Eligible. The station is now located to the north of the Site with the rear of the building facing the Site.

The Harrison Station building is not subject to any regulatory requirements. However, consideration is being taken on the historic nature and integrity of the building. The following are elements of the Project that are in the spirit of the Secretary of Interior's Standards of "New Construction within the Boundaries of Historic Properties" recommendation, and are applicable to the Project.

- Recommendation: New construction should be placed away from or at the side or rear of historic buildings and must avoid obscuring, damaging, or destroying character-defining features of these buildings or the site.
 - The building is not located on the Site and the rear of the building faces the rear of the Site. The Project will comply with this recommendation.
- Recommendation: The location of new construction should be considered carefully in order to follow the setbacks of historic buildings and to avoid blocking their primary elevations.

³Building-Structure Inventory Form, Unique Site No. 119-05-0002, Harrison RR Station-New Haven Line
Karen Morey Kennedy, July 12, 1980.



- Recommendation: The limitations on the size, scale, and design of new construction may be less critical the farther it is located from historic buildings.
 - A visual analysis was undertaken in Chapter 3B of the DEIS. The proposed elevations for the Project will not overpower the elevations of the Harrison Station. The Harrison Station building is not located on the Project Site and will not block the front or side facing elevations. Furthermore, the Project will follow the setbacks already existing along Halstead Avenue. The proposed development is positioned on the street to compliment and complete the Halstead streetscape. Scale is mitigated by dividing the mass into visually and materially distinct parts. Materials, including brick, stone, stucco, and siding, have been selected that relate to the scale, color and textures of existing buildings and compliment the established character of Harrison. The proposed architecture and relative location of the Harrison Station to the Project mitigate potential visual impacts.
- Recommendation: Historic landscapes and significant viewsheds must be preserved. Also, significant archeological resources should be taken into account when evaluating the placement of new construction, and, as appropriate, mitigation measures should be implemented if the archeological resources will be disturbed.
 - The Site does not contain any historic landscapes and significant viewsheds. As summarized in this chapter, the Site does not contain any significant archeological resources due to the Site having been previously disturbed.

3. Mitigation Measures

No significant archeological or historical site, buildings, structures, or objects were identified within the area of direct disturbance for the Site. No further cultural resources investigations were recommended in the June 1, 2016 submission to NY SHPO accepted that recommendation on June 7, 2016. Therefore, no mitigation measures are required.



E. GEOLOGY – SOILS, TOPOGRAPHY, AND STEEP SLOPES

1. Existing Conditions

Soils and Bedrock

According to the U.S. Natural Resources Conservation Service (“NRCS”), the Site is comprised entirely of the Urban Land (Uf) soil type (see Exhibit 3E-1). Table 3E-1 below summarizes the soils types located on the Project Site.

Table 3E-1 On-Site Soils

Soil Type	Name	Brief Description	Percentage of Site
Uf	Urban Land	Consists of areas where at least 60% of the land surface is covered with impervious materials. Slopes range from 0 to 8%.	100.0

Source: *Web Soil Survey* Online Resource by Natural Resources Conservation Service

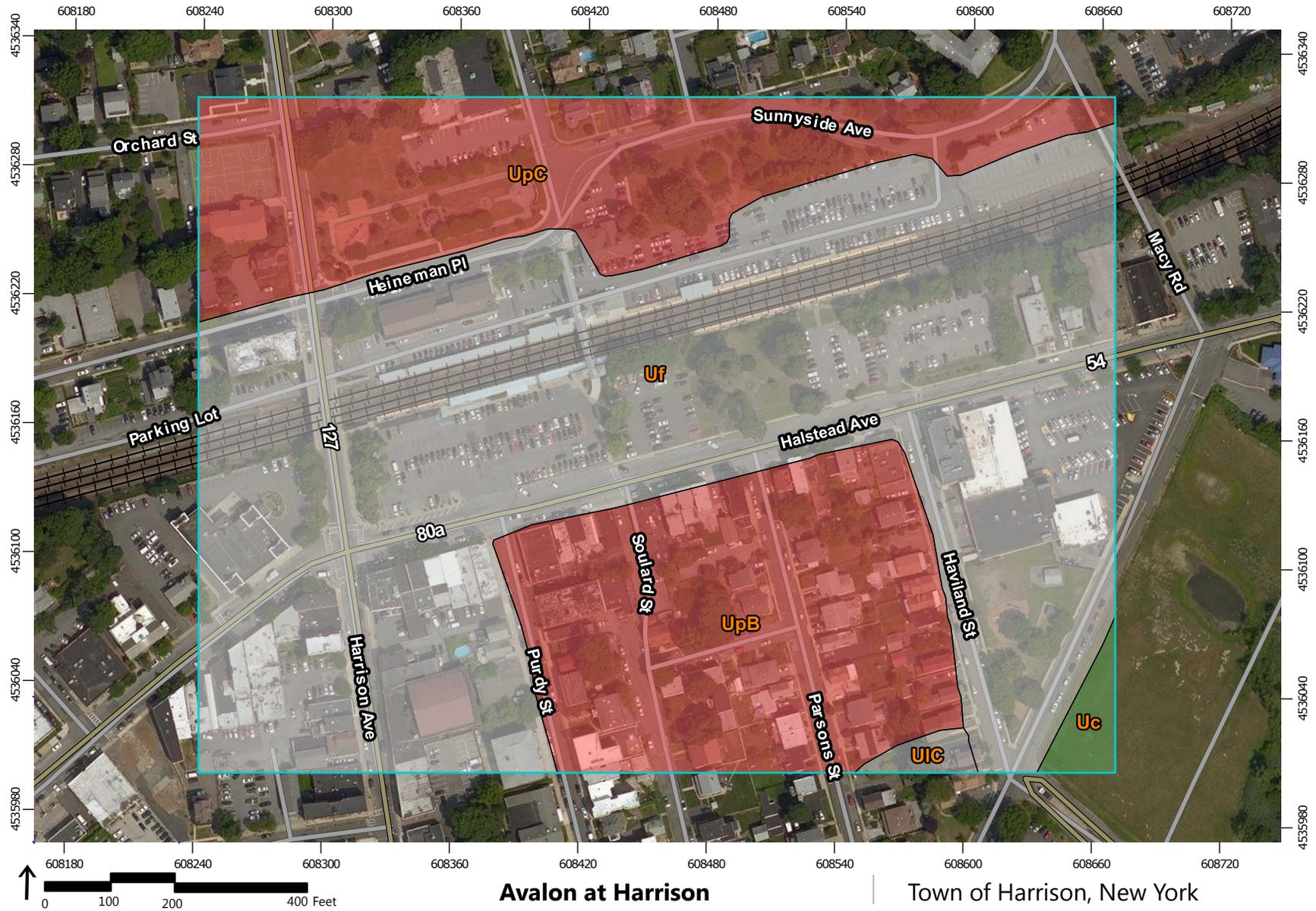
Urban Land is a typical soil in areas that have been altered by cut and fill. According to the 2014 Phase II Environmental Site Assessment by Triton Environmental Inc. (see Appendix I) the bedrock is identified as Hartland Formation, Ordovician unit age, consisting of amphibolite and pelitic schist. During the Phase II subsurface investigations, bedrock was encountered between one to 10 feet below grade. Borings were taken in 2009 and Exhibit 3E-2 displays the depth to bedrock encountered for each boring.

The Site is suitable for construction of the Project due to the physical characteristics and stability of the existing underlying bedrock.

Topography

The western portion of the Site generally slopes south-to-north from Halstead Avenue to the railroad tracks. The western edge of the property slopes steeply up to Harrison Avenue to the west as Harrison Avenue goes over the railroad tracks. The eastern portion of the Site generally slopes west-to-east from elevation 73 to elevation 42 with accumulated runoff discharging off-site to Halstead Avenue. The elevations on the western portion of the Site vary between elevation 70 feet and 62 feet. Appendix C displays the topography of the Site.

Hydrologic Soil Group—Westchester County, New York

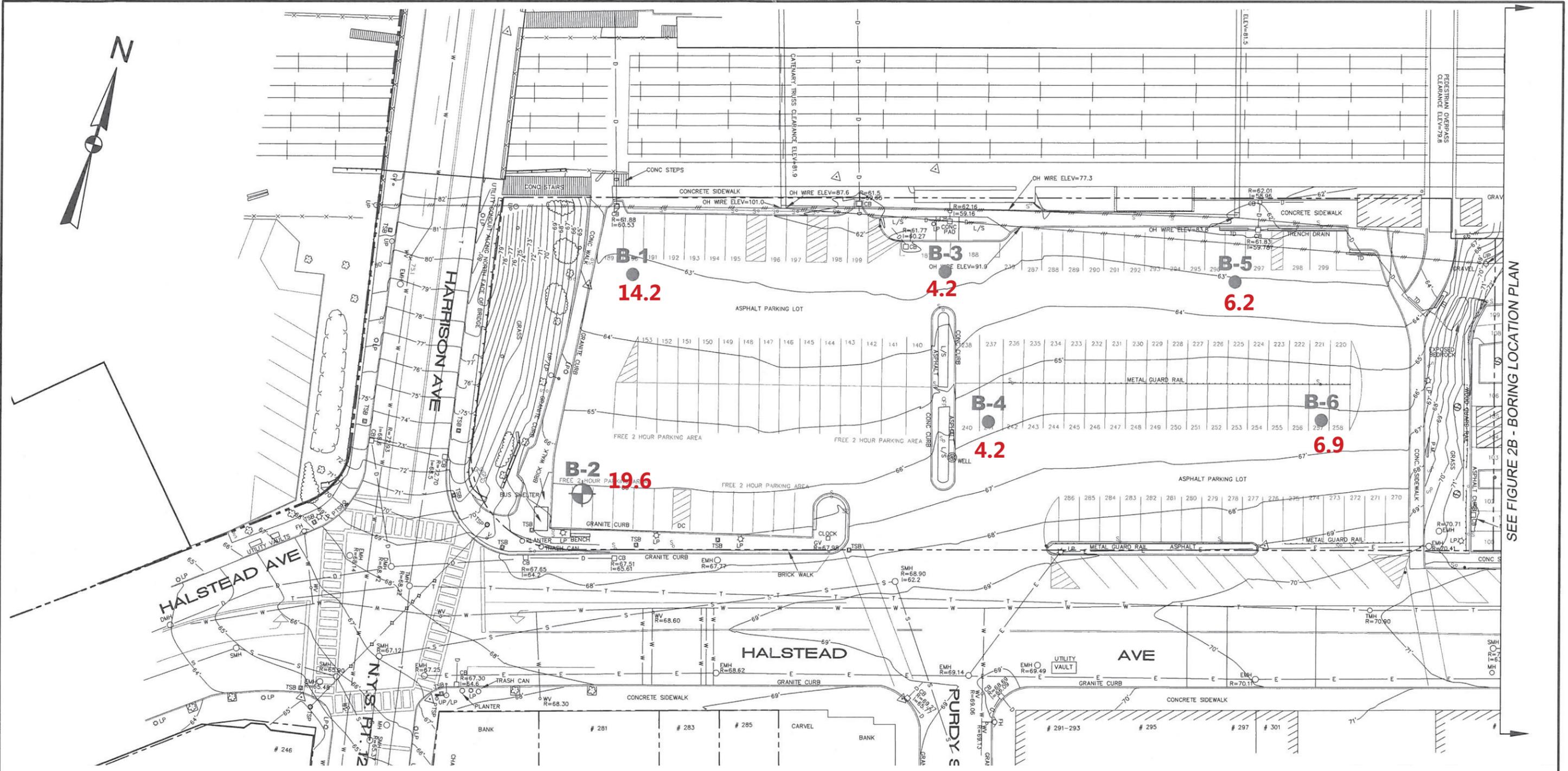


Legend

 Uf (Urban Land - 100% of Site)

**National Cooperative Soil Survey
(Web Soil Survey)**

Source: Natural Resources Conservation Service, May 2016



SEE FIGURE 2B - BORING LOCATION PLAN



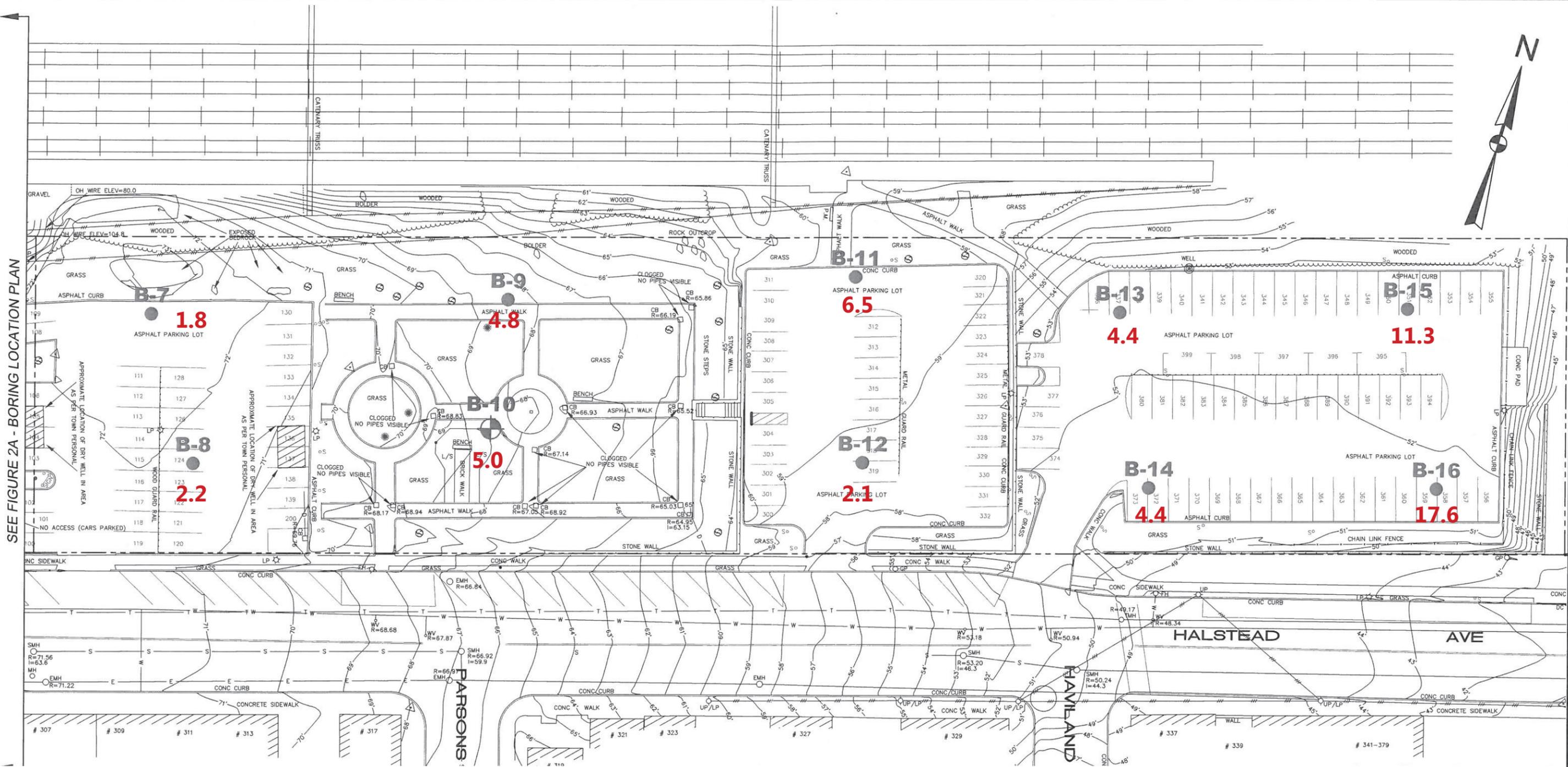
- Legend**
- Boring Location
 - Boring/Monitoring Well Location

Notes:

1. Base Map development from plan provided by Welsh Engineering & Land Surveying, P.C., entitled "Topographic & Boundary Survey Harrison Station," dated Sept. 18, 2009, Original Scale 1"=20', Sheets 1 or 2 and 2 of 2.
2. The location of the explorations, were approximately determined by the line of sight from existing topographic features. These data should be considered accurate only to the degree implied by the method used.

Avalon Bay, Harrison | Harrison, New York

Average Depth to Bedrock (in Feet)
 Prepared by GZA GeoEnvironmental of New York
 Engineers and Scientists, November 2009



SEE FIGURE 2A - BORING LOCATION PLAN



- Legend**
- Boring Location
 - ⊕ Boring/Monitoring Well Location

Notes:

1. Base Map development from plan provided by Welsh Engineering & Land Surveying, P.C., entitled "Topographic & Boundary Survey Harrison Station," dated Sept. 18, 2009, Original Scale 1"=20', Sheets 1 or 2 and 2 of 2.
2. The location of the explorations, were approximately determined by the line of sight from existing topographic features. These data should be considered accurate only to the degree implied by the method used.

Avalon Bay, Harrison | Harrison, New York

Average Depth to Bedrock (in Feet)
 Prepared by GZA GeoEnvironmental of New York
 Engineers and Scientists, November 2009



Steep Slopes

The Site does not contain steep slopes. The Site contains a consistent slope rating of 4.0% as indicated by the *Web Soil Survey* Online Resource by NRCS. See Exhibit 3E-3 for an illustration of the Site's existing slopes.

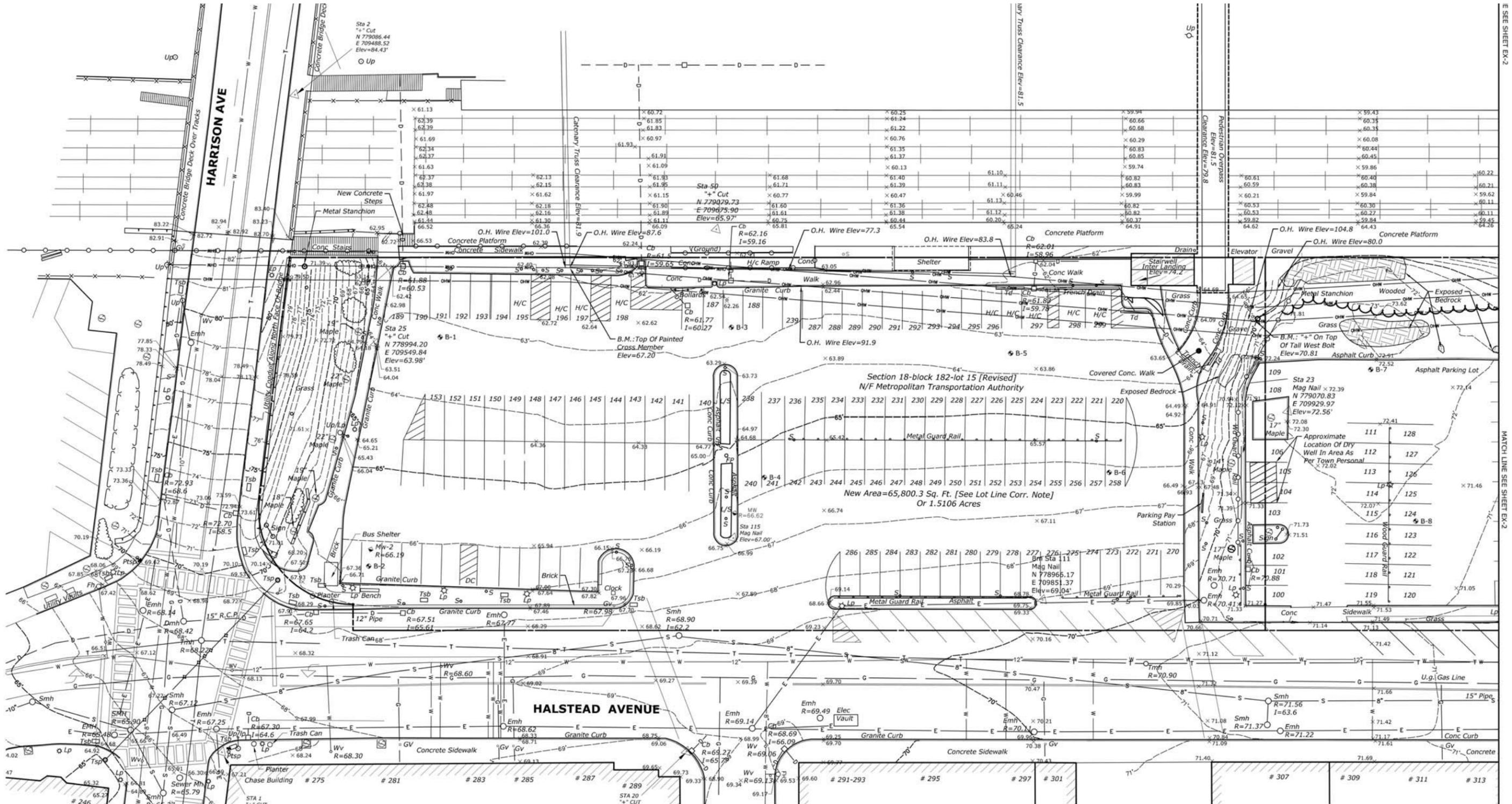
2. Potential Impacts

Soils

The entirety of proposed construction will be located in areas mapped as Uf soils. Exhibit 3E-4 displays the preliminary grading plan. Approximately 35,000 cubic yards of soils will be removed from the Site. It is estimated that a total of 1,950 truckloads of soils (4-5 truckloads each day), with each truckload carrying approximately 18-22 tons of material, would be required to carry out the construction. All soils will be removed in compliance with applicable federal, State, and local codes. The Site is underlain by bedrock and multiple areas of exposed bedrock exist within the construction limits. No exposed rock faces are proposed. The majority of rock removal would be for building foundations and utilities.

The removal of rock by blasting would be performed in accordance with all applicable federal, State, and local codes (Town/Village Code Chapter 135: Explosives and Blasting) as well as MNR's requirements for blasting near the railroad tracks. During construction, careful attention will be paid to the adjacent railroad tracks and structures, property owners and any adjacent structures will be monitored during activities to ensure that there is no impact from blasting operations. The Applicant will contract with a New York State licensed blasting contractor. The selected contractor will prepare a written Blasting Plan in accordance with the New York Department of Transportation "*Geotechnical Engineering Manual: Procedure for Blasting*" latest edition, providing a detailed description of the means and methods of the proposed rock removal program and in conformance with MNR's requirements. Typical elements of a blasting plan include the identification of adjacent properties and structures that will be monitored, record keeping and notification procedures, and blasting procedures. It is also anticipated that mechanical methods will be used for smaller areas of rock removal. If the rock is of suitable volume and character, it may be able to be processed on-site and used as crushed stone under the pavement areas.

Groundwater should be minimal based upon the boring test results except for specific areas of perched groundwater on the bedrock. If any groundwater is encountered during construction, it would be handled in accordance with *New York Standards and Specifications for Erosion and Sediment Control*, dated August 2005. If permanent control is required, a perforated pipe surrounded with broken stone and filter would be installed and directed to the nearest drainage inlet and away from the railroad tracks.



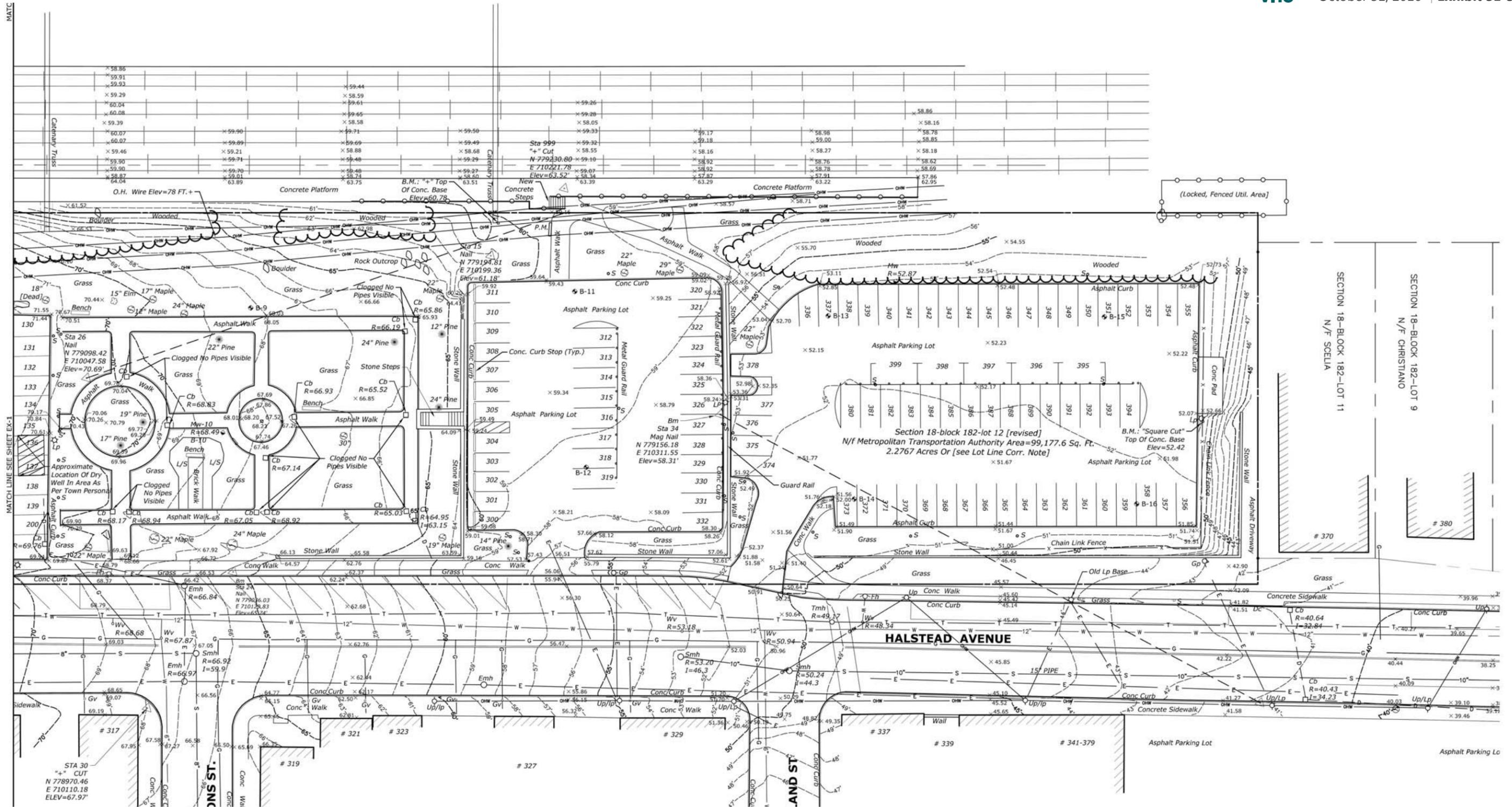
\\hbj\proj\WhitePlains\29626.00\AvalonBay-Harrison\graphics\FIGURES\IndesignFiles\29626.00_FiguresGrading_10_31_16.indd

Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

Slopes - Page 1

Source: Milone & MacBroom



\\vhb\proj\WhitePlains\25626.00\AvalonBay-Harrison\graphics\FIGURES\IndisgrFiles\25626.00_Figures\Grading_10_31_16\indd

MATC

MATCH LINE SEE SHEET EX-1

Not to Scale

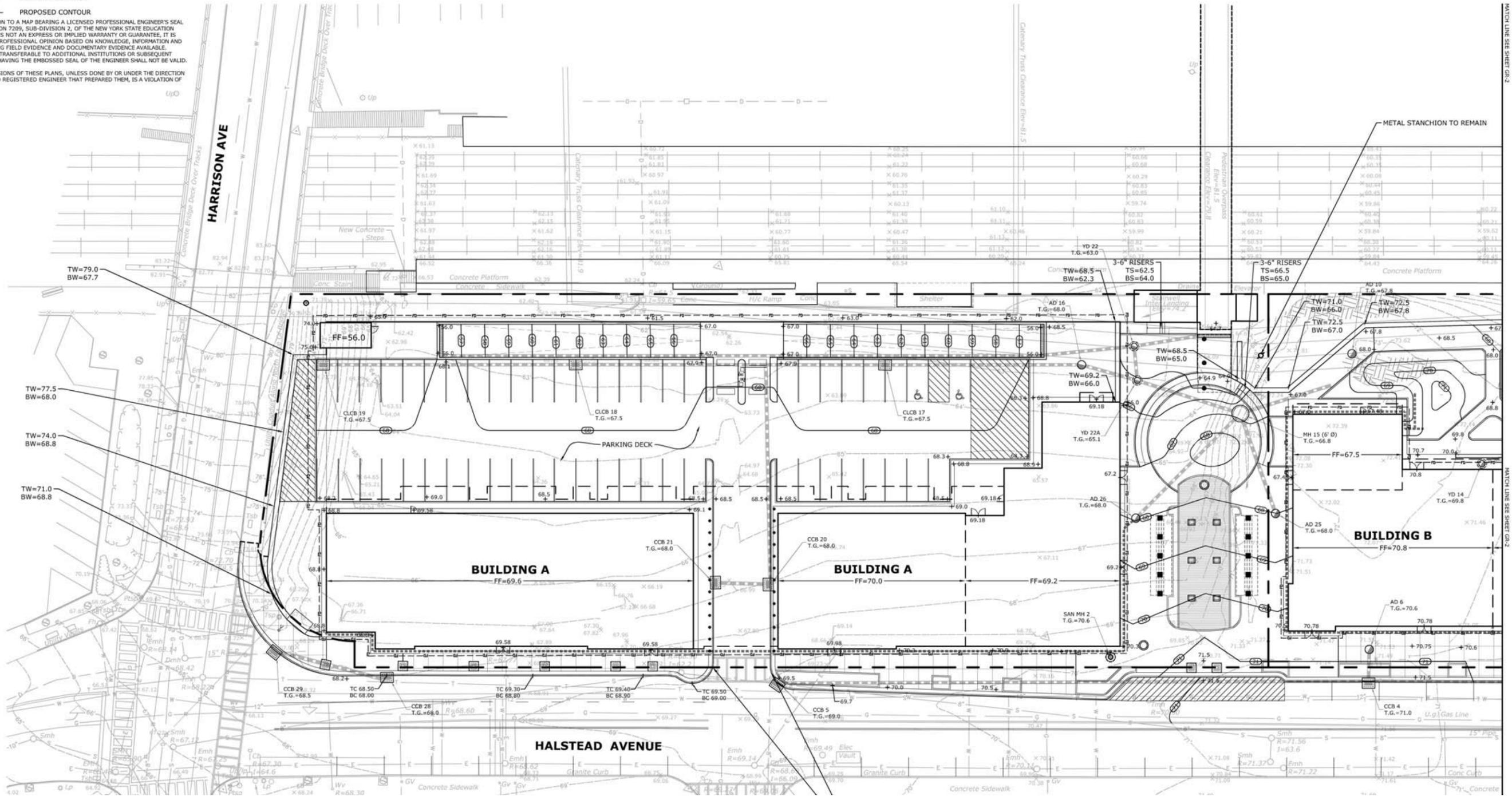
Avalon Bay Harrison | Town of Harrison, New York

GRADING LEGEND

- × 70.5 EXISTING SPOT ELEVATION
- + 70.5 PROPOSED SPOT ELEVATION
- 70 — EXISTING CONTOUR
- ① 24 — PROPOSED CONTOUR

UNAUTHORIZED ALTERATION TO A MAP BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS IN VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. THE CERTIFICATION IS NOT AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE. IT IS PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE AVAILABLE. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS. COPIES OF NOT HAVING THE EMBOSSED SEAL OF THE ENGINEER SHALL NOT BE VALID.

ANY ALTERATION OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED ENGINEER THAT PREPARED THEM, IS A VIOLATION OF THE NYS EDUCATION LAW.



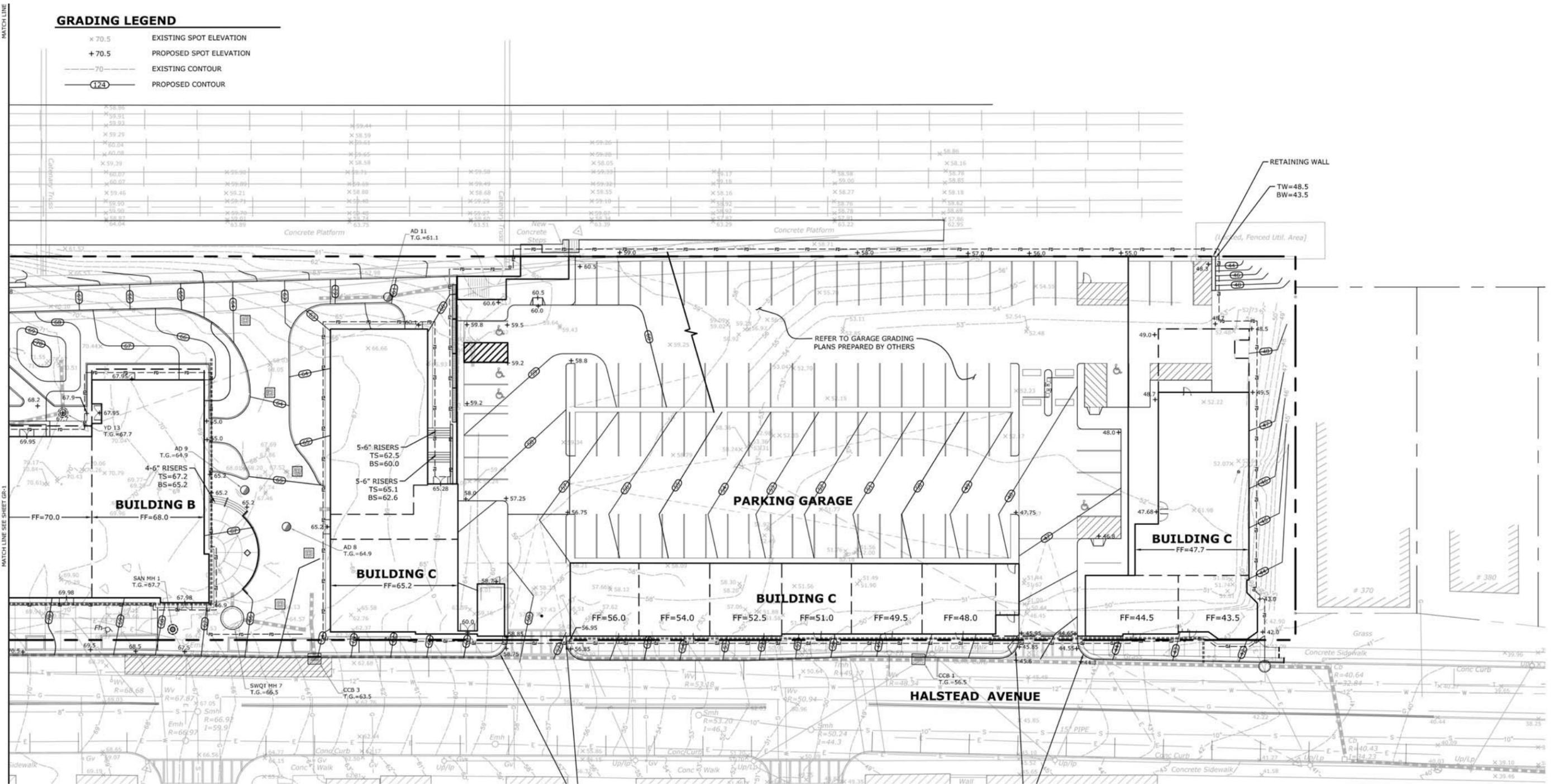
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Not to Scale

Avalon Bay Harrison | Town of Harrison, New York

GRADING LEGEND

- x 70.5 EXISTING SPOT ELEVATION
- + 70.5 PROPOSED SPOT ELEVATION
- 70 --- EXISTING CONTOUR
- (72) --- PROPOSED CONTOUR



\\vhb\proj\WhitePlains\2962600\AvalonBay-Harrison\Graphics\FIGURES\InDesignFiles_2962600_FiguresGrading_11_1_16.rvt

Not to Scale

Avalon Bay Harrison | Town of Harrison, New York



Slopes

All of the construction would occur on slopes of 0 to 15 percent. The following table summarizes the slope ranges that would be impacted by construction.

Table 3E-2 Construction on Existing Slopes

Slope Range	Area Within the Construction Limits (acres)	Percentage of the Construction Area (%)	Percentage of the Total Site Slope Areas (%)
0-15%	3.8	100.0	100.0

3. Mitigation Measures

By phasing the Project, the total amount of land disturbed at any time will be reduced. The removal of rock by blasting would be performed in accordance with all applicable federal, State, and Town/Village codes, including Town/Village Code Chapter 135: Explosives and Blasting, and MNR's requirements. During construction careful attention will be paid to the adjacent railroad tracks and structures, property owners and any adjacent structures will be monitored during any blasting and excavation activities to ensure that there is no impact from blasting operations. The Applicant will contract with a New York State licensed blasting contractor. The selected contractor will prepare a written Blasting Plan in accordance with the New York Department of Transportation *"Geotechnical Engineering Manual: Procedure for Blasting"* latest edition, providing a detailed description of the means and methods of the proposed rock removal program. This plan will be reviewed by the Town/Village Engineering Department and Building Department and MNR.

All disturbed soils will be re-used to the extent practicable. Excavated soil found to be unsuitable for reuse will be removed from the Site. Suitable soils that will underlie the driveway, walk, and plaza areas will be brought to the Site as needed.

A detailed Sediment and Erosion Control Plan will mitigate the short-term impacts of construction. The Sediment and Erosion Control Plan will include descriptive specifications concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. All of the sediment and erosion controls will be designed in accordance with the *New York Standards and Specifications for Erosion and Sediment Control*, dated August 2005, and will be reviewed by MNR.



The construction areas will be surrounded by geotextile sediment filter fence. A construction entrance will be provided along with several temporary topsoil stockpile areas encircled with sediment filter fencing. In addition, erosion control blankets will be installed on critical slopes to protect the newly created slopes until permanent vegetation can be established. Inlet protection will be provided for each catch basin and yard drain inlet to prevent sediment from entering the stormwater system during construction.

Temporary diversion berms and swales will be provided to direct the stormwater runoff to temporary sediment traps and away from the railroad during construction. The swales will include stone check dams to slow potential erosive velocities. The soil and erosion controls will be modified with the changing grades on site to ensure the protection of the surrounding areas.



D. WETLANDS, WATERBODIES, WATERCOURSES, AND FLOODPLAINS

1. Existing Conditions

Wetlands are regulated under the Harrison Freshwater Wetlands Protection Law (Chapter 149, Freshwater Wetlands, of the Harrison Town Code). The law states “the freshwater wetlands located in the Town of Harrison are invaluable resources for flood protection, wildlife habitat, open space and water resources”. The law establishes a 100-foot wetlands buffer and requires a permit from the Town Planning Board for regulated activities within wetlands and/or wetland buffers.

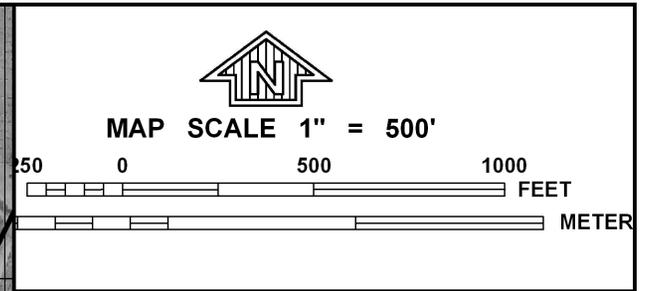
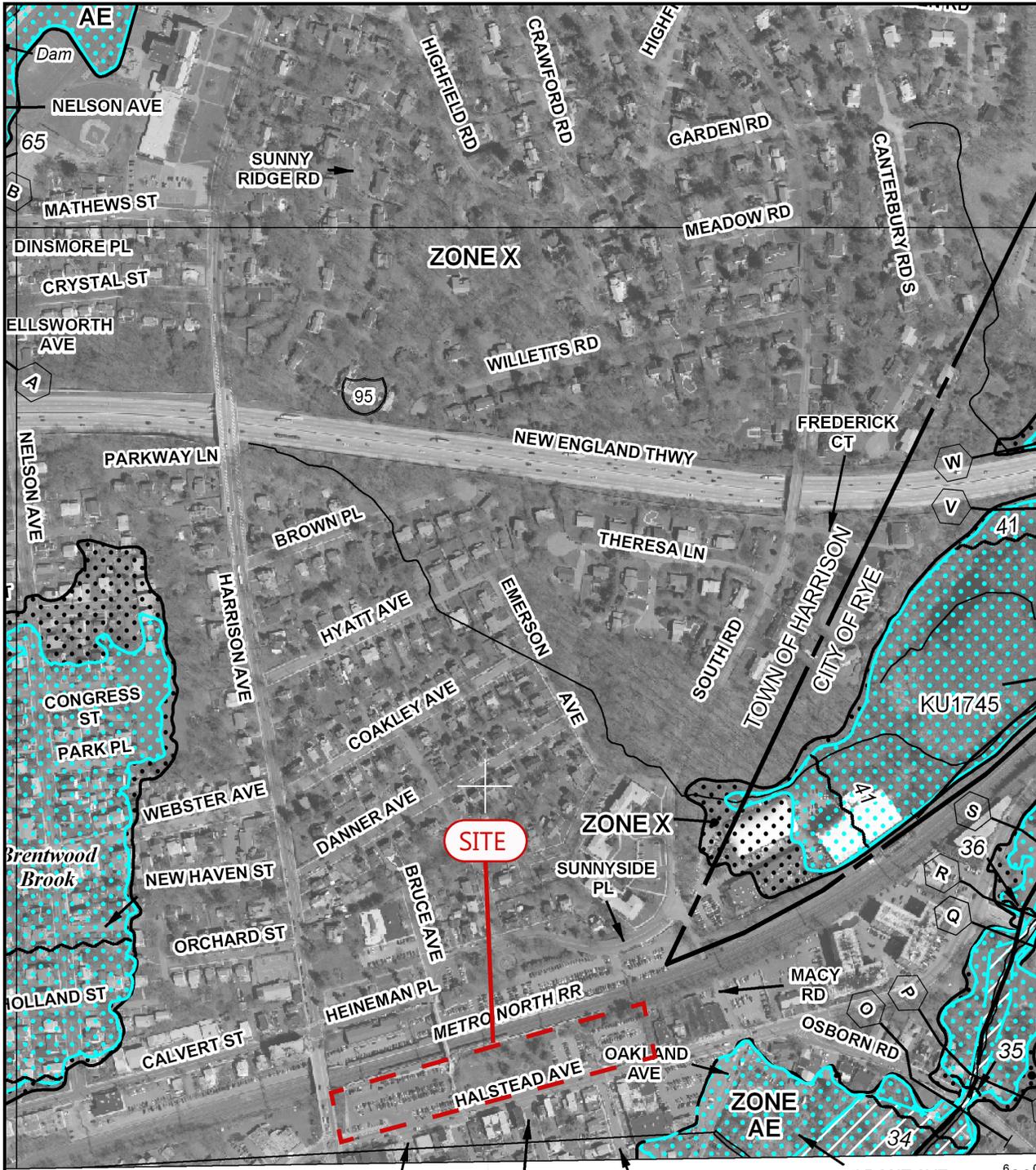
Wetlands over 12.4 acres are regulated under local law and under Article 24 of the State Environmental Conservation Law. Certain wetlands are also subject to regulation under Section 404 of the Clean Water Act and are within the jurisdiction of the Army Corps of Engineers.

Floodplains are mapped through US Federal Emergency Management Agency (“FEMA”) Flood Insurance Rate Maps (“FIRM maps”). Floodplains are regulated locally under Chapter 146, Flood Damage Prevention, of the Harrison Town Code.

The Site is currently a paved parking lot located in a built environment within a downtown center and does not contain any wetlands, wetland buffers, waterbodies, watercourses, or floodplains as defined by the Town/Village, New York State, or the Army Corps of Engineers. None of these natural features are identified on-site in the Town/Village Comprehensive Plan, on the New York State Environmental Resource Mapper, on FEMA FIRM maps, U.S. Fish and Wildlife Service National Wetlands Inventory, or on Westchester County GIS (See Exhibit 3D-1). No on-site lands meet the definition of “Freshwater Wetlands” as per Chapter 149 of the Town Code, or “Area of shallow flooding” or “Area of special flood hazard” as per Chapter 146 of the Town Code.

There are wetlands within $\frac{1}{4}$ of a mile of the Site located on the eastern end of Halstead Avenue along the Beaver Swamp Brook. Floodplains, as per FEMA FIRM map 36119C0352F, are also located within a $\frac{1}{4}$ mile of the Site in proximity of the Brentwood Brook to the west and in proximity of the Beaver Swamp Brook to the east.

According to the Westchester County Multi-Jurisdictional Hazard Mitigation Plan, two brooks located near the Project Site, Brentwood Brook and Beaver Swamp Brook, are flood hazard areas. The flooding area for Beaver Swamp Brook occurs along Oakland Avenue from the Metro-North railroad to the City of Rye boundary. Many of the buildings experience inundation and basement flooding. Most of the area is within a 1% annual chance flood zone. The area has flooded nine or 10 times over the past decade, with inundation beginning at four inches of rainfall and basement flooding beginning at two inches of rainfall. Flooding is exacerbated by constrictions in the stream channel from bridges and bridge



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0352F

FIRM
FLOOD INSURANCE RATE MAP

for WESTCHESTER COUNTY, NEW YORK
ALL JURISDICTIONS

CONTAINS:

COMMUNITY	NUMBER
HARRISON, TOWN OF	360912
RYE, CITY OF	360931

PANEL 352 OF 426
MAP SUFFIX: F
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
36119C0352F

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



abutments, especially the bridge on the Boston Post Road in Mamaroneck Village. Flooding inundation depths reach to approximately two feet and last approximately 48 hours (pg. 9.29-6).

The Brentwood Brook often floods in adjacent residential areas and is also adjacent to two local schools (Harrison Avenue Elementary School and Louis M. Klein Middle School).

While both brooks are in close proximity to the Site, the Site does not fall within the associated flood zones. The Harrison Town Engineer stated he was not aware of any historical or present flooding on the Site¹.

There is no hydrological or physical connection of the Site to the Beaver Swamp Brook.

2. Potential Impacts

There are no wetlands, waterbodies, watercourses, or floodplains on the Site, and the Project will not impact any of these features near the Site. Storm drainage patterns will not be altered and the flood risks of the nearby Beaver Swamp Brook and Brentwood Brook will not be increased.

The proposed Project will result in approximately 90% of the Site being covered with impervious surfaces while the existing Site is approximately 70% impervious. However, as described in Chapter 3J: Stormwater Management, the Project would not result in adverse stormwater impacts or detrimental changes to the quality or quantity of stormwater runoff discharged from the Site. No increases in peak rates of runoff would occur due to the proposed Project.

Stormwater runoff will be managed on-site by a proposed internal storm collection system. The system will convey runoff to a proposed stormwater management area located centrally on the Site, which will be designed to control the peak flows from the proposed development to rates that are equal or less than the predevelopment peak flow rates for all studied storm events. In addition to proposed site drainage infrastructure, it is proposed to upgrade the existing storm system along Halstead Avenue from the Site to its intersection with Oakland Avenue. See Chapter 3J: Stormwater Management for additional details.

3. Mitigation Measures

No significant adverse impacts to wetlands, waterbodies, watercourses, or floodplains near the Site are anticipated to result from implementation of the Project. Potential short-term impacts that might inadvertently result due to land clearing and construction activities would be mitigated through the adherence to a detailed Sediment and Erosion Control Plan (see Chapter 3J: Stormwater Management for additional details).

¹ Phone conversation with Michael Amodeo, PE, CFM, Town Engineer on May 10, 2016.



C. NATURAL RESOURCES

Existing ecological conditions at the Site were assessed through a review of United States Fish and Wildlife Service (“USFWS”), the New York Natural Heritage Program (“NYNHP”), and NYSDEC maps and records.

1. Existing Conditions

Vegetation

The Site currently contains 260 parking spaces within four parking lots on 2.50 acres of impervious asphalt. The Site contains 1.05 acres of open space, which is surrounded by the railroad to the rear, parking lots on both sides, and Halstead Avenue to the front. In addition, there is 0.24 acres of undeveloped land that acts as a landscaped buffer strip surrounding the parking lots. The Site has been subject to significant disturbance associated with the development of the railroad and parking lots. As a consequence, a majority of the Site is developed with anthropogenic (created or altered by humans) habitats, including buildings, pavement and landscaping. The existing land uses fall into the following categories described in the NYNHP publication *Ecological Communities of New York State (March, 2014)* (“ECNYS”):

**Table 3C-1 Land Use/Cover Type
(ECNYS Ecological Communities)**

Land use or Cover type	Current Acreage
Impervious (Urban Structures and Paved Roads)	2.50
Undeveloped (mowed lawns)	0.24
Landscaping (mowed lawns)	1.05

Urban Structure Exterior and Paved Road/Path:

On-site buildings, driveways, parking lots and other impervious surfaces encompass 2.50 acres, or 66 percent of the Site. These land uses are described in ECNYS as:

Urban Structure Exterior

“The exterior surfaces of metal, wood, or concrete structures (such as commercial buildings, apartment buildings, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in an urban or densely populated suburban area. These sites may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks...”



Paved Road/Path:

"A road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in cracks in the paved surface."

Actively Maintained Landscapes:

Actively maintained landscaped habitats occur in the vicinity of the buildings and within parking lot islands and grassy borders. The landscaped communities described below include 1.05 acres of open spaces and 0.24 acres of landscaped buffer strip that surrounds the parking lots. These maintained landscapes account for 34 percent of the Site. These communities are described in ECNYS as:

Mowed Lawn

"Residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing."

Wildlife

A map generated by the NYSDEC Environmental Resource Mapper did not identify any significant natural communities at or near the Site.

No New York State or federally-listed endangered, threatened or special concern wildlife, or significant natural communities have been identified for this Site. There are no known threatened or endangered species present within the vicinity of the Site.

The only plant identified by NYSDEC to be of special concern is the Yellow Flatsedge Sedge – Flowering Plant. This plant is identified as an endangered species according to a report generated by the NYSDEC New York Nature Explorer ("NYNE") (the NYNE website is an online database of NYNHP records, see Appendix E).

Correspondence was submitted to NYNHP on April 4, 2016 to determine whether records exist for known occurrences of rare or New York State-listed animals, plants or significant natural communities on or in the immediate vicinity of the Site. In correspondence dated April 27, 2016, NYNHP indicated that no such records currently exist (copies of NYNHP request and response letters are included in Appendix F). In addition, a review of the NYNE website was performed. Based upon review of the NYNE database, no NYNHP records currently exist for the Site or the one-mile surrounding radius (copy of the NYNE database report included in Appendix E).



The USFWS Trust Resources Report for the Site (see Appendix G) indicates that there are no endangered species or critical habitats found on-site. The Trust Resources Report for the Site did identify a list of migratory species that could potentially be affected by activities on the Site. The impact to these species of birds would be minimal if any due to the fact that the area is currently built-up with the undeveloped land acting as a buffer strip to the train station parking lots.

A field inspection was undertaken on October 7, 2016 by a Project Scientist for VHB Engineering, Surveying and Landscape Architecture, PC (VHB). The Site is situated within a densely developed downtown area that is comprised primarily of impervious surfaces (i.e., buildings and pavement) and does not support significant vegetated communities or wildlife habitats. In order to characterize the observed site conditions, the NYNHP publication *Ecological Communities of New York State*¹ (ECNYS) was consulted. This guidance provides detailed descriptions and global and state rarity rankings for various ecological communities that occur within New York. The Site contains unvegetated pavement and vegetated landscaped areas that are unranked by the NYNHP, due to their status as cultural communities that occur commonly throughout New York State. Utilizing ECNYS, three terrestrial ecological communities were identified at the Project Site: Paved Road/Path, Mowed Lawn and Mowed Lawn with Trees.

The site flora is dominated by common plant species, including ornamental trees and shrubs, maintained turf grasses and weedy herbaceous plants. Specifically, the open space area located within the central portion of the Site is dominated by common turf grasses (e.g., bluegrasses [*Poa spp.*], fescues [*Festuca spp.*] and ryegrasses [*Lolium spp.*]), that are maintained through regular mowing. The area has also been landscaped with ornamental trees, including sugar maple (*Acer saccharinum*), basswood (*Tilia americana*), Norway spruce (*Picea abies*) and kwanzan cherry (*Prunus serrulata*), as well as ornamental shrubs such as boxwood (*Buxus sp.*), yew (*Taxodium sp.*) and eastern redcedar (*Juniperus virginiana*). The border strips include maintained turf grasses and ornamental trees and shrubs as described above. In addition, a brushy vegetated border strip occurs adjacent the Metro North Railroad tracks. Dominant species observed within the latter area include common trees such as black locust (*Robinia pseudoacacia*), Norway maple (*Acer plantanoides*), black cherry (*Prunus serotina*) and white mulberry (*Morus alba*), along with various shrubs and vines including privet (*Ligustrum sp.*), poison ivy (*Toxicodendron radicans*), porcelainberry (*Ampelopsis brevipedunculata*) and Asiatic bittersweet (*Celastrus orbiculatus*). Various "weedy" herbaceous plants also occur, including mugwort (*Artemisia vulgaris*), yellow foxtail (*Setaria pumilla*), Queen Anne's lace (*Daucus carota*), small-flowered aster (*symphyotrichum lateriflorum*), pokeweed (*Phytolacca americana*) and rough-stemmed goldenrod (*Solidago rugosa*).

¹ Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State*. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.



No rare/protected plant or wildlife species were observed at the Site during the field inspection. An historic (1936) record exists for yellow flatsedge occurring in the vicinity of the Site. According to the National Wetlands Plant List,² yellow flatsedge has been assigned an indicator status of Obligate, which is indicative of plants that always occur in standing water or saturated soils associated with wetlands. As the Site and the adjoining developed properties do not contain surface waters or wetlands, habitat to support this wetland plant species does not occur on-site, and yellow flatsedge was not observed at the Site during the field inspection.

Table 3C-2 Species of Migratory Birds Potentially Affected

American Oystercatcher	<i>Haematopus palliatus</i>	Least Tern	<i>Sterna antillarum</i>
American Bittern	<i>Botaurus lentiginosus</i>	Peregrine Falcon	<i>Falco peregrinus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Pied-billed Grebe	<i>Podilymbus podiceps</i>
Black Skimmer	<i>Rynchops niger</i>	Prairie Warbler	<i>Dendroica discolor</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Purple Sandpiper	<i>Calidris maritima</i>
Blue-winged Warbler	<i>Vermivora pinus</i>	Rusty Blackbird	<i>Euphagus carolinus</i>
Canada Warbler	<i>Wilsonia canadensis</i>	Saltmarsh Sparrow	<i>Ammodramus caudacutus</i>
Cerulean Warbler	<i>Dendroica cerulea</i>	Seaside Sparrow	<i>Ammodramus maritimus</i>
Fox Sparrow	<i>Passerella iliaca</i>	Short-eared Owl	<i>Asio flammeus</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Snowy Egret	<i>Egretta thula</i>
Gull-billed Tern	<i>Gelochelidon nilotica</i>	Upland Sandpiper	<i>Bartramia longicauda</i>
Hudsonian Godwit	<i>Limosa haemastica</i>	Willow Flycatcher	<i>Empidonax traillii</i>
Kentucky Warbler	<i>Oporornis formosus</i>	Wood Thrush	<i>Hylocichla mustelina</i>
Least Bittern	<i>Ixobrychus exilis</i>	Worm Eating Warbler	<i>Helmitheros vermivorum</i>

2. Potential Impacts

As detailed in existing conditions, the majority of the Site consists of developed, anthropogenic habitats, including pavement and landscaping. No New York State or federally-listed endangered or threatened plant species have been identified on the Site. The Site is a developed property that supports predominantly anthropogenic habitats, with moderately- to highly-disturbed landscaped buffer perimeter and open space supporting common native and non-native plant species, including Red

² United States Army Corps of Engineers. 2016. National Wetland Plant List. Available online at: <http://rsgisias.crrel.usace.army.mil/NWPL/>. Accessed October 7, 2016.



Sunset, Armstrong Freeman Maple, 'Autumn Brilliance' Serviceberry, Columnar European Hornbeam, Cherokee Brave Dogwood, White Stellar Series Dogwood, Pink Flowering Stellar Dogwood, American Beech, Shademaster Locust, and London Plane Tree.

As a consequence of implementation of the Project, the majority of existing habitats at the Site would be cleared. Existing and proposed cover types are provided in Table 3C-3 below. As detailed in Table 3C-3, the primary impacts of the Project would be minor increases in impervious and landscaped cover types at the Site, and a corresponding decrease in vegetated habitats. In place of the existing open space, two publicly accessible plaza areas will be established.

**Table 3C-3 Cover Type (ECNYS Ecological Communities)
Land Coverage Changes**

Land use or Cover type	Current Acreage	Acreage after Project Completion	Change in Acres (+/-)
Impervious (Urban Structures and Paved Roads)	2.50	3.30	+0.8
Undeveloped (mowed lawns)	0.24	0	-0.24
Landscaping (mowed lawns)	1.05	0.49	-0.56

The Town Tree Protection Law (Chapter 220 of the Town/Village Code), requires a permit for the removal of trees greater than four inch trunk diameter measured at breast height. The proposed Project will require the removal of all existing trees on-site. The Site is a highly developed space with four commuter parking lots separated by grade changes (walls, slopes, and/or walks and steps). In addition, a small landscaped open space area separates two westerly commuter lots from two lower (easterly) commuter lots. The proposed plan requires removal of the parking areas and of approximately 52 trees on the Site. In support of the new buildings and streetscape, 58 trees are to be planted. The design intent is to use new street trees and plaza plantings to create a meaningful sequence of outdoor pedestrian spaces. In addition to the proposed trees, plantings of shrub masses and perennials in landscape beds are proposed. The proposed plantings are as follows:

- Street Trees (24) - These will be larger shade trees to overcast shade on shoppers and cars, creating a pedestrian-friendly streetscape condition.
- Plaza Trees (34) - These will be a mix of shade trees and flowering ornamental trees to scale down the buildings and provide selective springtime color. More structured



and hedge-like trees will be used in creating a promenade to and from the train station delineating public and more intimate spaces.

- Understory Planting - These plantings will be cold-hardy shrubs and perennials that can survive winter conditions and provide year-round color, fragrance, and movement in the landscape.
- Annual/Seasonal Pots and Baskets - These displays will provide seasonal flowering and interest.

As described earlier these trees are located on landscapes that have been significantly modified over the years and are a mixture of native and non-native species typical in urban environments.

The Project includes constructing two landscaped public plazas that will connect the Harrison Metro-North Railroad Station platform with Halstead Avenue. These plazas will contain pedestrian amenities, such as benches, planters, trees, decorative pavement and bicycle racks (Appendix H Landscape Plan).

3. Mitigation Measures

No significant adverse impacts to ecological resources on or adjacent to the Site are anticipated to result from implementation of the Project, since the Site would continue to be primarily developed and landscaped habitats. Nevertheless, additional street trees, planters, and trees within the public plazas are proposed to enhance ecological resources (Appendix H Landscape Plan).



B. VISUAL RESOURCES AND COMMUNITY CHARACTER

1. Existing Conditions

The Site is 3.79 acres and currently contains 260 surface parking spaces within four parking lots on 2.50 acres of impervious asphalt. The Site contains 1.05 acres of informal open space which is known as Jilly Flowers Park, although it is not dedicated parkland. This area is centrally located and surrounded by the MNR right-of-way to the rear, parking lots on both sides, and Halstead Avenue to the front. In addition, there is 0.24 acres of undeveloped land that acts as a landscaped buffer strip surrounding the parking lots.

The existing visual conditions of the surrounding properties along Halstead Avenue are characterized by mostly one- to three-story mixed use buildings with retail on the ground level and some buildings with residential apartments above the retail. Buildings along Halstead Avenue vary in height and architectural character. These buildings have no setbacks or buffers from the sidewalk and on-street parking is permitted.

The MNR railroad tracks are located immediately north of the Site with additional parking lots and the Town/Village of Harrison Municipal Building immediately north of the railroad tracks.

The Harrison Avenue (New York State Route 127) overpass is immediately west of the Site and one-story commercial uses are located immediately east. Other nearby buildings include a midrise residential building northeast of the Site. Existing visual conditions on-site and within the surrounding area are documented in the Exhibit 3B-1 Existing Visual Conditions Photographs 1-12.

2. Potential Impacts

Project Massing

The Project will consist of three, four-story buildings of varying heights up to approximately 75 feet in height. The visual character of the proposed development would be different from the existing conditions. The Project would replace the four existing asphalt parking lots containing 260-spaces and the 1.05 acre open space area with three mixed-use buildings and two landscaped publicly accessible plazas. The proposed Project has been designed as a Transit Oriented Development integrated with the MNR Harrison Station by providing structured commuter parking, and attractive new housing opportunities, restaurants and retail venues.

While the residential and commercial uses proposed for the Site are different from the current uses, the proposed Project is consistent with the commercial and residential nature of the surrounding area.

Photograph 1

Looking east from the Harrison Avenue overpass at the project site. Halstead Avenue is the picture right. Metro North platform is to the left.



Photograph 2

Looking east from the existing Metro-North parking lot toward Jilly Flowers Park (marked by the trees)



Photograph 3

Looking west from east end of Metro-North parking lot toward Harrison Avenue overpass, at existing building.



Photograph 4

Looking east at Jilly Flowers Park. Halstead Avenue to the right. The parking lot in the picture is outside of the project area.



Photograph 5

Looking at the SE corner of Halstead Avenue and Parsons Street from Jilly Flowers Park end of project area.



Photograph 6

Looking at the SW corner of Halstead Avenue and Parsons Street from the project area.



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Existing Visual Conditions
Photographs

Photograph 7

Looking SW across Halstead Avenue at the streetscape between Parsons Street and Purdy Street.



Photograph 8

Continuing to look SW across Halstead Avenue at the streetscape between Parsons and Purdy Streets.



Photograph 9

Looking SW at the streetscape across Halstead Avenue between Purdy Street and Harrison Avenue.



Photograph 10

Looking SE from the NW corner of Harrison Avenue toward the streetscape between Harrison Avenue and Purdy Street. The Wells Fargo building is on the SE corner of Halstead Avenue and Purdy Street.



Photograph 11

Looking east across Harrison Avenue with Halstead Avenue on the right and the project site on the left beyond the tree.



Photograph 12

Looking NE from the south side of Halstead Avenue at the multi-story apartment building in the background on the north side of the Metro-North Railroad tracks and the Harrison Avenue overpass.





The Project includes constructing two landscaped publicly accessible plazas that will connect the Harrison Station platform with Halstead Avenue. These plazas will contain pedestrian amenities, such as benches, planters, trees, decorative pavement and bicycle racks. The plazas will provide pedestrian connections to Halstead Avenue so that train passengers will not need to walk through a parking lot to get to the street. Residents of the Project will use the plazas to access the train station and Halstead Avenue. The plazas will also be designed to provide a safe and inviting waiting area for train passengers and respite for local workers and visitors shopping at the adjacent retail uses. Visually, the plazas will offer breaks in the Project building wall and visual appeal, and will indicate where to enter the railroad station.

Photographic Simulations

Photographic simulations have been developed to determine the overall massing of the proposed Project at eight separate locations (Exhibit 3B-2, Site Map). These photographic simulations illustrate massing only and do not include architectural design elements. The photo simulations are as follows:

Location #1 - Halstead Avenue (CR 54) and Harrison Avenue (Route 127)

The Project will be clearly visible from the intersection of Halstead Avenue and Harrison Avenue. Variations in the roofline offset the overall massing of the building, particularly along Halstead Avenue (Exhibit 3B-3).

Location #2 - Harrison Recreation Department (270 Harrison Avenue)

The Project will be visible from the Harrison Recreation Department. Due to the distance between the Project and the Harrison Recreation Department building and due to changes in topography, the height of the Project will appear similar to the height of the two-story Recreation Department building (Exhibit 3B-4).

Location #3 - Harrison Train Station/Platforms/Bridge Overpass

The upper portion of the Project will be clearly visible from this vantage point. (Exhibit 3B-5). The separate buildings will reduce the overall massing of the Project.

Location #4 - Harrison Public Library

Portions of the Project buildings will be visible from the Harrison Public Library. Overall, the massing will appear reduced due to the distance between the Project and the Harrison Public Library and due to changes in topography. (Exhibit 3B-6).

Location #5 - Sunnyside Place and Emerson Place

The Project will not be visible from this vantage point, even in the winter when leaves are off the trees, as shown in Exhibit 3B-7.

Location #6 - Parking lot on S Road across from Rye Racquet Club

During the winter months, when leaves are off the trees, much of the Project will be visible from the parking lot across from the Rye Racquet Club. During "leaf-on" months,



the views of the Project will be partially obstructed from this vantage point (Exhibit 3B-8).

Location #7 - Intersection of Osborne Road, Oakland Avenue, and Halstead Avenue (389 Halstead Ave)

From this vantage point, the Project will be visible along the north side of Halstead Avenue. The massing of the Project is not inconsistent with other, existing mid-rise buildings along Halstead Avenue (Exhibit 3B-9).

Location #8 - Halstead Ave and Parsons Street

The Project will be clearly visible from the intersection of Halstead Avenue and Parsons Street. Variations in the roofline and architectural details will offset the overall massing of the building (Exhibit 3B-10).

Shadow Analysis

A shadow analysis was performed for the summer solstice (June 22) and the fall equinox (September 21) at 9:00 am, 12:00 noon, and 3:00 pm, to show properties that will be impacted by the Project building shadows.

For the summer solstice, at 9:00 am, the Project will cast limited shadows that are mostly on-site with a minimal shadow affecting the northeast corner of Harrison Avenue and Halstead Avenue. There will also be a limited shadow cast from the easterly most portion of the Project over the MNR tracks (Exhibit 3B-11).

For the summer solstice, at 12:00 pm, the Project will cast very limited on-site shadows in a northerly direction that will not affect any off-site properties (Exhibit 3B-12).

For the summer solstice, at 3:00 pm, the Project will cast very limited on-site shadows in an easterly direction that will not affect any off-site properties (Exhibit 3B-13).

For the fall equinox, at 9:00 am, the Project will cast shadows in a northerly direction that are mostly on-site with a minimal shadow affecting the northeast corner of Harrison Avenue and Halstead Avenue. There will also be limited shadows cast over portions of the MNR tracks (Exhibit 3B-14).

For the fall equinox, at 12:00 pm, the Project will cast limited shadows that are mostly on-site. There will also be a limited shadow cast from the easterly most portion the Project over the MNR tracks (Exhibit 3B-15).

For the fall equinox, at 3:00 pm, the Project will cast limited shadows in an easterly direction that are mostly on-site, affecting only a limited portion of the MNR tracks. Other off-site properties would not be affected (Exhibit 3B-16).



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Avalon Bay Harrison | Town of Harrison, New York

**Photo Simulations
Site Map**

Source Perkins Eastman

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Avalon Bay Harrison | Town of Harrison, New York

Photo Simulations
Location #1 Halstead Ave &
Harrison Ave

Source Perkins Eastman

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**Photo Simulations
Location #2 Harrison Recreation
Department**

Source Perkins Eastman

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**Photo Simulations
Location #3 Trains Station/
Platforms/Bridge Overpass**

Source Perkins Eastman

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Photo Simulations
Location #4 Harrison Public Library

Source Perkins Eastman

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Photo Simulations
Location #5 Sunny Side Place &
Emerson Place

Source Perkins Eastman

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Photo Simulations
Location #6 Parking Lot Across
from Rye Racquet Club

Source Perkins Eastman

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Photo Simulations
Location #7 Osbourne Road &
Oakland Avenue

Source Perkins Eastman

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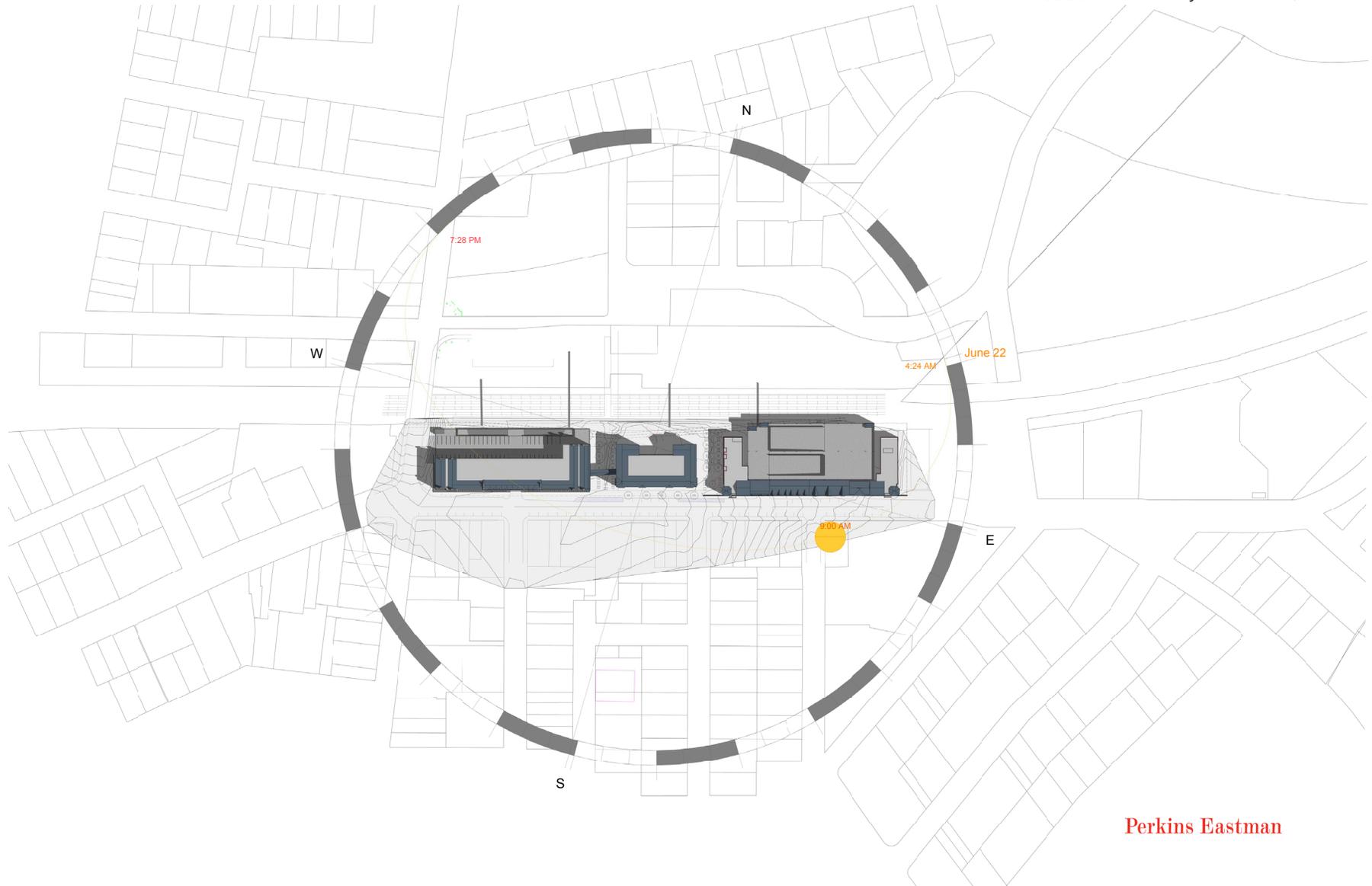


Avalon Bay Harrison | Town of Harrison, New York

Photo Simulations
Location #8 Halstead Avenue &
Parson Street

Source Perkins Eastman

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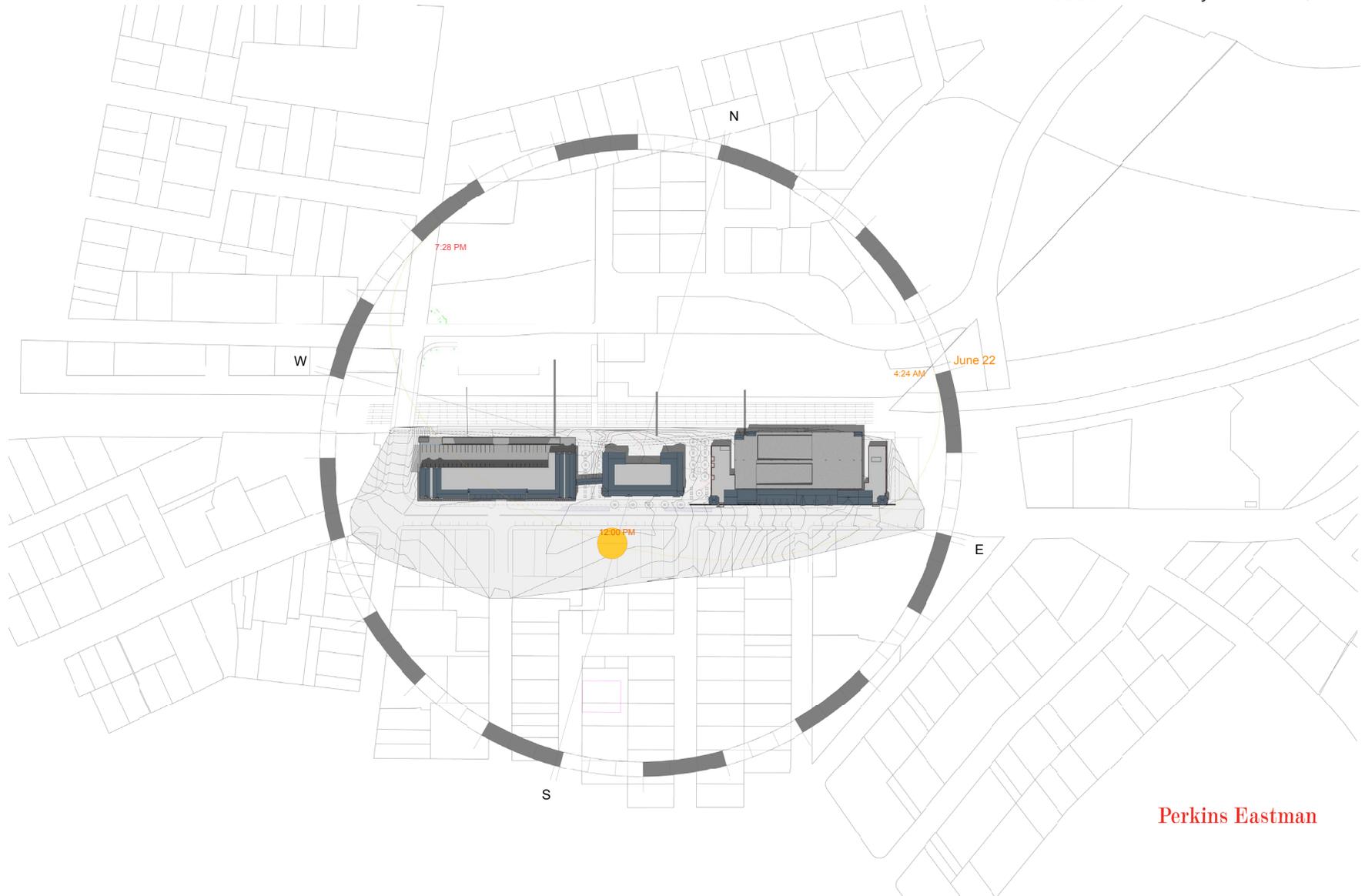
Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Summer Solstice 9 AM

Source Perkins Eastman

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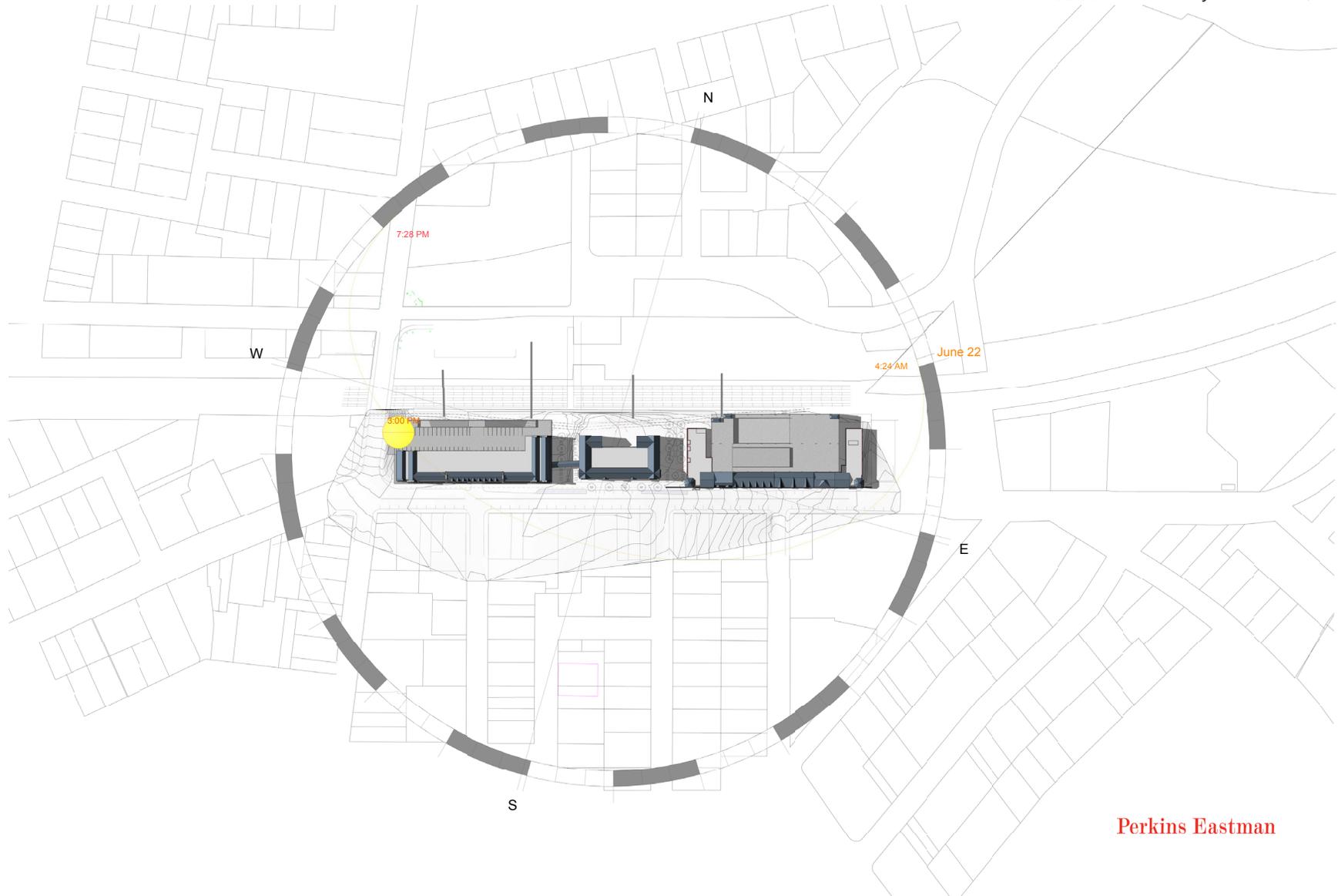
Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Summer Solstice 12 PM

Source Perkins Eastman

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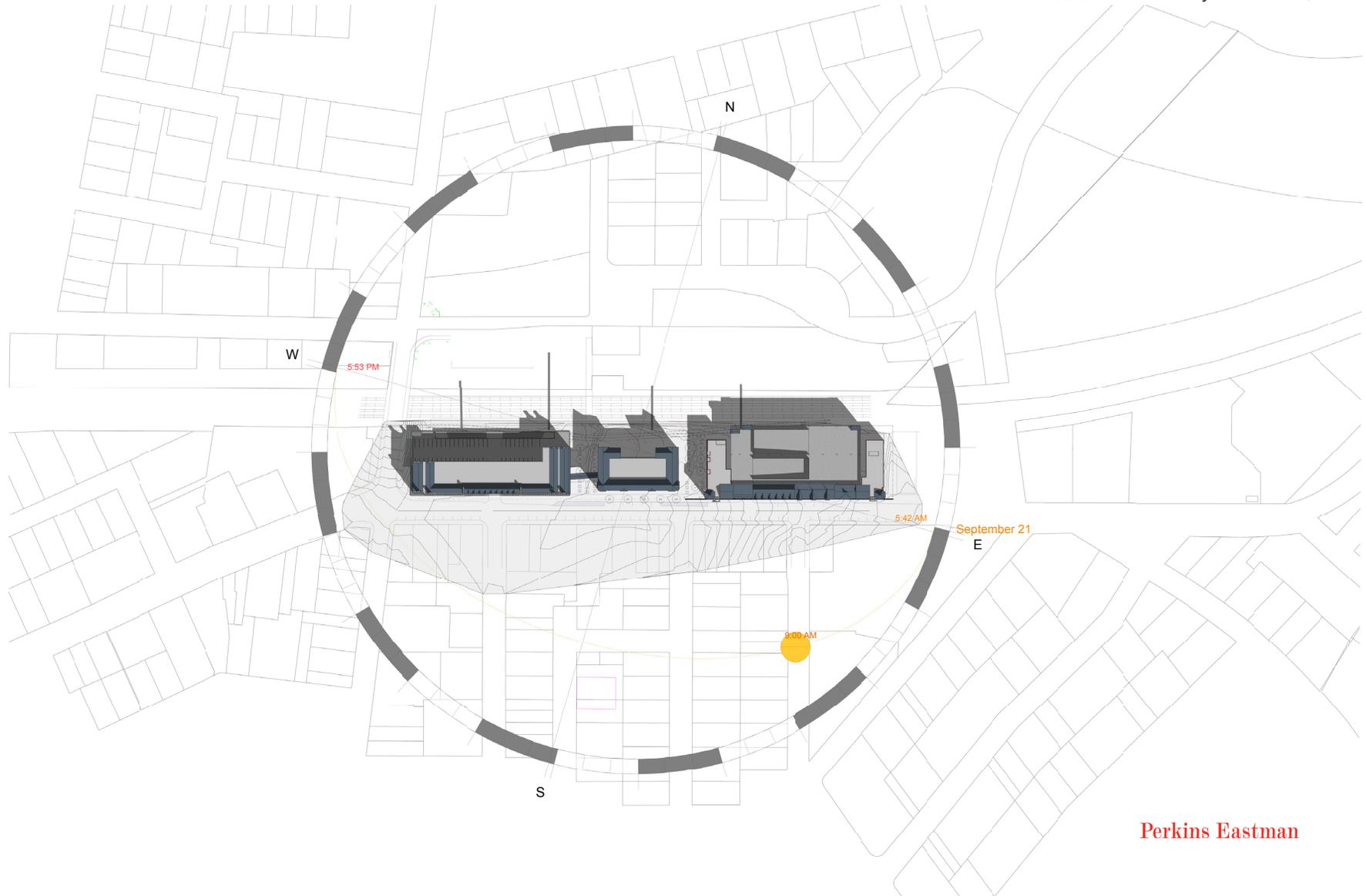
Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Summer Solstice 3 PM

Source Perkins Eastman

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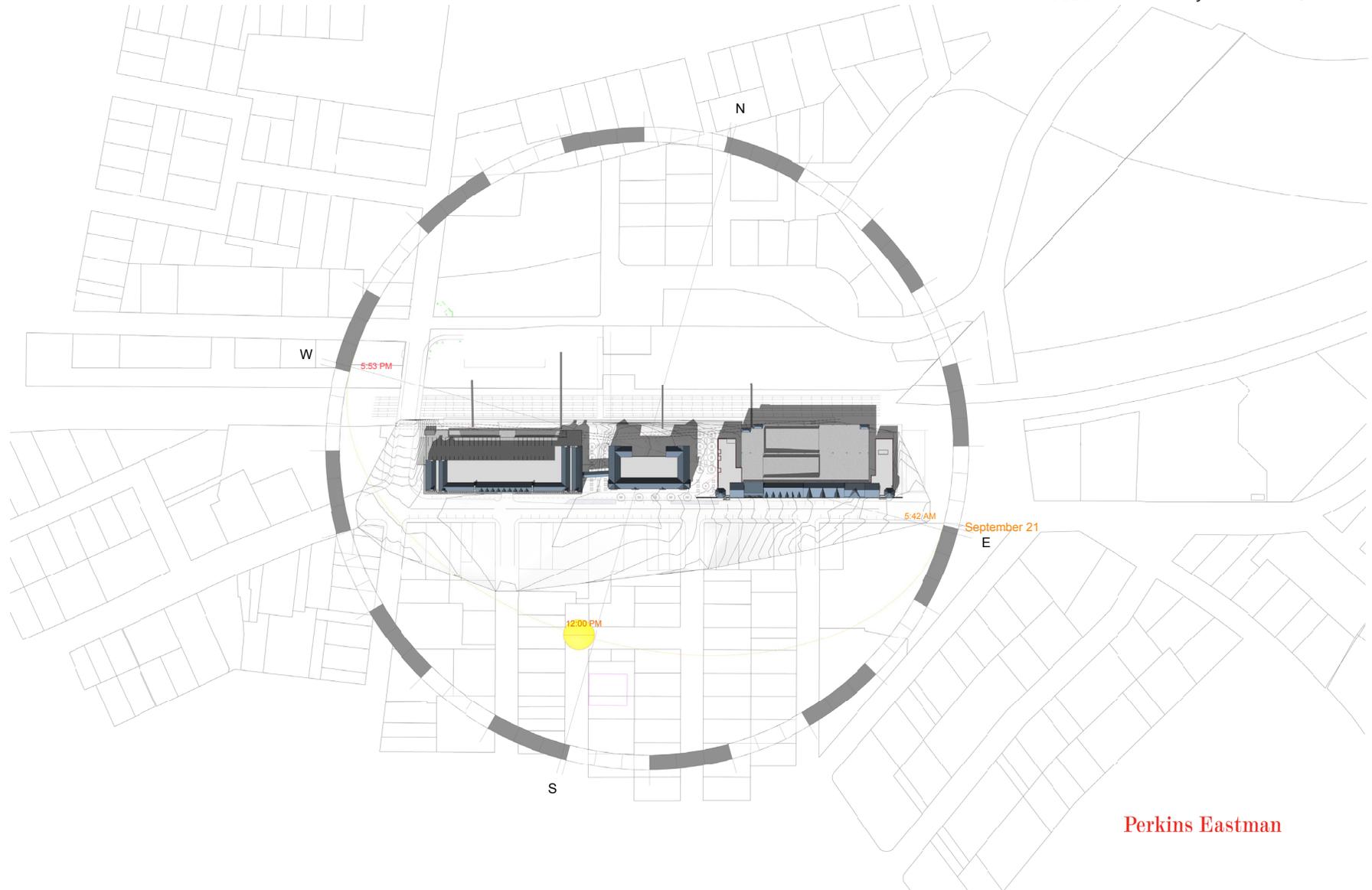
Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Fall Equinox 9 AM

Source Perkins Eastman

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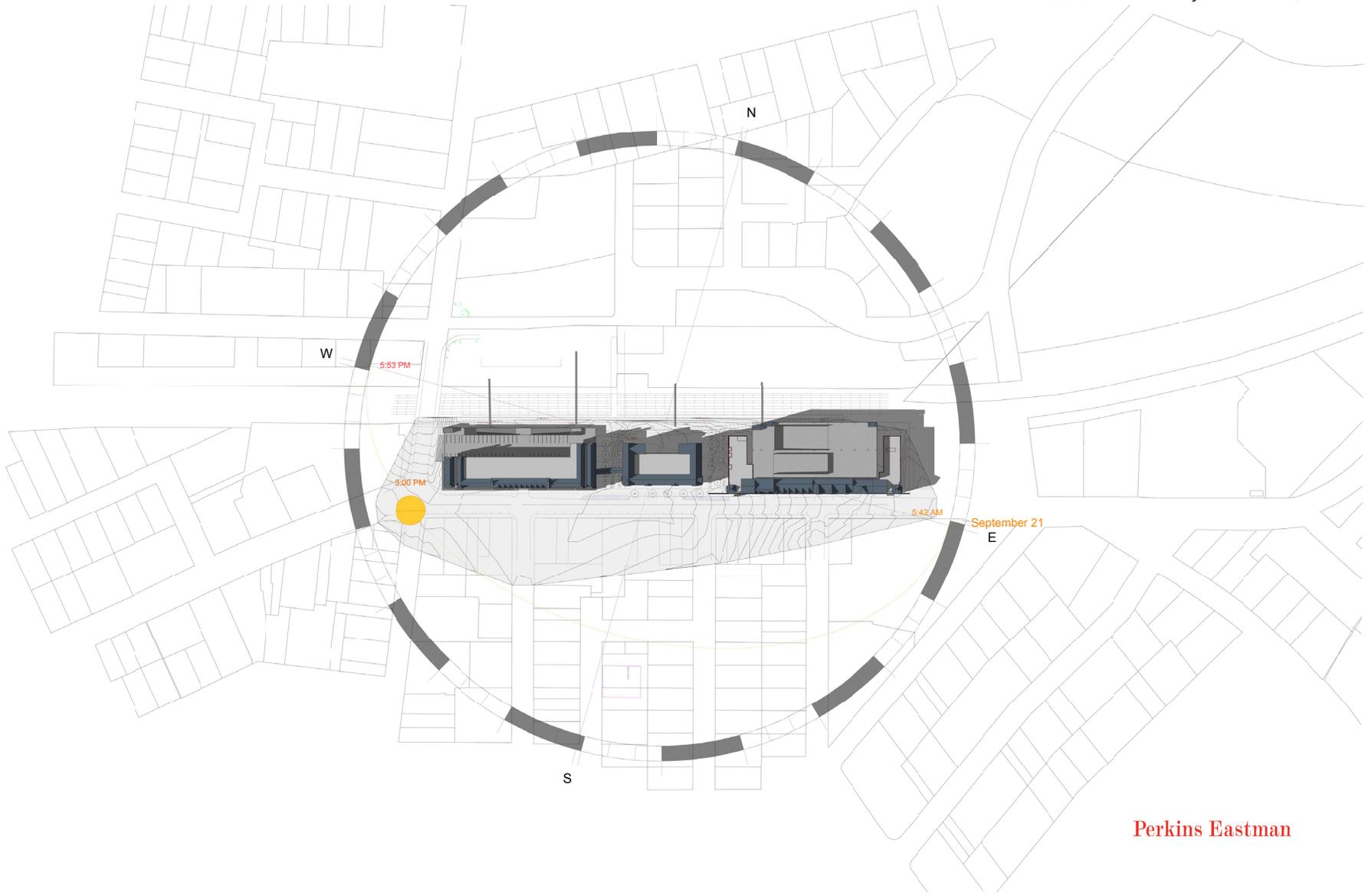
Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Fall Equinox 12 PM

Source Perkins Eastman

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Perkins Eastman

Avalon Bay Harrison | Town of Harrison, New York

Sun Study Fall Equinox 3 PM

Source Perkins Eastman



Architectural Details

The Project design takes cues from existing buildings along Halstead Avenue, and is intended to complement and complete the Halstead Avenue streetscape (Exhibit 3B-17). The scale of the Project is mitigated by dividing the mass into visually and materially distinct parts. Materials have been selected that relate to the scale, color and textures of existing buildings and complement the established character of the downtown. Brick, stone, horizontal siding, stucco and asphalt shingles provide the visual and tactile richness appropriate for the pedestrian scale, particularly at sidewalk level. Buildings are placed to provide two pedestrian plazas which further divide the long Site into appropriately scaled urban blocks that generally correspond to the existing street pattern opposite the Site. The use of dormers and steep-slope roofs further soften the Project's street profile and visual scale. Parking is pushed behind and below the buildings to visually screen it from the street, while maintaining easy access to the Project retail spaces as well as nearby retail uses. Activating the Site puts 'eyes on the street' and provides passive surveillance that improves a walking commuter's sense of security.

Signage

All proposed signage will be presented as part of the Project site plans. There will be no monument signs. Typical façade signs for residential and commercial uses are anticipated. All proposed signage will comply with Article VIII of the Town/Village Zoning Ordinance.

Lighting

The Project will include low-level site lighting that complements the light levels of the neighboring properties. The Project will utilize wall sconces at all emergency exits and at the retail spaces along Halstead Avenue and within the plazas. Pole lighting will provide appropriate lighting levels along the street. The parking garage will utilize ceiling-mounted lighting. The lighting within the plazas will be a combination of pole lighting to provide ambient lighting as well as bollards and accent luminaires to provide interest and articulate within the space and to the surrounding buildings.

Final lighting will be presented as part of the Project site plans.

3. Mitigation Measures

As described above, the Site will contain a greater concentration of building mass than the existing condition. The Project would be a more extensive development of the Site than the existing condition, with three buildings of varying heights of up to approximately 75 feet, and would cause some limited shadow impacts.

However, the proposed buildings would not adversely impact any significant public views, and the architectural style of the Project would be in character with surrounding uses. No mitigation, other than the significant array of design features already incorporated into the Project, is required.

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Avalon Bay Harrison | Town of Harrison, New York

Renderings

Source: Perkins Eastman

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Avalon Bay Harrison | Town of Harrison, New York

Renderings

Source: Perkins Eastman