



Table 3K-2 Existing and Proposed Cover Types

Cover Type (ECNYS Ecological Communities)	Existing Site Coverage (acres)	Existing Site Coverage (percent)	Proposed Site Coverage (acres)	Proposed Site Coverage (percent)
Landscaping	86.7	81.6%	42.4	39.9%
Meadows, Grasslands, or Brushlands	8.8	8.3%	44.8	42.2%
Impervious Surfaces	6	5.6%	14.3	13.5%
Surface Water Features and Wetlands	4.7	4.4%	4.7	4.4%

As detailed in Table 3K-2, the primary impacts of the Proposed Action would be a 14.3-acre increase in impervious surfaces associated with the residential development and newly created roadways, a decrease of 44.3 acres in landscaped cover types at the Project Site, and a 36-acre increase in grasslands and brushlands associated with the preserved shared open space, which would grow significantly as the maintenance of portions of the golf course would cease. There would be no change in surface water features and wetlands as a result of the Proposed Action. All existing ecological communities would continue to exist on-site.

Following implementation of the project, the Project Site would continue to function ecologically as a location of primarily developed and landscaped habitats, however, the areas of naturally vegetated habitats, to be located in the shared open spaces, would grow significantly. All existing ecological communities would continue to exist on-site.

No ponds or wetlands would be directly disturbed under the Proposed Action. The proposed landscaping plans include a 20-foot wetland edge of plantings for the ponds and bioretention areas. Given that currently, all of the pond areas are mowed and do not contain thriving wetland vegetation, the existing wetland habitat conditions will improve as a result of the Proposed Action.

Additionally, no New York State or federally-listed endangered, threatened or special concern plants or wildlife, or significant natural communities have been found on the Project Site. With respect to New York State rare/protected species or significant natural community records, the NYS DEC and NYNHP indicate that no such records currently exist for the Project Site and immediate vicinity.

Although there is potential for migratory bird species to be affected by the Proposed Action, the development would not result in the taking of those species given that the Project Site does not provide critical habitat. In addition, trees to be removed under the Proposed Action would be replaced according to the proposed Landscaping Plan, thereby restoring any habitat that may be disturbed in the short term.



In summary, the existing ecological communities at the Project Site provide suitable habitat for common wildlife species adapted to predominantly developed/disturbed conditions and close human presence. No significant adverse impacts to these communities are anticipated as a result of the Proposed Action, and in some cases, conditions would be improved, particularly within the 36 acres of shared open space associated with the PRD development.

c) Hommocks Salt Marsh CEA

The project as designed would avoid negative impacts on the Hommocks Salt Marsh CEA. The proposed stormwater maintenance system for the Project Site would improve water quality control through the construction of drainage pipes, bioretention basins and stormwater ponds. These mechanisms would treat water runoff, ultimately improving the water quality on the Project Site, including any stormwater being discharged into the Hommocks Salt Marsh CEA.

In addition, no development is proposed within a 100-foot adjacent area of any existing pond or wetland on the Project Site which may discharge into the Hommocks Salt Marsh. This buffer would provide a non-structural stormwater infiltration zone, encouraging infiltration into the soil as opposed to the wetland. Finally, the maintenance of nine holes of the golf course, particularly along the perimeter of the Project Site, would maintain current conditions in those areas and limit developmental impacts on the sensitive habitat provided by the Hommocks Conservation Area.

d) Landscape Maintenance Plan / Use of Fertilizers

Golf courses utilize fertilizers, pesticides, and herbicides as a means to maintain the course. The Proposed Action would reduce the use of these materials due to the change in use of a portion of the site from a golf course to residential housing with shared open spaces. No pesticides, herbicides, or fertilizers are anticipated to be applied to the 36 acres of shared open space. These shared open spaces would be maintained by the proposed Homeowners Association (HOA). The preserved holes of the golf course would continue to be maintained by the Applicant.

4. Mitigation

As detailed above, no significant adverse impacts to ecological resources on or adjacent to the Project Site are anticipated to result from implementation of the Proposed Action. The Project Site would continue to function ecologically as a location dominated by landscaped habitats, grasslands, and ponds or wetlands. Nevertheless, the following measures are proposed to enhance ecological resources.

The primary wildlife mitigation for the Proposed Action is the clustering of the residential development. By clustering the development, potential impacts are reduced and 36 acres of natural vegetation on the Project Site can be preserved.



Existing maintained lawn area will be reduced and replaced with native low maintenance plant species based on the recommendation of the *Coastal Planting Guide for the Village of Mamaroneck* (Exhibit 3K-4, Landscaping Plan). Over time, it is anticipated that these vegetated habitats would attract a more robust wildlife species assemblage, resulting in an overall increase in wildlife species diversity at the Project Site, as compared to existing conditions. In order to avoid/minimize any potential adverse impacts to wetlands, a 100-foot adjacent area would be maintained throughout the duration of work and following implementation. In addition, as detailed in the Landscaping Plan, 432 trees would be planted to replace any trees to be removed during construction and native plantings would be provided along the perimeter areas of on-site wetlands, improving overall plant and wildlife species diversity.

Water quality treatment controls through stormwater ponds and retention basins will be installed to collect stormwater runoff that currently discharges into the Hommocks Conservation Area. These controls will improve the water quality of the runoff.

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L. CRITICAL ENVIRONMENTAL AREA

The Project Site is one of seven CEAs that have been designated in the Village of Mamaroneck, including the Hommocks Conservation Area (Village of Mamaroneck portion), designated the same day as the Hampshire Country Club.

A Critical Environmental Area (CEA) is a State- or locally-designated site recognized for its exceptional or unique environmental characteristics. Specifically, a CEA's characteristics must be unique with respect to one or more of the following: a benefit or threat to human health; a natural setting, e.g. open space or area of important scenic quality; agricultural, social, cultural, archaeological, recreational, or education values; or an inherent ecological, geological, or hydrological sensitivity to change. Development in a CEA is subject to more rigorous review by local agencies, which has prompted the inclusion of this chapter in the Environmental Impact Statement.

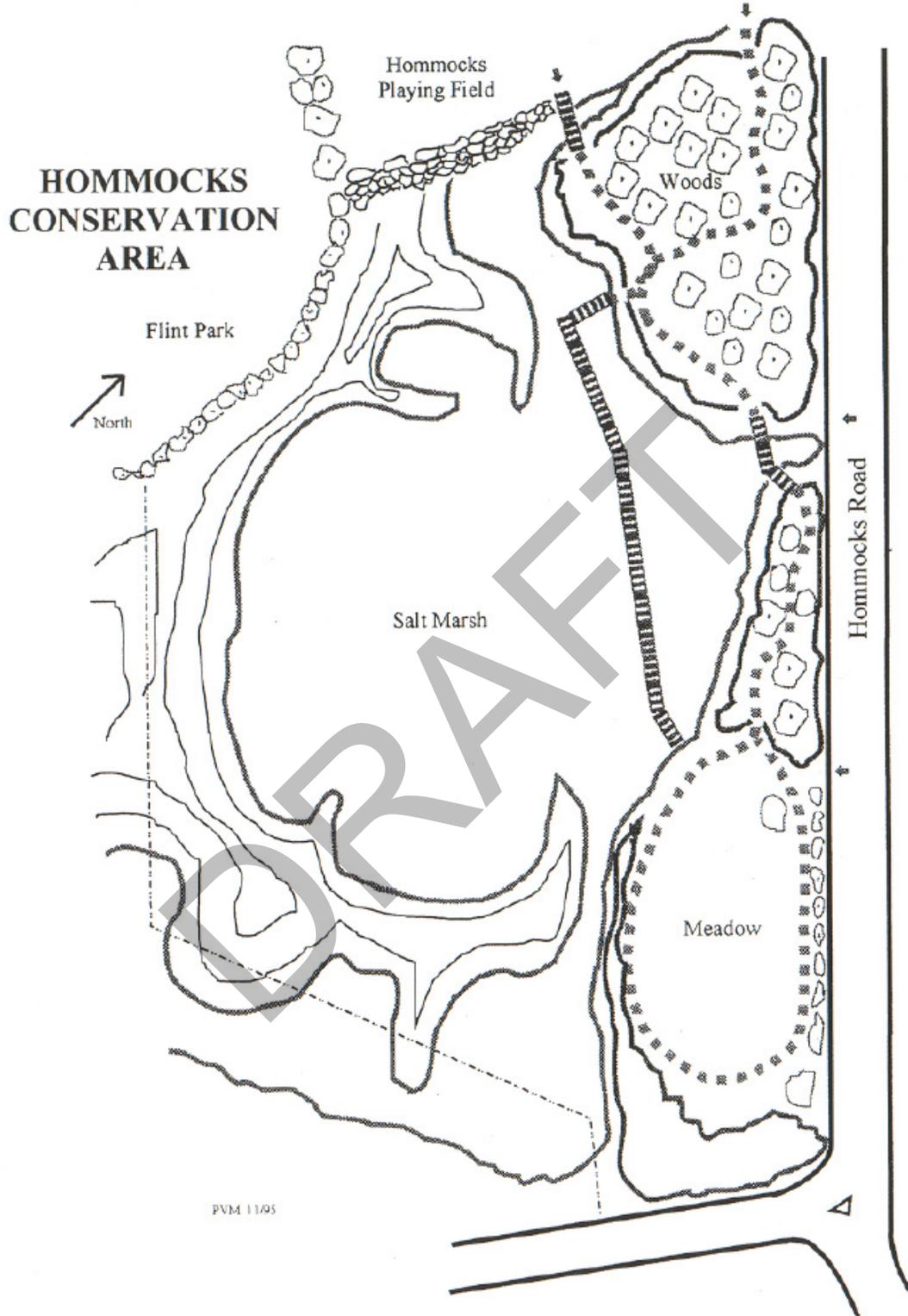
In January 1981, the Village of Mamaroneck Coastal Zone Management Committee published its Coastal Zone Management Program Phase One report to provide an inventory of coastal conditions in the Village. As discussed below, the Phase One report recommended that the Hampshire Country Club be designated as a CEA for its sensitive drainage characteristics. Three years later, the Village of Mamaroneck Local Waterfront Revitalization Program (LWRP) recommended an amendment to its Local Law 15-1980 to designate the Hampshire Country Club CEA. The Hampshire Country Club CEA was officially designated by Local Law No. 34-1984, effective on February 2, 1985.

1. Existing Conditions

As mentioned, the Hampshire Country Club was recommended for designation as a Critical Environmental Area in the Village of Mamaroneck LWRP, adopted in November 1984. According to the LWRP:

The Hampshire Country Club golf course is a highly sensitive drainage area with the potential for impacting the Hommocks Marsh and coastal waters. The Hommocks Conservation Area is a significant habitat. CEA designation would encourage more careful review of proposed actions in or contiguous to these two areas.

The Hommocks Conservation Area, which includes the Hommocks Salt Marsh, and the Hampshire Country Club were designated as CEAs simultaneously by the Village of Mamaroneck. The marsh is considered a highly sensitive coastal area, encompassing tidal wetlands, the outfalls of two nearby creeks, and sheltered waters. Together these features provide optimal feeding and nesting areas for migrating birds. A map of the Hommocks Conservation Area is provided in Exhibit 3L-1. Unlike the Hommocks Salt Marsh, the Hampshire Country Club CEA was not noted for its significant habitat.



Hampshire Country Club - PRD

Village of Mamaroneck, NY

Hommocks Conservation Area

Source: Town of Mamaroneck



The existing golf course has three separate drainage systems that interconnect the streams and ponds on the Project Site, either through surface connections or via subsurface pipe conveyances. The drainage system located on the northeast portion of the Project Site is directly connected to the tidal wetlands located within the Hommocks Conservation Area (see Exhibit 3L-2, Drainage Systems and Wetlands). This connection is provided via underground piping feeding from the long surface pond within the Town of Mamaroneck portion of the Project Site, under Hommocks Road, ultimately discharging into the tidal wetlands. This drainage system collects from both the golf course and the adjacent multi-family development, the Fairway Green Townhouses. This sensitive connection, as stated in the LWRP, is one of the primary characteristics on which the CEA designation is based.

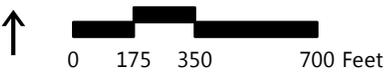
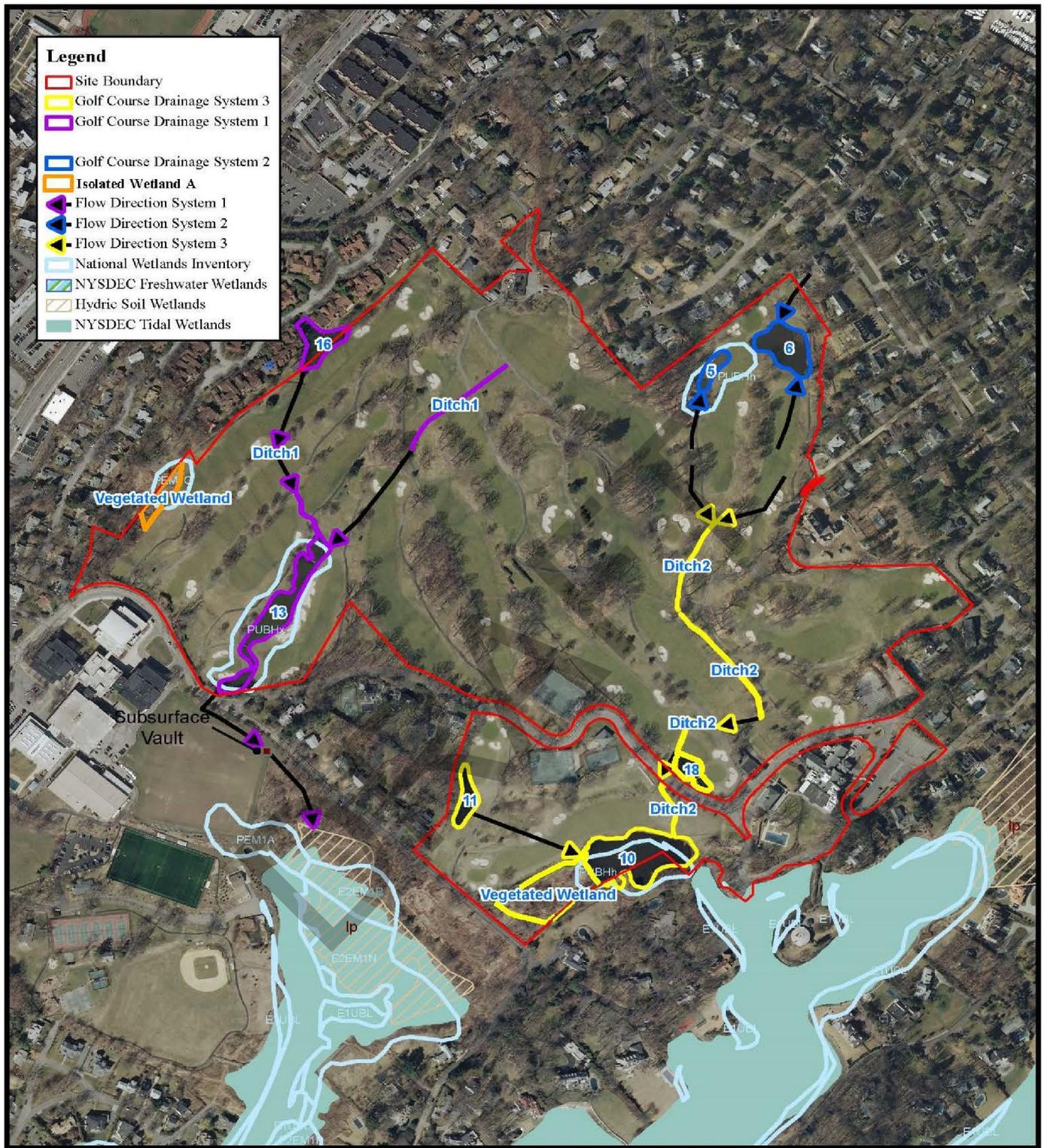
The 2014 draft LWRP highlights other unique environmental conditions of the Project Site, citing specific physical features which qualify it as a CEA under NYSDEC regulations, including its ponds and wetland areas and its proximity to the Long Island Sound. The document also labels the Hampshire Country Club a "Conservation or Open Space Area" for its discharge into adjacent tidal wetlands, open space and recreation, and location within a 100-year floodplain. There are no tidal wetlands on the Project Site.

There are seven ponds, most of them man-made and three associated man-made stream systems located on the Project Site which function simultaneously as part of the drainage system and as water hazards for the golf course. These water features play an important role in the existing ecosystem of the Project Site and its surroundings, with direct connections to the tidal wetlands associated with Delancey Cove. Chapter 3E, "Surface Water Courses and Wetlands," provides a more detailed description of this connectivity and how the Proposed Action would maintain their existing condition. In summary, as a result of the proposed stormwater management system, onsite stormwater discharges to the ponds and stream systems would decrease, with a corresponding reduction in discharges of pollutants, organic material and mineral sediments. Based on the foregoing, an overall improvement in water quality is expected for the wetlands at the Project Site.

The Project Site's proximity to the Long Island Sound is an important and unique characteristic. The proximity allows for a coveted waterfront view, adding to the scenic quality of the Project Site. The 2014 draft LWRP highlights the aesthetic value the Village places on its waterfront with its policy to "Enhance visual quality and protect scenic resources throughout the Long Island Sound."¹ The location within the 100-year floodplain is also a contributing factor. Any development on the Project Site must avoid increasing the affects or risks for flooding.

Finally, the Village reiterated in its Comprehensive Plan that Project Site was designated as a CEA due to its location in the floodplain and proximity to the Long Island Sound, as well as the ponds and wetland systems on the Project Site. The Comprehensive Plan suggests the Village should consider utilizing "more sensitive zoning techniques" at the Project Site to protect these features. This includes an open space or cluster development would allow the development to preserve between 33% and 50% of the

¹ 2014 Draft Local Waterfront Revitalization Program, Village of Mamaroneck, Page III-3.



Hampshire Country Club - PRD

Village of Mamaroneck, NY

Drainage Systems and Wetlands

Source: Wetland Characterization Assessment - Figure 5, prepared by Nelson, Pope and Voorhis, LLC (September 17, 2012), as revised by VHB based on current conditions as observed on May 17-18, 2016



property as open space.² With the 9-hole golf course and remaining open space, the proposed action preserves 68% of the Project Site.

In summary, the unique environmental characteristics that qualify the Project Site for CEA designation, according to the predominant planning documents set forth by the Village of Mamaroneck, include the following:

- Drainage patterns into the Hommocks Marsh
- Presence of various surface water features and tidal and freshwater wetlands
- Proximity to the Long Island Sound
- Location within the 100-year floodplain
- Open Space and Recreation

2. Future without the Proposed Project

In a future without the proposed project, the environmental characteristics and unique features of the Project Site would remain as previously described. See the No Action Alternative described in Chapter 4 for more detailed information.

The Applicant does not anticipate any land use changes at the Project Site in the event that the Proposed Action is not pursued. As discussed in Chapter 3A, current economic factors at the Project Site driving the need for the proposed development will continue. These factors include a downward trend in golfing over the past decade consistent with regional and national trends on both public and private courses. This data establishes that it would be difficult for the membership club at Hampshire Country Club to remain viable without the introduction of other revenue sources. The Applicant has determined that downsizing the golfing recreational use and improving the rest of the Project Site with a residential development is the best permissible option under existing zoning to counteract these economic trends.

The future of the Project Site without the Proposed Action will result in the golf course and membership club not being a sustainable business in the long run. Operations of the club, and the continual maintenance of the open and recreational space at the Project Site, will cease. In addition, maintenance of the ponds and other stormwater management features on the Project Site would cease. Without a custodian to manage these features of the Project Site, the quality of the critical environmental area would diminish significantly.

3. Potential Impacts

The Proposed Action would not impair any of the features associated with the Project Site's designation as a CEA. The project was designed to preserve the characteristics and values that contribute to the

² Comprehensive Plan, Village of Mamaroneck. February 2012. Page 63-64.



Hampshire Country Club and Hommocks Conservation Area's designation as a Critical Environmental Area. It would ensure that a custodian remains at the Project Site to ensure that these features are protected and maintained. The following is an assessment of each of the characteristics listed above and the potential impacts the Proposed Action would have.

Drainage Patterns into the Hommocks Marsh and Delancey Cove

The Stormwater management plan for the Proposed Action will meet all New York State stormwater management requirements to ensure proper drainage is maintained, and that the adjacent sensitive environmental areas are protected. The proposed drainage system for the Project Site consists of drainage pipes, bioretention basins, and stormwater ponds. The addition of bioretention basins and stormwater ponds will treat water runoff to provide water quality control, which will improve the water quality of the stormwater being discharged into the Hommocks Marsh. Runoff from the Project Site will be collected via the proposed drainage system along the proposed roads. This runoff will then be discharged to the proposed bioretention basins and water quality ponds for water quality treatment. In addition, the project is designed to avoid the existing sensitive surface water features that are critical to the drainage systems on the Project Site. No development is proposed within a 100-foot buffer from any pond or wetland to avoid negative impacts to adjacent properties, including the Hommocks Marsh and tidal wetlands along the edge of Delancey Cove. The Homeowners Association (HOA) of the proposed development will be responsible for the maintenance of the bioretention basins and stormwater ponds. For more detail on the proposed Stormwater Management System, see Chapter 3F, Stormwater Management.

Location within the 100-year floodplain

The density of the Proposed Action limits development disturbance to areas that could be elevated above the floodplain, allowing the natural topography to act as a barrier to flooding on the Project Site. The flood analysis, as detailed in Chapter 3G, demonstrates that there would be no impacts to the neighboring properties and the base flood elevations would remain as they exist today for those properties. In addition, all new building structures will meet the New York State Building Code for minimum height above the base flood elevation and ensure proper design for the location. For more detail, see Chapter 3G, Floodplains.

Presence of surface water features and tidal and freshwater wetlands

The Project Site's combined 72.8 acres of shared open space (*i.e.*, the 36 acres of open space and 36.8 acres of golf/recreational space within the Village of Mamaroneck) is positioned to provide a significant buffer to the existing ponds and wetlands on-site, ensuring that the residential development has no negative impact on these sensitive environmental features. These deliberate open space buffers also function to protect the environmental conditions for any species on the Project Site (Chapter 3K, Vegetation and Wildlife).



Proximity to the Long Island Sound

The Project Site's proximity to the Long Island Sound elevates the aesthetic quality of the Hampshire Country Club, adding to its unique physical character. However, given the layout and topography of the Project Site, the most significant views can be accessed from the MR zoning district, particularly from the clubhouse, patio, and pool area, where no changes of use are proposed. For a more detailed discussion of the visual impacts of the Proposed Action, see Chapter 3B, Community Impacts and Visual Character.

Open Space and Recreation

As mentioned above, both the Village of Mamaroneck Comprehensive Plan and the 2014 Draft LWRP name the Hampshire Country Club as a "Conservation and Open Space Area." By reducing the golf course to 9-holes, the project would result in the reduction of some private recreational use on-site which is currently open to Hampshire Country Club members only. In place of certain portions of the private recreational use, the Proposed Action would include 36 acres of shared open space to serve current neighbors and future residents of the Planned Residential Development. These open spaces would provide passive recreational opportunities in addition to vegetative buffers separating the proposed development from the existing surrounding neighborhoods.

In addition to the unique characteristics listed above, the Project Site's CEA designation increases the importance of the Proposed Action's consistency with the Village's LWRP policies, particularly those involving fish and wildlife, wetlands, and flood protection. It is the Applicant's belief that the Proposed Action is consistent with these policies. Please see Appendix C, which includes a listing of all policies in the 2014 LWRP update and an explanation of how the Proposed Action is consistent.

4. Mitigation

The project has been carefully designed to respect and protect the environmental features that make it unique and which contribute to its CEA designation. On-site ponds and wetlands, which function both as an important flood mitigation device and contribute to the Project Site's drainage system, are well protected under the Proposed Action. The proposed drainage system for the Project Site will include bioretention basins, and stormwater ponds. The bioretention basins and stormwater ponds will treat water runoff to provide water quality control, which will improve the water quality of the stormwater being discharged into the Hommocks Marsh. In addition, runoff from the Project Site will be collected via the proposed drainage system along the proposed roads. This runoff will then be discharged to the proposed bioretention basins and water quality ponds for water quality treatment.

The 36 acres of protected open space in addition to the 36.8 acres of the golf course to be maintained along the perimeter of the Project Site are positioned to act as a barrier to these sensitive features and isolate the disturbance from the proposed development. In addition, the protected acreage will help maintain the open space character that currently defines the property and is so valued in the



neighborhood. The Applicant believes that the downsized golf course supplemented by the private golf club alternatives in adjacent municipalities will accommodate any resident that may be adversely affected by the loss of some of the private recreational use of the Project Site. Given the careful design of the project, no further mitigation measures are required.

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M. TRAFFIC, TRANSIT, AND PEDESTRIANS

1. Existing Conditions

a) Inventory of Existing Road Conditions

Evaluation of the traffic impacts associated with the Proposed Action requires a thorough understanding of the existing roadway system in the vicinity of the Project Site. The existing conditions observed in the study area include an inventory of roadway, sidewalk and intersection geometry, traffic control devices, and traffic signal timings. This information is provided below.

Roadways

Boston Post Road (US Route 1)

Boston Post Road, designated as US Route 1, is a north-south urban principal arterial under the jurisdiction of the New York State Department of Transportation (NYSDOT). It runs west of the Project Site and provides two travel lanes in each direction with additional turn lanes at key intersections. The roadway is relatively straight and level with horizontal radii of generally 1,100 feet or greater and vertical grades of two percent or less.

Within the study area, travel lanes measure 10 to 11 feet wide and concrete curbs and sidewalks are provided along each side of the roadway. The sidewalk varies in width from 5 feet to 15 feet. The pavement is in generally fair to good condition with some surface distress. Parking is permitted, with some restrictions, along the east (northbound) side of Boston Post Road from a point just north of the intersection with Old Boston Post Road/Richbell Road to Rockland Avenue. Along the southbound side of the road, parking is permitted between Orienta Avenue and the northern driveway to Mamaroneck High School.

A 2016 Automatic Traffic Recorder (ATR) count on Boston Post Road near Mamaroneck High School indicates a daily traffic volume of 19,320 on weekdays and 18,549 on Saturdays. The posted speed limit on this section of roadway is 30 miles per hour (mph).

Hommocks Road

Hommocks Road is a local road which runs east from Boston Post Road and serves the Hommocks Middle School and the residences further to the east. The western portion of the road is in the Town of Mamaroneck and is posted with the 30 mph Town speed limit. The eastern portion of the road is in the Village of Mamaroneck. Hommocks Road provides one travel lane measuring 11 to 12 feet wide in each direction. The roadway is generally level with grades of one percent or less.



Hommocks Road has an “S” curve near the Middle School; otherwise, the roadway is generally straight within the study area.

A sidewalk is provided along the south side of the road from Boston Post Road to and extending along the frontage of the Middle School with sidewalk widths ranging from 5 feet to 10 feet. On the north side of the roadway, a sidewalk is provided between Boston Post Road and the Middle School main driveway with widths varying from 5 feet near the Middle School to 20 feet adjacent to Walgreens. Except for an area along the south side of the road in front of the Middle School, which permits one-hour parking on weekdays, there is no on-street parking. The roadway’s asphalt pavement is in fair condition.

An Automatic Traffic Recorder count indicated that the average weekday traffic volume on Hommocks Road, just north of Eagle Knolls Road, is 708 vehicles.

Weaver Street (NYS Route 125)

Weaver Street, designated as NYS Route 125, is a State principal arterial roadway that connects White Plains in the north to Boston Post Road in Mamaroneck to the south. Within the study area, Weaver Street provides two 12-foot travel lanes and has a posted speed limit of 30 mph. There are areas of the roadway with horizontal curves, with the sharpest curve in the study area located near Howell Avenue and having a radius of 425 feet. As it approaches Boston Post Road, Weaver Street has a two percent downhill grade.

Sidewalks ranging in width from 4 feet to 8 feet are provided on both sides of the road in the vicinity of its intersection with Boston Post Road. Parking is prohibited on both sides of the roadway and the pavement is in generally good condition.

The NYSDOT count on Weaver Street shows a 2015 AADT estimate of 8,755 vehicles.

Eagle Knolls Road

Eagle Knolls Road is a local roadway between its terminus at Hommocks Road and extending to the east to the Proposed Action’s property line. Within the Project Site, Eagle Knolls Road is a private roadway. The western portion of the roadway is in the Town of Mamaroneck and the eastern portion is in the Village of Mamaroneck. Eagle Knolls Road provides one 10 to 11-foot travel lane in each direction. The pavement in the public portion of the roadway is in fair condition; while the pavement within the private section is in poor condition.

Sidewalks are not provided along Eagle Knolls Road and parking is not permitted on the private portion of the road.



East Cove Road

East Cove Road is designated as a private road and connects Orienta Avenue to private residences and the Hampshire Country Club. It provides one 10-foot travel lane per direction with varying pavement conditions. Between its intersection with Orienta Avenue and the entrance to the Hampshire Country Club property, the pavement is in generally fair to good condition. Within the Country Club property, the pavement is in fair to poor condition. Sidewalks are not provided and parking is not permitted on the portion of the roadway within the Hampshire Country Club property.

The roadway has generally level terrain with grades of two percent or less. The horizontal curvature of East Cove Road is generally straight with some curves; the sharpest curve is located approximately 300 feet to the west of Orienta Avenue and has a radius of 75 feet.

Orienta Avenue

Orienta Avenue is a collector roadway that extends from Boston Post Road to Flagler Drive and is under the jurisdiction of the Village of Mamaroneck. A 15-foot wide service road is provided to the east of Orienta Avenue, in the area between Bleeker Avenue and Protano Lane. The service road is also designated as a bike path for use by pedestrians and bicyclists. Orienta Avenue provides two 10-foot travel lanes in each direction and has a posted speed limit of 25 mph. Sidewalks are provided in the section between Boston Post Road and Rushmore Avenue, between Old Boston Post Road and the service road and between the service road and Bleeker Avenue. Parking is prohibited on both sides of the roadway and the pavement is in generally fair to good condition.

A 2016 Automatic Traffic Recorder (ATR) count on Orienta Avenue to the north of Rushmore Avenue indicates a daily traffic volume of 6,818 on weekdays and 5,682 on Saturdays. Further to the east of this location, a NYSDOT ATR count on Orienta Avenue near Fairway Lane estimates an average daily traffic volume of 3,052 vehicles.

Delancey Avenue

Delancey Avenue is a two-lane, 30-foot wide local roadway extending from Boston Post Road through a residential area to its terminus near the Metro-North Railroad tracks. The pavement is generally in good condition. Within the study area, parking is permitted along the north side of Delancey Avenue. Sidewalks, measuring 4 feet wide, are provided on both sides of the road between Boston Post Road and Palmer Avenue; sidewalks are not provided to the west of Palmer Avenue. Truck traffic is not permitted along Delancey Avenue.

Delancey Avenue has a 7 percent decrease in elevation traveling from Munro Avenue to Boston Post Road. Elsewhere the roadway is fairly level. The horizontal alignment of the roadway is relatively straight.



Cooper Avenue

Cooper Avenue is a two-lane local road extending a short distance through a residential area from Old Boston Post Road to its terminus at the driveway to the Hampshire Country Club's maintenance facility. The roadway width varies from 16 feet to 18 feet and parking is permitted on the east side of the road. Traveling from Old Boston Post Road, the elevation decreases approximately 5 percent. The horizontal roadway alignment is generally straight. Although there is no posted speed limit, the Village speed limit of 30 mph would be in effect.

Fairway Lane

Fairway Lane is a two-lane local road extending from Orienta Avenue through a small residential area to its terminus in a cul-de-sac. The roadway width varies from 15 feet to 18 feet and parking is permitted on both sides of the road. Traveling from Orienta Avenue to the cul-de-sac, the vertical elevation decreases approximately 3 percent. The roadway has a straight horizontal alignment. There are no sidewalks along Fairway Lane. Although there is no posted speed limit, the Village speed limit of 30 mph would be in effect.

Old Boston Post Road

Old Boston Post Road is a one-lane, local road that provides one-way travel in the southbound direction from Orienta Avenue in the north to its terminus at Boston Post Road (US Route 1), opposite Richbell Road to the south. The roadway width varies from 20 feet to 33 feet and parking is permitted on the west side of the road in some areas. Old Boston Post Road has a posted speed limit of 25 mph and the pavement is in generally good condition. A sidewalk is provided on the west side of the road across the frontage of the Orienta Gardens apartment complex. A 6-foot striped pedestrian walkway is provided on the eastern edge of the road starting at the Old Boston Post Road Cut-off near Orienta Avenue and continuing to the McDonald's exit driveway, near Boston Post Road.

Old Boston Post Road has a 2.6 percent increase in elevation traveling from Orienta Avenue to Old Post Lane. Between Old Post Lane and Boston Post Road, the elevation decreases by 1.5 percent. The horizontal curvature of Old Boston Post Road is generally straight with some curves; the sharpest curves are located near Fairway Green and near the roadway terminus at Boston Post Road.

Study Intersections

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



1) Boston Post Road (US Route 1) and Hommocks Road/Weaver Street

Boston Post Road provides two through lanes and an exclusive left turn lane in each direction at this signalized, four-way intersection. The eastbound Weaver Street and westbound Hommocks Road approaches each provide an exclusive left turn lane, a shared through/right turn lane and one receiving lane. Crosswalks and pedestrian displays are provided on each leg and the intersection is controlled by a multi-phase traffic signal, which includes a protected phase for the left turn movements on Boston Post Road and a separate, actuated pedestrian-only phase.

2) Hommocks Road and Eagle Knolls Road

The unsignalized intersection of Hommocks Road and Eagle Knolls Road is a three-legged T-intersection. One lane per direction is provided on each roadway. The intersection is controlled by stop signs on each approach.

3) Orienta Avenue and East Cove Road

The unsignalized intersection of Orienta Avenue with East Cove Road is a three-legged T-intersection. Each roadway provides one approach lane and one receiving lane. Stop signs are provided on each approach to control traffic.

4) Boston Post Road (US Route 1) and Orienta Avenue/Delancey Avenue

Boston Post Road provides two through lanes in each direction at this signalized, four-way intersection. Delancey Avenue and Orienta Avenue are offset from each other by 130 feet. Delancey Avenue forms the eastbound approach and provides a left turn lane and a right turn lane and one receiving lane. At Delancey Avenue, pedestrian crosswalks are provided on the north and west legs of the intersection. The westbound Orienta Avenue approach consists of exclusive left turn and right turn lanes and one receiving lane. At Orienta Avenue, pedestrian crosswalks are provided on the south and east legs of the intersection. The intersection is controlled by a four-phase traffic signal.

5) Old Boston Post Road and Cooper Avenue

The unsignalized intersection of Old Boston Post Road and Cooper Avenue is a three-legged T-intersection. Old Boston Post Road is a one-way roadway in the southbound direction with one travel lane. Cooper Avenue provides one left-turn lane. The intersection is controlled by a stop sign on the Cooper Avenue approach. A sidewalk is provided on the west side of Old Boston Post Road along the frontage of the Orienta Gardens apartment complex. Along the east side of the Old Boston Post Road, there is a striped pedestrian lane. Crosswalks are not provided at this intersection.



6) Boston Post Road (US Route 1) and Old Boston Post Road/Richbell Road

Boston Post Road provides two through lanes in each direction and an exclusive left turn lane in the northbound direction at this signalized, four-way intersection. Old Boston Post Road is a one-way westbound roadway with an exclusive left-turn lane and a shared through/right-turn lane. The eastbound Richbell Road approach has one left-turn lane and one right-turn lane. Pedestrian displays and crosswalks are provided on each leg. The intersection is controlled by a multi-phase traffic signal, which includes a protected phase for the northbound left turn movement on Boston Post Road and a separate, actuated pedestrian-only phase.

7) Fairway Lane and Orienta Avenue

The unsignalized intersection of Orienta Avenue with Fairway Lane is a three-legged T-intersection. Each roadway provides one approach lane and one receiving lane. A Stop sign is provided on the Fairway Lane approach. There are no sidewalks or pedestrian crosswalks at this intersection.

b) Existing Traffic Volumes

Vehicular Traffic Volumes

To assess existing traffic conditions in the vicinity of the Proposed Action, peak period manual turning movement traffic volume counts were recorded at the seven study intersections in March 2016. The intersection counts included tallies of automobiles, trucks, buses, pedestrians and bicyclists. Automatic Traffic Recorder (ATR) 24-hour counts were also conducted for a one-week period in March 2016 on Boston Post Road, Hommocks Road and Orienta Avenue. The ATR counts collected traffic volumes and vehicle classifications (automobiles, trucks and buses). The manual and ATR count locations are shown on Exhibit 3M-2.

In consultation with Village planning staff, the manual counts were recorded during a typical weekday AM peak period (7:00 to 9:15 AM) and a typical weekday PM peak period (2:00 to 6:15 PM) which encompassed the peak arrival and departure periods at the Hommocks Middle School. Manual counts were also conducted in March 2016 during a typical Saturday midday peak period (11:00 AM to 1:00 PM). All counts were conducted during periods with scheduled activities at the Hommocks Park Ice Rink (house league hockey games, group skating lessons or public skating sessions) and Hommocks Pool (early morning swim, open swim, swim lessons or lifeguarding).

The traffic counts were tabulated and peak hour factors (PHF) were calculated and then applied to the volumes to identify the hour within the weekday and Saturday count periods which had the greatest peak-hour-factored volumes. The hour with the highest factored volumes was chosen for



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Hampshire Country Club - PRD

Village of Mamaroneck, NY

- 1 Intersection Manual Count Location
- ATR Count Location

Count Locations



analysis. The peak hours are identified as 7:30 to 8:30 AM, 3:45 to 4:45 PM and 11:45 AM to 12:45 PM for the weekday AM, PM and Saturday midday periods, respectively. The existing peak hour volumes were compared to the ATR counts to verify their validity and were balanced and increased as needed to provide a conservative approach. The Existing peak hour traffic volumes are shown on Exhibits 3M-3 and 3M-4.

A review of the exhibits indicates that overall, the AM, PM and Saturday peak hour volumes are similar. The Saturday peak hour volumes are slightly higher (from 0.4 to 0.9 percent higher) than the AM and PM peak hour volumes.

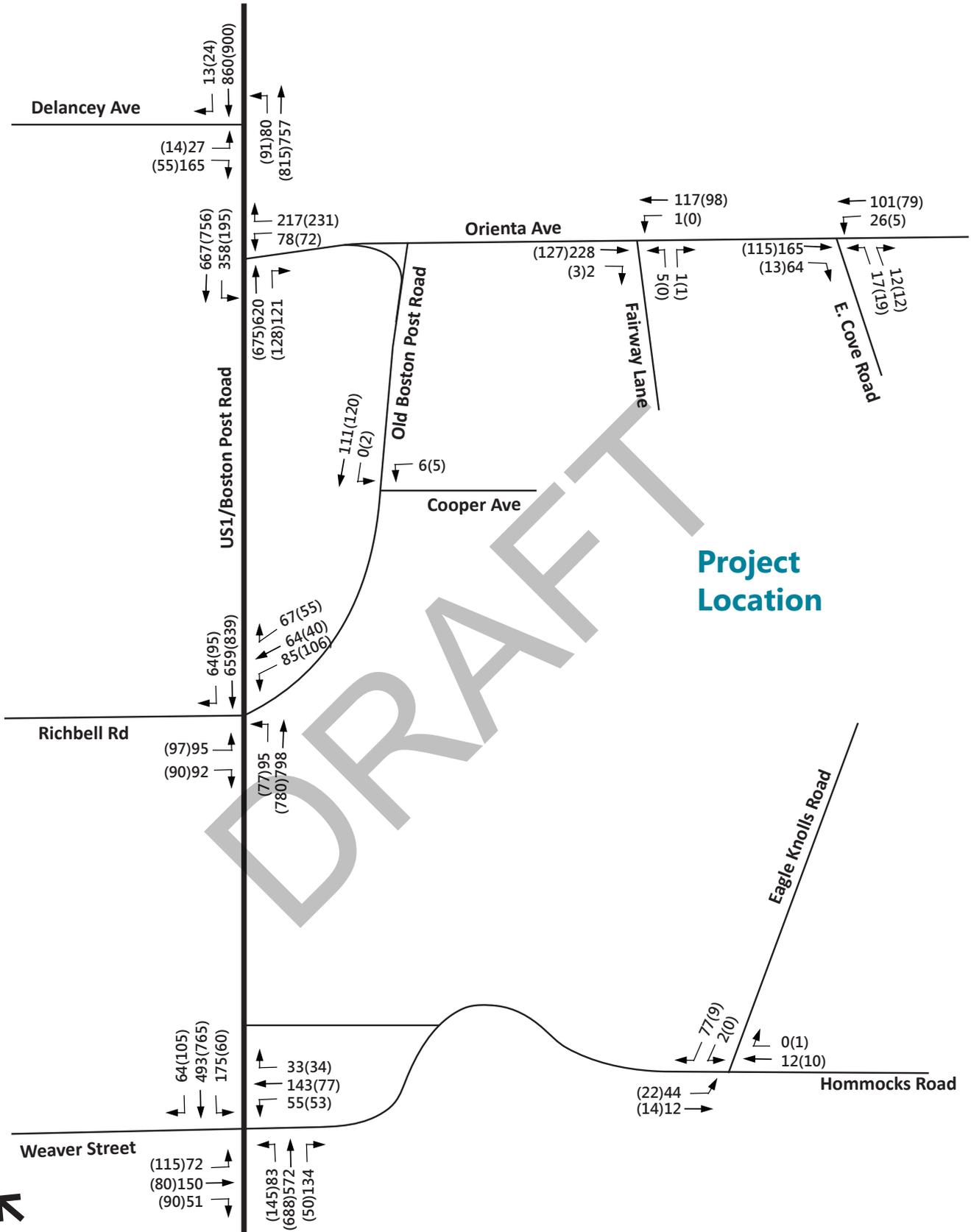
Pedestrian and Bicyclist Activity

The intersection counts included tallies of pedestrians and bicyclists, which are summarized in Table 3M-1, below.

Table 3M-1 Summary of Pedestrian and Bicyclist Peak Hour Counts

Intersection	AM Peds/Bikes	PM Peds/Bikes	Sat Peds/Bikes
Boston Post Road (US Route 1) and Hommocks Road/Weaver Street	245/6	64/4	74/9
Hommocks Road and Eagle Knolls Road	11/10	4/6	16/0
Orienta Avenue and East Cove Road	2/4	1/6	13/1
Boston Post Road (US Route 1) and Orienta Avenue/Delancey Avenue	24/6	31/0	43/11
Old Boston Post Road and Cooper Avenue	16/0	5/0	19/0
Boston Post Road (US Route 1) and Old Boston Post Road/Richbell Road	106/5	80/0	51/12
Fairway Lane and Orienta Avenue	2/6	2/2	2/2

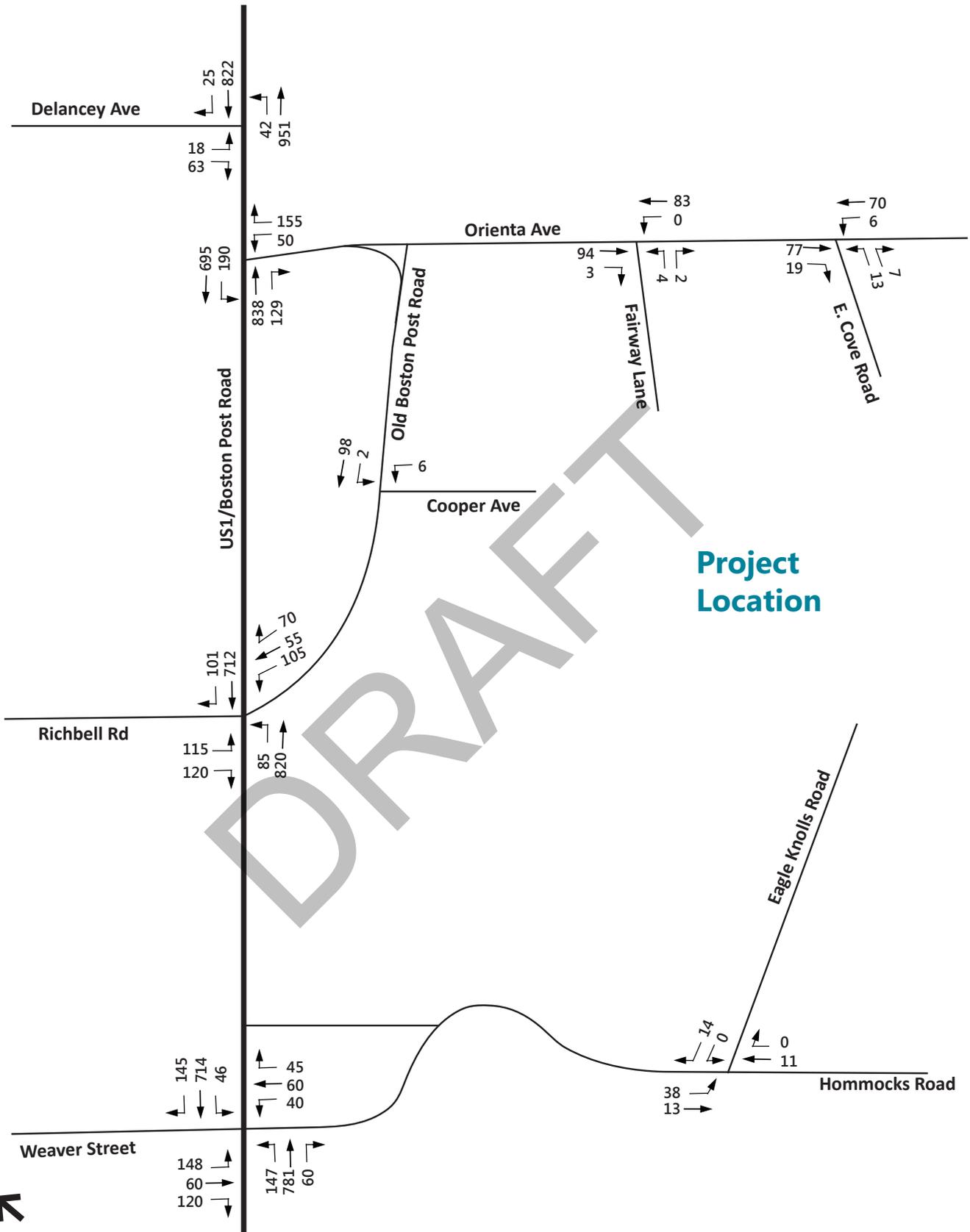
As indicated in the table, pedestrian activity was at its greatest during the AM peak hour, with the highest concentration of pedestrians at the intersection of Boston Post Road and Hommocks Road/Weaver Street. At this intersection, a total of 245 pedestrians were counted during the AM peak hour, the majority of which were students walking to Hommocks Middle School. A total of 64 pedestrians were counted at this intersection during the PM peak hour and 74 pedestrians were observed during the Saturday peak hour. At the Boston Post Road intersection with Old Boston Post Road and Richbell Road, a total of 106 pedestrians were counted during the AM peak hour, 80 during the PM peak hour and 51 during the Saturday peak hour. All other study intersections had fewer pedestrians with the least amount observed at the Orienta Avenue intersections with East Cove Road and Fairway Lane. Only a handful of bicyclists (12 or fewer) were observed at any study location, with the highest number (11 and 12) occurring during the Saturday peak hour at the



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Hampshire Country Club - PRD | Village of Mamaroneck, NY

Existing Weekday Peak Hour Traffic Volumes



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intersections of Boston Post Road with Old Boston Post Road/Richbell Road and Orienta Avenue/Delancey Avenue.

Existing Pedestrian Crossings

Sidewalks are provided connecting all of the businesses on Boston Post Road between Hommocks Road/Weaver Street and Orienta Avenue/Delancey Avenue. Signalized crossings of Boston Post Road are provided at Hommocks Road/Weaver Street, Richbell Road/Old Boston Post Road, the High School driveway and Orienta Avenue/Delancey Avenue. All of the intersections were observed to be properly marked to accommodate pedestrians and appeared to be functioning safely. Crossing guards were provided at the intersections of Boston Post Road with Hommocks Road/Weaver Street and with Richbell Road/Old Boston Post Road.

Sidewalks are provided on both sides of Hommocks Road from Boston Post Road to the driveway to the school's main parking lot where there are unsignalized crosswalks. These crosswalks are staffed by a crossing guard during morning and afternoon school dismissal periods. East of the parking lot driveway, a sidewalk continues on the school side of Hommocks Road all the way to the school's rear driveway, allowing students complete access to the campus from Boston Post Road without having to walk in the street.

Traffic Circulation Patterns on and Surrounding the Project Site

Primary access to the Project Site is currently provided from Eagle Knolls Road and East Cove Road; access to the golf course maintenance area is provided through Cooper Avenue. Vehicles from the south generally approach the Project Site via Hommocks Road and Eagle Knolls Road. Vehicles from the north generally approach the Project Site via Orienta Avenue and East Cove Road. Hommocks Road provides access to the Hommocks School and the residences on Eagle Knolls Road, Hommocks Road and Oak Lane. Orienta Avenue provides access to the residences and businesses to the north of the Project Site. Old Boston Post Road provides access to the residences to the west of the Project Site.

Within the Hampshire Country Club's property, Eagle Knolls Road and East Cove Road are private roads. A review of the existing traffic volumes shown on Exhibits 3M-3 and 3M-4 indicates that these roadways are used as a short cut by traffic between Orienta Avenue and Hommocks Road, most notably on weekday mornings when some residents to the east of the Project Site travel back and forth to the school.

c) Existing Traffic Conditions

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 conducted based on the evaluation criteria contained in the 2010 Highway 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, PM and Saturday peak hours for the Existing traffic conditions are summarized in Table 3M-2. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix J.



Table 3M-2 Existing Levels of Service

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour		Sat Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	E	58.0	D	48.4	D	45.4	
		TR	D	51.6	D	47.1	D	43.8	
	WB	L	D	54.1	D	46.9	D	43.0	
		TR	D	50.6	D	44.4	D	41.1	
	NB	L	D	39.7	D	53.1	D	47.5	
		TR	E	68.7	C	30.7	C	32.8	
	SB	L	E	75.5	C	25.8	C	27.1	
		TR	D	37.4	D	40.2	D	41.4	
	Intersection			E	55.4	D	38.8	D	38.9
	Hommocks Rd & Eagle Knolls Rd (unsignalized)	WB	LR	A	7.6	A	6.5	A	6.6
NB		TR	A	7.6	A	7.0	A	7.1	
SB		LT	A	8.3	A	7.3	A	7.5	
Orienta Ave & East Cove Rd (unsignalized)	EB	LR	A	8.2	A	7.6	A	7.4	
	NB	LT	A	8.9	A	7.7	A	7.5	
	SB	TR	A	9.8	A	8.1	A	7.5	
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	D	43.9	D	43.8	D	45.4	
		R	B	10.5	B	13.0	B	13.1	
	WB	L	D	44.5	D	42.1	D	40.1	
		R	A	9.0	A	8.6	A	8.5	
	NB	TR	D	41.6	D	36.6	D	40.0	
	SB	TR	C	22.8	C	23.0	C	20.9	
	Intersection			C	25.7	C	21.0	C	24.1
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	A	9.6	A	9.3	A	9.3	
	SB	LT	A	0.0	A	0.1	A	0.1	
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	D	48.1	D	43.9	D	40.8	
		R	D	41.0	D	39.8	A	9.6	
	WB	L	D	39.7	D	39.8	D	35.7	
		TR	D	42.7	D	39.3	C	26.2	
	NB	L	B	18.8	B	13.8	B	14.6	
		T	B	18.8	B	13.2	B	14.8	
	SB	TR	C	28.6	C	24.0	C	24.7	
	Intersection			C	27.1	C	22.7	C	21.2
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	B	10.9	A	9.0	A	9.3	
	NB	LT	A	0.1	A	0.0	A	0.0	
	SB	TR	A	0.0	A	0.0	A	0.0	



As indicated in Table 3M-2, under existing conditions, the signalized intersection of Boston Post Road and Hommocks Road/Weaver Street currently operates at an overall level of service (LOS) "E" during the AM peak hour. LOS "E" is also experienced on individual movements (eastbound and southbound left turn movements and northbound through movement) during the AM peak hour. The intersection operates at acceptable LOS "D" during the PM and Saturday hours, with all individual movements operating at LOS "D" or better. The two other signalized study intersections operate at an overall LOS "C" during the peak hours.

At the unsignalized intersections, the minor street turning movements operate at LOS "B" or better during each peak hour.

The Synchro analyses also provide a calculation of the average (50th percentile) and maximum (95th percentile) queues expected on individual lane groups. The queues for the existing traffic conditions are summarized in Table 3M-3.

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Table 3M-3 Summary of Existing Queues

Intersection	Approach	Lane Group	Available Storage Length	Existing					
				AM Peak Hour		PM Peak Hour		Sat Peak Hour	
				50th	95th	50th	95th	50th	95th
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	145'	73'	112'	103'	178'	118'	198'
		TR	-						
	WB	L	150'	54'	87'	45'	93'	30'	66'
		TR	-						
	NB	L	180'	49'	69'	75'	115'	70'	111'
		TR	-						
SB	L	140'	135'	176'	30'	54'	21'	42'	
	TR	-							
Hommocks Rd & Eagle Knolls Rd (unsignalized) ⁽¹⁾	WB	LR							
	NB	TR							
	SB	LT							
Orienta Ave & East Cove Rd (unsignalized) ⁽¹⁾	EB	LR							
	NB	LT							
	SB	TR							
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	-						
		R	70'	0'	61'	0'	37'	0'	40'
	WB	L	450'	58'	110'	49'	99'	33'	74'
		R	450'	0'	70'	0'	74'	0'	59'
	NB	TR	-						
		SB	TR	-					
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	200'+	0'	1'	0'	0'	0'	1'
	SB	LT	-						
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	-	67'	132'	36'	135'	38'	148'
		R	140'	62'	121'	33'	122'	0'	51'
	WB	L	100'	57'	113'	39'	139'	34'	131'
		TR	-						
	NB	L	175'	40'	78'	10'	61'	11'	68'
		T	-						
SB	TR	-							
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	450'+	0'	1'	0'	0'	0'	1'
	NB	LT	-						
	SB	TR	-						

Note: (1) Synchro does not provide queue length calculations for movements at all-way stop intersections. However, the low volume of traffic and Level-of-Service "A" conditions suggest average queues of 25 feet or less and 95th percentile queues of 50 feet or less.

The queues provided in Table 3M-3 were compared to the available storage lengths which indicated that the maximum (95th percentile) queue exceeded the provided storage at two intersections. During the AM peak hour at the Boston Post Road intersection with Hommocks Road and Weaver



Street, the southbound left turn queue is 176 feet where the available storage is 140 feet. The eastbound left-turn from Weaver Street exceeds the 145-foot available storage during the PM (178 feet) and Saturday (198 feet) peak hours. At the Boston Post Rd and Old Boston Post Road/Richbell Road intersection, the calculated maximum queue for the westbound left turn from Old Boston Post Road exceeds the available 100-foot left-turn storage during the AM (113'), PM (139') and Saturday (131') peak hours. The average (50th percentile) queues at all locations are less than the available storage. At the unsignalized intersections, the queue lengths measure less than the provided storage.

d) Accident Analysis

Historical accident data for the study intersections were obtained from the NYSDOT for the latest available three-year period from January 1, 2013 to December 31, 2015. The data was reviewed and tabulated according to location, crash severity (fatalities or injuries), crash type (rear-end, right-angle, etc.) and contributing factors. The accident data are summarized by roadway corridor and by study location in Tables 3M-4 and 3M-5, respectively. A detailed breakdown is provided in the Traffic Impact Study in Appendix J.

Table 3M-4 Accident Summary by Corridor

Corridor	2013	2014	2015	Total 2013 to 2015
Boston Post Road (US Route 1)	36	46	46	128
Oriente Avenue	4	1	3	8
Hommocks Road/Weaver St (NY Route 125)	0	1	1	2
Old Boston Post Road	1	0	2	3
Eagle Knolls Road	0	0	0	0
East Cove Road	0	0	0	0
Fairway Lane	0	0	0	0
Cooper Avenue	0	0	0	0
Total	41	48	52	141



Table 3M-5 Accident Summary by Study Location

Study Location	Total No. of Accidents	Accident Severity		No. of Accidents involving	
		Fatalities	Injuries	Pedestrians	Bicyclists
Boston Post Road (US Route 1) and Hommocks Road/Weaver Street	27	0	10	0	2
Hommocks Road and Eagle Knolls Road	1	0	1	0	0
Orienta Avenue and East Cove Road	3	0	1	0	0
Boston Post Road (US Route 1) and Orienta Avenue/Delancey Avenue	35	0	15	2	1
Old Boston Post Road and Cooper Avenue	0	0	0	0	0
Boston Post Road (US Route 1) and Old Boston Post Road/Richbell Road	40	0	21	6	2
Fairway Lane and Orienta Avenue	1	0	0	0	0
Total	107	0	48	8	5

As indicated in Table 3M-4, during the three-year period there was a total of 141 crashes with 128 crashes (91 percent) reported on Boston Post Road, 8 crashes on Orienta Avenue, 2 on Hommocks Road/Weaver Street and 3 on Old Boston Post Road. No accidents were reported on Eagle Knolls Road, East Cove Road, Fairway Lane or Cooper Avenue. Of the 141 crashes within the study area, 107 occurred at the study intersections, with the remaining 34 crashes occurring at other locations along the roadway corridors. As shown in Table 3M-5, the highest number of crashes in the 3-year period occurred at the Boston Post Road (US Route 1) and Old Boston Post Road/Richbell Road intersection with a total of 40 crashes. That intersection also had the most accidents involving pedestrians (6) and cyclists (2). A further tabulation of the accidents was conducted to show the manner of collision, as summarized in Table 3M-6.



Table 3M-6 Accident Summary – Manner of Collision

Study Location	Total No. of Accidents	Manner of Collision								
		Rear End	Right Angle	Left turn	Right Turn	Over-taking	Head-on	Ped	Bike	Other
Boston Post Road (US Route 1) and Hommocks Road/Weaver Street	27	8	5	3	1	4	-	-	2	4
Hommocks Road and Eagle Knolls Road	1	-	-	-	-	-	-	-	-	1
Orienta Avenue and East Cove Road	3	1	1	-	-	-	1	-	-	-
Boston Post Road (US Route 1) and Orienta Ave/Delancey Ave.	35	15	6	1	0	9	-	2	1	1
Old Boston Post Road and Cooper Avenue	0	-	-	-	-	-	-	-	-	-
Boston Post Road (US Route 1) and Old Boston Post Road/ Richbell Road	40	3	9	6	1	6	-	6	2	7
Fairway Lane and Orienta Avenue	1	-	1	-	-	-	-	-	-	-
Total	107	27	22	10	2	19	1	8	5	13

As shown in Table 3M-6, of the 107 crashes, the most predominant types were rear-end collisions with a total of 27 crashes (25 percent), followed by right-angle (22 crashes/21 percent) and overtaking (19 crashes/18 percent).

e) Public Transit

The Project Site is afforded convenient access to public transit, including rail and bus service. The MTA’s Metro-North Railroad’s New Haven line runs parallel with Boston Post Road and has two stations in proximity to the Project Site, the Mamaroneck and Larchmont rail stations. 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 91 Metro North trains each weekday on the New Haven line between New York City and the Mamaroneck and Larchmont stations (46 southbound trains, 45 northbound trains). On weekends, there are 75 trains on Saturdays (37 southbound; 38 northbound) and 63 trains on Sundays (31 southbound; 32 northbound).

Westchester County runs the Bee-Line Bus Service within the study area. Bus route #70, also known as the Bonnie Briar Commuter, is the only route that operates in the vicinity of the Proposed Action.

Route #70 provides weekday service that operates in a loop with the starting and ending points at the Larchmont train station. Route #70 travels along Boston Post Road between Weaver Street and Richbell Road and operates 4 buses during the morning peak commuter period and 7 buses during the PM peak period. At the Larchmont station, connections can be made to other Bee-Line buses (#61, #66, and #71).



Map indicating Bee-Line Bus routes within the study area

f) Village of Mamaroneck Comprehensive Plan

VHB reviewed the Village’s 2012 Comprehensive Plan and the goals listed for pedestrian, bicycle and transportation-related improvements that are relevant to the study area for the Proposed Action. The Traffic and Transportation chapter of the Comprehensive Plan generally focuses on the area near the Mamaroneck train station and commercial corridors such as Boston Post Road and Mamaroneck Avenue. The Plan does not include any specific transportation or parking goals for the Project site. The Comprehensive Plan recommends the creation of a Transportation and Pedestrian Improvement Plan that will address a number of issues including the connectivity of sidewalks within a half-mile radius of schools and the train station, the viability of adding designated bike lanes and/or shared bike/vehicle lanes along Village roadways, especially arterial roads that provide access to the train station. The Plan recommends that the Village work with the State and



County to improve Boston Post Road to accommodate bicycle and pedestrian traffic. The Comprehensive Plan includes general recommendations to consider traffic calming measures such as speed humps or neck downs; however, no specific recommendations are proposed within the study area for the Proposed Action.

g) Hommocks Middle School

The Hommocks Middle School campus also includes the Hommocks Park Ice Rink and Hommocks Pool. VHB observed vehicular, pedestrian and bicyclist circulation during the peak morning arrival period and during the peak afternoon dismissal period at the Hommocks Middle School. As school bus transportation is provided only for students who live more than 2 miles from the school, the majority of students walk, bike or are driven to school by a parent/guardian. The circulation paths during the peak morning period for walkers, bicyclists, vehicle and bus drop-offs are described below and shown on Exhibit 3M-5.

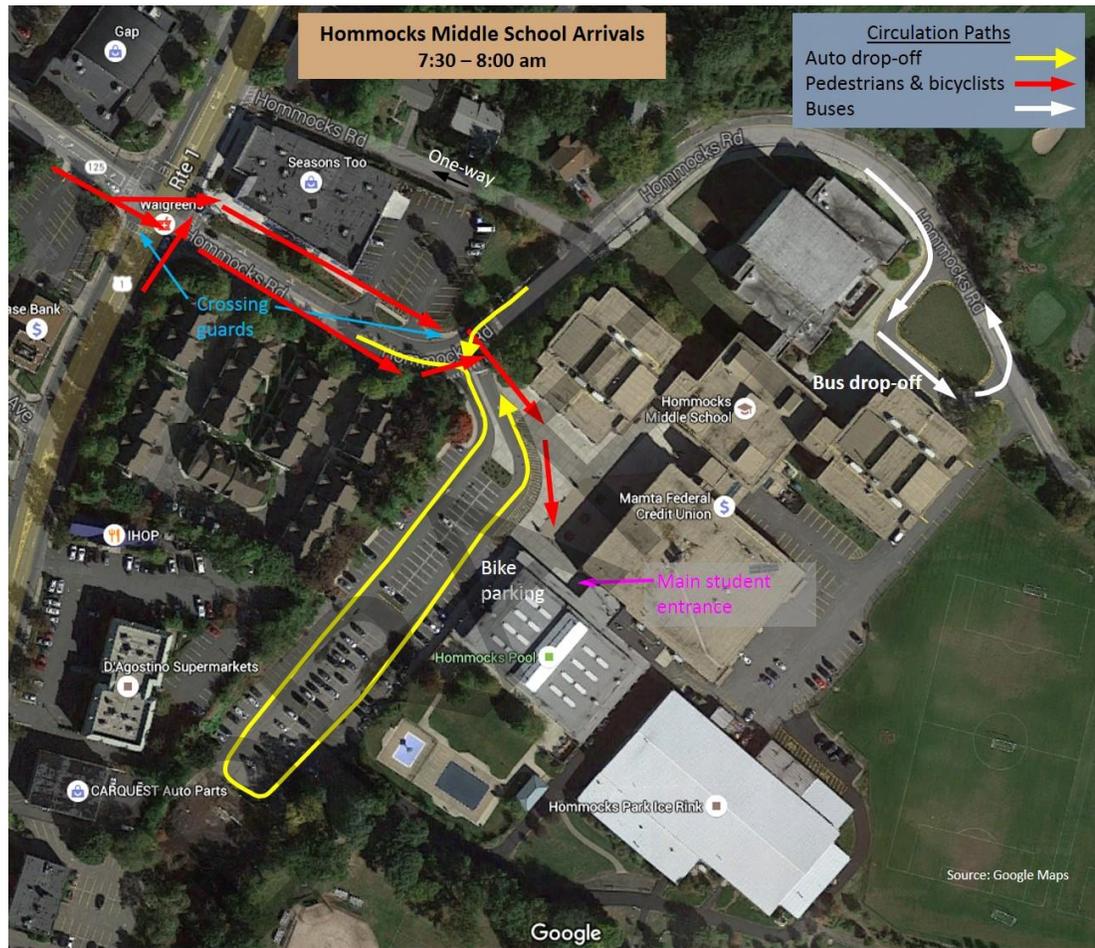
The first bell is at 8:00 AM with most students arriving between 7:30 and 7:55 AM. In the afternoon, dismissal is at 2:57 with most students departing between 3:00 and 3:20 PM. In the morning and afternoon, crossing guards are assigned to the Boston Post Road and Hommocks Road/Weaver Street intersection and at the Boston Post Road and Richbell Road/Old Boston Post Road intersection. At these two signalized intersections, crosswalks are provided on each approach leg and the traffic signals have an exclusive pedestrian phase during which all vehicular traffic is stopped. A crossing guard is also assigned on Hommocks Road in front of the School. Crosswalks are provided on the main school driveway and on Hommocks Road to the east of the school driveway. The majority of students walking or biking to/from the school from Boston Post Road use the sidewalk adjacent to Walgreen's and then cross Hommocks Road when directed by the crossing guard.

Motorists dropping off or picking up students enter the main school driveway and circulate around to the drop-off/pick-up area in front of the school entrance. Drivers then exit the driveway onto Hommocks Road when directed to by the crossing guard. School buses travel along Hommocks Road to the bus drop-off/pick-up area located on the northern part of the campus.

The Larchmont/Mamaroneck Safe Routes to School Committee (L/M SRTS) was established in 2008 to promote the health and fitness among students by providing safe walking and bicycling routes to area schools. Walking and biking to school is encouraged at all Mamaroneck schools and students and parents are provided tips on biking and pedestrian safety to increase awareness among drivers and pedestrians. At the Hommocks Middle School, per the L/M SRTS, it is quite busy during the arrival and dismissal periods with pedestrians, cyclists, buses and cars. Prior to the beginning of the school year in 2015, the School (with help from law enforcement) established a drop off lane and a "through" lane in the front parking lot to increase efficiency and improve safety.

More information on the Safe Routes to School initiatives is provided in the Traffic Impact Study in Appendix J.

Exhibit 3M-5 Hommocks Middle School Circulation Patterns



h) Emergency Vehicle Access

Primary access for emergency responders to the Hampshire Country Club site is provided from the south via Eagle Knolls Road and from the north via East Cove Road. Access to the property can also be provided from the west through Cooper Avenue, if needed.

i) Parking Facilities

The existing parking at the Hampshire Country Club is located in parking lots adjacent to the clubhouse. A total of 207 permanent parking spaces are provided. During events at the clubhouse, if needed, parking for an additional 50 vehicles is available along the roadways within the property, which is more than adequate to meet the typical event parking demand. Valet parking is used



during larger events. The existing parking supply and typical use of the parking areas is provided in Table 3M-7. The parking provided for the membership club meets the zoning requirements for the MR district.

Table 3M-7 Existing Parking Supply and Use

Number of Spaces Provided	Typical Non-Event Parking Demand	Typical Event Parking Demand
207 permanent 50 roadway	80	120

2. Future without the Proposed Project

a) No-Build Conditions

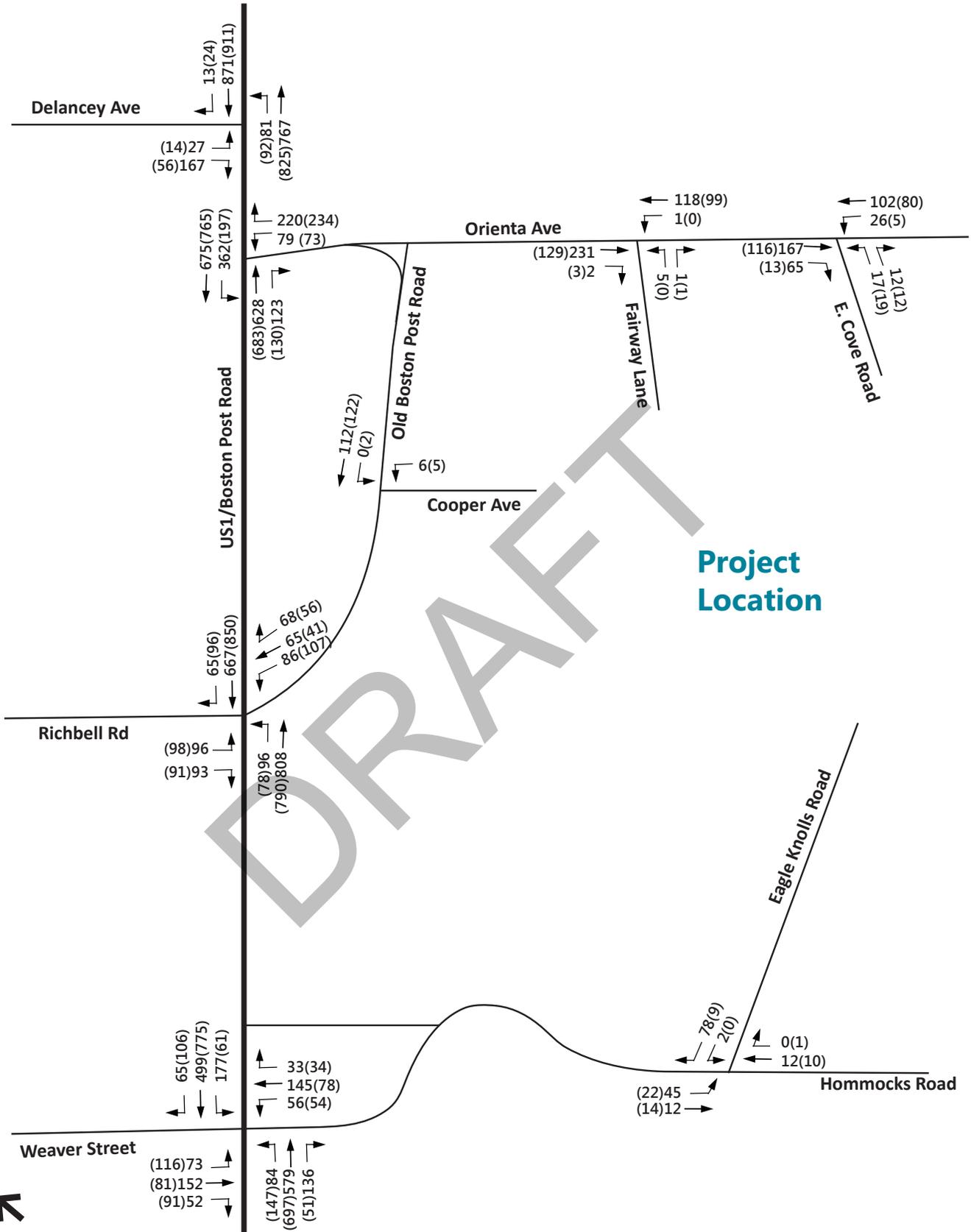
The No-Build condition represents the future traffic conditions that can be expected to occur, if the Proposed Action does not materialize. Traffic growth is typically a function of the expected land development, economic activity and changes in demographics in the region. To estimate the rate at which 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 has decreased by approximately 0.4% per year between 1996 and 2014, with more recent data (2011 to 2014) indicating a 0.8% per year decline. In consultation with the Village of Mamaroneck Planner, it has been determined that an increase of 0.25% per year would be appropriate and would provide for a conservative analysis. The existing traffic volumes for all three peak hours were increased by a total of 1.3 percent to represent the grown volumes. The Weekday and Saturday peak hour volumes are shown on Exhibits 3M-6 and 3M-7.

Planned Vicinity Developments

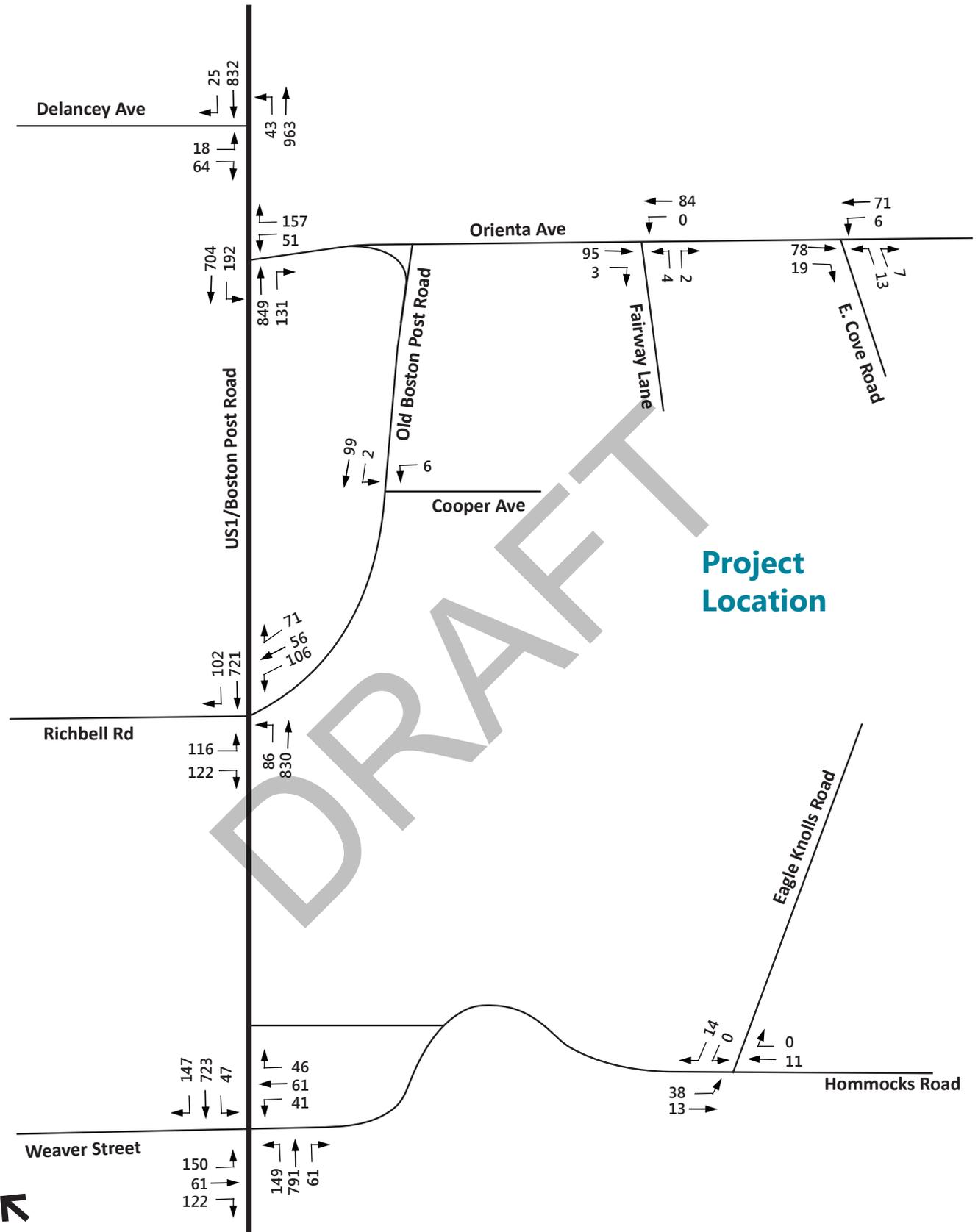
The Planning Boards of the Village and Town of Mamaroneck provided information on proposed vicinity developments in the area. A total of 7 residential developments were identified; 6 in the Village of Mamaroneck and 1 project in the Town of Mamaroneck, as noted in Table 3M-8.



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Hampshire Country Club - PRD | Village of Mamaroneck, NY

Grown Weekday Peak Hour Volumes



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Table 3M-8 Vicinity Developments

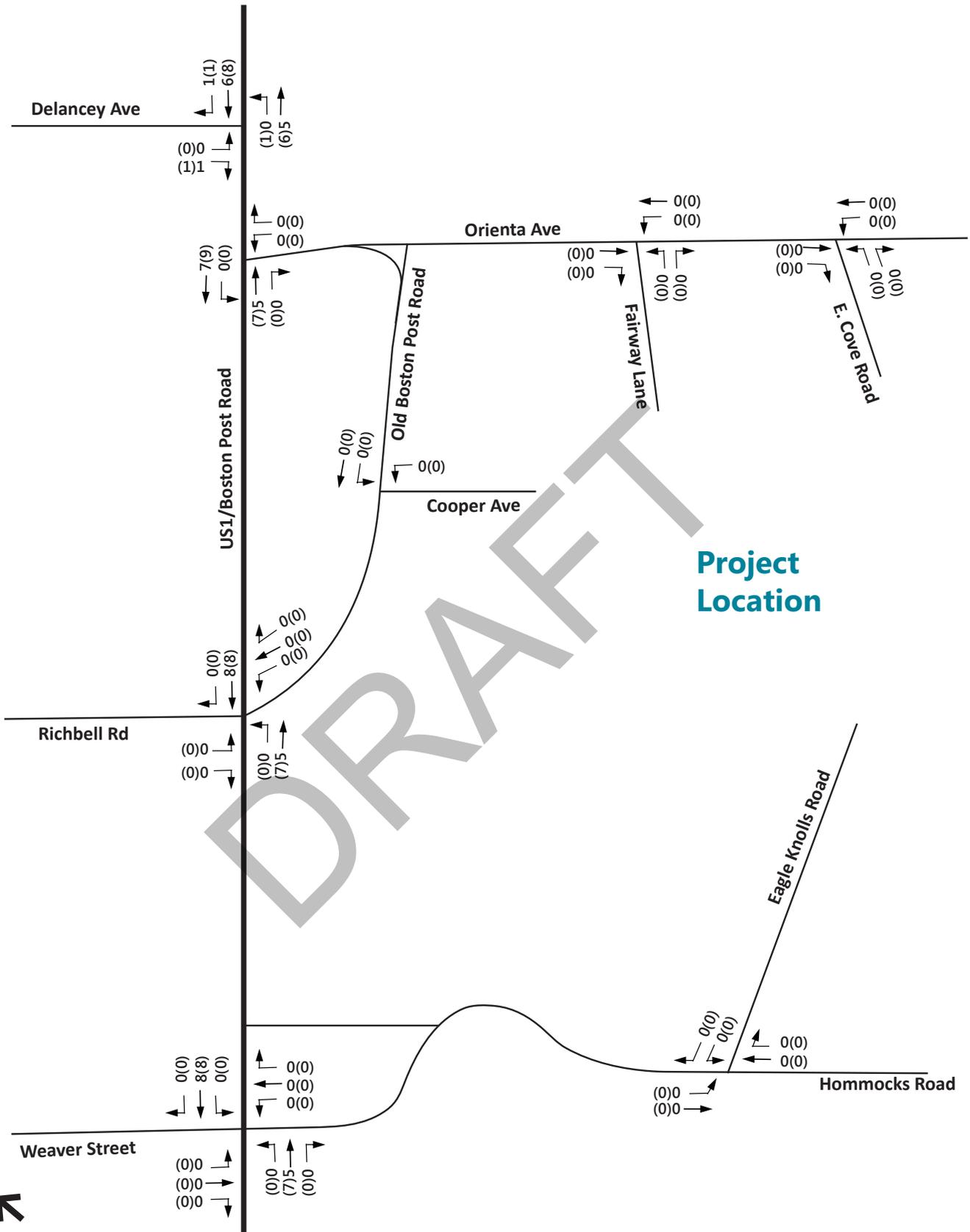
Development	Size
690 Mamaroneck Avenue	21 units
270 Waverly Avenue	96 units
620 W. Boston Post Road	6 units
422 E. Boston Post Road	13 units
151 Mamaroneck Avenue ⁽¹⁾	10 units
532 W. Boston Post Road	7 units
The Cambium (Town)	149 units

Note: (1) Subsequent to preparing the traffic analyses in this study, VHB was advised that this project is no longer going forward; however, the volumes are included in the analyses.

The traffic volumes associated with the above developments were obtained from traffic studies, if available, or were estimated by VHB using standard trip generation methodology. Altogether, the 7 developments are projected to increase traffic in the study area by a further 0.7 percent. The vicinity development trips added to the study area intersections are indicated on Exhibits 3M-8 and 3M-9.

The vicinity development volumes were added to the grown volumes resulting in the future No-Build peak hour traffic volumes shown on Exhibits 3M-10 and 3M-11.

To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for the No-Build traffic volume conditions. 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, PM and Saturday peak hours for the No-Build traffic conditions are summarized in Table 3M-9. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix J.



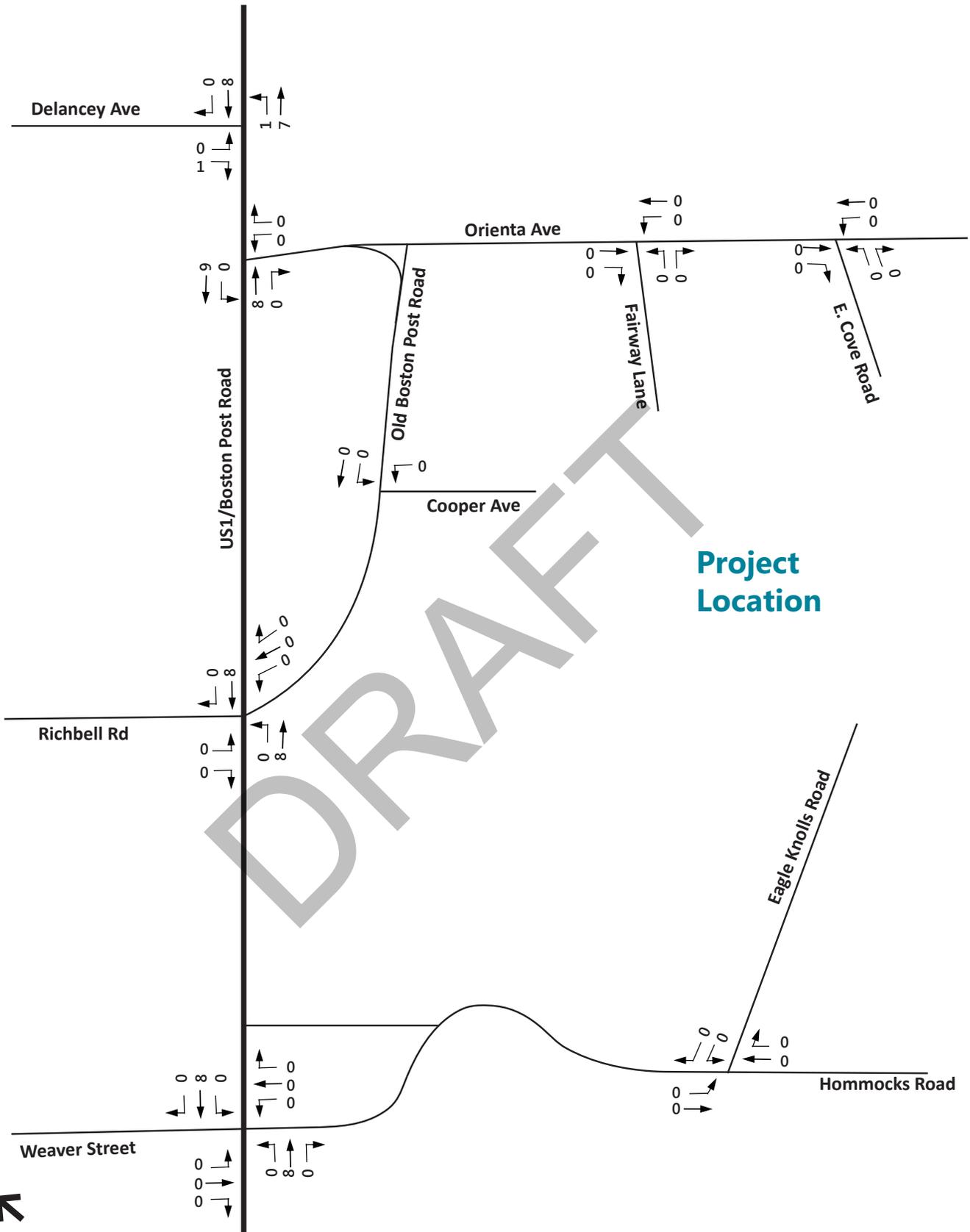
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00= AM Peak Hour
 (0)=PM Peak Hour

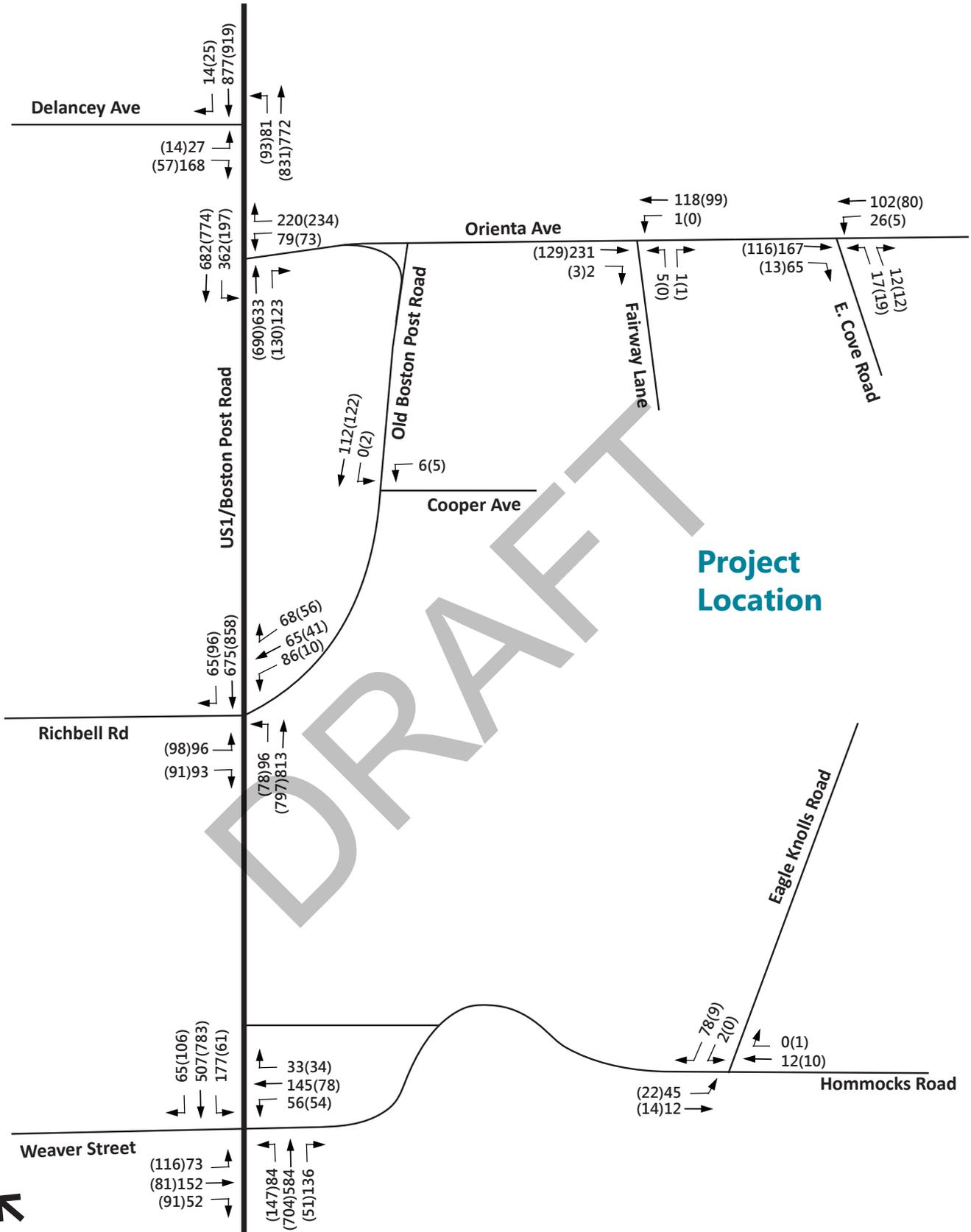
Vicinity Development
 Weekday Hour Volumes



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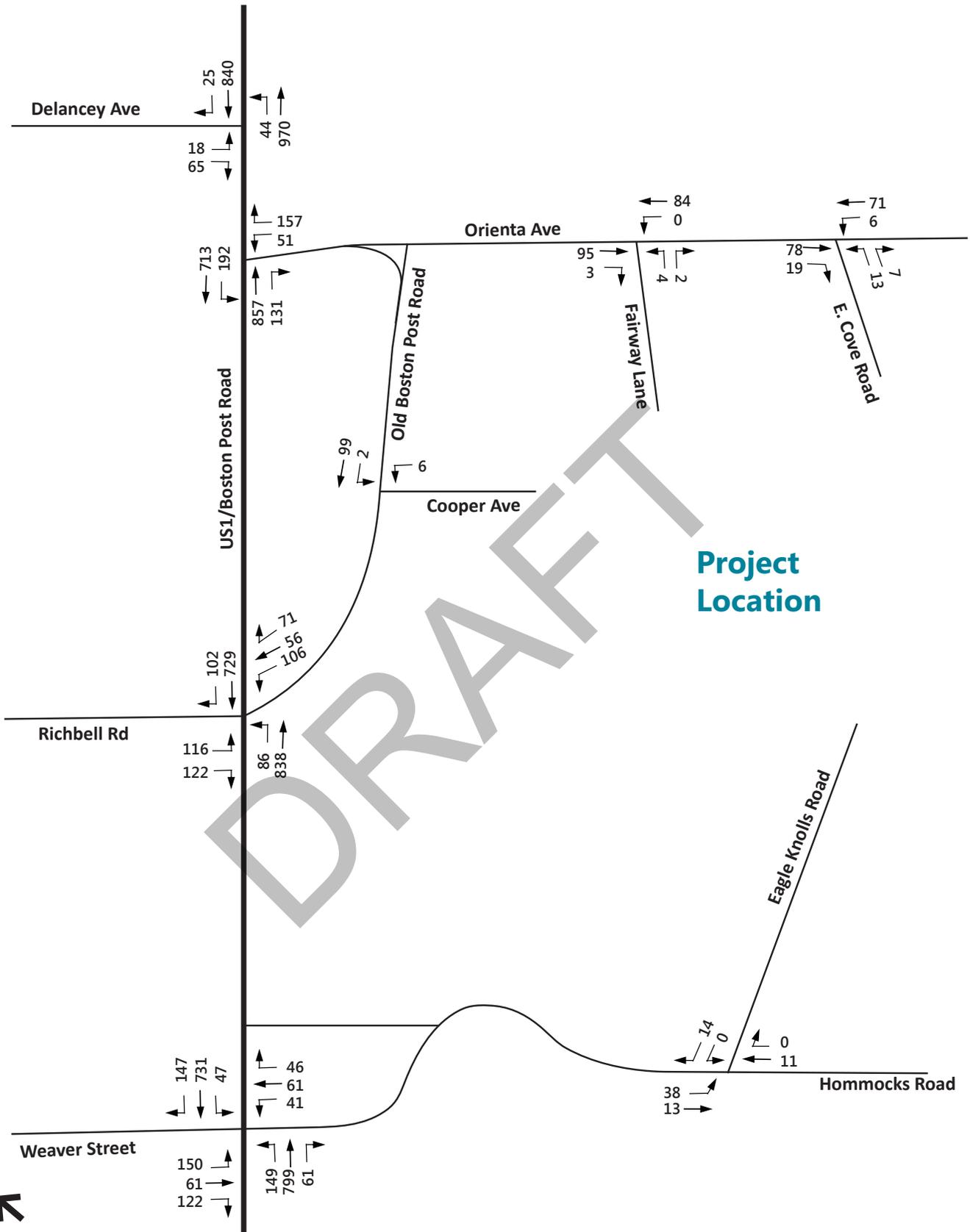


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Hampshire Country Club - PRD | Village of Mamaroneck, NY

00= AM Peak Hour
(00)=PM Peak Hour

**No-Build Weekday Peak Hour
Traffic Volumes**



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Table 3M-9 No-Build Levels of Service

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour		Sat Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	E	59.1	D	48.7	D	45.7	
		TR	D	52.1	D	47.3	D	43.9	
	WB	L	E	55.3	D	47.1	D	43.1	
		TR	D	50.9	D	44.6	D	41.1	
	NB	L	D	41.7	E	56.2	D	49.8	
		TR	E	72.9	C	30.9	C	33.1	
	SB	L	E	76.2	C	26.4	C	28.2	
		TR	D	38.0	D	40.9	D	42.1	
	Intersection			E	57.3	D	39.4	D	39.4
	Hommocks Rd & Eagle Knolls Rd (unsignalized)	WB	LR	A	7.6	A	6.5	A	6.6
NB		TR	A	7.6	A	7.0	A	7.1	
SB		LT	A	8.4	A	7.3	A	7.5	
Orienta Ave & East Cove Rd (unsignalized)	EB	LR	A	8.2	A	7.6	A	7.4	
	NB	LT	A	8.9	A	7.7	A	7.5	
	SB	TR	A	9.9	A	8.1	A	7.5	
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	D	43.6	D	43.6	D	45.2	
		R	B	10.4	B	12.8	B	13.0	
	WB	L	D	44.8	D	42.2	D	40.3	
		R	A	9.0	A	8.6	A	8.5	
	NB	TR	D	42.1	D	37.0	D	40.8	
	SB	TR	C	23.3	C	23.4	C	21.2	
	Intersection			C	27.8	C	21.5	C	24.7
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	A	9.6	A	9.3	A	9.3	
	SB	LT	A	0.0	A	0.1	A	0.1	
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	D	49.3	D	44.2	D	41.6	
		R	D	41.5	D	40.1	A	9.6	
	WB	L	D	40.2	D	40.1	D	36.2	
		TR	D	43.3	D	39.7	C	26.7	
	NB	L	B	18.9	B	14.0	B	14.6	
		T	B	18.8	B	13.3	B	14.8	
	SB	TR	C	28.6	C	24.3	C	24.7	
	Intersection			C	27.3	C	23.0	C	21.3
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	B	10.9	A	9.0	A	9.3	
	NB	LT	A	0.1	A	0.0	A	0.0	
	SB	TR	A	0.0	A	0.0	A	0.0	

As indicated in Table 3M-9, under future No-Build conditions, with the forecast increases in traffic volumes, there will be a slight increase in overall delays at the three signalized intersections along



Boston Post Road, generally on the order of 2 seconds or less. The levels of service will remain unchanged from those experienced under existing conditions.

At the unsignalized intersections, the minor street turning movements will continue to operate at LOS "B" or better during each peak hour with imperceptible increases in delay of up to 0.1 seconds.

The intersections of Eagle Knolls Road with Hommocks Road and East Cove Road with Orienta Avenue are projected to experience Level of Service "A" conditions which, as stated by the Highway Capacity Manual (2000), is indicative of "little or no delay". Since traffic volumes on Eagle Knolls Road and East Cove Road between Hommocks Road and Orienta Avenue are even lower than those at the intersections of Eagle Knolls Road with Hommocks Road and East Cove Road with Orienta Avenue, it is reasonable to conclude that any intersections along these roads will also experience "little or no delay" in the No-Build condition.

The Synchro analyses also provide a calculation of the average (50th percentile) and maximum (95th percentile) queues expected on individual lane groups. The queues for the No-Build traffic conditions are summarized in Table 3M-10.

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Table 3M-10 Summary of No-Build Queues

Intersection	Approach	Lane Group	Available Storage Length	No-Build					
				AM Peak Hour		PM Peak Hour		Sat Peak Hour	
				50th	95th	50th	95th	50th	95th
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	145'	74'	115'	104'	179'	120'	201'
		TR	-						
	WB	L	150'	56'	90'	46'	94'	30'	68'
		TR	-						
	NB	L	180'	49'	70'	76'	118'	71'	113'
		TR	-						
SB	L	140'	138'	179'	30'	55'	21'	43'	
	TR	-							
Hommocks Rd & Eagle Knolls Rd (unsignalized)	WB	LR	<i>N/A - All-Way stop intersection - queue not calculated</i>						
	NB	TR							
	SB	LT							
Orienta Ave & East Cove Rd (unsignalized)	EB	LR	<i>N/A - All-Way stop intersection - queue not calculated</i>						
	NB	LT							
	SB	TR							
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	-						
		R	70'	0'	62'	0'	38'	0'	40'
	WB	L	450'	60'	111'	50'	100'	33'	74'
		R	450'	0'	70'	0'	75'	0'	60'
	NB	TR	-						
		SB	TR	-					
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	200'+	0'	1'	0'	0'	0'	1'
	SB	LT	-						
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	-	68'	135'	37'	136'	39'	151'
		R	140'	64'	124'	34'	123'	0'	52'
	WB	L	100'	58'	115'	40'	141'	35'	133'
		TR	-						
	NB	L	175'	40'	78'	10'	63'	12'	69'
		T	-						
SB	TR	-							
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	450'+	0'	1'	0'	0'	0'	1'
	NB	LT	-						
	SB	TR	-						

Note: (1) Synchro does not provide queue length calculations for movements at all-way stop intersections. However, the low volume of traffic and Level-of-Service "A" conditions suggest average queues of 25 feet or less and 95th percentile queues of 50 feet or less.

As indicated in Table 3M-10, under future No-Build conditions, with the forecast increases in traffic volumes, there will be a slight increase in the length of the queues at the three signalized intersections along Boston Post Road, generally on the order of 3 feet or less. The average (50th



percentile) queues at all locations will remain at acceptable lengths. At the unsignalized intersections, the 50th and 95th percentile queue lengths will continue to be acceptable.

3. Potential Impacts as a Result of the Proposed Project

a) Trip Generations

The Proposed Action is to consist of 105 residential units, comprised of 44 single-family detached homes and 61 townhouses. The existing 18-hole golf course will be reduced to a 9-hole course to facilitate the development of the project. The existing membership club facilities (including a clubhouse, pool and parking areas) will remain.

To evaluate the traffic impact of the Proposed Action, it is necessary to determine the traffic volumes expected to be generated by the 105-unit residential development and how much traffic activity at the existing country club will be reduced by the elimination of 9 holes of the golf course. A review was undertaken of the available trip generation data sources, including the reference published by the Institute of Transportation Engineers ("ITE"), *Trip Generation Manual*, Ninth Edition. This widely utilized reference source contains trip generation rates for related uses, "Single-Family Detached Housing" (Land Use Code 210) and "Residential Condominium/Townhouse" (Land Use Code 230).

The existing road network through the Project Site connects the Hommocks Road School with the residential neighborhood to the north of the Project Site and approximately 23 homes are accessed off of either Eagle Knolls Road or East Cove Road. Current levels of traffic activity at the existing Hampshire Country Club were identified based on a review of the existing traffic volumes which indicated that the facility currently generates 33 trips during the weekday AM peak hour (19 in and 14 out), 50 trips during the weekday PM peak hour (21 in and 29 out) and 69 trips during the Saturday peak hour (47 in and 22 out). These values compare reasonably well with ITE values for an 18-hole golf course (37, 53 and 83 in the AM, PM and Saturday peak hours, respectively).

It was assumed that that 6% of country club traffic activity in the morning peak hour (2 trips) were staff arriving at the facility and that 23% of activity in the afternoon and Saturday peak hours (12 and 16 trips, respectively) were staff and members arriving or leaving the clubhouse. Subtracting these trips from the 33, 50 and 69 peak-hour trips yielded 31, 38 and 53 AM, PM and Saturday peak-hour trips, respectively, associated with the golf course component of the facility. It was conservatively assumed that the elimination of 9 holes of the golf course would reduce golf-course traffic generation by 37% or 11 trips in the AM peak Hour, 13 trips in the PM peak hour and 20 trips in the Saturday peak hour.

In addition, to account for expected pedestrian trips, including internal trips between the single-family homes, town homes and the clubhouse/golf course, a five percent credit was applied to the



residential trips (a 4 trip reduction in each of the peak hours). The resulting new trips from the Project on the local roadways are summarized in Table 3M-11.

Table 3M-11 Project Trip Generations

Land Use	No. of Units	AM Peak Hour Total (in/out)	PM Peak Hour Total (in/out)	Saturday Peak Hour Total (in/out)
Single-Family Home	44	41 (11/30)	50 (33/17)	48 (26/22)
Townhouse	61	35 (10/25)	40 (27/13)	37 (20/17)
<i>Total Residential Trips</i>	105	76 (21/55)	90 (60/30)	85 (46/39)
- Internal Credit (5%)	-	-4 (-2/-2)	-4 (-2/-2)	-4 (-2/-2)
- Golf Course Trip Credit ⁽¹⁾	-	-11 (-8/-3)	-13 (-9/-4)	-20 (-11/-9)
Total New Trips		61 (11/50)	73 (49/24)	61 (33/28)

Source: ITE Trip Generation, 9th Edition

Note: (1) Assumed 50% of the existing golf course trips would be eliminated.

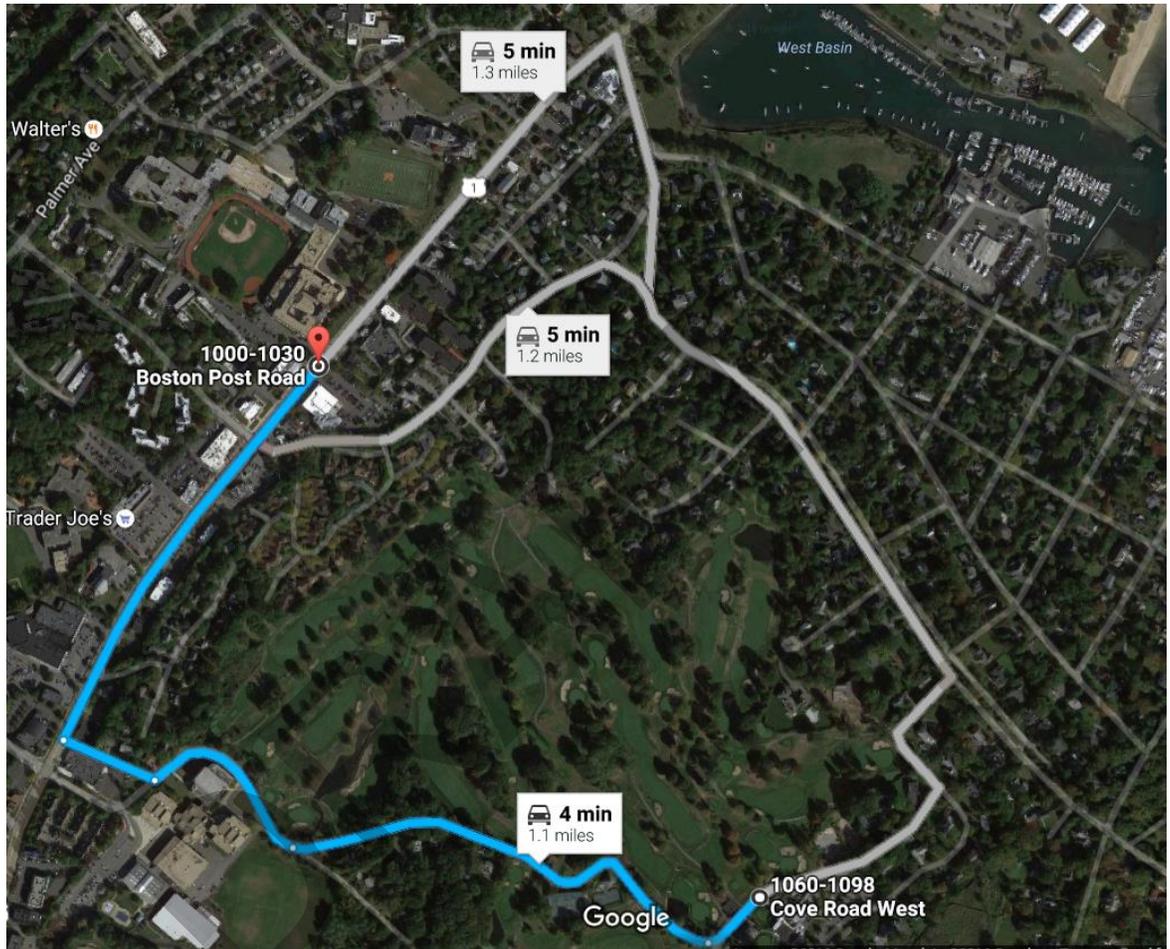
As shown in Table 3M-11, the Proposed Action is expected to generate a total of 61 new trips during the AM peak hour, 73 new trips during the PM peak hour and 61 new trips during the Saturday peak hour.

b) Trip Distributions

The three existing access points to the Project Site (Cove Road, Eagle Knolls Road and Cooper Avenue) will be modified as part of the Proposed Action. The privately-owned portion of Cove Road within the Project site will be relocated, and this road will form the central corridor for the project which will connect with Eagles Knolls Road. Portions of Eagle Knolls Road will also be relocated from its existing location, and will terminate in a cul-de-sac. Cooper Avenue, which currently extends from Old Boston Post Road to its terminus at the driveway to the golf course maintenance facility will be extended into the Project Site and will intersect with Cove Road.

As part of the development of the site plan, consideration was given to what configuration access to Cooper Avenue should take. This evaluation determined that allowing project traffic to exit via Cooper Avenue would have the greatest overall benefit, as it would encourage motorists travelling from the Project Site to Richbell Road or any destination on Boston Post Road between Hommocks Road and the Mamaroneck High School to do so without passing through the busiest intersection in the study area (Boston Post Road with Hommocks Road/Weaver Street) or by the Hommocks Road School. Because of the one-way orientation of Old Boston Post Road, allowing project traffic to enter via Cooper Avenue would not achieve the same outcome. As a result of this evaluation, the extension of Cooper Avenue is currently envisioned to be a one-way, exit only road for

development residents to provide access to Boston Post Road (US Route 1) via Old Boston Post Road.



Trip arrival and departure patterns, which show how the newly-generated trips will travel to and from the Project 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 the project-generated trips are shown in Table 3M-12.



Table 3M-12 Trip Origins and Destinations

Trip Origin/Destination	Percent of Site Traffic
Boston Post Road (US Route 1) from/to the north	30
Boston Post Road (US Route 1) from/to the south	40
Weaver Street (NYS Route 125) from/to the west	10
Delancey Avenue from/to the west	10
Richbell Road from/to the west	5
From/to Local streets	5

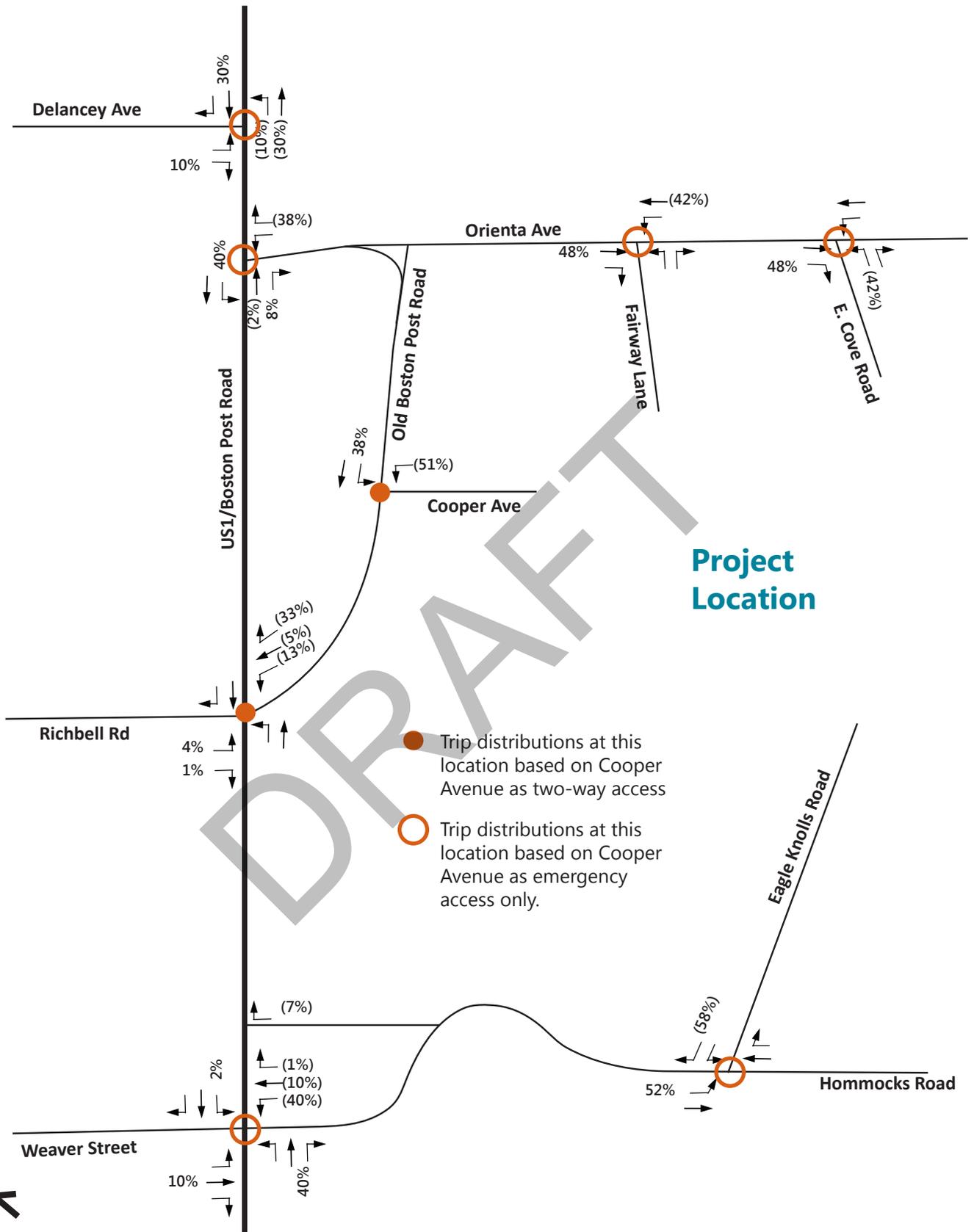
The distribution percentages at each study location are shown on Exhibit 3M-12. In the event that access to the Project Site not be provided via Cooper Avenue, this study conservatively assumed that all project traffic would enter and exit via Hommocks Road or Orienta Avenue. Similarly, were two-way access to be provided to the Project Site via Cooper Avenue, the study also evaluated the impacts of this condition on the intersections of Old Boston Post Road with Cooper Avenue and Richbell Road/Boston Post Road.

The trip distributions shown on Exhibit 3M-12 were then applied to the project trips shown in Table 3M-11 and the resulting volumes were assigned to the local roadway network. These project-generated volumes are shown on Exhibits 3M-13 and 3M-14.

The project-generated volumes were added to the No-Build traffic volumes shown on Exhibits 3M-10 and 3M-11 resulting in the Build traffic volumes for the AM, PM and Saturday peak hours shown on Exhibits 3M-15 and 3M-16.

c) Build Conditions

To assess the quality of traffic flow in the study area during the peak hours, intersection capacity analyses were conducted for the Build traffic volume conditions. 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, PM and Saturday peak hours for the Build traffic conditions are summarized in Table 3M-13. The detailed Synchro capacity analysis worksheets are contained in the Traffic Impact Study in Appendix J.

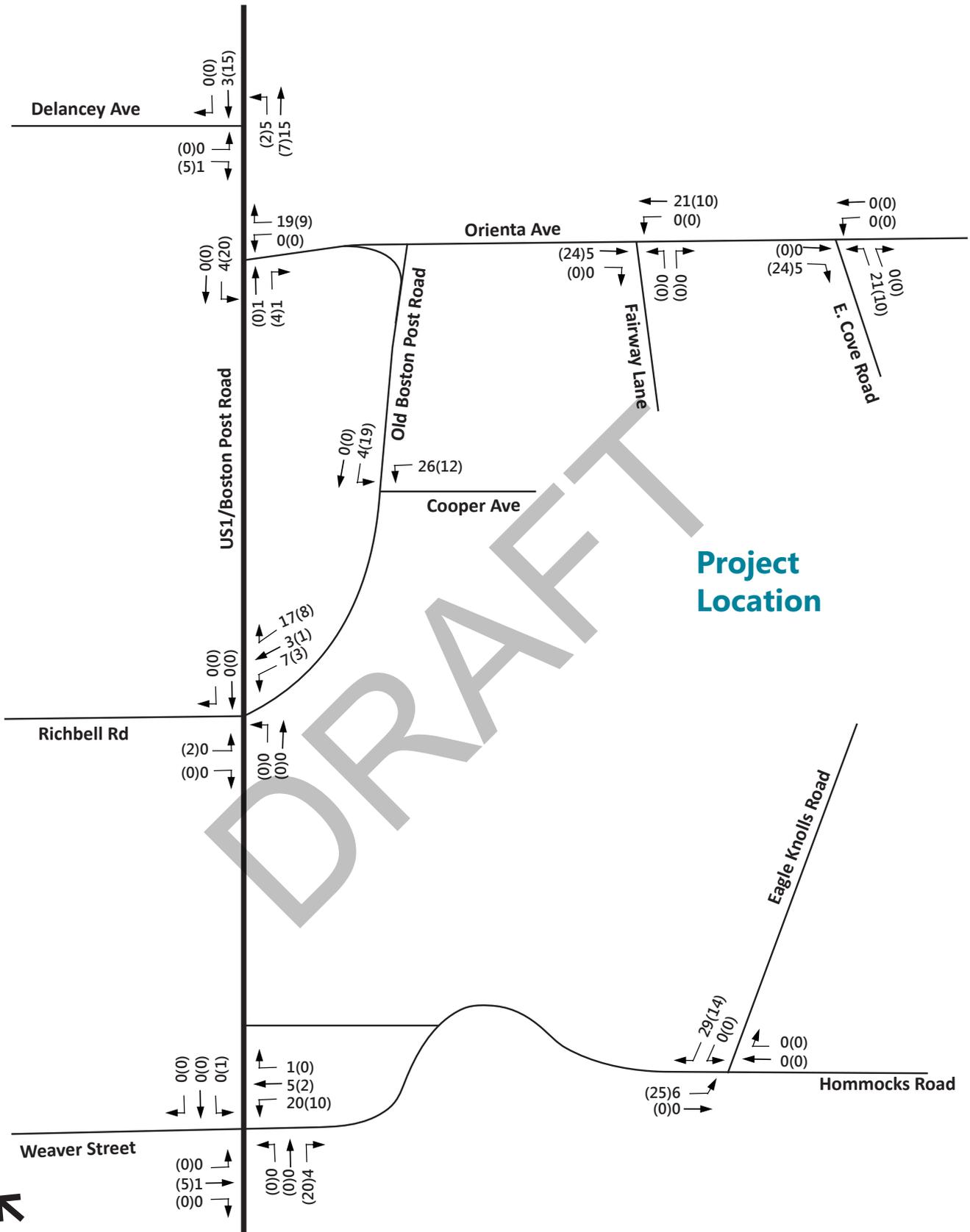


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Trip Distributions



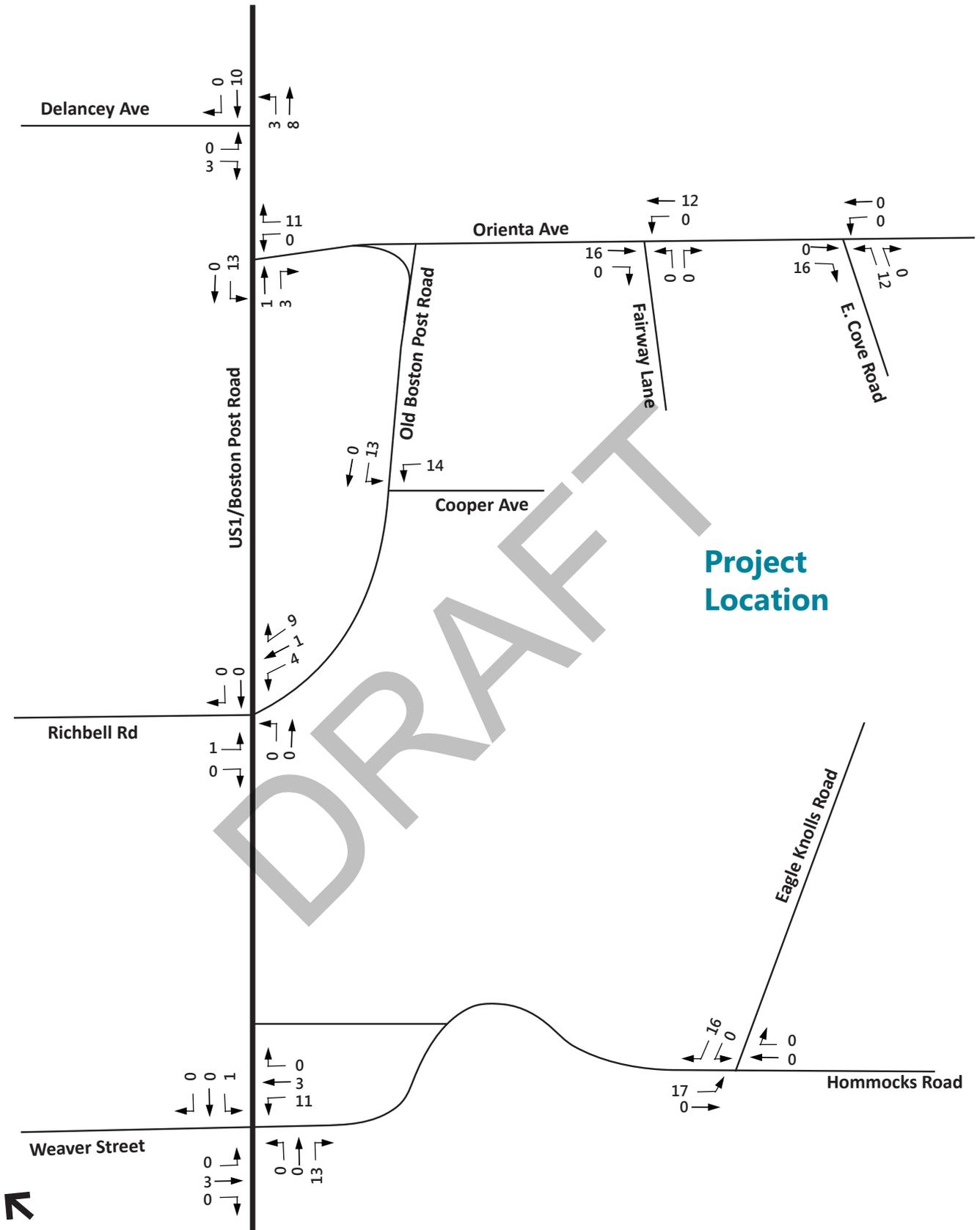
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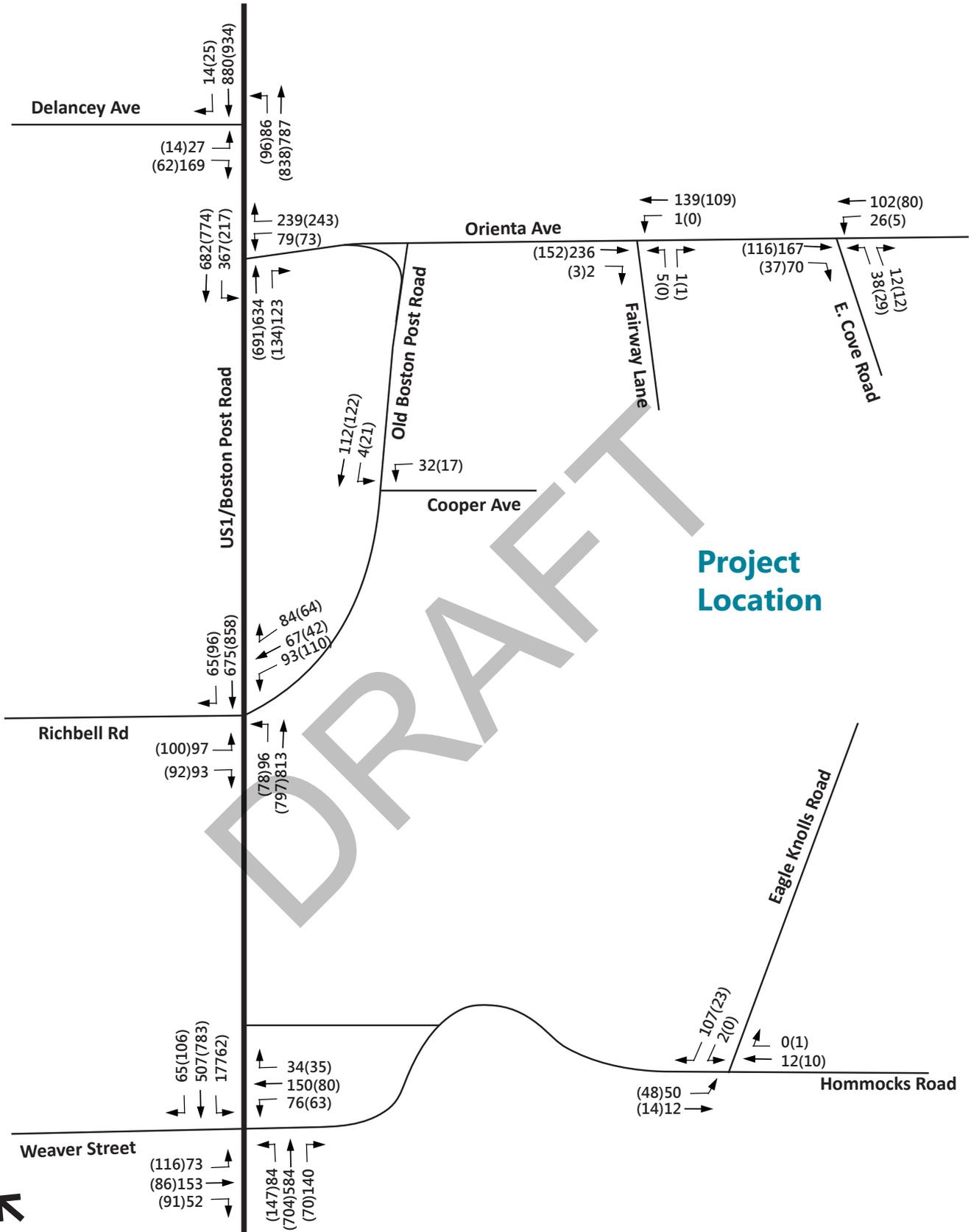
00= AM Peak Hour
 (00)=PM Peak Hour

Project Generated Weekday Peak Hour Volumes

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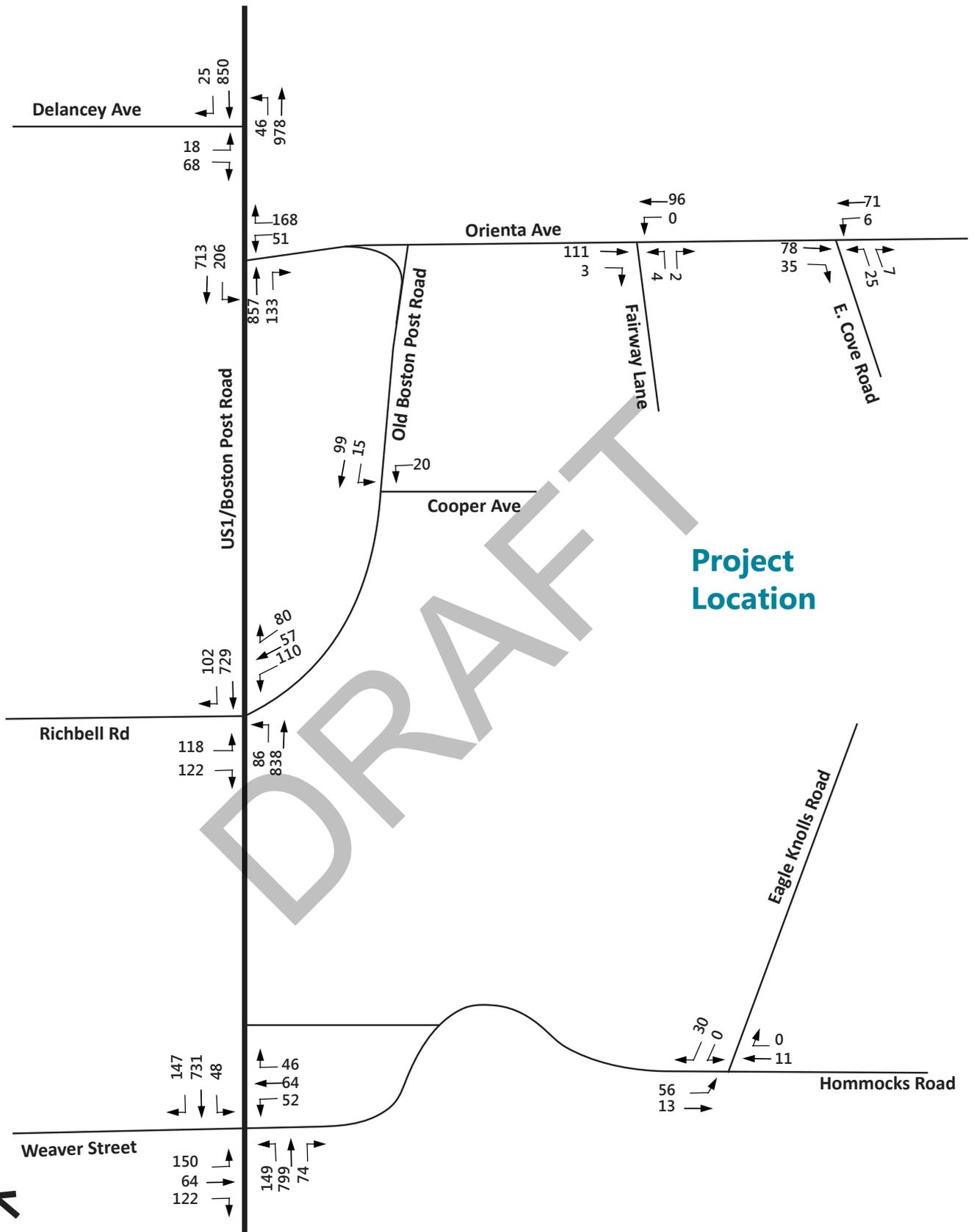


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00= AM Peak Hour
 (00)=PM Peak Hour

**Build Weekday Peak Hour
 Traffic Volumes**



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Table 3M-13 Build Levels of Service

Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour		Sat Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	E	60.3	D	48.8	D	45.8
		TR	D	52.2	D	47.6	D	44.0
	WB	L	E	64.1	D	47.9	D	43.5
		TR	D	51.6	D	44.7	D	41.2
	NB	L	D	41.7	E	56.2	D	49.8
		TR	E	74.5	C	31.4	C	33.4
	SB	L	E	76.2	C	27.4	C	29.2
		TR	D	38.0	D	40.9	D	42.1
Intersection			E	58.3	D	39.6	D	39.6
Hommocks Rd & Eagle Knolls Rd (unsignalized)	WB	LR	A	8.1	A	6.6	A	6.7
	NB	TR	A	7.8	A	7.1	A	7.2
	SB	LT	A	8.7	A	7.6	A	7.7
Orienta Ave & East Cove Rd (unsignalized)	EB	LR	A	8.7	A	7.8	A	7.6
	NB	LT	A	9.1	A	7.8	A	7.6
	SB	TR	B	10.2	A	8.2	A	7.5
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	D	43.6	D	43.4	D	45.1
		R	B	10.4	B	12.5	B	12.8
	WB	L	D	44.8	D	42.5	D	40.5
		R	A	9.0	A	8.7	A	8.4
	NB	TR	D	42.2	D	37.2	D	41.0
	SB	TR	C	23.4	C	23.7	C	21.4
Intersection			C	28.0	C	21.6	C	24.7
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	A	9.9	A	9.6	A	9.6
	SB	LT	A	0.3	A	1.2	A	1.0
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	D	51.1	D	44.1	D	42.2
		R	D	41.1	D	39.8	A	9.6
	WB	L	D	40.2	D	39.9	D	36.2
		TR	D	44.0	D	39.9	C	26.5
	NB	L	B	19.3	B	14.3	B	14.8
		T	B	19.3	B	13.6	B	15.0
	SB	TR	C	29.1	C	24.6	C	24.9
	Intersection			C	28.0	C	23.3	C
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	B	11.2	A	9.2	A	9.5
	NB	LT	A	0.1	A	0.0	A	0.0
	SB	TR	A	0.0	A	0.0	A	0.0



As indicated in Table 3M-13, under future Build conditions, with the added traffic from the Proposed Action, there will be a slight increase in overall delays at the three signalized intersections along Boston Post Road, generally on the order of 1 second or less. The levels of service will remain unchanged from those experienced under No-Build conditions.

At the unsignalized intersections, the minor street turning movements will continue to operate at LOS "B" or better during each peak hour with only minor increases in delay of 1.1 seconds or less.

The Synchro analyses also provide a calculation of the average (50th percentile) and maximum (95th percentile) queues expected on individual lane groups. The queues for the Build traffic conditions are summarized in Table 3M-14.

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Table 3M-14 Summary of Build Queues

Intersection	Approach	Lane Group	Available Storage Length	Build					
				AM Peak Hour		PM Peak Hour		Sat Peak Hour	
				50th	95th	50th	95th	50th	95th
Boston Post Rd (US Route 1) & Hommocks Rd/Weaver St	EB	L	145'	74'	121'	104'	180'	120'	202'
		TR	-						
	WB	L	150'	78'	134'	54'	108'	39'	81'
		TR	-						
	NB	L	180'	49'	70'	76'	118'	71'	113'
		TR	-						
	SB	L	140'	138'	179'	31'	55'	22'	44'
		TR	-						
Hommocks Rd & Eagle Knolls Rd (unsignalized)	WB	LR	N/A - All-Way stop intersection - queue not calculated						
	NB	TR							
	SB	LT							
Orienta Ave & East Cove Rd (unsignalized)	EB	LR	N/A - All-Way stop intersection - queue not calculated						
	NB	LT							
	SB	TR							
Boston Post Rd (US Route 1) & Orienta Ave/Delancey Ave	EB	L	-						
		R	70'	0'	61'	0'	40'	0'	41'
	WB	L	450'	60'	111'	50'	100'	33'	75'
		R	450'	0'	73'	0'	76'	0'	62'
	NB	TR	-						
	SB	TR	-						
Old Boston Post Rd & Cooper Ave (unsignalized)	WB	L	200'+	0'	5'	0'	2'	0'	2'
	SB	LT	-						
Boston Post Rd (US Route 1) & Old Boston Post Rd/Richbell Rd	EB	L	-	70'	138'	38'	138'	40'	155'
		R	140'	64'	124'	34'	124'	0'	52'
	WB	L	100'	64'	123'	41'	144'	36'	137'
		TR	-						
	NB	L	175'	42'	78'	11'	63'	12'	69'
		T	-						
SB	TR	-							
Orienta Ave & Fairway Ln (unsignalized)	EB	LR	450'+	0'	1'	0'	0'	0'	1'
	NB	LT	-						
	SB	TR	-						

As indicated in Table 3M-14, under future Build conditions, with the added traffic from the Proposed Action, at the three signalized study locations there will be a slight increase in the length of the maximum (95th percentile) queues on the turning lane movements that exceeded the available storage under No-Build conditions, generally on the order of 8 feet or less. The average (50th



percentile) queues at all locations will remain at acceptable lengths. At the unsignalized intersections, the 50th and 95th percentile queue lengths will continue to be acceptable.

d) Sight Distance Analysis

Sight distance analyses were conducted at the four unsignalized study intersections to determine if sufficient sight lines are provided. The sight distances at each location were measured and compared to the requirements provided in the American Association of State Highway and Transportation Officials' (AASHTO) publication, *A Policy on Geometric Design of Highways and Streets (2011)*. Two of the intersections are controlled by Stop signs on all approaches (Orienta Avenue and East Cove Road; Hommocks Road and Eagle Knolls Road). Per AASHTO, at these two all-way stop intersections, the first stopped vehicle on one approach should be visible to the drivers of the first stopped vehicles on the other approaches. At the two other unsignalized intersections (Orienta Avenue and Fairway Lane; Old Boston Post Road and Cooper Avenue), Stop signs are provided on the minor street approaches (Fairway Lane and Cooper Avenue). AASHTO sight distance requirements at these locations are generally based on travel speeds, grades, number of lanes to cross and type of traffic control. The sight distance analysis is summarized in Table 3M-15.

Table 3M-15 Sight Distance Analysis

Intersection	Control	Approach/ Movement	Sight Distance	
			Required	Available
Orienta Avenue & East Cove Road	All-way Stop	All approaches	First stopped vehicle visible	Yes
Hommocks Road & Eagle Knolls Road	All-way Stop	All approaches	First stopped vehicle visible	SB – Yes NB & WB – No ⁽¹⁾
Orienta Avenue & Fairway Lane	Stop (Fairway Ln)	EB LR	280' looking left 280' looking right	410' left 512' right
Old Boston Post Rd & Cooper Avenue	Stop (Cooper Ave)	NB L	280' to the right	120' right ⁽¹⁾

Note: Required sight distances based on AASHTO publication, A Policy on Geometric Design of Highways and Streets (2011).

(1) – Sight distance can be increased to the required level by the removal of foliage.

As shown in Table 3M-15, acceptable sight distances are provided at the Orienta Avenue and East Cove Road all-way stop intersection. At the Hommocks Road and Eagle Knolls Road all-way stop intersection, the drivers on the Eagle Knolls Road approach and the northbound Hommocks Road approach have somewhat limited visibility due to foliage on the southeast corner of the intersection which partially obstructs the view (see photograph below). If a small bush at the corner of the intersection were removed and the tree next to it pruned so the branches do not hang down within 4 feet of the ground, adequate sight distance would be provided.



At the intersection of Orienta Avenue with Fairway Lane, acceptable sight distance is provided for vehicles exiting from Fairway Lane.

At the intersection of Cooper Avenue with Old Boston Post Road, a lot of vegetation has grown since the August 2013 photograph below was taken. This new vegetation has significantly reduced sightlines and should be removed to restore the required 280 feet of sight distance.





For the on-site intersections, a review of the site plan indicates that a minimum of 200 feet can be provided from all intersections which will be sufficient to accommodate vehicles traveling at the posted Village-wide speed limit of 30 mph.

e) Proposed Parking

In the future, with the Proposed Action, a total of 163 parking spaces would be provided at the clubhouse and parking for an additional 16 vehicles will be available during large club events, for a total of 179 spaces. Parking regulations, per Village Code §342-56(A), require 2 spaces for each 3 individual, family or other type of memberships. The club had 264 memberships as of 2017 which require 176 parking spaces per the Village code. With the downsizing of the golf course offset by the potential new memberships generated by the planned residential development, it is anticipated that the membership total will remain at its current level in the future with the Proposed Action. Therefore, the 179 parking spaces to be provided will be in compliance with Village parking requirements. The clubhouse's banquet hall can accommodate up to 250 guests for weddings or other events. The 179 parking spaces will also be able to accommodate the parking for events.

For the PRD, four spaces will be provided for each residential unit, including two in the driveway and two in the garage, yielding 210 enclosed spaces and 210 driveway apron spaces for a total of 420 private residential parking spaces. In addition, on-street parking within the PRD development will be permitted on one side of all streets (2x10 foot travel ways and 8 feet for parking). It is calculated that parking for approximately 125 vehicles will be able to be accommodated on street.

Village Code §342-52(I) states that "Off-street parking shall be provided within each planned residential development at the rate of not less than two spaces for each one-family detached dwelling, and one space per dwelling unit, plus one-half (1/2) space per bedroom for each dwelling unit in an attached or semi-detached dwelling. No less than one-third (1/3) nor more than two-thirds (2/3) of the minimum required off-street parking spaces shall be enclosed. Of the unenclosed spaces, an amount equal to at least one-third (1/3) of the total number of required spaces shall not be reserved for the use of specific dwelling units and shall, at all times, remain open and available for the use of visitors and guests, as well as other residents."

Applying the Code mandates that a minimum of 241 parking spaces be provided, 88 for the single family homes and 153 for the semi/attached carriage houses, each of which has 3 bedrooms. Between 80 and 160 of the required parking spaces must be enclosed and at least 80 of the unenclosed parking spaces must be available for use by anyone.

A total of 545 parking spaces (420 private + 125 on-street) are proposed for the PRD, which is significantly more than the 241 required. The 125 vehicles which will be able to be accommodated on street will be more than 80 required for use by any one at any time.



f) Pedestrian and Bicycle Circulation

Pedestrian and bicycle circulation would be facilitated on the Project Site through the redeveloped and improved road and sidewalk network. The Proposed Action would include sidewalks on the north side of the extended and rerouted Cove Road, which would provide a path for residents and children biking or walking through the proposed development to access community facilities nearby, including Hommocks Middle School, Hommocks Ice Rink and Hommocks Pool, and the commercial corridor along Boston Post Road/U.S. Route 1. The other proposed roadways, which will be very low volume roadways (less than 1 vehicle every 2 minutes during the busiest hour) would not include sidewalks or bicycle pathways. This is in keeping with much of the road network immediately surrounding the Project Site, primarily the portions of Hommocks Road, Cove Road, Cooper Avenue, and Fairway Lane immediately adjacent to the Project Site, which do not contain designated bicycle pathways or sidewalks. The existing and proposed roadway network would also be wide enough to accommodate on-road cycling.

g) Potential Impacts to Hommocks Middle School, Hommocks Pool and Ice Rink

The Proposed Action will add only a few trips to Hommocks Road during the peak hours (31 AM trips, 38 PM trips and 31 Saturday trips), or approximately 1 additional vehicle every 2 minutes in the worst case conditions. The backups on Hommocks Road westbound will increase slightly compared to No-Build conditions and the maximum queues will be within the provided storage area and will not impact the Hommocks Middle School main driveway. Under the proposed action, with Cooper Avenue providing an exit to Boston Post Road via Old Boston Post Road, the projected minimal increases in delays and queuing near the school will be reduced as the number of vehicles passing through the intersection is projected to be reduced to 10 in the AM peak hour, 28 in the PM peak hour and 20 during the Saturday peak hour.

On Boston Post Road, the maximum queue on the southbound left turn into Hommocks Road currently exceeds the available storage area during the AM peak hour and will continue to do so in the future without the project. The Proposed Action will not add any traffic to this movement during the AM peak hour; therefore, the backups will not increase from future No-Build conditions. The Proposed Action will not have any impacts on this movement during the PM and Saturday peak hours as only 1 vehicle will be added during each peak hour.

The peak activity periods for Hommocks Pool and Ice Rink do not typically coincide with the roadway weekday AM and PM peak hours or the Saturday peak hour. It is anticipated that some of the residents of the proposed development will walk or bike to the Hommocks Pool and Ice Rink facilities.



h) Construction Traffic Impacts

Construction activity for the proposed development will primarily be divided into three stages, grading, structures and finishing. Once construction of the proposed development commences, it is estimated that there will be approximately 24 trucks per day (on a five-day per week schedule) for the first 9 months of construction. After that, the number of trucks will begin to diminish to 3 or 4 trucks per day as the 105 units are built-out. The exact construction schedule is contingent on the build out rate of the homes; therefore, the duration of the construction period and the final build-out date are unknown at this time. Employee construction traffic activity is expected to be similar to the project traffic levels listed in Table 3M-11, above.

All construction trucks accessing the Project Site will be required to use I-95, exiting at either Exit 17 (to and from the south) or Exit 19 (to or from the north) to use Boston Post Road (US Route 1) to get to and from Hommocks Road and Eagle Knolls Road. There will be no truck access allowed via Orienta Avenue or East Cove Road. When school is in session, truck access to the Project Site will only be permitted between 8:15 am and 2:30 pm, as well as between 4:00 pm and 7:00 pm.

To evaluate existing pavement conditions, an inspection of the roadway surface was conducted on Hommocks Road and the west end of Eagle Knolls Road. In addition to conducting a visual inspection of the pavement, six (6) core samples were taken on Hommocks Road for scientific evaluation while four (4) core samples were taken on Eagle Knolls Road. The results of these evaluations were as follows:

- Hommocks Road – Other than for a 300-foot section by the entrance to the front parking lot serving the school, the road surface displayed significant distress levels but the pavement structure from two inches below the surface down is structurally sound. The Road Manager Pavement Condition Index (PCI) is 35 on a scale of 0 (virtually impassable) to 100 (brand new and perfectly constructed).
- Eagle Knolls Road – The road surface displayed moderate distress levels and is considerably better condition than Hommocks Road. The pavement structure from two inches below the surface down is structurally sound. The Road Manager Pavement Condition Index (PCI) is 65.

For the duration of construction, it is proposed to mill and pave Hommocks Road to improve its PCI score. At the completion of construction, the roadways will be reexamined and repaired as needed to leave them with a PCI score of 66 or better.



PCI Decision Matrix				
TIME OF IMPROVEMENT	FREEWAY	ARTERIAL	COLLECTOR	LOCAL
Adequate	>85	>85	>80	>80
6 to 10 years	76 to 85	76 to 85	71 to 80	66 to 80
1 to 5 years	66 to 75	56 to 75	51 to 70	46 to 65
NOW Rehabilitate	60 to 65	50 to 55	45 to 50	40 to 45
NOW Reconstruct	<60	<50	<45	<40

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i) Site Roadways and Intersections

Site Roadways

As noted previously, the three existing access points to the Project Site (Cove Road, Eagle Knolls Road and Cooper Avenue) will be modified as part of the Proposed Action. The privately-owned portion of Cove Road within the Project site will be relocated and will form the central corridor for the project. Eagle Knolls Road will be relocated from its existing location and will intersect with the relocated Cove Road prior to terminating in a cul-de-sac. Cooper Avenue, which currently extends from Old Boston Post Road to its terminus at the driveway to the golf course maintenance facility, will be extended into the Project Site and will intersect with Cove Road. This roadway extension is currently envisioned to be a one-way, exit only road for development residents to provide access to Boston Post Road (US Route 1) via Old Boston Post Road. A new internal roadway, "Road A", will intersect with Cove Road and terminate in a cul-de-sac. Each Roadway will be 28 feet wide, wide enough to provide one 10-foot wide lane for travel in either direction along with allowing 8 feet on one side of the road or the other to be used for on-street parking. At its west end, Cove Road will narrow down as it leaves the property to match the existing section width. The relocated Cove Road will have a sidewalk run along its entire length. Each internal intersection will be designed to provide sufficient sight distance for vehicles traveling within the Project Site.

At the present time, the portions of Eagle Knolls Road, Cove Road and Cooper Avenue within the Project Site are private roads. In the future, with the proposed Project and planned modifications to these roadways, those portions of the road within the Project Site will remain as private roads. The proposed homeowners' association will be responsible for maintenance of all roadways within the Project Site.

With respect to rights of access over those portions of Eagle Knolls Road and Cove Road under private ownership, the proposed project will not prohibit the area residents who currently use the private roads to access Hommocks Road from Eagle Knolls Road or the public portions of Cove Road beyond the Project Site.



The improved Cove Road, including the proposed sidewalk, will greatly enhance east-west access for both motorists and pedestrians who live on either side of Hampshire Country Club. In addition, the Proposed Action will significantly improve the safety of Eagle Knolls and Cove Road by elevating low-lying portions of these roads above the floodplain. The road pavement conditions will be upgraded from their present condition.

Emergency access and evacuation will be provided via the three access routes to the Project Site. These roadways will be designed so that fire trucks and other emergency vehicles will be able to easily access and circulate within the Project Site. Elevating Cove Road will also improve emergency evacuation for the entire neighborhood.

Internal Intersections

A qualitative analysis was conducted at the three newly created "T" intersections with Cove Road (Cooper Avenue Extension, Road "A" and Eagle Knolls Road) to identify future traffic operating conditions. Each approach at the three intersections will have one lane with Stop signs controlling the minor leg approaches (Cooper Avenue Extension, Road "A" and Cove Road at its intersection with Eagle Knolls Road). The project-generated traffic volumes were assigned to the internal intersections based on the distributions identified on Table 3M-12 and the location of the residential units along the internal roadways. The project trips were then added to the No-Build volumes to develop the Build volumes on the internal roads. A review of the Build volumes along the relocated Cove Road indicates that the AM peak hour volumes are 72 percent higher than the PM peak hour volumes and 52 percent higher than the Saturday peak hour volumes (primarily as a result of traffic to and from the Hommocks Middle School).

A Synchro analysis was conducted with the higher AM peak hour volumes which indicate that the minor street approaches at all three internal intersections will operate at level of service A. Level of service "A" generally means that queuing on a minor street approach is rare and that there are little or no delays. A further analysis was conducted in which the AM peak hour volumes were increased by a magnitude of five. This sensitivity analysis indicated that, even with the substantial increase in traffic volumes, the minor street approaches at each intersection would operate at acceptable LOS B. During the PM and Saturday peak hours, it can be concluded that traffic operating conditions will be better than the AM peak hour conditions as the PM and Saturday volumes are much lower than the AM volumes.

j) Public Transit Availability

The Proposed Action is afforded relatively convenient access to public transit, including rail and bus service. The Metro-North Railroad's Mamaroneck and Larchmont stations are each approximately 1.5 miles from the Project Site. At the Larchmont station, connections can be made to other Bee-Line buses (#61, #66, and #71). Westchester County's Bee-Line Bus route #70 travels along Boston



Post Road between Weaver Street and Richbell Road and operates in a loop with the starting and ending points at the Larchmont train station. The nearest bus stop to the Project Site is approximately 0.55 miles away on Richbell Road at its intersection with Boston Post Road, meaning that the train is just a 10 minute walk and a 5 to 10 minute bus ride from the Project Site.

4. Mitigation

a) Recommended Mitigation

As indicated by the analysis described herein, the proposed development will not have a significant adverse impact on area traffic operating conditions. Nonetheless, good engineering practice and site design will lead to a number of improvements to operating conditions, the most notable of which are:

- Improved road surface, profile and alignment of Cove Road across the Project Site for residents on either side of the property, including those who travel back and forth to Hommocks Middle School;
- Improved pedestrian environment with the completion of a sidewalk across the property;
- Improved emergency evacuation routes with the raising of Cove Road above the flood elevation.

It is also noted that providing an egress from the Project Site will reduce project traffic past the Hommocks Middle School and through the busy intersection of Boston Post Road with Hommocks Road/Weaver Street.



N. COMMUNITY DEMOGRAPHICS, FACILITIES, AND SERVICES

Letters were sent to community service providers (schools, police, fire, and EMS) to inquire as to current facilities and services and as to potential issues or impacts of the Proposed Action. These letters and the responses received are included in Appendix K. Local youth leagues were also contacted, though no responses were received.

1. Existing Conditions

a) Demographics

The following information was gathered from the United States Census and the 2014 American Community Survey 5-Year Estimates.

The population of the Village of Mamaroneck was 19,133 in 2014. This is an increase of 1% over the 2010 population of 18,929. In fact, the Village has seen a subtle but steady increase in population over the last two decades, as demonstrated in Table 3N-1 below.

Table 3N-1 Village of Mamaroneck Population

1990	2000	2010	2014
17,325	18,752	18,929	19,133

Source: 1990, 2000, 2010 U.S. Census; 2010-2014 American Community Survey 5-Year Estimates

Of the total population, 10,112 residents are female and 9,021 are male. 31% of the population falls within the age brackets of 35 to 44 years old (2,735 residents) and 45 to 54 years old (3,132 residents); the median age is 42.3 years old.

The racial and ethnic breakdown of the Village is as follows: 78.5% of the population is White; 5.9% is Black; 5.6% is Asian; 9.8% is some other race; and 18.2% of the population is Hispanic or Latino (of any race).

There are 7,988 housing units in the Village. The homeowner vacancy rate is 2.8% and the rental vacancy rate is 3.0%. For comparison, the Westchester County homeowner vacancy rate is 1.8% and the rental vacancy rate is 6.0%. Of the total housing units, 43% are single-family detached homes, 17.6% are two-family, and another 17.6% are found within large multi-family developments of 20 or more units. The Village contains an old housing stock; 80% of housing units are within structures built in 1939 or earlier. The median value of an owner-occupied unit in the Village is \$578,900, slightly higher than the \$509,200 median value in Westchester County.



89.1% of the Village population attained a high school degree or higher. The median household income is \$85,865, comparable but slightly higher than the county median income of \$83,422. Roughly 68.4% of the population 16 years and over is in the labor force; of those residents in the labor force, 92% are employed. 31.6% of the population 16 years and over are currently out of the labor force.

b) Open Space and Recreation

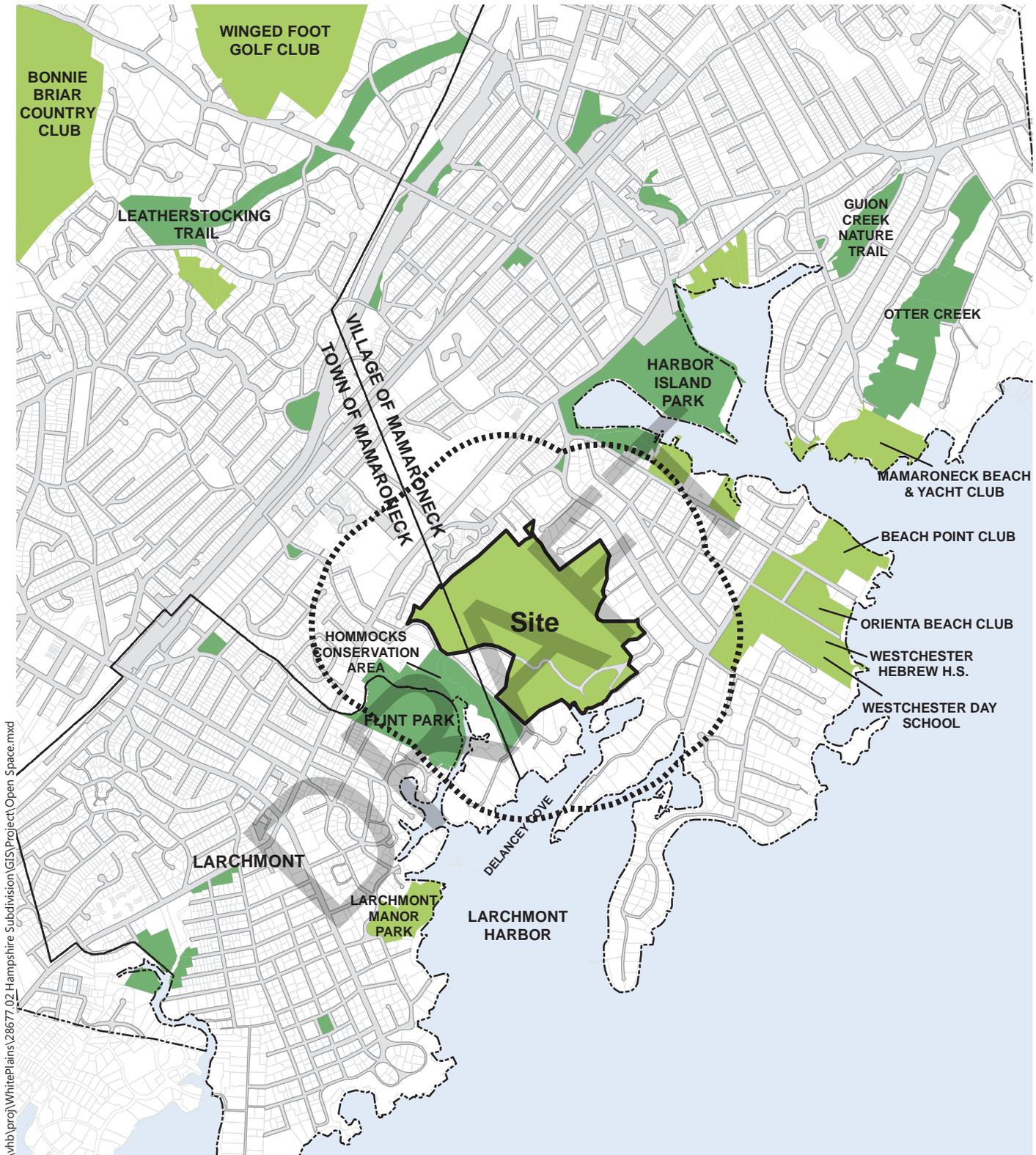
The Project Site currently contains a private open space and recreation use, the Hampshire Country Club golf course, and has been in continual operation as a golf course since it opened in the late 1920's. Hampshire Country Club is the Village's only golf course, although there are several other golf clubs in neighboring municipalities, including Bonnie Briar Country Club, Winged Foot Golf Club, Quaker Ridge Golf Club, and Rye Golf Club. Hampshire Country Club is a private club with no public access; other private clubs in the Village include the Orienta Beach Club, Beach Point Club, and Mamaroneck Beach and Yacht Club. Hampshire Country Club also includes an outdoor pool and tennis courts. No public trails are located on the Project Site.

The Village of Mamaroneck has several parks and recreational facilities available to the public. Exhibit 3N-1, Open Space, contains a map of nearby open space resources, both public and private. Harbor Island Park, the Village's largest park at 44 acres, is located within a quarter-mile of the Project Site and contains a playground apparatus, beach, pavilion, boat launch, tennis club, and sports fields. Other public open spaces within the Village include: Columbus Park, containing a playground and basketball courts (1.25 miles from the Project Site); Florence Park, containing sports facilities and a jogging/walking path around the perimeter (1.6 miles from the Project Site); Warren Avenue Park, containing a playground, trails, and sports facilities (2.2 miles from the Project Site); and playground apparatus at Jefferson Avenue Park, Stanley Avenue Park, and Ward Avenue Park.

The Town of Mamaroneck also contains various open space resources within a quarter-mile of the Project Site, including Flint Park, which holds several sports facilities, and the Hommocks Conservation Area, a 7.6-acre preserved area with woodland paths, meadows, and a salt marsh. The Hommocks Middle School also contains some outdoor recreational facilities.

Nearby trails and bike paths include the Guion Creek Nature Trail along Shore Acres Drive, a small walking path along the stream at Ward Avenue Park, and a forested trail three-quarters of a mile in length located in the 35-acre Otter Creek Preserve, adjacent to Van Amringe Millpond. As mentioned, there are also walking paths in the Hommocks Conservation Area.

Commercial recreational venues near the Project Site are generally located along Boston Post Road and include several Pilates and Yoga studios, the Equinox gym located just north of the Hampshire golf course, and personal training facilities. Several other venues are located along Mamaroneck Avenue, including a martial arts studio and several training or gym facilities, such as New York Sports Club and NY Strong. All facilities are easily accessible from the Project Site.



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Hampshire Country Club - PRD

| Village of Mamaroneck, NY

Legend

-  1/4-mile Radius from Site
-  Nature Preserves; Public Parks, Parkway Lands
-  Private Recreation
-  Roadway

Open Space

Source: Westchester County GIS, 2009



Hommocks Park Ice Rink and Hommocks Pool are located immediately adjacent to Hommocks Middle School, to the northwest of the Project Site in the Town of Mamaroneck. The two facilities are managed by the Town of Mamaroneck Department of Recreation. Hommocks Pool receives approximately 11,000 patrons per month, while the ice rink receives approximately 9,000 patrons per month.¹ The ice rink offers lessons, youth leagues, and hockey leagues for all ages, in addition to public skating time and equipment rentals. The pool hosts various swimming and aqua fitness lessons in addition to open pool time for the public. According to the Recreation Department, Hommocks Pool's outdoor training pool often reaches its capacity of 100 people during the summer months; summertime weekdays are busy in general given the variety of programming listed above. The rink faces capacity issues during High School playoff games, which fall at the end of March. Approximately 140 students participate in the ice rink's Youth Hockey League.

With respect to sports league enrollment, letters were sent to the local youth sports leagues in Mamaroneck. However, no response was received.

c) Police

Police protection and services are currently provided to the Project Site by the Village of Mamaroneck Police Department, headquartered at 169 Mount Pleasant Avenue, approximately 1.5 miles north of the existing clubhouse. The location of the Police headquarters is indicated on Exhibit 3N-2, Community Facilities.

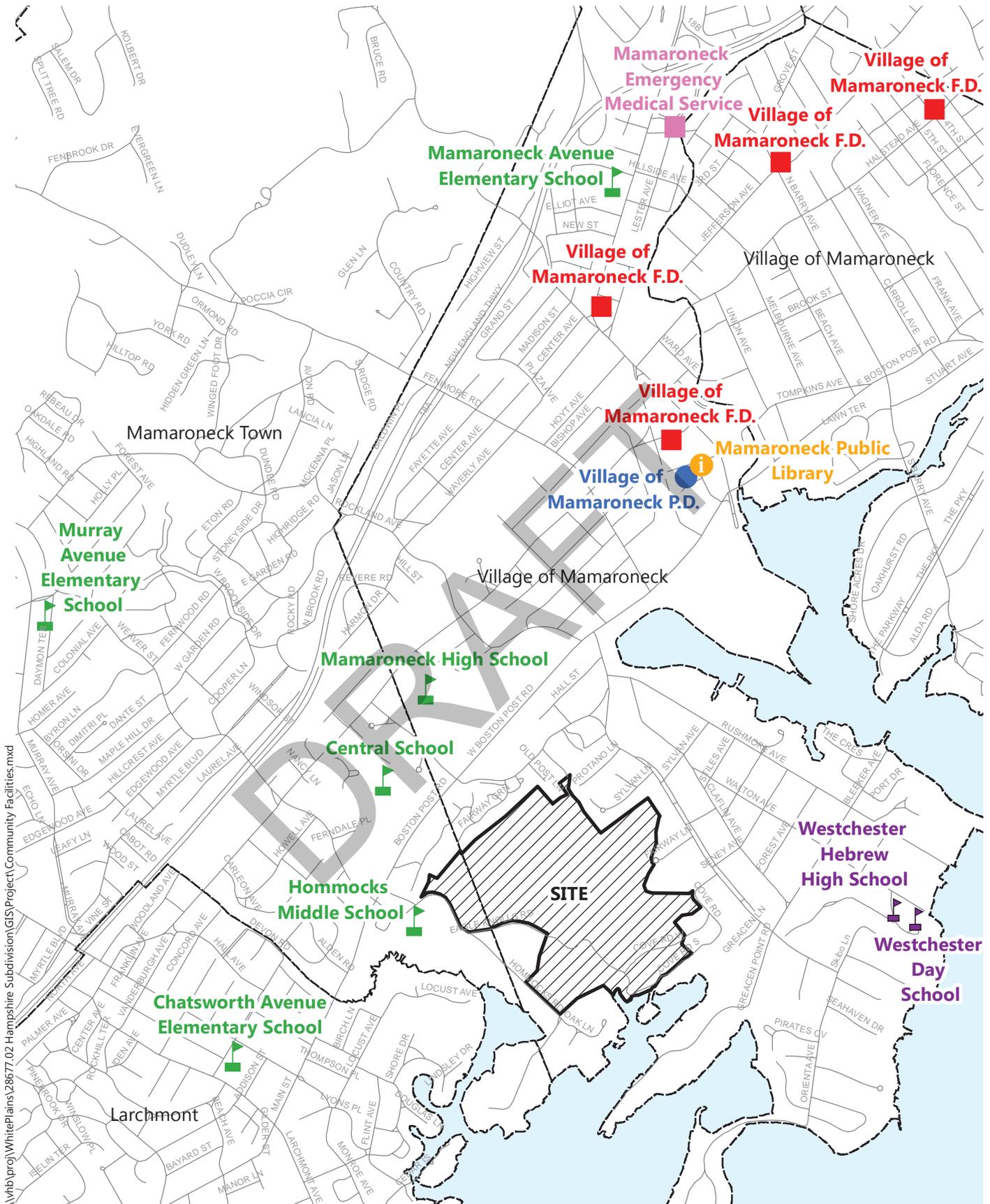
According to the 2015-2016 Village of Mamaroneck Adopted Budget, the Police Department is organized into a number of units, including patrol, investigations, support, bicycle, traffic, youth bureau, marine, domestic violence, parking enforcement, and watch persons. The Department had a total 2015 budget of \$7,540,226. The bulk of the expenditures, \$6,854,628 or approximately 91%, are for personal services (i.e. staff pay). According to the document, the Police Department has 53 positions within the department. For security reasons, the department was unable to confirm or provide details on staff size, organization, equipment, station locations, and average response time to the Project Site.²

d) Fire and EMS

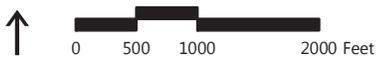
For fire services, the Project Site is in a developed portion of the Village and includes existing buildings that are protected by the Village of Mamaroneck Fire Department. According to the 2015-2016 Adopted Budget, the Fire Department consists of five companies that operate out of four fire stations. The department is a volunteer force staffed with over 200 volunteers. Department equipment includes five Engines, two Aerial Trucks, two Utility Trucks, three Chief's Vehicles, and one Fire Boat. The department

¹ Letter Response from the Town of Mamaroneck Recreation Department, dated: February 25, 2016 (see Appendix K)

² Email Response from the Village of Mamaroneck Police Department, dated: February 10, 2016 (see Appendix K)



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Hampshire Country Club - PRD

Village of Mamaroneck, NY

Community Facilities

Source: Westchester County GIS, 2009



responds to approximately 800 fire emergencies per year. The closest fire station is at the intersection of Mamaroneck Avenue and Palmer Avenue, approximately one mile to the north (See Exhibit 3N-2 Community Facilities).

The Fire Department had a total budget of \$652,850 in 2015. The bulk of its expenses are for equipment and contractual expenses (e.g., auto repairs, fuel, utilities).

The Project Site is also served by the Volunteer Mamaroneck Emergency Medical Service (MEMS). MEMS, with a membership of 65 volunteers, operates one Advanced Life Support ambulance 24 hours a day, 365 days per year, and one Basic Life Support unit available for standbys and emergency conditions. The MEMS headquarters is located at 220 North Barry Avenue Extension, just off of Mamaroneck Avenue and approximately 2.5 miles north of the Project Site. The Town of Mamaroneck Ambulance District provides one paid professional paramedic for the MEMS first due unit. MEMS is dispatched through the Westchester County Department of Emergency Services.³

The Village budgeted \$78,001 for Ambulance Services in 2015, including building improvement and contract services. In that year alone, MEMS responded to over 1,600 calls for service including emergencies and event standbys. Call volume has consistently increased year over year. The average response time for calls for service within the Village of Mamaroneck is between three and eight minutes.

Emergency vehicles have existing access to the Project Site from the southwest via Eagle Knolls Road and from the southeast via Cove Road.

e) Schools

The Project Site is located within the Mamaroneck Union Free School District (MUFSD), which administers six schools: four neighborhood elementary schools (Central School, Chatsworth Avenue School, Mamaroneck Avenue School, and Murray Avenue School), Hommocks Middle School, and Mamaroneck High School. The elementary schools serve students in pre-kindergarten through grade five, the Middle School serves grades six through eight, and the High School serves grades nine through twelve. The District includes residents of the Village of Larchmont, the Village of Mamaroneck, and the Town of Mamaroneck. There are two private schools located in the Village of Mamaroneck, Westchester Day School and Westchester Hebrew High School (See Exhibit 3N-2, Community Facilities). Students generated by the Proposed Action attending public school would attend Central School, Hommocks Middle School, and Mamaroneck High School.

The Westchester Putnam School Board Association reports a district-wide enrollment of 5,274 pupils for the 2015-2016 school year - an increase from the 5,205 pupils reported for 2014-2015 school year in MUFSD. Historically, the school district has seen measured enrollment increases, with the student

³ Email Response from the Mamaroneck Village Emergency Medical Service: March 30, 2016 (see Appendix K)



population growing from 4,818 students in 2002-2003 to 5,166 in 2011-2012 (an increase of 348 students, or 7%, over 9 years.)

Table 3N-2 Enrollment by School, Mamaroneck Union Free School District

School Name	Grade Levels	2015-2016 Enrollment
Central School	K-5	487
Chatsworth Avenue School	K-5	644
Mamaroneck Avenue School	K-5	723
Murray Avenue School	K-5	681
Hommocks Middle School	6-8	1,206
Mamaroneck High School	9-12	1,533
TOTAL		5,274

Source: Proposed Budget of the Board of Education, Mamaroneck Public Schools, 2015-2016 School Year

According to a 2013 report by Hudson Valley Pattern for Progress titled “The Empty Classroom Syndrome,” only 18 of 42 districts in Westchester are projected to exhibit growth between 2010 and 2020. Mamaroneck is one of those districts, projected to increase by 4% in that time period.⁴

Historic enrollment data was obtained from NYSED Student Information Repository System (SIRS) dating back to 2010-2011, exhibited in Table 3N-3 below. As indicated, enrollment numbers dropped in Central School and Mamaroneck High School after the 2010-2011 school year, and only this year have they surpassed the enrollment from five years ago. Overall, enrollment has not increased dramatically for any of the schools in the table below in the past five year. Additionally, though not shown below, enrollment in the Central School actually peaked in the 1998-1999 school year at 537 students.

Table 3N-3 Mamaroneck Schools Enrollment History

School Name	Grade Levels	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Central School	K-5	485	473	459	457	474	487
Hommocks Middle School	6-8	1,111	1,129	1,139	1,166	1,203	1,206
Mamaroneck High School	9-12	1,501	1,460	1,475	1,468	1,482	1,533

Source: NYSED Student Information Repository System (SIRS)

⁴ The Empty Classroom Syndrome, Hudson Valley Pattern for Progress (May 2013).



The 2015-2016 budget for the Mamaroneck Union Free School District is \$133,898,902, of which \$117,043,027 (or approximately 87%) comes from the local property tax levy. With a current enrollment of 5,274 students, total budgeted expenditures per pupil is approximately \$25,389. The total budgeted cost per student funded by the local property tax levy is \$22,192.

Table 3N-4 Cost Per Pupil (2015-2016)

A	B	C
2015-2016 Budget	District Enrollment	Cost Per Pupil (A ÷ B)
\$133,898,902	5,274	\$25,389

Table 3N-5 Tax Levy Per Pupil (2015-2016)

A	B	C
Local Tax Levy Funds	District Enrollment	Tax Levy Per Pupil (A ÷ B)
\$117,043,027	5,274	\$22,192

While the average total per-pupil costs are useful metrics for certain tasks, such as overall district budgeting, it is not appropriate for evaluating the marginal cost of educating a new student in situations where no new facility construction is required. This is because the average cost includes fixed administrative and capital expenditures that are not affected by the introduction of new students (e.g., superintendent salary, building maintenance and service costs, debt service, etc.) Program costs provide a more accurate assessment of the incremental cost of educating additional students generated by new residences, although it is still conservative as costs do not increase in a direct ratio.

The program component includes instructional-related activities such as the regular education and special education programs, guidance, extracurricular activities, and transportation services, among others. As identified in the district budget, program costs account for approximately \$96,350,408, or 72% of the total budget and a cost per pupil of approximately \$18,268.

As demonstrated below, only a portion of this cost is currently paid for from the local property tax levy. The portion of the program costs paid by the local real estate property tax is approximately \$15,893 per pupil. Non-property tax revenue sources, such as State Aid, make up approximately 13% of the school district's revenue.



Table 3N-6 Program Costs and Tax Levy Per Pupil (2015-2016)

A Program Costs (72% of total budget)	B District Enrollment	C Program Cost Per Pupil (A÷B)	D % Paid by Local Tax Levy	E Per Pupil Program Costs Paid by Local Tax Levy (C x D)
\$96,350,408	5,274	\$18,268	87%	\$15,893

f) Other Community Services

Other community services surrounding the Project Site include libraries, day care centers, and medical facilities. The Mamaroneck Public Library is located at the corner of Prospect Avenue and Library Lane, about one mile north of the Project Site. Table 3N-7 below shows the name and location of local day care centers serving the Village of Mamaroneck.

Table 3N-7 Mamaroneck Day Care/After-School Centers

Facility	Address
Children’s Corner Before- and After-school Program	130 Hommocks Road
Kathy’s Kids Day Care, Inc.	1215 Henry Avenue
Keeps Inc. After School Child Care	168 West Boston Post Road
Kidz Korner of Mamaroneck, Inc.	705 North Barry Street
Liberty Montessori School	631 West Boston Post Road
Little Feet First Day Care	814 Hall Street
Little Flower Nursery School	110 Spruce Street
Little Sweethearts Day Care	929 Lester Avenue
Mamaroneck Child Development Center	134 Center Avenue
Mamaroneck Community Nursery School Toddler Center	122 Fenimore Road
My Gym Larchmont Child Care	1030 West Boston Post Road
Nana’s Kids Child Care	615 Mamaroneck Avenue
Sakura Gakuen Day Care	16 Halstead Avenue
Westchester Jewish Center Nursery School	175 Rockland Avenue

The closest hospital to the Project Site is the Montefiore New Rochelle Hospital, located at 50 Guion Place, New Rochelle, a little over four miles away. The table below provides a list of other medical facilities and resources nearby.



Table 3N-8 Medical Facilities

Facility	Facility Type	Address
Larchmont Women’s Center	Women’s health clinic	2345 Boston Post Road, Larchmont
PM Pediatrics Westchester	Specialized urgent care	620 East Boston Post Road, Mamaroneck
The Sarah Neuman Center	Rehab and long-term nursing home care	845 Palmer Avenue, Mamaroneck
MDXpress	Urgent care facility	1030 West Boston Post Road, Mamaroneck
St. Vincent’s Hospital Westchester	Mental healthcare facility	275 North Street, Harrison
Burke Rehabilitation and Outpatient Clinic	Physical therapy clinic	703 West Boston Post Road, Mamaroneck

2. Future without the Proposed Project

In a future without the proposed project, the previously described demographics and Village services would represent the baseline condition in the Village of Mamaroneck in the short term. As discussed in Section Chapter 3A, current economic factors at the Project Site driving the need for the proposed development would continue in the future. These factors include a downward trend in golfing over the past decade consistent with regional and national trends on both public and private courses. This data establishes that it would be difficult for the membership club at Hampshire Country Club to remain viable without the introduction of other revenue sources. The Applicant has determined that downsizing the golfing recreational use and improving the rest of the Project Site with a residential development is the best permissible option under existing zoning to counteract these economic trends.

In the long term, without the Proposed Action, the golf course and membership club would not be a sustainable business. Operations of the club, and the continual provision of recreational space at the Project Site, would cease, eliminating a valued recreational facility within the community.

3. Potential Impacts

a) Demographics

The addition of 105 new residential units is projected to bring approximately 335 residents to the Project Site, as demonstrated in Table 3N-9. If all of these residents were new to the Village of Mamaroneck, the population of the Village would increase approximately 1.8% based on the Village’s 2014 population of 19,133. The number of housing units in the Village would increase approximately 1.3% based on the 2014 American Community Survey estimates. The development would also contribute to an updated housing stock. It is anticipated that the proposed residential units, both single-family homes and



townhomes, would attract young families to the Village. The Applicant does not anticipate significant impacts to any other demographic metrics discussed in this chapter.

Table 3N-9 Proposed Action Resident Population Projections

Unit Type	Number of Units	Multiplier	Total Projected Persons
4-bedroom Single-Family Home	44	3.67	162
3-bedroom Carriage Home	61	2.83	173
TOTAL	105		335

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, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

b) Open Space and Recreation

The Proposed Action would result in the loss of a portion of the private recreational use on-site, the golf course, which is currently open to Hampshire Country Club members only. The Applicant believes, however, that the proposed nine-hole golf course to be maintained on the Project Site, supplemented by the concentration of private golf club alternatives in adjacent municipalities, would accommodate any resident looking to participate in golf as a recreation activity. The swimming pool and tennis courts would remain in use to serve current and future country club members.

In place of a portion of the private recreational use, the proposed project would include 36 acres of shared open space to serve current the future residents of the Planned Residential Development. These open spaces would provide passive recreational opportunities in addition to vegetative buffers separating the proposed development from the existing surrounding neighborhoods, as depicted in the proposed Landscaping Plan (see Exhibit 3N-3).

In addition, the Project Site is well-served by surrounding public open space resources, offering opportunities for both active and passive uses. The Proposed Action is not expected to significantly impact existing public spaces and recreational facilities, including Hommocks Pool and Hommocks Park Ice Rink, since new residents at the development would comprise less than 2% of the Village's current population. The Recreation Department expressed concerns regarding parking capacity at the pool and ice rink⁵. However, given the Project Site's proximity to these facilities and easy access via Hommocks and Eagle Knolls Roads, it is not anticipated to generate a significant parking need. In addition, some

⁵ Letter Response from the Town of Mamaroneck Recreation Department, dated: February 25, 2016 (see Appendix K)



PLANT SCHEDULE

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
JVE	14	Juniperus virginiana 'Emerald Sentinel'	Eastern Redcedar	6 - 7 HT.
PA	13	Picea abies	Norway Spruce	6 - 7 HT.
PP	9	Picea pungens	Colorado Spruce	6 - 7 HT.
TPG	15	Thuja plicata 'Green Giant'	Western Arborvitae	6 - 7 HT.
CL	11	Cupressocyparis leylandii	Leyland Cypress	6 - 7 HT.
SHADE TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
ARS	36	Acer rubrum 'Franksred' TM	Red Sunset Maple	2 - 2 1/2' CAL
AFJ	27	Acer x freemanii 'Jeffred'	Autumn Blaze Maple	2 - 2 1/2' CAL
BNH	20	Betula nigra 'Heritage'	Heritage River Birch	2 - 2 1/2' CAL
CBF	18	Carpinus betulus 'Franz Fontaine'	Franz Fontaine Hornbeam	2 1/2 - 3' CAL
CO	16	Celtis occidentalis	Common Hackberry	2 - 2 1/2' CAL
CK	20	Chadronia henricus	American Yellowwood	2 - 2 1/2' CAL
LS	36	Liquidambar styraciflua	Sweet Gum	2 - 2 1/2' CAL
NS	30	Nyssa sylvatica	Sour Gum	2 - 2 1/2' CAL
PAL	34	Platanus x acerifolia 'Liberty'	London Plane Tree	2 - 2 1/2' CAL
QB	22	Quercus bicolor	Swamp White Oak	2 - 2 1/2' CAL
QC	15	Quercus coccinea	Scarlet Oak	2 - 2 1/2' CAL
QP	20	Quercus phellos	Willow Oak	2 - 2 1/2' CAL
TAR	27	Tilia americana 'Redmond'	Redmond American Linden	2 - 2 1/2' CAL
UM	22	Ulmus x 'Morton'	Accolade Elm	2 - 2 1/2' CAL
ZS	27	Zelkova serrata 'Spring Grove'	Spring Grove Zelkova	2 - 2 1/2' CAL

NOTE

SEE BUILDING FOUNDATION PLANTINGS ENLARGEMENTS ON PLANTING DETAILS & NOTES SHEET.





new residents may use the existing pool and tennis courts at the Hampshire Country Club, which would remain in use and open to existing and future club members.

c) Police

The addition of 105 new residential units would generate approximately 335 residents at the Project Site, according to Table 3N-9 above. The 1.8% increase over the 2014 population likely would result in a proportionate increase in demand for police services, which includes an increase of 0.67 police personnel, 67 square feet of facility space, and 0.07 vehicles, according to the planning standards published in the Urban Land Institute's Development Assessment Handbook⁶. As the quantified impacts are marginal, these projected increases are not considered significant. Additional taxes generated from the Proposed Action are anticipated to cover the cost of these additional police services. The projected Village taxes are \$1,304,928 annually, as detailed in Chapter 3O, Fiscal and Economic Conditions.

Access to the Project Site would be provided at three locations: Eagle Knolls Road would provide access to the southern cluster of carriage homes; the extended Cove Road from the southwest would provide access to the single-family homes, the northwest cluster of carriage homes, and the existing country clubhouse and pool facility; and Cooper Avenue from the north would provide exit-only access from the final cluster of carriage homes, in addition to the single-family homes along Cove Road. The Police Department indicated that the proposed site access would be adequate for the new development.⁷

d) Fire and EMS

This population increase of 335 new residents would also likely result in a proportionate increase in demand for fire and emergency medical services. The fire service increases include an increase of 0.6 fire personnel, 83.8 square feet of facility space, and 0.07 additional vehicles. The emergency medical services (EMS) may include an additional 12.2 EMS calls per year, 0.05 EMS full-time personnel, and 0.01 EMS vehicles.⁸ As these quantified impacts for both of these services appear to be marginal, these impacts are not considered significant. Additional taxes generated from the absorption of the project are anticipated to cover the cost of additional fire and EMS services. The projected Village taxes are \$1,304,928 annually.

In an email response from March 30, 2016, MEMS provided an alternative projection for increased demand for emergency services from the Proposed Action. The MEMS calculation generated an estimate of 27 additional calls for service annually, more than the 12.2 calls estimated above. However,

⁶ Model Factors for Social Impact Analysis (Police), Development Impact Assessment Handbook. Urban Land Institute, 1994.

⁷ Email Response from the Village of Mamaroneck Police Department, dated: February 10, 2016 (see Appendix K)

⁸ Model Factors for Social Impact Analysis (Fire and Emergency Medical Services), Development Impact Assessment Handbook. Urban Land Institute, 1994.



the email states in part, "MEMS believes that the additional calls for service as a result of the increase in residential population and other human activity are within the response capabilities of the organization."⁹

The Fire Department and EMS would have three access points to the Project Site. See section 3C above for further detail. In its email response, MEMS indicated that the proposed site access and vehicle turnaround areas are adequate.

e) Schools

Utilizing the Residential Demographic Multipliers by Rutgers University Center for Urban Policy Research (June 2006), the Proposed Action is projected to generate approximately 57 public-school children. These 57 public school children would be spread throughout the 13 grades (K-12).

Table 3N-10 Projected Public School-Children Generated

Unit Type	Number of Units	Student Multiplier	Public School Students
4-bedroom Single-Family Home	44	.87	39
3-bedroom Carriage Home	61	.28	18
TOTAL	105		57

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, All Public School Children, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

The School District has an enrollment of 5,274 students (2015-2016), therefore, the additional 57 students would increase total enrollment by 1.1%, to 5,331 students.

For comparison purposes, a multiplier was also applied to determine the total number of school-aged children generated (public and private school). As indicated in the table below, it is projected that 71 total school-age children would be generated from the Proposed Action.

⁹ Email Response from the Mamaroneck Village Emergency Medical Service: March 30, 2016 (see Appendix K)



Table 3N-11 Total Projected School-Children Generated

Unit Type	Number of Units	Student Multiplier	Total School-Age Children
4-bedroom Single-Family Home	44	1.05	47
3-bedroom Carriage Home	61	.39	24
TOTAL	105		71

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, All School Children, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

The table below shows the breakdown of potential new students generated by the Proposed Action using the standard Rutgers multiplier for each school, assuming even distribution across each grade. This equates to approximately four to five additional students for each grade. As discussed above, Central School Elementary School has the capacity for at least 50 additional students, based on its peak enrollment of 537 students during the 1998-1999 school year. Therefore, it is anticipated that Central School has the capacity to accommodate the 26 additional students generated from the Proposed Action.

Table 3N-12 New Public School-Children Generated, by School

School Name	Grade Levels	New Students
Central School	K-5	26
Hommocks Middle School	6-8	13
Mamaroneck High School	9-12	18
TOTAL		57

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, All Public School Children, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

Applying the per student programmatic cost from Table 3N-6 of \$15,893 paid by local property taxes to the estimated 57 new public school students indicates that the proposed project could result in an additional cost of \$905,901 to the Mamaroneck Union Free School District. These figures can be compared with the estimated property tax revenues to the school district from the project. As demonstrated in Chapter 3O, Fiscal and Economic Conditions, the estimated property tax revenues to the school district is \$2,604,098. Using these figures, the Mamaroneck Union Free School District would receive an annual surplus of tax revenue of \$1,698,197.



f) Cumulative Impacts

As mentioned, there are currently five other proposed or approved developments in the Village of Mamaroneck, according to the Village Planning Department. These include 690 Mamaroneck Avenue (21 units), 422 East Boston Post Road (13 units), 270 Waverly Avenue (96 units), 532 West Boston Post Road (7 units), and 620 West Boston Post Road (6 units). Combined, these five developments would add approximately 143 units of housing to the Village. If completed, the majority of the new units would be concentrated in a new development at 270 Waverly Avenue, containing 64 one-bedroom units and 32 two-bedroom units. According to a new study from the Village of Mamaroneck Planning Department, together these developments would generate a combined 19 school age children, including 10 generated from 270 Waverly. (Elementary aged school children from this development would attend Mamaroneck Elementary School, not Central School. The DEIS for 270 Waverly concludes that impacts to community facilities and services would be negligible. The other four proposed or approved developments, if completed, are relatively small and would not contribute significantly to any cumulative demand for community services. Cumulative impacts relating to off-site development in the Village are not anticipated.

4. Mitigation

The additional population projected from the new residences is not anticipated to create a significant adverse impact to the Village of Mamaroneck's provision of community services, including its Police Department, Recreation and Parks Department, Fire Department, and Emergency Medical Services.

Annual property taxes generated from the Project would exceed current taxes (See Chapter 30, Fiscal and Economic Conditions) and it is anticipated that the additional tax revenue would cover any incremental costs to the Police Department, Fire Department, Recreation and Parks Department, and Emergency Medical Services, to service the project. The projected Village taxes are \$1,304,928.

Though a significant recreational resource, the existing golf course, would be downsized under the Proposed Action, the Applicant is confident that the nine-hole golf course to be maintained, in addition to the local supply of golfing opportunities, would be able to accommodate this loss. In exchange, the Proposed Action will protect 36 acres of shared open space for the community.

The potential impact of 57 new public school children in the school district is not considered significant given the sizable annual surplus of tax revenue anticipated.

No other mitigation measures are proposed.



O. FISCAL AND ECONOMIC CONDITIONS

1. Existing Conditions

a) Current Taxes

The Proposed Action consists of two tax parcels, 4-14-20 in the Town of Mamaroneck and 9-42-568 in the Village of Mamaroneck. The Village/Town of Mamaroneck municipal boundary line passes through the Project Site, creating a 98.9-acre portion in the Village of Mamaroneck and a smaller 7.3-acre portion within Town of Mamaroneck. Both the Village of Mamaroneck and the Town of Mamaroneck pay taxes to the Town of Mamaroneck Assessor's Office. Existing taxes paid on both parcels are listed in Table 3O-1 on the following page.

According to 2016 Town of Mamaroneck Tax Rolls, approximately \$22,839 taxes were paid by tax parcel 4-14-20 and \$322,441.27 for tax parcel 9-442-568. Of the existing total taxes generated from the Project Site, approximately 50% of the taxes generated from the Project Site are taxes paid towards the Mamaroneck Union Free School District.

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Table 30-1 Existing Taxes

Tax Parcel 4-14-20 (Town of Mamaroneck)	Assessed Value	Tax Rate (per \$1,000)	Taxes Paid
Westchester County	1,000,000	3.37323	\$3,373.23
General Town	1,000,000	0.419668	\$419.67
Outside Villages	1,000,000	2.241576	\$2,241.58
Highways	1,000,000	1.125794	\$1,125.79
Mamaroneck Sewer, Town	1,000,000	0.550651	\$550.65
Fire District, Town	1,000,000	0.782919	\$782.92
County Refuse, Town	1,000,000	0.307353	\$307.35
Light District, Town	1,000,000	0.061837	\$61.84
Garbage District, Town	1,000,000	0.508254	\$508.25
Ambulance, Town	1,000,000	0.058761	\$58.76
Mamaroneck United Free School District	1,000,000	13.40936	\$13,409.36
TOTAL			\$22,839.40
Tax Parcel 9-42-568 (Village of Mamaroneck)	Assessed Value	Tax Rate (per \$1,000)	Tax Projection
Village Tax	12,000,000	6.73685	\$80,842.20
Westchester County	12,000,000	4.709663	\$56,515.96
General Town	12,000,000	0.419668	\$5,036.02
Mamaroneck Sewer, Town	12,000,000	0.550651	\$6,607.81
County Refuse, Town	12,000,000	0.307353	\$3,688.24
Ambulance, Town	12,000,000	0.058761	\$705.13
Library District	12,000,000	0.6778	\$8,133.60
Mamaroneck United Free School District	12,000,000	13.40936	\$160,912.32
TOTAL			\$322,441.27
TOTAL FOR BOTH PARCELS			\$345,280.68¹

Source: Town of Mamaroneck Tax Assessor, 2016; School District rate is for 2016-2017 Academic Year

¹ Hampshire Recreation recently prevailed in a Tax Certiorari proceeding, resulting in a reduced assessment for the Project Site. The Tax Assessment for the years 2010, 2011, and 2012 in the Village of Mamaroneck has been reduced to 5.3 million in 2010 and 5.2 million in years 2011 and 2012. It is anticipated that the current assessed value of the Project Site will also be reduced in the near future.



b) Current Municipal Operating Budgets

Police, Fire, and EMS

The Police Department is organized into a number of units, including patrol, investigations, support, bicycle, traffic, youth bureau, marine, domestic violence, parking enforcement, and watch persons. The Department had a total 2015 budget of \$7,540,226. The bulk of the expenditures, \$6,854,628 or approximately 91%, are for personnel services (i.e. staff pay).

The Fire Department consists of five companies that operate out of four fire stations. In 2015 it had a total budget of \$652,850. The bulk of its expenses were for equipment and contractual expenses (e.g., auto repairs, fuel, utilities).

The Village budgeted \$78,001 for Ambulance Services in 2015, including building improvement and contract services.

Schools

The Project Site is located within the Mamaroneck Union Free School District (MUFSD), which administers six schools: four neighborhood elementary schools (Central School, Chatsworth Avenue School, Mamaroneck Avenue School, Murray Avenue School), Hommocks Middle School, and Mamaroneck High School.

The Westchester Putnam School Board Association reports a district-wide enrollment of 5,275 pupils for the 2015-2016 school year - an increase from the 5,205 pupils reported for 2014-2015 school year. Historically, the MUFSD has seen measured enrollment increases, with the student population growing from 4,818 students in 2002-2003 to 5,166 in 2011-2012 (an increase of 348 students, or 7%, over 9 years).



Table 30-2 Enrollment by School, Mamaroneck Union Free School District

School Name	Grade Levels	2015-2016 Enrollment
Central School	K-5	487
Chatsworth Avenue School	K-5	644
Mamaroneck Avenue School	K-5	723
Murray Avenue School	K-5	681
Hommocks Middle School	6-8	1,206
Mamaroneck High School	9-12	1,533
TOTAL		5,274

Source: Proposed Budget of the Board of Education, Mamaroneck Public Schools, 2015-2016 School Year

The 2015-2016 budget for the Mamaroneck Union Free School District is \$133,898,902, of which \$117,043,027 (or approximately 87%) comes from the local property tax levy. With a current enrollment of 5,275 students, total budgeted expenditures per pupil are therefore approximately \$25,384. The total budgeted cost per student funded by the local property tax levy is \$22,188.

Table 30-3 Cost Per Pupil (2015-2016)

A	B	C
2015-2016 Budget	District Enrollment	Cost Per Pupil (A ÷ B)
\$133,898,902	5,274	\$25,389

Table 30-4 Tax Levy Per Pupil (2015-2016)

A	B	C
Local Tax Levy Funds	District Enrollment	Tax Levy Per Pupil (A ÷ B)
\$117,043,027	5,274	\$22,192

While the average total per-pupil costs are useful metrics for certain tasks, such as overall district budgeting, it is not appropriate for evaluating the marginal cost of educating a new student in situations where no new facility construction is required. This is because the average cost includes fixed administrative and capital expenditures that are not affected by the introduction of new students (e.g., superintendent salary, building maintenance and service costs, debt service, etc.). Program costs provide a more accurate assessment of the incremental cost of educating additional students generated by new residences, although it is still conservative as costs do not increase in a direct ratio.

The program component includes instructional-related activities such as the regular education and special education programs, guidance, extracurricular activities, and transportation services, among



others. As identified in the district budget, program costs account for approximately \$96,350,408, or 72% of the total budget and a cost per pupil of approximately \$18,265.

Table 30-5 Program Costs and Tax Levy Per Pupil (2015-2016)

A Program Costs (72% of total budget)	B District Enrollment	C Program Cost Per Pupil (A÷B)	D % Paid by Local Tax Levy	E Per Pupil Program Costs Paid by Local Tax Levy (C x D)
\$96,350,408	5,274	\$18,268	87%	\$15,893

As noted above, only a portion of this cost is currently paid for from the local property tax levy. The portion of the program costs paid by the local real estate property tax is approximately \$15,891 per pupil. Non-property tax revenue sources, such as State Aid, make up approximately 13% of the school district's revenue.

2. Future without the Proposed Project

In a future without the Proposed Project, the previously described tax generation, demographics and Village services would represent the baseline condition in the Village of Mamaroneck. It is assumed that tax generation would remain stable when the club is operable but would be reduced even further if the club use were to cease as a result of current economic pressures on private golf courses in the area, as described in Chapter 3A. See Chapter 4, the No Action Alternative for more detailed information on the future without the Proposed Project.

3. Potential Impacts

a) Community Facilities and Services

The addition of 105 new residential units is projected to bring approximately 335 residents to the Project Site, as demonstrated in Table 30-6. If all of these residents were new to the Village of Mamaroneck, the population of the Village would increase approximately 1.8% based on the Village's 2014 population of 19,133. The number of housing units in the Village would increase approximately 1.3% based on the 2014 American Community Survey estimates. The development would also contribute to an updated housing stock.



Table 30-6 Proposed Action Resident Population Projections

Unit Type	Number of Units	Multiplier	Total Projected Persons
4-bedroom Single-Family Home	44	3.67	162
3-bedroom Carriage Home	61	2.83	173
TOTAL	105		335

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, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

Utilizing the Residential Demographic Multipliers by Rutgers University Center for Urban Policy Research (June 2006), the Proposed Action is projected to generate approximately 57 public-school children. These 57 public school children would be spread throughout the 13 grades (K-12).

Table 30-7 Projected Public School-Children Generated

Unit Type	Number of Units	Student Multiplier	Public School Students
4-bedroom Single-Family Home	44	.87	39
3-bedroom Carriage Home	61	.28	18
TOTAL	105		57

Source: Rutgers University, Center for Urban Policy Research: Residential Demographic Multipliers - Estimates of the Occupants of New Housing, June 2006 (New York, All Public School Children, Single-Family Detached, 4 BR, More than \$329,500 and Single-Family Attached, 3 BR, More than \$269,500)

The School District has an enrollment of 5,274 students (2015-2016), therefore, the additional 57 students would increase total enrollment by 1.1%, to 5,331 students. With a per pupil cost of \$15,893, the addition of 57 new students to the School District would result in \$905,901 of additional program costs.



Table 3O-8 Estimated Tax Projections

Tax Parcel 4-14-20 (Town of Mamaroneck)	Assessed Value*	Tax Rate (per \$1,000)	Tax Projection
Westchester County	500,000	3.37323	\$1,687
General Town	500,000	0.419668	\$210
Outside Villages	500,000	2.241576	\$1,121
Highways	500,000	1.125794	\$563
Mamaroneck Sewer, Town	500,000	0.550651	\$275
Fire District, Town	500,000	0.782919	\$391
County Refuse, Town	500,000	0.307353	\$154
Light District, Town	500,000	0.061837	\$31
Garbage District, Town	500,000	0.508254	\$254
Ambulance, Town	500,000	0.0508254	\$25
Mamaroneck Union Free School District	500,000	13.40936	\$6,705
Total			\$11,416
Tax Parcel 9-42-568 (Village of Mamaroneck)	Assessed Value	Tax Rate (per \$1,000)	Tax Projection
Village Tax	193,700,000	6.73685	\$1,304,928
Westchester County	193,700,000	4.70663	\$911,674
General Town	193,700,000	0.419668	\$81,290
Mamaroneck Sewer, Town	193,700,000	0.550651	\$106,661
County Refuse, Town	193,700,000	0.307353	\$59,534
Ambulance, Town	193,700,000	0.058761	\$11,382
Library District	193,700,000	0.6778	\$131,290
Mamaroneck United Free School District	193,700,000	13.40936	\$2,597,393
Total			\$5,204,152
Total for both parcels			\$5,215,568

Source: Town of Mamaroneck Tax Assessor, 2016; School District rate is for 2016-2017 Academic Year
 *Assessed Value for the Tax Parcel located in the Town of Mamaroneck (4-14-20) is assumed to be 50% less than the parcel's existing assessed value. The existing 18-hole golf course is planned to be converted into a 9-hole golf course, thus reducing the value of the value of the parcel. None of the proposed residential units will be constructed on this parcel of the Project Site.



All of the 105 proposed residential units will be constructed on the Village of Mamaroneck parcel (9-42-568) of the Project Site. The total assessed value of all of the proposed units is \$193,700,000. Each of the 44 single-family homes are assessed at \$2,600,000 and each of the 61 carriage, or townhouses, are assessed at \$1,300,000. While the projected revenue generated from the Town of Mamaroneck parcel (4-14-20) is half of the existing tax revenue at \$11,162 due to the reduction of the 18-hole golf course to a 9-hole course, the projected revenue from the Village of Mamaroneck parcel (9-42-568) is \$5,204,152. In total, the net increase in the amount of tax revenue generated from the Proposed Action is approximately \$4,870,287, greater than the existing tax revenue generated from the Project Site.

b) Employment Generation

Construction jobs

It is anticipated that approximately 285 construction jobs will be generated from constructing the 105 residential units over the course of a phased construction period of 5.3 years in length.

The total estimated cost of construction for the Project is approximately \$123,000,000. It is estimated that 40% (or \$49,200,000) of these costs will account for labor costs. The following steps were used to determine the number of construction workers needed annually to build the Project:

Step 1: Number of construction hours needed to build the project

The average hourly compensation per construction worker (including wages, fringes, profit and overhead) is estimated to be \$85. By dividing the estimated labor costs total (\$49,200,000) by \$85, it is estimated that it will take 578,824 construction hours to build the entire Project.

Step 2: Number of construction worker hours per year

By dividing the total construction hours (578,824) by the total number of years of the construction period will take place (5.3), it is estimated that 109,212 construction hours will be worked each year.

Step 3: Number of construction workers needed per year

According to the U.S. Bureau of Labor Statistics, the average number of hours worked by a construction worker weekly is 39.1² or 2,034 hours annually. By dividing the number of construction hours required per year (109,212) by the average number of hours a construction workers worked per year (2,034), it is estimated that 54 construction workers would be needed to build the project each year.

² <http://www.bls.gov/iag/tgs/iag23.htm>



Operation and maintenance jobs

As the clubhouse is currently in operation, the existing number of jobs that are held at the clubhouse are 15 during off-season and 75 during on-season. At full built out of the Project, it is anticipated that the number of jobs associated with the clubhouse would increase to 16 during off-season and 80 during on-season, an increase of 6.4%.

c) Resident Expenditures

Consumers who currently live within a one-mile radius of the Proposed Action spend approximately 15.9 percent of their after tax available income on retail purchases such as apparel, services, entertainment, recreation, personal care products, and furniture. The households in the 105 new units can be expected to have disposal income available to be spent on these categories identified in Table 30-9 below.

**Table 30-9 Average Household Budget Expenditures
Select Project Groups - 2015**

Product Group	Per Household*	Per 105 Households
Food Away from Home	\$7,627	\$800,835
Appeal and Services	\$5,402	\$567,210
Entertainment and Recreation	\$7,772	\$816,060
Household Furnishings and Equipment	\$4,150	\$435,750
Personal Care Products and Services	\$1,817	\$190,785
Total	\$26,768	\$2,810,640

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 mile radius of the Project Site.

The Proposed Action will result in greater economic activity in the Town and Village of Mamaroneck. The proposed 105 multi-family housing units would provide an increase of new residents with disposable incomes. Some of this income can be captured in the Town and Village and will support existing businesses within the Town and Village. Based on the current spending patterns of residents within one mile of the Project Site, the new residents are anticipated to spend a total of \$2,810,640 on common disposable income expenditures, including apparel, entertainment, restaurants, recreation, personal care and household items. Thus, the Proposed Action would be economically beneficial for the business community of the Town and Village of Mamaroneck.



d) Direct and Indirect Economic Impacts

Data from the Regional Input-Output Modeling System (RIMS II) is utilized to calculate the direct and indirect economic impacts from the construction of the Proposed Action. This model measures secondary regional impacts that can be attributed to the construction and operation of the proposed project. Individuals, including laborers and contractors constructing the development will spend their income within the region. The regional area applied to the multipliers analysis for the Project is Westchester County. Construction impacts are a one-time activity but household spending during the operational phase continues to accrue annually.

The RIMS II model incorporates two types of multipliers, final demand multipliers and direct effect multipliers. Final demand multipliers are used to estimate how the project will impact output, earnings, and employment and they assist in quantifying the number of secondary impacts jobs that are created in the particular region for every million dollars spent on the project.

Direct effect multipliers are used to estimate the economic impact of new earnings and employment associated with a project. Direct effect multipliers can dictate initial changes in employment by industry, demonstrating how many secondary jobs can be supported by a certain number of newly created jobs at a particular location. Initial changes in earnings are available by industry to show the amount secondary payrolls that can be supported by known payroll spending in a particular project.

RIMS II Multipliers

Construction Phase

The final demand multipliers indicate that each dollar spent on construction increases the total output of the Westchester County regional economy by \$1.5022. For each dollar spent on construction, an additional \$0.8328 value is added to the output of all industries in the region. Earning multipliers indicate that for each dollar spent on construction, the total earnings in the region increase by \$0.2992. As previously calculated above, construction employment is projected to hold 285 jobs over the course of the construction period.

While utilizing the total estimated construction costs of \$123,000,000 and the multipliers discussed above, the regional output goods and services generated from the construction of the project would be approximately \$184,770,600, an increase of \$61,770,600 from the initial cost of construction. Additionally, earnings are estimated to be \$36,801,600 generated into the regional economy. The added value of output towards the regional economy would be an increase of \$102,434,400.

For indirect final demand impacts, multipliers for utilities were considered since the implementation of utilities have a secondary impact towards the overall construction of the Project. Indirect output of goods and services is expected to be approximately \$158,411,700 from the implementation of utilities to serve the Project. Earnings are expected to increase \$13,320,900 indirectly. The project employment



to be created indirectly from the Project’s utilities is approximately 204 jobs added to the regional workforce. The added value of secondary output towards the regional economy would be an increase of \$180,199,110.

Operations Phase

RIMS II final demand multipliers were also applied to quantify the impacts on the occupied households that will be created at the completion of the Project. Utilizing the approximate assessed value of the Project (\$193,700,000), it is anticipated that the approximate total output of goods and services would increase by \$180,199,110 for the regional economy from the new households. Estimated earnings would result in approximately \$33,064,590 within the regional economy. The added value of output towards the Westchester County regional economy would be an increase of \$180,199,110.

Final demand multipliers were used to determine the indirect impacts the project would have towards the real estate industry as all of the units will be ownership and not rental. The indirect output generated from the full buildout of the Project would result in \$285,998,050 towards the Westchester County’s regional economy indirectly. Earnings would indirectly contribute approximately \$34,672,300 into the regional economy. The total value of output generated from the Project indirectly at buildout would be an increase of \$191,840,480 from the real estate industry.

Table 30-10 below summarizes the final demand direct and indirect economic impacts anticipated from the Project while it is being developed and when the proposed dwelling units are occupied.

Table 30-10 Summary of Direct and Indirect Economic Impacts

Construction Phase		
	Direct	Indirect
Output	\$184,770,600	\$158,411,700
Earnings	\$36,801,600	\$13,320,900
Employment	285*	204
Added Value	\$102,434,400	\$86,604,300
Operations Phase		
	Direct	Indirect
Output	\$180,199,110	\$285,998,050
Earnings	\$33,064,590	\$34,672,300
Employment	545	1,121
Added Value	\$108,665,700	\$191,840,480

Source: 2007/2013 RIMS II multipliers, Bureau of Economic Analysis.

Multipliers are based on 2007 Benchmark Input-Output Region: Westchester County, Type II; *Construction employment was calculated using data from U.S. Bureau of Labor Statistics, 2016 and the applicant.



4. Mitigation

The proposed project would result in a net positive impact for the taxing districts, including the Mamaroneck Union Free School District, the Town/Village and Westchester County. The development is anticipated to generate a combined total of \$5,215,568 in annual property taxes, which is \$4,870,287 greater than the taxes generated at the Project Site currently.

The estimated annual tax surplus from the Project for the School District is approximately \$1,698,197 per year using estimates of 57 public students to be generated at the time of Project completion. The final amount will depend on the actual number of school children residing in the development. The economic benefits to the Town would include tax revenues and other positive impacts to the local economy including employment during construction, and secondary economic impacts from the residents who will occupy the 105 dwelling units of the Project. It is not anticipated that the Proposed Action would result in any significant adverse impacts to the taxing districts. It is estimated that the overall result of the proposed development will be a net positive fiscal benefit to the Town, Village, County, other taxing districts and the school district.

DRAFT



P. HISTORIC AND CULTURAL RESOURCES

A site file and literature review was conducted utilizing the on-line map catalogue from the University of New Hampshire, Diamond Library and the Westchester County Archives and site files from the New York Office of Parks, Recreation, and Historic Preservation (NY SHPO).

The Project Site falls within an archaeologically sensitive area (ASA) as defined by NY SHPO based on the presence of previously reported archeological sites within at least 1/2-mile of the Project Site. In November 2015, VHB, on behalf of the Applicant, submitted a Notice of Project (NOP) to NY SHPO. NY SHPO assigned the project number 15PR06513, and on November 10, 2015, provided a comment letter which stated in part "Based upon this review, the New York SHPO has determined that no historic properties will be affected by this undertaking" (the "No Effects Letter"). A Phase 1A Cultural Resource Report is not necessary. A copy of the letter can be found in Appendix L.

1. Existing Conditions

a) Background and Literature Review

Initial Project Site file research was conducted online on November 5, 2013 using the NY SHPO Cultural Resources Information System (CRIS) and the on-line map catalogues of the Westchester County Archives and the University of New Hampshire, Diamond Library.

This research uncovered no known archeological sites or recorded historic buildings/structures within the Project Site. However, there are three previously reported New York State Museum (NYSM) archaeological sites within a 1/2-mile of the Project Site. These sites, documented in the 1920s and 1930s, hold the following NYSM site numbers: 5213; 5224; and 5478. The Project Site falls within ASAs as defined by NY SHPO.

NYSM #5213 is the closest of the three sites which, as currently mapped, encompasses the Greacen Point and Satan's Toe peninsulas and the area between Delancey and Orienta points, Bleeker Avenue, and the Long Island Sound. The NY SHPO files contain no information about the site characteristics, but most NYSM sites that have been identified in near-shore settings were classified as Native American villages and campsites. Three NY SHPO archaeological sites (sites 11907.000004, 11949.000044, 11949.000064) have been defined in recent years within one mile of the Proposed Action, all of which are Native American archaeological sites dating to the pre-EuroAmerican era.

Three historic maps provide information on the Project Site prior to its current development: the 1900 Oyster Bay USGS 15-minute quadrangle; the Bromley & Bromley 1901 Westchester County Atlas; and



the 1929-1931 Hopkins Westchester County Atlas. According to the 1900 Oyster Bay USGS map¹, prior to development as a golf course, the Project Site was a marsh with hummocks, with a floodplain less than 20 feet in elevation. At that time, two prominent feeder streams drained south and southeast into Larchmont Harbor and Delancey Cove. The 1901 Westchester County Atlas² illustrates the majority of the landholding as belonging to Thomas L. Rushmore and the eastern edge as belonging to the Estate of C. A. Howell. No buildings are shown on either property though smaller parcels with buildings are mapped on the south side of Union Avenue and along Back Street-Old Post Road. The stream that drained southeast into Delancey Cove is better defined with two secondary drainages feeding the main stem. The 1929-1931 Hopkins Westchester County Atlas³ shows that by the late 1920s, the entire Estate of C.A. Howell parcel, less the sliver on the Project Site, had been subdivided into house lots. On this map, the Project Site is subdivided in its southeast quadrant by Eagle Knolls Road, which appears to service a small cluster of house lots called "Eagle Hommocks." However, none of the lots have buildings.

As previously mentioned, the 1900 Oyster Bay USGS map shows the Project Site as a marsh with several outcroppings of ledge rock and feeder streams. At the time of the golf course's original development in the late 1920's, tidal gates were positioned to control tidal actions and to allow for the creation of additional usable land on the Project Site. The golf course was developed on the upland and filled tidal wetland.

b) Built Resources

A walkover of the Project Site was conducted on August 4, 2015 to survey existing built resources on the property. Presently, there are seven buildings and eight structures within the golf course area of the Project Site, as shown in Exhibit 3P-1, Existing Conditions Plan Golf Course Buildings and Structures. Table 3P-1 below outlines the character of each of these built resources. All of these buildings and structures were constructed as accessories to the recreational uses on the Project Site. NY SHPO evaluated photographs and descriptions of them and none were determined to be historically significant.

¹ USGS. 1900. Oyster Bay 15-minute quadrangle. University of New Hampshire Library, Diamond Map Collection.

² Bromley and Bromley. 1901. Atlas of Westchester County. Plate 18, pg. 18. Westchester County Archives (<http://archives.westchestergov.com>), digital collection: Historic Maps, 2012-07, A-0081(1)S(AA10).

³ G. M. Hopkins Co. 1929-1931. Atlas of Westchester County. Volume 1, pgs. 21-23. Westchester County Archives (<http://archives.westchestergov.com>), digital collection: Historic Maps, 2011-02, A-0100(1)S(AA1).

Table 3P-1 Built Resources

Built Resource	Character
Building A	Concrete block utility foundation
Building B	Wood frame shed
Building C	Wood and concrete block garage
Building D	Wood frame tennis facility
Building E	Concrete block maintenance building
Building F	Wood frame garage
Building G	Stucco over wood bathroom
Structure 1	Drainage channel, two ponds, tidal gates
Structures 2, 3, & 4	Tennis courts
Structure 5	Drainage channel
Structure 6	Tee retaining wall
Structure 7	Tee retaining wall
Structure 8	Metal foot bridge

2. Future without the Proposed Project

Without the proposed project, conditions on the Project Site would remain as previously described in this chapter. The No Effects Letter issued by NY SHPO on November 10, 2015 remains applicable in a future without the proposed project.

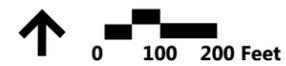
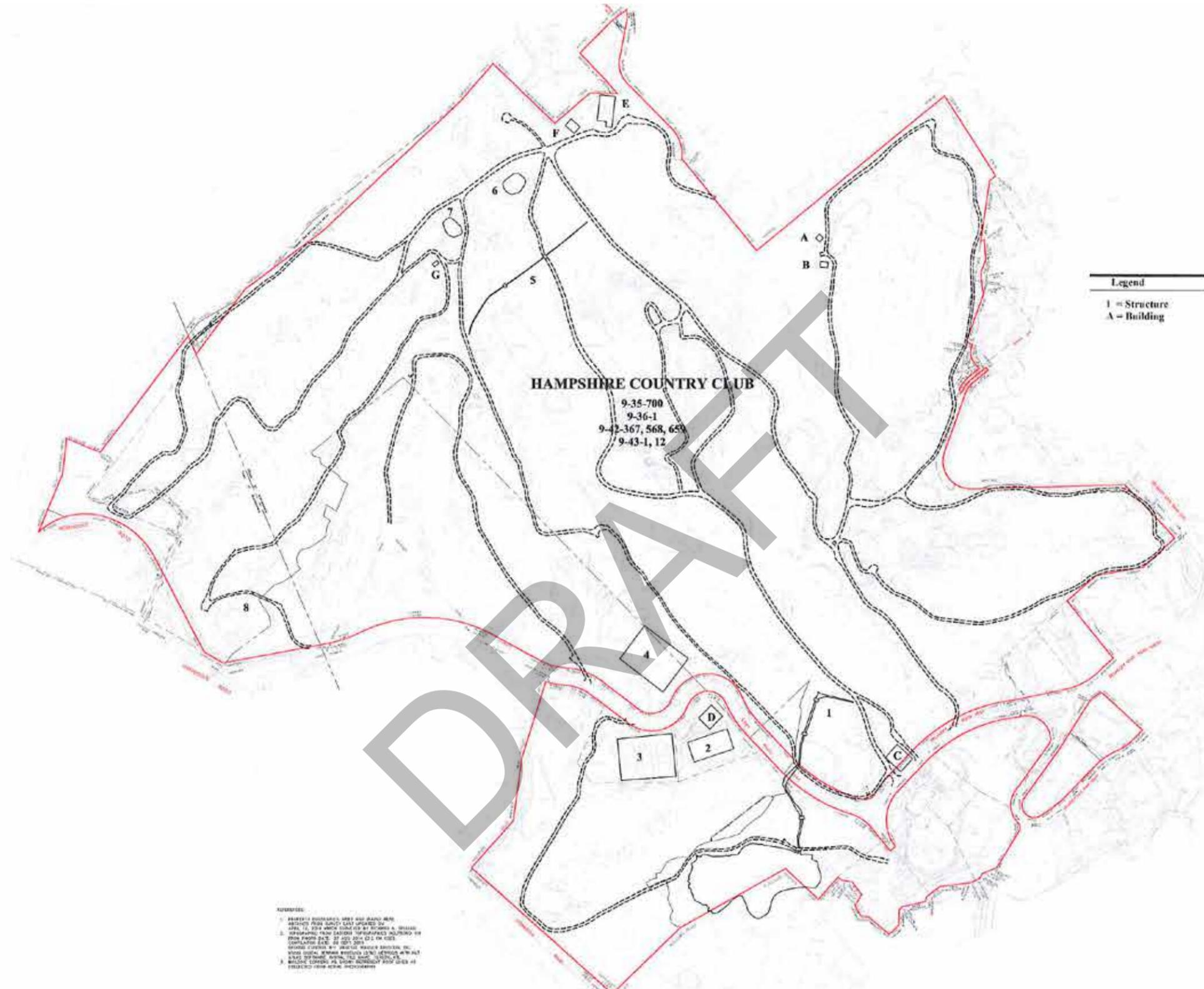
3. Potential Impacts

Of the structures and buildings currently on the Project Site, only structures and buildings that were constructed as accessories to the recreational uses on the Project Site would be removed and are not historically significant.

According to NY SHPO’s No Effects Letter, based on the background and literature review conducted, “the New York SHPO has determined that no historic properties will be affected...” In addition, no previously identified archaeological sites would be affected by the Proposed Action.

4. Mitigation

No significant cultural resource sites, buildings, structures, or objects were identified within the Project Area. No further cultural resources investigations were recommended in the November 2015 submission to NY SHPO and NY SHPO accepted that recommendation on November 10, 2015. Therefore, no mitigation measures are required.



Hampshire Country Club - PRD | Village of Mamaroneck, New York

**Existing Conditions Plan
 Golf Course Buildings and Structures**

Source: VHB



Q. ENVIRONMENTAL CONTAMINATION

1. Existing Conditions

a) Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) of the Project Site was prepared by GZA GeoEnvironmental of New York in April 2016 in general accordance with ASTM International's Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process (ASTM E1527-13). The Phase I ESA renders an opinion as to whether surficial or historical evidence indicates the presence of recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and/or historical recognized environmental conditions (HRECs), which could result in the presence of hazardous materials in the environment. The assessment included Project Site reconnaissance, review of the Project Site history, review of selected local, state, and federal regulatory records, and interviews with persons and agencies familiar with the Project Site. The findings and outcomes of the Phase I ESA are summarized in this section. The full report including methodology, regulatory review, site photographs, and mapping is provided in Appendix M.

Historically, the Project Site has been a country club and golf course since at least 1934. A review of the historical Sanborn maps indicates that prior to 1934, the Project Site and the general vicinity consisted of vacant land utilized for agricultural purposes. A review of the historical topographic maps indicates that during the development of the country club, coastal marshland and waterways that were present on the Project Site were backfilled. The source of the fill material is unknown.

The Phase I ESA notes that one septic tank on the Project Site is connected to the maintenance and workshop building in the northeastern maintenance area and concludes that the history of equipment maintenance under this condition is considered a REC. In addition, the Project Site is identified in the NY LTANKS database; the listing is identified as a "tank failure" reported on June 11, 1999. NYSDEC Spill Case No. 9902831 was subsequently assigned. The spill was closed on August 2, 1999 with no further action recommended. The Project Site is also identified in the NY SPILLS database. Spill Case No. 9902193 is associated with a tank failure, reported on May 26, 1999 for an unknown quantity of gasoline. The spill was also closed on August 2, 1999 with no further action recommended. Both closed spill cases are considered to be HRECs.

The Phase I ESA did not reveal any upgradient off-site environmental concerns, which are anticipated to affect the subsurface conditions at the Project Site.

The Phase I ESA also identified the following conditions:



Storage Tanks. There are currently three above-ground storage tanks located in the maintenance and workshop building area to the northeast of the Project Site: Tank 1 is an in-service 1,000-gallon gasoline; Tank 2 is an in-service 500-gallon diesel tank; and Tank 3 is an in-service 275-gallon No. 2 fuel oil tank. No visual evidence of release was associated with these three tanks.

Septic Systems. There was evidence of three septic systems at the Project Site. The northern-most septic tank is located near the maintenance area of the Project Site and is utilized for the maintenance and workshop buildings. A second septic system is located to the south and west of the maintenance area, and is associated with a comfort station/restroom located on the golf course. The third septic tank is located on the south side of the Site, and is associated with the tennis court pavilion.

Chemical Storage. Pool chemicals are stored in a dedicated building adjacent to the pool and consist of muriatic acid and calcium chloride flakes. Laundry-related detergents and household cleaning chemicals are stored in the primary clubhouse area. Additionally, there is one chemical storage shed containing various herbicides, pesticides, and fungicides in the northern maintenance area of the Project Site. No visual evidence of release was observed from the current chemical storage shed. As part of routine maintenance of the golf course, the use of herbicides and pesticides at the Project Site is anticipated for at least the past 40 years.

Transformers. There are two pad-mounted transformers on the Project Site. The transformers are located near the southern and northern sides of the golf course. No surficial staining was observed at either transformer location.

b) Phase II Environmental Site Assessment

A Limited Phase II ESA of the Project Site was prepared by GZA GeoEnvironmental of New York in April 2016, with the primary objective to collect and analyze shallow soil and sediment samples in order to assess the impacts of pesticide and herbicide usage at the Project Site. Twenty-one soil samples were collected at the surface (a depth of 0-6 inches) and at subsurface (a depth of 18-24 inches) in each location. Sample locations include a representative distribution across the existing golf course, including tee-boxes and greens. In addition, six sediment samples were collected from the edges of the Project Site ponds and near visible discharge pipes within the ponds. See Figure 2 in Appendix N for a map of soil and sediment sample locations. The soil sample analytical results were compared to the New York State Department of Environmental Conservation Part 375 "Unrestricted Use" Soil Cleanup Objectives (SCOs) and the "Restricted Use" Residential SCO. The findings and outcomes of the Phase II ESA are summarized below. The full report is provided in Appendix N.

Findings from the Phase II ESA include the following:

Surface Soil Samples. Arsenic was identified in eight of the 21 surface soil samples at concentrations that exceeded the Unrestricted Use SCO. The arsenic concentrations in six of these samples also exceeded the Residential Use SCO. Lead was identified in seven of the 21 surface soil samples at concentrations



that exceeded its respective Unrestricted Use SCO. None of the lead concentrations in the surface soil samples exceeded the Residential Use SCO. Six pesticides were detected in the surface soil samples (4,4'-DDD, 4,4'-DDE, 4,4-DDT, Aldrin, alpha-Chlordane, and Dieldrin) at concentrations that exceeded the Unrestricted Use SCO. Pesticides concentrations exceeding the Unrestricted Use SCO were identified in 20 of the 21 surface soil samples. The pesticides 4,4'-DDE, 4,4'-DDT and Dieldrin were identified in three of these locations at concentrations that also exceeded the Residential Use SCO. No herbicides were detected in any of the surface soil samples.

Subsurface Soil Samples. Arsenic was identified in four of the 21 subsurface soil samples at concentrations that exceeded its respective Unrestricted Use SCO. The arsenic concentrations in two of these samples also exceeded the Residential Use SCO. Lead was identified in three of the subsurface soil samples at concentrations that exceeded its respective Unrestricted Use SCO. None of the lead concentrations in the subsurface soil samples exceeded the Residential Use SCO. Eight pesticides were identified in the 21 subsurface soil samples (4,4'-DDD, 4,4'-DDE, 4,4-DDT, Aldrin, alpha-Chlordane, delta-BHC, Dieldrin, and Endrin) at concentrations that exceeded the Unrestricted Use SCO. Pesticides concentrations exceeding the Unrestricted Use SCO were identified in 15 of the 21 subsurface soil samples. The pesticide Dieldrin was identified in one of these locations at a concentration that also exceeded the Residential Use SCO. No herbicides were detected in any of the subsurface soil samples.

Sediment Samples. Arsenic was not detected in any of the sediment samples at concentrations that exceeded its respective SCO. Lead was identified in one sediment sample in the pond at the western portion of the Project Site at a concentration that exceeded its respective Unrestricted Use SCO. Six pesticides were identified in the sediment samples (4,4'-DDD, 4,4'-DDE, 4,4-DDT, Aldrin, alpha-Chlordane, and Dieldrin) at concentrations which exceeded the Unrestricted Use SCO. The exceedances were identified in five of the six sediment samples. None of the pesticide compounds exceeded their Residential Use SCO in any of the samples analyzed. Herbicide concentrations were detected in one of the sediment samples. However, there are no NYSDEC SCOs for the two herbicide compounds detected (i.e., Dicamba and Dichlorprop).

2. Future without the Proposed Project

In a future without the proposed project, environmental contamination conditions would remain as described above. See the No Action Alternative described in Chapter 4 for more detailed information.

3. Potential Impacts

The project is proposed to contain residential, open space and recreational (golf course) uses. The open space and golf course uses require soil contamination to be at or below Commercial Soil Cleanup Objectives (SCOs). The residential use requires and soil contamination to be at or below Residential SCOs. The Residential SCOs are more stringent than the Commercial SCOs.