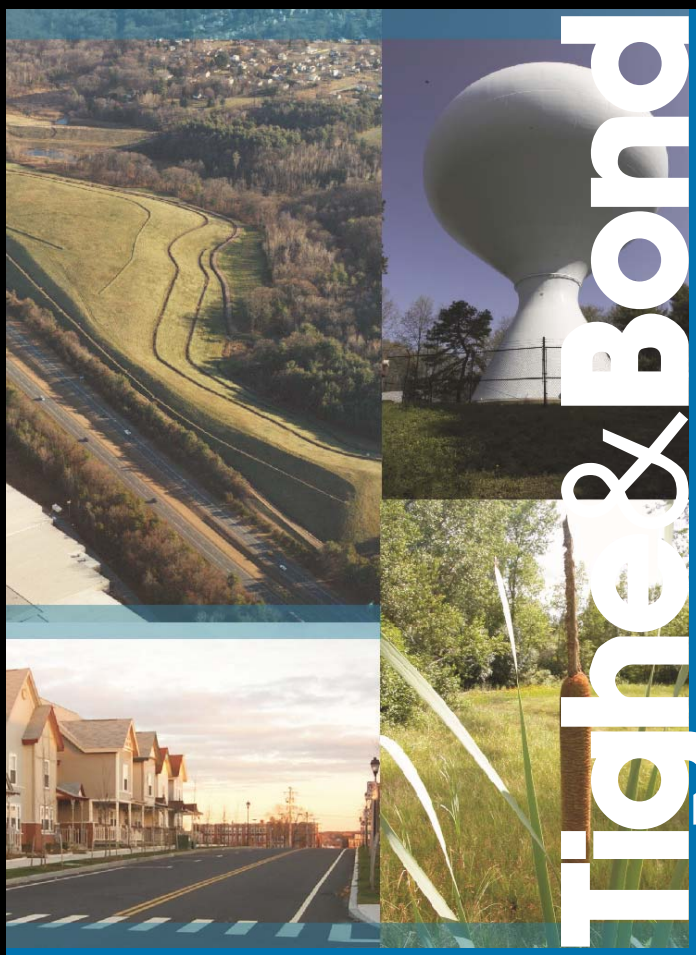

Noroton Heights Shopping Center Redevelopment
Darien, CT

Traffic Impact & Parking Study

Prepared For:

Noroton Heights Shopping Center
Darien, Connecticut

November 18, 2016

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Section 1
Introduction

This Traffic Study evaluates the potential traffic impact of the proposed redevelopment of Noroton Heights Shopping Center (NHSC) located in the Noroton Heights section of the Town of Darien, Connecticut. The redevelopment site currently contains approximately 75,527 square feet of mixed-use development located at 264 Heights Road (the Site), opposite the Noroton Heights Metro-North Railroad Station. The Site includes frontage along Heights Road to the south, residential properties on West Avenue to the north, Hollow Tree Ridge Road to the west, and Edgerton Street to the east. Figure 1 shows the Site location relative to the surrounding roadway network.

The proposed project retains the existing Palmer's Market building located on the east end of the Site and proposes to redevelop the western portions of the Site to include 33,127 square feet of shopping center retail space and 59 residential units in two buildings. The Site will provide 402 parking spaces including 10 handicap accessible spaces. The proposed redevelopment project is expected to be completed in 2019.

The proposed NHSC redevelopment and the Federal redevelopment (148 Heights Road, between Edgerton Street and Noroton Avenue) have been coordinating with each other and the Town during the development of this Traffic Study. Tighe & Bond has considered the impacts of both the project standalone as well as with the Federal Redevelopment to accurately reflect the traffic conditions of the area in the 2019 full build conditions. Improvements recommended for implementation as part of the Palmer's redevelopment are intended to supplement planned improvements being discussed as part of the Federal development to improve existing travel conditions and accommodate site traffic in the study area. Further detail on the Federal Redevelopment and the proposed improvements are provided in Sections 3.2 and 3.3.

This study concludes that based on the results of the analysis, it is the professional opinion of Tighe & Bond that the additional traffic expected to be generated by the proposed redevelopment of the Noroton Heights Shopping Center is not expected to have a significant impact to traffic operations within the study area. Section 7 provides a summary of the analyses performed and the results, which are the basis of this conclusion.

Section 2
Existing Conditions

The Site is located in the Noroton Heights section of the Town of Darien opposite the Noroton Heights Metro-North train station. The Site has frontage on Heights Road to the south, residential properties on West Avenue to the north, Hollow Tree Ridge Road to the west and Edgerton Street to the east. The Site is currently occupied by the approximately 40,800 square foot Palmer's Market on the east end of the Site, and two buildings containing 30,627 square feet of mixed retail, commercial and restaurant use on the west portion of the Site. An adjacent parcel, containing a 4,100 square foot bank, shares parking with the Site and will remain as existing.

The Site is currently accessed via one full access curb cut on Hollow Tree Ridge Road, two full access and two entrance only driveways on Heights Road, and two full access driveways on Edgerton Street. There is a mix of angled, 90-degree and parallel parking spaces within the Site in parking areas surrounding the existing buildings. Along the west end of Heights Road there are 90-degree parking spaces that are directly accessed from Heights Road. Include this parking along Heights Road, the Site contains 386 parking spaces including 11 handicap accessible spaces.

As mentioned, the site is opposite the Noroton Heights Metro-North train station providing service from New York City to New Haven. In addition, Connecticut Transit (CT Transit) Route 344 provides weekday and Saturday service connecting the train station to the Stamford and Darien Stations. Together, these services provide convenient, walkable access for future residents and customers of the redevelopment regional transit trips serving the Connecticut coast line and New York City.

2.1 Roadways

The following sections provide details on the roadways within the study area.

2.1.1 West Avenue

West Avenue is classified by the Connecticut Department of Transportation (CTDOT) as a minor arterial and by the Town of Darien Plan of Conservation and Development (POCD) as a collector. The roadway runs from west to east from the Stamford Town line to U.S. Route 1 (Post Road). Within the study area, the roadway provides one lane in each direction with a narrow shoulder of varying width. A narrow sidewalk is provided on the north side of the roadway within the study area and limited sidewalks to the south in the vicinity of the Hollow Tree Ridge Road, Edgerton Street and Noroton Avenue intersections. The posted speed limit on West Avenue is 35 miles per hour in the vicinity of the Site.

2.1.2 Heights Road

CTDOT classifies Heights Road as a collector, while the POCD identifies it a local roadway. Heights Road runs from west to east from Hollow Tree Ridge Road to Noroton Avenue. The Site fronts the north portion of Heights Road opposite the Noroton Heights Metro North train station. The roadway provides one lane in each direction with no marked shoulder. Heights Road widens on the east end at the intersection with Noroton Avenue to provide an exclusive right turn lane and shared left-through lane. On the south side, the roadway provides sidewalks from Hollow Tree Ridge Road to the eastern

most railroad parking area driveway. On the north side, sidewalks are segmented. Heights Road provides access to commercial properties, as well as access to one of the parking areas for the Noroton Heights Metro North Station. The posted speed limit on Heights Road is 25 miles per hour.

2.1.3 Hollow Tree Ridge Road

Hollow Tree Ridge Road runs north to south from U.S. Route 1 (Post Road) to Inwood Road, fronting the Site on its western portion. In the vicinity of the Site, CTDOT classifies the roadway as a minor arterial, while the POCD classifies it as a collector. The roadway provides one lane in each direction within the study area with no shoulders except on the I-95 overpass bridge to the southwest of the Site. A sidewalk is provided on the east side of the roadway within the study area. Hollow Tree Ridge Road mainly provides access to residential neighborhoods to the north and south of the Site as well as one of the parking areas serving the Noroton Heights Metro North station. The posted speed limit on Hollow Tree Ridge Road is 25 miles per hour in the Site vicinity.

2.1.4 Edgerton Street

Edgerton Street runs along the eastern side of the Site beginning at Heights Road to the south and continuing north to the intersection with Middlesex Road. Edgerton Street is classified as a local roadway by the POCD, while the CTDOT classifies the portion between Heights Road and West Avenue as a collector and a local roadway north of West Avenue. As the classification suggests, Edgerton Street provides mainly access to residential properties, with the exception of the southern area adjacent to the Site where adjacent land use is commercial in nature. Edgerton Street has one lane in each direction with no marked shoulder. Sidewalk is provided on both sides of the street starting on the west side to the south and crossing to the east side at the driveway to 148 Heights Road. The posted speed limit on Edgerton Street is 20 miles per hour north of West Avenue. There are no posted speed limit signs on the segment between Heights Road to West Avenue.

2.1.5 Noroton Avenue

Noroton Avenue is classified as a minor arterial and a collector by CTDOT and the POCD, respectively. The roadway runs south to north on the eastern end of the study area beginning at U.S. Route 1 (Post Road) and continuing north to the Darien High School loop roadway. North of the intersection with Heights Road, Noroton Avenue is a single lane in each direction with narrow shoulders of varying width. At the intersection with Heights Road, the roadway widens to provide a southbound right turn lane onto Heights Road and a shared left-through lane continuing south. The Noroton Avenue segment between Heights Road and Hecker Avenue/Maple Street intersection has 4 lanes with two lanes in each direction between Heights Road and the I-95 NB Off-Ramp and one northbound lane and three southbound lanes approaching Hecker Avenue/Maple Street. Noroton Avenue has sidewalk on both sides of the roadway throughout the study area, with the exception of the west side north of West Avenue where there is an approximate 170-foot gap. The roadway provides access to a mix of commercial and residential properties as well as Darien High School on the north end. The posted speed limit on Noroton Avenue is 25 miles per hour.

2.1.6 Ledge Road

Ledge Road is classified by CTDOT and the POCD as a minor arterial and collector roadway, respectively. The roadway begins at the intersection with Noroton Avenue and continues east to U.S. Route 1 (Post Road) towards downtown Darien. The roadway

provides a single lane in each direction for the majority of its length, widening to provide an exclusive left and an exclusive right turn at the intersection with Post Road. Ledge Road provides access to I-95 Interchanges 10 and 11 on the west and east ends, respectively. Within the study area, Ledge Road only provides sidewalks at the corners of the intersection with Noroton Avenue. Between Noroton Avenue and Post Road, it also provides access a small number of residential homes and a senior living facility to the west and commercial/industrial properties to the east. The posted speed limit on Ledge Road is 35 miles per hour.

2.1.7 Interstate 95

Interstate 95 (I-95) intersects the east end of the study area along Noroton Avenue with the Interchange 11 southbound entrance and northbound exit ramps. The Interchange 11 northbound entrance and southbound exit ramps are located east of the study area on Hecker Avenue and Ledge Road, respectively. In the vicinity of the Site, I-95 has three travel lanes in each direction. Both the southbound entrance and the northbound exit ramps are a single travel lane. I-95 provides convenient regional access to the Site.

2.1.8 Hecker Avenue / Maple Street

Hecker Avenue and Maple Street are located in the southeast corner of the study area intersecting Noroton Avenue. The roadways are classified by CTDOT as a collector, while the POCD considers them local roadways. Maple Street begins to the west at the intersection with Linden Avenue continuing east to the Noroton Avenue intersection. Hecker Avenue starts opposite Maple Street at Noroton Avenue and continues east to U.S. Route 1 (Post Road). Within the study area, Hecker Avenue provides sidewalk on both sides of the street. Maple Street does not provide sidewalks west of the intersection with Noroton Avenue. Maple Street provides access to residential homes along its length, while Hecker Avenue has a mix of residential and commercial uses. Hecker Avenue accesses I-95 northbound with an entrance ramp approximately 0.2 miles east of the Noroton Avenue intersection. Both roadways are a single lane in each direction with posted speed limits of 20 miles per hour on Maple Street and 25 miles per hour on Hecker Avenue.

2.2 Study Area Intersections

Generally, the study area intersections are selected based upon the proposed land use and size of the development and previous traffic studies in the area. Due to the adjacent planned redevelopment of the adjacent 148 Heights Road property (see Section 3.2 for more information on this development program), the following 10 intersections constitute the study area intersections:

- West Avenue at Hollow Tree Ridge Road
- West Avenue at Edgerton Street
- West Avenue at Noroton Avenue
- Heights Road at Hollow Tree Ridge Road
- Heights Road at Edgerton Street
- Heights Road at Noroton Avenue

- Hollow Tree Ridge Road at Avalon and Metro North Parking Lot Driveways
- Noroton Avenue at Ledge Road and I-95 SB On-Ramp
- Noroton Avenue at I-95 NB Off-Ramp
- Noroton Avenue at Hecker Avenue/Maple Street

The study area intersections all operate under traffic signal control with the exception of the intersection of Heights Road at Edgerton Street. Heights Road at Edgerton is unsignalized with stop sign control on the Edgerton Street approach, with Heights Road traffic free flowing.

The Noroton Avenue signals at Heights Road, Ledge Road/I-95 SB On-Ramp, I-95 NB Off-Ramp and Hecker Avenue/Maple Street are coordinated along Noroton Avenue northbound and southbound to allow for better traffic flow through the corridor. Due to their proximity, the Hollow Tree Ridge Road intersections with Heights Road and the Avalon/Metro North Parking Lot Driveways, as well as the Noroton Avenue intersections with Heights Road and Ledge Road/I-95 SB On-Ramp operate under cluster intersection configurations. The cluster intersection operation allows for coordination of side street and main line movements for closely spaced intersections that would not allow efficient progression under separate, coordinated operation. The signals along West Avenue are uncoordinated.

Pedestrian accommodations at the following signalized intersection include a pedestrian-actuated exclusive pedestrian phase where pedestrians are provided a separate phase from vehicular traffic to cross the intersection:

- West Avenue at Hollow Tree Ridge Road
- West Avenue at Edgerton Street
- Hollow Tree Ridge Road at Heights Road
- Hollow Tree Ridge Road with Avalon/Metro North Parking Lot Driveway

The remaining study area intersections have pedestrian-actuated side street pedestrian accommodations. At these intersections, the pedestrian actuation calls the minor street (side street) pedestrian clearance green time to allow pedestrians to cross concurrently with vehicular traffic.

2.3 Traffic Volumes

The study analysis focuses on the weekday morning, Friday (weekday) afternoon and Saturday midday peak hours, the periods when residential and/or retail related trips are at their highest levels. In order to determine the traffic impact of the proposed development on adjacent study area roadways, weekday morning (7:00 – 9:00 AM), Friday (weekday) afternoon (4:00 PM to 6:00 PM), and Saturday midday (11:00 AM to 1:00 PM) peak hour manual intersection turning movement counts were collected at the study area intersections. The traffic count data indicates that the weekday morning peak hour occurred from 7:15 to 8:15 AM, the Friday (weekday) afternoon peak hour occurred from 5:00 to 6:00 PM and the Saturday midday peak hour occurred from 11:15

AM to 12:15 PM. These 2015 existing traffic volumes for the three peak hours are shown in Figures 2 through 4, respectively.

An Automatic Traffic Recorder (ATR) count was also conducted on Heights Road, in the vicinity of the Site frontage, to record hourly traffic volumes and vehicular speeds. The 24-hour traffic volume was 7,095 vehicles, including 3,360 and 3,735 vehicles in the eastbound and westbound directions, respectively. The measured 85th percentile speeds, also known as the operating speed of the roadway, were 33 miles per hour and 31 miles per hour in the eastbound and westbound directions, respectively. The raw turning movement counts and ATR data are provided in Appendix A.

2.4 Capacity and Queue Analyses - Existing Condition

Capacity and queue analyses were performed for the study intersections for the Existing Condition traffic volumes during the weekday morning, Friday (weekday) afternoon, and Saturday midday peak hours using Trafficware Synchro Studio 9 – Traffic Analysis Software. The software conducts the analyses based upon the methodology provided in the *Highway Capacity Manual (HCM), 2010*. The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. A summary of the HCM capacity analysis methodology and a detailed definition of LOS is provided in Appendix B. The queue analysis results are summarized in terms of the 50th percentile queue length, and the 95th percentile queue length. The 50th percentile queue length represents the approximate average queue length, and the 95th percentile queue length represents the design queue length under peak traffic conditions. Tables 1 and 2 summarize the capacity and queue analyses results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix C.

As shown in Tables 1 and 2, the majority of the overall intersections and intersection approaches operate acceptably at LOS D or better during the three peak hours. The Heights Road approach to Hollow Tree Ridge Road experiences delay during all peaks with LOS E/F operation, average delays of 58 to 120 seconds per vehicle and queues ranging from 240 feet to 345 feet. The Ledge Road approach to Noroton Avenue also experiences delays with LOS D operation in the weekday morning and Friday afternoon peak with average delays within 1 second per vehicle of LOS E operation, as well as LOS E operation during the Saturday midday peak hour. Queues of over 300 feet are present on the approach during the peak hours.

A review of the queuing results shows that the majority of the design queues are accommodated within available storage between intersections. Queues in the weekday morning peak hour on Norton Avenue southbound approaching the Heights Road and Ledge Road/I-95 SB On-Ramp intersections and on Hollow Tree Ridge Road southbound approaching the Heights Road intersection extend beyond available storage with queues of 485 feet and 315 feet for each intersection approach, respectively. On Hollow Tree Ridge Road southbound, morning peak hour queues are approaching available storage to West Avenue extending 375 feet. Queues in the Friday afternoon peak on Noroton Avenue northbound approaching West Avenue extend 390 feet, past the intersection with Heights Road.

2.5 Collision History

Vehicle collision history was collected from the Darien Police Department and the Connecticut (UCONN) Crash Data Repository, between October 2013 and October 2016, at the study area intersections. Table 3 provides a summary of the collisions at each of the study area intersections as well as the types and severity of the collisions. Appendix D includes detailed collision summaries for each of the intersections. Raw collision data can be provided upon request.

As shown in Table 3, there were 86 reported motor vehicle collisions at the study area intersections within the 3-year period analyzed. West Avenue at Hollow Tree Ridge Road and Noroton Avenue at Ledge Road/I-95 SB On-Ramp experienced the most frequent collision rate, with an average of just over 5 collisions per year. The remaining intersections had a rate of 4 collisions per year or less. The most frequent type of collisions were rear end, accounting for over 46% of the collisions within the study area. The second most frequent collision type was angle, accounting for almost 29% of the collisions. Fixed object and sideswipe-same direction were the third most frequent collision types at 7% of the study area collisions. The remainder of the collision types were each less than 5% of the total collisions.

The collision analysis results do not identify a significant or notable pattern of collisions in the study area. Throughout the time period analyzed, there were no fatalities, with only 14% (12 collisions) where evident injuries were reported. The addition of the proposed development's site generated traffic is not anticipated to negatively impact existing collision patterns or overall roadway safety at the study area intersections.

Section 3
Background Conditions

The Background Condition represents the projection of traffic volumes and operating conditions to the completion year of the proposed development. The Background Condition considers the general background growth of traffic and site generated traffic associated with other area developments, which are expected to open prior to the opening of the Site. The proposed development is scheduled to be completed in 2019, and therefore 2019 was selected as the Background Condition year.

3.1 Background Traffic Growth

Upon consultation with CTDOT, the Existing Condition traffic volumes were projected to the 2019 Background Condition year using a 0.6 percent per year peak hour growth factor to account for general traffic growth within the study area.

3.2 Other Area Developments

Tighe & Bond contacted the Darien Planning and Zoning Department to identify any pending or approved developments having site generated traffic on the study area roadways. Two developments were identified, one approved self-storage facility to be constructed along the Avalon Driveway at 131 Hollow Tree Ridge Road, southwest of the Site, and one planned redevelopment of 148 Heights Road by Federal Realty Investment Trust (the Federal Redevelopment) east of the Site.

The site generated traffic from the approved self-storage facility was added to the 2019 projected volumes, which include the background traffic growth, to obtain the 2019 Background Condition traffic volumes for the study area intersections, shown in Figures 5 through 7 for the three peak hours, respectively.

The Federal Redevelopment proposes to reconstruct the existing, approximate 45,000 square foot shopping center at 148 Heights Road to include approximately 80,350 square feet of shopping center retail, pharmacy and quality restaurant space and 122 residential units along with approximately 43,000 square feet of existing mixed-use. As the Federal Redevelopment is in the planning stages and has not been formally submitted to the Town, a second iteration of 2019 Background Condition traffic volumes were created by adding the Federal Redevelopment site generated traffic to the 2019 Background Condition traffic volumes described above. The 2019 Federal Redevelopment Background Condition traffic volumes are shown in Figures 8 through 10 for the three peak hours, respectively. Site generated traffic volumes and volume figures for the Federal Redevelopment are included in Appendix E.

3.3 Planned Roadway Improvements

Tighe & Bond contacted the Darien Planning and Zoning Department to identify any roadway improvements planned for the study area. The Town has received funding to improve the intersection of West Avenue at Noroton Avenue and are currently working to contract a consultant to review potential improvement opportunities. In addition, the Federal Redevelopment is considering improvements along Noroton Avenue from the Heights Road intersection to the Hecker Avenue/Maple Street, as well as on the Ledge Road approach to Noroton Avenue to mitigate the effects of their site generated traffic on the adjacent roadway network. These improvements are in the early planning stages by that project team and therefore have not been included in the analyses for this study.

3.4 Noroton Heights TOD Planning Study

The Town of Darien is currently conducting a transit-oriented development (TOD) planning study for the Noroton Heights area. Per information from Darien Planning and Zoning Department, a consultant has been contracted and data collection is set to begin in November. The study has an approximately 14-month schedule, with the final report expected to be completed in late 2017 or early 2018. As such, this traffic study and recommendations can be utilized by the planning study for information purposes. The recommendations from the planning study are expected to be longer range development and improvement planning and therefore are not expected to impact the results of this traffic study.

3.5 Capacity and Queue Analyses – Background Conditions

Capacity and queue analyses were conducted for the 2019 Background Condition and 2019 Federal Redevelopment Background Condition traffic volumes for the peak hours, using the methodology described in Section 2.4. Tables 1 and 2 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix C.

3.5.1 Background Conditions

Under the Background Conditions, the study area intersections are projected to continue operating at similar LOS as in the Existing Condition during the peak hours with minor increases in average delays and queues due to the additional traffic in the Background Condition. The Ledge Road approach to Noroton Avenue experiences a drop to LOS E operation during the weekday morning and Friday afternoon peaks with the growth as it was previously on the threshold between LOS D and LOS E operation. Similarly, the Heights Road approach to Hollow Tree Ridge Road and the Ledge Road approach to Noroton Avenue in the Saturday midday peak experience worsening LOS E and F conditions.

3.5.2 Background Conditions with Federal Redevelopment

The addition of site generated traffic from the Federal Redevelopment further exacerbates capacity issues realized in the Existing and 2019 Background Conditions. In addition to the aforementioned capacity issues, the additional traffic from the Federal Redevelopment results in a capacity reduction for the Edgerton Street southbound approach to Heights Road from LOS D to LOS E in the weekday morning peak with moderate queues of approximately 140 feet.

Section 4
Development Plan - Proposed Conditions

The applicant proposes to redevelop the existing shopping center to create better traffic flow and parking configuration. The redevelopment will retain the eastern end of the Site, largely in the existing configuration including the approximately 40,800 square foot Palmer's Market building. The two buildings on the western portion of the Site, consisting of approximately 30,627 square feet of mixed shopping center retail, commercial and restaurant space, will be demolished and replaced with 33,127 square feet of shopping center retail space, resulting in an increase of 2,500 square feet of this use. In addition, the upper levels of the new buildings will include 59 apartments. As mentioned in existing conditions, the existing bank, on a parcel adjacent to the eastern end of the site and sharing parking with the Site, will remain as existing. The Overall Site Plan is provided in Appendix F for reference.

4.1 Site Access

Site access along the western side of the Site will be reconfigured with the Hollow Tree Ridge Road driveway removed and the eastern driveway on Heights Road shifted approximately 135 feet west and converted to full access. The second existing driveway on Heights Road will remain full access in the existing location with revised radii for better turning movements. The two western driveways, one entrance only and one full access, on Heights Road and the two full access driveways on Edgerton Street will remain in their existing locations.

Intersection sight distances were observed at these existing and reconfigured site driveways in accordance with criteria set forth in the 2003 CTDOT Highway Design Manual. Based on the Heights Road operating speeds of 31 and 33 miles per hour, the CTDOT minimum required sight distances on a stop controlled approach to a two lane roadway is 346 feet and 368 feet, respectively. The exiting approaches of the site driveways were observed to provide sight lines in excess of the required distance.

Streetscape improvements including lighting, landscaping, street furniture, wider sidewalks, pedestrian ramps and a marked pedestrian crossing along the Site frontage will be provided along Heights Road.

4.2 Roadway Improvements

In conjunction with the Site redevelopment and the revisions to circulation on the west portion of the Site, improvements are proposed for the Heights Road at Hollow Tree Ridge Road intersection. Heights Road will be widened to the north towards the Site to provide an exclusive right turn lane and an exclusive left turn lane for 50 feet approaching Hollow Tree Ridge Road, as shown in the Overall Site Plan in Appendix F. The revision will also remove the 90-degree parking along Heights Road, addressing an existing safety concern as the spaces required vehicles to back onto Heights Road. The removal of the existing Site driveway on Hollow Tree Ridge Road will increase the amount of traffic utilizing the Heights Road approach to Hollow Tree Ridge Road (see Section 4.5 for further information). The removal of the driveway was suggested by Town staff and incorporated into the redevelopment plan to consolidate access points on Hollow Tree Ridge Road to alleviate existing congestion, queuing and safety concerns. The revision will result in additional traffic congestion along Heights Road accessing

Hollow Tree Ridge Road for traffic destined for the local uses on Heights Road while improving conditions for vehicles traveling through the study area on Hollow Tree Ridge Road.

4.3 Trip Generation

Site generated traffic volumes for the proposed development were estimated using the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. Land Use 220 – Apartment was used to estimate traffic for the 59 residential apartments, Land Use Code 820 – Shopping Center was used to estimate traffic generation for the 2,500 square foot increase in retail, commercial and restaurant space.

The proposed redevelopment is anticipated to generate the following vehicle trips based on the proposed land use mix noted above:

- Weekday Morning: 31 vehicle trips (8 entering, 23 exiting)
- Friday (weekday) Afternoon: 56 vehicle trips (34 entering, 22 exiting)
- Saturday Midday: 55 vehicle trips (28 entering, 27 exiting)

Table 4 provides a summary of the trip generation by retail and residential land use.

The proximity of the Noroton Heights Train Station and the mix of uses on Site will reduce automobile trips to and from the development in favor of transit-oriented and internal trips (customers visiting more than one use per trip or residents visiting retail uses). Industry standards suggest a reduction of 7% for internal trips and an additional 20% reduction for transit-oriented trips for locations proximate to transit stations. As such, a conservative 15% reduction in the total site generated traffic was included.

4.4 Arrival and Departure Distribution

The distribution of new traffic entering and exiting the Site was applied to the road network based on existing traffic patterns within the study area, as well as the roadway layout and expectation of vehicles accessing the Site from local roadways/neighborhoods and I-95. Due to the nature of the retail trips being more local in nature and residential trips more regional, separate distributions were developed independently for the retail and residential traffic. These distributions have been coordinated with the Federal Redevelopment traffic to present consistent travel patterns for site generated traffic within the study area. The following arrival/departure distributions are anticipated:

<u>Retail</u>

- 15% to/from Hollow Tree Ridge Road northwest of the Site
- 10% to/from each of the following:
    - West Avenue west of the Site
    - Hollow Tree Ridge Road southwest of the Site
    - I-95 south of the Site

- I-95 north of the Site
- Ledge Road east of the Site
- Hecker Avenue east of the Site
- Noroton Avenue southeast of the Site

- 5% to/from each of the following:
  - Edgerton Street north of the Site
  - Noroton Avenue northeast of the Site
  - West Avenue east of the Site

Residential

- 25% to/from I-95 north of the Site
- 25% to/from I-95 south of the Site
- 10% to/from each of the following:
  - West Avenue west of the Site
  - Hollow Tree Ridge Road southwest of the Site
- 5% to/from each of the following:
  - Hollow Tree Ridge Road northwest of the Site
  - Edgerton Street north of the Site
  - Noroton Avenue northeast of the Site
  - West Avenue east of the Site
  - Ledge Road east of the Site
  - Noroton Avenue southeast of the Site

Figures 11 and 12 present the arrival and departure distributions by approach for the retail and residential distributions, respectively. Figures 13 through 15 show the retail site generated traffic distributed to the study area roadways for the three peak hours, respectively. Figures 16 through 18 show the residential site generated traffic distributed to the study area roadways for the three peak hours, respectively. The total site generated traffic (retail plus residential) are provided in Figures 19 through 21 for the three peak periods, respectively.

4.5 Driveway Redistribution

As mentioned in Section 4.1, the proposed redevelopment will remove the existing Site driveway to Hollow Tree Ridge Road to consolidate access points along Hollow Tree Ridge Road to alleviate existing congestion, queuing and safety concerns. Due to the removal, existing traffic flowing into and out of the driveway will need to be redistributed to the revised/existing driveways along Heights Road.

Existing traffic volumes for the three peak hours were redistributed to the Heights Road driveways using existing travel patterns with vehicles from the north and south utilizing the Heights Road intersection for turning movements toward the driveway. This will result in additional traffic volume on the Heights Road approach to Hollow Tree Ridge Road. The revision will impact traffic operations along Heights Road accessing Hollow Tree Ridge Road for traffic destined for the local uses on Heights Road, while improving operations for vehicles traveling through the study area on Hollow Tree Ridge Road. The proposed widening of Heights Road to provide an exclusive right and left turn lane is aimed at mitigating the impact of the additional redistributed and site traffic volume on Heights Road.

Section 5
Combined Conditions

The anticipated site generated traffic volumes associated with the proposed Site redevelopment were added to the 2019 Background Condition and 2019 Federal Redevelopment Background Condition traffic volumes to develop the 2019 Combined Condition and 2019 Federal Redevelopment Combined Condition traffic volumes. Figures 22 through 24 present the 2019 Combined Conditions for the three peak hours, respectively. Figures 25 through 27 show the 2019 Federal Redevelopment Combined Condition traffic volumes for the three peak hours, respectively.

5.1 Capacity and Queue Analyses - Combined Condition

Capacity and queue analyses were conducted for the 2019 Combined and 2019 Federal Redevelopment Combined Condition for the peak hours using the methodology described in Section 2.4. These Combined Condition analyses include the proposed improvements to the Heights Road approach to Hollow Tree Ridge Road (See Section 4.1 for details). Tables 1 and 2 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix C.

5.1.1 Combined Conditions

The study area intersections will continue to operate with the same overall LOS under the Combined Condition as in the Background Condition during the peak hours. The intersection approaches will also continue to operate at Background levels with the exception of the Norton Avenue northbound approach to the I-95 Off-Ramp and the Edgerton Street approach to Heights Road in the Friday (weekday) afternoon peak, which will operate at LOS B and LOS C, respectively, in the Combined Conditions. In both cases, the Background conditions average delay were within 0.4 seconds of delay per vehicle from the lower operation designation grade and the impact of the site traffic was less than one second per vehicle.

As mentioned in Section 4, the proposed driveway removal on Hollow Tree Ridge Road will redirect additional traffic to the Heights Road approach to Hollow Tree Ridge. The driveway removal aimed to consolidate access points to Hollow Tree Ridge Road to alleviate existing congestion, queuing and safety concerns. The improvements to Heights Road, detailed in Section 4.1, are intended to mitigate the existing capacity concerns, while accommodating the additional site generated and redistributed site traffic. The capacity analyses show that the improved Heights Road approach will operate significantly better than the Background LOS E and LOS F operations. During the weekday morning peak, the westbound approach left and right turns will operate at LOS D and LOS E operation with average delays of 36 and 77 seconds per vehicle, respectively, significantly improved from the LOS F operation with average delays of 136 seconds per vehicle in the Background conditions with the single lane. During the Friday afternoon peak, the approach will operate at LOS E for left turns and LOS B for right turns, better than the LOS E operation in the Background Conditions. During the Saturday peak hour, Background Conditions of LOS F operation with delays of 89 seconds per vehicle improve to LOS D and LOS B for left and right turns, respectively, with the two-lane approach. Coinciding with the improved LOS, queues on the Heights Road approach will improve in all three peak periods with reductions of 100 to 175 feet.

5.1.2 Combined Conditions with Federal Redevelopment

The addition of site generated traffic from the Federal Redevelopment will result in minor impacts to the study area intersections operations when compared to the 2019 Combined Conditions. Similar to the improvements proposed along Heights Road westbound under this application, planned improvements by the Town and Federal along Noroton Avenue (See Section 3.3 for details) will aim to mitigate existing capacity issues, particularly at the Ledge Road intersection.

Section 6
Parking

The redevelopment will reconfigure the surface parking areas on the west portion of the Site and slightly reorganize the parking in front of Palmer's Market to complement the revised traffic circulation through the Site. The site surface parking supply will be 328 spaces for the shopping center uses. In addition, there will be two underground parking facilities below the new buildings on the west side of the site. Each facility will contain 37 spaces including 2 handicapped spaces and be reserved for residential parking. The project will remove the existing 90-degree parking along the west end of Heights Road and include 12 on-street parallel parking spaces along the center of the Site frontage. Following the redevelopment, a total parking supply of 402 spaces including 10 handicap accessible spaces will be provided.

The following sections will detail the methodology used to determine the parking supply for the proposed redevelopment. As detailed in the following Darien Parking Regulations Section, the site will require approval of joint parking under Section 905 (Joint Parking) of the regulations. Per the regulations, an on-site parking survey of existing parking demand along with the shared parking model presented in the Downtown Darien Parking Management Plan show that the site has sufficient parking capacity to accommodate the expected demand of the proposed redevelopment.

6.1 Darien Parking Regulations

General parking regulations, including specific parking regulations for the Noroton Heights Redevelopment Zone, are found in Section 900 of the Town Zoning Regulations. As shown in the Parking Demand Projections Summary Table (Table 5), the current zoning regulations will require 699 parking spaces for the proposed development plan. However, Section 905 of the regulations allows for up to a 50% total reduction in required parking in the Noroton Heights Redevelopment Overlay Zone, provided it is shown that the uses share parking spaces and the proposed available parking is demonstrated to be adequate for usage. As such, the minimum number of parking spaces that can be approved for the proposed redevelopment is 350 spaces, well below the proposed 402 spaces to be supplied on the Site.

6.2 Parking Survey

In order to assess the existing parking demand for the current shopping center usage, a parking survey was conducted. Understanding the existing parking demand allows for a more accurate estimation of potential future parking demand following redevelopment, as the redevelopment is expected to generate similar parking demand since both the existing and proposed uses are shopping center oriented, and a significant portion of the Site is maintaining the current uses. The survey was conducted counting occupied parking spaces every half hour during the following periods:

- Thursday, January 23, 2014 from 9:00 AM to 5:00 PM
- Sunday, January 26, 2014 from 11:00 AM to 6:00 PM
- Tuesday, January 28, 2014 from 9:00 AM to 5:00 PM

- Saturday, February 1, 2014 from 10:00 AM to 8:00 PM

The results of the parking surveys are shown in Tables 6 through 9, showing the number of utilized parking spaces and empty spaces by parking area on the site. The parking areas are shown in the Parking Study Key Map (Figure 28). As shown in the tables, the following observations were noted:

- Parking demand on the weekdays was consistent, with approximately 35% to 58% parking utilization throughout the day.
- Sunday parking demand was significantly lower than the other days surveyed, ranging from approximately 18 to 35% utilized.
- Saturday had the highest parking demand with 60% utilization in the mid-afternoon time period.

Based on the survey data, the existing development generates a peak parking demand of 1 space for every 322 square feet of existing shopping center development (total area). As shown in the suggested parking supply column in Table 4, utilizing a conservative 1 space per 300 square feet of development for the proposed redeveloped shopping center retail, bank and supermarket usage and 1.25 spaces per residential unit results in a peak parking demand of 393 spaces, significantly less than the zoning regulations and less than the proposed parking supply of 402 spaces.

6.3 Downtown Darien Parking Management Plan

The Town of Darien contracted Nelson Nygaard and Fitzgerald & Halliday to assess parking demand in Downtown Darien and create a Downtown Darien Parking Management Plan in late 2015. As part of the plan, the team presented a shared parking model to assist in determining parking demand in mixed-use, urban settings, similar to Noroton Heights. As stated in the study documents, these ratios are based on the teams “firm-wide experience in measuring and projecting parking demand in shared parking environments, as well as their familiarity with similar peer work, and ‘industry standard’ projection methodologies and models.” These recommended parking ratios, along with a calculation of the proposed Site parking demand based upon these ratios is shown in Table 4.

As shown in the table, the shared parking demand model recommends 322 parking spaces, well below the proposed parking supply of 402 spaces, further supporting the premise that the Site has adequate parking supply to meet projected demands.

Section 7
Conclusions & Recommendations

1. The project proposes to redevelop the western portion of the Site resulting in an additional 2,500 square feet of shopping center retail space and 59 apartments. The Site will provide 402 parking spaces including 10 handicap accessible spaces. The proposed redevelopment is expected to be complete in 2019.

2. This Traffic Study has been developed in coordination with the Federal Redevelopment and the Town. This study considers the impacts the proposed redevelopment standalone as well as with Federal to accurately reflect the traffic conditions of the area in the 2019 full build conditions. Improvements recommended for implementation as part of this application are intended to supplement planned improvements being discussed as part of the Federal development to improve existing travel conditions and accommodate future site traffic in the study area.

3. Transit service to the Site is provided by the adjacent Noroton Heights Metro-North train station and CT Transit Route 344. Together, these services provide convenient, walkable access for future residents and customers of the redevelopment regional transit trips serving the Connecticut coast line and New York City.

4. Vehicle collision history, collected from Darien Police Department and the Connecticut Crash Data Repository from October 2013 through October 2016, do not indicate a significant or notable pattern of collisions in the study area. The addition of the proposed development site generated traffic is not anticipated to effect existing collision occurrences in the vicinity of the Site.

5. Site access along the western portion of the Site will be reconfigured with the Hollow Tree Ridge Road driveway removed and the eastern driveway on Heights Road shifted approximately 135 feet west and converted to full access. The removal of the driveway was suggested by Town staff and incorporated into the redevelopment plan to consolidate access points to Hollow Tree Ridge Road to alleviate congestion, queuing and safety concerns. The remaining driveways on Heights Road and Edgerton Street will remain in the existing location with existing traffic operating patterns.

6. The proposed redevelopment is expected to generate 31 new vehicle trips (8 entering, 23 exiting) during the weekday morning peak hour, 56 new vehicle trips (34 entering, 22 exiting) during the Friday (weekday) afternoon peak hour, and 55 new vehicle trips (28 entering, 27 exiting) during the Saturday midday peak hour. The trip generation was conservatively reduced with a transit-oriented and internal trip credit of 15% accounting for customers/residents accessing the Site via transit, customers visiting multiple uses as the Site during one trip, and/or residents visiting the retail uses within the Site.

7. The study area intersections will continue to operate with the same overall LOS under the 2019 Combined Condition as in the 2019 Background Condition during the peak hours. The intersection approaches will also continue to operate at Background levels with the exception of the Norton Avenue northbound approach to the I-95 Off-Ramp and the Edgerton Street approach to Heights Road, which will operate acceptably at LOS B and LOS C, respectively, in the Combined Conditions.

8. The redevelopment proposes to widen Heights Road to the north towards the Site to provide an exclusive right turn lane and an exclusive left turn lane approaching Hollow Tree Ridge Road. The improvements will mitigate the existing traffic congestion on Heights Road approaching Hollow Tree Ridge Road, while accommodating the additional site traffic and traffic redistributed from the closed Hollow Tree Ridge Road site driveway. The capacity analyses show that the widened Heights Road approach will operate significantly better in the Combined, improved Condition than the Existing and Background operations.

9. As detailed in Section 6, a parking demand analysis including a parking survey conducted on the existing site and the shared parking model presented in the Downtown Darien Parking Management Plan support the premise that the proposed parking supply of 402 spaces will be sufficient to accommodate projected parking demand and that approval of joint parking under Section 905 (Joint Parking) of the Darien Zoning Regulations is justified.

10. Based on the results of the foregoing analysis, it is the professional opinion of Tighe & Bond that the additional traffic expected to be generated by the proposed redevelopment of the Noroton Heights Shopping Center is not expected to have a significant impact to traffic operations within the study area.

Section 8
Tables

TABLE 1
Intersection Operation Summary - Vehicular Levels of Service / Average Delay (sec/veh)

	Lane Use	Weekday Morning Peak Hour					Friday (Weekday) Afternoon Peak Hour					Saturday Midday Peak Hour				
		2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal
Traffic Signal - West Avenue at Hollow Tree Ridge Road																
Overall		**C / 22.9**	**C / 24.2**	**C / 23.4**	**C / 24.3**	**C / 23.6**	**B / 18.8**	**B / 19.9**	**B / 19.9**	**C / 20.1**	**C / 20.1**	**B / 15.7**	**B / 16.5**	**B / 16.9**	**B / 16.7**	**B / 17.1**
West Avenue	EB	C / 24.5	C / 26.2	C / 25.3	C / 26.5	C / 25.5	C / 21.3	C / 22.0	C / 22.4	C / 22.1	C / 22.4	B / 15.3	B / 17.1	B / 17.6	B / 17.5	B / 18.0
	WB	B / 17.9	B / 18.4	B / 18.3	B / 18.5	B / 18.4	B / 17.4	B / 17.6	B / 17.1	B / 17.5	B / 17.0	B / 14.8	B / 16.1	B / 16.2	B / 16.3	B / 16.4
Hollow Tree Ridge Road	NB	C / 24.5	C / 26.3	C / 25.4	C / 26.4	C / 25.8	C / 20.8	C / 23.1	C / 23.1	C / 23.6	C / 23.6	B / 16.1	B / 16.7	B / 17.0	B / 16.9	B / 17.1
	SB	C / 24.4	C / 25.6	C / 24.4	C / 25.4	C / 24.4	B / 13.3	B / 13.7	B / 13.7	B / 13.8	B / 13.7	B / 16.3	B / 16.2	B / 16.8	B / 16.2	B / 16.8
Traffic Signal - West Avenue at Edgerton Street																
Overall		**B / 19.8**	**C / 20.7**	**C / 20.2**	**C / 20.8**	**C / 20.2**	**B / 13.0**	**B / 13.4**	**B / 13.8**	**B / 13.5**	**B / 13.9**	**B / 12.1**	**B / 12.4**	**B / 13.1**	**B / 12.4**	**B / 13.2**
West Avenue	EB	C / 23.8	C / 25.4	C / 24.3	C / 25.7	C / 24.5	B / 12.1	B / 12.5	B / 12.4	B / 12.5	B / 12.4	B / 10.6	B / 10.8	B / 11.2	B / 10.8	B / 11.2
	WB	B / 18.7	B / 19.8	B / 19.3	B / 19.9	B / 19.4	B / 11.7	B / 12.3	B / 13.1	B / 12.5	B / 13.3	B / 10.8	B / 11.1	B / 12.0	B / 11.2	B / 12.1
Edgerton Street	NB	B / 14.6	B / 14.6	B / 15.0	B / 14.7	B / 15.1	B / 17.8	B / 18.1	B / 18.8	B / 18.2	B / 19.0	B / 17.3	B / 17.5	B / 18.6	B / 17.6	B / 18.7
	SB	B / 16.1	B / 15.8	B / 15.8	B / 15.8	B / 15.7	B / 14.4	B / 14.5	B / 14.8	B / 14.5	B / 14.9	B / 14.1	B / 14.1	B / 13.9	B / 14.1	B / 13.9
Traffic Signal - West Avenue at Noroton Avenue																
Overall		**C / 21.6**	**C / 22.1**	**C / 22.1**	**C / 22.2**	**C / 22.2**	**C / 23.5**	**C / 24.5**	**C / 24.4**	**C / 24.5**	**C / 24.5**	**B / 19.7**	**C / 20.4**	**C / 20.8**	**C / 20.5**	**C / 20.8**
West Avenue	EB	B / 17.2	B / 17.1	B / 17.3	B / 17.2	B / 17.5	C / 23.3	C / 23.3	C / 23.1	C / 23.3	C / 23.1	B / 17.6	B / 17.7	B / 17.7	B / 17.8	B / 17.7
	WB	D / 36.8	D / 36.6	D / 36.6	D / 36.9	D / 36.9	D / 35.7	D / 36.4	D / 36.1	D / 36.4	D / 36.0	C / 34.0	D / 35.2	D / 35.7	D / 35.3	D / 35.8
Noroton Avenue	NB	B / 17.0	B / 18.2	B / 18.1	B / 18.2	B / 18.1	C / 20.0	C / 22.0	C / 22.4	C / 22.2	C / 22.6	B / 15.5	B / 16.5	B / 17.1	B / 16.6	B / 17.1
	SB	B / 16.4	B / 17.4	B / 17.3	B / 17.4	B / 17.3	B / 11.5	B / 12.1	B / 12.1	B / 12.2	B / 12.3	B / 11.6	B / 12.1	B / 12.4	B / 12.2	B / 12.5
Traffic Signal - Heights Road at Hollow Tree Ridge Road																
Overall		**D / 40.7**	**D / 46.6**	**D / 42.5**	**C / 31.6**	**C / 29.8**	**C / 23.1**	**C / 28.4**	**C / 30.3**	**B / 17.3**	**B / 19.2**	**C / 24.2**	**C / 31.8**	**D / 38.3**	**B / 14.2**	**B / 14.1**
Heights Road	WBL	F / 120.5	F / 135.7	F / 122.8	D / 36.8	D / 37.8	E / 57.3	E / 71.6	E / 77.5	E / 56.7	E / 67.8	E / 66.0	F / 89.0	F / 109.7	D / 53.4	D / 51.3
	WBR	-- / --	-- / --	-- / --	E / 77.4	E / 73.5	-- / --	-- / --	-- / --	B / 10.8	B / 11.1	-- / --	-- / --	-- / --	B / 11.5	A / 8.8
Hollow Tree Ridge Road	NB	A / 6.7	A / 7.0	A / 7.1	A / 7.1	A / 7.0	A / 5.0	A / 6.2	A / 6.2	A / 5.6	A / 5.6	A / 4.2	A / 5.7	A / 5.5	A / 5.0	A / 5.2
	SB	C / 22.6	C / 26.7	C / 25.3	C / 30.1	C / 27.8	B / 14.0	B / 16.5	B / 16.6	B / 14.5	B / 14.6	A / 9.6	B / 11.2	B / 11.5	A / 9.5	B / 10.8
Traffic Signal - Heights Road at Noroton Avenue																
Overall		**B / 18.5**	**C / 20.1**	**C / 20.1**	**C / 20.2**	**C / 20.2**	**B / 10.5**	**B / 10.6**	**B / 10.6**	**B / 10.6**	**B / 10.6**	**B / 12.5**	**B / 13.1**	**B / 13.9**	**B / 13.3**	**B / 13.9**
Heights Road	EBTL	C / 22.9	C / 22.6	C / 23.1	C / 24.1	C / 24.2	C / 33.8	C / 34.1	C / 34.3	C / 34.0	C / 34.2	C / 28.9	C / 29.1	C / 30.1	C / 29.6	C / 29.9
	EBR	B / 10.7	B / 11.8	B / 11.6	B / 11.5	B / 11.3	A / 2.4	A / 2.4	A / 2.4	A / 2.4	A / 2.4	A / 7.2	A / 8.6	B / 10.1	A / 9.3	A / 9.5
Gas Station Driveway	WB	C / 23.4	C / 23.4	C / 23.4	C / 24.1	C / 24.1	C / 22.0	C / 22.0	C / 22.0	C / 22.0	C / 22.0	C / 26.5	C / 26.5	C / 26.5	C / 26.5	C / 26.5
	NBL	A / 9.3	B / 10.3	B / 10.0	B / 10.2	A / 9.9	A / 6.1	A / 6.6	A / 7.4	A / 6.8	A / 7.7	A / 7.9	A / 8.9	B / 11.7	A / 9.3	B / 12.4
Noroton Avenue	NBTR	A / 6.6	A / 6.7	A / 6.8	A / 6.6	A / 6.7	A / 6.8	A / 6.9	A / 7.0	A / 6.9	A / 7.0	A / 7.0	A / 7.2	A / 7.0	A / 7.2	A / 7.0
	SBTL	D / 38.1	D / 42.2	D / 42.2	D / 43.1	D / 43.1	C / 22.4	C / 22.9	C / 23.2	C / 23.0	C / 23.3	C / 25.3	C / 26.0	C / 26.4	C / 26.2	C / 26.4
	SBR	A / 0.7	A / 1.1	A / 1.0	A / 1.1	A / 1.0	A / 2.6	A / 3.3	A / 3.5	A / 3.3	A / 3.5	A / 4.5	A / 4.4	A / 4.3	A / 4.4	A / 4.3
Traffic Signal - Hollow Tree Ridge Road at RR Parking Lot / Avalon Driveway																
Overall		**B / 14.6**	**B / 15.4**	**B / 15.4**	**B / 16.3**	**B / 16.2**	**B / 15.1**	**B / 16.0**	**B / 16.1**	**B / 16.6**	**B / 16.7**	**B / 13.4**	**B / 14.7**	**B / 14.9**	**B / 15.6**	**B / 16.0**
RR Parking Lot Driveway	EB	C / 31.6	C / 32.3	C / 32.3	C / 32.3	C / 32.4	C / 22.4	C / 24.1	C / 24.1	C / 25.4	C / 25.3	C / 34.8	D / 37.1	D / 37.1	D / 40.9	D / 38.4
Avalon Driveway	WBL	C / 21.8	C / 21.8	C / 21.8	C / 21.8	C / 21.8	B / 15.9	B / 15.9	B / 15.9	B / 16.3	B / 16.3	C / 26.3	C / 26.3	C / 26.3	C / 27.0	C / 25.2
	WBTR	C / 21.2	C / 21.3	C / 21.3	C / 21.3	C / 21.3	B / 16.3	B / 16.2	B / 16.2	B / 17.0	B / 16.9	C / 25.7	C / 25.8	C / 25.8	C / 26.9	C / 25.5
Hollow Tree Ridge Road	NB	B / 13.8	B / 14.3	B / 14.2	B / 14.3	B / 14.1	B / 16.1	B / 16.7	B / 16.7	B / 15.8	B / 15.9	A / 9.9	B / 10.3	B / 10.4	A / 9.3	B / 10.2
	SB	B / 10.7	B / 11.7	B / 11.8	B / 13.8	B / 13.6	B / 12.8	B / 13.6	B / 13.8	B / 15.3	B / 15.5	A / 9.9	B / 10.4	B / 11.0	B / 12.2	B / 13.5
Traffic Signal - Noroton Avenue at I-95 SB On-Ramp / RR Parking Lot Driveway / Ledge Road																
Overall		**C / 21.2**	**C / 23.8**	**C / 23.7**	**C / 24.7**	**C / 24.6**	**B / 19.1**	**C / 20.2**	**C / 21.4**	**C / 20.5**	**C / 21.7**	**C / 21.2**	**C / 22.4**	**C / 25.1**	**C / 22.6**	**C / 26.0**
I-95 SB On-Ramp / RR Dwy	EB	A / 0.2	A / 0.2	A / 0.2	A / 0.2	A / 0.2	B / 19.6	B / 19.4	B / 19.3	B / 19.3	B / 19.3	C / 21.4	C / 21.4	C / 21.3	C / 21.4	C / 21.3
Ledge Road	WB	D / 54.2	E / 55.6	E / 55.6	E / 59.6	E / 59.6	D / 54.5	E / 57.7	E / 60.6	E / 58.4	E / 61.4	E / 56.3	E / 60.4	E / 68.3	E / 60.6	E / 71.2
	NBL	B / 17.6	C / 27.8	C / 26.9	C / 29.7	C / 29.2	A / 2.9	A / 3.0	A / 3.0	A / 3.0	A / 3.1	A / 3.3	A / 3.6	A / 3.8	A / 3.7	A / 3.8
Noroton Avenue	NBTR	A / 4.2	A / 4.4	A / 4.3	A / 4.2	A / 4.2	A / 4.7	A / 4.9	A / 5.3	A / 5.0	A / 5.5	A / 4.9	A / 5.1	A / 5.7	A / 5.3	A / 5.8
	SBL	A / 8.9	A / 9.2	A / 9.1	A / 8.6	A / 8.6	A / 6.8	A / 6.9	A / 7.4	A / 7.1	A / 7.5	B / 11.0	B / 11.7	B / 12.8	B / 11.8	B / 12.9
	SBTR	B / 17.6	C / 21.0	C / 20.7	C / 21.1	C / 20.8	A / 7.9	A / 8.4	A / 9.3	A / 8.6	A / 9.6	B / 11.2	B / 12.8	B / 14.4	B / 13.1	B / 14.7
Traffic Signal - Noroton Avenue at I-95 NB Off-Ramp																
Overall		**B / 12.5**	**B / 12.5**	**B / 12.6**	**B / 12.6**	**B / 12.7**	**B / 17.2**	**B / 17.6**	**B / 17.7**	**B / 17.8**	**B / 17.9**	**B / 11.7**	**B / 12.0**	**B / 12.4**	**B / 12.1**	**B / 12.6**
I-95 NB Off-Ramp	EB	D / 42.8	D / 42.7	D / 42.7	D / 42.8	D / 42.8	D / 42.7	D / 42.5	D / 42.4	D / 42.4	D / 42.2	D / 45.1	D / 45.0	D / 44.7	D / 44.8	D / 44.8
Noroton Avenue	NB	A / 6.6	A / 6.8	A / 6.8	A / 6.9	A / 6.8	A / 9.3	A / 9.9	B / 10.5	B / 10.2	B / 10.7	A / 6.0	A / 6.3	A / 6.9	A / 6.4	A / 7.1
	SB	A / 2.9	A / 3.0	A / 3.0	A / 3.1	A / 3.1	A / 4.5	A / 5.0	A / 5.2	A / 5.1	A / 5.3	A / 2.1	A / 2.3	A / 2.4	A / 2.4	A / 2.5

TABLE 1
Intersection Operation Summary - Vehicular Levels of Service / Average Delay (sec/veh)

		Weekday Morning Peak Hour					Friday (Weekday) Afternoon Peak Hour					Saturday Midday Peak Hour				
	Lane Use	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal
Traffic Signal - Noroton Avenue at Hecker Avenue / Maple Street																
Overall		**A / 8.9**	**A / 9.0**	**A / 9.0**	**A / 9.1**	**A / 9.1**	**A / 7.5**	**A / 7.5**	**A / 7.4**	**A / 7.5**	**A / 7.4**	**A / 8.5**	**A / 8.6**	**A / 8.6**	**A / 8.5**	**A / 8.6**
Maple Street	EB	D / 47.0	D / 47.5	D / 47.2	D / 47.5	D / 47.2	D / 40.1	D / 40.3	D / 40.5	D / 40.3	D / 40.5	D / 45.5	D / 46.2	D / 47.8	D / 46.3	D / 48.0
Hecker Avenue	WB	B / 13.6	B / 13.5	B / 13.7	B / 13.5	B / 13.7	B / 15.2	B / 15.2	B / 15.0	B / 15.2	B / 15.0	B / 16.2	B / 16.1	B / 15.3	B / 16.0	B / 15.3
	NB	A / 7.3	A / 7.4	A / 7.4	A / 7.5	A / 7.4	A / 5.7	A / 5.8	A / 5.8	A / 5.8	A / 5.9	A / 6.0	A / 6.1	A / 6.2	A / 6.1	A / 6.2
Noroton Avenue	SBL	A / 3.6	A / 3.9	A / 3.9	A / 4.3	A / 4.3	A / 2.7	A / 2.8	A / 2.9	A / 2.8	A / 3.1	A / 2.6	A / 2.7	A / 3.0	A / 2.7	A / 3.1
	SBT	A / 1.8	A / 1.8	A / 1.8	A / 1.9	A / 1.9	A / 1.9	A / 1.8	A / 1.7	A / 1.8	A / 1.7	A / 1.5	A / 1.5	A / 1.4	A / 1.5	A / 1.4
	SBR	A / 0.5	A / 0.5	A / 0.5	A / 0.5	A / 0.5	A / 0.1	A / 0.1	A / 0.1	A / 0.1	A / 0.1	A / 0.5	A / 0.5	A / 0.5	A / 0.5	A / 0.5
Unsignalized - Heights Road at Edgerton Street																
Heights Road	EBL	A / 8.3	A / 8.3	A / 8.3	A / 8.4	A / 8.3	A / 8.1	A / 8.3	A / 8.4	A / 8.3	A / 8.4	A / 8.2	A / 8.3	A / 8.4	A / 8.4	A / 8.5
Edgerton Street	SB	D / 31.5	D / 31.3	E / 35.7	D / 34.3	E / 39.9	B / 13.5	B / 14.6	B / 14.6	C / 15.2	C / 15.2	C / 17.9	C / 20.9	C / 22.3	C / 22.6	C / 24.1

TABLE 2

Intersection Operation Summary - Vehicular 50th / 95th Percentile Queue (In Feet)

		Weekday Morning Peak Hour					Friday (Weekday) Afternoon Peak Hour					Saturday Midday Peak Hour				
	Lane Use	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal
Traffic Signal - West Avenue at Hollow Tree Ridge Road																
West Avenue	EB	75 / 281	80 / 299	78 / 293	79 / 299	78 / 294	75 / 267	79 / 285	81 / 288	80 / 287	81 / 292	40 / 153	51 / 163	53 / 169	51 / 164	53 / 170
	WB	54 / 190	56 / 202	56 / 203	56 / 202	56 / 203	59 / 183	61 / 192	58 / 181	61 / 192	58 / 181	37 / 142	44 / 145	45 / 147	44 / 145	45 / 147
Hollow Tree Ridge Road	NB	70 / 264	76 / 283	73 / 271	76 / 285	74 / 275	70 / 293	87 / 322	84 / 324	89 / 326	86 / 328	39 / 214	45 / 245	47 / 250	46 / 251	48 / 255
	SB	69 / 258	73 / 273	70 / 262	73 / 274	70 / 262	34 / 130	41 / 137	40 / 138	42 / 138	41 / 139	43 / 233	47 / 252	50 / 263	48 / 254	51 / 266
Traffic Signal - West Avenue at Edgerton Street																
West Avenue	EB	67 / 348	69 / 368	66 / 354	69 / 368	66 / 354	49 / 231	52 / 257	53 / 260	52 / 257	53 / 260	34 / 169	36 / 173	40 / 180	36 / 173	40 / 180
	WB	48 / 257	50 / 276	49 / 268	50 / 276	49 / 268	42 / 194	46 / 209	48 / 240	46 / 217	48 / 244	27 / 138	29 / 144	33 / 153	29 / 146	34 / 155
Edgerton Street	NB	21 / 74	22 / 77	23 / 81	23 / 79	24 / 83	22 / 97	23 / 102	24 / 104	23 / 103	25 / 105	21 / 93	22 / 97	27 / 116	22 / 100	28 / 119
	SB	31 / 101	32 / 104	31 / 101	32 / 104	31 / 101	7 / 39	7 / 40	8 / 42	7 / 41	8 / 43	7 / 40	8 / 42	9 / 46	8 / 43	9 / 47
Traffic Signal - West Avenue at Noroton Avenue																
West Avenue	EB	96 / 163	100 / 167	101 / 169	101 / 169	102 / 171	135 / 217	140 / 224	138 / 221	141 / 226	139 / 222	82 / 144	86 / 148	87 / 150	87 / 150	88 / 151
	WB	141 / 242	146 / 250	144 / 248	146 / 250	145 / 248	126 / 220	132 / 229	132 / 230	133 / 231	134 / 233	113 / 202	118 / 210	122 / 216	119 / 211	123 / 216
Noroton Avenue	NB	106 / 260	113 / 279	112 / 276	113 / 280	112 / 276	143 / 391	157 / 426	160 / 434	158 / 428	161 / 436	108 / 262	117 / 282	122 / 294	117 / 283	123 / 295
	SB	113 / 264	121 / 284	120 / 282	121 / 284	120 / 282	37 / 98	41 / 107	42 / 109	42 / 107	43 / 110	51 / 124	56 / 136	59 / 143	56 / 136	59 / 143
Traffic Signal - Heights Road at Hollow Tree Ridge Road																
Heights Road	WBL	209 / 344	233 / 373	220 / 356	70 / 124	71 / 127	116 / 241	127 / 267	130 / 273	85 / 145	87 / 148	143 / 300	163 / 332	176 / 347	78 / 136	86 / 120
	WBR	-- / --	-- / --	-- / --	149 / 271	141 / 254	-- / --	-- / --	-- / --	8 / 65	9 / 68	-- / --	-- / --	-- / --	10 / 41	19 / 27
Hollow Tree Ridge Road	NB	63 / 80	67 / 85	67 / 85	67 / 86	67 / 85	40 / 56	52 / 72	52 / 72	51 / 69	50 / 68	39 / 59	54 / 79	53 / 78	54 / 77	54 / 77
	SB	133 / 375	143 / 433	142 / 418	148 / 465	147 / 452	76 / 190	83 / 233	83 / 233	73 / 209	74 / 210	95 / 143	105 / 157	105 / 157	91 / 155	94 / 177
Traffic Signal - Heights Road at Noroton Avenue																
Heights Road	EBTL	21 / 29	21 / 29	20 / 29	21 / 29	20 / 29	49 / 94	53 / 101	57 / 107	53 / 101	57 / 107	52 / 100	57 / 106	62 / 112	57 / 106	62 / 107
	EBR	126 / 103	144 / 121	138 / 125	143 / 104	138 / 110	0 / 37	0 / 38	0 / 41	0 / 39	0 / 41	65 / 144	86 / 173	115 / 216	90 / 187	118 / 205
Gas Station Driveway	WB	5 / 21	5 / 21	5 / 21	5 / 21	5 / 21	7 / 28	7 / 28	7 / 28	7 / 28	7 / 28	12 / 35	12 / 35	12 / 35	12 / 35	12 / 35
	NBL	56 / 90	59 / 107	59 / 104	59 / 107	58 / 104	66 / 86	75 / 97	89 / 113	80 / 104	94 / 118	87 / 113	97 / 121	120 / 142	101 / 125	125 / 146
Noroton Avenue	NBTR	99 / 133	102 / 134	103 / 135	102 / 131	103 / 132	108 / 139	111 / 139	112 / 137	111 / 138	111 / 136	97 / 126	101 / 126	95 / 119	100 / 125	94 / 119
	SBTL	307 / 485	318 / 504	318 / 504	312 / 491	312 / 491	125 / 195	129 / 200	129 / 200	129 / 200	129 / 200	166 / 252	171 / 259	171 / 259	171 / 259	171 / 259
	SBR	0 / 4	0 / 6	0 / 6	0 / 6	0 / 6	0 / 18	0 / 22	0 / 23	0 / 22	0 / 23	0 / 32	0 / 33	0 / 34	0 / 33	0 / 34
Traffic Signal - Hollow Tree Ridge Road at RR Parking Lot / Avalon Driveway																
RR Parking Lot Driveway	EB	47 / 70	53 / 76	53 / 76	53 / 76	53 / 76	21 / 38	36 / 56	36 / 56	37 / 56	37 / 56	32 / 69	51 / 98	51 / 98	53 / 98	52 / 93
Avalon Driveway	WBL	6 / 16	6 / 16	6 / 16	6 / 16	6 / 16	6 / 14	6 / 14	6 / 14	6 / 14	6 / 14	3 / 13	3 / 13	3 / 13	3 / 13	3 / 12
	WBTR	14 / 27	15 / 27	15 / 27	15 / 27	15 / 27	24 / 37	24 / 38	24 / 38	26 / 38	25 / 38	19 / 44	19 / 45	19 / 45	20 / 45	20 / 42
Hollow Tree Ridge Road	NB	111 / 220	122 / 239	119 / 234	122 / 240	120 / 234	89 / 204	97 / 220	97 / 222	92 / 223	93 / 225	75 / 119	83 / 131	88 / 138	77 / 133	82 / 154
	SB	84 / 107	91 / 110	92 / 114	94 / 121	95 / 125	88 / 136	94 / 150	95 / 152	106 / 196	109 / 199	80 / 106	88 / 110	94 / 115	102 / 144	109 / 152
Traffic Signal - Noroton Avenue at I-95 SB On-Ramp / RR Parking Lot Driveway / Ledge Road																
I-95 SB On-Ramp / RR Dwy	EB	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	13 / 46	13 / 46	13 / 46	13 / 46	13 / 46	9 / 33	9 / 33	9 / 33	9 / 33	9 / 33
Ledge Road	WB	162 / 322	169 / 334	169 / 334	173 / 348	173 / 348	172 / 349	184 / 374	198 / 399	188 / 382	203 / 409	177 / 363	192 / 392	215 / 429	196 / 397	225 / 437
	NBL	16 / 45	16 / 55	16 / 53	17 / 58	17 / 57	5 / 9	5 / 9	5 / 8	5 / 9	5 / 8	6 / 11	6 / 11	6 / 11	6 / 11	6 / 11
Noroton Avenue	NBTR	42 / 54	43 / 56	42 / 54	45 / 55	44 / 54	42 / 47	44 / 51	46 / 55	44 / 52	46 / 56	33 / 41	35 / 43	40 / 48	35 / 44	40 / 48
	SBL	17 / 33	18 / 35	17 / 34	19 / 35	18 / 33	10 / 26	11 / 28	12 / 32	11 / 28	13 / 32	42 / 79	47 / 85	54 / 95	48 / 88	55 / 98
	SBTR	204 / 316	224 / 362	218 / 358	231 / 370	226 / 364	72 / 132	79 / 143	93 / 167	83 / 149	97 / 173	121 / 182	164 / 232	195 / 270	169 / 242	204 / 282
Traffic Signal - Noroton Avenue at I-95 NB Off-Ramp																
I-95 NB Off-Ramp	EB	148 / 214	152 / 219	152 / 219	154 / 222	154 / 222	188 / 255	199 / 266	209 / 277	204 / 272	214 / 282	118 / 179	126 / 188	139 / 203	129 / 192	143 / 208
Noroton Avenue	NB	58 / 98	59 / 101	59 / 99	60 / 108	59 / 99	45 / 186	70 / 196	103 / 205	100 / 199	106 / 210	49 / 90	51 / 94	54 / 129	51 / 94	55 / 158
	SB	21 / 44	22 / 47	22 / 47	21 / 57	21 / 56	21 / 86	22 / 96	26 / 102	23 / 98	31 / 106	17 / 24	19 / 25	20 / 26	20 / 25	20 / 30

TABLE 2

Intersection Operation Summary - Vehicular 50th / 95th Percentile Queue (In Feet)

		Weekday Morning Peak Hour					Friday (Weekday) Afternoon Peak Hour					Saturday Midday Peak Hour				
	Lane Use	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal	2015 Exisiting	2019 Background	2019 Background Federal	2019 Combined	2019 Combined Federal
Traffic Signal - Noroton Avenue at Hecker Avenue / Maple Street																
Maple Street	EB	68 / 121	70 / 124	70 / 124	70 / 124	70 / 124	40 / 84	41 / 85	41 / 85	41 / 85	41 / 85	53 / 101	54 / 104	54 / 104	54 / 104	54 / 105
Hecker Avenue	WB	4 / 41	4 / 42	4 / 41	4 / 42	4 / 41	8 / 55	8 / 56	8 / 56	8 / 56	8 / 56	9 / 53	9 / 53	9 / 55	9 / 53	9 / 56
	NB	72 / 129	75 / 134	74 / 132	75 / 134	75 / 133	41 / 77	43 / 80	45 / 83	44 / 81	45 / 85	45 / 82	48 / 85	51 / 90	48 / 86	52 / 91
Noroton Avenue	SBL	18 / 27	18 / 27	18 / 27	19 / 32	19 / 31	13 / 20	13 / 22	12 / 31	12 / 25	12 / 35	11 / 17	11 / 17	11 / 16	11 / 17	11 / 16
	SBT	13 / 21	13 / 21	13 / 21	14 / 21	13 / 21	10 / 17	10 / 17	9 / 16	10 / 16	9 / 16	6 / 10	6 / 10	6 / 10	6 / 10	6 / 9
	SBR	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
Unsignalized - Heights Road at Edgerton Street																
Heights Road	EBL	5	8	5	8	5	5	5	5	5	5	3	5	5	5	5
Edgerton Street	SB	110	113	138	120	150	20	25	25	28	28	45	57	65	65	73

TABLE 3
Study Area Collision Summary

BY STUDY AREA INTERSECTION

	2013	2014	2015	2016	Total	Percent
West Avenue at Hollow Tree Ridge Road	0	4	5	7	**16**	**18.6%**
West Avenue at Edgerton Street	0	1	2	3	**6**	**7.0%**
West Avenue at Noroton Avenue	1	2	5	4	**12**	**14.0%**
Heights Road at Hollow Tree Ridge Road	0	2	3	3	**8**	**9.3%**
Heights Road at Edgerton Street	1	0	2	2	**5**	**5.8%**
Heights Road at Noroton Avenue	0	3	4	4	**11**	**12.8%**
Hollow Tree Ridge Road at Avalon/Railroad Parking Driveway	0	1	1	1	**3**	**3.5%**
Noroton Avenue at Ledge Road/I-95 SB On-Ramp	1	8	4	4	**17**	**19.8%**
Noroton Avenue at I-95 NB Off-Ramp	1	1	1	1	**4**	**4.7%**
Noroton Avenue at Hecker Avenue/Maple Street	0	2	1	1	**4**	**4.7%**
TOTAL	**4**	**24**	**28**	**30**	**86**	**100%**

COLLISION TYPE

	2013	2014	2015	2016	Total	Percent
Rear-End	1	14	8	17	**40**	**46.5%**
Angle	3	5	11	5	**24**	**27.9%**
Fixed Object	0	1	2	3	**6**	**7.0%**
Sideswipe, Same Direction	0	3	1	2	**6**	**7.0%**
Head-On	0	1	3	0	**4**	**4.7%**
Sideswipe, Opposite Direction	0	0	1	2	**3**	**3.5%**
Backing	0	0	2	0	**2**	**2.3%**
Bicycle	0	0	0	1	**1**	**1.2%**
TOTAL	**4**	**24**	**28**	**30**	**86**	**100%**

SEVERITY

	2013	2014	2015	2016	Total	Percent
Fatal	0	0	0	0	**0**	**0.0%**
Injury	0	0	10	2	**12**	**14.0%**
Property Damage Only (PDO)	4	24	18	28	**74**	**86.0%**
TOTAL	**4**	**24**	**28**	**30**	**86**	**100%**

Sources: Darien Police Department (October 2013 - October 2016)
Connecticut Crash Data Repository (January 2015 to October 2016)

TABLE 4
Site Generated Traffic Summary

Existing - 30,627 SF Retail - To Be Removed (See Note 1)			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	47	29	76
Weekday Afternoon	130	141	271
Saturday Midday	211	194	405

Proposed - 33,127 SF Retail			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	49	30	79
Weekday Afternoon	137	149	286
Saturday Midday	222	204	426

Net New Retail Trips (Proposed Minus Existing)			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	2	1	3
Weekday Afternoon	7	8	15
Saturday Midday	11	10	21

Proposed - 59 Residential			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	7	26	33
Weekday Afternoon	33	17	50
Saturday Midday	22	21	43

Subtotal New Vehicular Trips (Net New Retail Plus Residential)			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	9	27	36
Weekday Afternoon	40	25	65
Sautrday Midday	33	31	64

Alternative Mode & Internal Capture Credit	**15%**		
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	1	4	5
Weekday Afternoon	6	3	9
Sautrday Midday	5	4	9

Total New Vehicular Trips (Subtotal New Minus Credit)			
Peak Hour Period	**Enter**	**Exit**	**Total**
Weekday Morning	**8**	**23**	**31**
Weekday Afternoon	**34**	**22**	**56**
Sautrday Midday	**28**	**27**	**55**

Note 1: Trip Generation for Existing Development Estimated Based on ITE Trip Generation Data.

Source: Institute of Transportation Engineering, Trip Generation, 9th Edition, 2012.
Land Use - 220 Apartment
Land Use - 820 Shopping Center

TABLE 5

Parking Demand Projections Summary

Proposed Redevelopment Plan		Darien Parking Requirements[1]					Parking Required	Downtown Darien Parking Management Plan Shared Parking Model[2]					Parking Required	Suggested Parking Supply					
Use	**Size**																		
Retail	24,481	s.f.	1	space per	150	s.f.	164	1	space per	333	s.f.		74	1	space per	300	s.f.		82
Apartments	59	units	2.5	space per	1	units	148	1	space per	1	units		59	1.25	space per	1	units		74
Restaurant	8,646	s.f.	1	space per	100	s.f.	87	1	space per	166	s.f.		53	1	space per	100	s.f.		87
Bank	4,104	s.f.	1	space per	150	s.f.	28	1	space per	333	s.f.		13	1	space per	300	s.f.		14
Supermarket	40,788	s.f.	1	space per	150	s.f.	272	1	space per	333	s.f.		123	1	space per	300	s.f.		136
						Parking Required =	**699**					**Parking Required =**	**322**					**Suggested Parking =**	**393**
						Parking Supplied =	**402**					**Parking Supplied =**	**402**					**Parking Supplied =**	**402**
						Parking Deficit =	**-297**					**Parking Surplus =**	**80**					**Parking Surplus =**	**9**
																		% Reduction =	**42.49%**

Notes:

1 Per Darien Zoning Regulations Section 905. Parking may only be reduced by 50% by the Planning and Zoning Commission within the Noroton Heights Redevelopment Zone due to lack of municipal and on-street parking.

2 Downtown Darien Parking Management Plan, performed by Nelson Nygaard and Fitzgerald & Halliday, October 2015

Table 6
Parking Occupancy Survey - Data Summary
Noroton Heights Center, 346 Heights Road, Darien

Field Survey: Thursday, January 23, 2014

Section	Capacity	Number of Occupied Parking Spaces																
		9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM
1	14	8	8	10	13	10	10	12	13	13	14	11	11	11	7	6	7	7
2	11	7	7	7	7	7	7	7	7	8	7	6	6	6	6	5	5	5
3	10	7	7	8	8	8	8	8	8	7	7	7	6	6	6	6	5	5
4	15	11	12	13	11	13	14	14	14	14	14	13	12	12	10	10	9	7
5	15	10	8	11	14	14	15	15	8	4	5	6	8	7	6	9	9	7
6	15	10	12	12	12	11	11	10	9	8	7	8	9	10	10	10	8	7
7	12	5	4	6	6	7	7	9	8	8	7	4	9	7	7	7	9	8
8	11	4	4	6	4	5	6	6	5	7	5	5	6	4	3	3	5	5
9	2	0	0	0	1	1	1	1	1	0	1	0	0	1	0	1	0	0
10	20	6	6	7	8	10	9	11	11	10	11	10	12	11	10	10	11	10
11	20	7	9	10	10	9	11	11	13	14	13	12	12	11	10	6	6	9
12	20	6	3	3	5	7	8	13	10	11	9	9	10	6	7	7	5	8
13	20	4	7	8	8	11	13	15	8	11	10	12	10	4	11	6	7	13
14	19	3	5	7	10	15	13	15	14	13	13	12	11	12	7	8	11	12
15	13	2	2	3	3	3	5	9	7	5	6	7	6	5	6	3	5	5
16	13	3	3	3	3	4	4	4	5	3	3	5	5	4	4	3	4	0
17	8	1	1	0	0	0	1	1	0	1	4	2	1	2	1	1	1	1
18	3	0	0	1	1	2	3	2	2	2	2	1	1	1	2	2	1	1
19	27	5	7	3	11	10	13	18	13	18	16	14	17	12	16	12	17	18
20	13	1	1	1	3	2	2	2	4	3	3	1	0	0	1	0	0	2
21	15	5	4	7	14	14	12	5	13	13	13	8	6	5	5	9	9	8
22	14	2	3	3	10	10	6	3	11	12	12	3	2	3	4	5	4	7
23	18	8	8	8	8	7	8	7	10	12	12	11	8	9	6	10	9	11
24	8	2	3	5	1	3	2	2	1	3	3	1	1	1	1	1	0	2
25	6	1	1	1	2	2	2	3	3	3	3	2	2	2	2	2	2	2
26	8	0	0	0	2	0	3	0	2	1	2	1	0	2	3	1	0	2
27	15	4	4	8	10	10	13	4	5	4	7	5	10	6	5	8	5	4
28	10	2	4	4	6	5	4	4	7	7	6	6	5	5	7	6	6	6
29	11	6	6	8	10	8	8	7	8	4	8	8	9	9	9	9	8	8
TOTALS	**386**	**130**	**139**	**163**	**201**	**208**	**219**	**218**	**220**	**219**	**223**	**190**	**195**	**174**	**172**	**166**	**168**	**180**
PERCENT OCCUPIED		**33.7%**	**36.0%**	**42.2%**	**52.1%**	**53.9%**	**56.7%**	**56.5%**	**57.0%**	**56.7%**	**57.8%**	**49.2%**	**50.5%**	**45.1%**	**44.6%**	**43.0%**	**43.5%**	**46.6%**
OPEN SPACES		**256**	**247**	**223**	**185**	**178**	**167**	**168**	**166**	**167**	**163**	**196**	**191**	**212**	**214**	**220**	**218**	**206**

Table 7
Parking Occupancy Survey - Data Summary
Noroton Heights Center, 346 Heights Road, Darien

Field Survey: Sunday, January 26, 2014

Section	Capacity	Number of Occupied Parking Spaces														
		11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
1	14	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4
2	11	3	4	4	2	1	1	1	1	1	1	1	1	1	1	1
3	10	2	2	2	2	2	2	2	2	1	1	2	1	1	0	0
4	15	7	7	7	6	5	5	5	3	2	1	1	1	1	1	1
5	15	3	5	5	4	3	2	2	2	2	2	2	2	2	2	2
6	15	7	2	3	4	4	3	3	1	7	1	1	1	1	1	1
7	12	2	1	4	5	4	4	2	2	4	5	4	2	6	4	5
8	11	1	0	1	2	2	0	1	3	3	1	0	0	1	2	1
9	2	0	0	1	1	2	1	0	0	0	1	0	0	0	0	0
10	20	6	10	9	8	7	7	7	6	8	2	7	4	5	5	5
11	20	3	5	7	2	3	4	6	5	6	4	4	5	6	4	2
12	20	5	5	8	5	2	8	9	5	3	7	7	6	10	5	6
13	20	7	5	5	7	4	7	9	8	8	9	11	10	8	7	5
14	19	8	7	9	7	5	6	7	8	10	9	6	4	9	4	3
15	13	3	5	4	4	4	4	5	3	3	4	1	2	2	2	2
16	13	1	2	3	2	2	1	1	1	2	2	1	1	1	1	1
17	8	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
18	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	27	3	4	5	4	4	6	4	4	4	5	7	6	5	6	7
20	13	9	9	9	2	0	0	0	0	0	0	2	2	2	2	1
21	15	15	15	15	7	7	7	7	8	7	7	10	10	11	14	8
22	14	13	14	14	3	3	3	4	4	4	4	10	10	10	11	5
23	18	9	7	8	4	2	2	2	2	2	2	3	1	1	5	5
24	8	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0
25	6	1	1	1	2	2	2	2	1	1	1	1	1	1	0	0
26	8	0	0	0	0	1	0	1	1	2	2	1	3	2	0	0
27	15	7	8	5	5	3	2	4	11	4	8	9	8	0	0	0
28	10	1	3	2	3	2	2	1	6	6	5	3	4	0	1	2
29	11	3	3	3	4	4	4	4	3	2	3	2	2	2	4	4
TOTALS	**386**	**126**	**131**	**140**	**100**	**83**	**88**	**94**	**94**	**96**	**92**	**100**	**91**	**92**	**86**	**71**
PERCENT OCCUPIED		**32.6%**	**33.9%**	**36.3%**	**25.9%**	**21.5%**	**22.8%**	**24.4%**	**24.4%**	**24.9%**	**23.8%**	**25.9%**	**23.6%**	**23.8%**	**22.3%**	**18.4%**
OPEN SPACES		**260**	**255**	**246**	**286**	**303**	**298**	**292**	**292**	**290**	**294**	**286**	**295**	**294**	**300**	**315**

Table 8
Parking Occupancy Survey - Data Summary
Noroton Heights Center, 346 Heights Road, Darien

Field Survey: Tuesday, January 28, 2014

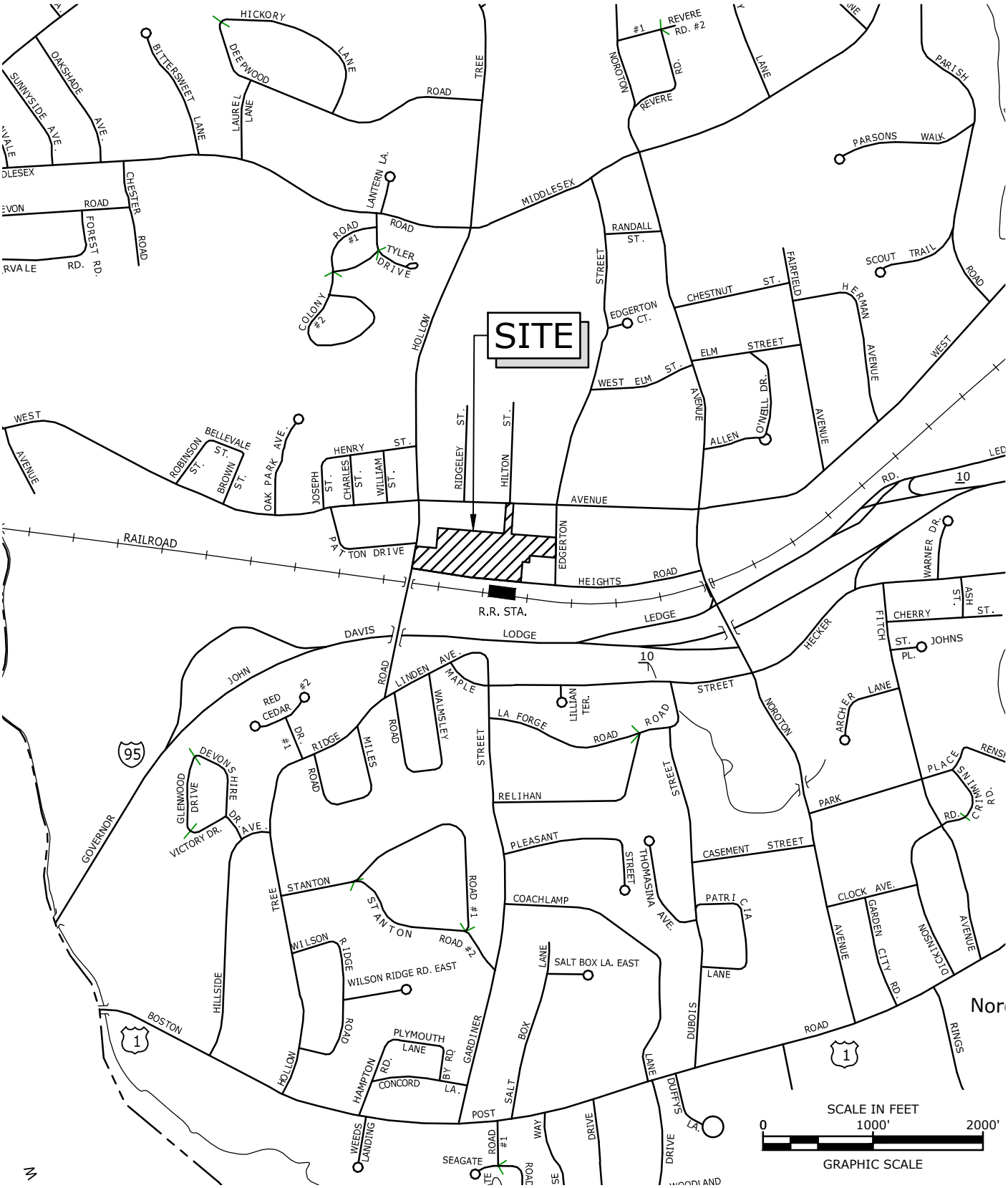
Section	Capacity	Number of Occupied Parking Spaces																
		9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM
1	14	10	10	10	10	11	11	11	10	10	10	10	10	7	7	6	6	6
2	11	8	8	7	7	7	6	5	5	6	5	6	5	2	3	2	2	2
3	10	7	7	7	7	7	6	6	5	6	6	6	7	6	6	6	5	5
4	15	12	12	12	13	13	13	14	14	14	15	13	13	10	10	8	8	4
5	15	13	14	10	7	10	10	6	7	7	9	9	7	6	8	5	6	5
6	15	13	12	12	11	9	7	5	7	7	3	5	6	3	1	3	5	7
7	12	9	8	7	7	8	7	8	6	5	7	7	9	9	9	8	9	7
8	11	3	3	4	5	4	7	8	6	7	5	6	8	7	8	5	4	5
9	2	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0
10	20	4	4	6	6	9	10	8	9	8	11	11	9	8	9	7	7	6
11	20	5	5	3	5	7	9	8	9	8	13	10	8	9	8	8	8	8
12	20	3	2	4	5	6	10	9	8	9	12	11	10	9	11	8	9	8
13	20	5	6	9	6	9	12	12	8	12	9	9	10	9	11	13	12	9
14	19	3	4	5	4	9	14	9	9	6	8	10	9	10	12	9	10	8
15	13	1	1	2	3	5	5	6	7	7	7	7	8	5	6	5	3	2
16	13	4	5	7	7	7	7	9	5	5	5	5	6	4	4	11	4	4
17	8	1	1	1	1	1	0	0	0	0	1	1	3	2	1	1	1	2
18	3	1	1	1	0	0	0	0	2	1	1	1	3	1	1	1	1	2
19	27	6	7	5	9	16	14	10	14	17	16	15	12	17	14	18	17	16
20	13	3	3	1	2	4	4	0	3	5	3	0	0	0	0	0	0	0
21	15	2	3	4	6	14	10	9	15	14	14	8	6	7	7	8	9	11
22	14	5	4	2	8	10	10	7	12	11	9	7	6	1	3	6	6	7
23	18	7	6	6	10	7	8	9	11	11	10	8	8	8	6	8	9	6
24	8	2	3	1	2	1	1	1	3	2	2	3	2	4	3	2	2	3
25	6	0	0	1	2	2	3	2	3	3	3	3	0	3	2	2	2	2
26	8	0	0	0	0	1	1	0	0	2	3	2	2	0	1	1	1	2
27	15	6	5	4	6	4	3	8	7	8	7	6	10	7	4	5	1	3
28	10	3	3	2	4	3	4	7	7	7	4	6	7	4	8	3	4	4
29	11	5	5	7	6	8	9	10	9	6	6	5	5	6	6	6	6	6
TOTALS	**386**	**141**	**142**	**140**	**159**	**192**	**201**	**188**	**202**	**205**	**205**	**190**	**190**	**164**	**169**	**165**	**157**	**150**
PERCENT OCCUPIED		**36.5%**	**36.8%**	**36.3%**	**41.2%**	**49.7%**	**52.1%**	**48.7%**	**52.3%**	**53.1%**	**53.1%**	**49.2%**	**49.2%**	**42.5%**	**43.8%**	**42.7%**	**40.7%**	**38.9%**
OPEN SPACES		**245**	**244**	**246**	**227**	**194**	**185**	**198**	**184**	**181**	**181**	**196**	**196**	**222**	**217**	**221**	**229**	**236**

Table 9
Parking Occupancy Survey - Data Summary
Noroton Heights Center, 346 Heights Road, Darien

Field Survey: Saturday, February 1, 2014

Section	Capacity	Number of Occupied Parking Spaces																				
		10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM	8:00 PM
1	14	3	6	6	8	9	8	6	8	7	7	9	8	8	7	6	4	4	5	3	1	2
2	11	3	4	6	5	6	8	8	9	5	6	7	5	5	5	7	5	3	5	4	4	4
3	10	5	7	2	7	9	9	4	4	6	6	7	6	6	6	6	6	2	7	4	5	2
4	15	2	6	2	4	11	9	9	12	10	12	10	9	7	5	6	11	8	7	3	2	2
5	15	8	8	10	11	10	10	8	9	9	11	9	8	7	7	7	4	5	6	4	2	1
6	15	3	5	5	7	7	6	8	6	10	10	11	10	9	8	7	3	2	1	2	2	2
7	12	7	9	9	4	6	9	8	7	8	8	7	7	5	6	5	5	3	1	1	1	1
8	11	3	1	2	3	1	1	4	6	6	5	6	7	4	3	5	3	3	1	1	0	0
9	2	2	1	2	0	1	0	1	2	1	1	1	2	1	1	0	0	2	1	0	0	0
10	20	17	10	11	14	12	12	10	11	14	12	10	9	8	5	4	1	0	0	0	0	0
11	20	9	7	6	11	11	10	7	9	9	10	9	9	10	10	9	9	8	7	6	6	4
12	20	11	11	13	10	9	10	7	7	9	11	7	6	7	11	9	9	9	6	6	7	6
13	20	8	10	6	10	8	6	10	10	7	11	12	10	8	10	10	7	9	10	10	9	6
14	19	10	12	13	10	10	9	9	10	6	7	9	6	6	9	12	9	11	8	7	9	8
15	13	11	9	9	7	10	10	7	10	8	8	9	6	10	8	11	10	9	7	10	8	6
16	13	11	11	10	10	6	6	10	12	7	6	13	12	10	10	11	10	9	6	7	7	5
17	8	3	1	4	5	5	7	7	8	7	7	6	8	7	7	6	6	4	4	3	3	1
18	3	3	1	2	0	1	1	1	2	2	2	1	1	0	3	3	3	3	3	3	3	1
19	27	26	19	16	12	13	14	12	12	18	11	10	7	8	7	6	3	5	4	4	3	2
20	13	5	7	7	9	3	4	12	11	7	7	6	6	6	3	4	5	2	2	2	2	2
21	15	13	10	8	12	11	15	11	10	12	10	9	7	3	4	4	3	2	2	1	1	6
22	14	13	11	12	12	10	10	7	8	9	12	11	10	9	8	6	8	7	5	6	6	4
23	18	10	9	11	11	10	9	6	12	9	13	10	10	9	7	6	9	7	6	5	5	4
24	8	8	6	4	5	5	6	8	6	6	7	6	5	4	4	3	2	2	1	1	2	1
25	6	2	3	4	6	1	2	2	1	1	6	4	1	2	1	2	3	2	2	2	1	1
26	8	2	6	4	1	3	5	3	2	2	6	4	1	2	2	2	3	6	2	1	1	0
27	15	10	11	10	10	9	9	11	9	8	9	7	3	2	2	1	1	0	2	1	0	0
28	10	8	9	9	7	8	8	4	7	8	9	6	4	5	1	3	1	4	3	2	0	1
29	11	8	7	4	7	7	6	4	9	7	4	6	5	5	3	1	1	1	1	1	1	1
TOTALS	**386**	**224**	**217**	**207**	**218**	**212**	**219**	**204**	**229**	**218**	**234**	**222**	**188**	**173**	**163**	**162**	**144**	**132**	**115**	**100**	**91**	**73**
PERCENT OCCUPIED		**58.0%**	**56.2%**	**53.6%**	**56.5%**	**54.9%**	**56.7%**	**52.8%**	**59.3%**	**56.5%**	**60.6%**	**57.5%**	**48.7%**	**44.8%**	**42.2%**	**42.0%**	**37.3%**	**34.2%**	**29.8%**	**25.9%**	**23.6%**	**18.9%**
OPEN SPACES		**162**	**169**	**179**	**168**	**174**	**167**	**182**	**157**	**168**	**152**	**164**	**198**	**213**	**223**	**224**	**242**	**254**	**271**	**286**	**295**	**313**

Section 9
Figures



NOROTON HEIGHTS SHOPPING CENTER

DARIEN, CT

SITE LOCATION MAP

NORTH

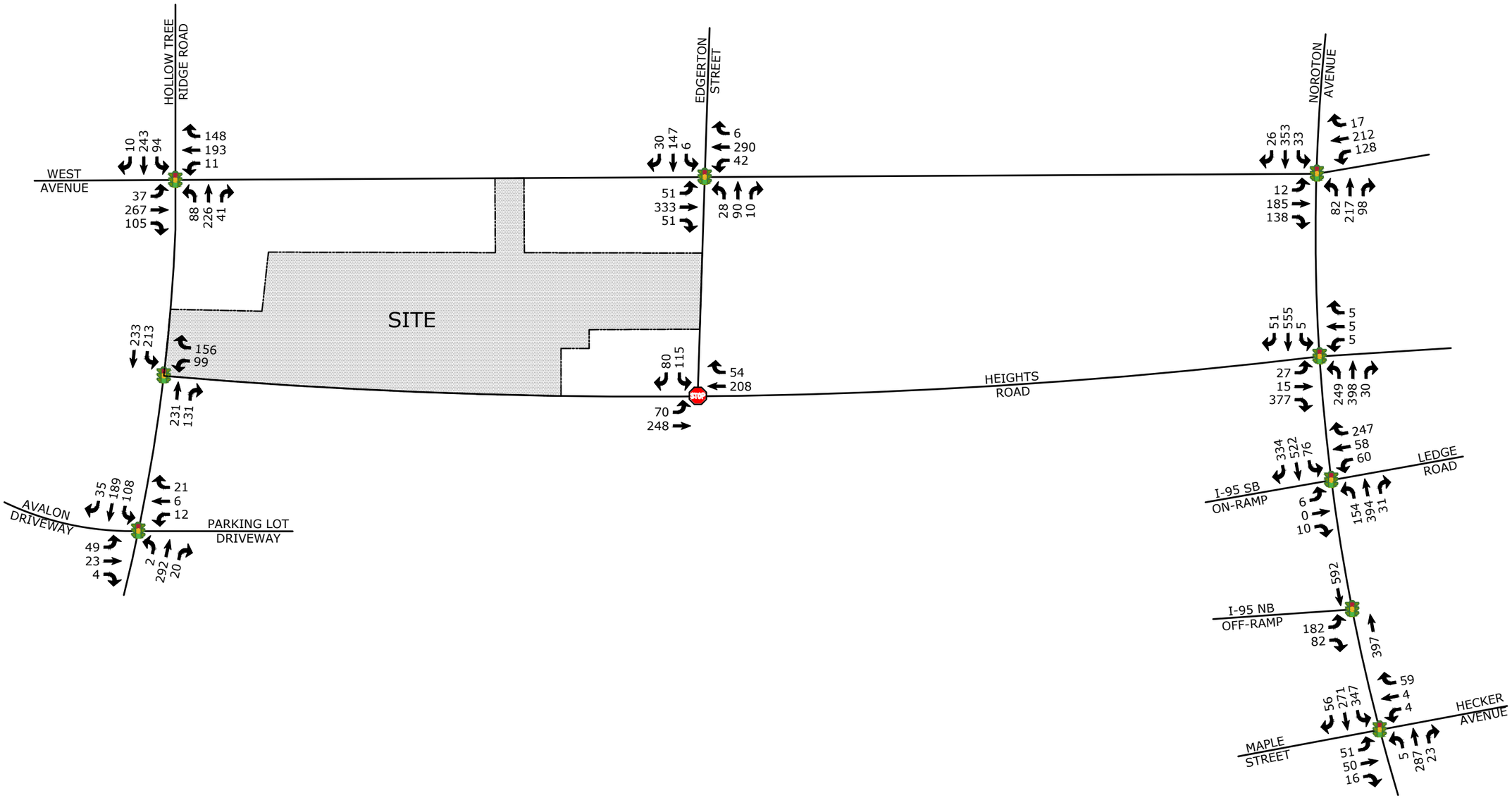
1" = 1000'

FIGURE 1

Tighe&Bond

www.tighebond.com

Nov 03, 2016-2:15pm Plotted By: CDY
Tighe & Bond, Inc. C:\Users\CDY\appdata\local\temp\AcPublish_2260\Figure 1 - Site Location.dwg



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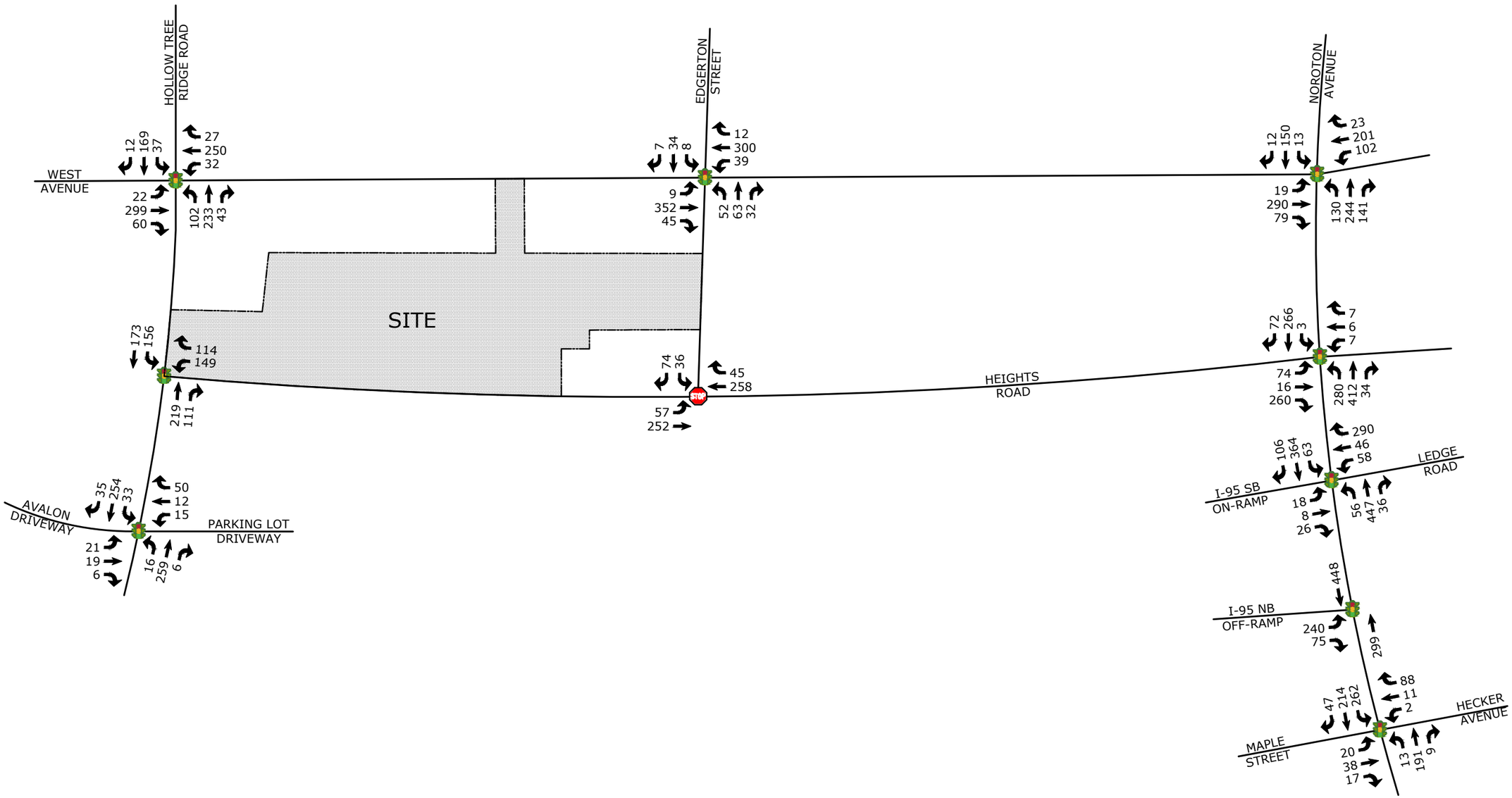
Noroton Heights
Shopping Center
Redevelopment
Darien, Connecticut

November 2016

2015 EXISTING TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 2

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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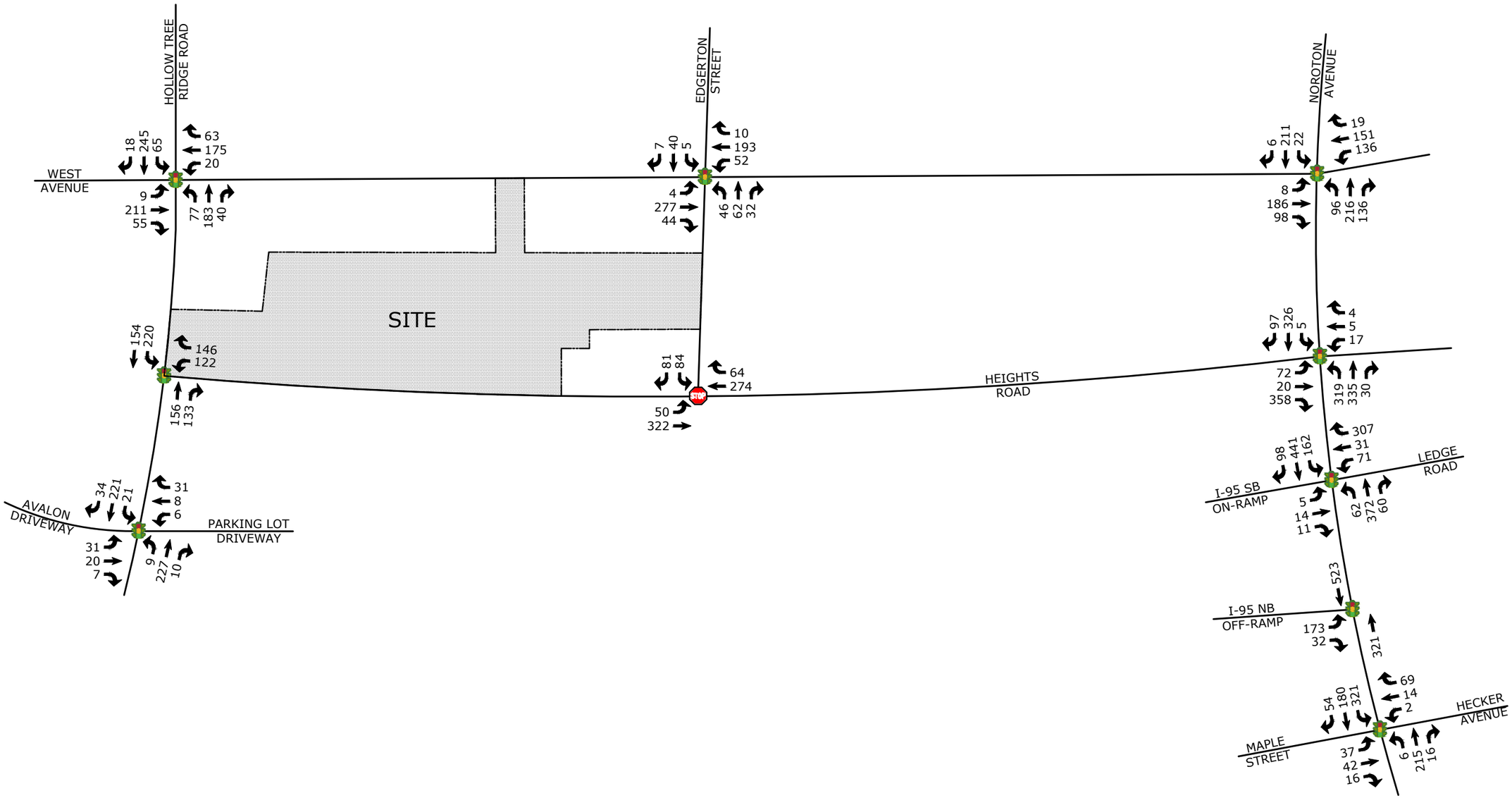
Redevelopment
Darien, Connecticut

November 2016

2015 EXISTING TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 3

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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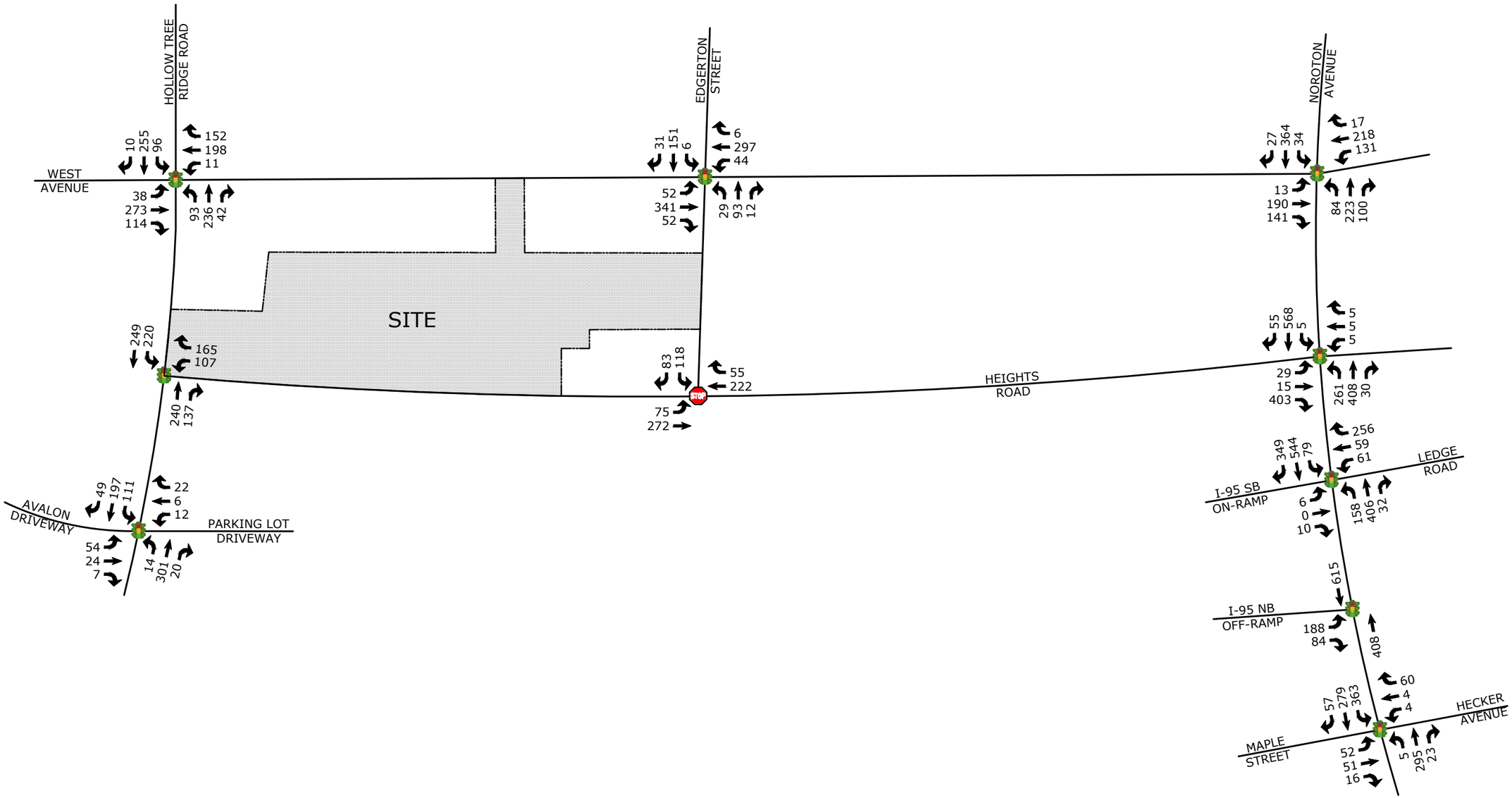
Darien, Connecticut

November 2016

2015 EXISTING TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 4

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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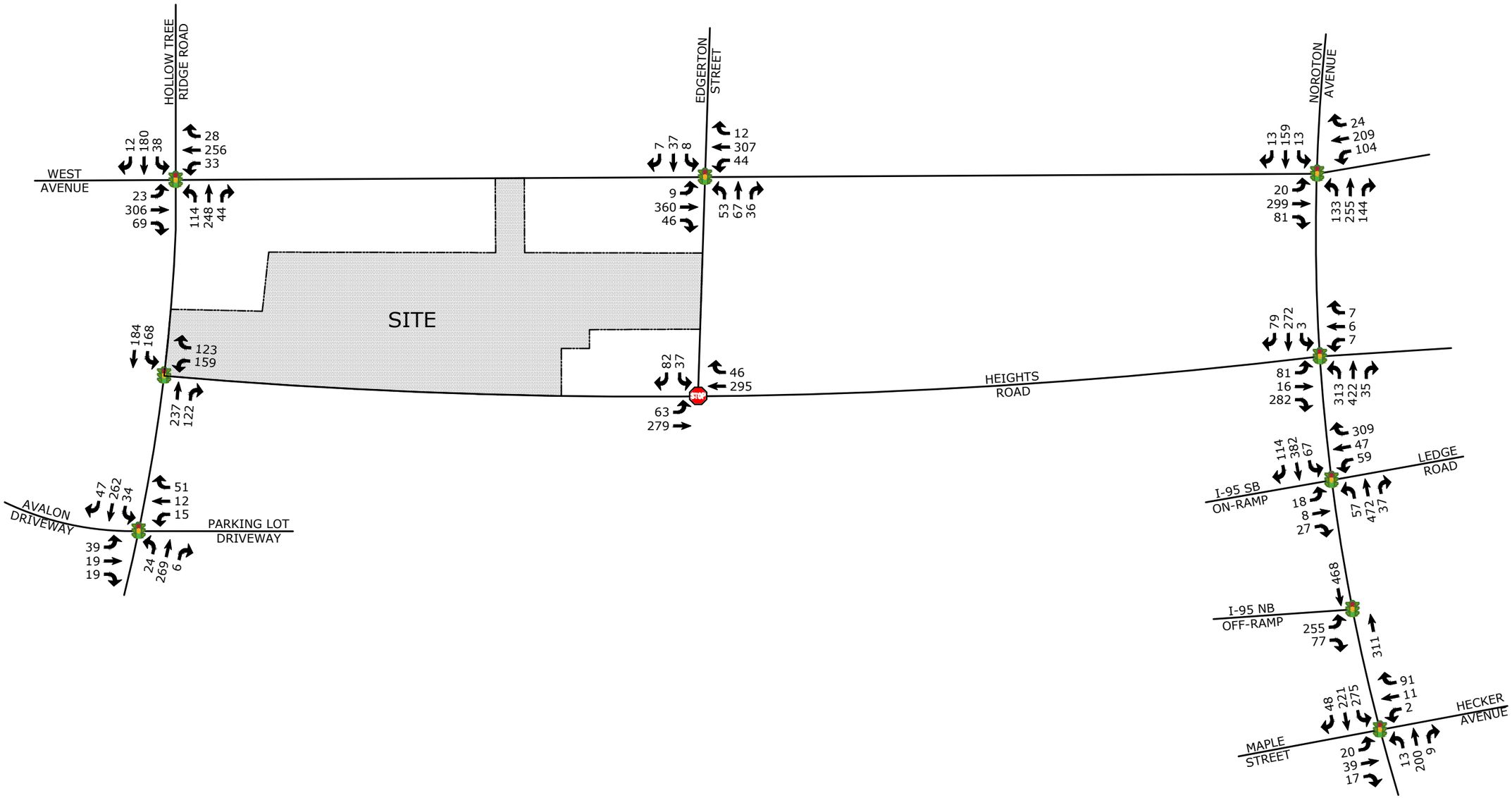
Noroton Heights Shopping Center Redevelopment
Darien, Connecticut

November 2016

2019 BACKGROUND TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 5

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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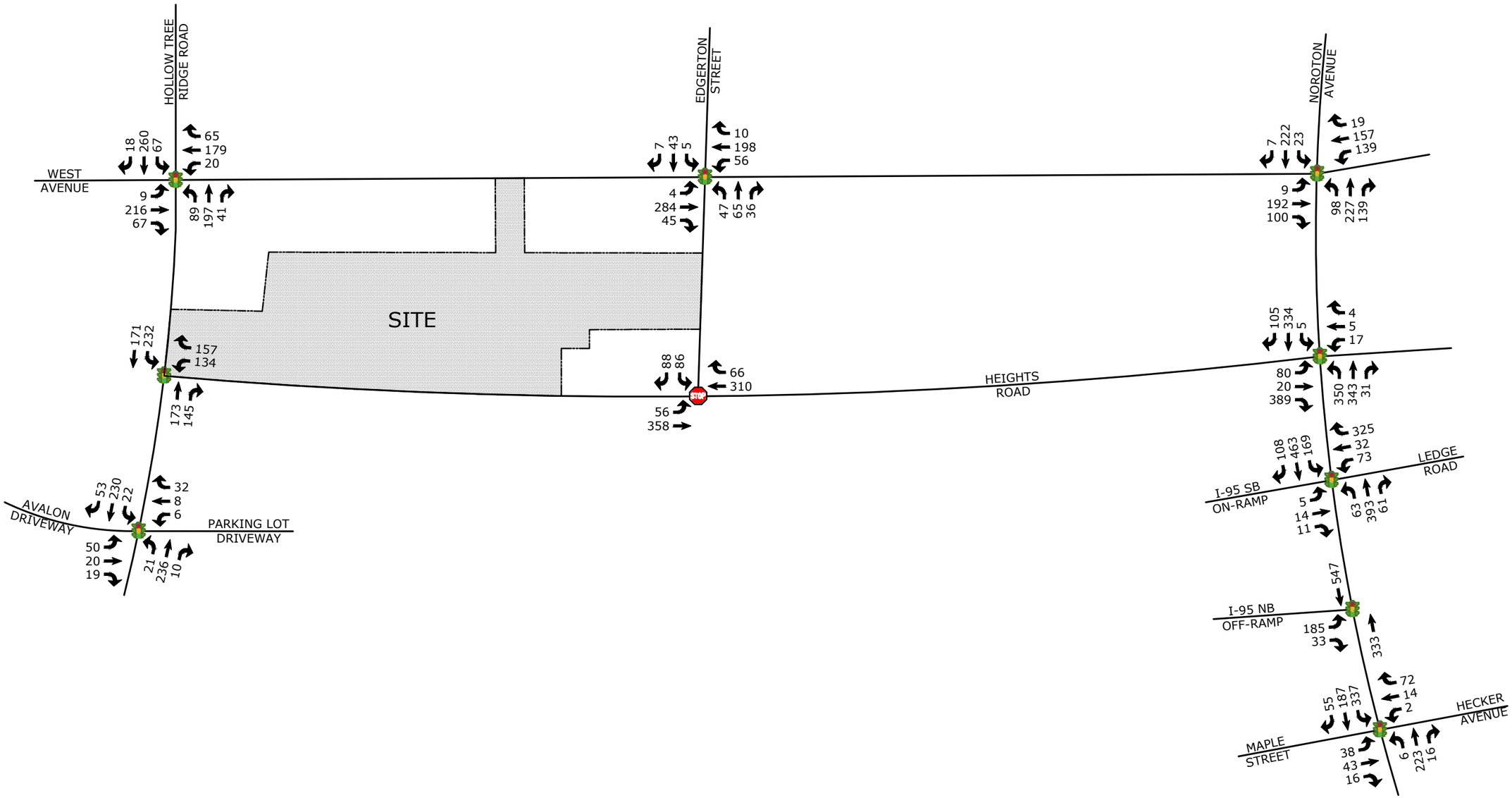
2019 BACKGROUND TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 6

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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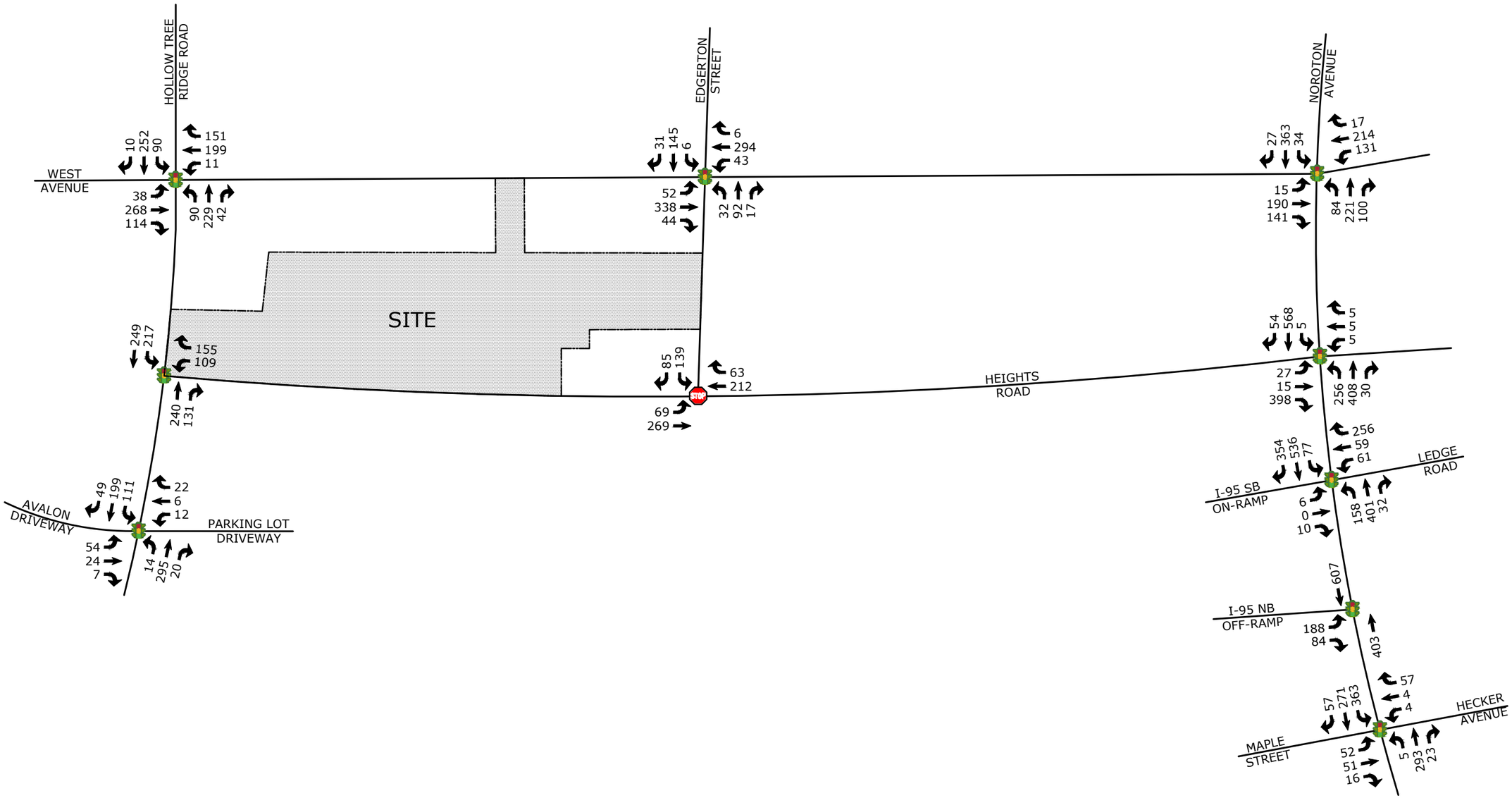
Darien, Connecticut

November 2016

2019 BACKGROUND TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 7

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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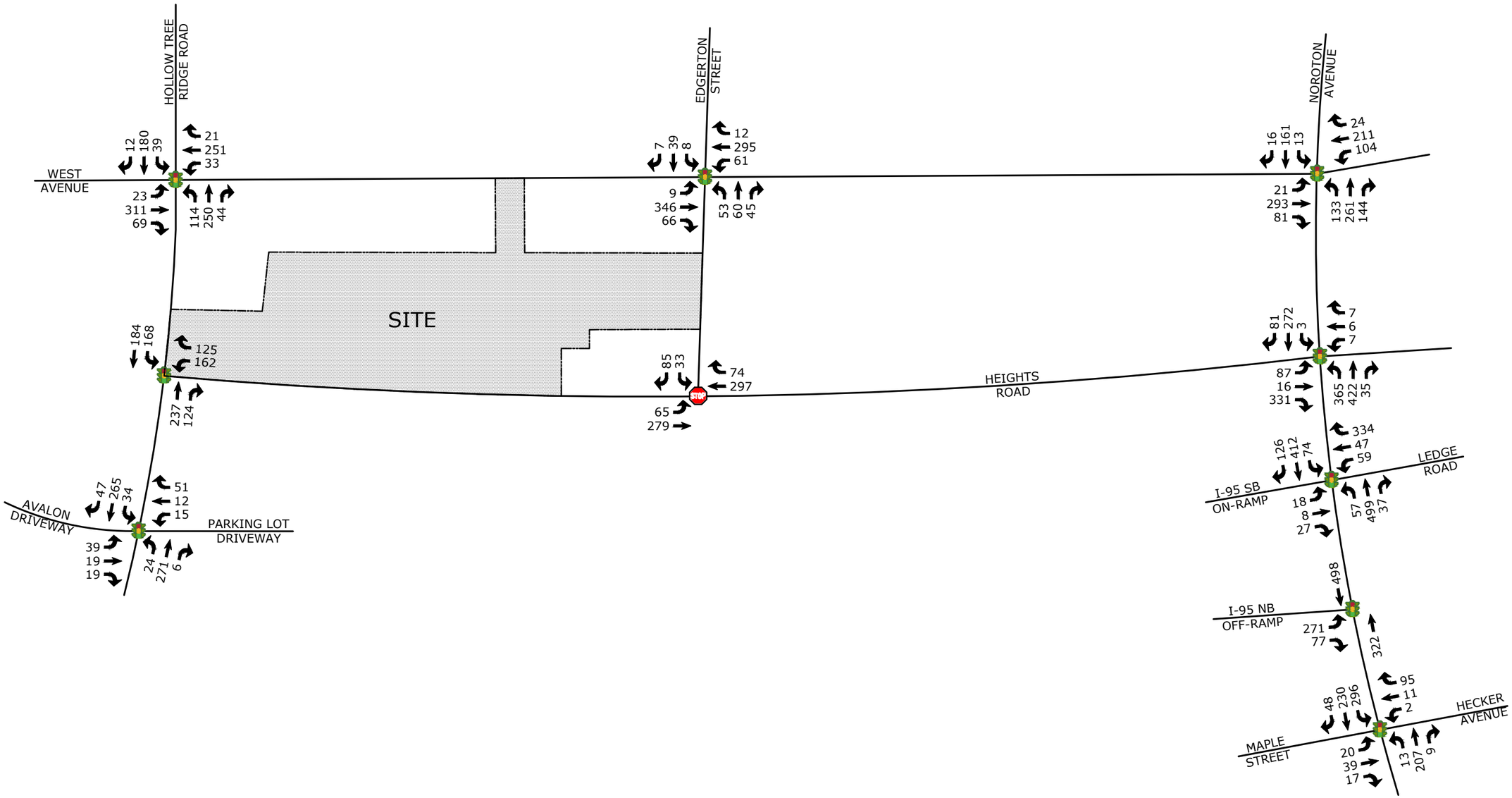
Darien, Connecticut

November 2016

2019 FEDERAL REDEVELOPMENT BACKGROUND TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 8

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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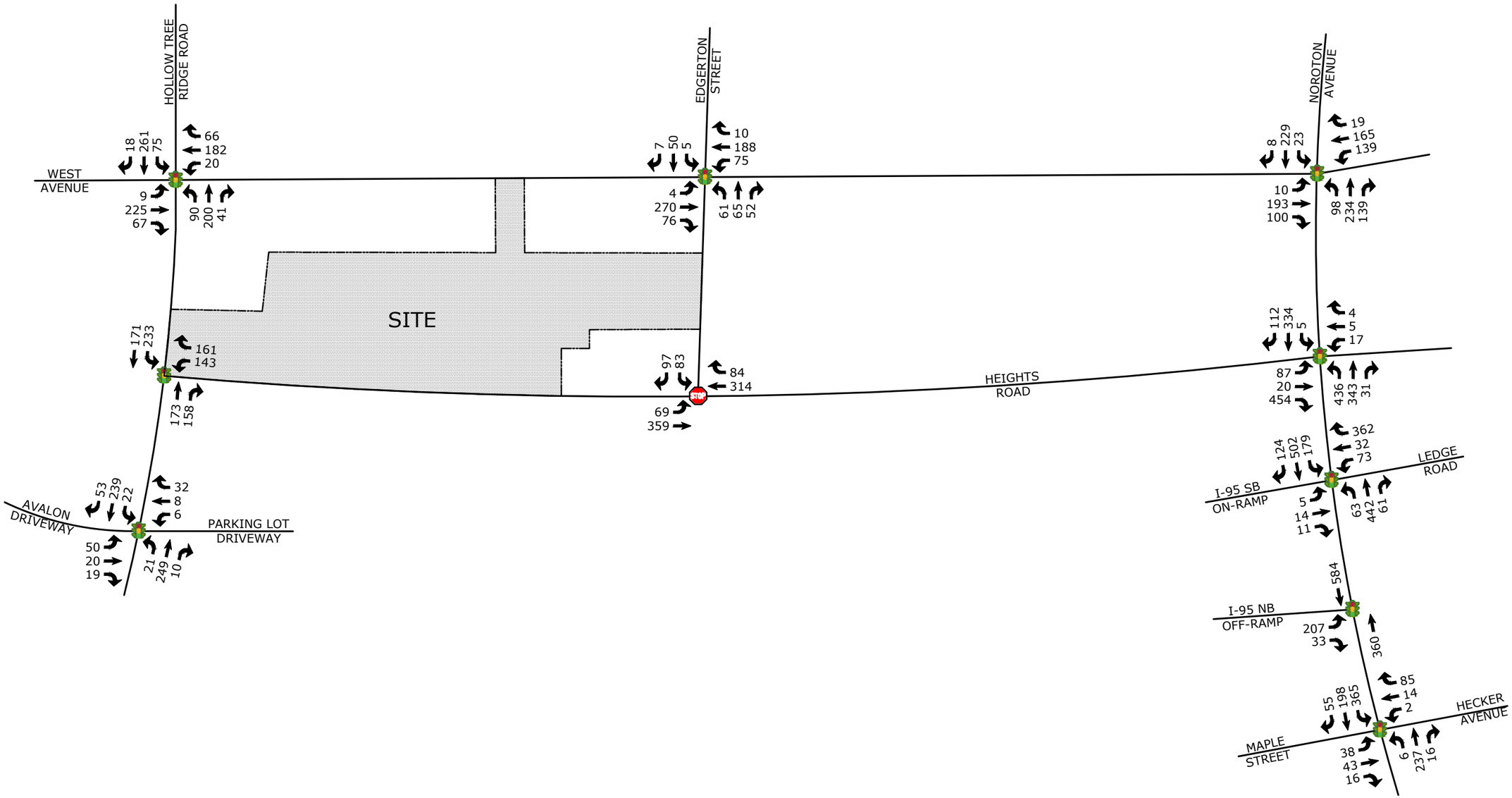
Darien, Connecticut

November 2016

2019 FEDERAL REDEVELOPMENT BACKGROUND TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 9

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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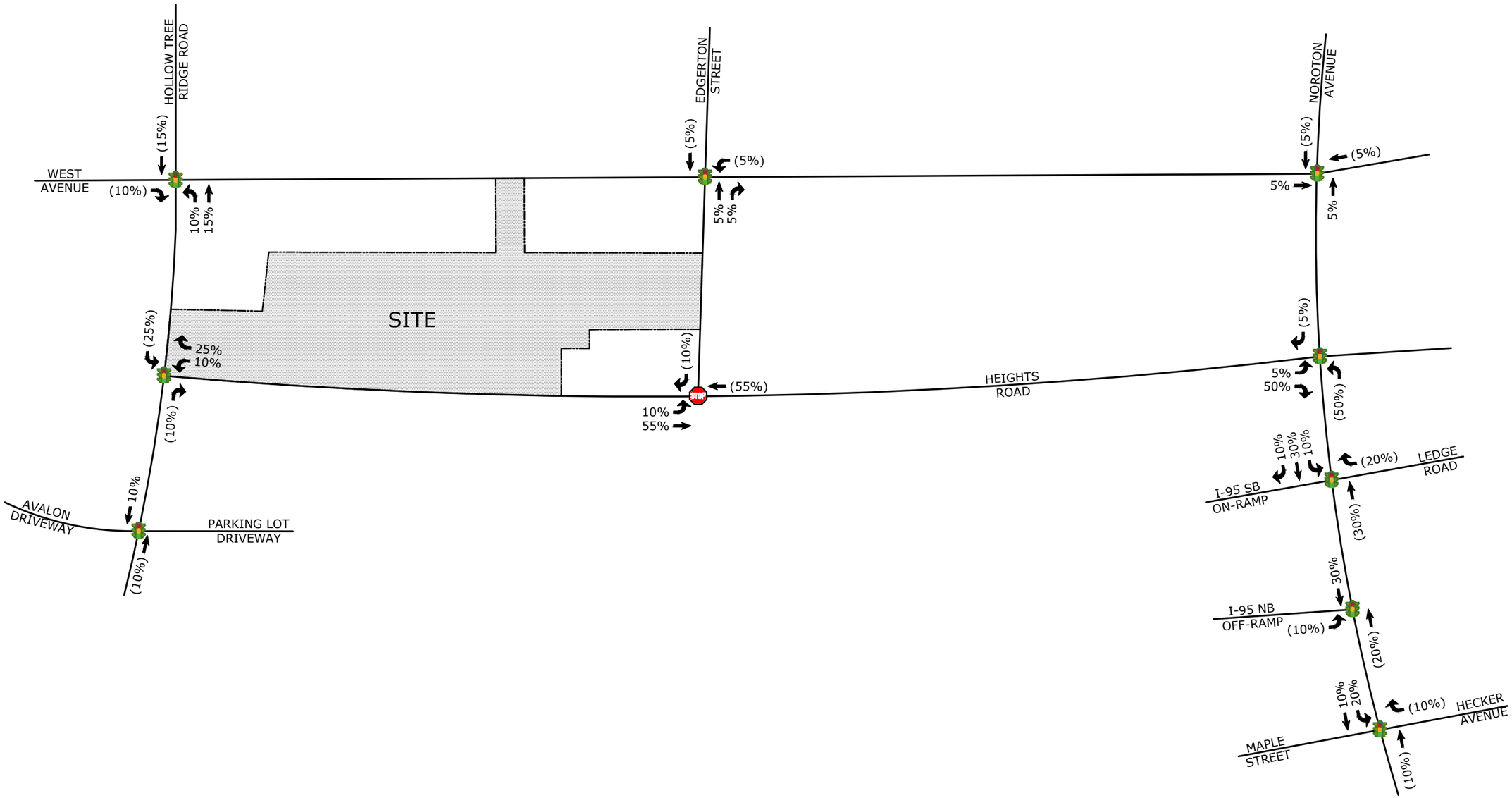
Redevelopment
Darien, Connecticut

November 2016

2019 FEDERAL REDEVELOPMENT BACKGROUND TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 10

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



(XX)XX = (ENTERING TRAFFIC) EXITING TRAFFIC

N

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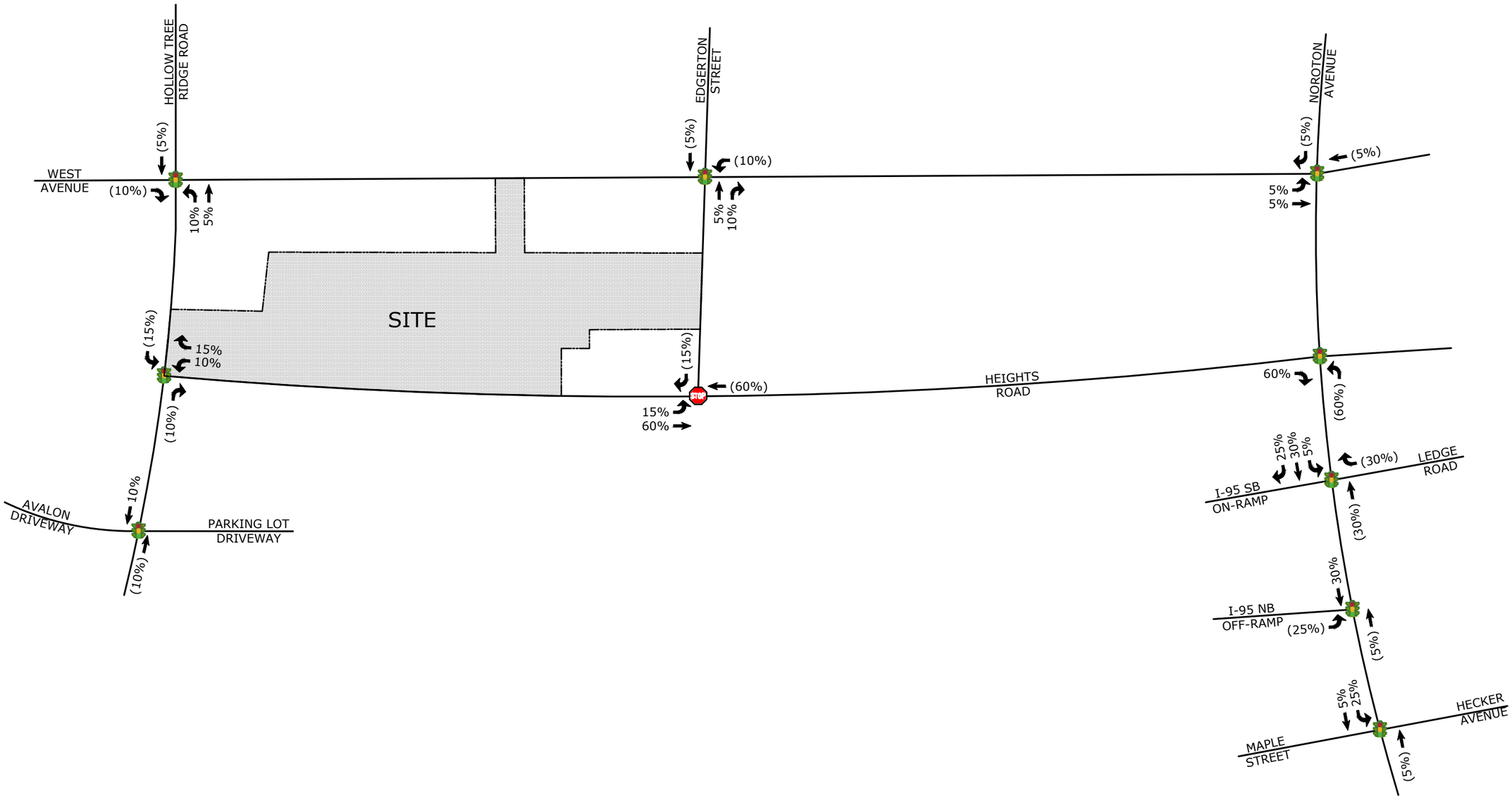
Shopping Center
Redevelopment
Darien, Connecticut

November 2016

RETAIL SITE GENERATED TRAFFIC ARRIVAL/DEPARTURE DISTRIBUTION

FIGURE 11

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



(XX)XX = (ENTERING TRAFFIC) EXITING TRAFFIC

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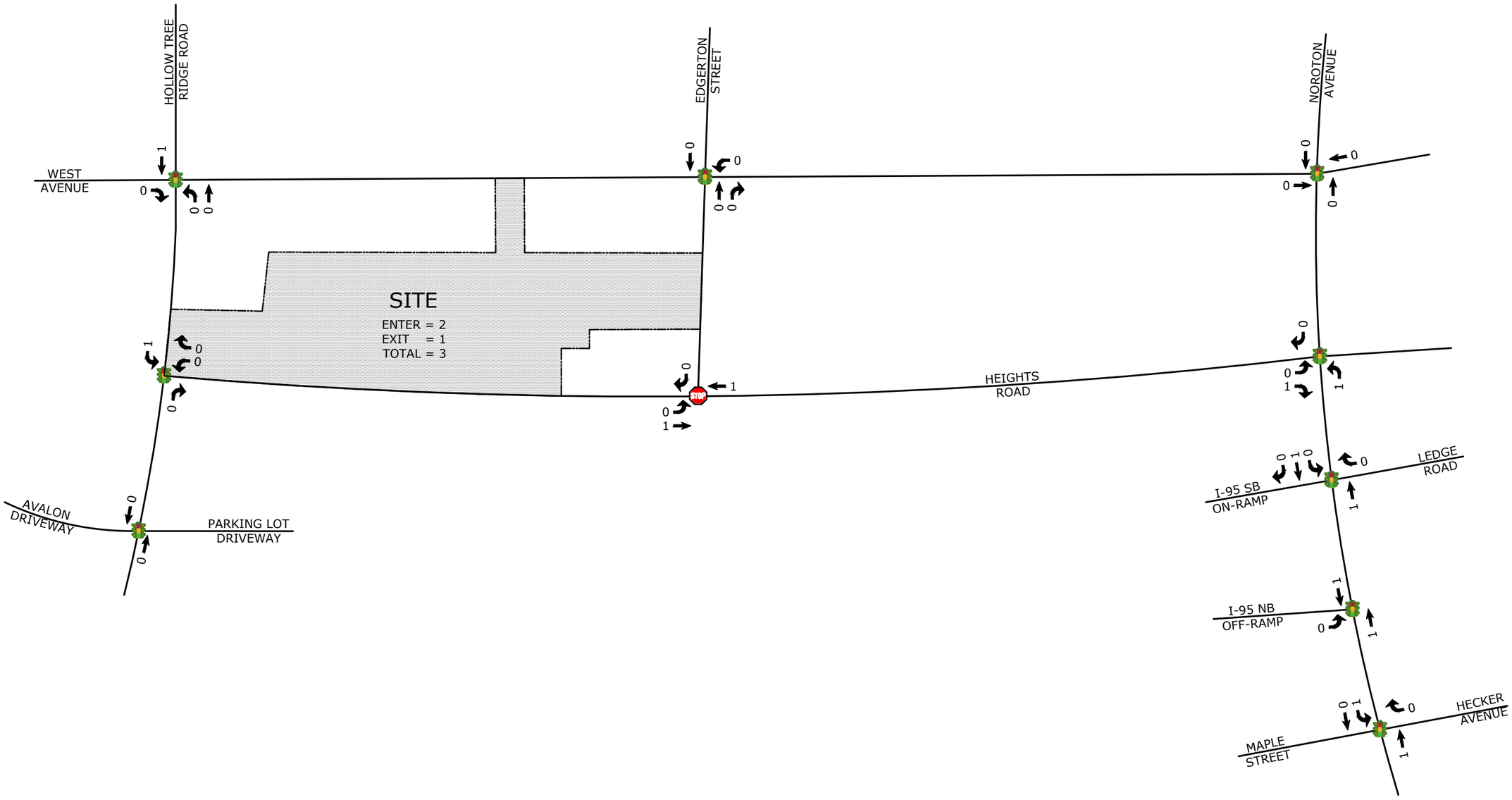
Darien, Connecticut

November 2016

RESIDENTIAL SITE GENERATED TRAFFIC ARRIVAL/DEPARTURE DISTRIBUTION

FIGURE 12

I:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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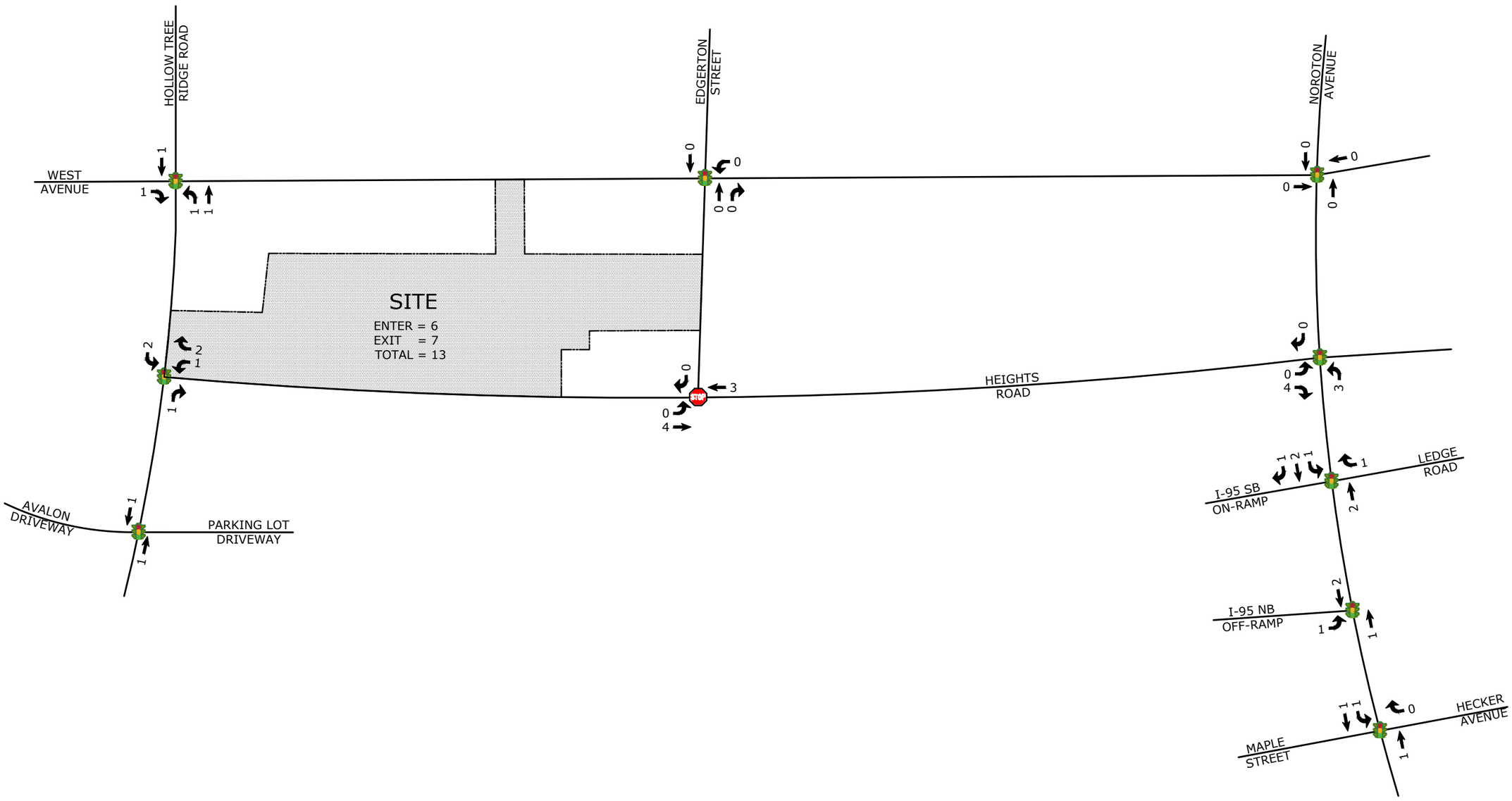
Noroton Heights
Shopping Center
Redevelopment
Darien, Connecticut

November 2016

RETAIL
SITE GENERATED
TRAFFIC VOLUMES
WEEKDAY MORNING
PEAK HOUR

FIGURE 13

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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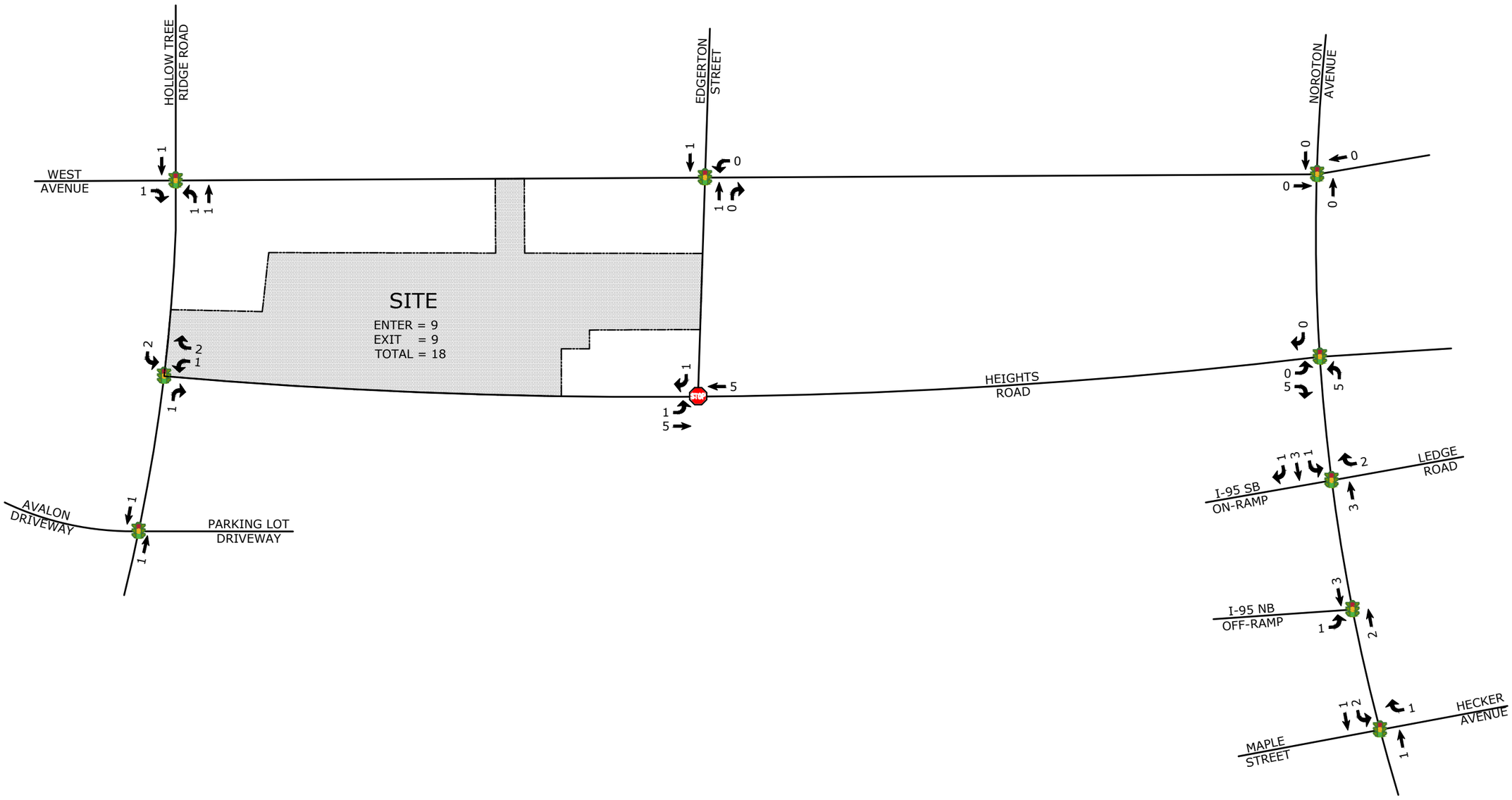
Shopping Center
Redevelopment
Darien, Connecticut

November 2016

RETAIL
SITE GENERATED
TRAFFIC VOLUMES
FRIDAY AFTERNOON
PEAK HOUR

FIGURE 14

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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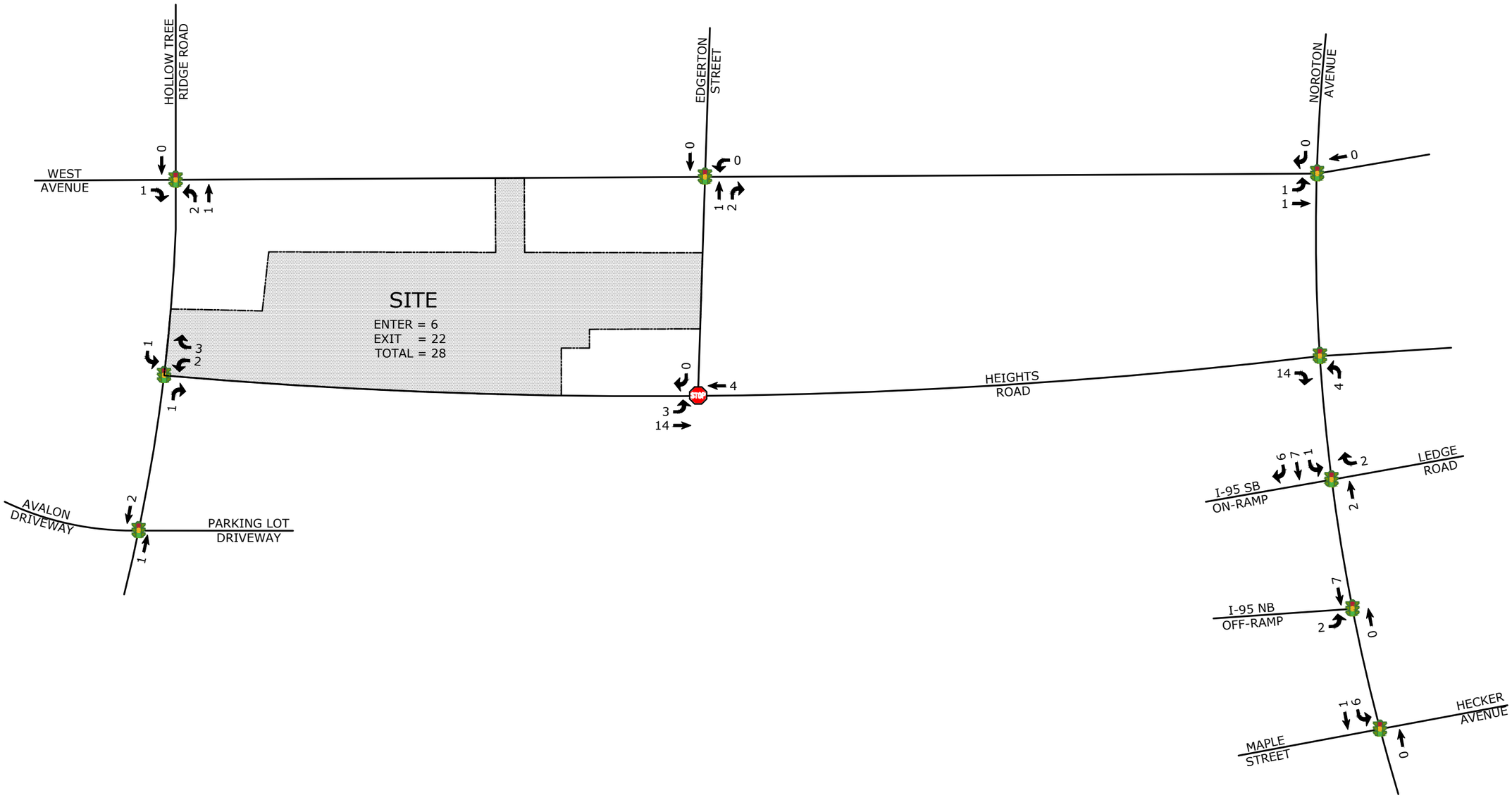
Noroton Heights
Shopping Center
Redevelopment
Darien, Connecticut

November 2016

RETAIL
SITE GENERATED
TRAFFIC VOLUMES
SATURDAY MIDDAY
PEAK HOUR

FIGURE 15

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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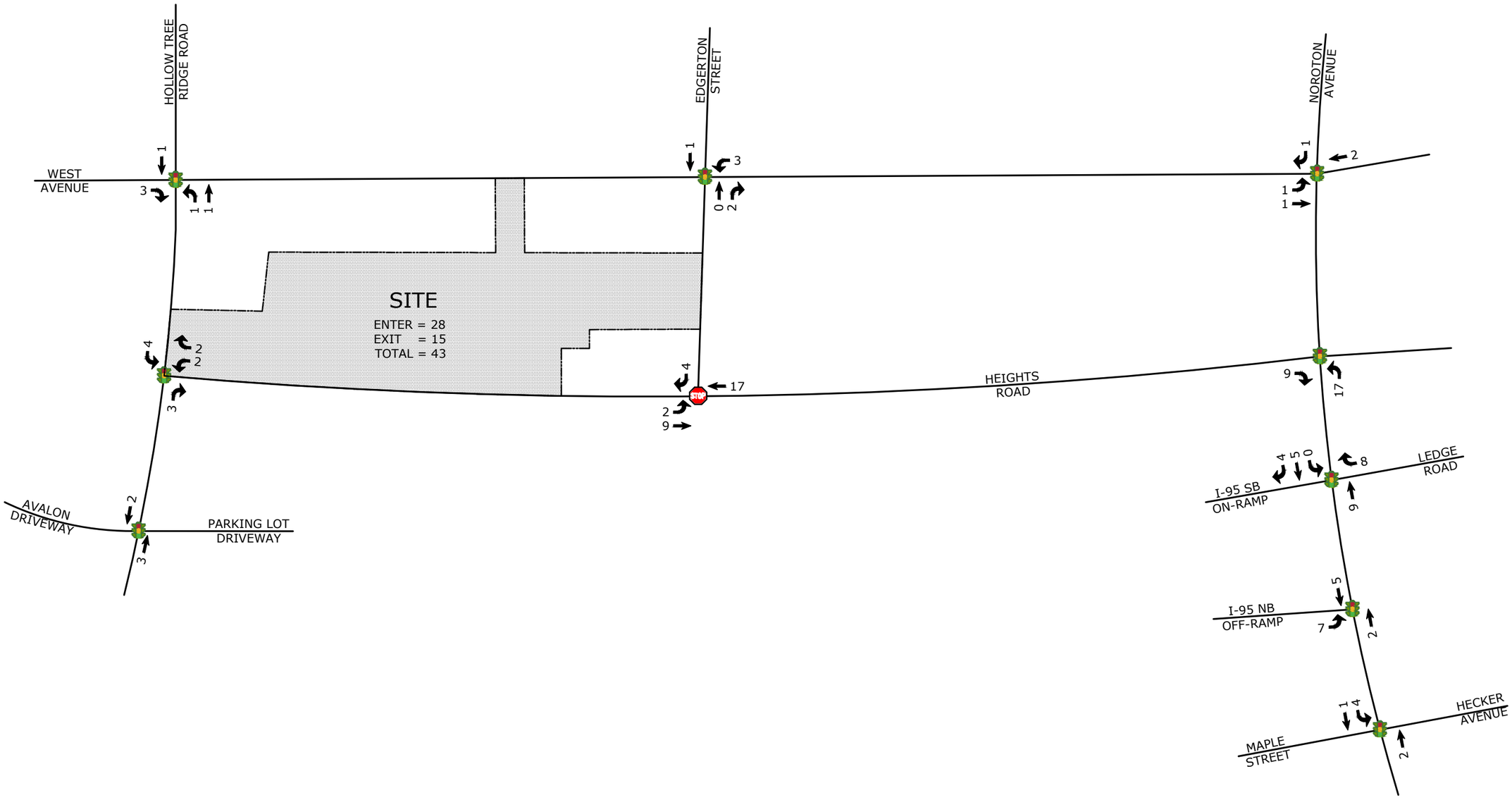
Darien, Connecticut

November 2016

RESIDENTIAL SITE GENERATED TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 16

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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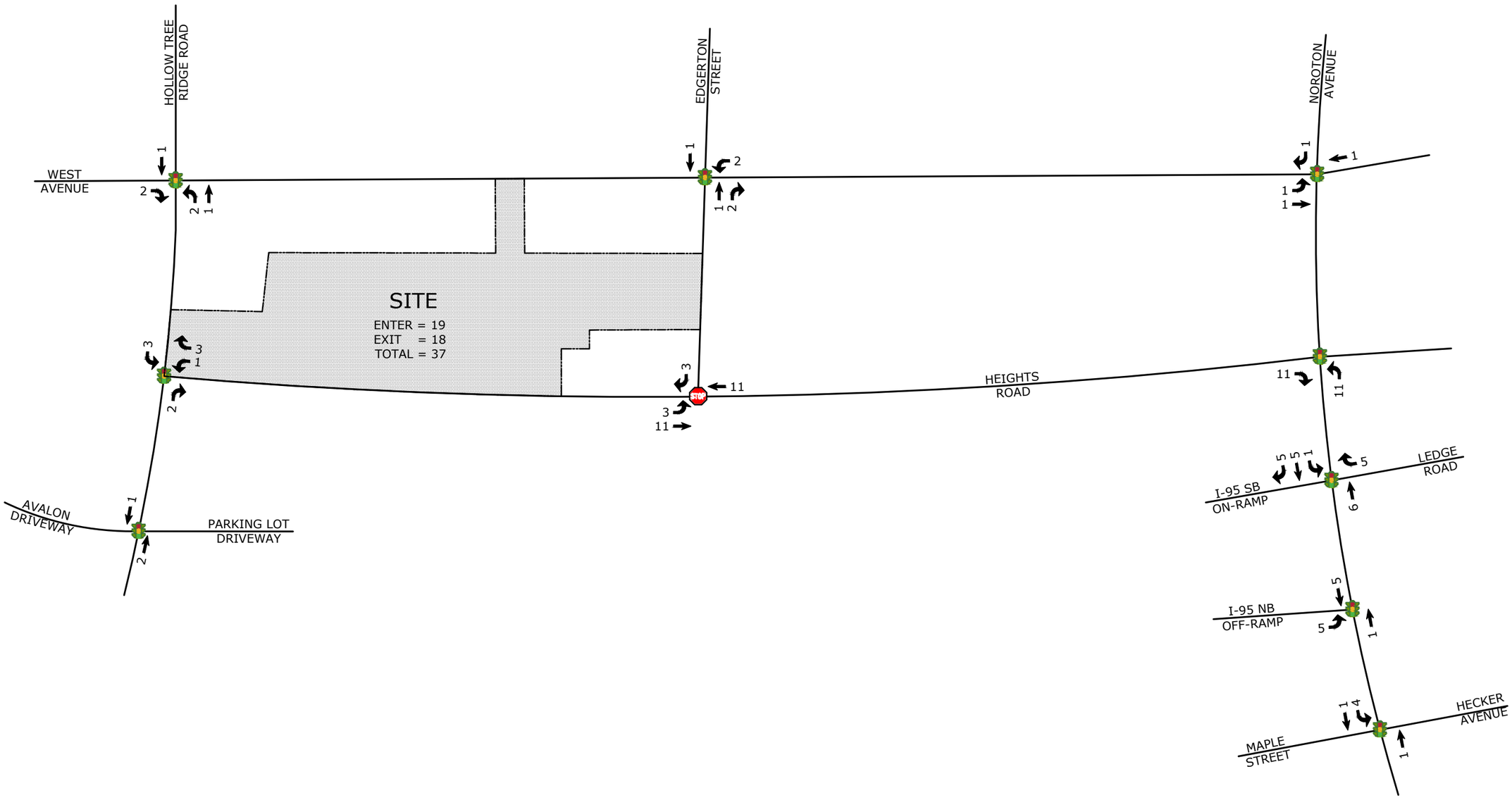
Redevelopment
Darien, Connecticut

November 2016

RESIDENTIAL SITE GENERATED TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 17

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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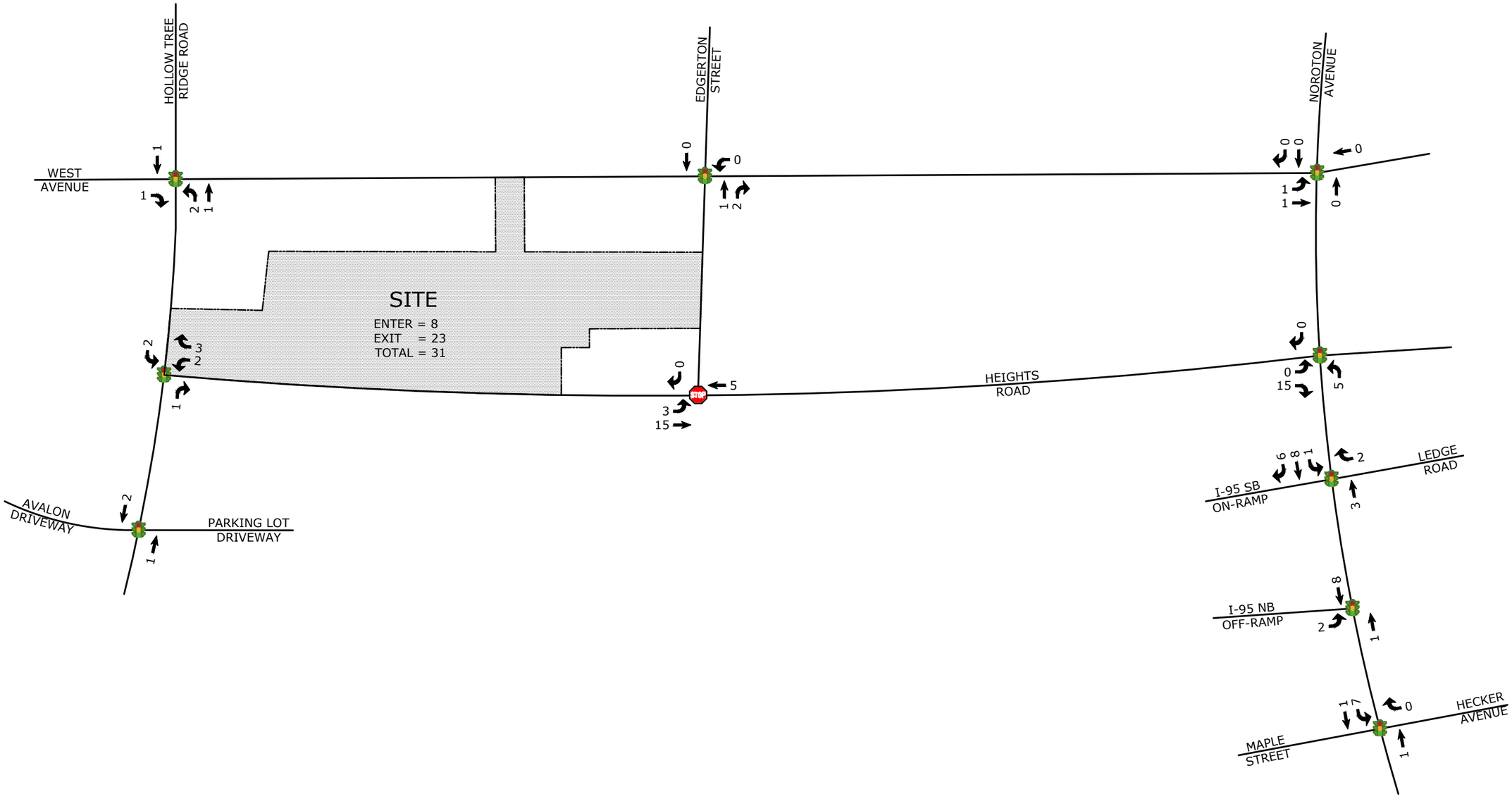
Redevelopment
Darien, Connecticut

November 2016

RESIDENTIAL SITE GENERATED TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 18

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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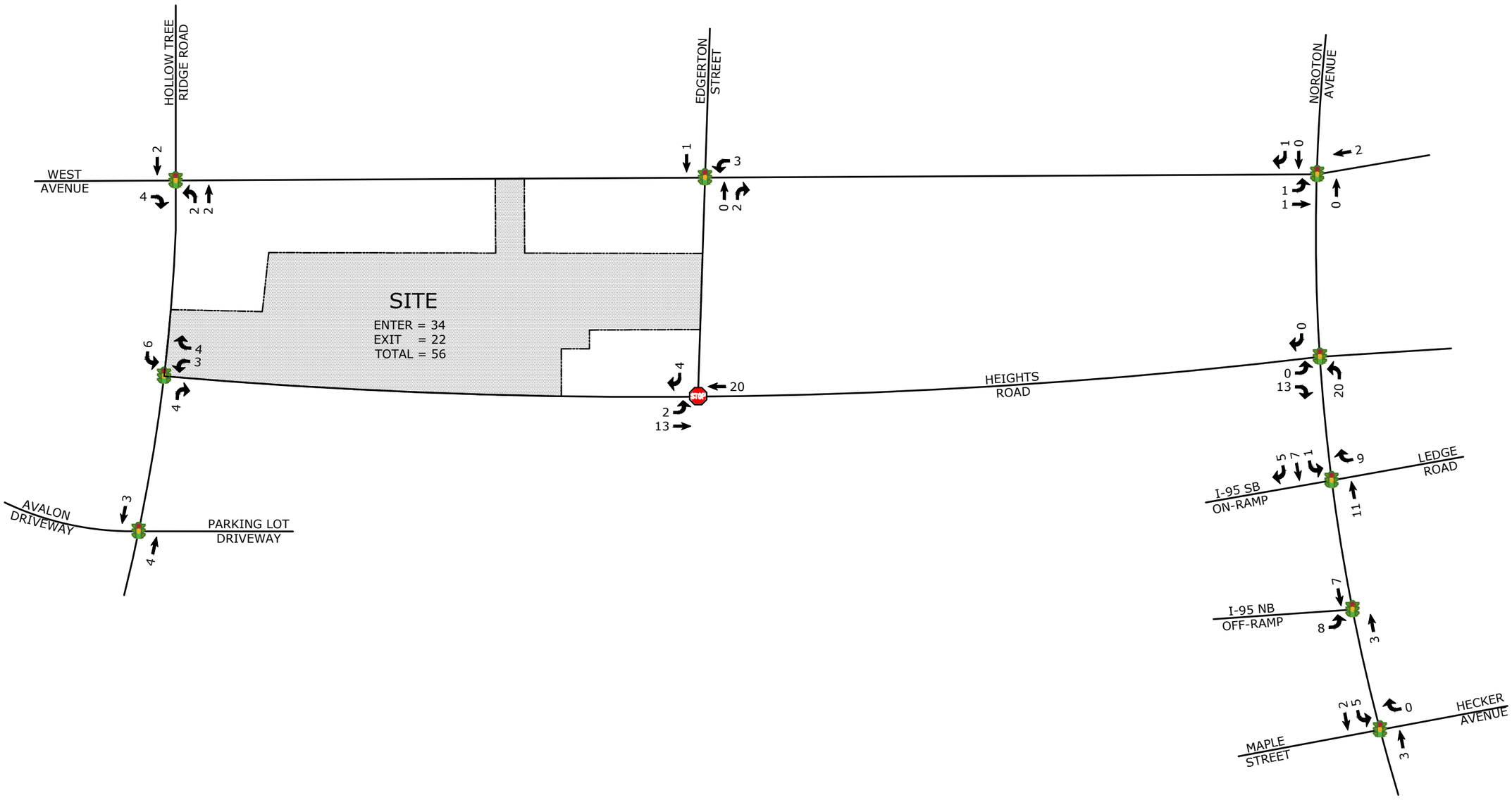
TOTAL SITE GENERATED TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 19

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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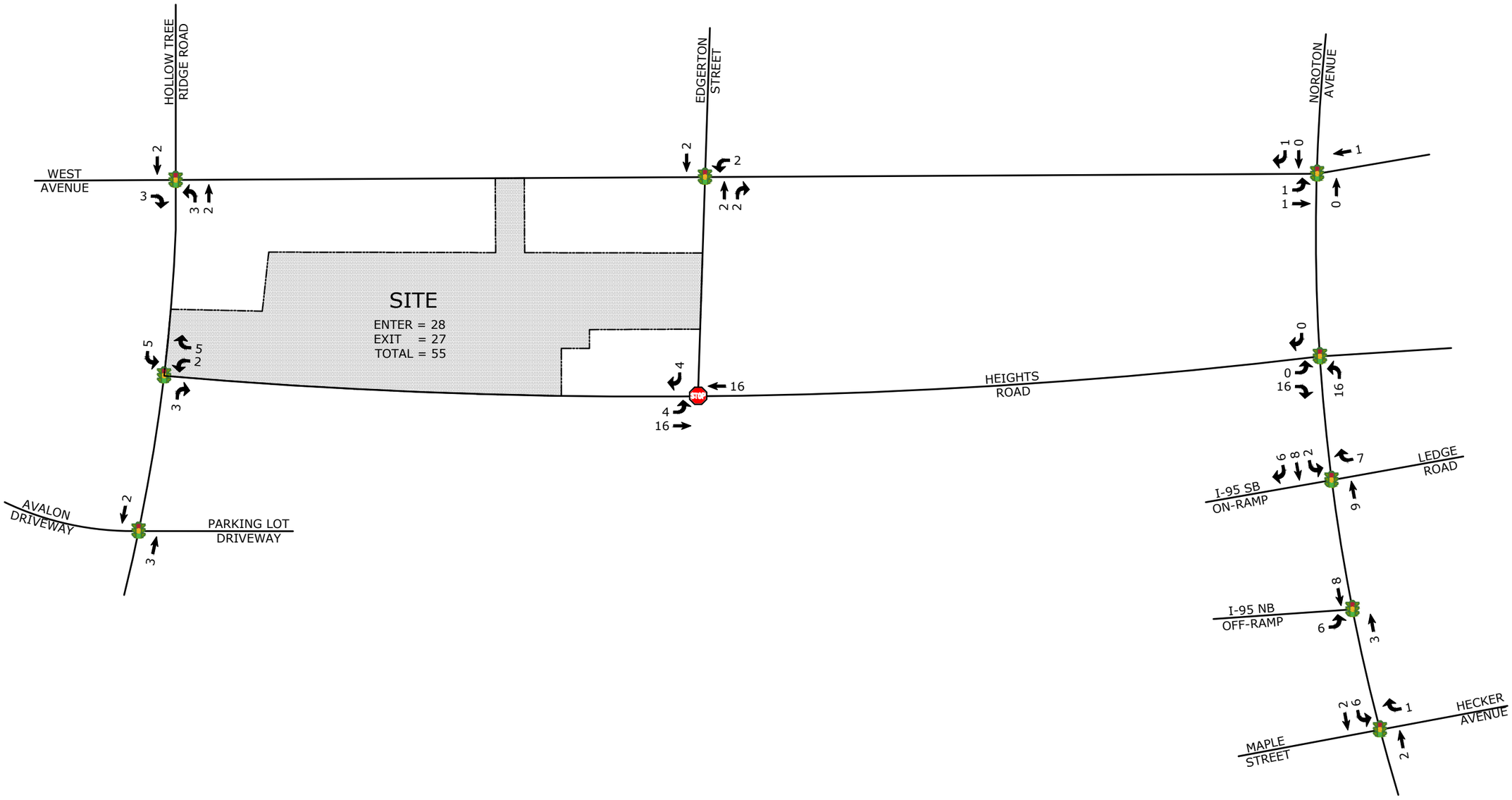
TOTAL SITE GENERATED TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 20

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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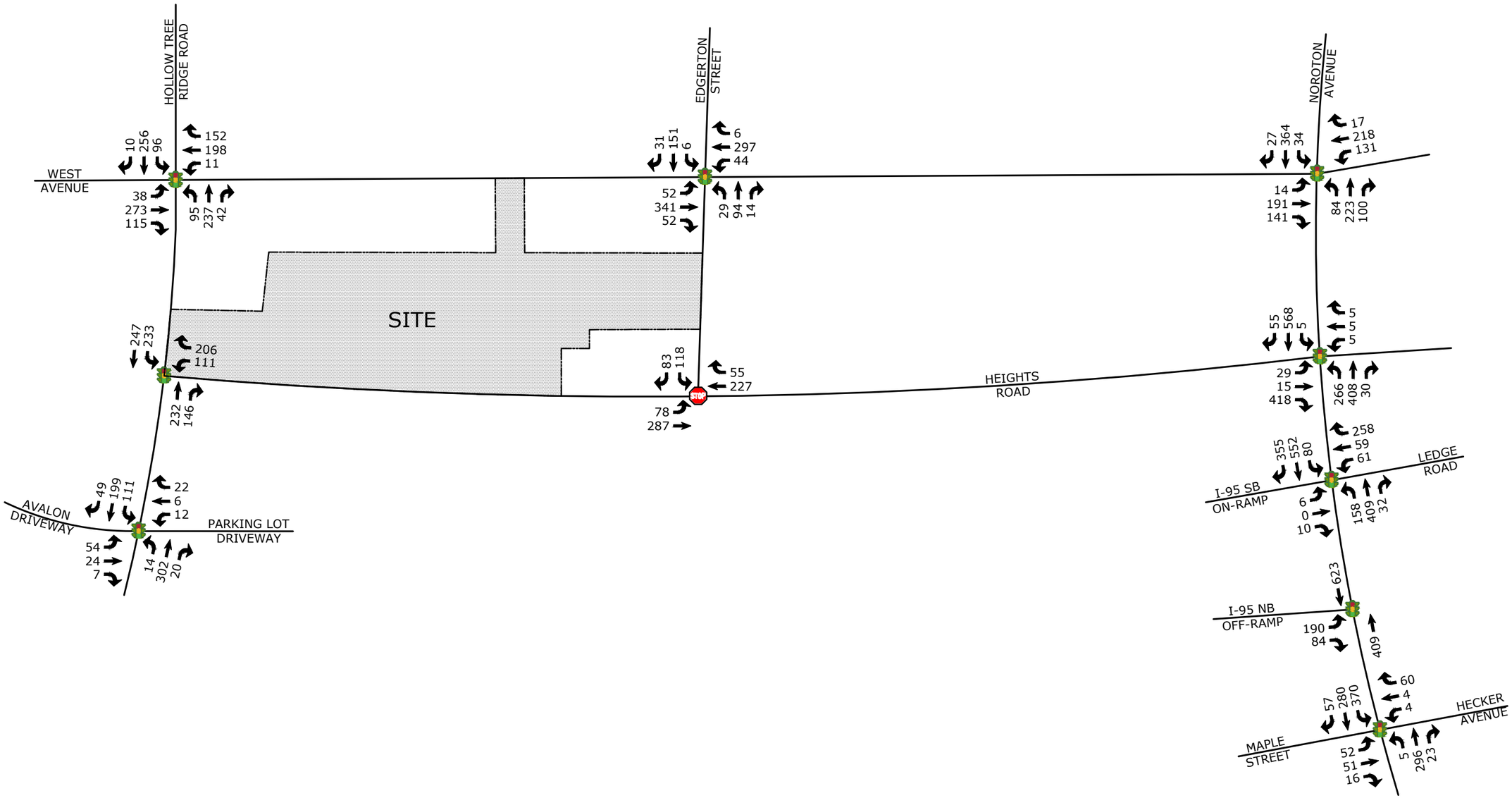
TOTAL SITE GENERATED TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 21

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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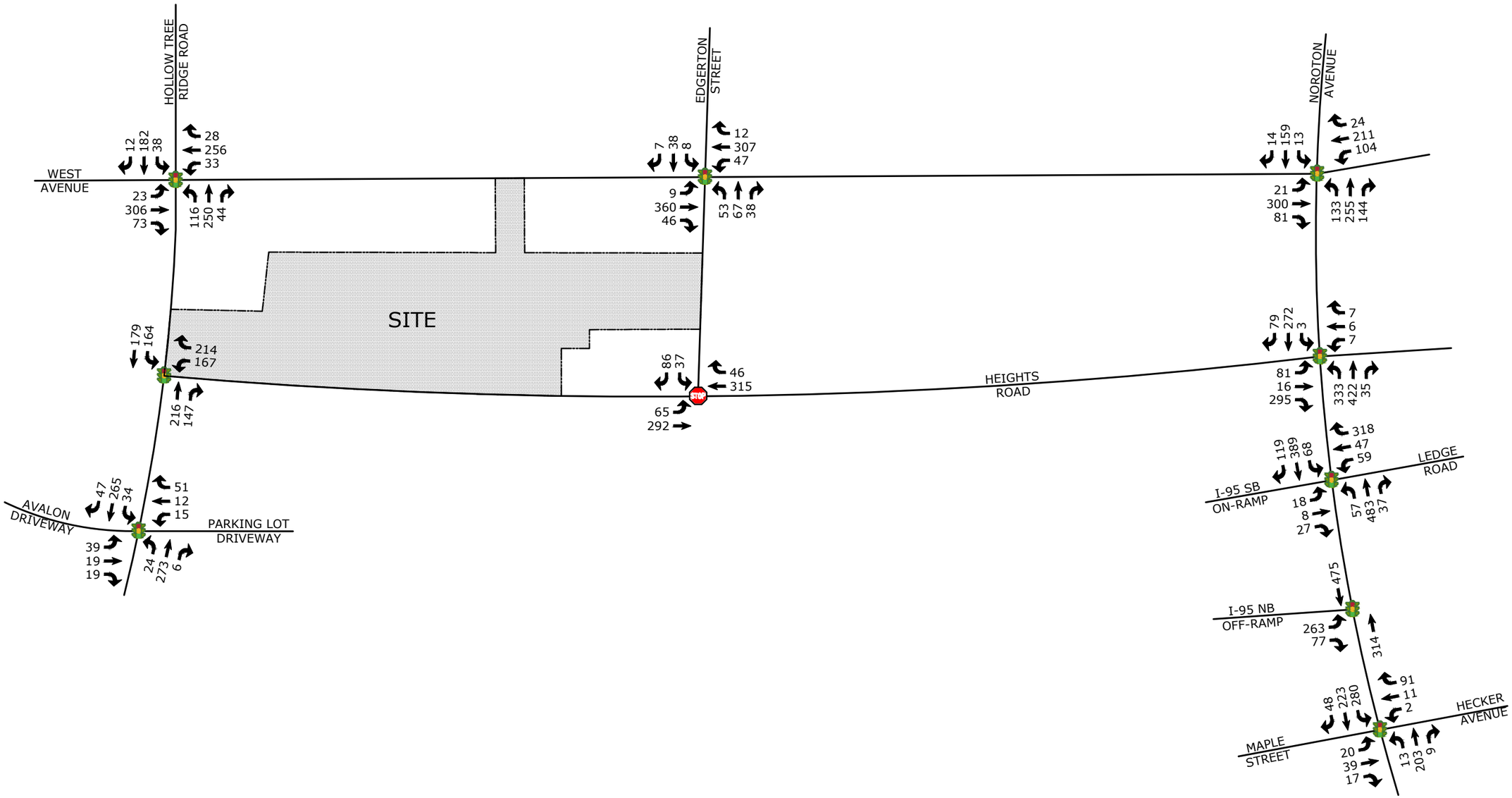
2019 COMBINED TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 22

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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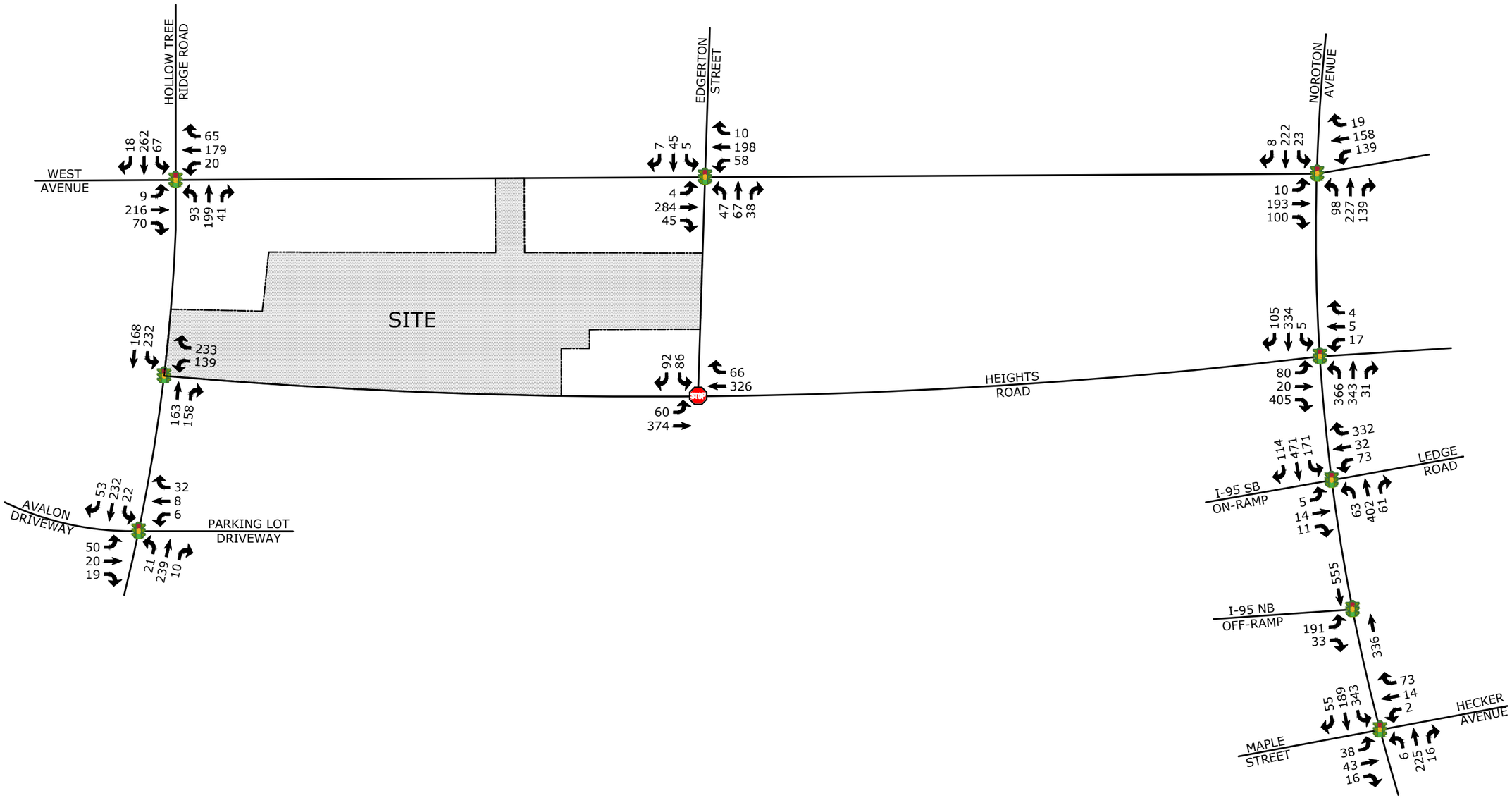
2019 COMBINED TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 23

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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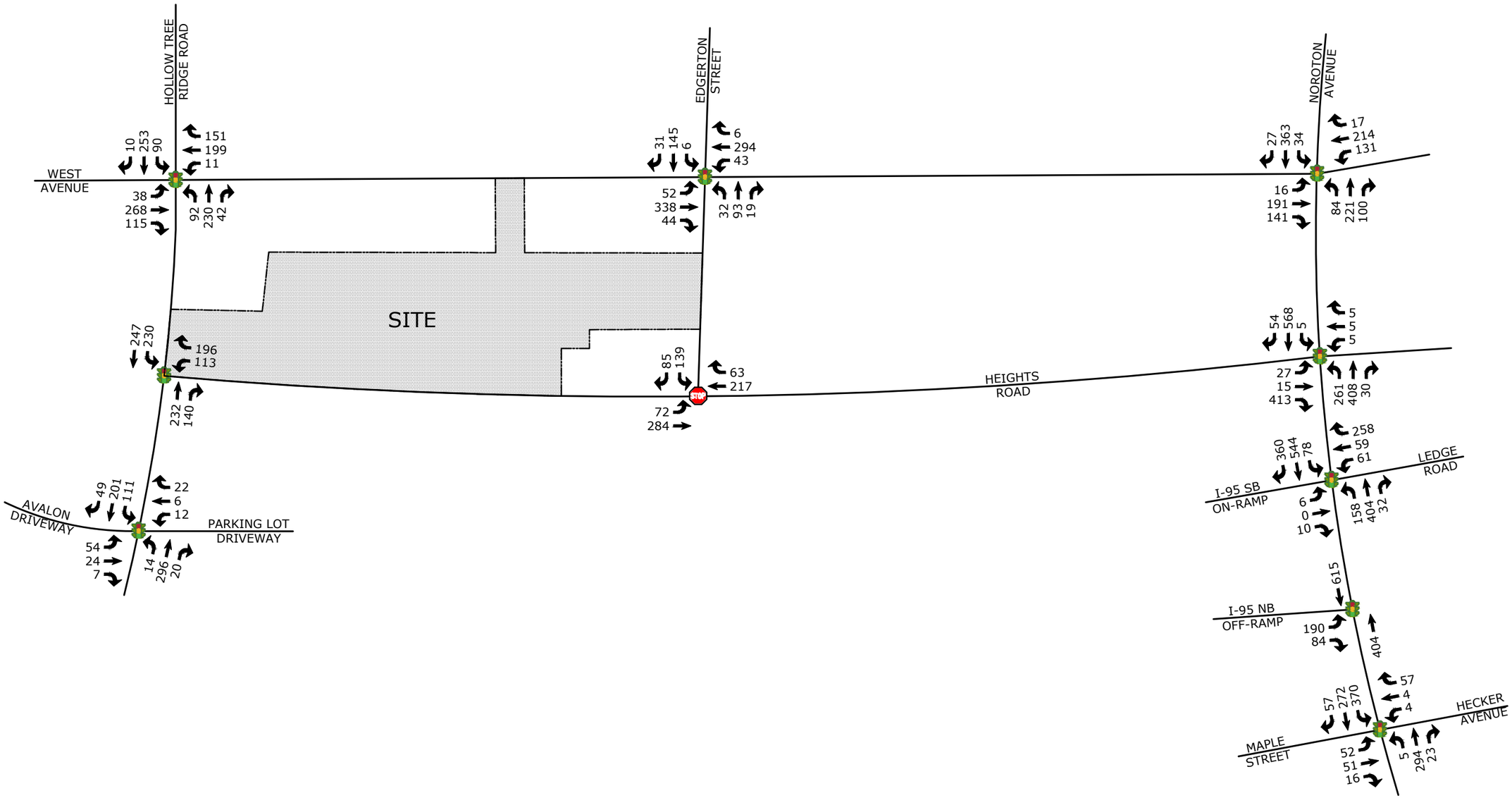
2019 COMBINED TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 24

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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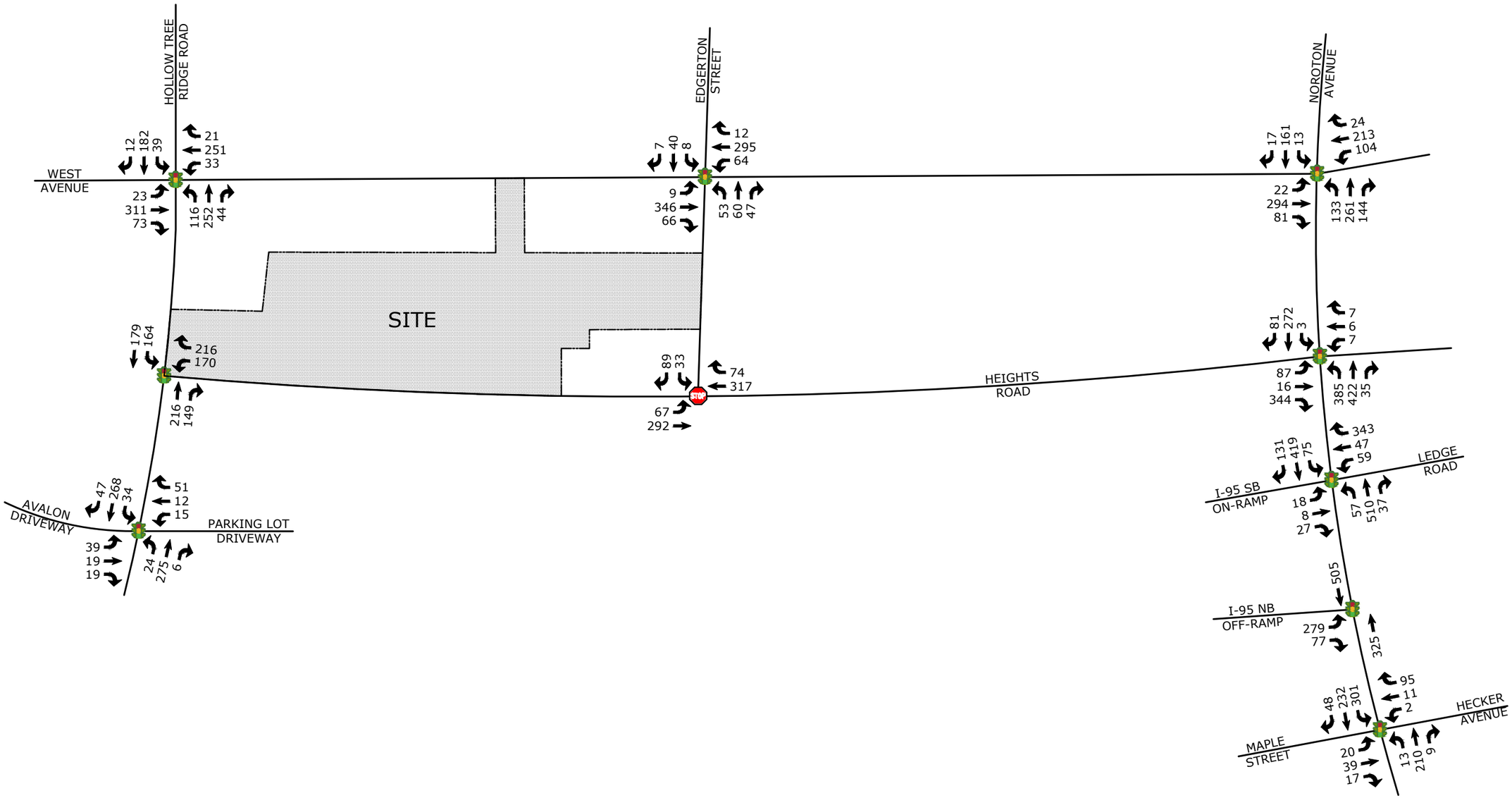
2019 FEDERAL REDEVELOPMENT COMBINED TRAFFIC VOLUMES WEEKDAY MORNING PEAK HOUR

FIGURE 25

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



N

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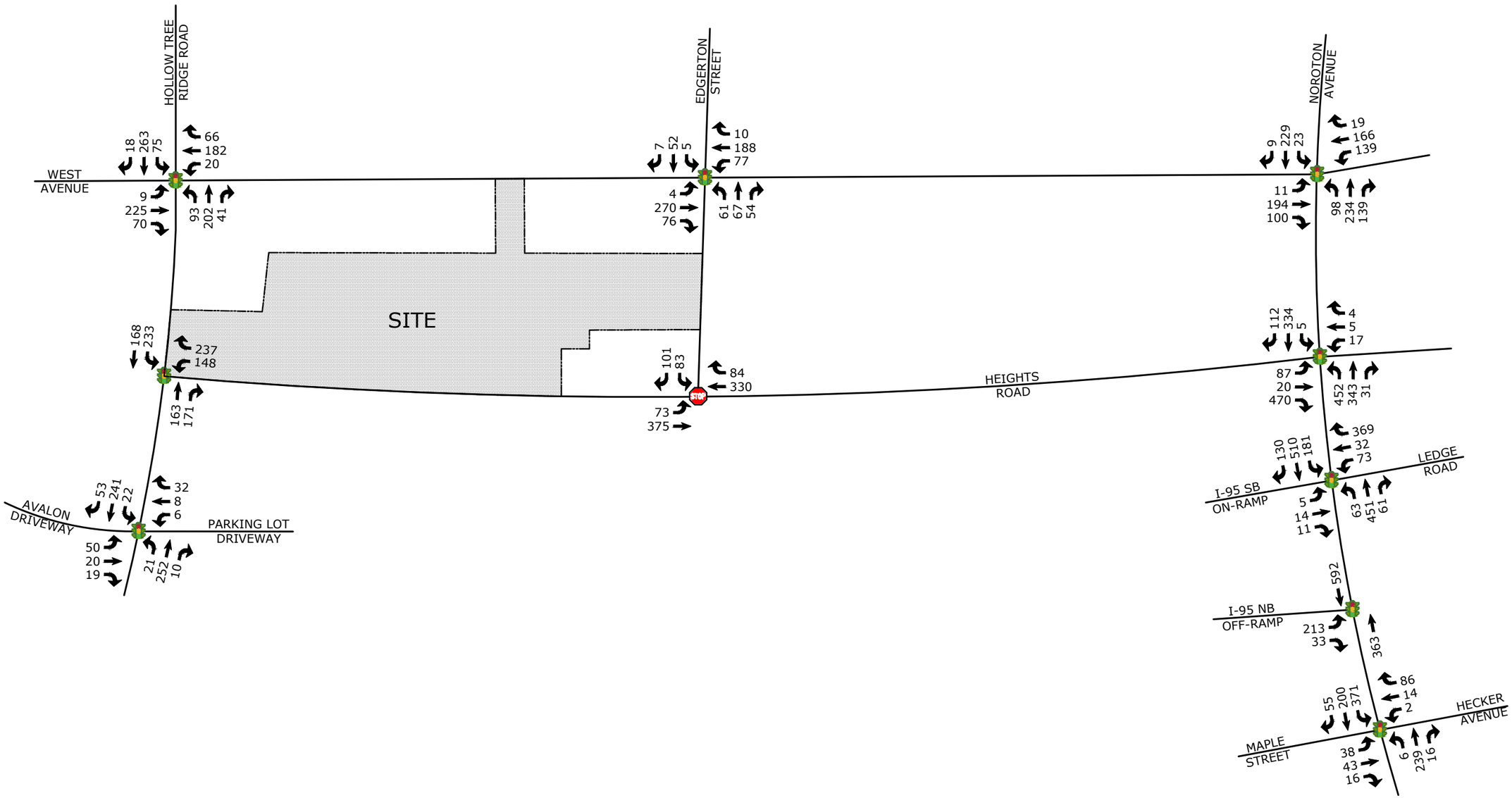
2019 FEDERAL REDEVELOPMENT COMBINED TRAFFIC VOLUMES FRIDAY AFTERNOON PEAK HOUR

FIGURE 26

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



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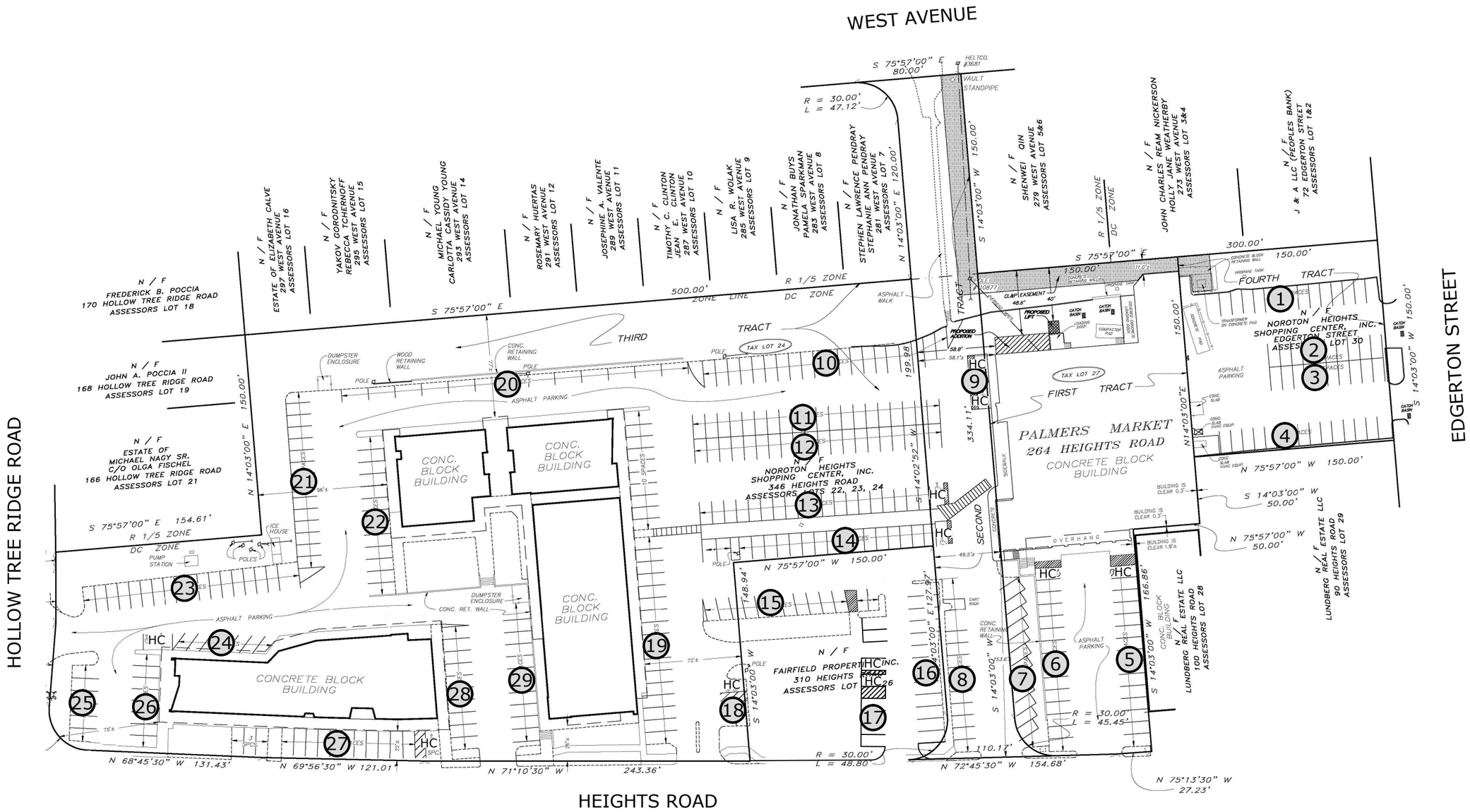
2019 FEDERAL REDEVELOPMENT COMBINED TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

FIGURE 27

J:\P\P0695 J&G Palmer Mixed Use\Report\Traffic\TVF\TVF_P0695-01.dwg



PARKING COUNT = 386 SPACES (INCLUDING 11 HANDICAP SPACES)

SECTION	REGULAR	HC	TOTAL
1	14	0	14
2	11	0	11
3	10	0	10
4	15	0	15
5	14	1	15
6	14	1	15
7	12	0	12
8	11	0	11
9	0	2	2
10	20	0	20

SECTION	REGULAR	HC	TOTAL
11	20	0	20
12	20	0	20
13	20	0	20
14	19	0	19
15	13	0	13
16	13	0	13
17	6	2	8
18	2	1	3
19	25	2	27
20	13	0	13

SECTION	REGULAR	HC	TOTAL
21	15	0	15
22	14	0	14
23	18	0	18
24	7	1	8
25	6	0	6
26	8	0	8
27	14	1	15
28	10	0	10
29	11	0	11

LEGEND:

(#) - PARKING SECTION LABEL

HC - HANDICAP SPACE

SCALE IN FEET

0 60' 120'

GRAPHIC SCALE

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PARKING SURVEY KEY MAP

FIGURE 28

J:\P\P0695 J&G Palmer Mixed Use\TRAFFIC\0_CURRENT\PARKING DATA\Parking Study Key Map 11.04.2016.dwg