Exhibit 8

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Driving Range Apartments
Traffic Impact Analysis

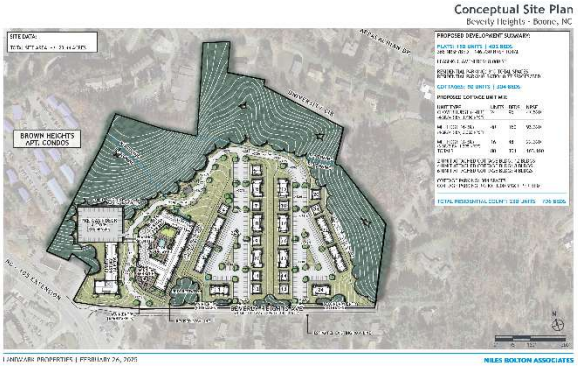
Located in

Boone, North Carolina

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5/13/2026

JMTE #: WAYN 1582

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Boone Driving Range Apartments

Traffic Impact Analysis

Boone, North Carolina

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5/13/2026

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LIST OF ABBREVIATIONS

AADT	Annual average daily traffic
ADT	Average Daily Traffic
AM	Morning peak period
ARMs	*Access and Roadside Management Standards* (South Carolina)
CBD	Central Business District
CIP	Capital Improvement Program
DOT	Department of Transportation
Driveway Manual	*Policy on Street and Drive Access to North Carolina Highways*
FAI	Functional Area of the Intersection:
FC	Functional Classification
ft. or ‘	Foot
HCM	Highway Capacity Manual
in. or ”	Inch
KSF	Thousand Square Feet
LOS	Level of Service
LUC	Land Use Code
MUTCD	Manual On Uniform Traffic Control Devices
NCDOT	The North Carolina Department of Transportation
PHF	Peak Hour Factor (a measure of traffic variability)
PM	Afternoon peak period
q	Flow rate (vehicle/hour)
Q	Queue Length in feet
Q95	95th Percentile Queue in feet
RIRO	Right-in/Right-out
Sec.	Second
SimTraffic	A traffic simulation extension of the Synchro Package that randomly simulates intersection operations
STIP	State Transportation Improvement Program
Subdivision Roads	Subdivision Roads Minimum Construction Standards (NCDOT)
SYNCHRO	A dedicated analysis package that implements the HCM
T	Trips
TMP	Traffic Management Plan
TWLTL	Two-way Left Turn Lane
v/c	V over C or the volume-to-capacity ratio

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INTRODUCTION

Landmark Construction, LLC plans to develop an apartment complex including 185 apartment units (642 beds) at the existing driving range at 115 Beverly Heights Avenue in Boone, North Carolina. Figure 1 shows the project location. The build-out year for this single-phase project is 2027.

The Traffic Impact Analysis (TIA) assesses the development's impact on transportation infrastructure, addressing traffic flow, safety, and compliance with relevant codes.

If built as proposed, the recommended mitigation measures ensure the project meets transportation and safety standards. It is the opinion of the Engineer that the development will not adversely affect public health, safety, or welfare, nor will it necessitate additional public expenditures. Agency coordination ensured the analysis adhered to local and state guidelines.

AGENCY COORDINATION AND SCOPING

J.M. Teague Engineering & Planning developed the TIA in coordination with the North Carolina Department of Transportation (NCDOT) Division 11, District 2, and the Town of Boone. A 1.0% annual growth rate was agreed upon for forecasting background traffic, and analysis focused on 10 existing intersections and 2 new access points in the project area.

1. NC 105 Ext. and King Street
2. NC 105 Ext. and Horn Ave./ Beverly Heights Ave.
3. NC 105 Ext. and State Farm Road
4. US 221 and US 321
5. US 221 and Shadowline Drive
6. Shadowline Drive and State Farm Road
7. State Farm Road and VFW Drive
8. State Farm Road and Berkeley Ave.
9. Beverly Heights Ave. and Sheridan Ave.
10. Beverly Heights Ave. and Berkeley Ave.

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EXISTING CONDITIONS

Land Use: NC 105 Extension (US 221) is a commercial corridor backing up to residential land uses, with Appalachian State University approximately 1 mile to the west.

Roadway Network: The NCDOT classifies US 221 as an other principal arterial with an AADT of 41,000 and a speed limit of 35 MPH. NC 105 is an other principal arterial with an AADT of 30,500 and a speed limit of 35 MPH. US 321 is a minor arterial with an annual average daily traffic (AADT) of 25,500 and a speed limit of 35 mph. State Farm Road is a major collector with an AADT of 11,500 and a speed limit of 35 MPH. Beverly Heights Ave., VFW Drive, Horn Ave, Berkeley Ave., and Sheridan Ave. are all local streets with speed limits of 20 MPH.

Safety: The NCDOT database recorded that there have been 138 crashes reported at the intersection of US 321 and US 221, 46 crashes reported at the intersection of NC 105 and State Farm Road, and 54 crashes at the intersection of US 221 and Shadowline Drive between 2020 and 2024. Out of these crashes, no fatal crashes and only two crashes with serious injuries were reported. Sight distance at the site access points will exceed the required 200 feet for the posted speed limit once some trees are removed.

KEY FINDINGS

1. **Traffic Flow and Capacity**:
    - The project generates an estimated 2,549 daily trips, with 108 trips during the morning peak hour and 199 during the evening peak hour.
    - Intersection 2 operates at a level of service F in the background and build out case. All other intersections operate at acceptable levels.
2. Sight Distance and Protected Stem:

The access points will meet the required sight distance and will include a 100-foot protected stem to ensure safe operations.

3. Fire Code and Emergency Access:

The North Carolina Fire Code requires either two separate access points or a fire sprinkler system for developments with more than 100 homes. The site plan (see Figure 2) provides three access points meeting the fire code requirements.

RECOMMENDED MITIGATIONS

Intersection 2: The Engineer recommends converting this intersection to a right-in in right-out intersection.

The Engineer recommends that Landmark Construction modernize Beverly Heights Drive, along the width of its frontage, to a modern two-lane two-way cross section. Any construction should meet the stricter of NCDOT standards or Town of Boone Standards.

Sight distance at the site access points will exceed the required 200 feet for the posted speed limit once some trees are removed. It is Landmark Constructions' responsibility to ensure adequate sight distance for the duration of construction.

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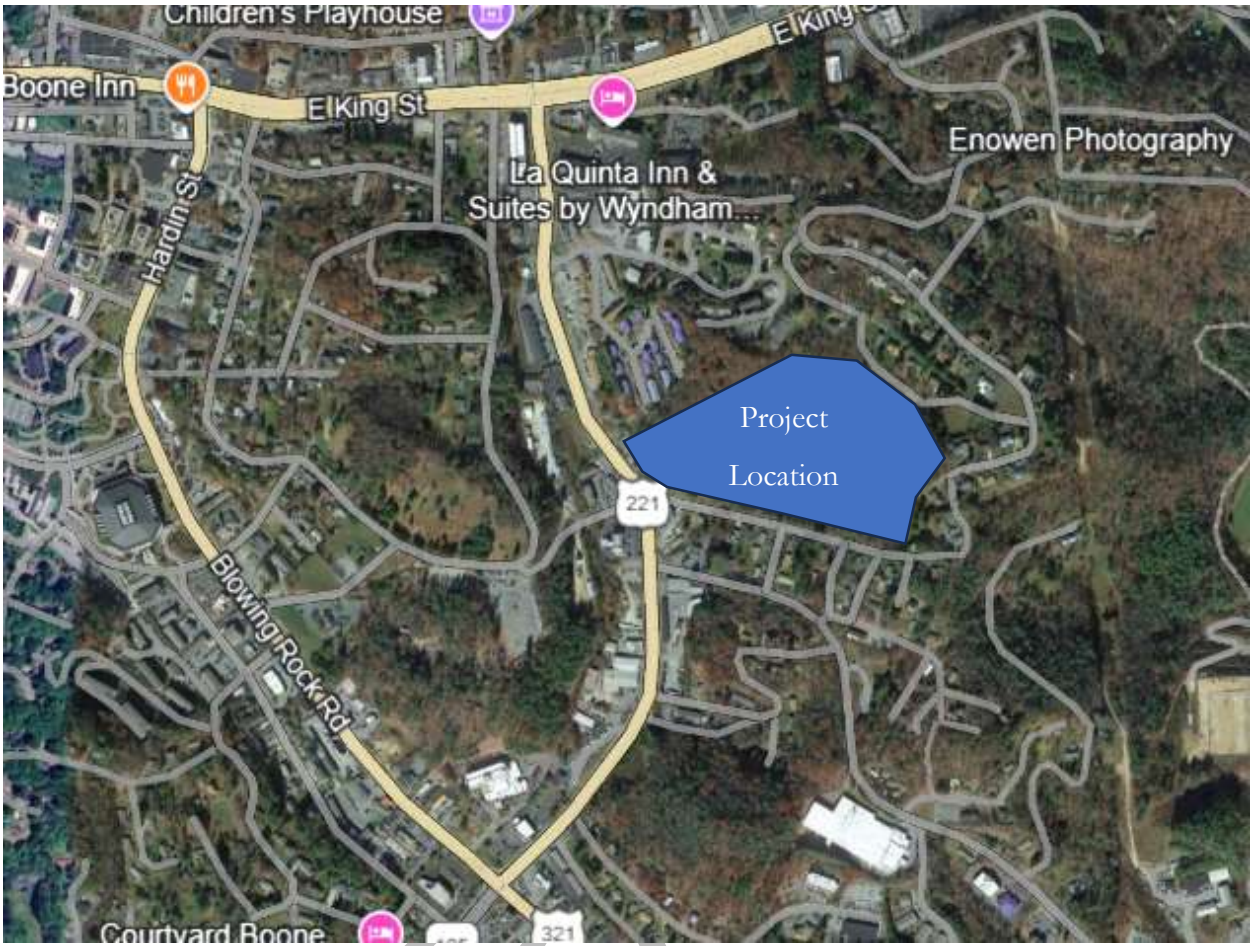


Figure 1: Proposed Boone Driving Range Apartments Site

PROJECT DESCRIPTION

Landmark Construction LLC proposes to develop 185 apartment units on approximately 23.44 acres of land in Boone, North Carolina. Figure 2 shows the site plan for the proposed project.

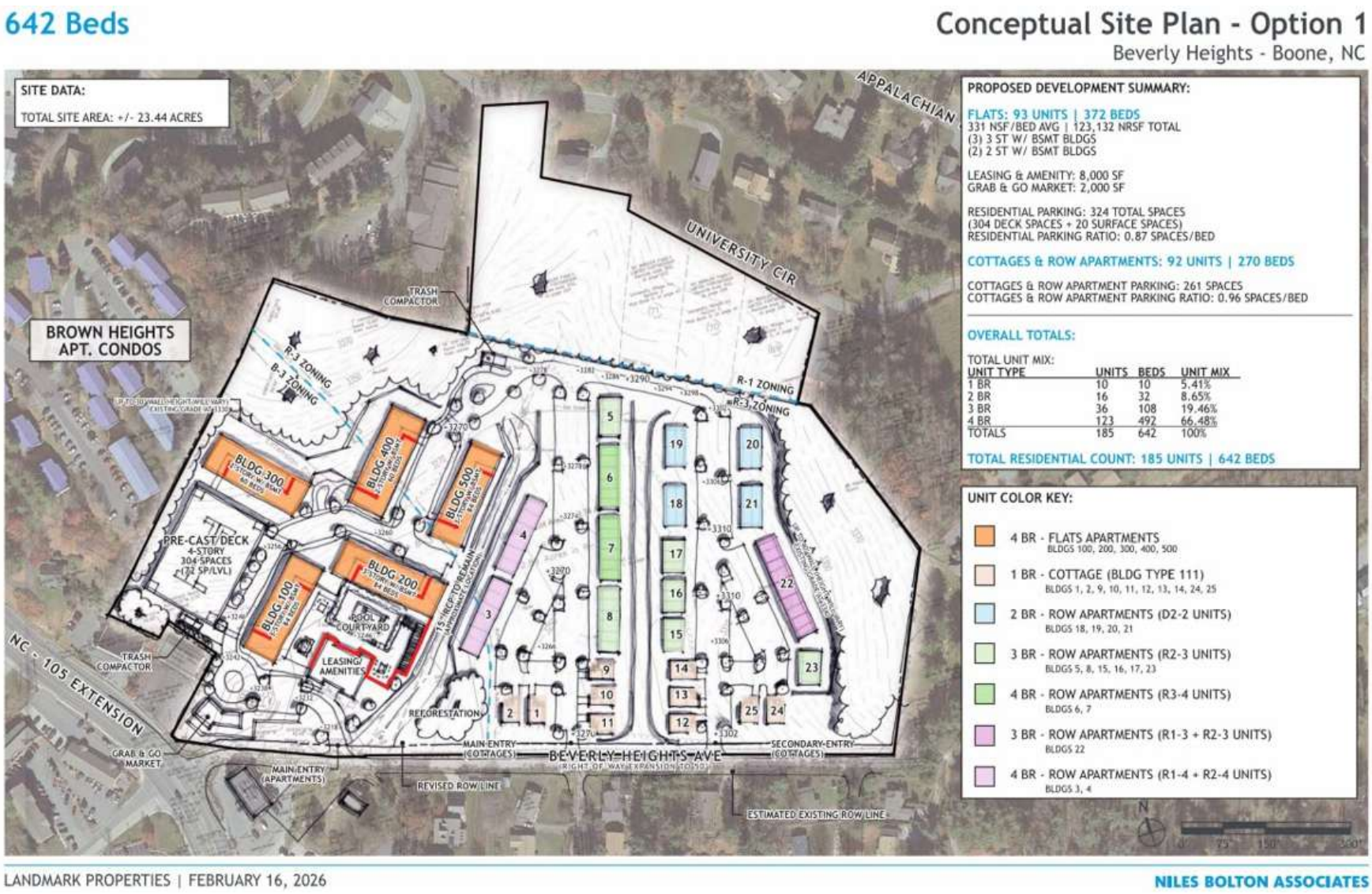


Figure 2: Site Plan – Boone Driving Range (Source: Niles Bolton Associates)

PROJECT SCHEDULE AND STAGES

Landmark Construction, LLC, anticipates completing construction in 2027. There is only one project phase. No follow-up construction is expected.

AGENCY COORDINATION

The Engineer coordinated with Division 11, District 2, and the Town of Boone.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION REQUIREMENTS

The NCDOT requires a traffic impact analysis under the following conditions:

- ☐ Estimated daily trips exceed 3,000 trips per day,
- ☒ Estimated daily trips exceed the City's TIA trip threshold (see below),
- ☐ The project is located in a known STIP or local CIP project #
- ☒ The project includes a rezoning request,
- ☐ The proposed site access is within 1,000 feet of an interchange,
- ☐ The Applicant requests a new or modified control of access break, or
- ☐ The Applicant requests a new or modified median break.

The Driving Range Apartments meet the second and fourth criteria of the NCDOT checklist.

LOCAL ORDINANCE REQUIREMENTS

Under Section 4.04.02(c), developments accessing public roads less than 18 feet wide are required to have a TIA. Also, developments accessing public roads operating at a Level of Service D and expected to generate more than 1,500 trips per day are required to have a TIA. The Driving Range Apartments meet both requirements.

DEVIATIONS FROM THE APPROVED SCOPE

There are no deviations from the approved scope.

ANALYSIS REQUIREMENTS

The analysis requirements have been agreed upon between the Development Team and the North Carolina Department of Transportation. Table 1 summarizes the key parameters of the analysis. The paragraphs following Table 1 provide additional explanations as needed.

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Table 1: Summary of Analysis Parameters

Parameter	Selected Value	Notes
Annual Growth Rate (%/yr.)	1%	Per the NCDOT Division 11, District 2.
Calculated Growth Factor	1.02 for the 2025 traffic counts and 1.01 for the 2026 traffic counts.	Per the Compund Interest formula.
Base Year	2025	Per the Client.
Project Phases	1	Per the Client.
Horizon Year(s)	2027	Per the Client.
Peak Hour Factor	0.90	Per NCDOT Capacity Analysis Guidance.
Minimum Synchro Volume	4	Per the NCDOT Division 11, District 2.

Figure 3 shows the historic traffic growth trends at four of NCDOT's traffic count stations in the Driving Range Apartment area. The trend line at each station is shown with a unique line type and color.

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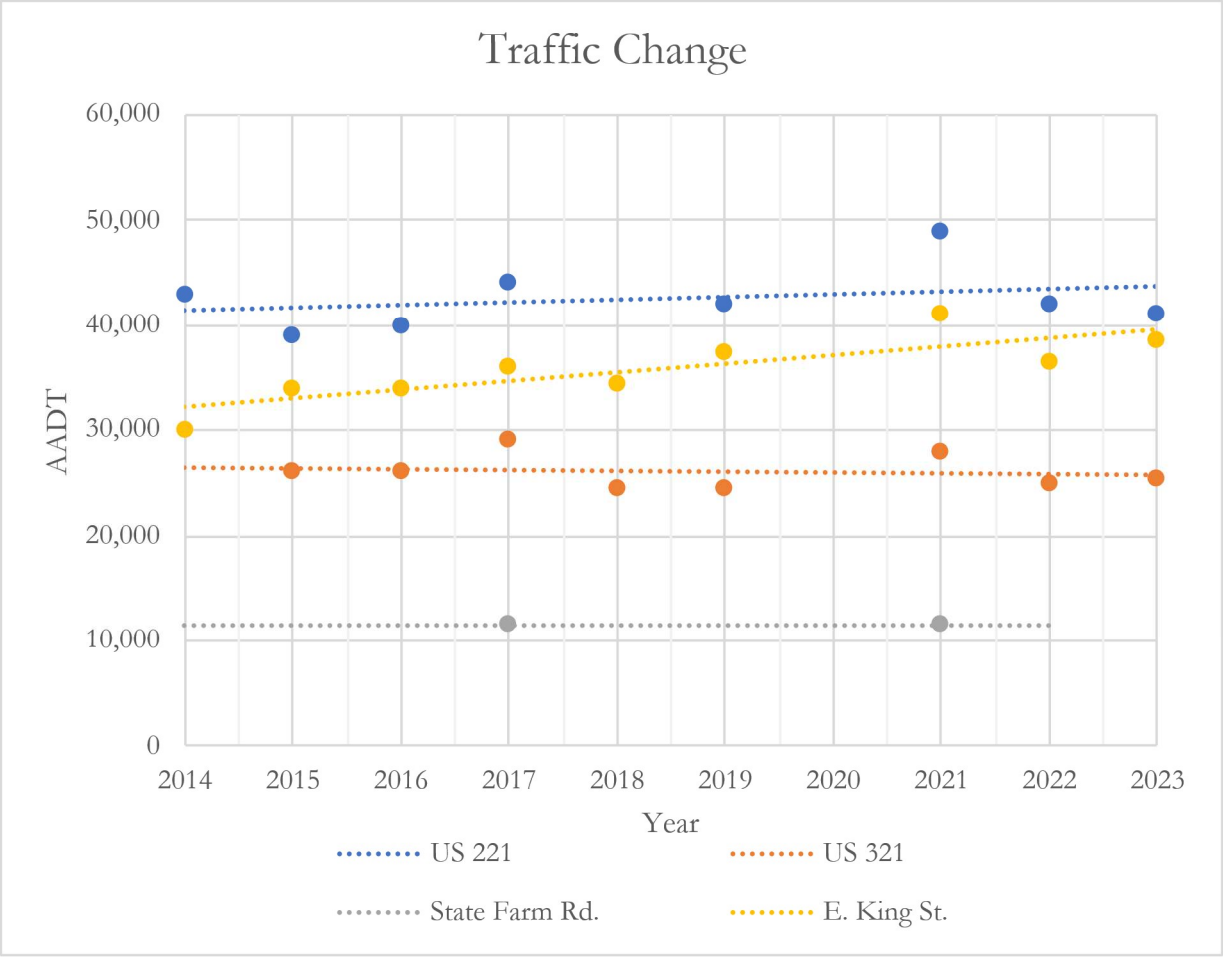


Figure 3: Change in Traffic

Traffic is assumed to grow according to the compound interest formula. Each base year traffic count is multiplied by a growth factor calculated using the formula shown below, where G_f is the growth factor, i is the annual growth rate, and n is the number of years between the base year and the build-out year.

$$G_f = (1 + i)^n$$

DESIGN YEARS(S)

The development team anticipates that the Driving Range Apartments will be complete by 2027 and that there will be no additional phases for this development.

EXISTING CONDITIONS

This section of the report discusses existing land use near the project and existing street conditions near the project. The structure and function of the street network are discussed, as are the potential

for alternative travel modes (transit, bicycle, and pedestrian) and the crash history of the US 221 Corridor.

NEARBY LAND-USES

US 221 (NC 105 Extension) is a commercial corridor backing up to residential land uses, with Appalachian State University approximately 1 mile to the west.

EXISTING ROADWAY NETWORK

The functional classification of roadways delineates their intended purpose. Higher-classified roads prioritize efficient travel and speed, while lower-classified roads are primarily designed to facilitate property access. The hierarchical order of functional classifications comprises Interstate, Freeway, Arterial, Collectors, and Locals.

Table 2 provides a summary of the neighboring street network, organized by street or road name. It details the functional classification, recent Average Annual Daily Traffic (AADT), and the Posted Speed Limit for each road. In instances where no formal speed limit is posted (indicated by NA), the statutory speed limit defaults to 55 miles per hour as outlined in North Carolina General Statutes Chapter 20-141.

Table 2: Existing Roadway Network

Roadway	Functional Classification	AADT (2022)	Posted Speed Limit
US 221	Other Principal Arterial	41,000	35 MPH
NC 105	Other Principal Arterial	30,500	35 MPH
US 321	Minor Arterial	25,500	35 MPH
State Farm Rd	Major Collector	11,500	35 MPH
Beverly Heights Ave.	Local	N/A	20 MPH
VFW Drive	Local	N/A	20 MPH
Horn Ave.	Local	N/A	20 MPH
Berkely Ave	Local	N/A	20 MPH

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TRAFFIC CONTROL DEVICES

Table 3 summarizes the existing traffic control devices in the study area.

Table 3: Traffic Control Devices

Synchro Intersection Number	Major Street	Minor Street	Traffic Control	Signal Phases	Phasing Diagram	Notes
1	NC 105 Ext.	King Street	Signal	5 Phase	1+5, 1+6, 2+5, 2+6, 8	Actuated, coordinated (11-0021)
2	NC 105 Ext.	Horn Ave./ Beverly Heights Ave.	Stop			
3	NC 105 Ext.	State Farm Rd.	Signal	3 Phase	1+6, 2+6, 4+8	Actuated, Isolated (11-0974)
4	US 221	US 321	Signal	8 Phase	1+5, 1+6, 2+5, 2+6, 3+7, 3+8, 4+7, 4+8	Actuated, coordinated (11-0883)
5	US 221	Shadowline Dr.	Signal	3 Phase	2+5, 2+6, 4+8	Actuated, coordinated (11-1113)
6	Shadowline Dr.	State Farm Rd.	Signal	2 Phase	2+6, 4+8	Actuated, Isolated (Town-owned)
7	State Farm Rd.	VFW Dr.	Stop			
8	State Farm Rd.	Berkley Ave.	Stop			
9	Beverly Heights Ave.	Sheridan Ave.	Stop			
10	Beverly Heights Ave.	Berkley Ave.	Stop			

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INTERSECTION GEOMETRY

Roadway intersection geometry refers to the layout and design of the intersection, including the alignment and arrangement of the intersecting roads, lanes, turns, and traffic control devices. It includes the number and angles of approach, the presence of medians or islands, the types of turning movements allowed, and the overall configuration of the intersection.

Figure 4 on the following page shows the available turn lanes at each studied intersection. Thru lanes are assumed to be continuous between intersections and are not dimensioned. Turn lanes are measured from the stop bar to the approximate beginning of the taper. Dimensions are given to the nearest vehicle length (25 feet).

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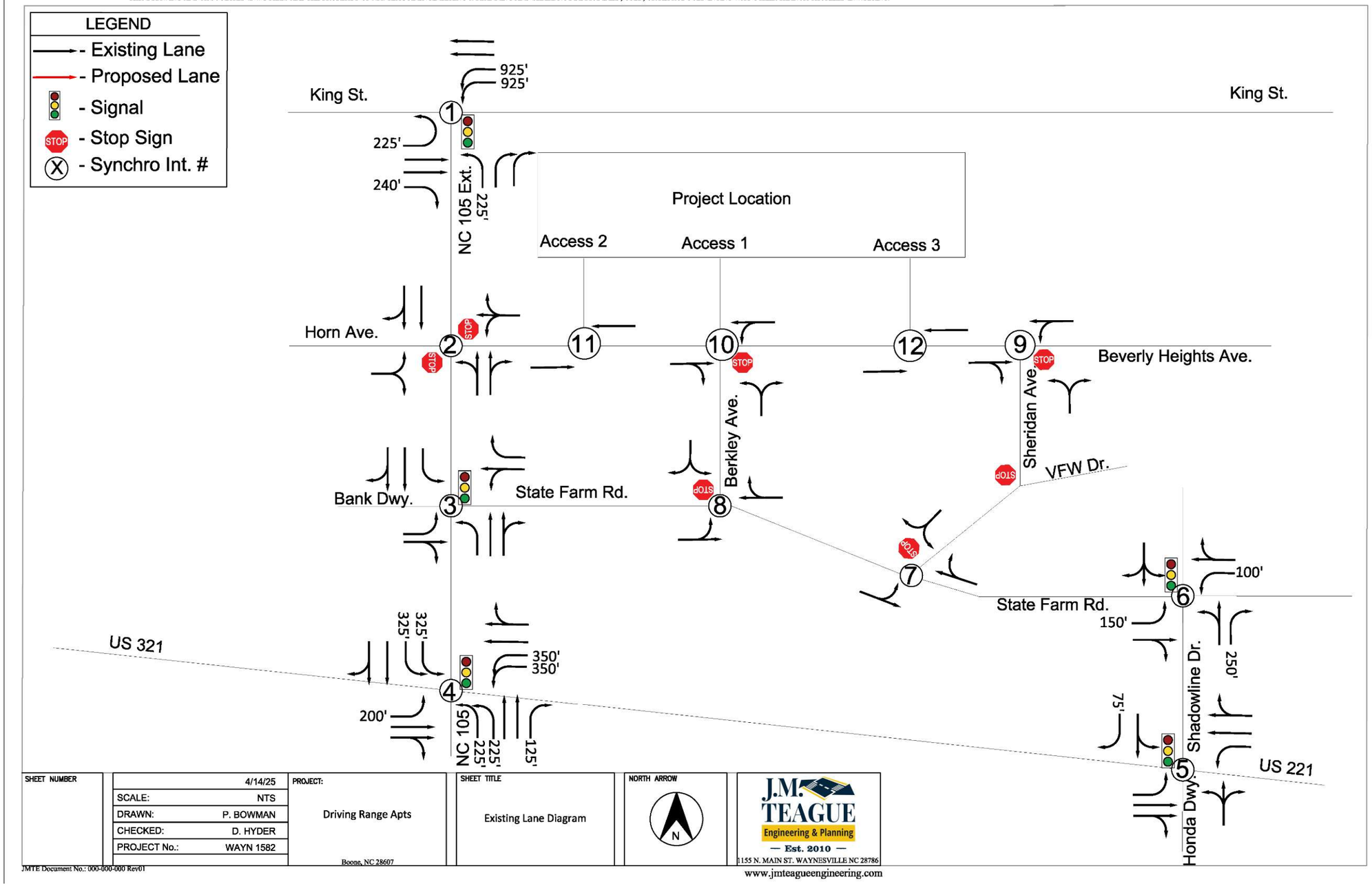


Figure 4: Existing (2025) Lane Diagram

SAFETY

For this review, safety is composed of roadway and street safety and emergency response.

CRASH REVIEW

The NCDOT's Crash Frequency by Intersection Maps for the years 2020-2024 are included in Appendix D. The maps show there have been 138 crashes reported at the intersection of US 321 and US 221, 46 crashes reported at the intersection of NC 105, and State Farm Road, and 54 crashes at the intersection of US 221 and Shadowline Drive. Out of these crashes, 2 involved serious injuries, and none of the reported crashes were fatal.

SIGHT DISTANCE

Page 29 of *Policy on Street and Driveway Access to North Carolina Highways (2003)* requires a sight distance of one hundred (100) feet per 10 miles per hour in each direction for a passenger vehicle to safely cross a two-lane street. A street with a 20-mile-per-hour posted speed limit needs two hundred (200) feet of sight distance in either direction.

As observed on a site visit and shown in Figure 5, the sight distance for Access 1 exceeds the 200 feet of required sight distance.



Looking Left toward Sheridan Ave.



Looking Right toward NC 105

Figure 5: Access 1 Sight Distance (Source: JMTE)

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As observed on a site visit and shown in Figure 6 the sight distance for Access 2 exceeds the 200 feet of required sight distance.



Looking Left toward Sheridan Ave.



Looking Right toward NC 105

Figure 6: Access 2 Sight Distance. (Source: JMTE)

As observed on a site visit and shown in Figure 7, the sight distance for Access 3 will exceed the 200 feet of required sight distance once the vegetation is removed.



Looking Left toward Sheridan Ave.



Looking Right toward NC 105

Figure 7: Access 3 Sight Distance (Source: JMTE)

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FIRE & EMERGENCY VEHICLE ACCESS

The site plan (Figure 2) meets the requirements of the Uniform Fire Code for:

- ☒ Width of driveways, and
- ☒ Number and spacing of driveways, or
- ☐ The site plan does not provide sufficient detail to evaluate compliance with the requirements of the Uniform Fire Code.

ALTERNATIVE MODES OF TRAVEL

Incorporating alternative modes of transportation in our Traffic Impact Analysis (TIA) is essential to ensure a comprehensive understanding of the diverse transportation needs within a community. By examining and accommodating alternative modes such as walking, cycling, and public transit, we promote sustainable, accessible, and efficient transportation options. The available alternative modes in the project area are described below.

BICYCLE AND PEDESTRIAN

There are sidewalks on the west side of NC 105 Ext. in the project area. However, there are no bicycle facilities near the project.

TRANSIT

Appal Cart Transits Gray Route has a stop across NC 105 Ext. from the project location on Horn Ave., and the Red Route has a stop at the intersection of Beverly Heights Ave. and NC 105 Ext. The Driving Range Apartments are not expected to negatively impact the transit routes.

Given the proximity of the Appal Cart Transit stop. It is anticipated that vehicle trips will be reduced. However, the trip generation for analysis purposes was not adjusted.

TRAVEL DEMAND

The goal of a traffic impact analysis is to assess how future conditions would differ without the project compared to the conditions with the project in place.

EXISTING TRAFFIC

Existing traffic is the travel demand on the street system today. Existing traffic is estimated from traffic counts taken at the site. The existing traffic is used to estimate the peak travel periods of the area, the variability of the traffic within the peak period, and the through movements and turning movements at each intersection. A TIA intends to estimate conditions on a "typical day" in a project's horizon year. To accomplish this intent, the traffic counts are taken at midweek with school in session. Figure 9 shows the results of the traffic counts taken on a typical day.

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Traffic may be discussed as daily traffic (ADT) or peak period traffic. In the TIA process and the street design process, it is more useful to focus on peak-period traffic. This is the time at which the demand on the street is the heaviest. Often, the peak hour of travel accounts for ten percent of daily traffic on a street. In addition, there are two peak periods during each day. In the morning peak period, people are leaving home and driving to work. The morning peak has historically been a sharp peak that rises and falls quickly. During the afternoon, people are not only returning home from work but also often perform other errands after work. Figure 8 shows the AM and PM Peak Periods for the existing study intersections.

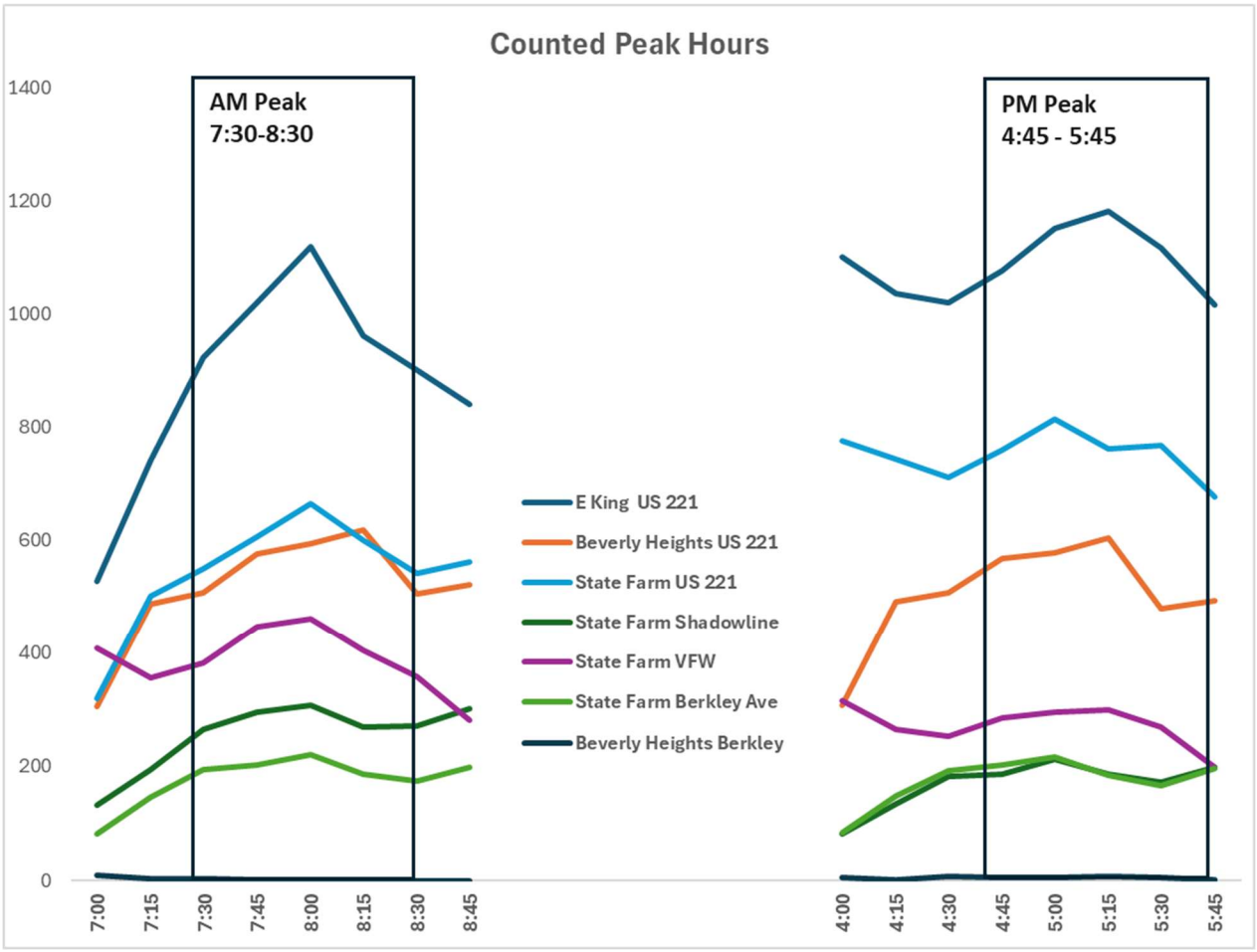


Figure 8: Peak Hours at Study Intersections

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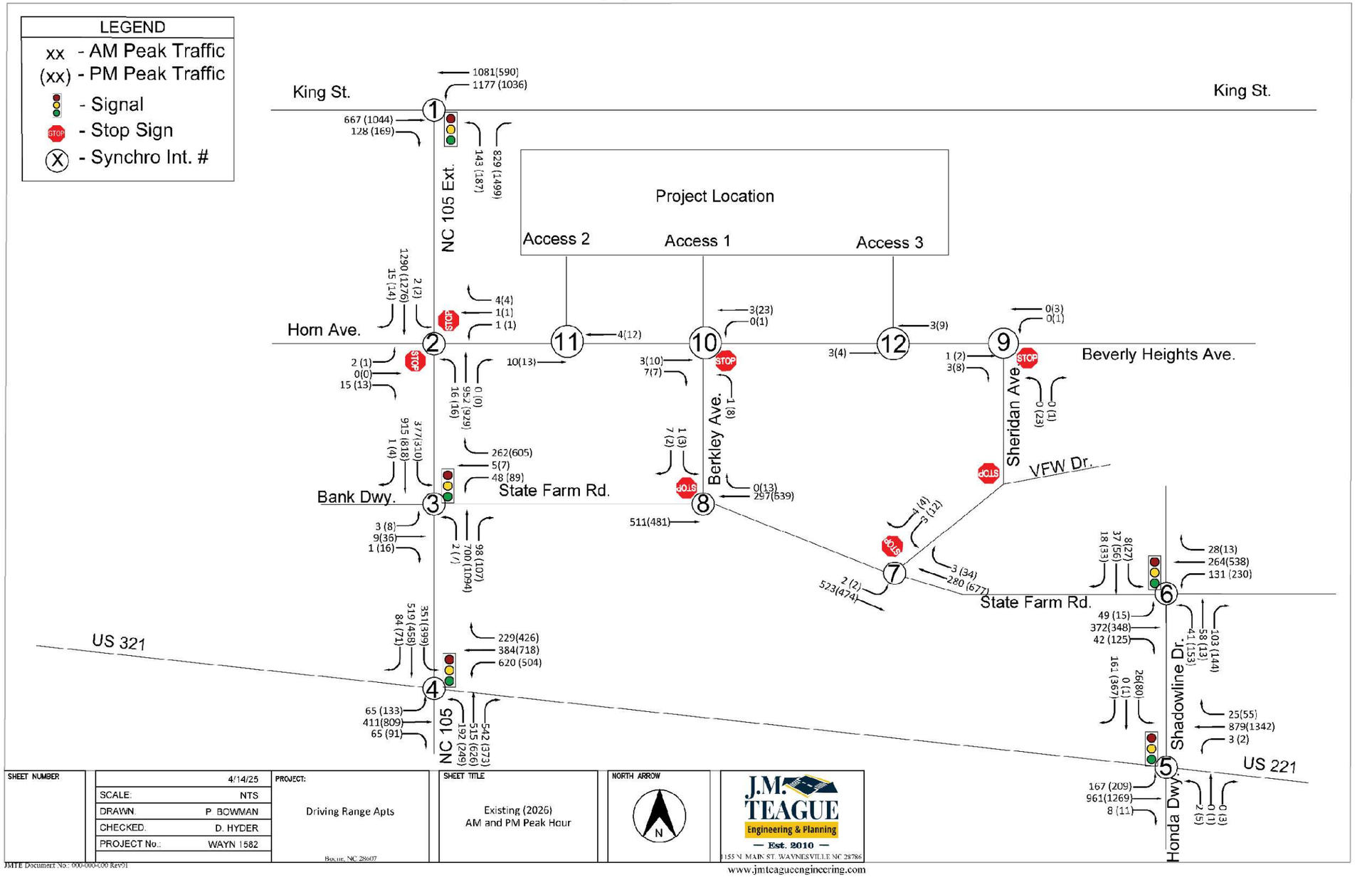


Figure 9: Base (2026) AM and Peak Hour Traffic Volume

BACKGROUND TRAFFIC

Figure 11 illustrates the background traffic within the study area, encompassing traffic resulting from both natural growth and contributions from other developments in the project area that can be reasonably anticipated.

NATURAL GROWTH

Natural Growth is traffic that will be present on the surrounding roadway network in the build-out year of the project, caused by population growth in the region. The project build-out year is 2027. Using historical data in the area, it was determined that a growth rate of one (1.0) percent per year was reasonable. Each traffic count for 2025 was multiplied by 1.02 and then balanced to estimate the typical 2027 traffic volume. Each traffic count from 2026 was multiplied by 1.01 and then balanced to estimate the typical 2027 traffic volume.

REASONABLY FORESEEABLE DEVELOPMENTS

A reasonable foreseeable project is a project already approved by the local government that is expected to be completed before the analysis project is complete. The scoping process discovered no reasonably foreseeable projects in the Driving Range area of effect.

EFFECT OF NCDOT PROJECTS

The North Carolina Department of Transportation does not anticipate any Transportation Improvement Program projects along this portion of the US 221/NC 105, US 321, or the US 421 corridors. Figure 10 shows the NCDOT STIP Projects near the Driving Range Apartments development.

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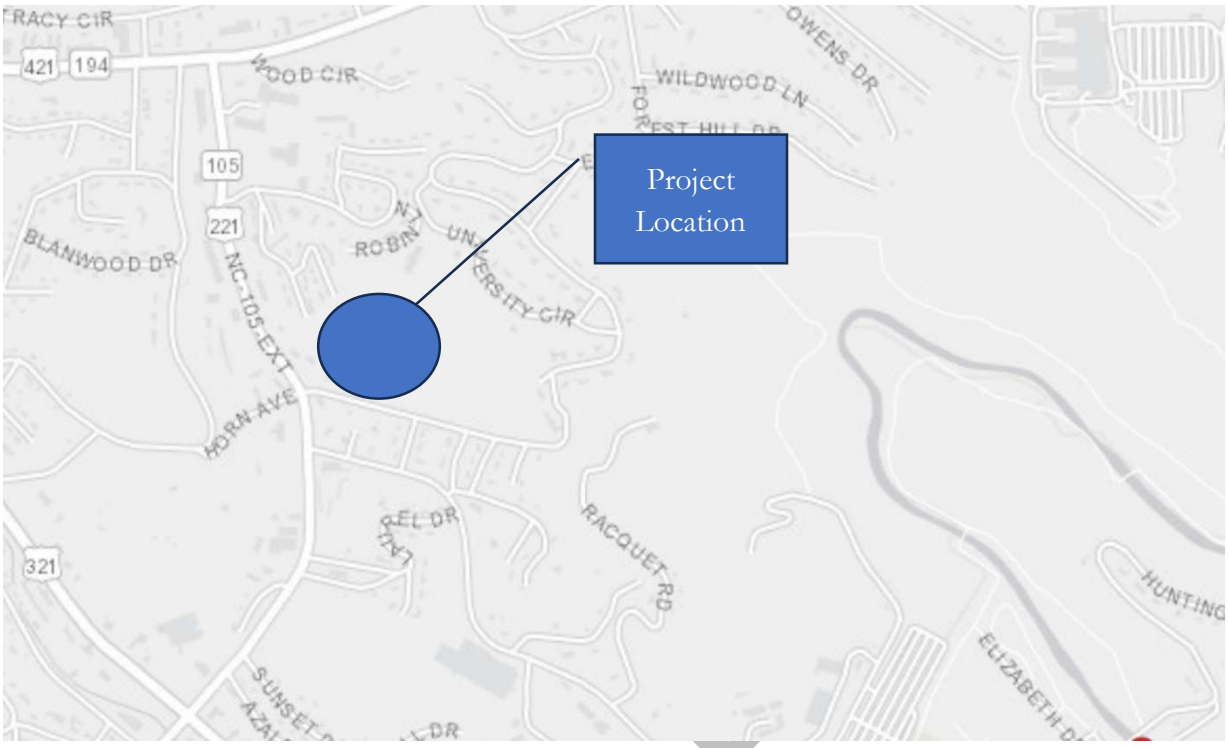


Figure 10: NCDOT STIP Projects (2024-2033) (Source: NCDOT)

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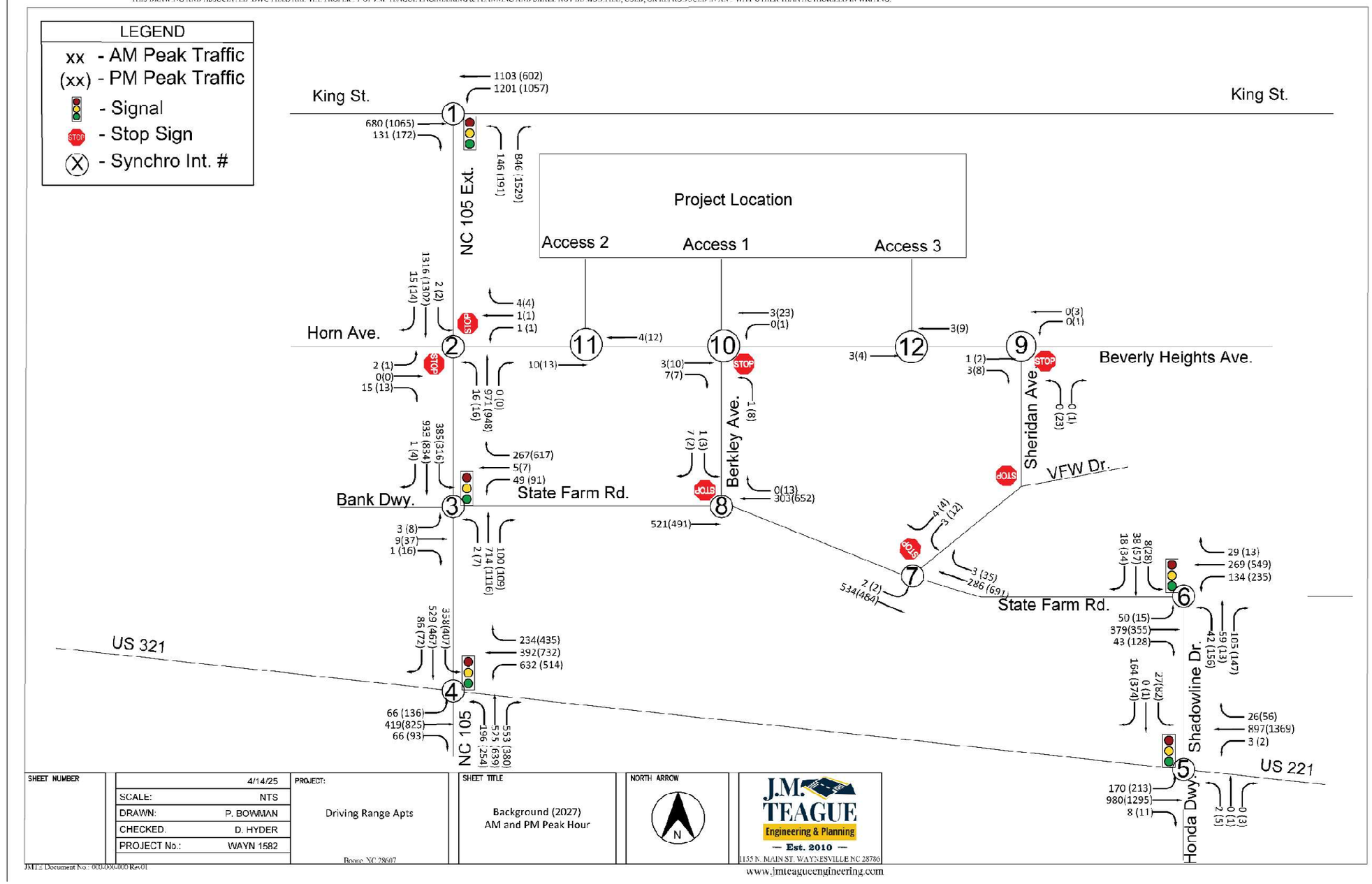


Figure 11: Background (2027) AM & PM Peak Hour Traffic

BUILD-OUT TRAFFIC

Build-out traffic is all traffic that will be present on the surrounding roadway network when the project is complete and fully occupied (2027)

Build-out traffic is the sum of background traffic and the proposed site trips. The anticipated Build-out AM and PM peak-hour traffic is shown in Figure 14.

TRIP DISTRIBUTION

Trip distribution is the assignment of project traffic throughout the road network as it enters and exits the site. The pathway is assigned to show the traffic as it travels through the study area intersections. The trip distribution for this development was estimated from the existing traffic volume patterns within the surrounding roadway network, the surrounding population densities, the location of the proposed development, and engineering judgment. The estimated trip distribution is based on the following assumptions:

- The trip distribution for the project will match the existing trip distribution in the project area,
- The percentage of trips at the study area boundary roughly approximates the percentage of trips to and from the site,
- On a typical day, inbound site trips balance outbound site trips, and
- A reasonable origin-to-destination matrix can be estimated using these assumptions.

Using these assumptions, the trip distribution was estimated using the following steps:

1. The percentage of site trips (origins) using each access point (driveway) is assumed,
2. The percentage of site trips exiting the project area at each network boundary is estimated based on historic traffic counts,
3. Estimate the trip interchange between the site and the boundary by multiplying the row target percentage by the column target percentage.

Table 4 shows the results of that work.

The pathway is assigned to show the traffic as it travels through the study area intersections. The trip distribution for this development was estimated from the existing traffic volume patterns within the surrounding roadway network, the surrounding population densities, the location of the proposed development, and engineering judgment.

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Table 4: Estimated Trip Distribution

Location		King St West	King St. East	US 221 East	NC 105 South	Us 321 West	Horn Ave. West
Peak Hour Traffic		17,000	38500	23500	31,000	25500	0
Access #	% of Traffic	13%	28%	17%	23%	19%	0%
Access 1	20%	3%	6%	3%	5%	4%	0%
Access 2	70%	9%	20%	12%	16%	13%	0%
Access 3	10%	1%	3%	2%	2%	2%	0%
Adjusted % Entering/Exiting		20%	20%	15%	5%	35%	5%

Once the balanced trip matrix is complete, the trips from Trip Generation can be assigned to the network. Figure 12 shows the trip distribution percentages as applied to the street network.

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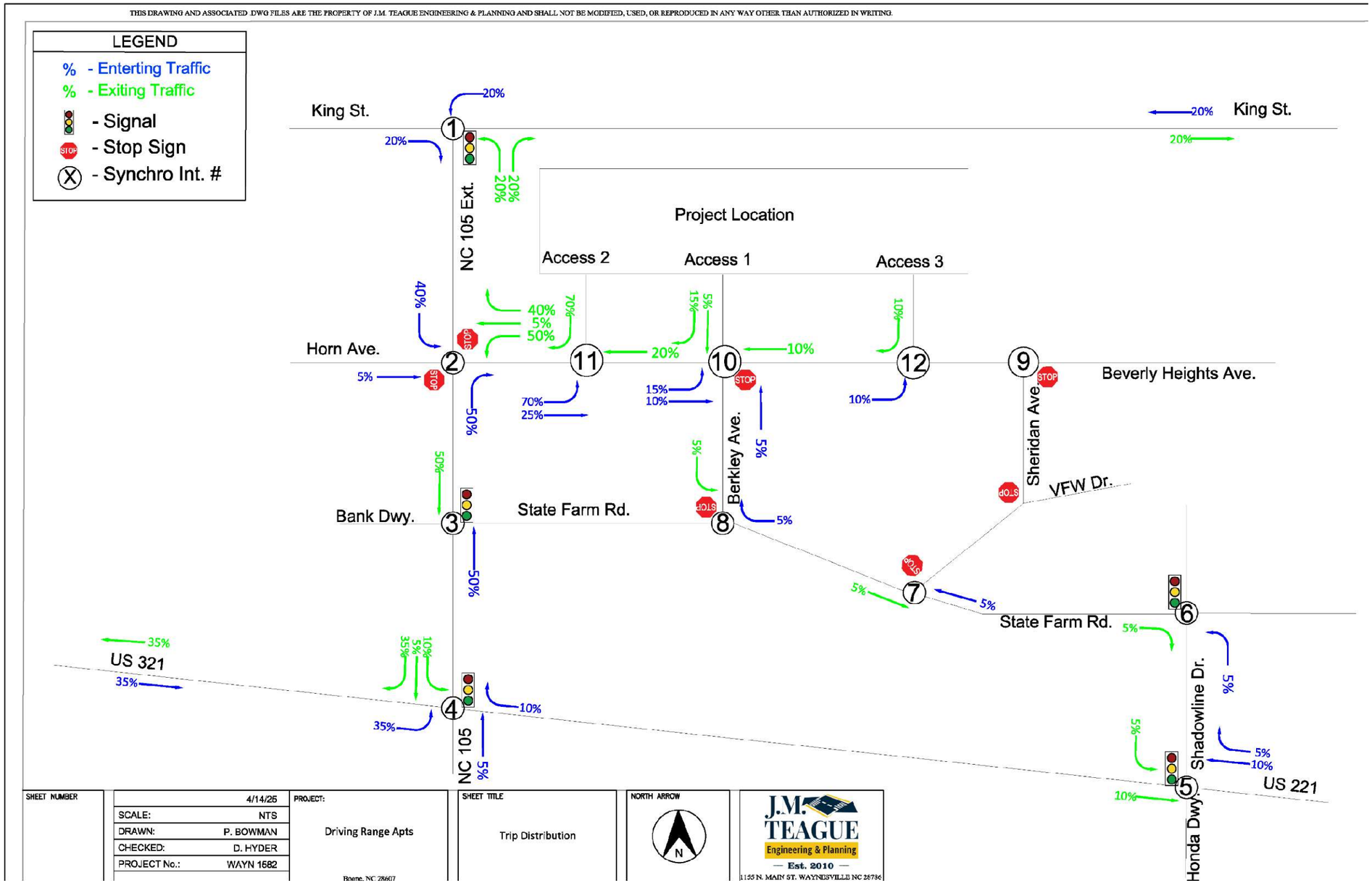


Figure 12: Driving Range Apartments Trip Distribution

Trip Generation

In the trip generation step, the number of vehicle trips connected to the proposed development is estimated using the current version of ITE's *Trip Generation Manual*. The number of trips is determined by the type of land use (commercial, industrial, residential, or service) and the intensity of the land use. The number of trips may be modified to account for area type (dense urban or suburban/rural), the people passing by that stop, or any existing development on the site. Typically, the engineer estimates the number of daily, morning, and evening trips. Most state departments of transportation and local governments compare the estimated trips to a threshold trip number to determine if a traffic analysis is required. Table 5 shows the Trip Generation for the Driving Range Apartments Development.

Table 5: Trip Generation

ITE LUC	Proposed Land Use	Units	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					Entering	Exiting	Total	Entering	Exiting	Total
225	Student Housing Low-Rise	642	Beds	2,549	29	79	108	104	95	199
			Total	2,549	29	79	108	104	95	199

Daily Trips

Daily trips from Student Housing Low Rise were estimated using the equation below. The number of trips is based on the number of beds:

$$T = 3.97(Beds)$$

Morning Trips (AM)

AM Trips from Student Housing Low Rise were estimated using the equation below:

$$T = 0.16(Beds)$$

Evening Trips (PM)

PM from Student Housing Low Rise was estimated using the equation below.

$$T = 0.31(Beds).$$

The number of trips is rounded to the nearest vehicle.

Trip Assignment

In the Trip Assignment, the trips from the trip generation step are assigned to the network using the percentages in Figure 12. Figure 13 shows the results of the daily trip assignment.

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TOTAL TRAFFIC

Tables 6 through 17 show how the trips are developed at each of the study intersections.

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Table 6: Intersection 1 Trip Development

Intersection 1: NC 105 Ext. & E. King St.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	E King St	Northbound	U-Turn	0	0	0	0	0	0
AM	E King St	Northbound	Left	143	146	0	146	16	162
AM	E King St	Northbound	Through	0	0	0	0	0	0
AM	E King St	Northbound	Right	829	846	0	846	16	862
AM	E King St	Eastbound	U-Turn	0	0	0	0	0	0
AM	E King St	Eastbound	Left	0	0	0	0	0	0
AM	E King St	Eastbound	Through	667	680	0	680	0	680
AM	E King St	Eastbound	Right	128	131	0	131	6	137
AM	E King St	Southbound	U-Turn	0	0	0	0	0	0
AM	E King St	Southbound	Left	0	0	0	0	0	0
AM	E King St	Southbound	Through	0	0	0	0	0	0
AM	E King St	Southbound	Right	0	0	0	0	0	0
AM	E King St	Westbound	U-Turn	0	0	0	0	0	0
AM	E King St	Westbound	Left	1177	1201	0	1201	6	1207
AM	E King St	Westbound	Through	1081	1103	0	1103	0	1103
AM	E King St	Westbound	Right	0	0	0	0	0	0
PM	E King St	Northbound	U-Turn	0	0	0	0	0	0
PM	E King St	Northbound	Left	187	191	0	191	19	210
PM	E King St	Northbound	Through	0	0	0	0	0	0
PM	E King St	Northbound	Right	1499	1529	0	1529	19	1548
PM	E King St	Eastbound	U-Turn	0	0	0	0	0	0
PM	E King St	Eastbound	Left	0	0	0	0	0	0
PM	E King St	Eastbound	Through	1044	1065	0	1065	0	1065
PM	E King St	Eastbound	Right	169	172	0	172	21	193
PM	E King St	Southbound	U-Turn	0	0	0	0	0	0
PM	E King St	Southbound	Left	0	0	0	0	0	0
PM	E King St	Southbound	Through	0	0	0	0	0	0
PM	E King St	Southbound	Right	0	0	0	0	0	0
PM	E King St	Westbound	U-Turn	0	0	0	0	0	0
PM	E King St	Westbound	Left	1036	1057	0	1057	21	1078
PM	E King St	Westbound	Through	590	602	0	602	0	602
PM	E King St	Westbound	Right	0	0	0	0	0	0

Table 7: Intersection 2 Trip Development

Intersection 2: NC 105 Ext. & Beverly Heights/Horn Ave.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Beverly Hts Ave/Horn Ave	Northbound	U-Turn	0	0	0	0	0	0
AM	Beverly Hts Ave/Horn Ave	Northbound	Left	16	16	0	16	0	16
AM	Beverly Hts Ave/Horn Ave	Northbound	Through	952	971	0	971	0	971
AM	Beverly Hts Ave/Horn Ave	Northbound	Right	0	0	0	0	15	15
AM	Beverly Hts Ave/Horn Ave	Eastbound	U-Turn	0	0	0	0	0	0
AM	Beverly Hts Ave/Horn Ave	Eastbound	Left	2	2	0	2	0	2
AM	Beverly Hts Ave/Horn Ave	Eastbound	Through	0	0	0	0	1	1
AM	Beverly Hts Ave/Horn Ave	Eastbound	Right	15	15	0	15	0	15
AM	Beverly Hts Ave/Horn Ave	Southbound	U-Turn	0	0	0	0	0	0
AM	Beverly Hts Ave/Horn Ave	Southbound	Left	2	2	0	2	12	14
AM	Beverly Hts Ave/Horn Ave	Southbound	Through	1290	1316	0	1316	0	1316
AM	Beverly Hts Ave/Horn Ave	Southbound	Right	15	15	0	15	0	15
AM	Beverly Hts Ave/Horn Ave	Westbound	U-Turn	0	0	0	0	0	0
AM	Beverly Hts Ave/Horn Ave	Westbound	Left	1	1	0	1	40	41
AM	Beverly Hts Ave/Horn Ave	Westbound	Through	1	1	0	1	4	5
AM	Beverly Hts Ave/Horn Ave	Westbound	Right	4	4	0	4	32	36
PM	Beverly Hts Ave/Horn Ave	Northbound	U-Turn	0	0	0	0	0	0
PM	Beverly Hts Ave/Horn Ave	Northbound	Left	16	16	0	16	0	16
PM	Beverly Hts Ave/Horn Ave	Northbound	Through	929	948	0	948	0	948
PM	Beverly Hts Ave/Horn Ave	Northbound	Right	0	0	0	0	52	52
PM	Beverly Hts Ave/Horn Ave	Eastbound	U-Turn	0	0	0	0	0	0
PM	Beverly Hts Ave/Horn Ave	Eastbound	Left	1	1	0	1	0	1
PM	Beverly Hts Ave/Horn Ave	Eastbound	Through	0	0	0	0	5	5
PM	Beverly Hts Ave/Horn Ave	Eastbound	Right	13	13	0	13	0	13
PM	Beverly Hts Ave/Horn Ave	Southbound	U-Turn	0	0	0	0	0	0
PM	Beverly Hts Ave/Horn Ave	Southbound	Left	2	2	0	2	42	44
PM	Beverly Hts Ave/Horn Ave	Southbound	Through	1276	1302	0	1302	0	1302
PM	Beverly Hts Ave/Horn Ave	Southbound	Right	14	14	0	14	0	14
PM	Beverly Hts Ave/Horn Ave	Westbound	U-Turn	0	0	0	0	0	0
PM	Beverly Hts Ave/Horn Ave	Westbound	Left	1	1	0	1	48	49
PM	Beverly Hts Ave/Horn Ave	Westbound	Through	1	1	0	1	5	6
PM	Beverly Hts Ave/Horn Ave	Westbound	Right	4	4	0	4	38	42

Table 8: Intersection 3 Trip Development

Intersection 3: NC 105 Ext. & State Farm Rd.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	State Farm Rd	Northbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Northbound	Left	2	2	0	2	0	2
AM	State Farm Rd	Northbound	Through	700	714	0	714	15	729
AM	State Farm Rd	Northbound	Right	98	100	0	100	0	100
AM	State Farm Rd	Eastbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Eastbound	Left	3	3	0	3	0	3
AM	State Farm Rd	Eastbound	Through	9	9	0	9	0	9
AM	State Farm Rd	Eastbound	Right	1	1	0	1	0	1
AM	State Farm Rd	Southbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Southbound	Left	377	385	0	385	0	385
AM	State Farm Rd	Southbound	Through	915	933	0	933	40	973
AM	State Farm Rd	Southbound	Right	1	1	0	1	0	1
AM	State Farm Rd	Westbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Westbound	Left	48	49	0	49	0	49
AM	State Farm Rd	Westbound	Through	5	5	0	5	0	5
AM	State Farm Rd	Westbound	Right	262	267	0	267	0	267
PM	State Farm Rd	Northbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Northbound	Left	7	7	0	7	0	7
PM	State Farm Rd	Northbound	Through	1094	1116	0	1116	52	1168
PM	State Farm Rd	Northbound	Right	107	109	0	109	0	109
PM	State Farm Rd	Eastbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Eastbound	Left	8	8	0	8	0	8
PM	State Farm Rd	Eastbound	Through	36	37	0	37	0	37
PM	State Farm Rd	Eastbound	Right	16	16	0	16	0	16
PM	State Farm Rd	Southbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Southbound	Left	310	316	0	316	0	316
PM	State Farm Rd	Southbound	Through	818	834	0	834	48	882
PM	State Farm Rd	Southbound	Right	4	4	0	4	0	4
PM	State Farm Rd	Westbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Westbound	Left	89	91	0	91	0	91
PM	State Farm Rd	Westbound	Through	7	7	0	7	0	7
PM	State Farm Rd	Westbound	Right	605	617	0	617	0	617

Table 9: Intersection 4 Trip Development

Intersection 4: US 321 & US 221/NC 105									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	US 221/NC105	Northbound	U-Turn	0	0	0	0	0	0
AM	US 221/NC105	Northbound	Left	192	196	0	196	0	196
AM	US 221/NC105	Northbound	Through	515	525	0	525	1	526
AM	US 221/NC105	Northbound	Right	542	553	0	553	0	553
AM	US 221/NC105	Eastbound	U-Turn	0	0	0	0	0	0
AM	US 221/NC105	Eastbound	Left	65	66	0	66	10	76
AM	US 221/NC105	Eastbound	Through	411	419	0	419	0	419
AM	US 221/NC105	Eastbound	Right	65	66	0	66	0	66
AM	US 221/NC105	Southbound	U-Turn	0	0	0	0	0	0
AM	US 221/NC105	Southbound	Left	351	358	0	358	8	366
AM	US 221/NC105	Southbound	Through	519	529	0	529	4	533
AM	US 221/NC105	Southbound	Right	84	86	0	86	28	114
AM	US 221/NC105	Westbound	U-Turn	0	0	0	0	0	0
AM	US 221/NC105	Westbound	Left	620	632	0	632	0	632
AM	US 221/NC105	Westbound	Through	384	392	0	392	0	392
AM	US 221/NC105	Westbound	Right	229	234	0	234	3	237
PM	US 221/NC105	Northbound	U-Turn	0	0	0	0	0	0
PM	US 221/NC105	Northbound	Left	249	254	0	254	0	254
PM	US 221/NC105	Northbound	Through	626	639	0	639	5	644
PM	US 221/NC105	Northbound	Right	373	380	0	380	0	380
PM	US 221/NC105	Eastbound	U-Turn	0	0	0	0	0	0
PM	US 221/NC105	Eastbound	Left	133	136	0	136	36	172
PM	US 221/NC105	Eastbound	Through	809	825	0	825	0	825
PM	US 221/NC105	Eastbound	Right	91	93	0	93	0	93
PM	US 221/NC105	Southbound	U-Turn	0	0	0	0	0	0
PM	US 221/NC105	Southbound	Left	399	407	0	407	10	417
PM	US 221/NC105	Southbound	Through	458	467	0	467	5	472
PM	US 221/NC105	Southbound	Right	71	72	0	72	33	105
PM	US 221/NC105	Westbound	U-Turn	0	0	0	0	0	0
PM	US 221/NC105	Westbound	Left	504	514	0	514	0	514
PM	US 221/NC105	Westbound	Through	718	732	0	732	0	732
PM	US 221/NC105	Westbound	Right	426	435	0	435	10	445

Table 10: Intersection 5 Trip Development

Intersection 5: US 221 & Shadowline Dr.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Shadowline Rd	Northbound	U-Turn	0	0	0	0	0	0
AM	Shadowline Rd	Northbound	Left	2	2	0	2	0	2
AM	Shadowline Rd	Northbound	Through	0	0	0	0	0	0
AM	Shadowline Rd	Northbound	Right	0	0	0	0	0	0
AM	Shadowline Rd	Eastbound	U-Turn	0	0	0	0	0	0
AM	Shadowline Rd	Eastbound	Left	167	170	0	170	0	170
AM	Shadowline Rd	Eastbound	Through	961	980	0	980	8	988
AM	Shadowline Rd	Eastbound	Right	8	8	0	8	0	8
AM	Shadowline Rd	Southbound	U-Turn	0	0	0	0	0	0
AM	Shadowline Rd	Southbound	Left	26	27	0	27	4	31
AM	Shadowline Rd	Southbound	Through	0	0	0	0	0	0
AM	Shadowline Rd	Southbound	Right	161	164	0	164	0	164
AM	Shadowline Rd	Westbound	U-Turn	0	0	0	0	0	0
AM	Shadowline Rd	Westbound	Left	3	3	0	3	0	3
AM	Shadowline Rd	Westbound	Through	879	897	0	897	3	900
AM	Shadowline Rd	Westbound	Right	25	26	0	26	1	27
PM	Shadowline Rd	Northbound	U-Turn	0	0	0	0	0	0
PM	Shadowline Rd	Northbound	Left	5	5	0	5	0	5
PM	Shadowline Rd	Northbound	Through	1	1	0	1	0	1
PM	Shadowline Rd	Northbound	Right	3	3	0	3	0	3
PM	Shadowline Rd	Eastbound	U-Turn	0	0	0	0	0	0
PM	Shadowline Rd	Eastbound	Left	209	213	0	213	0	213
PM	Shadowline Rd	Eastbound	Through	1269	1295	0	1295	10	1305
PM	Shadowline Rd	Eastbound	Right	11	11	0	11	0	11
PM	Shadowline Rd	Southbound	U-Turn	0	0	0	0	0	0
PM	Shadowline Rd	Southbound	Left	80	82	0	82	5	87
PM	Shadowline Rd	Southbound	Through	1	1	0	1	0	1
PM	Shadowline Rd	Southbound	Right	367	374	0	374	0	374
PM	Shadowline Rd	Westbound	U-Turn	0	0	0	0	0	0
PM	Shadowline Rd	Westbound	Left	2	2	0	2	0	2
PM	Shadowline Rd	Westbound	Through	1342	1369	0	1369	10	1379
PM	Shadowline Rd	Westbound	Right	55	56	0	56	5	61

Table 11: Intersection 6 Trip Development

Intersection 6: Shadowline Dr. & State Farm Rd.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	State Farm Rd	Northbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Northbound	Left	41	42	0	42	1	43
AM	State Farm Rd	Northbound	Through	58	59	0	59	0	59
AM	State Farm Rd	Northbound	Right	103	105	0	105	0	105
AM	State Farm Rd	Eastbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Eastbound	Left	49	50	0	50	0	50
AM	State Farm Rd	Eastbound	Through	372	379	0	379	0	379
AM	State Farm Rd	Eastbound	Right	42	43	0	43	4	47
AM	State Farm Rd	Southbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Southbound	Left	8	8	0	8	0	8
AM	State Farm Rd	Southbound	Through	37	38	0	38	0	38
AM	State Farm Rd	Southbound	Right	18	18	0	18	0	18
AM	State Farm Rd	Westbound	U-Turn	0	0	0	0	0	0
AM	State Farm Rd	Westbound	Left	131	134	0	134	0	134
AM	State Farm Rd	Westbound	Through	264	269	0	269	0	269
AM	State Farm Rd	Westbound	Right	28	29	0	29	0	29
PM	State Farm Rd	Northbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Northbound	Left	153	156	0	156	5	161
PM	State Farm Rd	Northbound	Through	13	13	0	13	0	13
PM	State Farm Rd	Northbound	Right	144	147	0	147	0	147
PM	State Farm Rd	Eastbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Eastbound	Left	15	15	0	15	0	15
PM	State Farm Rd	Eastbound	Through	348	355	0	355	0	355
PM	State Farm Rd	Eastbound	Right	125	128	0	128	5	133
PM	State Farm Rd	Southbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Southbound	Left	27	28	0	28	0	28
PM	State Farm Rd	Southbound	Through	56	57	0	57	0	57
PM	State Farm Rd	Southbound	Right	33	34	0	34	0	34
PM	State Farm Rd	Westbound	U-Turn	0	0	0	0	0	0
PM	State Farm Rd	Westbound	Left	230	235	0	235	0	235
PM	State Farm Rd	Westbound	Through	538	549	0	549	0	549
PM	State Farm Rd	Westbound	Right	13	13	0	13	0	13

Table 12: Intersection 7 Trip Development

Intersection 7: State Farm Rd. & VFW Dr.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	VFW Dr	Northbound	U-Turn	0	0	0	0	0	0
AM	VFW Dr	Northbound	Left	0	0	0	0	0	0
AM	VFW Dr	Northbound	Through	280	286	0	286	1	287
AM	VFW Dr	Northbound	Right	3	3	0	3	0	3
AM	VFW Dr	Eastbound	U-Turn	0	0	0	0	0	0
AM	VFW Dr	Eastbound	Left	0	0	0	0	0	0
AM	VFW Dr	Eastbound	Through	0	0	0	0	0	0
AM	VFW Dr	Eastbound	Right	0	0	0	0	0	0
AM	VFW Dr	Southbound	U-Turn	0	0	0	0	0	0
AM	VFW Dr	Southbound	Left	2	2	0	2	0	2
AM	VFW Dr	Southbound	Through	523	534	0	534	4	538
AM	VFW Dr	Southbound	Right	0	0	0	0	0	0
AM	VFW Dr	Westbound	U-Turn	0	0	0	0	0	0
AM	VFW Dr	Westbound	Left	3	3	0	3	0	3
AM	VFW Dr	Westbound	Through	0	0	0	0	0	0
AM	VFW Dr	Westbound	Right	4	4	0	4	0	4
PM	VFW Dr	Northbound	U-Turn	0	0	0	0	0	0
PM	VFW Dr	Northbound	Left	0	0	0	0	0	0
PM	VFW Dr	Northbound	Through	677	691	0	691	5	696
PM	VFW Dr	Northbound	Right	34	35	0	35	0	35
PM	VFW Dr	Eastbound	U-Turn	0	0	0	0	0	0
PM	VFW Dr	Eastbound	Left	0	0	0	0	0	0
PM	VFW Dr	Eastbound	Through	0	0	0	0	0	0
PM	VFW Dr	Eastbound	Right	0	0	0	0	0	0
PM	VFW Dr	Southbound	U-Turn	0	0	0	0	0	0
PM	VFW Dr	Southbound	Left	2	2	0	2	0	2
PM	VFW Dr	Southbound	Through	474	484	0	484	5	489
PM	VFW Dr	Southbound	Right	0	0	0	0	0	0
PM	VFW Dr	Westbound	U-Turn	0	0	0	0	0	0
PM	VFW Dr	Westbound	Left	12	12	0	12	0	12
PM	VFW Dr	Westbound	Through	0	0	0	0	0	0
PM	VFW Dr	Westbound	Right	4	4	0	4	0	4

Table 13: Intersection 8 Trip Development

Intersection 8: State Farm Rd. & Berkeley Ave.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Berkley Ave	Northbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave	Northbound	Left	0	0	0	0	0	0
AM	Berkley Ave	Northbound	Through	0	0	0	0	0	0
AM	Berkley Ave	Northbound	Right	0	0	0	0	0	0
AM	Berkley Ave	Eastbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave	Eastbound	Left	0	0	0	0	0	0
AM	Berkley Ave	Eastbound	Through	511	521	0	521	0	521
AM	Berkley Ave	Eastbound	Right	0	0	0	0	0	0
AM	Berkley Ave	Southbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave	Southbound	Left	1	1	0	1	4	5
AM	Berkley Ave	Southbound	Through	0	0	0	0	0	0
AM	Berkley Ave	Southbound	Right	7	7	0	7	0	7
AM	Berkley Ave	Westbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave	Westbound	Left	0	0	0	0	0	0
AM	Berkley Ave	Westbound	Through	297	303	0	303	0	303
AM	Berkley Ave	Westbound	Right	0	0	0	0	1	1
PM	Berkley Ave	Northbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave	Northbound	Left	0	0	0	0	0	0
PM	Berkley Ave	Northbound	Through	0	0	0	0	0	0
PM	Berkley Ave	Northbound	Right	0	0	0	0	0	0
PM	Berkley Ave	Eastbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave	Eastbound	Left	0	0	0	0	0	0
PM	Berkley Ave	Eastbound	Through	481	491	0	491	0	491
PM	Berkley Ave	Eastbound	Right	0	0	0	0	0	0
PM	Berkley Ave	Southbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave	Southbound	Left	3	3	0	3	5	8
PM	Berkley Ave	Southbound	Through	0	0	0	0	0	0
PM	Berkley Ave	Southbound	Right	2	2	0	2	0	2
PM	Berkley Ave	Westbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave	Westbound	Left	0	0	0	0	0	0
PM	Berkley Ave	Westbound	Through	639	652	0	652	0	652
PM	Berkley Ave	Westbound	Right	13	13	0	13	5	18

Table 14: Intersection 9 Trip Development

Intersection 9: Bever;u Heights Ave. & Sheridan Ave.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Sheridan Ave	Northbound	U-Turn	0	0	0	0	0	0
AM	Sheridan Ave	Northbound	Left	0	0	0	0	0	0
AM	Sheridan Ave	Northbound	Through	0	0	0	0	0	0
AM	Sheridan Ave	Northbound	Right	0	0	0	0	0	0
AM	Sheridan Ave	Eastbound	U-Turn	0	0	0	0	0	0
AM	Sheridan Ave	Eastbound	Left	0	0	0	0	0	0
AM	Sheridan Ave	Eastbound	Through	1	1	0	1	0	1
AM	Sheridan Ave	Eastbound	Right	3	3	0	3	0	3
AM	Sheridan Ave	Southbound	U-Turn	0	0	0	0	0	0
AM	Sheridan Ave	Southbound	Left	0	0	0	0	0	0
AM	Sheridan Ave	Southbound	Through	0	0	0	0	0	0
AM	Sheridan Ave	Southbound	Right	0	0	0	0	0	0
AM	Sheridan Ave	Westbound	U-Turn	0	0	0	0	0	0
AM	Sheridan Ave	Westbound	Left	0	0	0	0	0	0
AM	Sheridan Ave	Westbound	Through	0	0	0	0	0	0
AM	Sheridan Ave	Westbound	Right	0	0	0	0	0	0
PM	Sheridan Ave	Northbound	U-Turn	0	0	0	0	0	0
PM	Sheridan Ave	Northbound	Left	23	23	0	23	0	23
PM	Sheridan Ave	Northbound	Through	0	0	0	0	0	0
PM	Sheridan Ave	Northbound	Right	1	1	0	1	0	1
PM	Sheridan Ave	Eastbound	U-Turn	0	0	0	0	0	0
PM	Sheridan Ave	Eastbound	Left	0	0	0	0	0	0
PM	Sheridan Ave	Eastbound	Through	2	2	0	2	0	2
PM	Sheridan Ave	Eastbound	Right	8	8	0	8	0	8
PM	Sheridan Ave	Southbound	U-Turn	0	0	0	0	0	0
PM	Sheridan Ave	Southbound	Left	0	0	0	0	0	0
PM	Sheridan Ave	Southbound	Through	0	0	0	0	0	0
PM	Sheridan Ave	Southbound	Right	0	0	0	0	0	0
PM	Sheridan Ave	Westbound	U-Turn	0	0	0	0	0	0
PM	Sheridan Ave	Westbound	Left	1	1	0	1	0	1
PM	Sheridan Ave	Westbound	Through	3	3	0	3	0	3
PM	Sheridan Ave	Westbound	Right	0	0	0	0	0	0

Table 15: Intersection 10 Trip Development

Intersection 10: Beverly Heights Ave. & Berkley Ave.									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Northbound	Left	1	1	0	1	0	1
AM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	1	1
AM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Eastbound	Through	3	3	0	3	3	6
AM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
AM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	12	12
AM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Through	3	3	0	3	8	11
AM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	Left	8	8	0	8	0	8
PM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	16	16
PM	Berkley Ave/Access 1	Eastbound	Through	10	10	0	10	10	20
PM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
PM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	14	14
PM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Westbound	Left	1	1	0	1	0	1
PM	Berkley Ave/Access 1	Westbound	Through	23	23	0	23	10	33
PM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0

Table 16: Intersection 11 Trip Development

Intersection 11: Beverly Heights Ave. & Access 2									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Northbound	Left	1	1	0	1	0	1
AM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	1	1
AM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Eastbound	Through	3	3	0	3	3	6
AM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
AM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	12	12
AM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Through	3	3	0	3	8	11
AM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	Left	8	8	0	8	0	8
PM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	16	16
PM	Berkley Ave/Access 1	Eastbound	Through	10	10	0	10	10	20
PM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
PM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	14	14
PM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Westbound	Left	1	1	0	1	0	1
PM	Berkley Ave/Access 1	Westbound	Through	23	23	0	23	10	33
PM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0

Table 17: Intersection 12 Trip Development

Intersection 12: Beverly Heights Ave. & Access 3									
Period	Minor Road Name	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Natural Growth	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Northbound	Left	1	1	0	1	0	1
AM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	1	1
AM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Eastbound	Through	3	3	0	3	3	6
AM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
AM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	4	4
AM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	12	12
AM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Left	0	0	0	0	0	0
AM	Berkley Ave/Access 1	Westbound	Through	3	3	0	3	8	11
AM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Northbound	Left	8	8	0	8	0	8
PM	Berkley Ave/Access 1	Northbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Northbound	Right	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Eastbound	Left	0	0	0	0	16	16
PM	Berkley Ave/Access 1	Eastbound	Through	10	10	0	10	10	20
PM	Berkley Ave/Access 1	Eastbound	Right	7	7	0	7	0	7
PM	Berkley Ave/Access 1	Southbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Left	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Southbound	Through	0	0	0	0	5	5
PM	Berkley Ave/Access 1	Southbound	Right	0	0	0	0	14	14
PM	Berkley Ave/Access 1	Westbound	U-Turn	0	0	0	0	0	0
PM	Berkley Ave/Access 1	Westbound	Left	1	1	0	1	0	1
PM	Berkley Ave/Access 1	Westbound	Through	23	23	0	23	10	33
PM	Berkley Ave/Access 1	Westbound	Right	0	0	0	0	0	0

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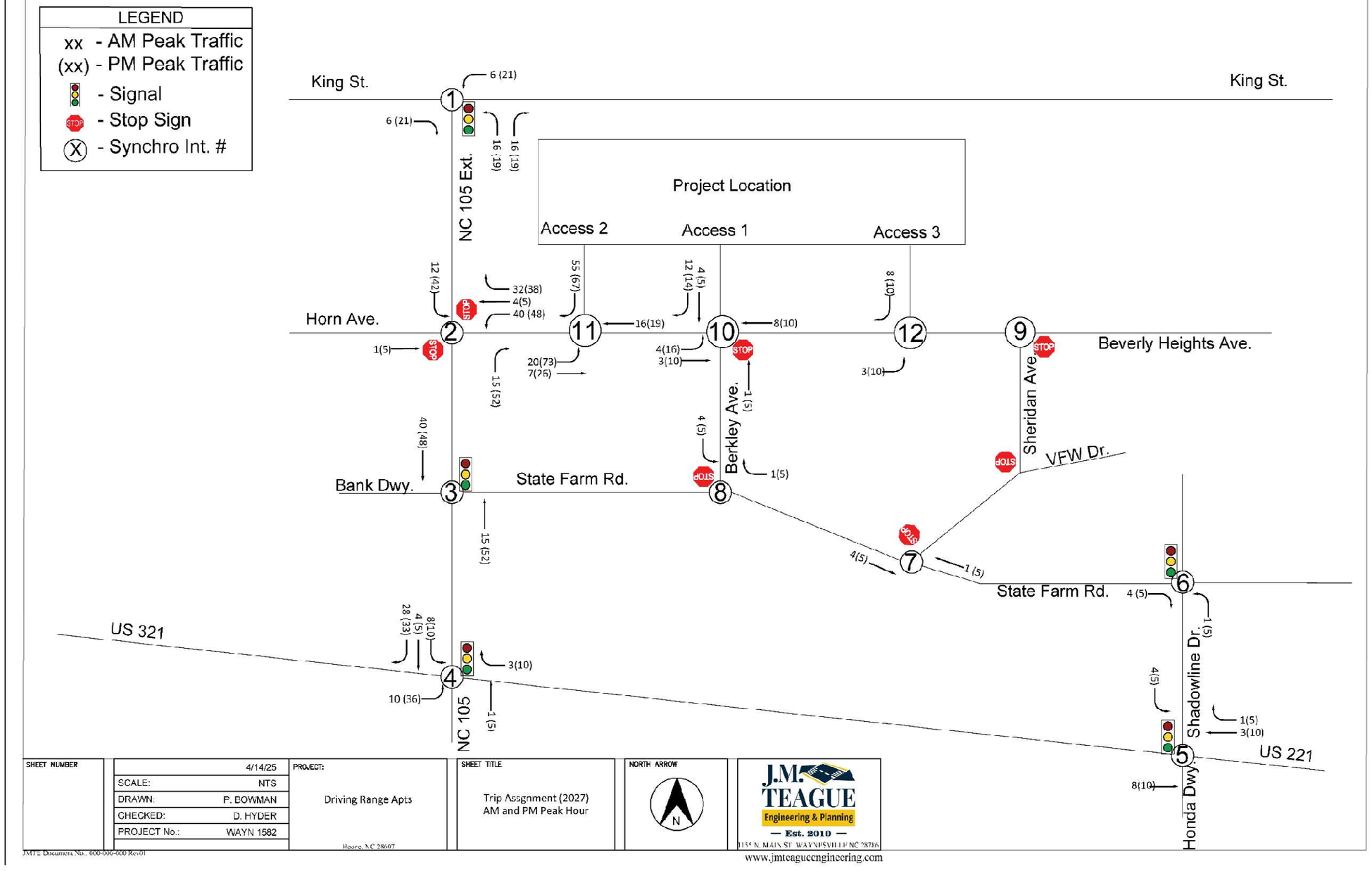


Figure 13: Driving Range Apartments Trip Assignment AM & PM Peak Hour

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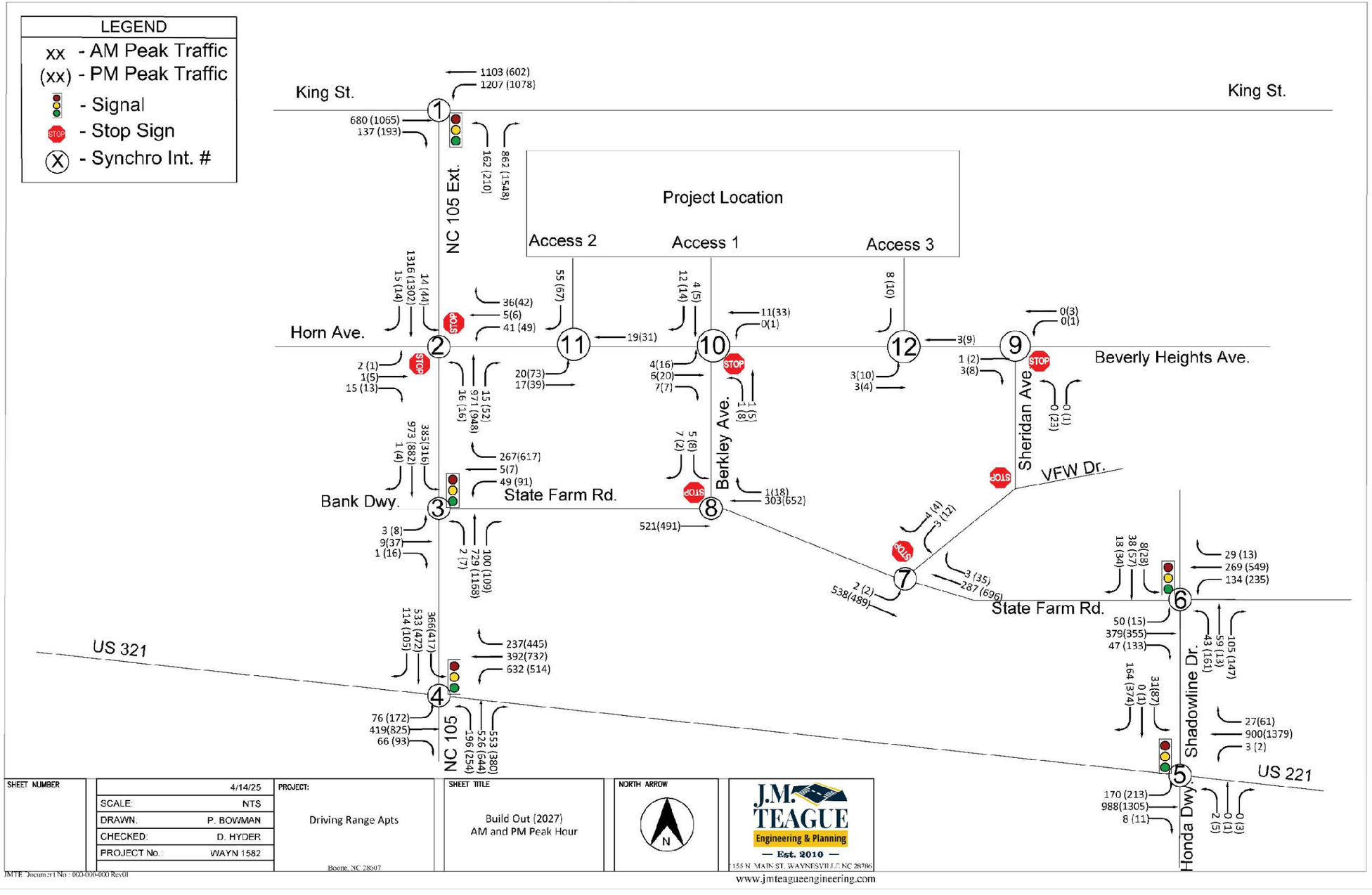


Figure 14: Future (Build-Out) Traffic (2027) AM and PM Peak Hour Traffic

OPERATIONAL AND CAPACITY ANALYSIS

The analysis for background conditions is based on methodologies presented in NCDOT's Congestion Management Capacity Analysis Guidelines. To estimate the background LOS, delay, v/c ratio, and queue at the study intersections, the background traffic was analyzed using existing lane configurations and traffic control conditions.

PEAK HOUR FACTOR

The Peak Hour Factor (PHF) is a metric for evaluating fluctuations in traffic demand during the peak hour. Calculated as the ratio of the peak hour volume to four times the peak fifteen-minute volume, the PHF offers insights into how traffic volume varies within this critical timeframe. In essence, the PHF compares the traffic volume during the busiest 15 minutes of the peak hour with the total volume throughout the entire hour.

A PHF of 0.90 was used for all background conditions per NCDOT guidelines. Based on HCM and NCDOT guidance, the free-flow movements/approaches were not analyzed for background conditions. The 0.90 PHF is used by traffic engineering companies and NCDOT to simulate worst-case scenarios for LOS calculations. The worst-case PHF assumption can sometimes create fluctuations in LOS and delay readings without any change in the traffic volumes.

TRAFFIC CAPACITY DISCUSSION

The Highway Capacity Manual (HCM) defines capacity as the highest rate at which people or vehicles can reasonably be expected to move through a point under existing road, traffic, and control conditions in an hour. Level of Service (LOS) categorizes driving conditions based on traffic congestion. LOS "A" represents smooth traffic flow, while LOS "F" indicates severe congestion. LOS is determined by the total "Control Delay" experienced by drivers, encompassing delays from traffic control devices such as deceleration, queuing, stopping, and acceleration. Figure 15 shows typical delays associated with each Level of Service for intersections.

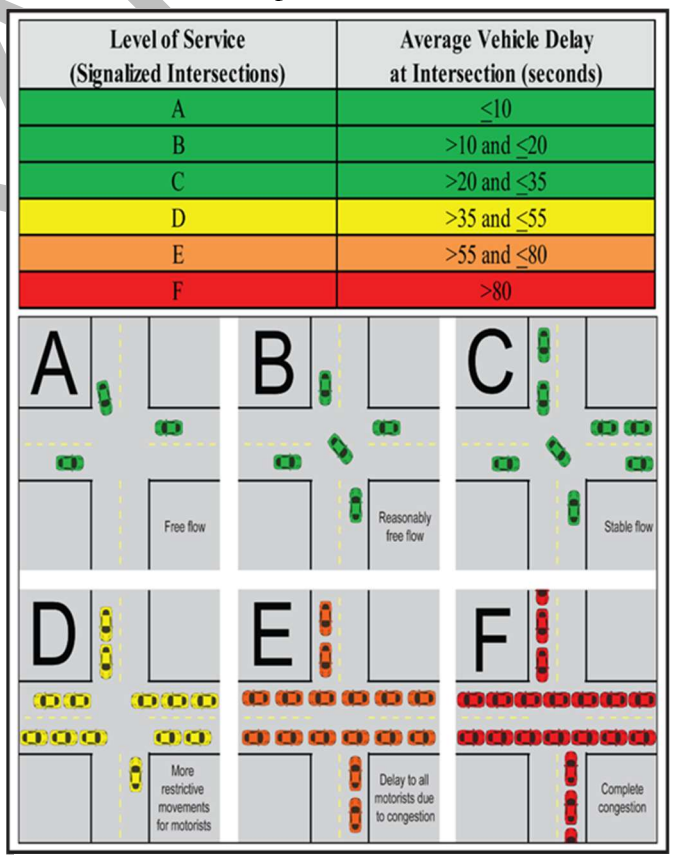


Figure 15: HCM LOS

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The Highway Capacity Manual analysis for unsignalized intersections can project very high delays on the minor side street, thus, it is recommended to use LOS measurements as a comparative tool rather than a design tool. The 95th percentile queue is the vehicle queue (backup) that has a 5% probability of being exceeded during the analysis period. At unsignalized intersections, p_0 (queue-free percent) is the probability of there being no backup.

SUMMARY OF SIMULATION MODELING PARAMETERS

The Q_{95} is the greater of the queue reported from SYNCHRO or SIMTRAFFIC. The existing traffic volumes from the AM & PM peak hours were analyzed using existing lane configurations and traffic control conditions. Since the existing turning movement count data was collected, the existing peak hour factor (PHF) was used for analyzing existing conditions.

The capacity analysis (Synchro) reports for the existing conditions are in Appendix B.

It should be noted that, following NCDOT Congestion Management Guidelines, right turn on red indication movements are prohibited for signalized intersections. Additionally, all left turn lanes from dedicated left turn lanes are treated as protected-only regardless of the actual or recommended traffic signal programming in the field. This gives both an "apples to apples" and a "worst-case" scenario for each intersection and makes the analyses more "future-proof". Minimum cycle lengths are also used for simulated traffic signal programming, as well as minimum clearance times. Additionally, due to the logic utilized by Synchro, a minimum of 4 vehicles are entered for each movement in an approach that is allowed in an intersection.

THRESHOLDS FOR IDENTIFYING MITIGATIONS

The NCDOT's Driveway Manual provides the following guidelines for assessing intersection performance and needed mitigations.

> "The applicant shall be required to identify mitigation improvements to the roadway network if at least one of the following conditions exists when comparing base network conditions to project conditions:
>
> - The total average delay at an intersection or individual approach increases by 25% or greater while maintaining the same level of service, Policy On Street And Driveway Access to North Carolina Highways Page 22 July 2003
> - The Level of Service degrades by at least one level, or
> - The Level of Service is "F," for turning lanes, mitigation improvements shall be identified when the analysis indicates that the 95th percentile queue exceeds the storage capacity of the existing lane alone. The District Engineer will be responsible for the final determination of mitigation improvements required to be constructed by the applicant."

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MEASURES OF EFFECTIVENESS

For ease of use, the operational and capacity analysis for each intersection is treated separately. Each intersection includes a table showing the morning and evening level of service, delay, and queuing for the background, build-out, and mitigation at that location.

LEVEL OF SERVICE

The Traffic Levels of Service (LOS) are reported using letters A, B, C, D, E, or F for each movement. LOS is a set of qualitative and quantitative measures used to evaluate the efficiency and effectiveness of traffic flow on roadways. They are commonly graded on a scale from "A" to "F," similar to a report card, with "A" representing free-flowing traffic and minimal delays, and "F" indicating heavily congested conditions with significant delays.

DELAY

The Delay (in seconds) was calculated for the studied intersections by approach and lane movement for each of the existing, background, and build-out cases. The traffic volumes from the AM & PM peak hours were analyzed using existing lane configurations and traffic control conditions. The difference between the background and build cases is shown in the Difference column. Percent Change is included in the right-hand column and calculated as:

$$\%Change = \left(\frac{Difference}{Background\ Delay}\right) \times 100$$

Movements with a percent change in delay above twenty-five percent are shown highlighted in red.

QUEUEING

Queuing analyses were performed to determine the effect of the build-out traffic on intersection traffic queues. Turning movements at which the queues exceed the available storage are noted in the queuing graph for each intersection. The numbers shown on the queuing graph show the available storage for each lane at each intersection.

ANALYSIS RESULTS

The next section of this report presents the analysis of each intersection and driveway. The intersection numbers are consistent with the numbers used in the Synchro analysis.

NOTE: In some cases, the level of service may improve from the background case to the full build-out. This is because the Synchro modeling system that is used randomizes the trip distribution to create real-world scenarios. Some intersections where no build-out traffic is added may improve the delay, therefore improving the level of service.

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Another reason that delays may decrease is that the intersection may be artificially constrained to use a longer cycle length than its natural cycle length. As traffic volumes increase, the signal's natural cycle length gets closer to the minimum cycle length.

It should be noted that in a coordinated traffic signal system, individual approach delays may decrease due to changes in the optimum splits. The delay for an intersection as a whole may decrease due to the natural cycle length becoming closer to the coordinated cycle length.

Some queues predicted at an intersection are expected to decrease from the background to build-out scenarios due to the natural cycle length and split optimization.

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Intersection 1: NC 105 Ext. & King St.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☐ Pass ☒ Fail

Queues for turn moves exceed existing storage ☐ Pass ☒ Fail



Figure 16: Intersection 1 NC 105 Ext. & King St.

The storage for the northbound left turn and the eastbound right turn exceeds the available storage lengths in the AM and PM approaches. However, since the delay and the level of service do not warrant mitigations, the Engineer does not believe it is feasible to extend the turn lanes at this intersection.

The mitigation for Intersection 2 (converting to a RIRO) affects this intersection by adding more traffic to the northbound approach. Even with this mitigation, the level of service remains the same as in the background case, and the delay does not increase by 25%. Therefore, the Engineer recommends no mitigation at this intersection.

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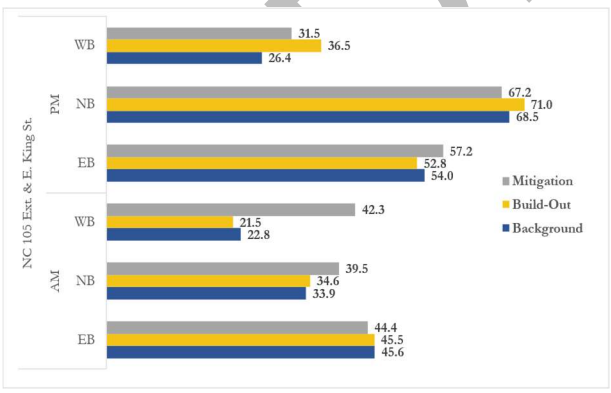


Figure 17: Intersection 1 Delay (seconds/vehicle)



Figure 18: Intersection 1 Level of Service

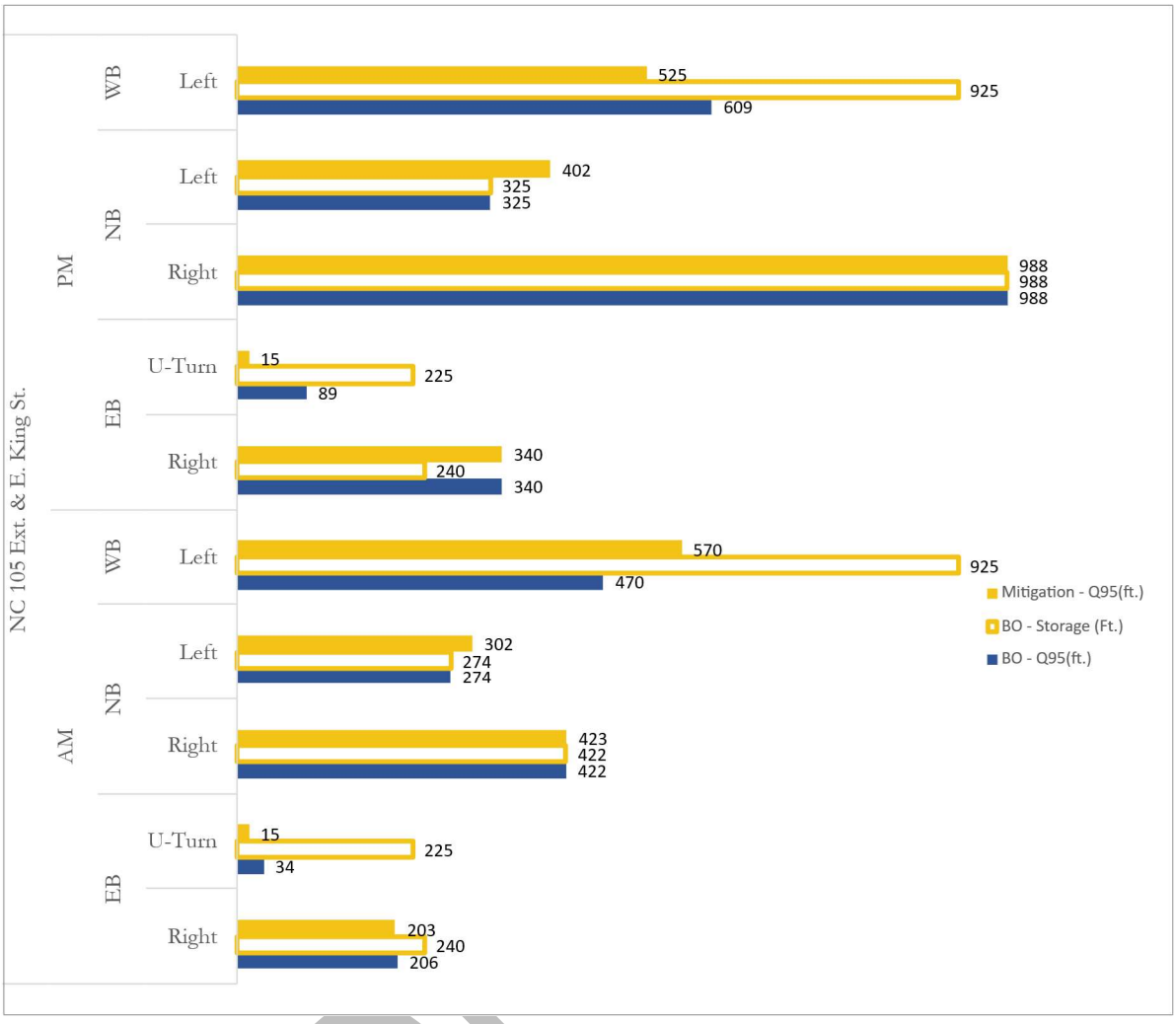


Figure 19: Intersection 1 Queues in Feet.

Intersection 2: NC 105 Ext. & Horn Ave./Beverly Heights Ave.

The total delay increases by 25% or greater ☐ Pass ☒ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

This intersection operates at a level of service F in the background and build out cases. The delay for the westbound approach increases by more than 25% in the build-out case. The engineer recommends converting the westbound approach of this intersection to a right-in in right-out with a left over movement. When doing this, the level of service and delay decrease beyond what is in the background case.



Figure 20: Intersection 2 NC 105 Ext. & Horn Ave./Beverly Heights Ave.

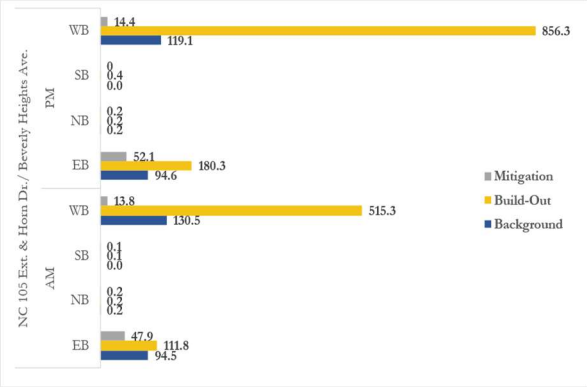


Figure 21: Intersection 2 Delay (seconds/vehicle)



Figure 22: Intersection 2 Level of Service

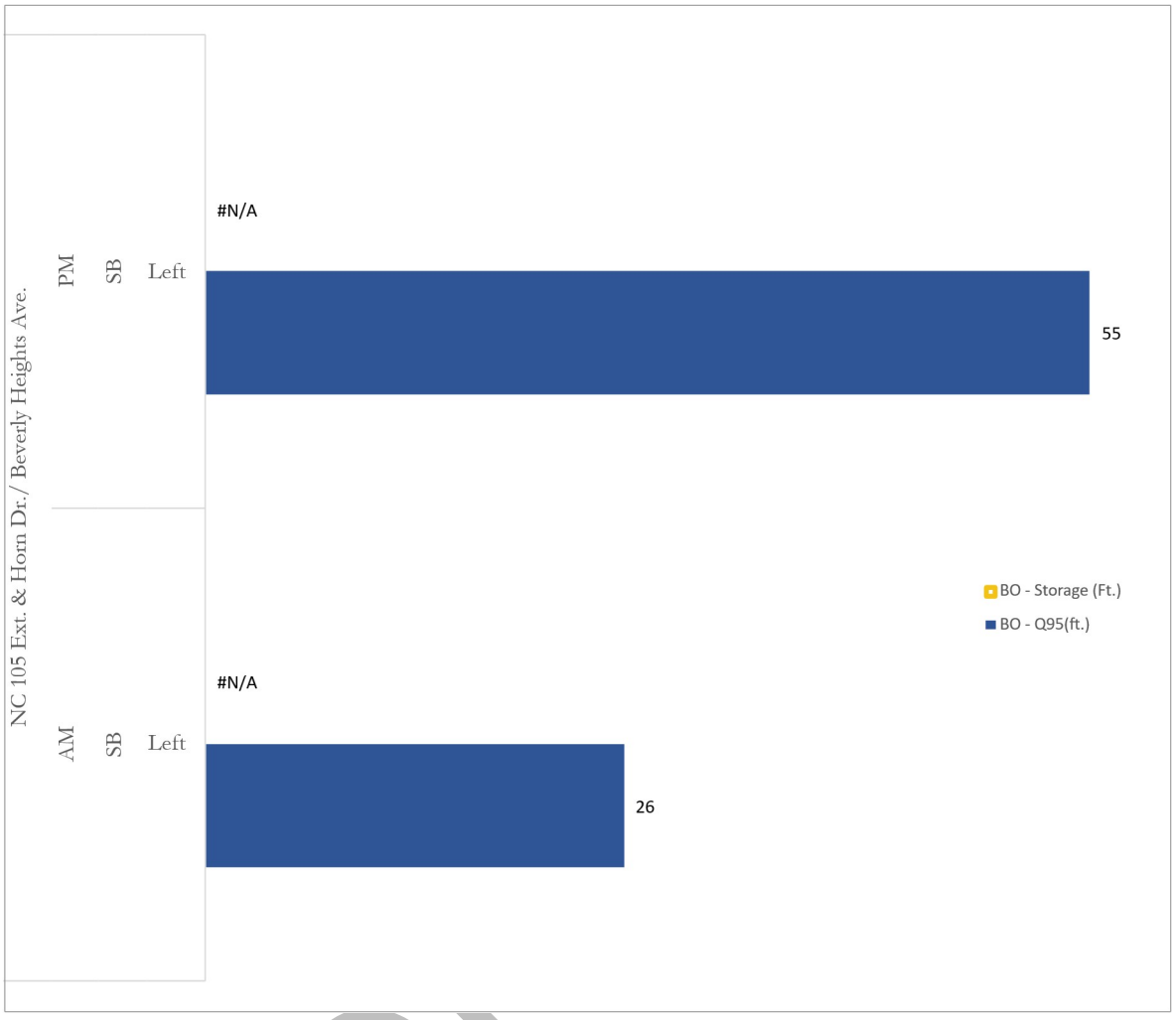


Figure 23: Intersection 2 Queues in Feet.

Intersection 3: NC 105 Ext. & State Farm Rd.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☐ Pass ☒ Fail

Queues for turn moves exceed existing storage ☐ Pass ☒ Fail

The northbound PM approach at this intersection drops to a level of service D. Even though this level of service drops, the Engineer believes that a level of service D in the PM peak hour for NC 105 Ext. is a reasonable level of service.

The mitigation at intersection 2 (converting to a RIRO) affects this intersection and adds more traffic to the westbound movement. However, the level of service remains a D in the northbound approach, and the delay does not increase by more than 25%. Therefore, the Engineer recommends no mitigation at this intersection.



Figure 24: Intersection 3 NC 105 Ext. & State Farm Rd.

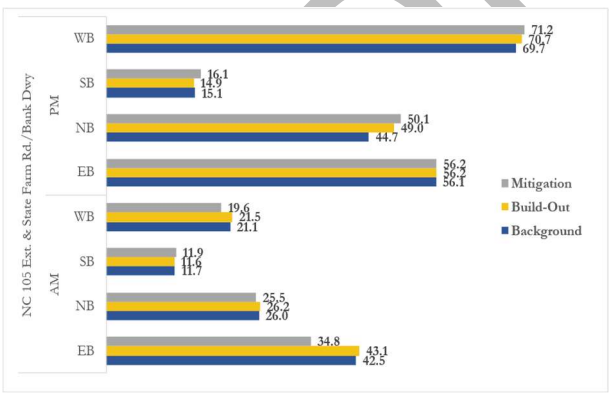


Figure 25: Intersection 3 Delay (seconds/vehicle)

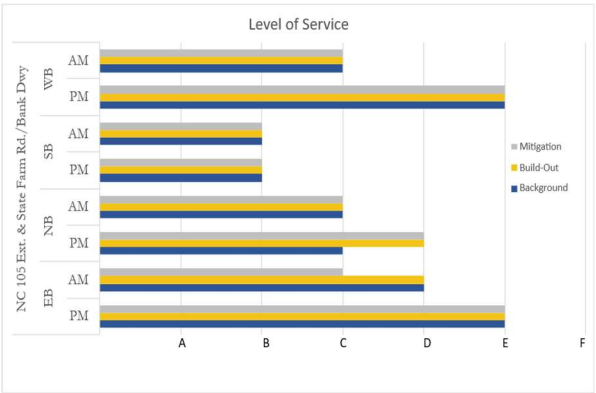


Figure 26: Intersection 3 Level of Service

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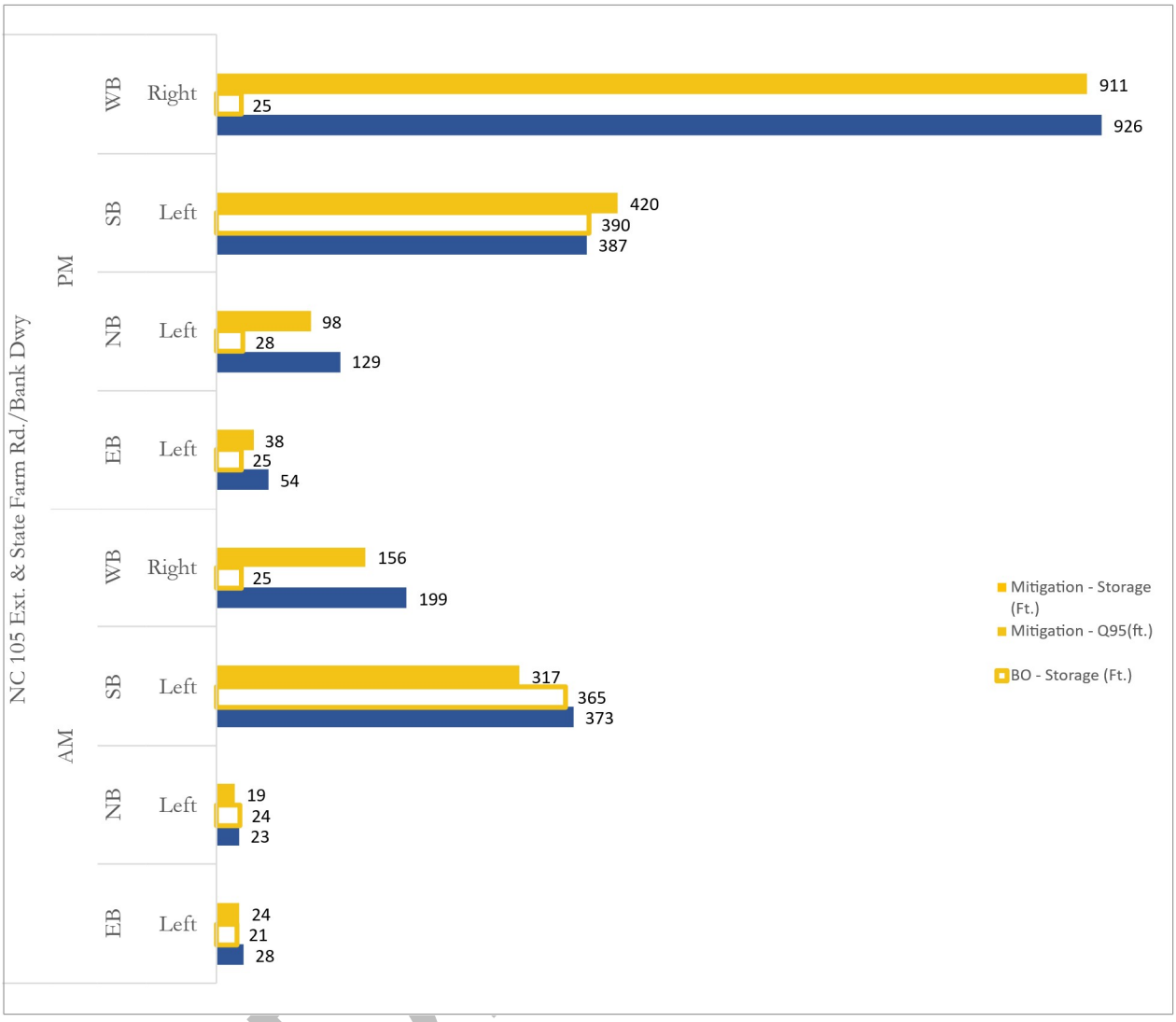


Figure 27: Intersection 3 Queues in Feet.

Intersection 4: US 221 & US 321

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☐ Pass ☒ Fail



Figure 28: Intersection 4 US 221 & US 321

The queue at this intersection increases beyond the available storage for the westbound and northbound approaches. However, this happens in the background case as well. The levels of service do not increase, and the delays do not increase by more than 25% in the build-out case.

The mitigation for Intersection 2 (converting to a RIRO) affects this intersection. However, even when adding this traffic, the level of service and delay remain reasonable. Therefore, the Engineer recommends no mitigation at this intersection.

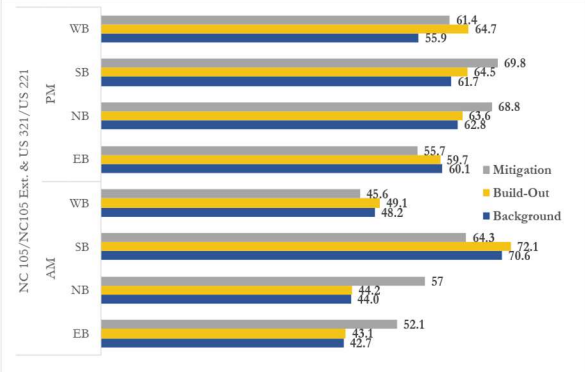


Figure 29: Intersection 4 Delay (seconds/vehicle)

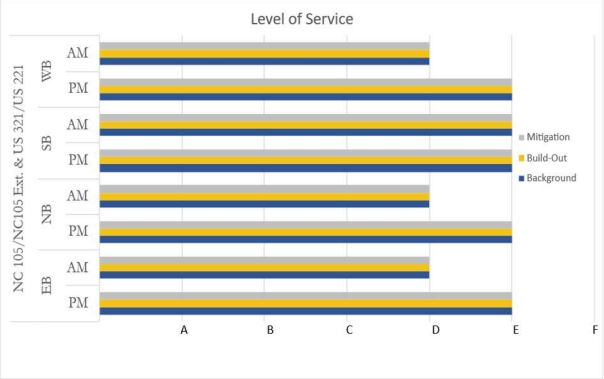


Figure 30: Intersection 4 Level of Service

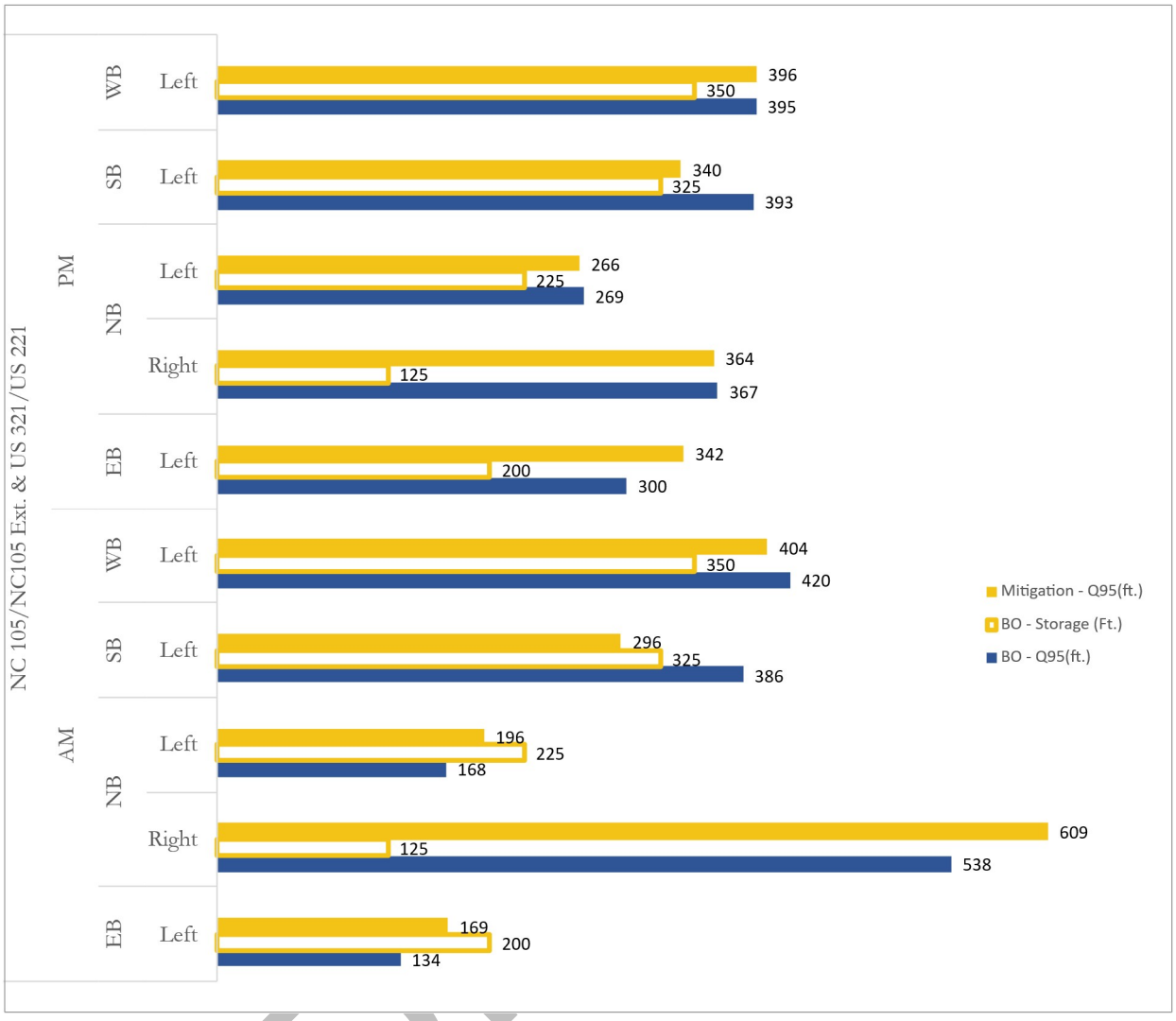


Figure 31: Intersection 4 Queues in Feet.

Intersection 5: US 221 & Shadowline Drive

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The Engineer recommends no mitigation at this intersection.

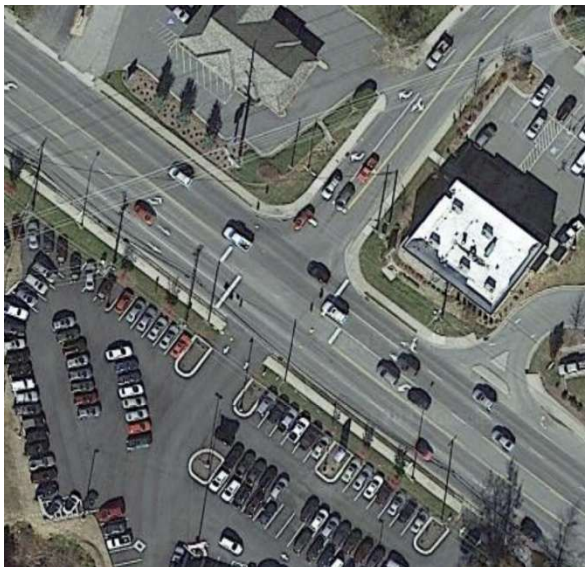


Figure 32: Intersection 5 US 221 & Shadowline Dr.

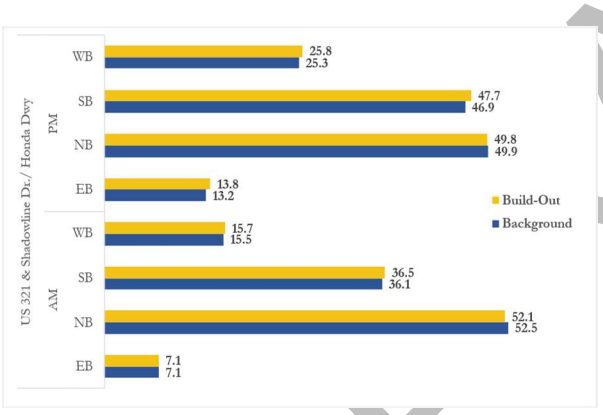


Figure 33: Intersection 5 Delay (seconds/vehicle)



Figure 34: Intersection 5 Level of Service

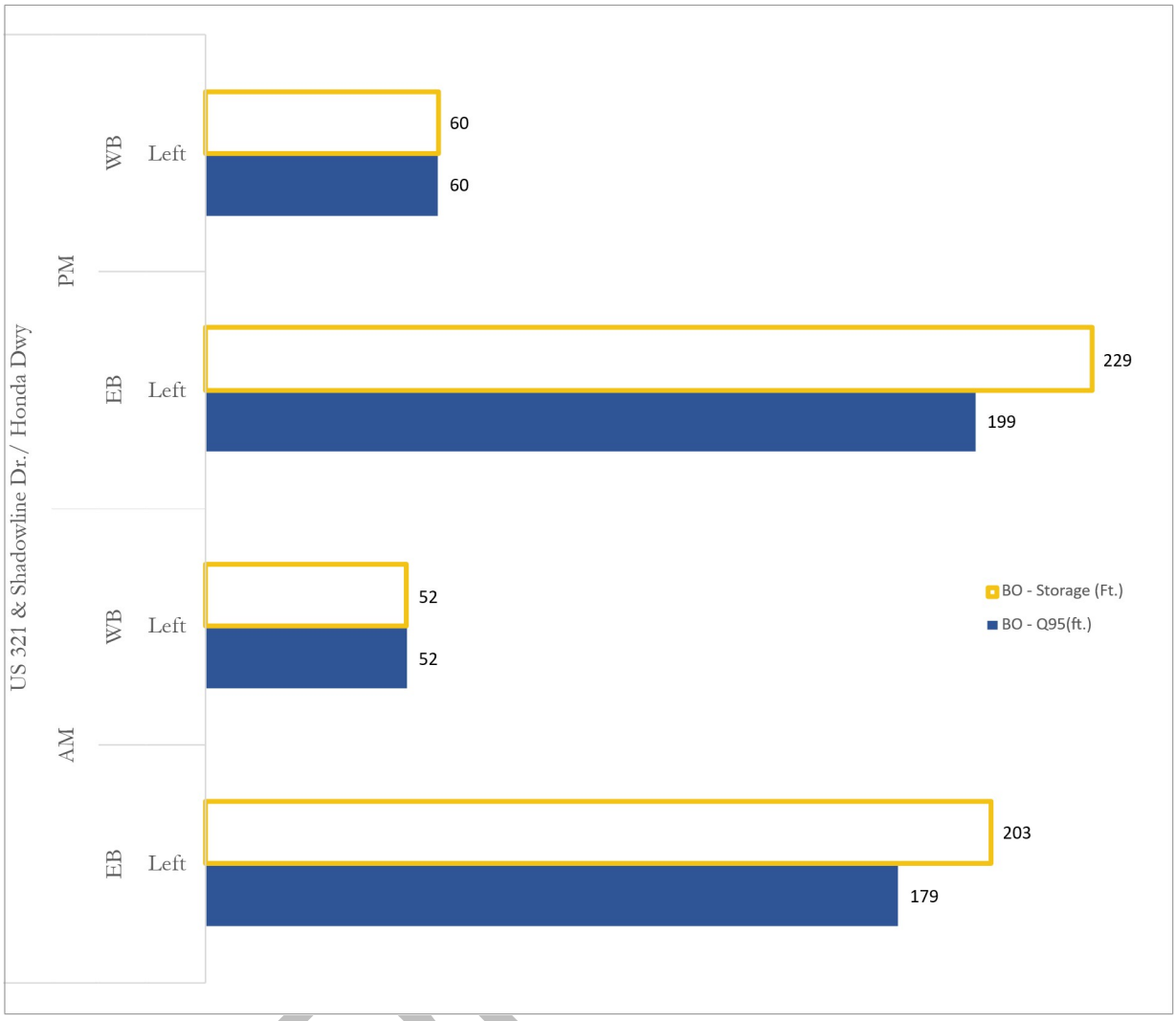


Figure 35: Intersection 5 Queues in Feet

Intersection 6: Shadowline Dr. & State Farm Rd.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The Engineer recommends no mitigation at this intersection.



Figure 36: Intersection 6 Shadowline Dr. & State Farm Rd.

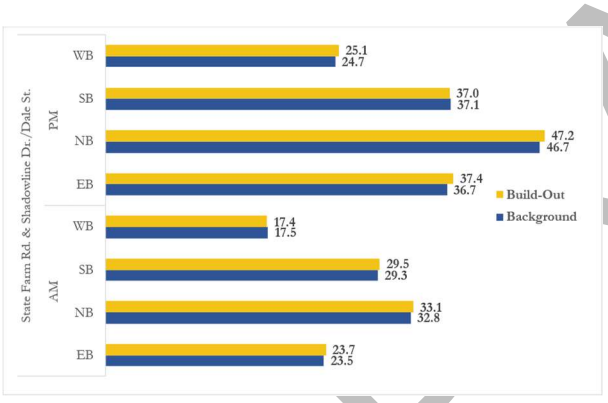


Figure 37: Intersection 6 Delay (seconds/vehicle)



Figure 38: Intersection 6 Level of Service

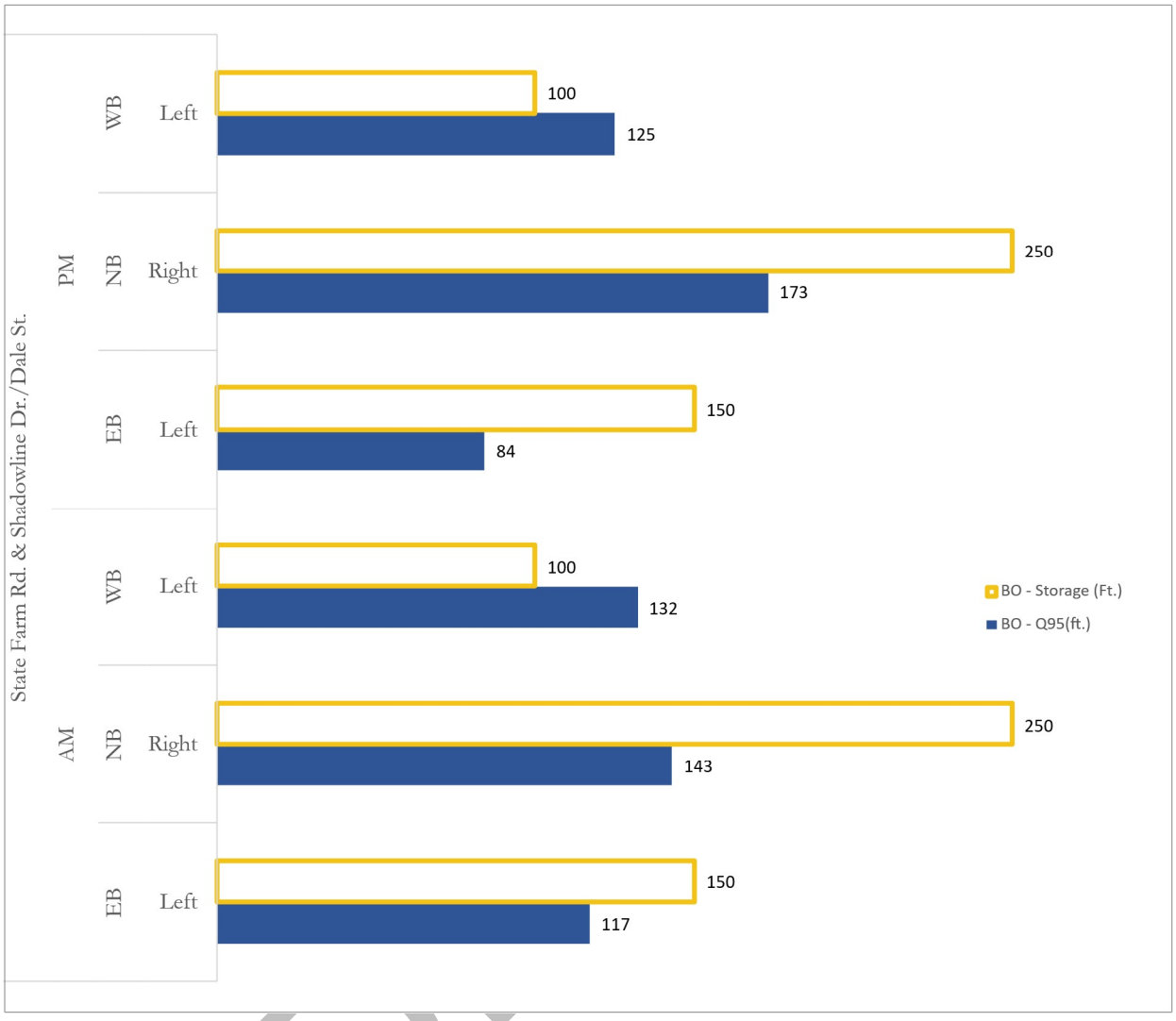


Figure 39: Intersection 6 Queues in Feet.

Intersection 7: State Farm Rd. & VFW Dr.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The Engineer recommends no mitigation at this intersection.



Figure 40: Intersection 7 State Farm Rd. & VFW Dr.

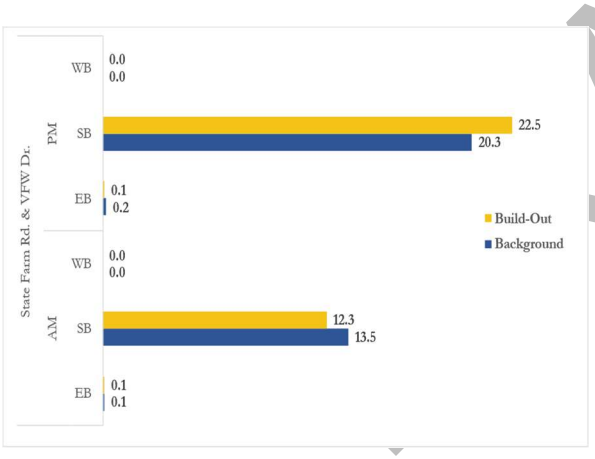


Figure 41: Intersection 7 Delay (seconds/vehicle)



Figure 42: Intersection 7 Level of Service

This intersection does not have dedicated turn lanes.

Intersection 8: State Farm Rd. & Berkeley Ave.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The mitigations from Intersection 2 (converting it to a RIRO) affect this intersection. However, the intersection still operates at an acceptable level of service. Therefore, the Engineer recommends no mitigation at this intersection.



Figure 43: Intersection 8 State Farm Rd & Berkley Ave.

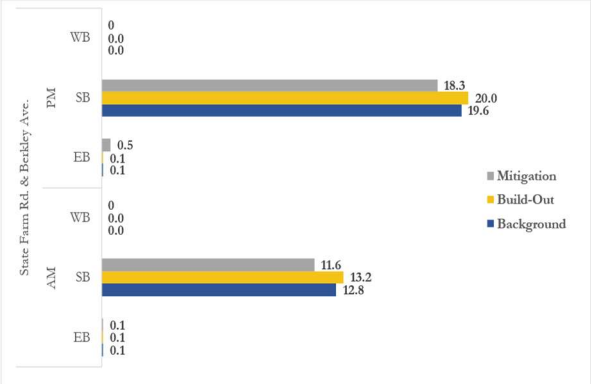


Figure 44: Intersection 8 Delay (seconds/vehicle)

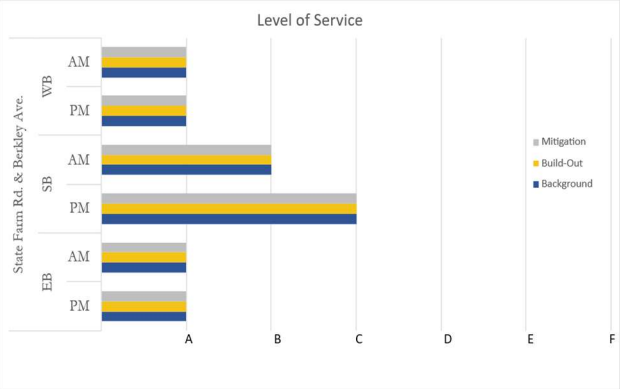


Figure 45: Intersection 8 Level of Service

This intersection does not have dedicated turn lanes.

Intersection 9: Beverly Heights Ave. & Sheridan Ave.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The Engineer recommends no mitigation at this intersection.



Figure 46: Intersection 9 Beverly Heights Ave. & Sheridan Ave.



Figure 47: Intersection 9 Delay (seconds/vehicle)



Figure 48: Intersection 9 Level of Service

This intersection does not have dedicated turn lanes.

Intersection 10: Beverly Heights Ave. & Berkeley Ave.

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The mitigations from Intersection 2 (converting it to a RIRO) affect this intersection. However, the intersection still operates at an acceptable level of service. Therefore, the Engineer recommends no mitigation at this intersection.



Figure 49: Intersection 10 Beverly Heights Ave. & Berkeley Ave.

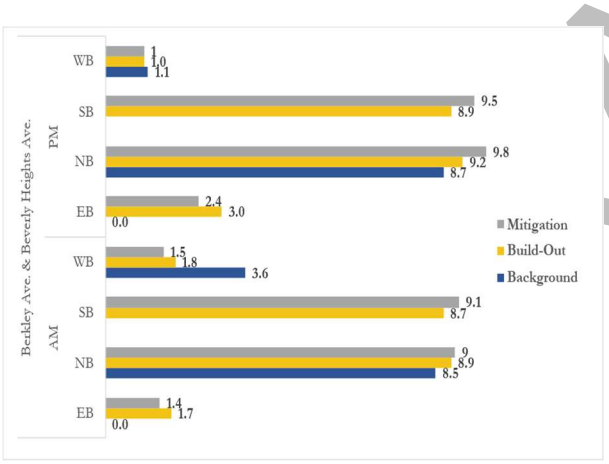


Figure 50: Intersection 10 Delay (seconds/vehicle)



Figure 51: Intersection 10 Level of Service

This intersection does not have dedicated turn lanes.

Intersection 11: Beverly Heights Ave. & Access 2

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The mitigations from Intersection 2 (converting it to a RIRO) affect this intersection. However, the intersection still operates at an acceptable level of service. Therefore, the Engineer recommends no mitigation at this intersection.



Figure 52: Intersection 11 Beverly Heights Ave. & Access 2

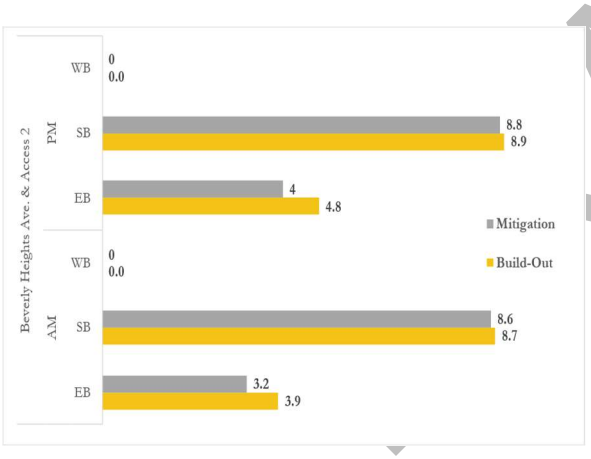


Figure 53: Intersection 11 Delay (seconds/vehicle)



Figure 54: Intersection 11 Level of Service

This intersection does not have dedicated turn lanes.

Intersection 12: Beverly Heights Ave. & Access 3

The total delay increases by 25% or greater ☒ Pass ☐ Fail

The Level of Service drops by at least one letter grade ☒ Pass ☐ Fail

Queues for turn moves exceed existing storage ☒ Pass ☐ Fail

The mitigations from Intersection 2 (converting it to a RIRO) affect this intersection. However, the intersection still operates at an acceptable level of service. Therefore, the Engineer recommends no mitigation at this intersection.



Figure 55: Intersection 12 Beverly Heights Ave. & Access 3

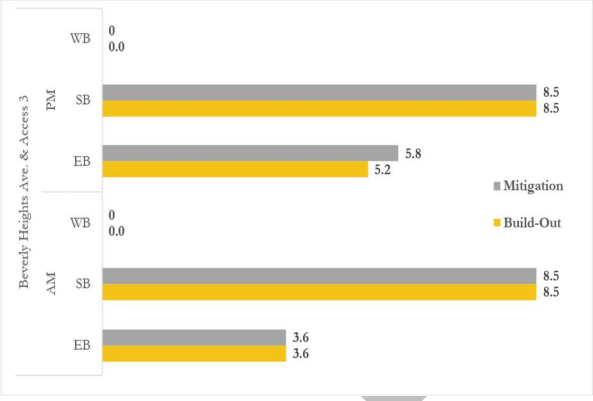


Figure 56: Intersection 12 Delay (seconds/vehicle)



Figure 57: Intersection 12 Level of Service

This intersection does not have dedicated turn lanes.

MITIGATION

This section discusses the proposed mitigations at each intersection and access point. If no mitigations are proposed, that too is noted.

Intersection 2 (US 221 and Horn Avenue/Beverly Heights Ave.) drops in level of service and increases in delay during the peak hours. It is recommended to convert this intersection to a Right In Right Out. When converted, the trip distribution changes. Figure 58 shows the adjusted trip distribution. Furthermore, the adjusted trip distribution changed the traffic at intersections 1, 2, 3, 4, 8, 10, 11, and 12.

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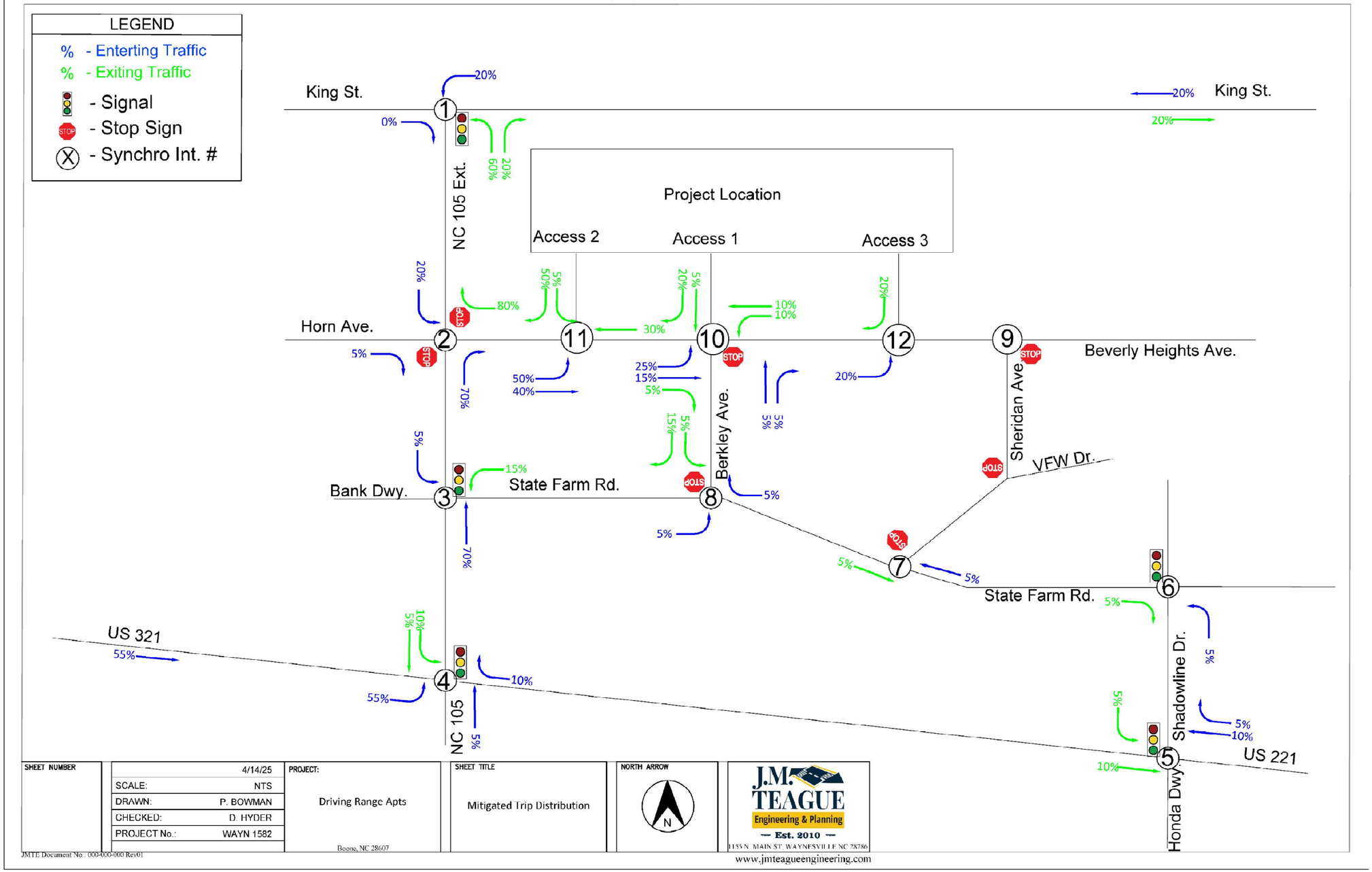


Figure 58: Mitigated Trip Distribution

Intersection 1: NC 105 Ext. and King Street

The Engineer recommends no mitigation at this intersection.

Intersection 2: NC 105 Ext. and Horn Ave./Beverly Heights Ave.

The Engineer recommends converting this intersection to a right-in/right-out.

Intersection 3: NC 105 Ext. and State Farm Road

The Engineer recommends no mitigation at this intersection.

Intersection 4: US 221 and US 321

The Engineer recommends no mitigation at this intersection.

Intersection 5: US 221 and Shadowline Drive

The Engineer recommends no mitigation at this intersection.

Intersection 6: Shadowline Drive and State Farm Road

The Engineer recommends no mitigation at this intersection.

Intersection 7: State Farm Road and VFW Drive

The Engineer recommends no mitigation at this intersection.

Intersection 8: State Farm Road and Berkeley Avenue

The Engineer recommends no mitigation at this intersection.

Intersection 9: Beverly Heights Avenue and Sheridan Avenue

The Engineer recommends no mitigation at this intersection.

Intersection 10: Beverly Heights Avenue and Berkeley Avenue/Access 1

The Engineer recommends no mitigation at this intersection.

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Intersection 11: Beverly Heights Avenue and Access 2

The Engineer recommends no mitigation at this intersection.

Intersection 12: Beverly Heights Avenue and Access 3

The Engineer recommends no mitigation at this intersection.

The Engineer recommends that Landmark Construction modernize Beverly Heights Drive, along the width of its frontage, to a modern two-lane two-way cross section. Any construction should meet the stricter of NCDOT standards or Town of Boone standards.

As discussed above, it is Landmark Constructions' responsibility to ensure adequate sight distance for the duration of construction.

EFFECT OF THE PROJECT ON ALTERNATE MODES

The project will not affect alternative modes in the area.

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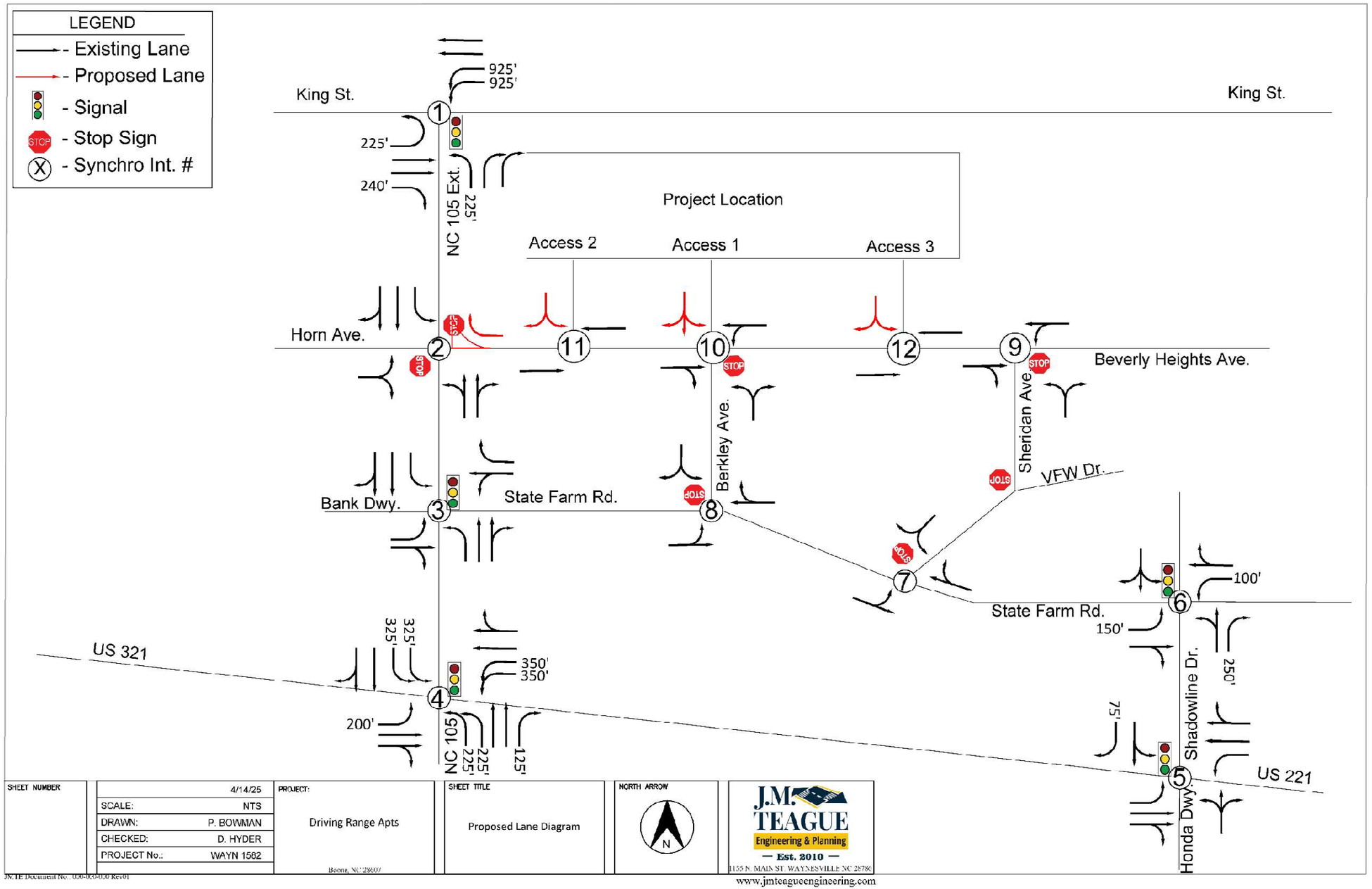


Figure 59 Recommended Lane Diagram

CONCLUSION

The Traffic Impact Analysis for the proposed Driving Range Apartments development at 115 Beverly Heights Avenue concludes that the project, consisting of 185 apartment units (642 beds) will generate additional traffic but will not significantly degrade traffic operations or safety in the surrounding area. The analysis, conducted in coordination with NCDOT and the Town of Boone, evaluated 10 intersections along with 2 new access points and identified acceptable levels of service for most, with minor impacts observed at a few locations. Only one mitigation measure (converting Intersection 2 to a right-in/right-out configuration) is recommended to maintain safe and efficient traffic flow. All access points meet required sight distance and emergency access standards, and no further mitigation is deemed necessary. Therefore, with the recommended mitigation, the project is expected to comply with applicable transportation and safety standards without requiring additional public investment or compromising public health, welfare, or safety.

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