Coventry Centre

666 Arnold Road and

2271 New London Turnpike

Coventry, Rhode Island

PREPARED FOR

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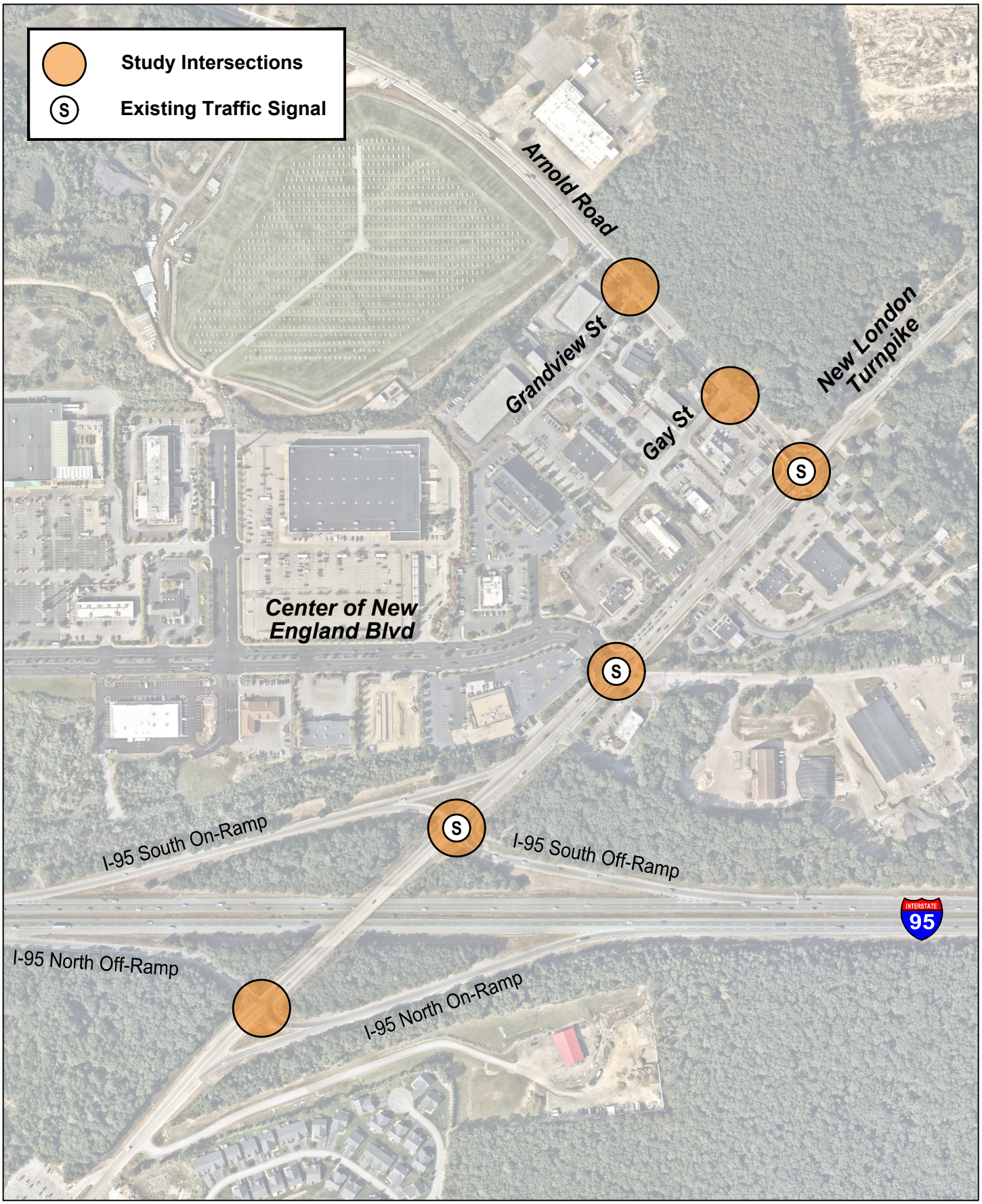
1

Introduction

VHB has performed a traffic impact and access study to evaluate impacts associated with the proposed development located in Coventry, Rhode Island. The project is located on the northwest corner of the signalized New London Turnpike/Arnold Road intersection. The proposed development is known as Coventry Centre. The development program consists of constructing up to 50,000 square feet (sf) of retail space and up to 220 residential units.

Access to the site will be provided by one full access driveway and one limited access driveway on both New London Turnpike and Arnold Road, for a total of four access points.

This report describes the proposed redevelopment program and analyzes the project-related traffic impacts on roadways adjacent to the site and the main site driveways. **Figure 1** depicts the study area limits.



0 400 Feet

Intersection Study Areas
New London Turnpike at Arnold Road
Coventry, RI

Figure 1

Project Description

The proposed redevelopment plan includes the construction of up to 50,000 square feet (sf) of retail development and up to 220 residential units. The proposal includes one full-access driveway and one limited-access driveway on both New London Turnpike and Arnold Road, for a total of four access points. The north driveway will be a full access driveway providing access/egress to and from the proposed residential use and the other three driveways will be for the retail uses. Providing three access points to the retail uses will disperse the traffic minimizing delays and traffic impacts. The development plan will include mitigation measures to the adjacent roadway network that will incrementally offset the impacts of the proposed project.

Study Methodology

This traffic assessment was conducted in three phases. The first phase involved an assessment of existing traffic conditions in and around the proposed development area. This included an inventory of existing roadway geometrics and observations of traffic flow including daily and peak period traffic counts.

The second phase utilized information assembled in the first phase and established the framework for evaluating the transportation impacts of future traffic conditions. In this phase, future traffic demands were forecasted for the study area roadways based on historical growth trends and other nearby proposed mixed-use development. The year 2030, which reflects a five (5) year horizon, was selected as the design year for analysis of this traffic impact and access study. The traffic analysis conducted in this phase identified existing and expected future roadway operations without the development of the site.

The third and final phase utilized information assembled in the second phase and established the framework for evaluating the transportation impacts of the proposed development project. In this phase the future traffic demands of the year 2030, from the second phase, were used as well as the trip generation for the proposed development of the site. The traffic analysis conducted in this phase identified future roadway operations which include necessary measures to mitigate traffic-related impacts associated with the proposed site developments.

2

Existing Conditions

Existing roadway and traffic conditions in the study area were determined based on field visits and traffic counts. The existing transportation conditions in the study area, including roadway geometrics, traffic controls, and daily and peak hour traffic flows are described in the following sections.

Study Area

To effectively evaluate the transportation impacts associated with the proposed redevelopment, it was necessary to review the existing roadway system in the vicinity of the site. The area delineated for this study includes New London Turnpike including the following critical intersections in the vicinity of the site:

- New London Turnpike) at Arnold Road
- New London Turnpike at Center of New England Boulevard
- New London Turnpike at I-95 South Ramps
- New London Turnpike at I-95 North Ramps
- Arnold Road at Grandview Street
- Arnold Road at Gay Street

Network Geometry

Roadways

New London Turnpike

For the purposes of this study, New London Turnpike will be referred to as a north/south roadway. New London Turnpike is a minor arterial under jurisdiction of the Town of Coventry that extends from Legris Avenue to Division Street. At the northern limits of the site, New London Turnpike consists of two lanes (one lane in each direction) and widens at the signalized intersection with Arnold Road to provide turn lanes and/or additional through capacity. There are currently three traffic signals along New London Turnpike which are located at Arnold Road, Center of New England Boulevard, and the I-95 South Ramps. The posted speed limit is 25 miles per hour (mph) within the project limits. Land use along New London Turnpike is primarily retail/commercial properties within some residential property in the project limits.

Arnold Road

For the purposes of this memo, Arnold Road will be referred to as an east/west roadway. Arnold Road is a minor arterial under jurisdiction of the Town of Coventry that runs from Tiogue Avenue to New London Turnpike. At the western limits of the site, Arnold Road consists of two lanes (one lane in each direction) and widens at the signalized intersection with New London Turnpike to provide turn lanes.

The posted speed limit is 35 miles per hour (mph) within the project limits. Land use along Arnold Road is primarily retail/commercial properties within the project limits.

Intersections

New London Turnpike at Arnold Road/Crompton Road

New London Turnpike and Arnold Road/Crompton Road intersect to form a four-way fully actuated signalized intersection. The New London Turnpike northbound approach consists of two left-turn lanes and a shared through/right-turn lane. The New London Turnpike southbound approach consists of an exclusive left-turn lane, a through lane, and a shared through/right-turn lane. The Arnold Road eastbound approach consists of a shared left-turn/ through lane and an exclusive right-turn lane. The Crompton Road westbound approach consists of an exclusive left-turn lane and a shared through/right-turn lane. Pedestrian crosswalks are provided on all approaches to the intersection; however, there are no signal heads, pushbuttons, or pedestrian phases. Sidewalks are provided on the southeast corner of the intersection adjacent to the CVS and along the southwest corner adjacent to the Cumberland Farm.

New London Turnpike at Center of New England Boulevard

New London Turnpike and Center of New England Boulevard intersect to form a four-way fully actuated signalized intersection. The New London Turnpike northbound approach consists of two left-turn lanes and a shared through/right-turn lane. The New London Turnpike southbound approach consists of an exclusive left-turn lane, a through lane, and a shared through/right-turn lane. The Center of New England Boulevard eastbound approach consists of a left-turn lane, a shared left-turn/through lane, and an exclusive right-turn lane. The RIDOT Midstate Facility Driveway westbound approach consists of a shared left-turn through right-turn lane. Pedestrian crosswalks are provided across the westbound approach to the intersection; however, there are no pedestrian signal heads, pushbuttons, or pedestrian phases.

New London Turnpike at I-95 South Ramps

New London Turnpike and the I-95 South Ramps intersect to form a four-way fully actuated signalized intersection. The New London Turnpike northbound approach consists of one shared left-turn/through lane. The New London Turnpike southbound approach consists of a through lane and a channelized right-turn lane (located 250 feet north of the stop line). The I-95 South Ramps westbound approach consists of a left-turn lane and a channelized right-turn lane with a curbed median under yield condition. There is no eastbound approach because this leg is one way away from the intersections and is the on-ramp to I-95 South. There are no pedestrian accommodations at the intersection.

New London Turnpike at I-95 North Ramps

New London Turnpike and the I-95 North Ramps intersect to form a four-way unsignalized intersection. The New London Turnpike northbound approach consists of one through lane and a channelized right-turn lane (located 270 feet south of the intersection). The New London Turnpike southbound approach consists of a shared through/left-turn lane. The I-95 North Ramps eastbound approach consists of a shared left-turn/right-turn lane that operates under stop control. The approach is wide enough to allow right-turning vehicles to get around vehicles waiting to take left turns. There is no westbound approach because this leg is one way away from the intersections and is the on-ramp to I-95 North. There are no accommodations for pedestrians at the intersection.

Arnold Road at Grandview Street

Arnold Road and Grandview Street intersect to form a T-type unsignalized intersection. The Arnold Road eastbound approach consists of a shared through/right-turn lane. The Arnold Road westbound approach consists of a shared left-turn/through lane. The Grandview Street northbound approach consists of a shared left-turn/right-turn lane that operates under stop control. The proposed full-access driveway to the site is proposed to be located across the street from

Grandview Street and would create a four-way intersection. There are currently pedestrian accommodations along the south side of Arnold Road with a crosswalk across the Gay Street northbound approach.

Arnold Road at Gay Street

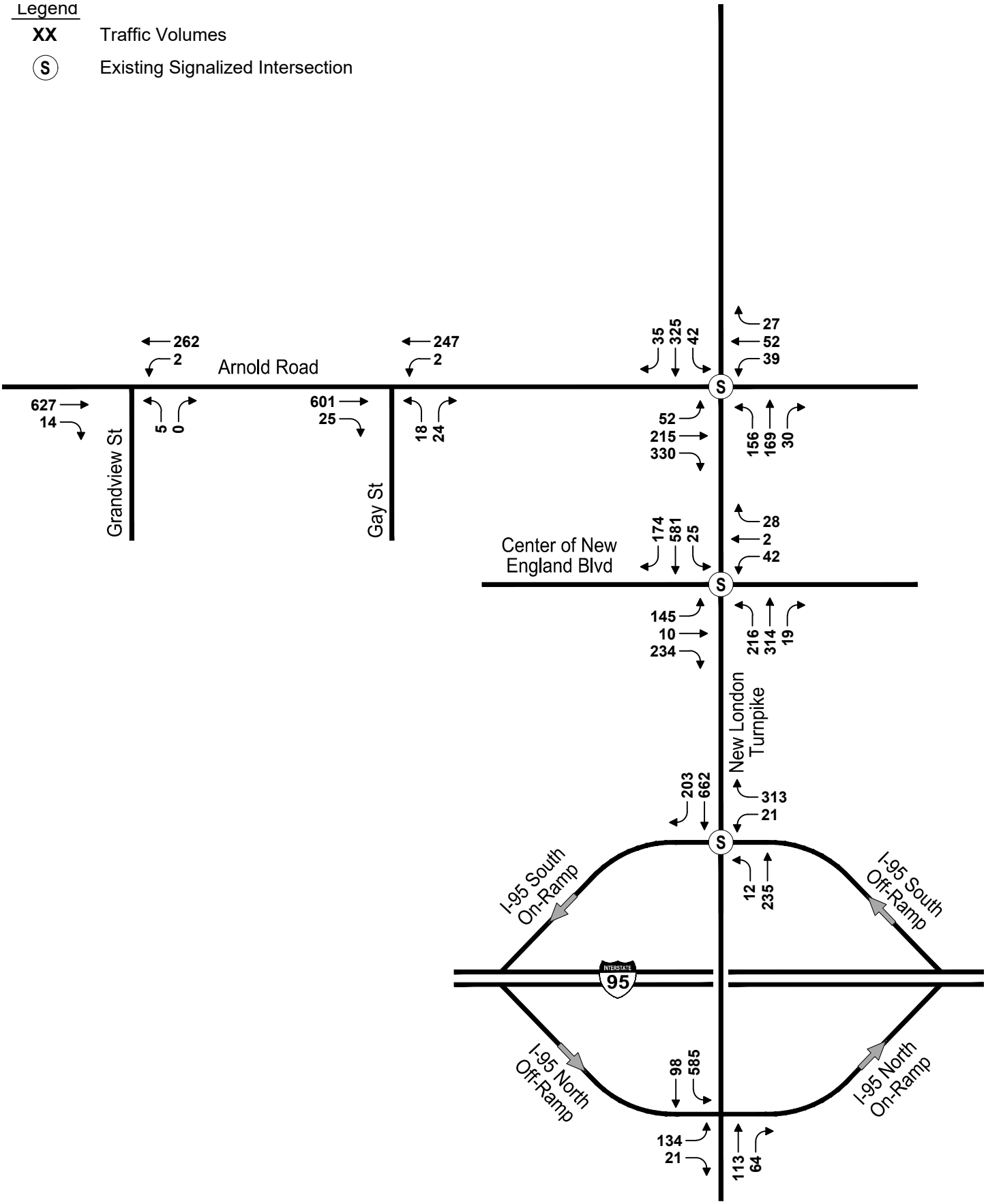
Arnold Road and Gay Street intersect to form a T-type unsignalized intersection. The Arnold Road eastbound approach consists of a shared through/right-turn lane. The Arnold Road westbound approach consists of a shared left-turn/through lane and a through lane. The Gay Street northbound approach consists of a shared left-turn/right-turn lane that operates under stop control. The proposed right-in/right-out driveway to the site is proposed to be located across the street from Gay Street and would create a four-way intersection. There are currently pedestrian accommodations along the south side of Arnold Road with a crosswalk across the Gay Street northbound approach.

Observed Traffic Volumes

To assess traffic conditions in the vicinity of the site, peak hour turning movement counts (TMCs) were conducted at the study area intersections on Thursday, April 10, 2025 from 6:30 AM to 8:30 AM and 3:30 PM to 4:30 PM and on Saturday, June 12, 2025 from 11:00 AM to 2:00 PM. Automatic Traffic Recorder (ATR) counts were performed on New London Turnpike, between I-95 South Ramps and Center of New England Boulevard, and on Arnold Road, between New London Turnpike and Gay Street from Thursday, April 10, 2025 thru Saturday, April 12, 2025.

It was determined from the TMCs that the weekday morning peak hour is between 7:30 AM and 8:30 AM. The weekday afternoon peak hour period is between 4:30 PM and 5:30 PM. The Saturday midday peak hour period is between 12:30 AM and 1:30 PM.

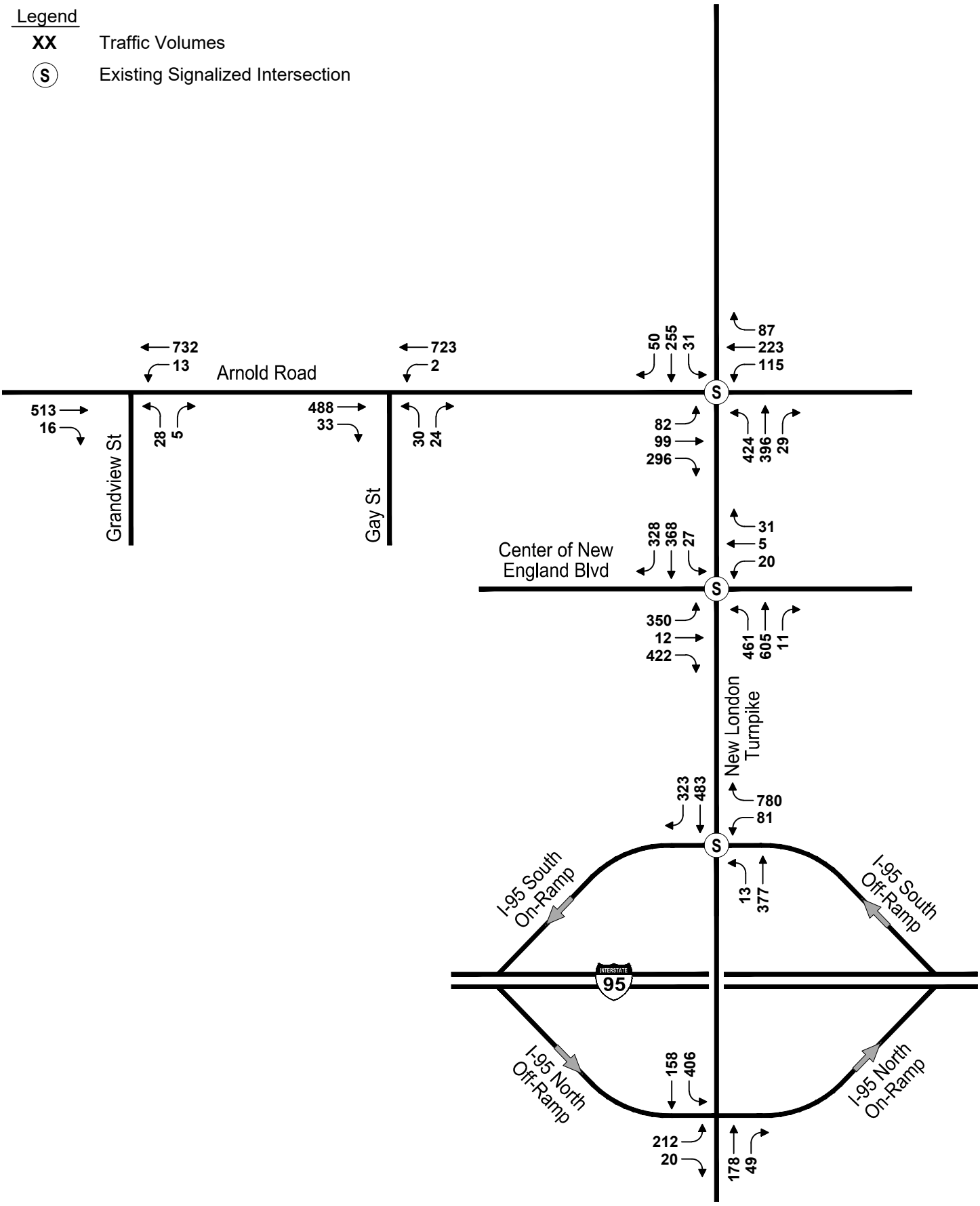
The existing weekday morning, weekday afternoon, and Saturday midday peak hour traffic volume networks are summarized in **Figures 2, 3, and 4,** respectively.



Not to Scale

2025 Existing Conditions
Weekday Morning Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 2



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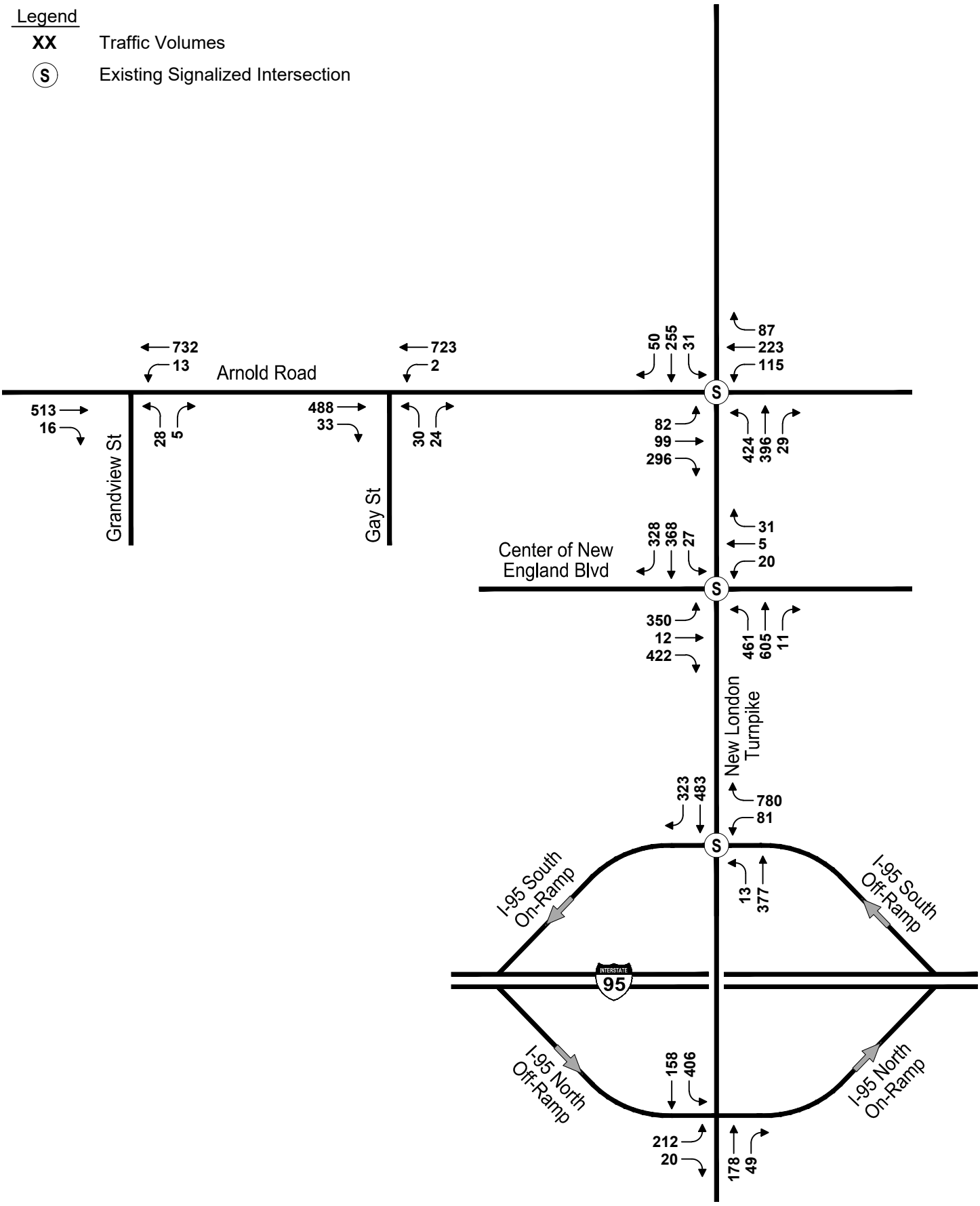
2025 Existing Conditions
Weekday Afternoon Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 3



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2025 Existing Conditions
Midday Saturday Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 4

3

Future Conditions

Typically, transportation conditions in the study area can be expected to change in the future due to potential developments/growth and planned transportation infrastructure improvements in the area. A five-year planning horizon was used to assess the New London Turnpike and Arnold Road corridors with the planned development. The traffic volumes were projected to the year 2030 to reflect growth without ("No-Build") and with ("Build") the development project and analyzed. The 2030 No-Build projected traffic volumes include growth in traffic volumes associated with generalized regional growth. The anticipated site-generated traffic volumes superimposed upon the 2030 No-Build peak hour traffic volume network reflect the 2030 Build peak hour conditions. A 2030 Build with Mitigation Condition was also developed to include proposed mitigation measures that will be completed in conjunction with the planned development projects in the area.

Background Traffic Growth

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. A procedure frequently employed is to estimate an annual percentage increase and apply that increase to study area traffic volumes. Another procedure is to identify estimated traffic generated by planned new major developments that would be expected to impact the project study area roadways. Both methods were utilized for this assessment. The following sections describe the procedures used to arrive at the No-Build traffic volume networks.

Background Traffic Growth

Population data from the U.S. Census suggest minimal growth for the Town of Coventry. The U.S. Census reports that total population grew by 0.3% annually from 2020 to 2023. Based on standard traffic engineering practice, the US Census data, and the fact that planned, site specific developments are going to be added on top of the background growth, it is conservative (projecting higher than anticipated growth) to assume a growth rate of 0.5 percent per year for five years through 2030.

Traffic Redistribution (Center of New England Blvd. Completion)

There is ongoing construction along Center of New England Boulevard that will complete the connection between Hopkins Hill Road and New London Turnpike. This connection will be completed before the 2030 Build conditions and will result in a redistribution of traffic traveling to and from the residential and commercial developments along Center of New England Boulevard. Vehicles traveling to and from the south and west along I-95 and Arnold Road will no longer have to use New London Turnpike to get to/from Walmart and other developments. Instead, they will be able to use the Hopkins Hill Road/New London Turnpike intersection.

It is projected that this new connection will result in a reduction in traffic on the Center of New England Boulevard eastbound approach to the New London Turnpike intersection. It is projected that there will be a 5 percent reduction in the eastbound left turns turning onto New London Turnpike northbound and then left onto Arnold Road and a 15 percent reduction in the eastbound traffic turning right onto New London Turnpike and then onto I-95 South. As stated previously, this traffic will travel over the new Center of New England connection roadway/bridge. Similarly, the New London Turnpike northbound left turn volumes and southbound right turn volumes will also be reduced by 15 percent and 5 percent, respectively. The 15 percent reduction is the traffic that currently travels northbound on I-95, turns left onto New London Turnpike northbound, and then turns left onto Center of New England Boulevard. The 5 percent reduction is the traffic that currently travels eastbound on Arnold Road, turns right onto New London Turnpike southbound, and then turns right onto Center of New England Boulevard.

These traffic reductions are included in the 2030 No-Build and Build conditions.

Planned Developments

As stated above, the projected future No-Build traffic volumes are being projected using conservative (higher than anticipated) background growth on top of site-specific planned growth in the area. Based on the discussion with the Coventry Planning Department, there are seven (7) planned developments in the vicinity of the project site that would have some impact on traffic volumes in the study area. The background traffic growth will account for any minor developments in the area.

The Coventry Planning Department directed VHB to include the following planned developments into the No-Build conditions:

1. Crompton Meadows (AP 8, Lot 11.1)
2. Willow Lakes (AP 16, Lot 3)
3. Centre of New England – Starr Capital
4. Village at Tiogue (AP 32, Lots 149-151 and 153)
5. Centre of New England (other lot near Hopkins Hill below "The Highlands")
6. New London Preserve (AP 7, Lot 25; AP 8, Lots 2, 3, 9, & 16; AP 16, lot 133)
7. Division Road Neighborhood - East Greenwich

The following is a summary of these projects and the estimated peak hour trip generation that is projected to be generated by these developments:

1. Crompton Meadows – This project is located on Crompton Road (east of New London Turnpike) and consist of constructing a total of 80 single family residential houses with 25% of the units being affordable housing units. The development is approximately 50% built out. VHB used land use code (LUC) 210 – Single-Family Detached Housing for 40 units to project future traffic volumes. The projected trip generation of the fully occupied development is summarized in **Table 1**.
2. Willow Lakes – This development is located on the west side of New London Turnpike (north of Arnold Road) and consists of constructing 124 independent living units, 48 assisted living units, and 30 memory care units (202 total units). VHB used trip generation information provided in the Trip Generation Memo dated July 17, 2019, prepared by Bryant Associates. The projected trip generation of the development is summarized in **Table 1**. No Saturday data was provided; therefore, Saturday was assumed to be the same as the Weekday Afternoon traffic volumes.
3. Centre of New England Starr Capital – This development consists of constructing 362 duplex-style townhouses and 350 multifamily units (712 total units) and is located on the south side of Arnold Road (west of New London Turnpike). VHB used trip generation information provided in the Traffic Impact Study dated August 2024 prepared by Crossman Engineering. The projected trip generation of the development is summarized in **Table 1**. No Saturday data was provided; therefore, Saturday was assumed to be the same as the Weekday Afternoon traffic volumes.
4. Village at Tiogue - This project is located on Tiogue Avenue and consists of construction of 61 detached single-family homes, 57 single-family/duplex cottages, and 58 multifamily housing units (176 total units). VHB used LUC 210 – Single-Family Detached Housing, LUC 215 - Single-Family Attached Housing, and LUC 220 -Multifamily Housing (Low-Rise) to project future traffic volumes.

The projected trip generation of the fully occupied development is summarized in **Table 1**. It should be noted that the location of this site results in most of the generated traffic traveling to the east (to Quaker Lane (Route 2) or west to Hopkins Hill Road and with only a small amount of traffic generated by this development traveling through the study area.

5. Centre of New England (below "The Highlands") – This project is located on Center of New England Boulevard (below "The Highlands") and consists of construction of 66 single family condominium units with 80% of units designated as age-restricted (age 55+). VHB used LUC 220 – Multifamily Housing (Low-Rise) and LUC 252 – Senior Adult Housing – Multifamily to project future traffic volumes. The projected trip generation of the fully occupied development is summarized in **Table 1**.

6. New London Preserve – This development consists of constructing 75 single family homes and is located on the east side of New London Turnpike (north of Arnold Road). VHB used LUC 210 – Single-Family Detached Housing for to project future traffic volumes. The projected trip generation of the fully occupied development is summarized in **Table 1**.

7. Division Road Neighborhood Development – This development is located on the north side of Division Road (east of New London Turnpike) and consists of constructing approximately 210 single family houses, 72 condos/apartments, and 136 Mid-level condos/apartments. The projected trip generation of the development is summarized in **Table 1**. Based on Traffic Impact Study dated Revised February 2023 prepared by VHB. No Saturday data was provided; therefore, Saturday was assumed to be the same as the Weekday Afternoon traffic volumes.

Table 1 Site Specific Background Growth

Time Period/ Movement	Crompton Meadows[1]	Willow Lakes[2]	Center of New England Starr Capital[3]	Village at Tiogue[4]	Center of New England near The Highlands[5]	New London Preserve[6]	Division Road Residential[7]	Total
AM Peak[8]								
Enter	8	31	84	28	5	14	59	229
Exit	24	17	220	85	11	43	177	577
Total	32	48	304	113	16	57	236	806
PM Peak[8]								
Enter	26	34	201	86	11	48	195	601
Exit	16	51	142	51	9	28	116	413
Total	42	85	343	137	20	76	311	1,014
Saturday Peak[8]								
Enter	24	34	201	62	13	40	195	569
Exit	20	51	142	62	10	34	116	435
Total	44	85	343	124	23	74	311	1,004

Source: Trip Generation, 11th Edition; Institute of Transportation Engineers (ITE); Washington, D.C.

1. Based on ITE LUC 210 – Single-Family Detached Housing for 40 units.
2. Based on Trip Generation Memo dated July 17, 2019, prepared by Bryant Associates.
3. Based on Traffic Impact Study dated August 2024 prepared by Crossman Engineering. No Saturday data was provided; therefore, Saturday was assumed to be the same as the Weekday Afternoon
4. Based on LUC 210 - Single Family Detached Housing for 61 units, LUC 215 – Single-Family Attached Housing) for 57 units, and LUC 220 -Multifamily Housing (Low-Rise) for 58 units.
5. Based on LUC 220 - Multifamily Housing (Low-Rise) for 13 and LUC 252 – Senior Adult Housing – Multifamily for 53 units.
6. Based on LUC 210 – Single-Family Detached Housing for 75 units.
7. Based on Traffic Impact Study dated Revised February 2023 prepared by VHB. No Saturday data was provided; therefore, Saturday was assumed to be the same as the Weekday Afternoon
8. Traffic volumes expressed in trips per day

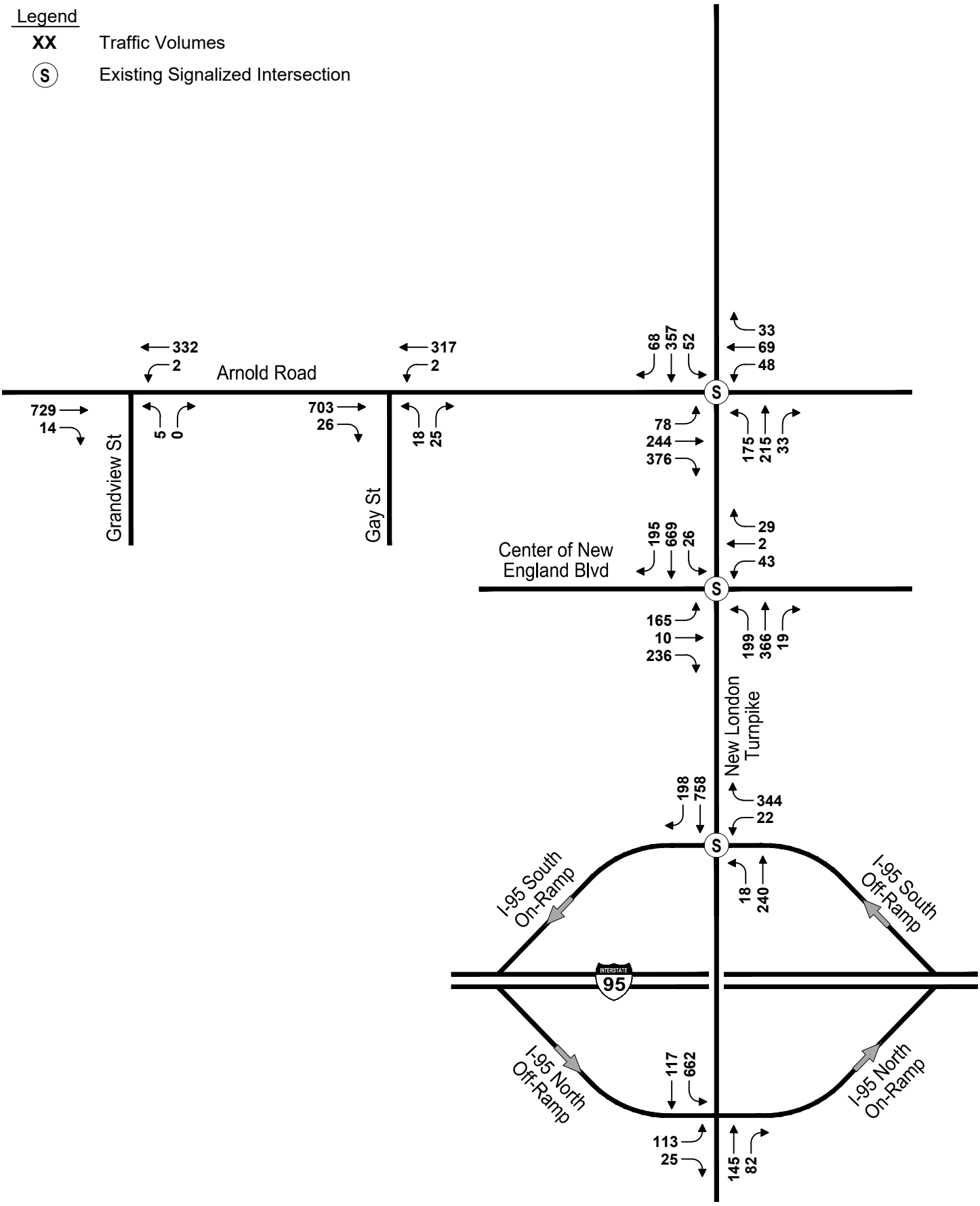
Trip Distribution and Assignment

Having estimated project generated vehicle trips, the next step in the study is to determine the trip distribution of project traffic and assign these trips to the roadway network. The directional distribution of site traffic approaching and departing the development is a function of several variables. These include the population densities, shopping opportunities, competing uses, existing and proposed travel patterns, and the efficiency of the roadways leading to the site.

The trip distribution for this project was based on existing travel patterns and the trip distribution developed for recent traffic studies in the area.

2030 No-Build Traffic Volumes

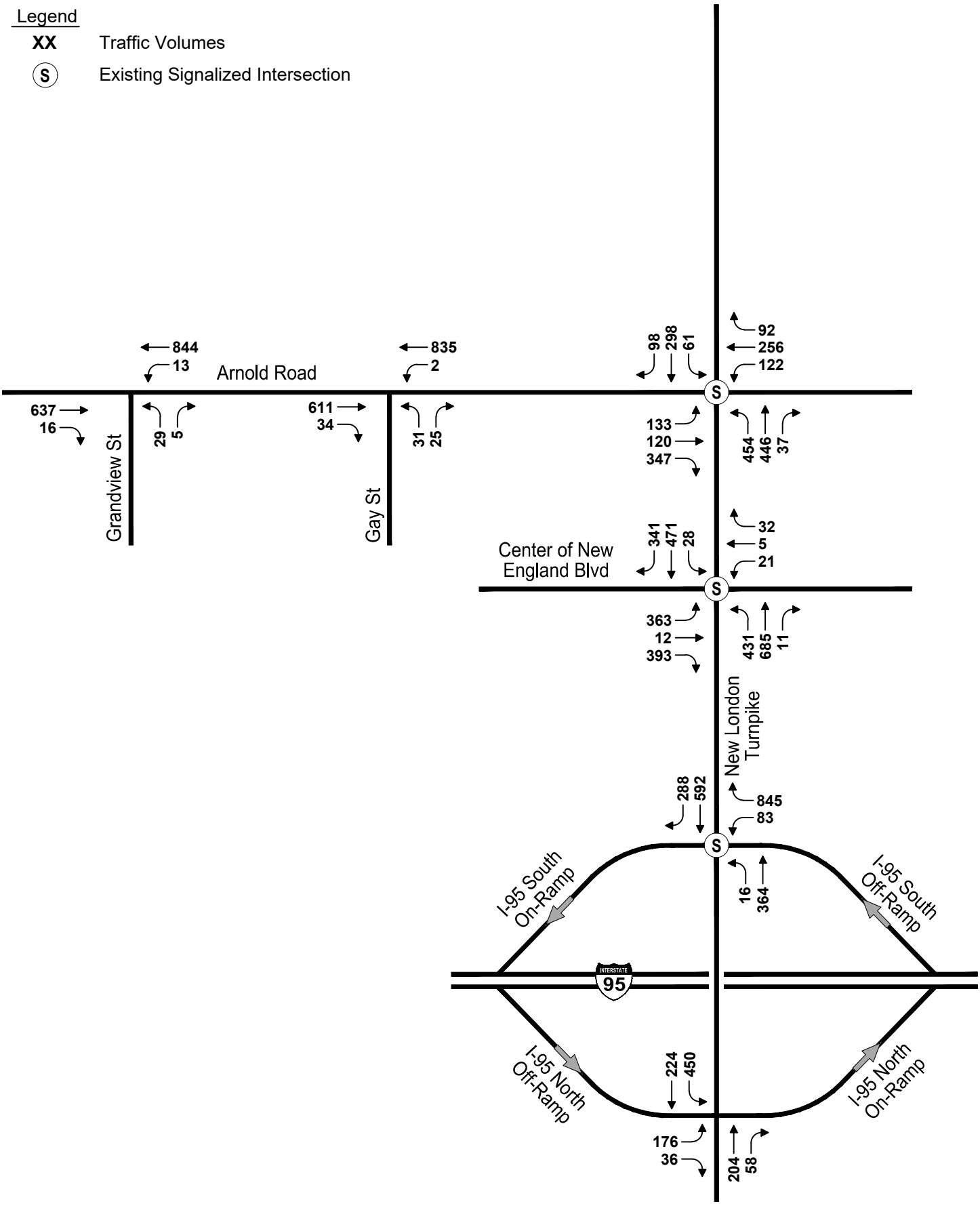
The 2030 No-Build peak hour traffic volumes were determined by first applying the 0.5 percent annual growth rate for five years to the 2025 Existing peak hour traffic volumes. The 2030 traffic volumes projected from the growth rate were then reduced to reflect the redistribution in traffic resulting from the completion of the Center of New England connection of Hopkins Hill Road to New London Turnpike. The projected site-specific traffic volumes of the seven developments listed above were then added to the study area network to develop the 2030 No-Build conditions. For the purposes of this study, the distribution of traffic was estimated based on the existing traffic patterns within the project limits. The 2030 No-Build condition weekday morning, weekday afternoon, and Saturday midday peak hour traffic volume networks are summarized in **Figures 5, 6, and 7,** respectively.



Not to Scale

Figure 5

2030 No-Build
Weekday Morning Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI



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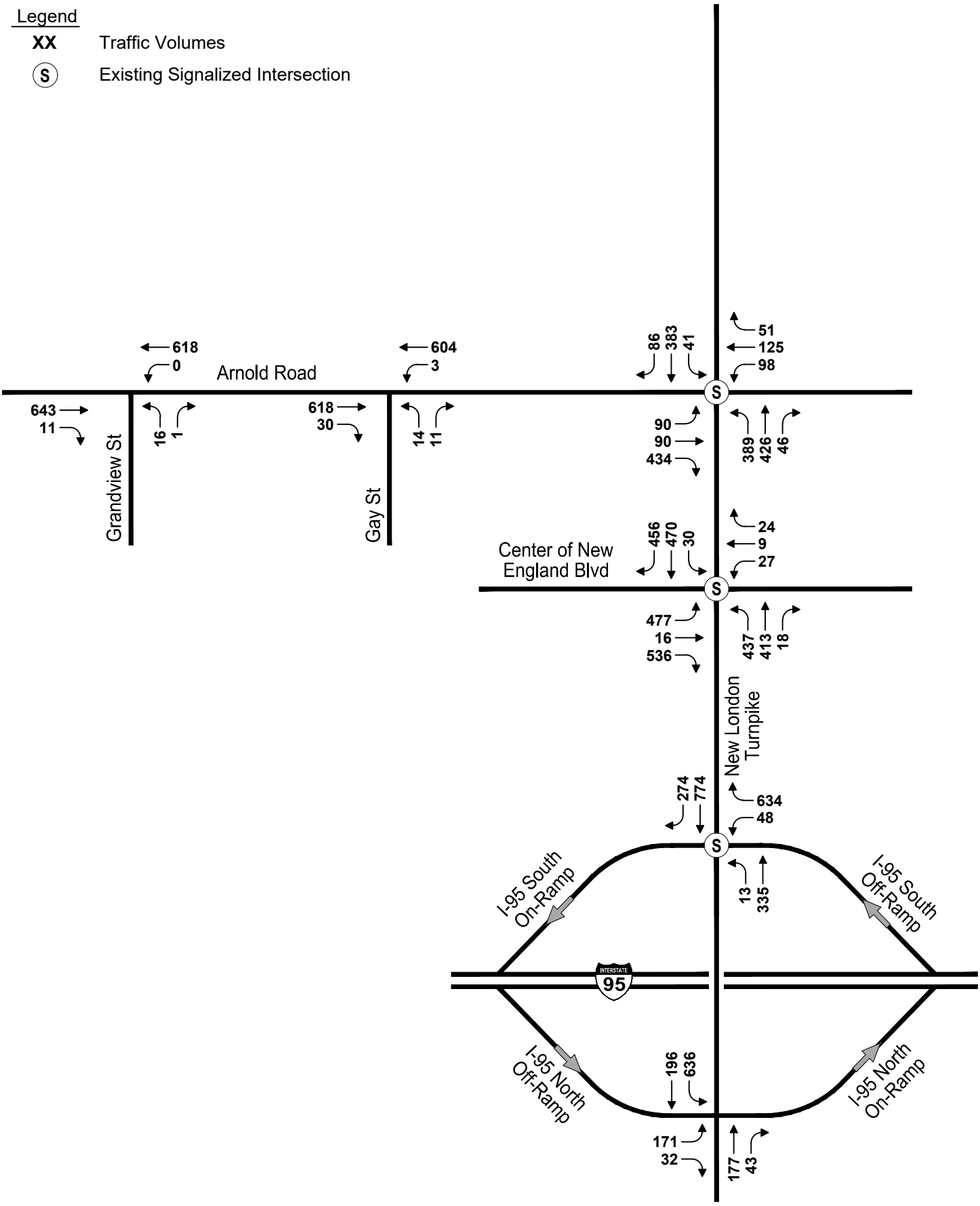
2030 No-Build
Weekday Afternoon Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 6



Not to Scale

2030 No-Build
Midday Saturday Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 7

Site-Generated Traffic Volumes

Design year 2030 Build traffic volumes were determined by estimating site-generated trips for the proposed new retail buildings and residential development and distributing these trips over the study area roadways. These site-generated trips were added to the 2030 No-Build traffic volumes to develop the Build weekday morning, weekday afternoon, and Saturday midday peak hour traffic volumes. The following sections describe the procedures used to arrive at the Build traffic volume networks.

Trip Generation

In order to estimate the traffic impacts of the proposed Coventry Centre development, it is necessary to determine the traffic volumes expected to be generated. The following text discusses the procedures used to determine the expected trip generation of the proposed mixed-use development.

Proposed Trip Generation

For the purpose of this study, traffic projections for the proposed Coventry Centre development were derived from trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*[1]. VHB has looked at two different alternatives to project traffic for the retail site. These alternatives include constructing up to 50,000 sf of retail space and constructing a combination of 45,000 sf of retail space and a 5,000 sf gas station with convenience store (the current conceptual Plan dated May 30, 2025). It was determined that the combination of retail and gas station with convenience store generated the highest trip generation. After reviewing the trip generation characteristics, VHB used "Shopping Plaza" (Land Use Code [LUC] 821) for 45,000± square feet of proposed retail space and "Convenience Store/Gas Station" (Land Use Code [LUC] 945) for 5,000± square feet of proposed gas station with convenience store (10 fuel positions) to determine the traffic of the proposed Coventry Centre development. **Table 2** summarizes the site-generated trips for the Build conditions.

VHB has looked at two different Land Use Codes to project traffic for the residential portion of the project. Land Use Code (LUC) 220, Multifamily Housing (Low-Rise), and LUC 221 Multifamily Housing (Mid-Rise) were considered because some of the buildings are proposed to be 3 stories and some of the buildings are proposed to be 4 stories. It was determined that using LUC 220, Multifamily Housing (Low-Rise), resulted in higher projected traffic generation; therefore, LUC 220 was used in this study in order to represent the most conservative analysis.

1 Trip Generation, 11th Edition, Institute of Transportation Engineers, Washington, D.C.

Pass-by/Diverted/Internal Captured Trips.

The proposed residential development will generate all new trips; however, not all the traffic generated by the retail development under Build conditions will be new traffic on study area roadways. A portion of the vehicle trips generated by the retail portion of the development will be drawn from the existing traffic streams passing the site in the form of pass-by traffic or from roadways in the vicinity of the site in the form of diverted-link traffic. The primary destination of pass-by traffic is elsewhere, and the primary trip will be resumed following a stop at the proposed site. In addition to pass-by trips, a significant number of trips to retail facilities are diverted trips. Based on ITE data, pass-by trip/diverted trip rates of as high as 94 percent with an average rate of 61 percent are typical for shopping centers. In order to present a conservative analysis (projecting higher than expected traffic volumes), it has been assumed in this analysis that only 42 percent of the traffic generated by the proposed development would be pass-by trips.

A majority of the vehicle-trips generated by the proposed gas station with convenience store will be drawn from the existing traffic streams passing the site in the form of pass-by traffic or from roadways in the vicinity of the site in the form of diverted-link traffic. The primary destination of pass-by traffic is elsewhere, and the primary trip will be resumed following a stop at the proposed site. Based on data from ITE, pass-by trip rates of as high as 72 percent with a low rate of 53 percent were observed at similar sites. In order to present a conservative analysis (projecting higher than expected traffic volumes), it has been assumed in this analysis that only 53 percent of the traffic generated by the gas station with convenience store would be pass-by trips.

Table 2 Build Trip Generation Summary

Time Period/ Movement	50ksf Retail [1]	45ksf Retail[2]	Gas Station with Convenience Store[3]	Total Retail and Gas[4]	New Residential[5]	New Retail[6]	New Gas Station with Convenience Store[7]	Total New Trips[8]	Pass-by Retail[6]	Pass-by Gas Station with Convenience Store[7]	Total Pass-by Trips[9]
AM Peak[10]											
Enter	**54**	48	135	**183**	22	32	63	117	16	72	88
Exit	**33**	30	135	**165**	69	14	63	146	16	72	88
Total	**87**	78	270	**348**	91	46	126	263	32	144	176
PM Peak[10]											
Enter	**127**	114	114	**228**	73	65	54	192	49	60	109
Exit	**133**	120	114	**234**	42	71	54	167	49	60	109
Total	**260**	234	228	**462**	115	136	108	359	98	120	218
Saturday Peak[10]											
Enter	**150**	130	104	**234**	45	78	50	173	53	54	107
Exit	**139**	120	100	**220**	45	68	46	159	53	54	107
Total	**289**	250	204	**454**	90	146	96	332	106	108	214

Source: Trip Generation, 11th Edition; Institute of Transportation Engineers (ITE); Washington, D.C.

1. Based on ITE LUC 821 – Shopping Plaza (40-150k) for 50,000 sf.
2. Based on ITE LUC 821 – Shopping Plaza (40-150k) for 45,000 sf.
3. Based on LUC 945 – Convenience Store/Gas Station for GFA (4-5.5k)
4. Total of LUC 821 - Shopping Plaza (40-150k) for 45,000 sf and LUC 945 – Convenience Store/Gas Station for GFA (4-5.5k)
5. Based on a 0% pass-by rate and 100% new trip rate for the residential portion of the site
6. Based on a 42% pass-by rate and 58% new trip rate for the retail portion of the site
7. Based on a 53% pass-by rate and 47% new trip rate for the gas station with convenience store.
8. Total of New Residential. New Retail, and New Gas Station with Convenience Store
9. Total of Pass-by Retail, and Pass-by Gas Station with Convenience Store
10. Traffic volumes expressed in trips per day

As shown in **Table 2**, the proposed shopping center is projected to generate 263 (117 entering/146 exiting) new vehicle trips during the weekday morning and 359 (192 entering/167 exiting) new vehicle trips during the weekday afternoon peak hours. In addition, 332 (173 entering/159 exiting) new vehicle trips during the Saturday midday peak hour.

Trip Distribution and Assignment

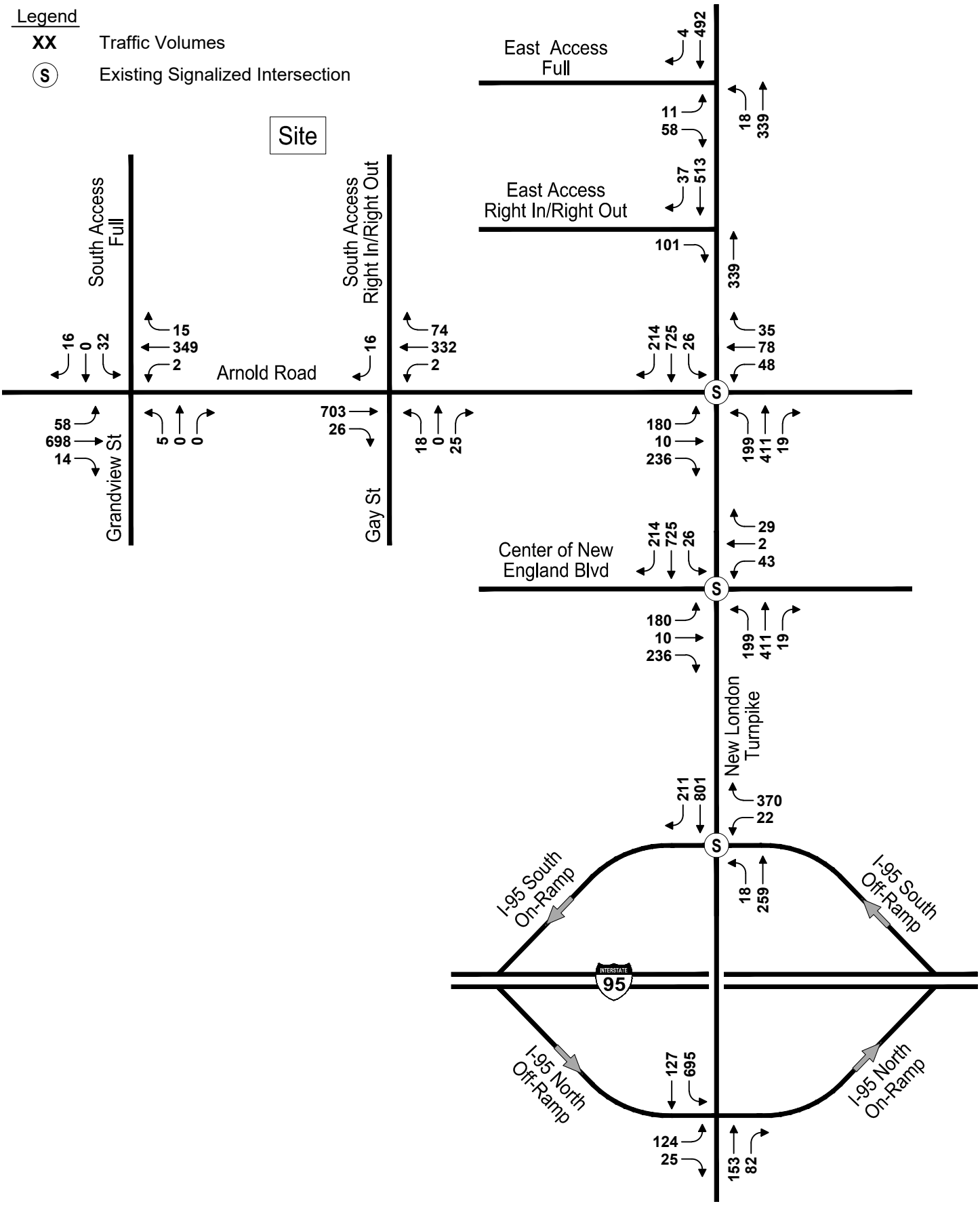
As discussed in the No-Build Full Occupancy Traffic Volumes section, The trip distribution for this project was based on a combination of existing travel patterns and the trip distribution developed for recent traffic studies in the area. The projected new trips associated with the proposed development were distributed on the study area roadways based on the following assumptions:

- 16% to/from the north on New London Turnpike
- 22% to/from the west on Arnold Road
- 9% to/from the east on Crompton Road
- 24% to/from the southwest on Center of New England Boulevard
- 9% to/from the southwest on I-95
- 15% to/from the east on I-95
- 5% to/from the south on New London Turnpike

The trips were distributed across the traffic network based on this distribution.

2030 Build Traffic Volumes

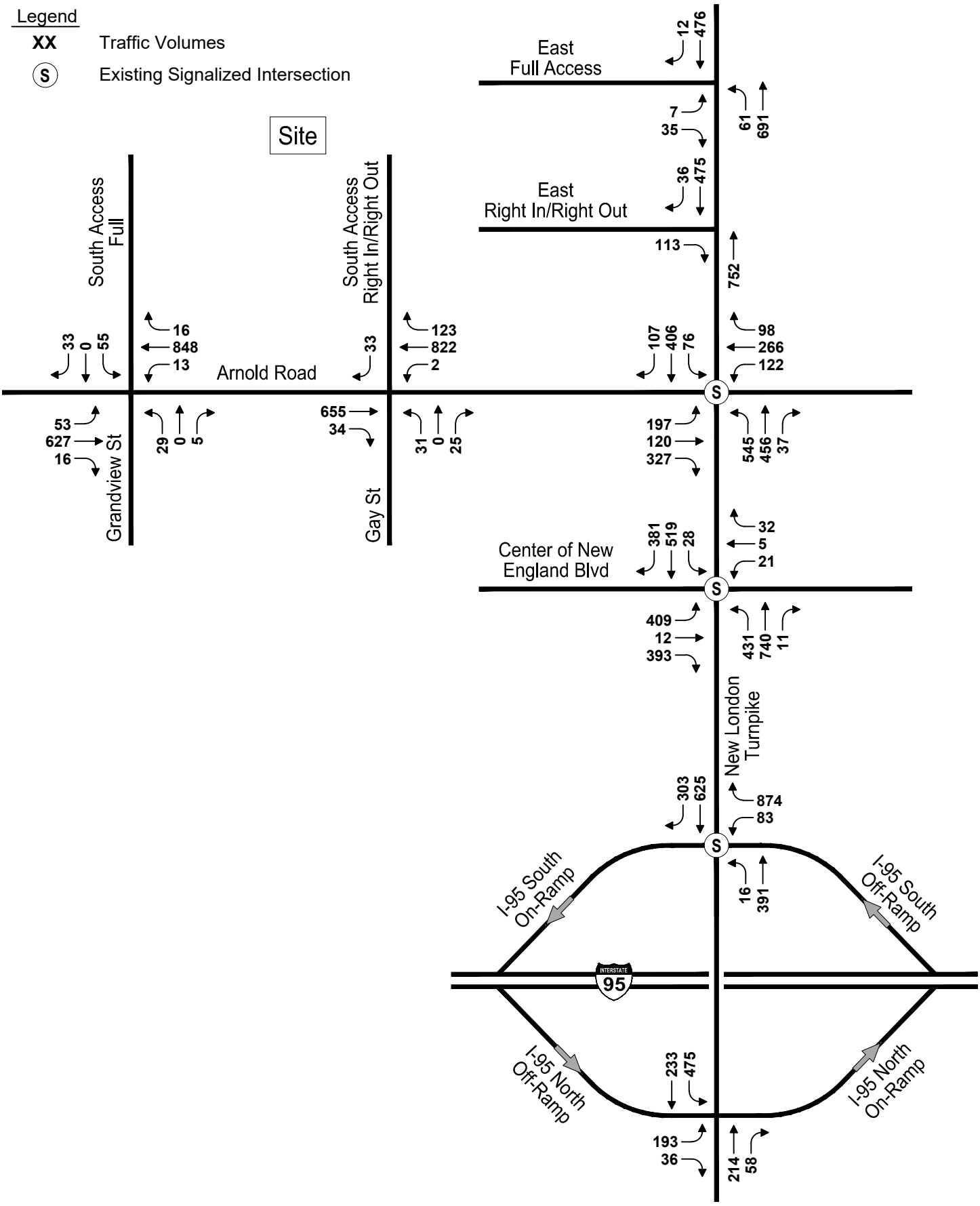
In order to evaluate the 2030 Build Condition, these site-generated trips described above were added to the 2030 No-Build traffic volumes. The resulting 2030 Build condition weekday morning, weekday afternoon, and Saturday midday peak hour traffic volumes are shown in **Figure 4**. The 2030 Build condition weekday morning, weekday afternoon, and Saturday midday peak hour traffic volume networks are summarized in **Figures 8, 9, and 10,** respectively.



Not to Scale

2030 Build
Weekday Morning Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

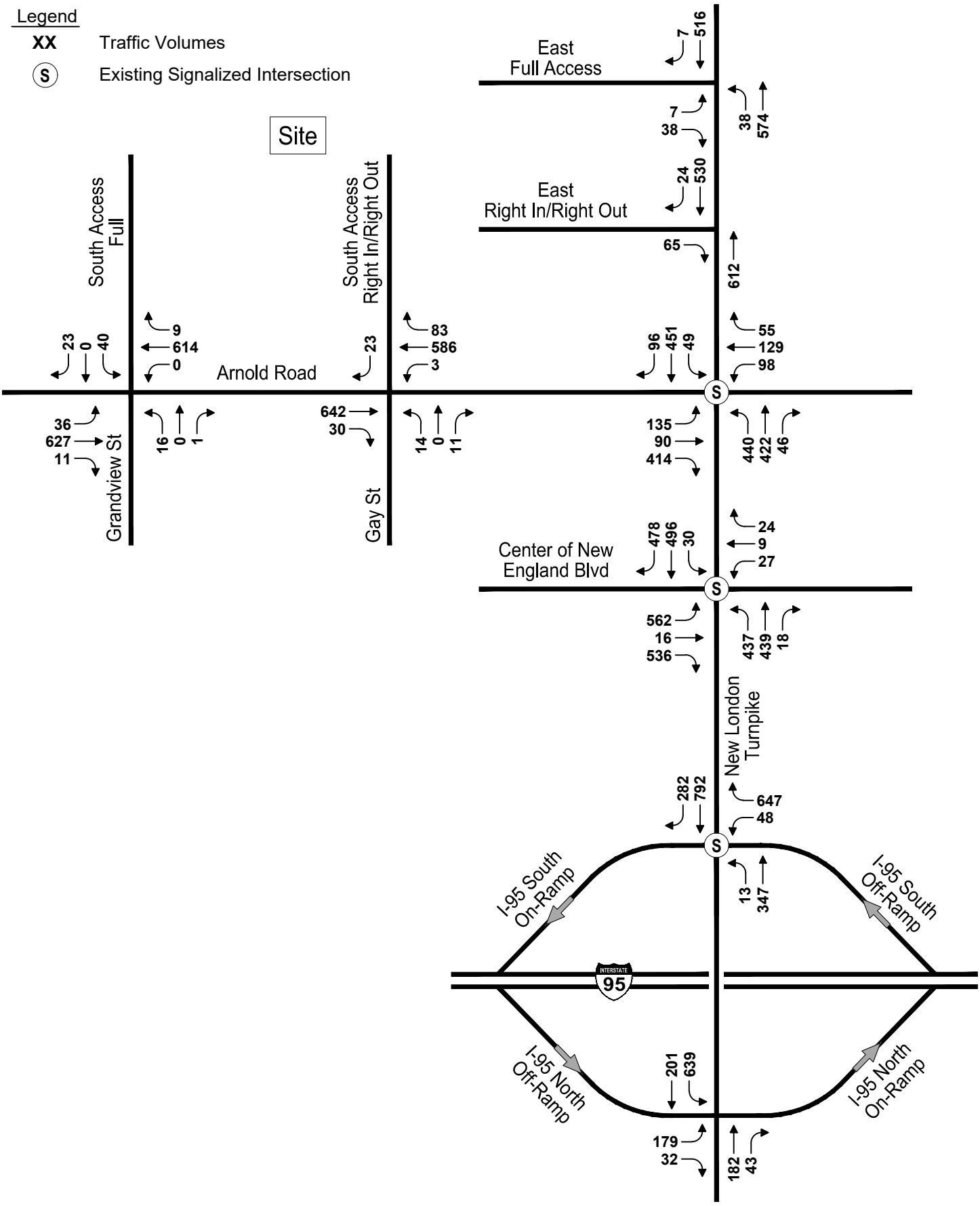
Figure 8



Not to Scale

2030 Build
Weekday Afternoon Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

Figure 9



Not to Scale

Figure 10

2030 Build
Midday Saturday Peak Hour Traffic Volumes
New London Turnpike at Arnold Road
Coventry, RI

4

Traffic Operations

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity analyses were conducted with respect to Existing and projected No-Build and Build conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels of service as described in the following sections.

Level of Service Criteria

Level of Service (LOS) is the term used to describe the different operating conditions that occur on a given roadway segment or intersection under various traffic volume loads. It is a qualitative measure of the effect of a number of factors including roadway geometrics, travel delay, and freedom to maneuver. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

For signalized intersections, the analysis considers the operation of all traffic entering the intersection, and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, the overall LOS designation is for the most critical movement, which is most often the left turn out of the side street/driveway. All study area intersections are unsignalized.

Signalized Intersections Capacity Analysis

Capacity analyses were conducted for the existing signalized intersections in the study area on New London Turnpike. For this study, the capacity analyses were completed using Synchro 11 software, with output based on the *2000 Highway Capacity Manual* (HCM). A summary of the signalized capacity analyses is presented in **Table 3**. As shown in the table, all intersections operate with acceptable delays and queues under existing conditions and are projected to operate at acceptable levels under 2030 Build conditions with the optimization of the signal timings.

Table 3 Signalized Intersection Capacity Analysis Summary

		2025 Existing			2030 No-Build			2030 Build		
Intersection	**Peak Hour**	**V/C[1]**	**Delay[2]**	**LOS[3]**	**V/C**	**Delay**	**LOS**	**V/C**	**Delay**	**LOS**
New London Turnpike at Arnold Road	Weekday AM	0.43	28	C	0.53	30	C	0.62	30	C
	Weekday PM	0.61	28	C	0.76	32	C	0.90	49	D
	Saturday Midday	0.51	24	C	0.64	26	C	0.68	28	C
New London Turnpike at Center of New England Blvd.	Weekday AM	0.44	21	C	0.50	22	C	0.54	23	C
	Weekday PM	0.68	27	C	0.74	28	C	0.81	29	C
	Saturday Midday	0.72	32	C	0.74	35	C	0.76	38	D
New London Turnpike at I-95 South Ramps	Weekday AM	0.53	10	A	0.61	12	B	0.64	13	B
	Weekday PM[4]	0.75	64	E	0.87	89	F	0.93	110	F
	Saturday Midday	0.65	15	B	0.79	19	B	0.83	22	C

Source: VHB using Synchro 11 software

1 Volume to capacity ratio
2 Vehicle delay expressed in seconds per vehicle
3 Level of Service

New London Turnpike at Arnold Road

The analysis indicates that under 2025 existing conditions, New London Turnpike at Arnold Road operates at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour. The eastbound shared left-turn/through lane operates at LOS E with long queues and delays during peak periods based on existing signal timings.

The intersection is projected to continue to operate at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour under 2030 No-Build and Build conditions.

Under No-Build and Build conditions, the eastbound shared left-turn/through lane are projected to continue to operate at LOS E or drop to LOS F with long queues and delays based on existing signal timings.

New London Turnpike at Center of New England Boulevard

The analysis indicates that under 2025 existing conditions, New London Turnpike at Center of New England Boulevard operates at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour. The eastbound left-turn and shared left-turn/through lanes operate at LOS E with long delays during the morning peak periods based on existing signal timings. The westbound also operates at LOS E with long delays during the morning and afternoon peak periods based on existing signal timings; however, the traffic volumes are relatively low.

The intersection is projected to continue to operate at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour under 2030 No-Build conditions. Under the 2030 Build conditions, the intersection is projected to continue to operate at LOS C during the weekday morning and weekday afternoon peak hours. The intersection is projected to reduce to LOS D during the Saturday midday peak hours under 2030 Build conditions.

The eastbound left-turn and shared left-turn/through lanes are projected to continue to operate at LOS E with long delays during the morning peak periods based on existing signal timings. The westbound also is projected to continue to operate at LOS E with long delays during the morning and afternoon peak hours and during the Saturday midday peak hour based on existing signal timings; however, the traffic volumes are relatively low. The queues in the northbound through/right turn lane are projected to be long during the weekday afternoon peak hour extending to the I-95 South off-ramp.

New London Turnpike at I-95 South Ramps

The analysis indicates that under 2025 existing conditions, New London Turnpike at Center of New England Boulevard operates at LOS A during the weekday morning peak hour, LOS E during the weekday afternoon peak hour, and LOS B during the Saturday midday peak hour. The I-95 off-ramp operates at LOS F during the weekday afternoon peak hour with long queues and delays.

The intersection is projected to operate LOS B during the weekday morning peak hour, LOS F during the weekday afternoon peak hour, and LOS B during the Saturday midday peak hour under 2030 No-Build conditions. Under the 2030 Build conditions, the intersection is projected to continue to operate at LOS B during the weekday morning peak hour and LOS F during the weekday afternoon peak hour and reduce to LOS C during the Saturday midday peak hour. The I-95 off-ramp is projected to continue to operate at LOS F during the weekday afternoon peak hour with long queues and delays.

Unsignalized Intersections Capacity Analysis

Capacity analyses were conducted for the existing and proposed new unsignalized study area intersections. For this study, the capacity analyses were completed using Synchro 11 software, with output based on the *2000 Highway Capacity Manual* (HCM). Summaries of the unsignalized capacity analyses are presented in **Table 4** for the weekday morning and afternoon peak periods and the Saturday midday peak period.

Table 4 Unsignalized Intersection Capacity Analysis Summary

Location	Peak Hour	Critical Movement	2025 Existing			2030 No-Build			2030 Build		
			Dem [1]	Del [2]	LOS [3]	Dem [1]	Del [2]	LOS [3]	Dem [1]	Del [2]	LOS [3]
New London Turnpike at I-95 North Ramps	Weekday AM	EB L/R	209	>50	F	187	>50	F	202	>50	F
	Weekday PM	EB L/R	240	>50	F	218	>50	F	236	>50	F
	Saturday Midday	EB L/R	259	>50	F	230	>50	F	239	>50	F
New London Turnpike at New Full Access Drive	Weekday AM	EB L/R	Intersection Doesn't Exist			Intersection Doesn't Exist			75	14	B
	Weekday PM	EB L/R							46	18	C
	Saturday Midday	EB L/R							49	16	C
New London Turnpike at New Right-in/ Right-Out	Weekday AM	EB R	Intersection Doesn't Exist			Intersection Doesn't Exist			110	14	B
	Weekday PM	EB/R							123	14	B
	Saturday Midday	EB R							71	13	B
Arnold Road at Grandview Street/ New Full Access Drive	Weekday AM	NB L/T/R	8	18	C	8	21	C	8	38	E
	Weekday PM	NB L/T/R	44	20	C	46	25	C	46	>50	F
	Saturday Midday	NB L/T/R	28	17	C	28	20	C	28	>50	F
Arnold Road at Gay Street/ New Right-in/ Right-Out	Weekday AM	NB L/T/R	47	18	C	48	21	C	48	23	C
	Weekday PM	NB L/T/R	85	17	C	87	22	C	87	29	D
	Saturday Midday	NB L/T/R	32	15	C	32	18	C	32	20	C

Source: VHB using Synchro 11 software.
1 Dem- vehicle demand
2 Del. - average delay in seconds per vehicle
3 LOS - level of service
4 Q – 95th percentile queue length, feet
EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; R = right; T = thru; L= left

New London Turnpike at I-95 North Ramps

The analysis indicates that under 2025 existing conditions, the unsignalized I-95 North intersections operate at LOS F during the weekday morning and afternoon peak periods and the Saturday midday period. There are long delays and queues on the I-95 North eastbound approach during the weekday morning and afternoon peak hours and Saturday midday peak hour. It should be noted that there are some gaps created in the New London Turnpike southbound traffic due to the traffic signal at the I-95 South Ramps.

The intersection is projected to continue to operate at LOS F during the weekday morning and afternoon peak periods and the Saturday midday period under 2030 No-Build and Build conditions. Long delays and queues on the I-95 North eastbound approach are projected to continue during the weekday morning and afternoon peak hours and Saturday midday peak hour. It should be noted that there are some gaps created in the New London Turnpike southbound traffic due to the traffic signal at the I-95 South Ramps.

Based on the April 2025 traffic counts, the intersection meets the peak hour signal warrant and it appears that it could meet additional warrants. It is recommended that the Town of West Greenwich and the Town of Coventry contact RIDOT to request that the State Traffic Commission (STC) investigate installation of a traffic signal at this location.

New London Turnpike at New Full Access Driveway

The New London Turnpike at New Full Access Drive intersection does not exist under existing or No-Build conditions. The new full access drive will consist of full access into and out of the site. Under 2030 Build conditions the proposed New London Turnpike Full Access Driveway is projected to operate at LOS B during the weekday morning peak period and LOS C during the weekday afternoon and Saturday Midday peak hours. It should be noted that the Synchro analysis overestimates the delays at unsignalized because drivers tend to accept shorter gaps in traffic and the analysis does not fully take into account the gaps in traffic created by adjacent traffic signals that allow vehicles to enter/exit unsignalized intersections. The existing traffic signals at the New London Turnpike/Arnold Road intersection will create gaps that will allow traffic to access/egress this new driveway.

New London Turnpike at New Right-in/Right-out Driveway

The New London Turnpike at New Right-in/Right-out intersection does not exist under existing or No-Build conditions. Under 2030 Build conditions the proposed New London Turnpike Right-in/Right-out Driveway is projected to operate at LOS B during the weekday morning and weekday afternoon peak periods and Saturday midday peak period.

Arnold Road at Grandview Street/New Full Access Driveway

The new full access drive intersection does not exist under existing or No-Build conditions; therefore, Arnold Road at Grandview Street is currently a "T" intersection. The Arnold Road at Grandview Street intersection currently operates at LOS C during the weekday morning and afternoon peak periods and Saturday midday peak periods under 2025 Existing conditions. The intersection is projected to operate at the same LOS C during all peak periods under 2030 No-Build conditions. Under 2030 Build conditions the new full access driveway will be constructed. The proposed New London Turnpike/Grandview Street/Full Access Driveway is projected to operate at LOS E during the weekday morning peak periods and LOS F during the afternoon peak periods and Saturday midday peak periods. It should be noted that the Synchro analysis overestimates the delays at unsignalized because drivers tend to accept shorter gaps in traffic and the analysis does not fully take into account the gaps in traffic created by adjacent traffic signals that allow vehicles to enter/exit unsignalized intersections. The existing traffic signals at the New London Turnpike/Arnold Road intersection will create gaps that will allow traffic to access/egress this new driveway.

Arnold Road at Gay Street/New Right-in/Right-out Driveway

New right-in/right out driveway does not exist under existing or No-Build conditions; therefore, Arnold Road at Gay Street is currently a "T" intersection. The Arnold Road at Gay Street intersection currently operates at LOS C during the weekday morning and afternoon peak periods and Saturday midday peak periods under 2025 Existing conditions. The intersection is projected to operate at the same LOS C during all peak periods under 2030 No-Build conditions. Under 2030 Build conditions the new right-in/right-out driveway will be constructed. The proposed New London Turnpike/Gay Street/New Right-in/Right-out Driveway is projected to operate at LOS C during the weekday morning peak periods and Saturday midday peak periods and LOS D during the afternoon peak periods. The existing traffic signals at the New London Turnpike/Arnold Road intersection will create gaps that will allow traffic to egress this new driveway.

Sight Distance Evaluation

A sight distance evaluation was conducted for the proposed Full access and right-in/right-out driveways on New London Turnpike and Arnold Road. Measurements were taken for Stopping Sight Distance (SSD) in accordance with guidelines provided by the American Association of State Highway and Transportation Officials (AASHTO).

In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

The available sight distance at the New London Turnpike/New right-in/right-out was measured to be 250 feet looking left out of the proposed driveway. This meets the distance required to meet a design speed of 35 miles per hour, which is 10 miles over the posted speed on New London Turnpike. The available sight distance at the other proposed site driveways is greater than 305 feet, which meets a design speed of 40 miles per hour. The posted speed limit on Arnold Road is 35 miles per hour. The available sight distances at all proposed driveways meet AASHTO design standards.

5

Comprehensive Improvements

As noted above, the cumulative impacts of the seven development projects and the Coventry Centre development results in increased queues and delays on study area roadways. VHB developed comprehensive improvement plan to mitigate existing deficiencies and accommodate the projected increase of the pending developments included in this study.

Capacity analyses were performed to assess the traffic operations if the comprehensive improvements are implemented to assess how well the study area roadways will serve the traffic demands placed upon them under full buildout of all developments listed in this study. Operating conditions are classified by calculated levels of service as described in the "Traffic Operations" sections. The results of the traffic operations under 2030 Build with Improvements conditions were compared to existing and projected No-Build and Build (without any improvements).

Site Specific Improvements

VHB was involved in developing the conceptual site plan dated April 4, 2025. and has located the proposed site driveways to optimize the access/egress travel patterns of the site and provide adequate sight distance for vehicles entering/exiting. In preparing this Traffic Impact and Access Study, VHB has developed off-site improvements that should be implemented on New London Turnpike and Arnold Road immediately adjacent to the site as well as other improvements that should be implemented to accommodate the full buildout of all developments listed in this study. The recommended improvements immediately adjacent to the site are discussed below.

Sidewalks – New Sidewalks are proposed to be installed on New London Turnpike and Arnold Road, immediately adjacent to the site. These sidewalks will connect with the existing sidewalks to the south and southeast along New London Turnpike and Arnold Road intersection.

New London Turnpike at Arnold Road –The New London Turnpike southbound approach to the Arnold Road signalized intersection is proposed to be widened to increase the length of the left turn storage lane and the length of the shared through/right-turn lane to accommodate projected queues.

Arnold Road at Grandview Street/Full Access Driveway – The Arnold Road westbound departure from the New London Turnpike/Arnold Road intersection consists of two lanes that begins to taper to one lane just east of Grandview Street. It is proposed that Arnold Road westbound remain two lanes up to the Grandview

Street/Full Access Driveway intersection, where the westbound right lane will be striped and signed as Right Turn Only" into the new full access site driveway.

Additional Improvements

VHB has developed a plan to implement additional improvements to improve operations and reduce congestion along study area roadways that will accommodate the full buildout of all the developments discussed in this study. These improvements are discussed below in further detail.

New London Turnpike at Center of New England Boulevard – The New London Turnpike southbound right turn volume into Center of New England Boulevard is comparable or higher than the southbound through volume during peak periods; therefore, the southbound right lane acts as a "de facto right-turn lane." It is proposed that the southbound right lane be striped and signed as "Right Turn Only" and that the southbound through lane shift through the intersection to provide only one southbound departure lane from the intersection. By having only one southbound departure lane, the striping on the northbound approach can be modified to provide two left-turn lanes, one through lane, and one through/right-turn lane (an addition of one northbound through lane). Restriping this intersection will reduce the delays and queues on the northbound approach and improve operations at the intersection. Having only one southbound departure lane at the intersection can be justified because there is technically only one southbound through lane approaching the intersection under existing peak hour conditions since the southbound right lane is a "de facto right-turn lane." It should also be noted that only one eastbound right-turn lane and one westbound left-turn lane feeds into the southbound departure lane.

Center of New England Boulevard – The geometry and the median opening on Center of New England Boulevard result in reduced capacity on the eastbound approach to the New London Turnpike signalized intersection. There is a sharp horizontal curve on the eastbound approach to the intersection which cannot easily be modified to improve operations; however, it is recommended that the median opening across from the Wendy's driveway be closed. This would result in less side friction on the Center of New England Boulevard eastbound approach to the traffic signal and increase throughput resulting in shorter delays and queues. It is recommended that a new driveway be constructed from the Wendy's parking lot to the Hampton Inn Driveway to allow Wendy's customers to make left turns onto Center of New England Boulevard at a location further from the signalized intersection to then exit onto New London Turnpike.

It should be noted that the proposed restriping of New London Turnpike to provide only one southbound departure lane from the Center of New England signalized intersection will make it difficult for large trucks on the eastbound approach to make right turns onto New London Turnpike southbound. It is recommended that Center of New England Boulevard eastbound be signed as "No Through Trucks" to restrict trucks from exiting onto New London Turnpike southbound. It is also recommended

that the radius on the southwest corner of the New London Turnpike/Center of New England Boulevard intersection be modified to provide a larger radius.

New London Turnpike at I-95 South Ramps – Under existing conditions the I-95 South off-ramp has long queues and delays during peak hours. This is partially due to driver behavior at yield signs in Rhode Island. Many drivers come to a complete stop, even when there are no vehicles on the New London Turnpike northbound approach. Some drivers also wait at the yield line until the traffic signal turns green on the off-ramp westbound approach. This results in unnecessary delays and queues on the I-95 South off-ramp. It is recommended that the I-95 South off-ramp be widened to provide two right-turn lanes to accommodate the heavy existing and future traffic volumes. This modification will require traffic signal modifications to add new signal heads with right-turn arrows and modifications to the raised island on the I-95 South off-ramp. It may also be necessary to install a median island on the New London Turnpike southbound approach to prevent wrong-way driving.

New London Turnpike at I-95 North Ramps – The unsignalized New London Turnpike/I-95 North intersections operates at LOS F during the weekday morning and afternoon peak periods and the Saturday midday period under 2025 Existing conditions and future 2030 No-Build and 2030 Build conditions. Based on the April 2025 traffic counts, the intersection meets the peak hour signal warrant, and it appears that it could meet additional warrants. It is recommended that the Town of Coventry and the Town of West Greenwich contact RIDOT to request that the State Traffic Commission (STC) investigate installation of a traffic signal at this location.

Implementing all the proposed improvements listed above will result in improved traffic operations at the study area intersections. The following section shows Existing, No-Build, and Build (without any improvements) traffic operations compared with Build with Improvements conditions.

Signalized Intersections Capacity Analysis

Capacity analyses were conducted for the existing signalized intersections in the study area on New London Turnpike under 2025 Existing, 2030 No-Build, and 2030 Build Conditions and are summarized under the Traffic Operations section of this report. The following section compares 2030 Build with Improvements (implementing the proposed improvements listed above) with the previous analysis of existing, no-build, and build conditions (without any improvements).

As stated previously, the capacity analyses were completed using Synchro 11 software, with output based on the *2000 Highway Capacity Manual* (HCM). A summary of the signalized capacity analyses is presented in **Table 3**. As shown in the table, all intersections are projected to operate at acceptable levels under 2030 Build with Improvements conditions. It should be noted that under 2030 Build with Improvements conditions the signal times have been optimized, and all movements are projected to operate at LOS D or better under all peak hour conditions.

Table 5 2030 Build with Improvements – Signalized Intersection Capacity Analysis Summary

Intersection	Peak Hour	2025 Existing			2030 No-Build			2030 Build			2030 Build with Improvements		
		V/C[1]	Delay[2]	LOS[3]	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
New London Turnpike at Arnold Road	Weekday AM	0.43	28	C	0.53	30	C	0.62	30	C	0.67	28	C
	Weekday PM	0.61	28	C	0.76	32	C	0.90	49	D	0..90	41	D
	Saturday Midday	0.51	24	C	0.64	26	C	0.68	28	C	0.76	25	C
New London Turnpike at Center of New England Blvd.	Weekday AM	0.44	21	C	0.50	22	C	0.54	23	C	0.82	22	C
	Weekday PM[4]	0.68	27	C	0.78	28	C	0.81	29	C	0.65	24	C
	Saturday Midday	0.72	32	C	0.74	35	C	0.76	38	D	0.94	28	C
New London Turnpike at I-95 South Ramps	Weekday AM	0.53	10	A	0.61	12	B	0.64	13	B	0.73	15	B
	Weekday PM[4]	0.75	64	E	0.87	89	F	0.93	110	F	0.68	23	C
	Saturday Midday	0.65	15	B	0.79	19	B	0.83	22	C	0.79	17	B

Source: VHB using Synchro 11 software

1 Volume to capacity ratio
2 Vehicle delay expressed in seconds per vehicle
3 Level of Service
4 Signal timings have been optimized under Build with Improvements conditions.

New London Turnpike at Arnold Road

The analysis indicates that under 2025 existing conditions, New London Turnpike at Arnold Road operates at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour. The eastbound shared left-turn/through lane operates at LOS E with long queues and delays during peak periods based on existing signal timings.

The intersection is projected to continue to operate at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour under 2030 No-Build and Build conditions.

Under No-Build and Build conditions, the eastbound shared left-turn/through lane are projected to continue to operate at LOS E or F with long queues and delays based on existing signal timings.

Under 2030 Build with Improvements conditions, the intersection is projected to operate at LOS C with all movements operating at LOS D or better.

New London Turnpike at Center of New England Boulevard

The analysis indicates that under 2025 existing conditions, New London Turnpike at Center of New England Boulevard operates at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour. The eastbound left-turn and shared left-turn/through lanes operate at LOS E with long delays during the morning peak periods based on existing signal timings. The westbound also operates at LOS E with long delays during the morning and afternoon peak periods based on existing signal timings; however, the traffic volumes are relatively low.

The intersection is projected to continue to operate at LOS C during the weekday morning and afternoon peak hours and during the Saturday midday peak hour under 2030 No-Build conditions. Under the 2030 Build conditions, the intersection is projected to continue to operate at LOS C during the weekday morning and weekday afternoon peak hours. The intersection is projected to reduce to LOS D during the Saturday midday peak hours under 2030 Build conditions.

The eastbound left-turn and shared left-turn/through lanes are projected to continue to operate at LOS E with long delays during the morning peak periods based on existing signal timings. The westbound also is projected to continue to operate at LOS E with long delays during the morning and afternoon peak hours and during the Saturday midday peak hour based on existing signal timings; however, the traffic volumes are relatively low. The queues in the northbound through/right turn lane are projected to be long during the weekday afternoon peak hour extending to the I-95 South off-ramp.

Under 2030 Build with Improvements conditions, the intersection is projected to operate at LOS C during the weekday morning and afternoon peak periods and LOS D during the Saturday midday peak period, with all movements operating at LOS D or better.

New London Turnpike at I-95 South Ramps

The analysis indicates that under 2025 existing conditions, New London Turnpike at Center of New England Boulevard operates at LOS A during the weekday morning peak hour, LOS E during the weekday afternoon peak hour, and LOS B during the Saturday midday peak hour. The I-95 off-ramp operates at LOS F during the weekday afternoon peak hour with long queues and delays.

The intersection is projected to operate LOS B during the weekday morning peak hour, LOS F during the weekday afternoon peak hour, and LOS B during the Saturday midday peak hour under 2030 No-Build conditions. Under the 2030 Build conditions, the intersection is projected to continue to operate at LOS B during the weekday morning peak hour and LOS F during the weekday afternoon peak hour and reduce to LOS C during the Saturday midday peak hour. The I-95 off-ramp is projected to continue to operate at LOS F during the weekday afternoon peak hour with long queues and delays.

Under 2030 Build with Improvements conditions, the intersection is projected to operate at LOS B during the weekday morning and Saturday midday peak periods and LOS C during the afternoon peak period, with all movements operating at LOS D or better.

6

Conclusions

The proposed redevelopment plan includes the construction of up to 50,000 square feet (sf) of retail development and up to 220 residential units. The proposal includes one full-access driveway and one limited-access driveway on both New London Turnpike and Arnold Road, for a total of four access points. The north driveway will be a full access driveway providing access/egress to and from the proposed residential use and the other three driveways will be for the retail uses. Providing three access points to the retail uses will disperse the traffic minimizing delays and traffic impacts. The development plan will include mitigation measures to the adjacent roadway network that will incrementally offset the impacts of the proposed project.

Access to and from the development will be provided via one full-access driveway and one right-in/right-out access driveway on both New London Turnpike and Arnold Road, for a total of four access points. The north driveway will be a full access driveway providing access/egress to and from the proposed residential use and the other three driveways will be for the retail uses. Providing three access points to the retail uses will disperse the traffic minimizing delays and traffic impacts. The conceptual site plan dated May 30, 2025, has located the proposed site driveways to optimize the access/egress travel patterns of the site and provide adequate sight distance for vehicles entering/exiting the site.

Site specific off-site improvements will be implemented on New London Turnpike and Arnold Road immediately adjacent to the site as part of the site development plan. These improvements include the following:

- Installing sidewalk on New London Turnpike and Arnold Road immediately adjacent to the site
- Widening the New London Turnpike southbound approach to the Arnold Road signalized intersection to increase the length of the left turn storage lane and the length of the shared through/right-turn lane to accommodate projected queues
- Extend the two lanes on the Arnold Road westbound departure from the New London Turnpike/Arnold Road intersection to the new full access driveway (located across from Grandview Street) and sign the westbound right lane as "Right Turn Only" into the new full access site driveway.

VHB has also identified existing and future operational concerns on New London Turnpike between Arnold Road and the I-95 North ramps that will result from the cumulative traffic impacts of the seven (7) proposed developments that were included in this study and the Coventry Centre project. VHB has identified improvements that will mitigate the traffic impacts of these developments. The Town of Coventry can use this list of comprehensive transportation improvements to develop an implementation plan.

It is also recommended that the Town of Coventry and the Town of West Greenwich contact RIDOT to request that the State Traffic Commission (STC) investigate installation of a traffic signal at the New London Turnpike/I-95 North intersection.

Implementation of the comprehensive improvements discussed in this study will provide adequate capacity to accommodate the seven (7) proposed developments that were included in this study and the Coventry Centre project.

Appendix – Traffic Count Data