

TRAFFIC IMPACT AND ACCESS STUDY

**IRVING OIL
EAST HARTFORD, CONNECTICUT**



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PREPARED FOR:

**IRVING OIL CORPORATION –
NETWORK DEVELOPMENT
10 SYDNEY STREET
SAINT JOHN, NEW BRUNSWICK
E2L 5E6**

MAY 2018



***Traffic Impact and Access Study
Irving Oil
East Hartford, Connecticut
May 2018***

TECHNICAL MEMORANDUM

REF: MAX-2018022

DATE: May 9, 2018

TO: Ms. Jennifer Daigle, P. Eng
Irving Oil Corporation – Network Development
10 Sydney Street
Saint John, New Brunswick E2L 5E6

FROM: Mr. Christer Ericsson, P.E., President
Ms. Heather L. Monticup, P.E., Senior Project Manager
Ms. Susannah E. Theriault, P.E., Project Engineer

RE: Traffic Impact and Access Study
Irving Oil
249 Silver Lane (Route 502) – East Hartford, Connecticut

INTRODUCTION

Greenman-Pedersen, Inc. (GPI) has prepared this *Traffic Impact and Access Study* (TIAS) for a proposed Irving Oil development to be located at 249 Silver Lane (Route 502) in East Hartford, Connecticut. The site is currently vacant. The development consists of constructing a gasoline facility with 5 Multi-Product Dispensers (MPDs) having 10 vehicle-fueling positions (vfps) and a $\pm 5,000$ square foot (sf) building which includes a 3,600 sf convenience store and a 1,400 sf fast-food restaurant with drive through window. Access and egress to the site is currently provided via one curb cut along Silver Lane. As proposed, access and egress will be provided via two defined driveways on Silver Lane; one enter-only driveway at the western property line and one full access/egress driveway on the eastern property line. This TIAS evaluates the traffic impacts and access/egress requirements for the proposed development.

The site is bounded by Silver Lane to the north, residential homes to the south, a vacant lot and residential homes to the east, and a restaurant and corner store to the west. The site location in relation to the surrounding roadways is shown on the map on Figure 1.

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Figure 1
Project Location Map

EXISTING CONDITIONS

Study Area

Evaluation of the traffic impacts associated with the proposed project requires an evaluation of existing and projected traffic volumes on the adjacent streets, the volume of traffic expected to be generated by the project, and the impact that this traffic will have on the adjacent streets and nearby intersections. In preparing the TIAS for the proposed site, the following intersections have been analyzed and evaluated:

- Silver Lane (Route 502) at Mercer Avenue and the Interstate-84 (I-84) High-Occupancy Vehicle (HOV) Westbound Off-Ramp and Eastbound On-Ramp
- Silver Lane (Route 502) at Site Driveways

Silver Lane / I-84 HOV Ramps / Mercer Avenue

Within the vicinity of the site, Silver Lane (Route 502) is under state jurisdiction and is classified as an Urban Minor Arterial. Mercer Avenue is under local jurisdiction and is classified as local roadway. The I-84 HOV ramps are under state jurisdiction and are classified as part of the interstate.

The I-84 HOV ramps and Mercer Avenue intersect Silver Lane (Route 502) from the north and south, respectively, to form this four-legged, signalized intersection. The Silver Lane (Route 502) eastbound and westbound approaches consist of one exclusive left-turn lane and one shared through/right-turn lane. Directional flow is separated by a double yellow centerline in each direction, and shoulders ranging between one and four feet wide are provided on either side of the roadway. The I-84 HOV ramps southbound approach consists of one shared left-turn/through lane and one exclusive right-turn lane. Directional flow is separated by a double yellow centerline, which transitions to a grass median approximately 85 feet north of the intersection. Shoulders are provided along either side of the roadway ranging from five to six feet in width. The Mercer Avenue northbound approach consists of one shared left-turn/through lane and one exclusive right-turn lane. Directional flow is separated by a double yellow centerline and no shoulders are provided along either side of the roadway. The posted speed limit on Silver Lane (Route 502) is 35 mph (miles per hour).

Traffic Volumes

Base traffic conditions within the study area were developed by conducting manual-turning movement counts (TMCs), vehicle classification counts, and automatic traffic recorder (ATR) counts in April 2018. The TMCs and vehicle classification counts were performed during the

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weekday AM peak period (7:00 to 9:00 AM), Friday weekday PM peak period (4:00 to 6:00 PM), and Saturday midday peak period (11:00 AM to 2:00 PM). The ATRs were used to obtain weekday and Saturday daily traffic volumes along Silver Lane (Route 502) adjacent to the site. All traffic-count data are provided in the Appendix.

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. To determine if the April traffic-volume data needed to be adjusted to account for this fluctuation, historical traffic-volume data were reviewed from the Connecticut Department of Transportation (ConnDOT) records.¹ This information revealed that April traffic volumes are 5.2 percent below peak-month conditions on Friday and 2.8 percent below peak-month conditions on Saturday. Therefore, the April traffic counts were upwardly adjusted to reflect a peak-month analysis condition. The ConnDOT seasonal adjustment data is provided in the Appendix.

Table 1 summarizes the existing daily and peak-hour traffic volumes on Silver Lane (Route 502) adjacent to the site. The 2018 Existing traffic-flow networks for the weekday AM, weekday PM, and Saturday midday peak hours are shown graphically on Figure 2.

Table 1
EXISTING TRAFFIC-VOLUME SUMMARY

Location/Time Period	Daily Volume (vpd) ^a	Peak Hour Volume (vph) ^b	K Factor (%) ^c	Directional Distribution ^d
Silver Lane adjacent to site:				
Weekday Daily	19,800			
<i>Weekday AM Peak Hour</i>		1,355	6.8	54% WB
<i>Weekday PM Peak Hour</i>		1,792	9.1	54% EB
Saturday Daily	15,400			
<i>Saturday Midday Peak Hour</i>		1,150	7.5	51% WB

^a In vehicles per day, seasonally adjusted to reflect peak-month conditions.

^b In vehicles per hour, seasonally adjusted to reflect peak-month conditions.

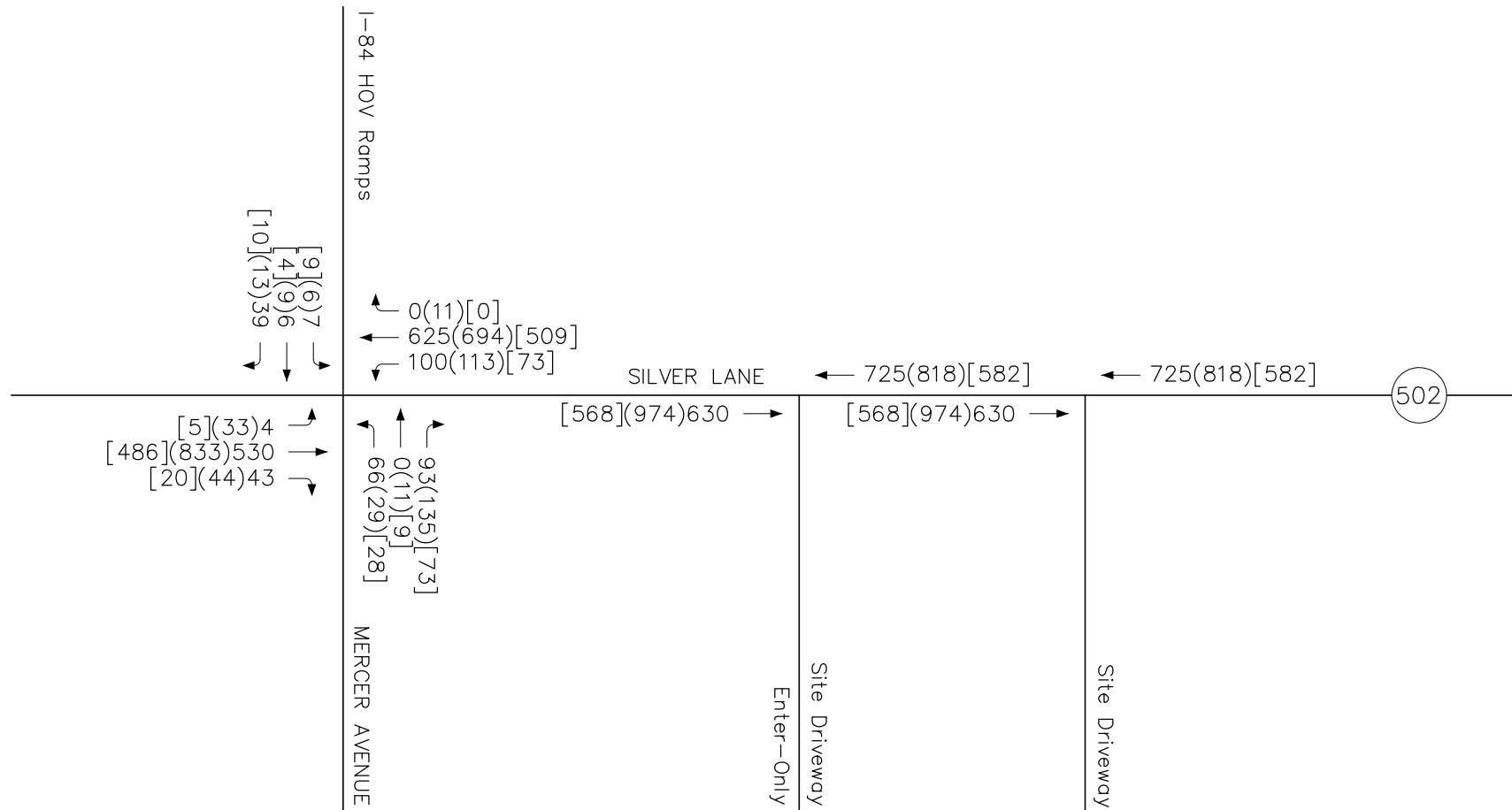
^c Percentage of daily traffic occurring during the peak hour.

^d EB= eastbound, WB = westbound.

¹ConnDOT 2015 Traffic Volumes; CC Station 049 – Interstate 84 west of Prospect Avenue (West Hartford).

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NOT TO SCALE

Figure 2

2018 Existing
Peak Hour Traffic Volumes

Collisions

Collision data for the study area intersection was obtained from the University of Connecticut (UConn) Connecticut Crash Data Repository for the latest complete three years available. Collision data was also requested from the East Hartford Police Department, but had not been received at the time of this study. A summary of the crash data is provided in Table 2.

Based on the collision data from UConn, the signalized intersection of Silver Lane (Route 502) at Mercer Avenue experienced, on average, 0.6 collisions per year over the three-year study period (2012-2014). Of the five collisions, one resulted in property damage only and four resulted in possible injury. Three collisions were cross movement/angle crashes, one was a rear-end crash, and one was a collision with a pedestrian. None of the crashes occurred during commuter peak periods and 40 percent of the crashes occurred in wet/icy conditions.

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Table 2
COLLISION SUMMARY

Location	Number of Collisions		Severity ^a				Collision Type ^b						Percent During	
	Total	Average per Year	PD	PI	F	P	SS	RE	CM	PED	HO	NR	Commuter Peak ^c	Wet/Icy Conditions ^d
UConn (2012-2014)														
Silver Lane (Route 502) at Mercer Avenue	5	0.6	1	--	--	4	--	1	3	1	--	--	0%	40%

^a PD = property damage only; PI = personal injury; F = fatality, P = possible injury.

^b SS = sideswipe; RE = rear end; CM = cross movement/angle; PED = pedestrian; HO = head on; NR = not reported.

^c Percent of vehicle incidents that occurred during the weekday AM (7:00 AM-9:00 AM) and weekday PM (4:00 PM -6:00 PM) commuter peak periods.

^d Represents the percentage of only “known” collisions occurring during inclement weather conditions.

Vehicle Speeds

Vehicle speed measurements were conducted along Silver Lane (Route 502) by measuring the elapsed time for vehicles traveling a short, pre-measured distance between two checkpoints. The travel times were recorded using ATRs and the speeds were derived by dividing the elapsed time into the measured distance between checkpoints. The primary use of this information is explained in the *Sight Distance* section where the speeds are correlated to sight distance measurements taken at the location of the site driveways to assure that adequate sight distances exist at the driveways to provide safe operation. The results of the speed measurements are summarized in Table 3.

Table 3
OBSERVED TRAVEL SPEEDS ^a

Location/Direction	Posted Speed Limit	Average Speed ^b	85 th Percentile Speed ^c
Silver Lane adjacent to site:			
<i>Eastbound</i>	35	33	37
<i>Westbound</i>	35	31	37

^a In miles per hour (mph).

^b Average speed of all observed vehicles.

^c Speed at, or below which 85 percent of all observed vehicles travel.

As shown in Table 3, the average speeds along Silver Lane (Route 502) were found to be 33 miles per hour (mph) and 31 mph in the eastbound and westbound directions, respectively, with the 85th percentile speeds at 37 mph for both directions. The observed speeds were found to be generally consistent with the posted speed limit of 35 mph adjacent to the site.

Public Transportation and Carpooling

The project site is located in close proximity to two (2) CTtransit fixed route public transit options that run through the project area, Route 83 and Route 121. Both public transit maps and schedules are provided in the Appendix.

Route 83 – Silver Lane – Services the communities of Hartford, East Hartford, and Manchester, and provides connection between Union Station Transit Center in Hartford to the Manchester Business Park in Manchester via Silver Lane (Route 502). The average travel time between Hartford and Manchester is between 48 and 84 minutes in the outbound direction and between 55 and 93 minutes in the inbound direction. On a typical weekday, the service runs between

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5:03 AM and 11:31 PM in the outbound direction and runs between 5:00 AM and 11:36 PM in the inbound direction. Saturday outbound service runs between 6:13 AM and 11:31 PM and inbound service runs between 6:09 AM and 11:36 PM. Sunday outbound service runs between 6:44 AM and 8:30 PM and inbound service runs between 6:43 AM and 7:28 PM.

Route 121 – Manchester Community College (MCC) / Hartford / University of Connecticut (UConn) Health – Services the communities Farmington, New Britain, Newington, West Hartford, Hartford, East Hartford, and Manchester, and provides connection between Manchester Community College and the UConn Health Outpatient Pavilion. The average travel time between Manchester and Farmington is approximately 67 minutes in the outbound direction and approximately 75 minutes in the inbound direction. On a typical weekday, the outbound service runs between 4:56 AM and 12:39 AM, beginning at the Columbus Boulevard/ Kinsley Street stop in Hartford, and terminating at the Sigourney Street Station in Hartford. Inbound service runs between 4:53 AM and 12:33 AM, beginning at the Sigourney Street Station in Hartford stop in Hartford, and terminating at the Capitol Avenue / Trinity Street stop in Hartford. Saturday outbound service runs from 5:25 AM to 12:45 AM beginning at the Columbus Boulevard / Kinsley Street stop in Hartford, and terminating at the Sigourney Street Station in Hartford. Inbound service runs from 5:45 AM and 12:45 AM, beginning at both the Sigourney Street Station in Hartford and UConn Health Outpatient Pavilion, and terminating at 100 Constitution Plaza in Hartford. Sunday outbound service runs from 6:20 AM to 9:55 PM beginning at the Columbus Boulevard / Kinsley Street stop in Hartford, and terminating at the Sigourney Street Station in Hartford. Inbound service runs from 6:42 AM to 9:50 PM beginning at the Sigourney Street Station in Hartford, and terminating at 100 Constitution Plaza in Hartford.

The closest bus stop serviced by Route 83 and Route 121 buses is located along Silver Lane on the western side of the intersection with Mercer Street. The bus stop is provided on both sides of the roadway for travel in either direction. No amenities are provided at these stops.

Although those traveling to/from the proposed Irving Oil development for the use of the gas facility will not be using the public transit, the option is available for the patrons traveling to/from the site for the use of the convenience store and fast-food restaurant. In addition, public transit as described above and carpooling options, such as CTrides, are available to the employees of the development.

FUTURE CONDITIONS

To estimate the impact of site-generated traffic within the study area, existing traffic volumes were projected to the year 2019, representing design year of occupancy in accordance with the Town of East Hartford Traffic Impact Study requirements. The proposed development is expected to be completed and fully operational well within this time frame. Traffic volumes on the roadway network at that time will include existing traffic and new traffic due to normal traffic growth.

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Consideration of these factors resulted in the development of 2019 No-Build traffic volumes, which assume that the proposed development is not built. The incremental impacts of the proposed project may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the No-Build conditions.

Traffic Growth

To develop the 2019 No-Build forecast volumes, two components of traffic growth were considered. First, an annual growth percentage was determined. Based on historic traffic-volume counts provided by ConnDOT, traffic volumes in the area have been increasing at a rate of approximately 0.5 percent per year.² Therefore, a 1 percent compounded annual growth was assumed for the project area. The ConnDOT adjustment data are provided in the Appendix.

Second, any planned or approved specific developments in the area that would generate a significant volume of traffic on study area roadways within the next year were considered. Based on discussions with the Town Planner, there are no specific developments in the area.

Planned Roadway Improvements

Based on discussions with the Department of Public Works (DPW), there are currently no roadway improvement projects planned to be constructed within the study area during the design horizons.

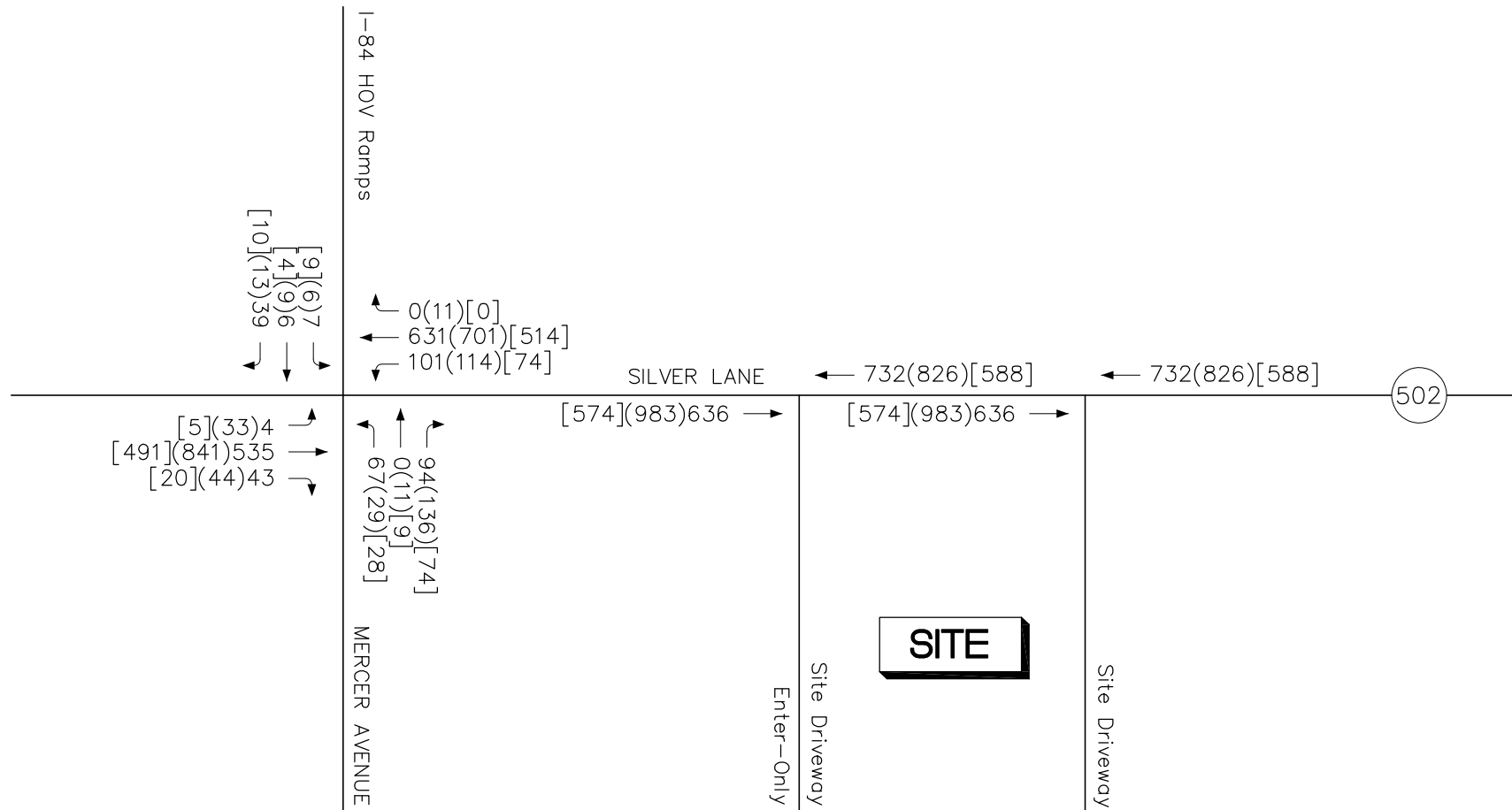
No-Build Conditions

The 2019 No-Build peak-hour traffic volumes were accordingly developed by applying a 1 percent compounded annual traffic growth rate (1 percent over one year) to the 2018 Existing traffic volumes and adding the traffic to be generated by the development. The 2019 No-Build traffic volumes are shown graphically on Figure 3 for the weekday AM, weekday PM, and Saturday midday peak hours.

² *State of Connecticut Department of Transportation: (2015-2009) Traffic Volumes State Maintained Highway Network (Traffic Log); Station 16, Station 37, Station 61, Station 72, Station, 213, Station, 331, Station 333, East Hartford.*

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NOT TO SCALE

Figure 3

2019 No-Build
Peak Hour Traffic Volumes

Trip Generation

To estimate the volume of traffic to be generated by the proposed development, trip-generation rates published by the ITE *Trip Generation Manual*³ were researched. The site is currently vacant. The development consists of constructing a gasoline facility with 5 MPDs having 10 vfps and a ±5,000 sf building which includes a 3,600 sf convenience store and a 1,400 sf fast-food restaurant with drive through window. Land Use Code (LUC) 960 (Super Convenience Market/Gas Station) and LUC 934 (Fast-Food Restaurant with Drive-Through Window) was used to estimate the potential trip generation of the proposed development. All trip-generation data are provided in the Appendix.

Studies have shown that for developments of mixed-use or multi-use sites, it is realistic to assume that there will be some multi-use trips within the site itself. For example, someone fueling their vehicle may also stop at the fast food restaurant. Therefore, a reduction in the overall trips experienced at the site driveways can be anticipated as a result of multi-use trips that include stops at more than one use on the site. Based on information published in the ITE *Trip Generation Handbook*⁴, *Procedure for Estimating Multi-Use Trip Generation*, it is estimated that multi-use trips account for 16 percent of weekday daily, 11 percent of weekday AM peak hour, 12 percent of weekday PM peak hour, 10 percent of Saturday daily, and 10 percent of Saturday midday peak hour trips generated by the site. The Multi-Use Development Trip Generation and Internal Capture Worksheets are provided in the Appendix.

Not all of the vehicle trips expected to be generated by the proposed development represent *new* trips on the study area roadway system. Studies have shown that for developments such as the one proposed, a substantial portion of the site-generated vehicle trips are already present in the adjacent passing stream of traffic. Based on information published in the ITE *Trip Generation Handbook*, the average *pass-by* trip percentage is 62 percent during the weekday AM peak hour and 56 percent during the weekday PM peak hour for Gasoline/Service Station with Convenience Market. The average *pass-by* trip percentage is 49 percent during the weekday AM peak hour and 50 percent during the weekday PM peak hour for Fast-Food Restaurant with Drive-Through Window. Per discussions with the ConnDOT District Office, a maximum pass-by credit of 20% is allowed. The lower percentage of *pass-by* trips result in more new trips to the study area than expected. Therefore, the proposed project is anticipated to have less impact on the adjacent roadways system beyond the site driveways due to the higher than expected new trips. Table 4 summarizes the results of the trip-generation estimates.

³ *Trip Generation, 10th Edition*. Institute of Transportation Engineers; Washington, DC; 2017.

⁴ *Trip Generation Handbook*; 3rd Edition; Institute of Transportation Engineers; Washington, DC; August 2014.

Table 4
TRIP-GENERATION SUMMARY

Time Period/Direction	Total External Trips ^a	Pass-By Trips ^b	New Trips ^d
Weekday Daily	2,500	500	2,000
Weekday AM Peak Hour:			
<i>In</i>	151	30	121
<i>Out</i>	<u>148</u>	<u>30</u>	<u>118</u>
<i>Total</i>	299	60	239
Weekday PM Peak Hour:			
<i>In</i>	123	24	99
<i>Out</i>	<u>121</u>	<u>24</u>	<u>97</u>
<i>Total</i>	244	48	196
Saturday Daily	3,410	680	2,730
Saturday Midday Peak Hour:			
<i>In</i>	140	28	112
<i>Out</i>	<u>138</u>	<u>28</u>	<u>110</u>
<i>Total</i>	278	56	222

^a ITE LUC 960 (Super Convenience Market/Gas Station) for 10 vfps and
ITE LUC 934 (Fast-Food Restaurant with Drive-Through Window) for 1,400 SF.

^b 20 percent of Total External Trips.

^c Total Trips minus Pass-By Trips.

As shown in Table 4, the proposed development is expected to generate 239 *new* vehicle trips (121 entering and 118 exiting) during the weekday AM peak hour, 196 *new* vehicle trips (99 entering and 97 exiting) during the weekday PM peak hour, and 222 *new* trips (112 entering and 110 exiting) during the Saturday midday peak hour assuming the reduced pass-by rate allowed by ConnDOT. It should be noted that the volume of *pass-by* traffic does not reduce the total volume of traffic generated by the development and the external trips will still be realized as turning movements at the site driveways.

Trip Distribution

Having estimated project-generated vehicle trips, the next step is to determine the distribution of project traffic and assign these trips to the local roadway network. The directional distribution of site traffic is dependent on expected travel route to and from the site and existing travel patterns. Accordingly, 45 percent of the site traffic is expected to/from the east along Silver Lane, 45 percent

to/from the west along Silver Lane, and 10 percent to/from the south along Mercer Avenue. The pass-by trips will follow the distribution of the adjacent street traffic. Due to the location of the drive-through on site, it was assumed that 70 percent of the trips from the west enter the site via the western (enter-only) site driveway and 30 percent of the trips enter via the eastern driveway. In addition, 60 percent of the trips from the east enter the site via the western (enter-only) site driveway and 40 percent of the trips enter via the eastern driveway.

Sight Distance

As proposed, access and egress will be provided via two defined driveways on Silver Lane; one enter-only driveway at the western property line and one full access/egress driveway on the eastern property line. To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed eastern site driveway location to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO)⁵. AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported.

Sight distance is the length of roadway ahead that is visible to the driver. Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling at a certain speed to safely stop before reaching a stationary object in its path. The values are based on a driver perception and reaction time of 2.5 seconds and a braking distance calculated for wet, level pavements. When the roadway is either on an upgrade or downgrade, grade correction factors are applied. Stopping sight distance is measured from an eye height of 3.5 feet to an object height of 2 feet above street level, equivalent to the taillight height of a passenger car. The SSD is measured along the centerline of the traveled way of the major road.

Intersection sight distance (ISD) is provided on minor street approaches to allow the drivers of stopped vehicles a sufficient view of the major roadway to decide when to enter the major roadway. By definition, ISD is the minimum distance required for a motorist exiting a minor street to turn onto the major street, without being overtaken by an approaching vehicle reducing its speed from the design speed to 70 percent of the design speed. ISD is measured from an eye height of 3.5 feet to an object height of 3.5 feet above street level. The use of an object height equal to the driver eye height makes intersection sight distances reciprocal (i.e., if one driver can see another vehicle, then the driver of that vehicle can also see the first vehicle). When the minor street is on an upgrade that exceeds 3 percent, grade correction factors are applied.

⁵*A Policy on Geometric Design of Highways and Streets*; American Association of State Highway and Transportation Officials (AASHTO); 2011.

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SSD is generally more important as it represents the minimum distance required for safe stopping while ISD is based only upon acceptable speed reductions to the approaching traffic stream. The ISD, however, must be equal to or greater than the minimum required SSD in order to provide safe operations at the intersection. In accordance with the AASHTO manual, *“If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.”* Accordingly, ISD should be at least equal to the distance required to allow a driver approaching the minor road to safely stop.

The available SSD and ISD at the proposed eastern site driveway location were measured and compared to minimum requirements as established by AASHTO. Based on the posted and observed speeds on Silver Lane (Route 502), the SSD and ISD requirements at this intersection were calculated. The required minimum sight distances for the driveway are compared to the available distances, as shown in Table 5.

Table 5
SIGHT DISTANCE SUMMARY

Location/Direction	Stopping Sight Distance (feet)		Intersection Sight Distance (feet)		
	Measured	Minimum Required ^a	Measured	Minimum Required ^b	Desirable ^c
Silver Lane at Eastern Site Driveway:					
East of intersection (WB)	450	270	450	270	415
West of intersection (EB)	450	270	450	270	390

^a Values based on AASHTO requirements for the 85th percentile speed of 37 mph on Silver Lane in both directions.

^b Values based on AASHTO requirements for SSD.

^c Values based on AASHTO requirements for posted speed limit of 35 mph on Silver Lane.

As indicated in Table 5, available sight distances at the proposed eastern site driveway on Silver Lane exceed the minimum and desirable SSD and ISD requirements as recommended by AASHTO. In addition, it is recommended that any proposed plantings, vegetation, landscaping, and signing along the site frontage be kept low to the ground (no more than 3.0 feet above street level) or set back sufficiently from Silver Lane so as not to inhibit the available sight lines.

Build Traffic Volumes

Based on the traffic generation and distribution estimates for this project, the traffic volumes associated with the proposed development were assigned to the roadway network. The site-generated traffic networks are shown on Figures 4, 5, and 6 for the weekday AM, weekday PM, and Saturday midday peak hours, respectively. The site-generated traffic volumes were then combined with the 2019 No-Build traffic volumes to develop the 2019 Build peak-hour traffic-volume networks. The 2019 Build weekday AM, weekday PM, and Saturday midday peak hour traffic volumes are illustrated on Figure 7.

Traffic Increases

The proposed development will result in increases in traffic on the study area roadways. As shown on Figures 4 through 6, traffic-volume increases beyond the study area during the peak hours are expected to be in the range of 20 to 108 vehicles. These increases represent, on average, one additional vehicle approximately every 0.5 to 3 minutes during the peak hours. It should be noted that these traffic-volume increases are expected to be less than evaluated due to the lower percentage of *pass-by* trips used.

DRIVE-THROUGH FACILITY**Description**

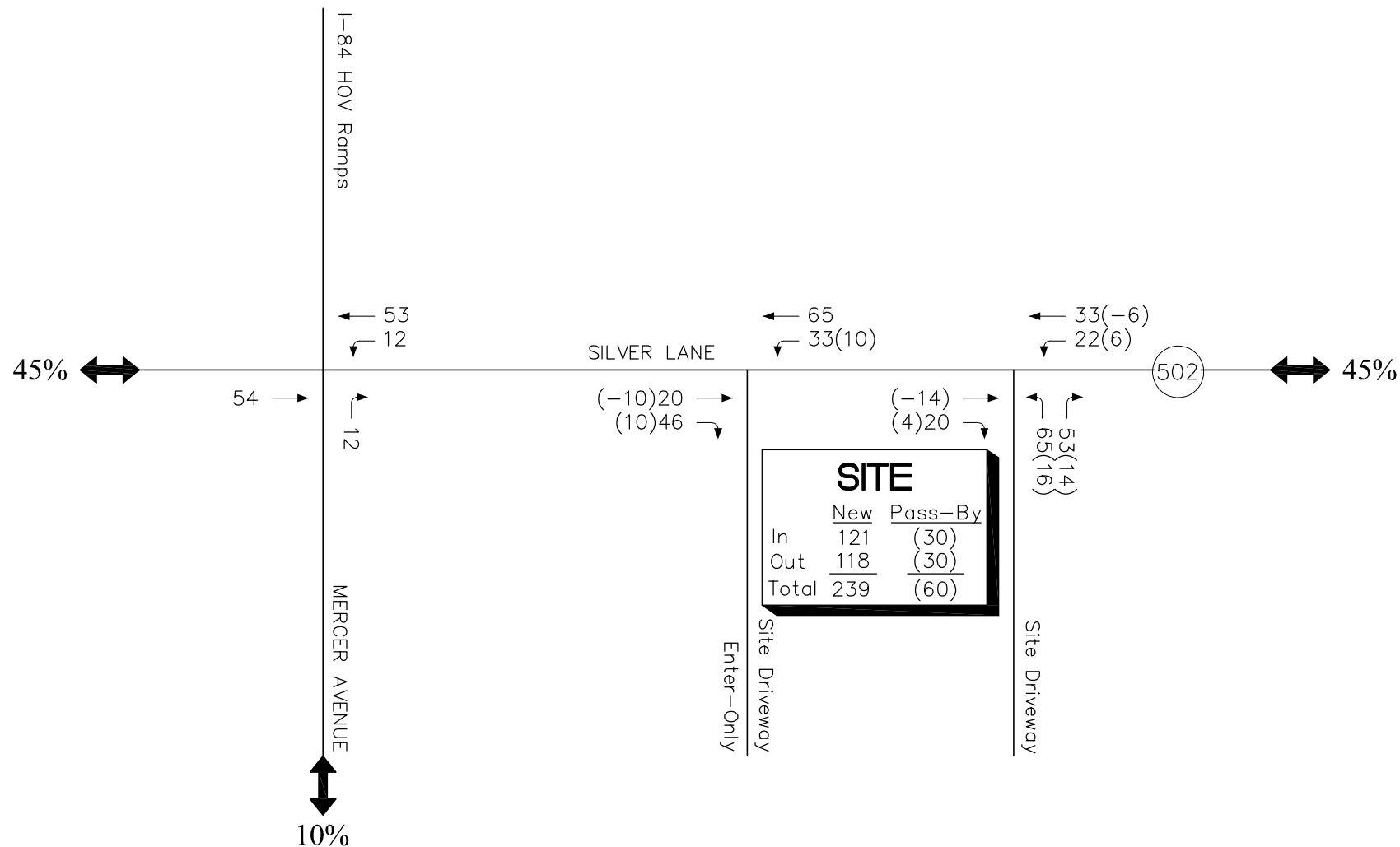
As described in the local *General Requirements for Drive-Through Facilities*, the proposed drive-through queuing lane will be located along the back and the side of the proposed restaurant and not along the frontage side of the building. A 10-foot wide drive-through queuing lane will be provided and separated from the adjacent parking aisle by a raised internal island. In addition, a 10-foot wide by-pass lane is provided adjacent to the queuing lane for those who wish to get out of the drive-through lane once in it.

Drive-Through Design

The proposed drive-through facility has been designed to separate drive-through traffic from other site circulating traffic, not to impede or impair access into or out of parking spaces, not to impede or impair vehicle or pedestrian traffic movements, and located to minimize conflicts between pedestrian and vehicular traffic. The entrance to the drive-through facility will be located more than 60 feet from any intersection with a public street, as required. Both the entrance and exit to

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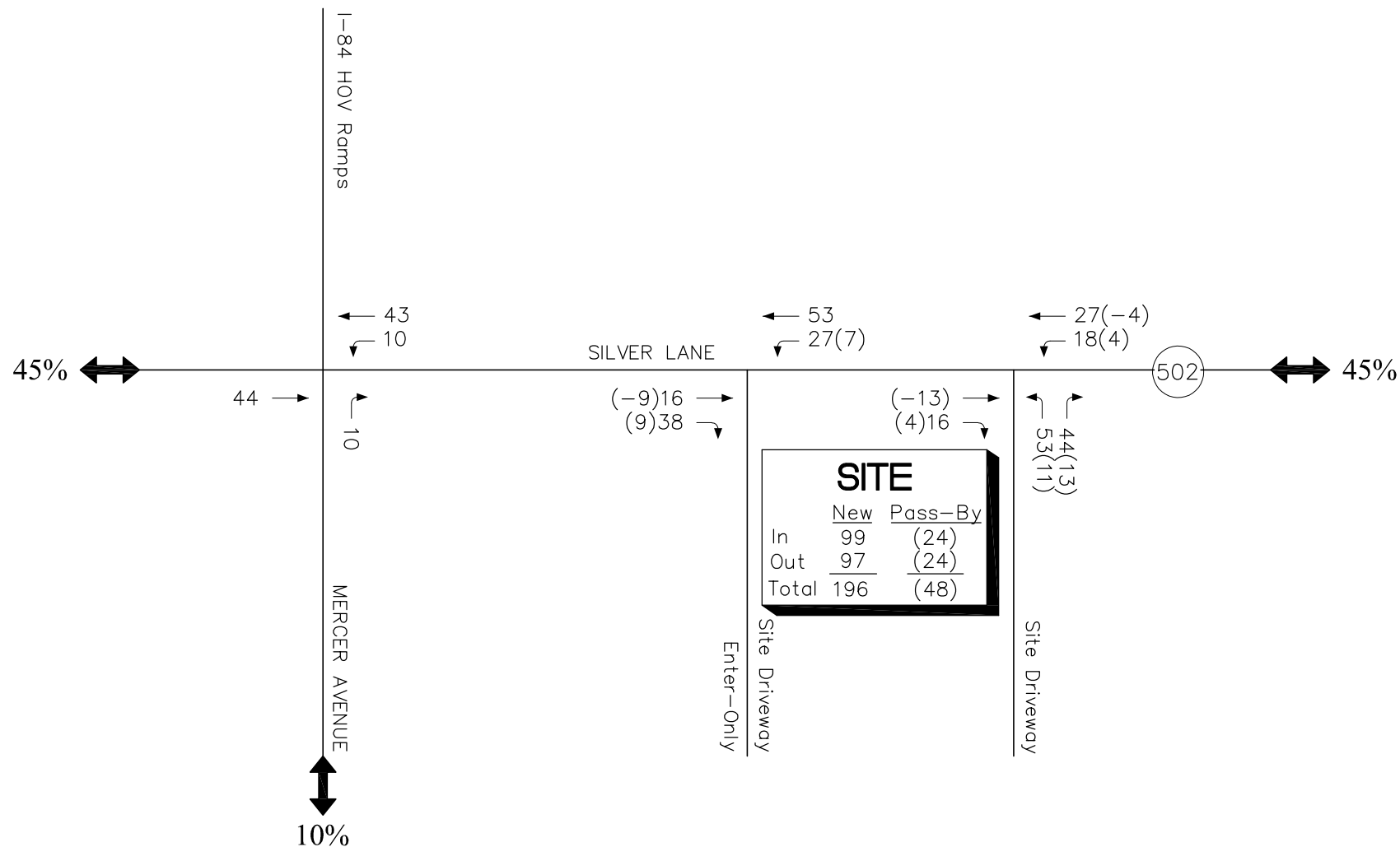


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Figure 4
Site-Generated
Weekday AM
Peak Hour Traffic Volumes

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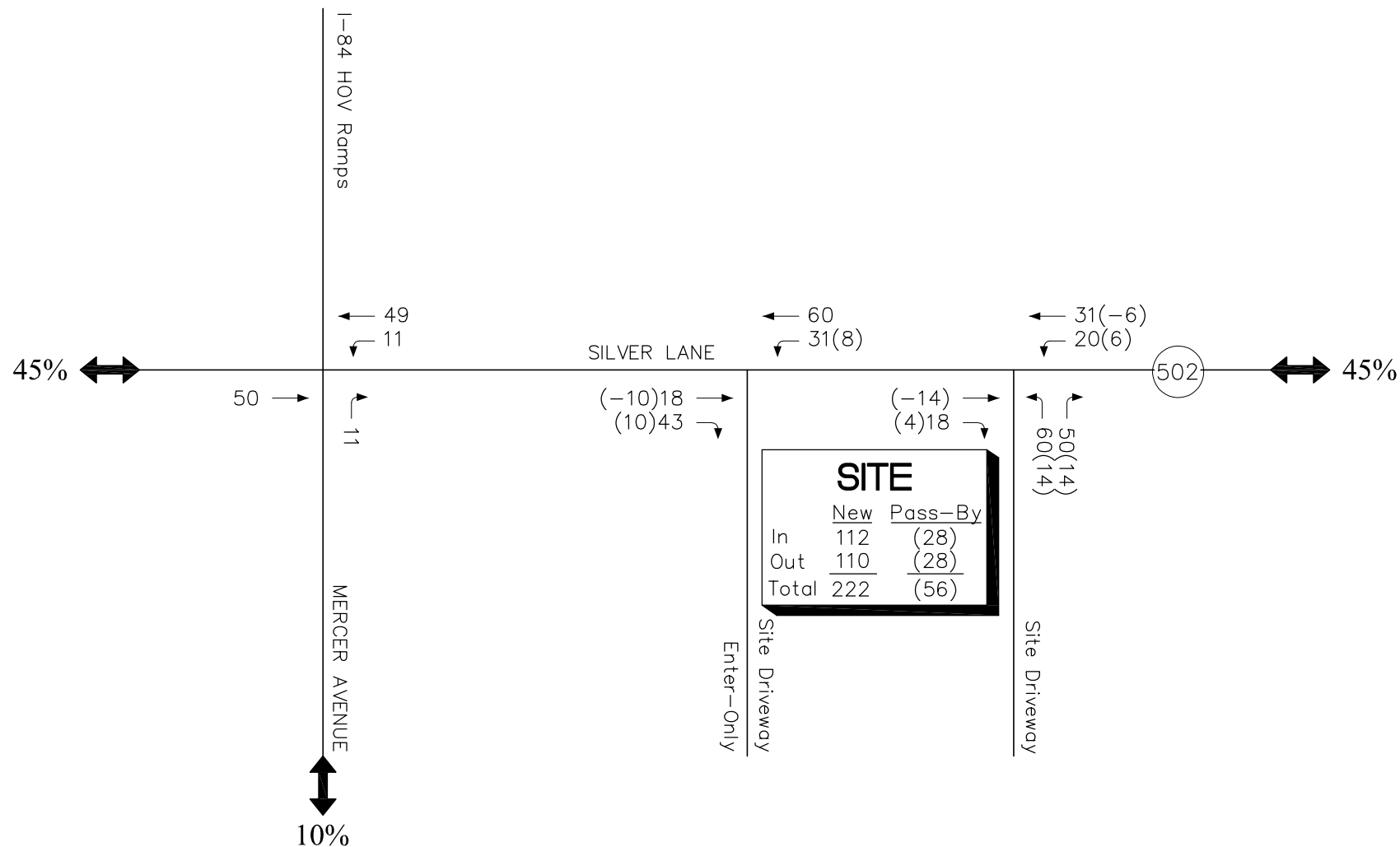


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Figure 5
Site-Generated
Weekday PM
Peak Hour Traffic Volumes

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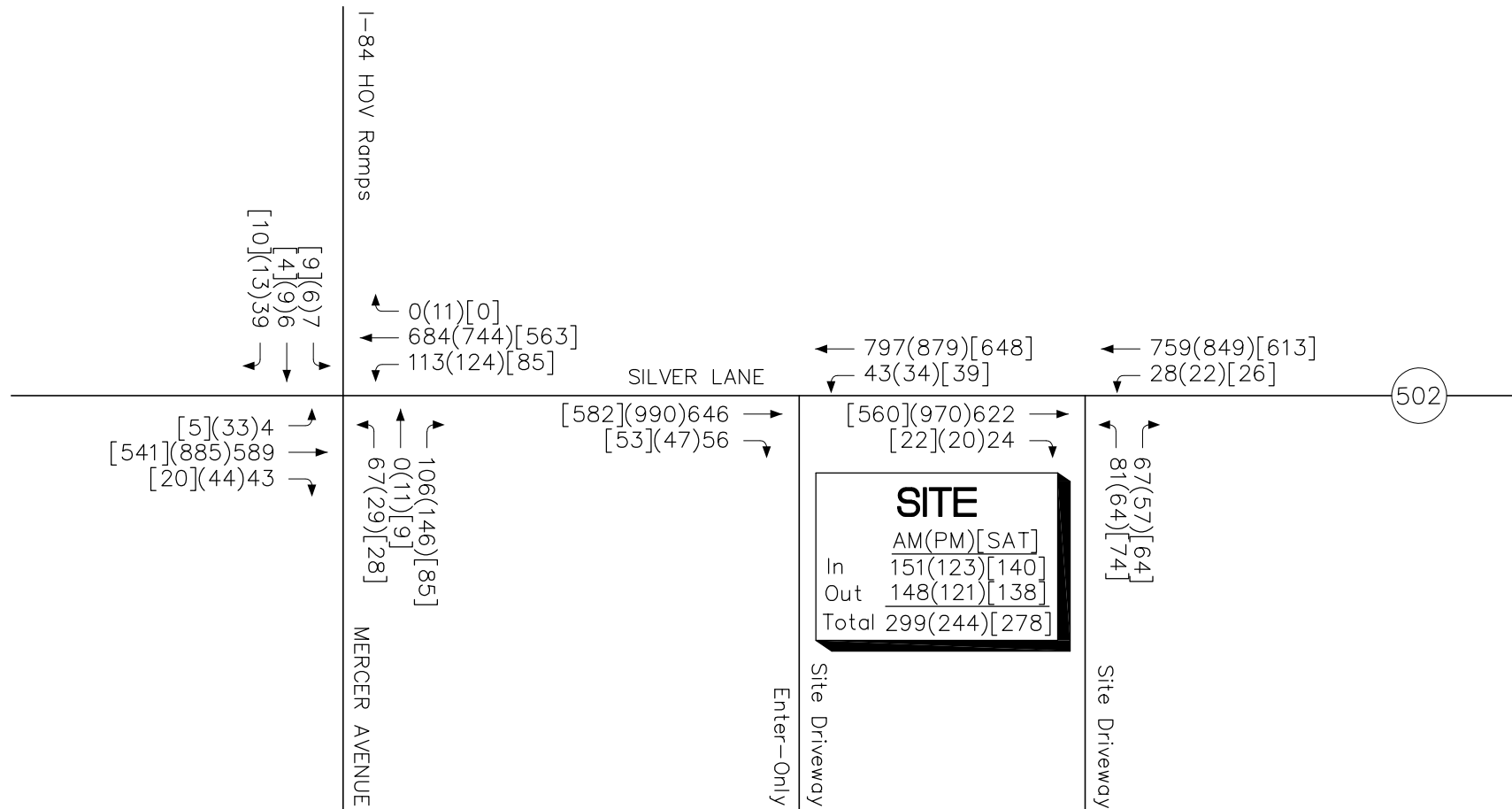


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Figure 6
Site-Generated
Saturday Midday
Peak Hour Traffic Volumes

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NOT TO SCALE

Figure 7

2019 Build
Peak Hour Traffic Volumes

the drive-through facility will be located within the site and not enter or exit into the public right-of-way. The location of the proposed restaurant within an existing site provides opportunities to promote shared trips between the restaurant and the proposed gas station/convenience store as well as a future development to the east using internal connections and a cross-connection.

Drive-Through Stacking

Since the proposed drive-through facility will include an order-board and a pick-up window, local regulations require a total of 16 vehicle queuing spaces, assuming 22 feet in length, with a minimum of 2 spaces before the window. The drive-through stacking queue for sandwich shop restaurants, however, are typically much less than those found for chain hamburger fast-food restaurants or donut shops.

Based on an article published in the *ITE Journal*, fast-food restaurants typically experience, on average, a 7 vehicle maximum queue at the drive-through window.⁶ These data include chain hamburger restaurants and donut shops. Sandwich shop restaurant drive-through queues, however, are typically much less than those found for chain hamburger fast-food restaurants or donut shops. Therefore, these data suggest that the maximum back of queue for the proposed restaurant is expected to be 5 vehicles or less.

The local regulations allow for a 50 percent reduction of the 16-vehicle stacking requirement based on information and justification provided to warrant the reduction. Based on the data presented by ITE, the provided stacking capacity of 10 vehicles should be sufficient for the proposed restaurant. In addition, although the stacking requirements are measured by assuming 22 feet per vehicle, observations have shown the stacking distances between the front of a vehicle to the front of the next vehicle is typically closer to 20 feet.

The proposed drive-through lane can accommodate 10 vehicles within the striped drive-through lane assuming 22 feet per vehicle. Based on queuing data provided by ITE, the proposed drive-through window lane is anticipated to accommodate the expected vehicle queues on site.

⁶ *Queuing Areas for Drive-Thru Facilities*; ITE Journal; May 1995.

CAPACITY AND QUEUE ANALYSIS

Capacity and queue analyses were conducted at all study area locations under 2018 Existing, 2019 No-Build, and 2019 Build traffic-volume conditions. The impact of site-generated traffic can be measured by comparing 2019 No-Build conditions to 2019 Build conditions.

Methodology

The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM)⁷ and is described in the Appendix. The TIAS utilizes the HCM 2000 methodology at the signalized intersection due to the fact that *HCM 2010 methodology does not support exclusive ped or hold phases*. It should be noted that the timings are different for the 2018 analysis condition and the 2019 analysis conditions. The ConnDOT District is currently in the process of revising the clearance intervals throughout District 1, and those timing changes are established at this point but have not yet been implemented. It is expected that these updated clearance intervals will be implemented by the year 2019. The TIAS utilizes the HCM 2010 methodology at the unsignalized full access/egress site driveway intersection. The level-of-service results are presented and discussed below and the analysis worksheets for all conditions are provided in the Appendix.

For unsignalized intersections, the 95th percentile queue represents the length of queue of the critical minor-street movement that is not expected to be exceeded 95 percent of the time during the analysis period (typically one hour). In this case, the queue length is a function of the capacity of the movement and the movement's degree of saturation. For signalized intersections, the maximum back of queue during a typical (average) signal cycle and a 95th percentile signal cycle were calculated for each lane group during the peak periods studied. The back of queue is the length of a backup of vehicles from the stop line of a signalized intersection to the last vehicle in the queue that is required to stop, regardless of the signal indication. The length of this queue depends on a number of factors including signal timing, vehicle arrival patterns, and the saturation flow rate.

Analysis Results

The results of the level-of-service (LOS) and queue analyses are shown in Table 6 and are discussed below. Capacity and queue analyses were conducted at the study area intersections utilizing *Synchro* software.⁸

⁷ *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000.

Highway Capacity Manual 2010, Transportation Research Board; Washington, D.C.; 2010.

⁸ *Synchro plus SimTraffic 9*; Trafficware LLC.; Sugar Land, TX; 2014.

Silver Lane (Route 502) at Mercer Avenue and the Interstate-84 (I-84) High-Occupancy Vehicle (HOV) Westbound Off-Ramp and Eastbound On-Ramp

As shown in Table 6, under existing and future traffic-volume conditions, the signalized intersection of Silver Lane at Mercer Avenue and the I-84 HOV ramps is anticipated to operate at an overall LOS C or better with all movements at LOS D or better. As a result of the development, increases in delay are expected to be less than 7 seconds on any movement with an increase in queue length of 6 vehicles or less. The volume-to-capacity (v/c) ratio on all movements is expected to be below 1.00 indicating there will be adequate capacity to accommodate the anticipated traffic volumes.

It should be noted that the ConnDOT requirements restrict the *pass-by* rate to 20 percent when studies have shown for these types of facilities the *pass-by* rate is 49 percent or higher. The lower percentage of *pass-by* trips result in more new trips to the study area than expected. Therefore, the proposed project is anticipated to have less impact on the adjacent roadways system beyond the site driveways due to the higher than expected new trips.

Silver Lane (Route 502) at Site Driveways

Under future traffic-volume conditions, the Silver Lane westbound left turn movement into the site is anticipated to operate at LOS B or better with queue lengths of 1 vehicle or less. The eastern site driveway approach is expected to operate with long delays (LOS F) during the weekday AM and weekday PM peak hours. The queue lengths on the site driveway are expected to be approximately 6 vehicles or less, which can be accommodated on site without disrupting flow on Silver Lane.

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

Table 6
INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection/Peak Hour/Lane Group	2018 Existing				2019 No-Build				2019 Build			
	V/C ^a	Del. ^b	LOS ^c	Queue ^d	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Silver Lane / Mercer Avenue / I-84 HOV Ramps												
<i>Weekday AM:</i>												
Silver Lane EB left-turn	0.01	9.3	A	1/8	0.01	10.9	B	1/9	0.01	11.0	B	1/10
Silver Lane EB through/right-turn	0.73	17.7	B	166/539	0.75	20.9	C	191/657	0.78	22.5	C	223/808
Silver Lane WB left-turn	0.30	8.4	A	10/58	0.33	10.1	B	12/70	0.35	10.9	B	14/77
Silver Lane WB through/right-turn	0.61	9.5	A	112/453	0.63	11.2	B	130/544	0.64	10.7	B	149/619
Mercer Avenue NB left-turn/through	0.41	25.6	C	32/91	0.46	30.4	C	37/100	0.52	36.1	D	44/103
Mercer Avenue NB right-turn	0.09	23.1	C	0/17	0.09	27.2	C	0/16	0.10	31.9	C	0/15
I-84 HOV Ramps SB left-turn/through	0.07	23.0	C	6/26	0.08	27.2	C	7/28	0.09	31.8	C	9/29
I-84 HOV Ramps SB right-turn	0.04	22.8	C	0/14	0.04	26.9	C	0/0	0.04	31.4	C	0/0
Overall Intersection	0.62	15.1	B	--/--	0.65	17.8	B	--/--	0.69	19.1	B	--/--
<i>Weekday PM</i>												
Silver Lane EB left-turn	0.08	7.0	A	6/35	0.09	8.8	A	6/41	0.10	9.0	A	7/42
Silver Lane EB through/right-turn	0.84	19.5	B	299/1030	0.89	27.2	C	339/1209	0.94	34.0	C	382/1301
Silver Lane WB left-turn	0.41	13.6	B	9/55	0.49	18.3	B	11/86	0.57	24.8	C	17/117
Silver Lane WB through/right-turn	0.56	5.9	A	109/466	0.59	7.6	A	123/585	0.62	8.1	A	137/653
Mercer Avenue NB left-turn/through	0.34	39.6	D	24/66	0.36	42.6	D	24/71	0.36	42.8	D	25/71
Mercer Avenue NB right-turn	0.10	37.5	D	0/49	0.10	40.3	D	0/51	0.11	40.5	D	0/52
I-84 HOV Ramps SB left-turn/through	0.16	37.9	D	12/29	0.17	40.7	D	12/32	0.17	40.9	D	13/32
I-84 HOV Ramps SB right-turn	0.01	36.9	D	0/0	0.01	39.7	D	0/0	0.01	39.8	D	0/0
Overall Intersection	0.73	16.3	B	--/--	0.77	20.9	C	--/--	0.81	24.5	C	--/--

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^c Level of service.

^d Average/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

Table 6 (continued)
INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection/Peak Hour/Lane Group	2018 Existing				2019 No-Build				2019 Build			
	V/C ^a	Del. ^b	LOS ^c	Queue ^d	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
<i>Saturday Midday:</i>												
Silver Lane EB left-turn	0.01	7.0	A	1/9	0.01	8.6	A	1/10	0.01	8.2	A	1/11
Silver Lane EB through/right-turn	0.61	11.4	B	118/380	0.64	14.0	B	134/460	0.66	14.4	B	156/530
Silver Lane WB left-turn	0.16	5.1	A	5/38	0.18	6.4	A	6/46	0.22	6.9	A	7/51
Silver Lane WB through/right-turn	0.45	5.3	A	59/271	0.46	6.6	A	67/336	0.49	6.6	A	78/382
Mercer Avenue NB left-turn/through	0.25	25.1	C	10/57	0.27	28.9	C	11/65	0.29	31.2	C	12/66
Mercer Avenue NB right-turn	0.05	23.9	C	0/43	0.05	27.4	C	0/40	0.06	29.6	C	0/51
I-84 HOV Ramps SB left-turn/through	0.08	24.0	C	3/26	0.09	27.6	C	4/30	0.09	29.8	C	4/30
I-84 HOV Ramps SB right-turn	0.01	23.6	C	0/0	0.01	27.2	C	0/0	0.01	29.2	C	0/0
Overall Intersection	0.51	9.9	A	--/--	0.55	12.0	B	--/--	0.58	12.4	B	--/--

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^c Level of service.

^d Average/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

Table 6 (continued)
INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection/Peak Hour/Lane Group	2018 Existing				2019 No-Build				2019 Build			
	V/C ^a	Del. ^b	LOS ^c	Queue ^d	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Silver Lane at Enter Only Site Driveway												
<i>Weekday AM:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.06	9.9	A	--/<25
<i>Weekday PM:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.09	14.7	B	--/<25
<i>Saturday Midday:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.05	9.5	A	--/<25
Silver Lane at Full Access/Egress Site Driveway												
<i>Weekday AM:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.03	9.1	A	--/<25
Site Driveway NB left-turn	--	--	--	--/--	--	--	--	--/--	0.76	97.5	F	--/108
Site Driveway NB right-turn	--	--	--	--/--	--	--	--	--/--	0.17	14.6	B	--/<25
<i>Weekday PM:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.04	10.8	B	<25
Site Driveway NB left-turn	--	--	--	--/--	--	--	--	--/--	1.27	331.1	F	--/155
Site Driveway NB right-turn	--	--	--	--/--	--	--	--	--/--	0.24	22.7	C	<25
<i>Saturday Midday:</i>												
Silver Lane WB left-turn	--	--	--	--/--	--	--	--	--/--	0.03	9.0	A	--/<25
Site Driveway NB left-turn	--	--	--	--/--	--	--	--	--/--	0.51	49.1	E	--/63
Site Driveway NB right-turn	--	--	--	--/--	--	--	--	--/--	0.15	13.8	B	--/<25

^a Volume-to-capacity ratio.

^b Average control delay in seconds per vehicle.

^c Level of service.

^d Average/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

CONCLUSIONS

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed development. Conclusions of this effort are presented below.

- The site is currently vacant. The development consists of constructing a gasoline facility with 5 Multi-Product Dispensers (MPDs) having 10 vehicle-fueling positions (vfps) and a $\pm 5,000$ square foot (sf) building which includes a 3,600 sf convenience store and a 1,400 sf fast-food restaurant with drive through window. Access and egress to the site is currently provided via one curb cut along Silver Lane. As proposed, access and egress will be provided via two defined driveways on Silver Lane; one enter-only driveway at the western property line and one full access/egress driveway on the eastern property line.
- The proposed development is expected to generate 239 *new* vehicle trips (121 entering and 118 exiting) during the weekday AM peak hour, 196 *new* vehicle trips (99 entering and 97 exiting) during the weekday PM peak hour, and 222 *new* trips (112 entering and 110 exiting) during the Saturday midday peak hour assuming the reduced pass-by rate allowed by ConnDOT. Traffic-volume increases beyond the study area during the peak hours are expected to be in the range of 20 to 108 vehicles. These increases represent, on average, one additional vehicle approximately every 0.5 to 3 minutes during the peak hours.
- Available sight distances at the proposed eastern site driveway on Silver Lane exceed the minimum and desirable SSD and ISD requirements as recommended by AASHTO. In addition, it is recommended that any proposed plantings, vegetation, landscaping, and signing along the site frontage be kept low to the ground (no more than 3.0 feet above street level) or set back sufficiently from Silver Lane so as not to inhibit the available sight lines.
- The proposed drive-through lane can accommodate 10 vehicles within the striped drive-through lane assuming 22 feet per vehicle, which is a 37.5 percent reduction of the 16-vehicle stacking requirement allowed by local regulations. Based on queuing data provided by ITE, the proposed drive-through window lane is anticipated to accommodate the expected vehicle queues on site.
- Under existing and future traffic-volume conditions, the signalized intersection of Silver Lane at Mercer Avenue and the I-84 HOV ramps is anticipated to operate at an overall LOS C or better with all movements at LOS D or better. As a result of the development, increases in delay are expected to be less than 7 seconds on any movement with an increase in queue length of 6 vehicles or less. The volume-to-capacity (v/c) ratio on all movements

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

is expected to be below 1.00 indicating there will be adequate capacity to accommodate the anticipated traffic volumes. From the analysis results, it can be concluded that the proposed Irving Oil development will not have a significant impact on the operations at the signalized intersection.

- ConnDOT requirements restrict the *pass-by* rate to 20 percent when studies have shown for these types of facilities the *pass-by* rate is 49 percent or higher. The lower percentage of *pass-by* trips result in more new trips to the study area than expected. Therefore, the proposed project is anticipated to have less impact on the adjacent roadways system beyond the site driveways due to the higher than expected new trips.
- Under future traffic-volume conditions, the Silver Lane westbound left turn movement into the site is anticipated to operate at LOS B or better with queue lengths of 1 vehicle or less. The eastern site driveway approach is expected to operate with long delays (LOS F) during the weekday AM and weekday PM peak hours. The queue lengths on the site driveway are expected to be approximately 6 vehicles or less, which can be accommodated on site without disrupting flow on Silver Lane.

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

APPENDIX

TRAFFIC-COUNT DATA

TRAFFIC-VOLUME ADJUSTMENT DATA

PUBLIC TRANSIT INFORMATION

TRIP-GENERATION CALCULATIONS

CAPACITY ANALYSIS METHODOLOGY

CAPACITY AND QUEUE ANALYSIS WORKSHEETS

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

TRAFFIC-COUNT DATA



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdilic.com

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros

186177 A Volume
Site Code: TBA

Start Time	04/19/18		04/20/18		04/21/18		04/22/18		04/23/18		04/24/18		04/25/18		Week Average	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	70	55	79	67	128	110	*	*	*	*	*	*	*	*	92	77
01:00	29	75	45	48	89	86	*	*	*	*	*	*	*	*	54	70
02:00	31	35	24	34	58	79	*	*	*	*	*	*	*	*	38	49
03:00	35	25	35	32	55	46	*	*	*	*	*	*	*	*	42	34
04:00	54	53	67	64	39	45	*	*	*	*	*	*	*	*	53	54
05:00	147	119	151	136	82	65	*	*	*	*	*	*	*	*	127	107
06:00	310	305	320	323	114	102	*	*	*	*	*	*	*	*	248	243
07:00	612	520	619	538	225	263	*	*	*	*	*	*	*	*	485	440
08:00	728	548	594	523	332	315	*	*	*	*	*	*	*	*	551	462
09:00	420	449	457	386	374	366	*	*	*	*	*	*	*	*	417	400
10:00	397	389	428	388	489	523	*	*	*	*	*	*	*	*	438	433
11:00	475	402	519	489	537	492	*	*	*	*	*	*	*	*	510	461
12:00 PM	543	513	627	576	524	552	*	*	*	*	*	*	*	*	565	547
01:00	515	477	616	538	530	500	*	*	*	*	*	*	*	*	554	505
02:00	551	509	680	534	553	507	*	*	*	*	*	*	*	*	595	517
03:00	693	588	768	706	564	467	*	*	*	*	*	*	*	*	675	587
04:00	677	683	764	756	528	491	*	*	*	*	*	*	*	*	656	643
05:00	666	778	668	844	598	417	*	*	*	*	*	*	*	*	644	680
06:00	526	496	637	583	452	406	*	*	*	*	*	*	*	*	538	495
07:00	410	412	508	462	426	368	*	*	*	*	*	*	*	*	448	414
08:00	353	296	375	320	362	289	*	*	*	*	*	*	*	*	363	302
09:00	289	240	350	268	329	247	*	*	*	*	*	*	*	*	323	252
10:00	203	158	250	214	247	232	*	*	*	*	*	*	*	*	233	201
11:00	121	119	196	183	190	167	*	*	*	*	*	*	*	*	169	156
Total	8855	8244	9777	9012	7825	7135	0	0	0	0	0	0	0	0	8818	8129
Day	17099		18789		14960		0		0		0		0		16947	
AM Peak	08:00	08:00	07:00	07:00	11:00	10:00	-	-	-	-	-	-	-	-	08:00	08:00
Vol.	728	548	619	538	537	523	-	-	-	-	-	-	-	-	551	462
PM Peak	15:00	17:00	15:00	17:00	17:00	12:00	-	-	-	-	-	-	-	-	15:00	17:00
Vol.	693	778	768	844	598	552	-	-	-	-	-	-	-	-	675	680

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



186177 A Volume
Site Code: TBA

Start	WB				EB				Combin ed		04/19/18			
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.	Thu		
12:00	26		127		21		141		47		268			
12:15	19		134		13		119		32		253			
12:30	13		144		11		124		24		268			
12:45	12	70	138	543	10	55	129	513	22	125	267	1056		
01:00	13		136		17		123		30		259			
01:15	3		130		25		139		28		269			
01:30	10		120		17		103		27		223			
01:45	3	29	129	515	16	75	112	477	19	104	241	992		
02:00	10		128		15		109		25		237			
02:15	7		143		6		126		13		269			
02:30	9		146		7		134		16		280			
02:45	5	31	134	551	7	35	140	509	12	66	274	1060		
03:00	4		180		6		144		10		324			
03:15	9		174		6		155		15		329			
03:30	12		189		3		141		15		330			
03:45	10	35	150	693	10	25	148	588	20	60	298	1281		
04:00	6		180		9		163		15		343			
04:15	7		161		14		172		21		333			
04:30	17		192		12		166		29		358			
04:45	24	54	144	677	18	53	182	683	42	107	326	1360		
05:00	22		167		18		222		40		389			
05:15	27		177		19		221		46		398			
05:30	47		163		32		159		79		322			
05:45	51	147	159	666	50	119	176	778	101	266	335	1444		
06:00	55		145		42		134		97		279			
06:15	61		139		67		126		128		265			
06:30	99		132		79		110		178		242			
06:45	95	310	110	526	117	305	126	496	212	615	236	1022		
07:00	93		117		112		122		205		239			
07:15	173		112		96		95		269		207			
07:30	162		94		145		96		307		190			
07:45	184	612	87	410	167	520	99	412	351	1132	186	822		
08:00	198		106		127		82		325		188			
08:15	200		97		139		83		339		180			
08:30	187		73		123		75		310		148			
08:45	143	728	77	353	159	548	56	296	302	1276	133	649		
09:00	113		84		129		66		242		150			
09:15	103		72		121		59		224		131			
09:30	111		75		96		54		207		129			
09:45	93	420	58	289	103	449	61	240	196	869	119	529		
10:00	114		61		98		40		212		101			
10:15	89		64		102		44		191		108			
10:30	100		49		87		31		187		80			
10:45	94	397	29	203	102	389	43	158	196	786	72	361		
11:00	88		34		98		34		186		68			
11:15	122		30		106		32		228		62			
11:30	129		36		94		28		223		64			
11:45	136	475	21	121	104	402	25	119	240	877	46	240		
Total	3308		5547		2975		5269		6283		10816			
Percent	52.7%		51.3%		47.3%		48.7%							
Day Total			8855				8244				17099			
Peak	07:45	-	03:00	-	07:30	-	04:30	-	07:45	-	04:30	-	-	-
Vol.	769	-	693	-	578	-	791	-	1325	-	1471	-	-	-
P.H.F.	0.961		0.917		0.865		0.891		0.944		0.924			

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508-875-0100 Fax: 508-875-0118
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186177 A Volume
Site Code: TBA

Start	WB		EB		Combin		ed		04/20/18	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Fri	
12:00	31	134	24	134	55	268				
12:15	21	158	18	149	39	307				
12:30	16	165	17	144	33	309				
12:45	11	170	8	149	19	319	146	1203		
01:00	13	149	15	145	28	294				
01:15	7	133	10	126	17	259				
01:30	14	164	15	137	29	301				
01:45	11	170	8	130	19	300	93	1154		
02:00	5	156	12	134	17	290				
02:15	8	172	5	117	13	289				
02:30	5	184	9	138	14	322				
02:45	6	168	8	145	14	313	58	1214		
03:00	6	188	9	148	15	336				
03:15	12	190	1	161	13	351				
03:30	9	185	5	212	14	397				
03:45	8	205	17	185	25	390	67	1474		
04:00	9	163	14	199	23	362				
04:15	17	202	15	164	32	366				
04:30	17	192	14	176	31	368				
04:45	24	207	21	217	45	424	131	1520		
05:00	23	167	16	232	39	399				
05:15	33	179	23	233	56	412				
05:30	48	158	37	200	85	358				
05:45	47	164	60	179	107	343	287	1512		
06:00	65	145	48	154	113	299				
06:15	75	146	60	155	135	301				
06:30	97	148	92	154	189	302				
06:45	83	198	123	120	206	318	643	1220		
07:00	117	128	101	143	218	271				
07:15	149	136	132	111	281	247				
07:30	176	122	153	105	329	227				
07:45	177	122	152	103	462	225	1157	970		
08:00	150	99	114	96	264	195				
08:15	168	96	145	88	313	184				
08:30	149	82	141	63	290	145				
08:45	127	98	123	73	320	171	1117	695		
09:00	115	96	103	77	218	173				
09:15	94	101	97	69	191	170				
09:30	131	75	91	51	222	126				
09:45	117	78	95	386	71	149	843	618		
10:00	99	59	101	63	200	122				
10:15	104	65	85	54	189	119				
10:30	98	72	112	53	210	125				
10:45	127	54	90	388	44	98	816	464		
11:00	120	54	104	52	224	106				
11:15	128	47	116	48	244	95				
11:30	131	55	139	42	270	97				
11:45	140	40	130	489	41	81	1008	379		
Total	3338	6439	3028	5984	6366	12423				
Percent	52.4%	51.8%	47.6%	48.2%						
Day Total		9777		9012		18789				
Peak	07:30	-	03:00	-	07:30	-	04:30	-	-	-
Vol.	671	-	768	-	564	-	882	-	1235	-
P.H.F.	0.948		0.937		0.922		0.946		0.938	

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



186177 A Volume
Site Code: TBA

Start		WB		EB		Combin ed		04/21/18	
Time	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	Sat	
12:00	43	140		30	149	73	289		
12:15	31	127		31	136	62	263		
12:30	35	125		25	134	60	259		
12:45	19	132	524	24	133	43	265	1076	
01:00	33	141		27	127	60	268		
01:15	21	135		21	135	42	270		
01:30	14	129		19	123	33	252		
01:45	21	125	530	19	115	40	240	1030	
02:00	15	132		27	136	42	268		
02:15	13	130		14	99	27	229		
02:30	16	155		20	135	36	290		
02:45	14	136	553	18	137	32	273	1060	
03:00	15	127		14	115	29	242		
03:15	15	155		5	123	20	278		
03:30	13	135		17	110	30	245		
03:45	12	147	564	10	119	22	266	1031	
04:00	7	129		9	111	16	240		
04:15	8	160		11	146	19	306		
04:30	13	125		11	116	24	241		
04:45	11	114	528	14	118	25	232	1019	
05:00	10	159		12	122	22	281		
05:15	17	159		12	109	29	268		
05:30	23	148		18	85	41	233		
05:45	32	132	598	23	101	55	233	1015	
06:00	23	121		19	96	42	217		
06:15	25	107		17	106	42	213		
06:30	32	102		32	94	64	196		
06:45	34	122	452	34	110	68	232	858	
07:00	38	112		60	83	98	195		
07:15	52	96		68	100	120	196		
07:30	66	103		61	102	127	205		
07:45	69	115	426	74	83	143	198	794	
08:00	66	120		73	75	139	195		
08:15	85	82		65	74	150	156		
08:30	86	78		79	67	165	145		
08:45	95	82	362	98	73	193	155	651	
09:00	80	90		73	69	153	159		
09:15	105	83		89	54	194	137		
09:30	87	81		93	63	180	144		
09:45	102	75	329	111	61	213	136	576	
10:00	110	74		128	75	238	149		
10:15	115	48		138	65	253	113		
10:30	137	62		130	51	267	113		
10:45	127	63	247	127	41	254	104	479	
11:00	118	51		101	49	219	100		
11:15	148	50		122	40	270	90		
11:30	147	49		129	45	276	94		
11:45	124	40	190	140	33	264	73	357	
Total	2522	5303		2492	4643	5014	9946		
Percent	50.3%	53.3%		49.7%	46.7%				
Day Total		7825			7135		14960		
Peak	10:45	-	05:00	-	10:00	-	11:00	-	02:30
Vol.	540	-	598	-	523	-	1029	-	1083
P.H.F.	0.912		0.940		0.947		0.932		0.934

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Class
Site Code: TBA

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/19/1														
8	0	57	9	1	2	0	0	0	1	0	0	0	0	70
01:00	0	24	3	0	2	0	0	0	0	0	0	0	0	29
02:00	0	28	2	0	1	0	0	0	0	0	0	0	0	31
03:00	0	28	5	0	1	0	0	1	0	0	0	0	0	35
04:00	0	37	12	2	2	1	0	0	0	0	0	0	0	54
05:00	0	111	20	4	9	0	0	0	3	0	0	0	0	147
06:00	0	227	44	10	23	2	1	3	0	0	0	0	0	310
07:00	3	481	78	19	25	4	0	2	0	0	0	0	0	612
08:00	6	564	106	15	26	5	1	1	4	0	0	0	0	728
09:00	5	306	77	7	17	5	1	1	1	0	0	0	0	420
10:00	2	300	64	8	20	1	0	1	1	0	0	0	0	397
11:00	3	372	76	6	12	3	0	1	2	0	0	0	0	475
12 PM	2	426	78	6	25	2	0	2	2	0	0	0	0	543
13:00	2	394	78	10	25	3	0	2	1	0	0	0	0	515
14:00	1	402	114	8	21	4	0	0	1	0	0	0	0	551
15:00	2	543	116	8	22	1	0	1	0	0	0	0	0	693
16:00	2	572	78	5	16	3	0	0	1	0	0	0	0	677
17:00	2	564	77	6	15	2	0	0	0	0	0	0	0	666
18:00	3	458	51	5	6	3	0	0	0	0	0	0	0	526
19:00	2	344	46	4	10	2	0	2	0	0	0	0	0	410
20:00	1	316	29	1	3	1	0	0	2	0	0	0	0	353
21:00	0	257	27	2	0	2	0	0	1	0	0	0	0	289
22:00	1	186	16	0	0	0	0	0	0	0	0	0	0	203
23:00	0	106	13	1	1	0	0	0	0	0	0	0	0	121
Total	37	7103	1219	128	284	44	3	17	20	0	0	0	0	8855
Percent	0.4%	80.2%	13.8%	1.4%	3.2%	0.5%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00	07:00	08:00	08:00	06:00	06:00	08:00					08:00
Vol.	6	564	106	19	26	5	1	3	4					728
PM Peak	18:00	16:00	15:00	13:00	12:00	14:00		12:00	12:00					15:00
Vol.	3	572	116	10	25	4		2	2					693

#273 Silver Lane
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186177 A Class
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WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/20/1														
8	0	66	8	3	2	0	0	0	0	0	0	0	0	79
01:00	0	37	6	0	1	0	0	0	1	0	0	0	0	45
02:00	0	22	1	0	1	0	0	0	0	0	0	0	0	24
03:00	0	28	3	2	0	0	0	1	1	0	0	0	0	35
04:00	0	49	14	0	4	0	0	0	0	0	0	0	0	67
05:00	0	111	19	3	17	0	0	0	1	0	0	0	0	151
06:00	1	232	50	14	19	2	0	1	1	0	0	0	0	320
07:00	4	484	81	15	26	5	0	3	1	0	0	0	0	619
08:00	5	473	80	8	15	7	1	4	1	0	0	0	0	594
09:00	0	352	76	10	13	4	1	0	1	0	0	0	0	457
10:00	2	320	68	6	21	7	1	3	0	0	0	0	0	428
11:00	2	399	78	11	21	6	0	0	2	0	0	0	0	519
12 PM	2	497	88	3	26	7	0	3	1	0	0	0	0	627
13:00	5	480	89	9	26	3	0	2	2	0	0	0	0	616
14:00	3	531	105	11	21	3	0	4	2	0	0	0	0	680
15:00	10	607	113	12	17	7	0	2	0	0	0	0	0	768
16:00	5	655	78	5	18	3	0	0	0	0	0	0	0	764
17:00	1	568	79	5	10	4	0	1	0	0	0	0	0	668
18:00	5	536	76	3	13	3	0	1	0	0	0	0	0	637
19:00	3	433	56	1	12	1	0	2	0	0	0	0	0	508
20:00	0	328	39	1	5	1	0	0	1	0	0	0	0	375
21:00	0	305	39	2	2	1	0	0	1	0	0	0	0	350
22:00	0	217	28	2	3	0	0	0	0	0	0	0	0	250
23:00	1	175	14	3	2	1	0	0	0	0	0	0	0	196
Total	49	7905	1288	129	295	65	3	27	16	0	0	0	0	9777
Percent	0.5%	80.9%	13.2%	1.3%	3.0%	0.7%	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	07:00	07:00	07:00	07:00	08:00	08:00	08:00	11:00					07:00
Vol.	5	484	81	15	26	7	1	4	2					619
PM Peak	15:00	16:00	15:00	15:00	12:00	12:00		14:00	13:00					15:00
Vol.	10	655	113	12	26	7		4	2					768

#273 Silver Lane
west of Taco Bell Driveway
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186177 A Class
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WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/21/1														
8	0	113	12	1	1	0	0	0	1	0	0	0	0	128
01:00	0	76	10	0	2	0	0	0	1	0	0	0	0	89
02:00	0	46	10	0	2	0	0	0	0	0	0	0	0	58
03:00	0	48	6	0	1	0	0	0	0	0	0	0	0	55
04:00	0	31	7	0	0	0	0	0	1	0	0	0	0	39
05:00	0	62	16	0	3	0	0	1	0	0	0	0	0	82
06:00	0	89	13	4	6	0	0	2	0	0	0	0	0	114
07:00	2	166	43	2	9	1	0	1	1	0	0	0	0	225
08:00	4	262	45	5	14	2	0	0	0	0	0	0	0	332
09:00	2	305	55	2	6	3	0	0	1	0	0	0	0	374
10:00	4	391	70	5	12	5	0	0	2	0	0	0	0	489
11:00	4	455	66	3	6	2	0	1	0	0	0	0	0	537
12 PM	5	429	69	6	14	0	0	1	0	0	0	0	0	524
13:00	1	444	69	4	6	3	1	2	0	0	0	0	0	530
14:00	6	459	70	5	9	2	0	1	1	0	0	0	0	553
15:00	8	479	67	3	6	1	0	0	0	0	0	0	0	564
16:00	8	436	75	2	6	1	0	0	0	0	0	0	0	528
17:00	4	495	74	2	16	4	2	1	0	0	0	0	0	598
18:00	2	393	44	5	6	1	0	1	0	0	0	0	0	452
19:00	1	364	49	0	11	1	0	0	0	0	0	0	0	426
20:00	0	309	46	2	5	0	0	0	0	0	0	0	0	362
21:00	1	291	31	1	4	1	0	0	0	0	0	0	0	329
22:00	0	224	21	1	1	0	0	0	0	0	0	0	0	247
23:00	0	167	20	2	1	0	0	0	0	0	0	0	0	190
Total	52	6534	988	55	147	27	3	11	8	0	0	0	0	7825
Percent	0.7%	83.5%	12.6%	0.7%	1.9%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	10:00	08:00	08:00	10:00		06:00	10:00					11:00
Vol.	4	455	70	5	14	5		2	2					537
PM Peak	15:00	17:00	16:00	12:00	17:00	17:00	17:00	13:00	14:00					17:00
Vol.	8	495	75	6	16	4	2	2	1					598

#273 Silver Lane
west of Taco Bell Driveway
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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/19/1														
8	0	50	4	0	1	0	0	0	0	0	0	0	0	55
01:00	0	68	3	1	1	0	0	0	2	0	0	0	0	75
02:00	0	30	2	1	0	0	0	1	1	0	0	0	0	35
03:00	0	20	3	0	2	0	0	0	0	0	0	0	0	25
04:00	0	37	12	0	1	1	0	1	1	0	0	0	0	53
05:00	0	89	17	5	5	1	0	1	1	0	0	0	0	119
06:00	2	238	39	14	10	0	1	1	0	0	0	0	0	305
07:00	3	433	53	13	13	0	0	4	1	0	0	0	0	520
08:00	3	468	58	9	6	3	0	1	0	0	0	0	0	548
09:00	1	339	69	9	27	3	0	1	0	0	0	0	0	449
10:00	1	286	57	6	25	4	0	8	2	0	0	0	0	389
11:00	1	306	68	5	17	2	0	2	1	0	0	0	0	402
12 PM	6	427	58	5	16	0	0	1	0	0	0	0	0	513
13:00	2	389	61	7	15	3	0	0	0	0	0	0	0	477
14:00	0	418	69	7	13	2	0	0	0	0	0	0	0	509
15:00	5	478	73	11	17	2	0	2	0	0	0	0	0	588
16:00	1	599	60	7	16	0	0	0	0	0	0	0	0	683
17:00	1	667	81	9	20	0	0	0	0	0	0	0	0	778
18:00	0	432	46	8	10	0	0	0	0	0	0	0	0	496
19:00	1	355	39	2	13	1	0	0	1	0	0	0	0	412
20:00	1	276	11	1	7	0	0	0	0	0	0	0	0	296
21:00	0	214	17	2	5	1	0	1	0	0	0	0	0	240
22:00	0	140	11	3	3	1	0	0	0	0	0	0	0	158
23:00	0	107	8	1	3	0	0	0	0	0	0	0	0	119
Total	28	6866	919	126	246	24	1	24	10	0	0	0	0	8244
Percent	0.3%	83.3%	11.1%	1.5%	3.0%	0.3%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	09:00	06:00	09:00	10:00	06:00	10:00	01:00					08:00
Vol.	3	468	69	14	27	4	1	8	2					548
PM Peak	12:00	17:00	17:00	15:00	17:00	13:00		15:00	19:00					17:00
Vol.	6	667	81	11	20	3		2	1					778

#273 Silver Lane
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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/20/1														
8	1	61	3	0	1	1	0	0	0	0	0	0	0	67
01:00	0	44	3	1	0	0	0	0	0	0	0	0	0	48
02:00	0	24	6	1	0	0	0	1	2	0	0	0	0	34
03:00	0	26	5	1	0	0	0	0	0	0	0	0	0	32
04:00	1	43	15	0	2	2	0	0	1	0	0	0	0	64
05:00	0	106	22	5	3	0	0	0	0	0	0	0	0	136
06:00	1	259	44	13	5	1	0	0	0	0	0	0	0	323
07:00	0	442	52	14	24	4	0	2	0	0	0	0	0	538
08:00	1	431	69	9	9	3	0	1	0	0	0	0	0	523
09:00	0	313	39	7	22	4	0	1	0	0	0	0	0	386
10:00	0	294	59	4	23	2	0	4	2	0	0	0	0	388
11:00	1	387	70	7	21	1	0	1	1	0	0	0	0	489
12 PM	0	469	68	4	28	2	0	4	1	0	0	0	0	576
13:00	2	446	68	5	12	1	0	4	0	0	0	0	0	538
14:00	7	431	70	7	18	1	0	0	0	0	0	0	0	534
15:00	0	582	88	11	20	2	0	2	1	0	0	0	0	706
16:00	9	644	76	9	11	4	0	2	1	0	0	0	0	756
17:00	4	736	65	10	26	2	0	0	1	0	0	0	0	844
18:00	3	502	52	4	18	1	0	2	1	0	0	0	0	583
19:00	2	396	50	2	8	1	0	1	2	0	0	0	0	462
20:00	1	289	24	2	3	1	0	0	0	0	0	0	0	320
21:00	1	243	19	2	2	1	0	0	0	0	0	0	0	268
22:00	0	195	14	3	1	1	0	0	0	0	0	0	0	214
23:00	0	167	11	1	3	0	0	0	1	0	0	0	0	183
Total	34	7530	992	122	260	35	0	25	14	0	0	0	0	9012
Percent	0.4%	83.6%	11.0%	1.4%	2.9%	0.4%	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	00:00	07:00	11:00	07:00	07:00	07:00		10:00	02:00					07:00
Vol.	1	442	70	14	24	4		4	2					538
PM Peak	16:00	17:00	15:00	15:00	12:00	16:00		12:00	19:00					17:00
Vol.	9	736	88	11	28	4		4	2					844

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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/21/1														
8	0	105	4	0	0	0	0	0	1	0	0	0	0	110
01:00	0	81	4	1	0	0	0	0	0	0	0	0	0	86
02:00	0	70	7	1	0	0	0	1	0	0	0	0	0	79
03:00	0	41	4	0	1	0	0	0	0	0	0	0	0	46
04:00	0	40	5	0	0	0	0	0	0	0	0	0	0	45
05:00	0	47	17	0	0	0	0	0	1	0	0	0	0	65
06:00	0	73	25	3	1	0	0	0	0	0	0	0	0	102
07:00	0	219	30	4	10	0	0	0	0	0	0	0	0	263
08:00	0	271	33	4	5	0	0	1	1	0	0	0	0	315
09:00	2	314	37	4	7	1	0	0	1	0	0	0	0	366
10:00	1	445	65	3	6	1	0	1	1	0	0	0	0	523
11:00	2	424	49	5	10	1	0	0	1	0	0	0	0	492
12 PM	4	473	59	4	7	2	0	2	1	0	0	0	0	552
13:00	4	431	52	4	7	1	0	0	1	0	0	0	0	500
14:00	3	440	52	3	9	0	0	0	0	0	0	0	0	507
15:00	3	393	57	4	7	2	0	1	0	0	0	0	0	467
16:00	3	430	52	1	5	0	0	0	0	0	0	0	0	491
17:00	3	376	30	4	3	1	0	0	0	0	0	0	0	417
18:00	0	373	25	2	5	0	0	1	0	0	0	0	0	406
19:00	0	329	34	2	3	0	0	0	0	0	0	0	0	368
20:00	0	261	22	2	4	0	0	0	0	0	0	0	0	289
21:00	0	219	20	2	5	0	0	1	0	0	0	0	0	247
22:00	1	213	13	3	1	0	0	1	0	0	0	0	0	232
23:00	0	150	15	2	0	0	0	0	0	0	0	0	0	167
Total	26	6218	711	58	96	9	0	9	8	0	0	0	0	7135
Percent	0.4%	87.1%	10.0%	0.8%	1.3%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	10:00	10:00	11:00	07:00	09:00		02:00	00:00					10:00
Vol.	2	445	65	5	10	1		1	1					523
PM Peak	12:00	12:00	12:00	12:00	14:00	12:00		12:00	12:00					12:00
Vol.	4	473	59	4	9	2		2	1					552

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Speed
Site Code: TBA

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
04/19/																
18	0	4	4	6	22	20	9	3	1	1	0	0	0	70	40	34
01:00	1	0	0	0	11	9	6	1	1	0	0	0	0	29	42	36
02:00	1	0	0	3	6	10	7	3	0	0	0	1	0	31	43	37
03:00	0	0	2	0	5	17	8	2	1	0	0	0	0	35	42	38
04:00	0	0	0	2	8	21	15	8	0	0	0	0	0	54	43	39
05:00	0	0	3	16	43	46	28	9	2	0	0	0	0	147	42	36
06:00	0	10	18	67	128	62	20	5	0	0	0	0	0	310	37	32
07:00	26	31	80	187	193	68	21	4	2	0	0	0	0	612	34	28
08:00	51	60	140	202	187	76	11	1	0	0	0	0	0	728	33	26
09:00	0	9	27	73	185	96	22	6	2	0	0	0	0	420	37	32
10:00	0	4	13	62	182	112	21	3	0	0	0	0	0	397	37	33
11:00	3	10	18	127	209	91	16	0	0	1	0	0	0	475	36	31
12 PM	4	21	56	133	214	99	14	2	0	0	0	0	0	543	35	30
13:00	0	20	42	148	207	85	12	1	0	0	0	0	0	515	35	30
14:00	5	31	73	133	196	90	21	1	0	1	0	0	0	551	35	30
15:00	17	38	86	221	248	72	10	1	0	0	0	0	0	693	33	28
16:00	21	38	103	209	217	72	15	2	0	0	0	0	0	677	33	28
17:00	1	13	57	205	263	116	7	4	0	0	0	0	0	666	35	30
18:00	1	11	37	136	201	103	32	3	0	0	1	1	0	526	36	31
19:00	0	13	28	91	169	88	17	2	2	0	0	0	0	410	36	31
20:00	0	2	24	91	157	59	15	5	0	0	0	0	0	353	36	31
21:00	1	6	8	70	134	57	10	3	0	0	0	0	0	289	36	32
22:00	0	10	8	19	80	62	17	7	0	0	0	0	0	203	38	33
23:00	0	3	7	22	36	38	9	5	1	0	0	0	0	121	38	33
Total	132	334	834	2223	3301	1569	363	81	12	3	1	2	0	8855		
%	1.5%	3.8%	9.4%	25.1%	37.3%	17.7%	4.1%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	11:00	10:00	05:00	05:00	05:00	00:00		02:00		08:00		
Vol.	51	60	140	202	209	112	28	9	2	1		1		728		
PM Peak	16:00	15:00	16:00	15:00	17:00	17:00	18:00	22:00	19:00	14:00	18:00	18:00		15:00		
Vol.	21	38	103	221	263	116	32	7	2	1	1	1		693		

Stats

15th Percentile :	24 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH

Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	5524
Percent in Pace :	62.4%
Number of Vehicles > 35 MPH :	1717
Percent of Vehicles > 35 MPH :	19.4%

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Speed
Site Code: TBA

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
04/20/																
18	0	3	2	9	25	25	11	3	1	0	0	0	0	79	40	34
01:00	0	0	1	4	20	14	4	2	0	0	0	0	0	45	38	34
02:00	0	0	0	3	7	6	7	1	0	0	0	0	0	24	42	36
03:00	0	1	1	4	6	11	10	2	0	0	0	0	0	35	42	36
04:00	0	0	0	3	17	27	11	6	3	0	0	0	0	67	43	38
05:00	0	0	2	19	38	49	34	8	1	0	0	0	0	151	41	36
06:00	1	7	17	49	104	86	49	4	2	1	0	0	0	320	39	34
07:00	22	29	61	115	210	140	33	8	0	1	0	0	0	619	37	30
08:00	26	36	56	122	226	104	21	2	1	0	0	0	0	594	35	29
09:00	2	3	23	82	185	122	37	3	0	0	0	0	0	457	37	33
10:00	1	4	20	95	149	118	33	8	0	0	0	0	0	428	38	33
11:00	1	9	45	134	200	96	34	0	0	0	0	0	0	519	36	31
12 PM	7	17	67	168	249	91	25	3	0	0	0	0	0	627	35	30
13:00	18	32	77	154	211	95	25	3	1	0	0	0	0	616	35	29
14:00	8	33	79	174	254	112	19	0	1	0	0	0	0	680	35	30
15:00	38	69	140	245	203	55	16	1	0	0	0	0	1	768	32	27
16:00	25	26	88	206	291	107	21	0	0	0	0	0	0	764	34	29
17:00	4	31	75	209	223	99	24	2	0	1	0	0	0	668	35	30
18:00	5	21	98	202	203	84	19	3	2	0	0	0	0	637	34	29
19:00	3	10	40	143	214	77	17	4	0	0	0	0	0	508	35	31
20:00	0	12	35	99	148	71	9	0	1	0	0	0	0	375	35	31
21:00	0	8	22	105	144	59	8	3	1	0	0	0	0	350	35	31
22:00	2	5	9	40	96	71	23	4	0	0	0	0	0	250	38	33
23:00	1	7	10	32	67	59	13	6	0	0	1	0	0	196	38	33
Total	164	363	968	2416	3490	1778	503	76	14	3	1	0	1	9777		
%	1.7%	3.7%	9.9%	24.7%	35.7%	18.2%	5.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	07:00	11:00	08:00	07:00	06:00	05:00	04:00	06:00				07:00		
Vol.	26	36	61	134	226	140	49	8	3	1				619		
PM Peak	15:00	15:00	15:00	15:00	16:00	14:00	12:00	23:00	18:00	17:00	23:00		15:00	15:00		
Vol.	38	69	140	245	291	112	25	6	2	1	1		1	768		

Stats

15th Percentile :	23 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	40 MPH

Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	5906
Percent in Pace :	60.4%
Number of Vehicles > 35 MPH :	2020
Percent of Vehicles > 35 MPH :	20.7%

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Speed
Site Code: TBA

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
04/21/																
18	1	3	3	14	38	47	20	0	2	0	0	0	0	128	39	34
01:00	1	1	7	10	32	20	13	5	0	0	0	0	0	89	40	34
02:00	0	2	2	6	13	27	4	3	1	0	0	0	0	58	38	35
03:00	0	0	0	5	18	19	9	3	0	1	0	0	0	55	41	36
04:00	0	0	1	2	6	12	11	4	1	2	0	0	0	39	45	39
05:00	0	2	0	2	19	36	17	4	2	0	0	0	0	82	42	37
06:00	0	0	4	6	33	37	21	10	3	0	0	0	0	114	43	37
07:00	0	1	5	24	49	84	52	8	2	0	0	0	0	225	41	36
08:00	1	2	6	33	120	119	38	10	3	0	0	0	0	332	39	35
09:00	0	2	8	59	137	130	34	3	1	0	0	0	0	374	38	34
10:00	2	7	14	94	217	119	31	3	2	0	0	0	0	489	37	32
11:00	5	7	51	140	204	105	24	1	0	0	0	0	0	537	36	31
12 PM	5	32	44	146	190	84	22	1	0	0	0	0	0	524	35	30
13:00	1	25	67	140	208	73	15	1	0	0	0	0	0	530	34	30
14:00	5	23	69	108	232	96	17	1	2	0	0	0	0	553	35	30
15:00	8	24	35	126	258	93	18	2	0	0	0	0	0	564	35	30
16:00	6	25	36	126	220	86	23	5	1	0	0	0	0	528	36	31
17:00	22	41	65	170	189	86	23	1	0	1	0	0	0	598	35	29
18:00	2	19	49	115	162	83	18	3	1	0	0	0	0	452	36	30
19:00	0	7	33	110	185	76	14	1	0	0	0	0	0	426	35	31
20:00	0	15	44	120	125	51	6	1	0	0	0	0	0	362	34	29
21:00	1	5	30	95	124	60	12	1	1	0	0	0	0	329	36	31
22:00	3	9	12	52	93	64	12	2	0	0	0	0	0	247	37	32
23:00	0	4	9	34	62	61	15	4	0	1	0	0	0	190	38	33
Total	63	256	594	1737	2934	1668	469	77	22	5	0	0	0	7825		
%	0.8%	3.3%	7.6%	22.2%	37.5%	21.3%	6.0%	1.0%	0.3%	0.1%	0.0%	0.0%	0.0%			
AM Peak	11:00	10:00	11:00	11:00	10:00	09:00	07:00	06:00	06:00	04:00				11:00		
Vol.	5	7	51	140	217	130	52	10	3	2				537		
PM Peak	17:00	17:00	14:00	17:00	15:00	14:00	16:00	16:00	14:00	17:00				17:00		
Vol.	22	41	69	170	258	96	23	5	2	1				598		

Stats

15th Percentile :	24 MPH
50th Percentile :	31 MPH
85th Percentile :	37 MPH
95th Percentile :	40 MPH

Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4671
Percent in Pace :	59.7%
Number of Vehicles > 35 MPH :	1907
Percent of Vehicles > 35 MPH :	24.4%

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Speed
Site Code: TBA

EB	Start Time	14	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
		14	19	24	29	34	39	44	49	54	59	64	69	9999			
04/19/																	
18	0	2	2	9	14	20	5	3	0	0	0	0	0	0	55	38	34
01:00	0	0	0	7	20	31	14	3	0	0	0	0	0	0	75	41	36
02:00	0	0	1	3	9	17	3	2	0	0	0	0	0	0	35	38	35
03:00	0	0	0	2	7	13	1	2	0	0	0	0	0	0	25	38	36
04:00	0	0	0	2	13	18	16	4	0	0	0	0	0	0	53	42	38
05:00	0	0	1	16	49	39	11	3	0	0	0	0	0	0	119	38	34
06:00	2	3	8	47	111	96	32	4	2	0	0	0	0	0	305	38	34
07:00	1	2	23	103	217	143	28	3	0	0	0	0	0	0	520	37	32
08:00	1	3	33	113	262	119	13	4	0	0	0	0	0	0	548	36	32
09:00	3	0	6	58	197	152	30	3	0	0	0	0	0	0	449	37	34
10:00	0	2	6	51	181	112	29	7	1	0	0	0	0	0	389	38	34
11:00	2	2	13	97	190	76	18	3	1	0	0	0	0	0	402	36	32
12 PM	2	6	29	88	238	128	20	2	0	0	0	0	0	0	513	36	32
13:00	5	12	29	122	203	90	14	2	0	0	0	0	0	0	477	35	31
14:00	3	6	32	134	215	89	25	5	0	0	0	0	0	0	509	36	31
15:00	2	3	30	166	259	106	17	5	0	0	0	0	0	0	588	35	31
16:00	2	8	42	163	284	150	29	3	2	0	0	0	0	0	683	36	32
17:00	4	4	27	134	409	170	22	8	0	0	0	0	0	0	778	36	32
18:00	0	6	9	75	255	127	20	3	1	0	0	0	0	0	496	37	33
19:00	0	4	11	73	191	108	23	2	0	0	0	0	0	0	412	37	33
20:00	0	2	7	62	131	76	16	1	1	0	0	0	0	0	296	37	33
21:00	1	5	12	28	111	62	18	2	0	1	0	0	0	0	240	37	33
22:00	0	5	4	16	48	66	17	2	0	0	0	0	0	0	158	38	34
23:00	0	2	4	12	42	40	14	5	0	0	0	0	0	0	119	39	34
Total	28	77	329	1581	3656	2048	435	81	8	1	0	0	0	0	8244		
%	0.3%	0.9%	4.0%	19.2%	44.3%	24.8%	5.3%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	06:00	08:00	08:00	08:00	09:00	06:00	10:00	06:00						08:00		
Vol.	3	3	33	113	262	152	32	7	2						548		
PM Peak	13:00	13:00	16:00	15:00	17:00	17:00	16:00	17:00	16:00	21:00					17:00		
Vol.	5	12	42	166	409	170	29	8	2	1					778		

Stats
15th Percentile : 26 MPH
50th Percentile : 31 MPH
85th Percentile : 37 MPH
95th Percentile : 40 MPH

Mean Speed(Average) : 32 MPH
10 MPH Pace Speed : 30-39 MPH
Number in Pace : 5704
Percent in Pace : 69.2%
Number of Vehicles > 35 MPH : 2163
Percent of Vehicles > 35 MPH : 26.2%

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



PRECISION
D A T A
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186177 A Speed
Site Code: TBA

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
04/20/																
18	0	4	2	8	19	21	12	1	0	0	0	0	0	67	40	34
01:00	0	0	3	6	10	19	9	0	1	0	0	0	0	48	40	35
02:00	0	0	0	5	11	13	4	0	1	0	0	0	0	34	38	35
03:00	0	0	0	6	10	10	2	2	2	0	0	0	0	32	41	35
04:00	0	0	3	3	15	26	15	0	1	1	0	0	0	64	41	36
05:00	0	0	1	16	40	39	32	8	0	0	0	0	0	136	42	36
06:00	0	0	7	29	104	125	51	6	1	0	0	0	0	323	39	35
07:00	0	3	18	59	193	188	59	14	4	0	0	0	0	538	38	34
08:00	1	0	10	69	244	155	40	3	1	0	0	0	0	523	37	33
09:00	0	2	7	44	149	136	44	4	0	0	0	0	0	386	38	34
10:00	0	1	6	44	178	126	27	3	2	1	0	0	0	388	38	34
11:00	0	8	12	95	221	124	25	4	0	0	0	0	0	489	37	32
12 PM	0	9	24	116	249	139	36	2	1	0	0	0	0	576	37	32
13:00	2	5	20	92	264	127	25	3	0	0	0	0	0	538	36	32
14:00	1	6	29	87	226	143	36	5	1	0	0	0	0	534	37	33
15:00	0	4	47	153	308	174	18	2	0	0	0	0	0	706	36	32
16:00	4	8	41	95	345	216	43	3	1	0	0	0	0	756	37	33
17:00	3	4	21	151	433	196	29	6	1	0	0	0	0	844	36	32
18:00	2	5	22	113	252	161	24	4	0	0	0	0	0	583	37	32
19:00	2	11	19	82	223	100	22	3	0	0	0	0	0	462	36	32
20:00	2	3	8	44	162	86	13	1	1	0	0	0	0	320	37	33
21:00	1	3	6	52	132	56	14	4	0	0	0	0	0	268	37	32
22:00	2	4	3	32	78	71	22	2	0	0	0	0	0	214	38	33
23:00	3	5	9	14	79	55	15	3	0	0	0	0	0	183	38	33
Total	23	85	318	1415	3945	2506	617	83	18	2	0	0	0	9012		
%	0.3%	0.9%	3.5%	15.7%	43.8%	27.8%	6.8%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	11:00	07:00	11:00	08:00	07:00	07:00	07:00	07:00	04:00				07:00		
Vol.	1	8	18	95	244	188	59	14	4	1				538		
PM Peak	16:00	19:00	15:00	15:00	17:00	16:00	16:00	17:00	12:00					17:00		
Vol.	4	11	47	153	433	216	43	6	1					844		

Stats

15th Percentile :	27 MPH
50th Percentile :	32 MPH
85th Percentile :	37 MPH
95th Percentile :	41 MPH

Mean Speed(Average) :	33 MPH
10 MPH Pace Speed :	30-39 MPH
Number in Pace :	6451
Percent in Pace :	71.6%
Number of Vehicles > 35 MPH :	2725
Percent of Vehicles > 35 MPH :	30.2%

#273 Silver Lane
west of Taco Bell Driveway
City, State: East Hartford, CT
Client: Greenman-Pedersen/ J. DeBarros



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

186177 A Speed
Site Code: TBA

Start Time	14	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th % ile	Ave Speed
04/21/																
18	0	0	4	15	40	34	13	4	0	0	0	0	0	110	39	34
01:00	1	1	2	4	30	25	19	4	0	0	0	0	0	86	41	35
02:00	0	0	1	9	24	27	14	4	0	0	0	0	0	79	41	36
03:00	0	0	0	2	15	17	5	6	0	0	0	1	0	46	44	37
04:00	0	0	0	2	13	15	9	5	1	0	0	0	0	45	43	38
05:00	0	0	0	6	18	23	10	8	0	0	0	0	0	65	43	37
06:00	0	1	1	5	26	34	26	6	2	1	0	0	0	102	42	37
07:00	0	0	3	11	67	119	51	10	2	0	0	0	0	263	41	37
08:00	0	2	2	27	101	116	61	4	2	0	0	0	0	315	40	36
09:00	0	1	2	36	153	126	38	9	1	0	0	0	0	366	38	35
10:00	0	1	7	39	250	174	49	2	1	0	0	0	0	523	38	34
11:00	2	1	16	79	245	118	30	1	0	0	0	0	0	492	37	33
12 PM	2	3	21	112	249	131	28	6	0	0	0	0	0	552	37	32
13:00	2	2	13	128	245	97	12	1	0	0	0	0	0	500	35	32
14:00	1	2	21	87	240	128	24	4	0	0	0	0	0	507	37	32
15:00	2	6	17	91	213	122	15	1	0	0	0	0	0	467	36	32
16:00	1	7	15	64	240	134	26	4	0	0	0	0	0	491	37	33
17:00	2	3	14	66	183	112	29	6	2	0	0	0	0	417	37	33
18:00	0	4	9	77	191	97	25	3	0	0	0	0	0	406	37	33
19:00	1	2	19	74	165	89	16	2	0	0	0	0	0	368	36	32
20:00	2	4	8	81	136	50	8	0	0	0	0	0	0	289	35	31
21:00	0	3	12	50	100	69	13	0	0	0	0	0	0	247	37	32
22:00	0	4	9	26	99	74	17	3	0	0	0	0	0	232	38	33
23:00	0	3	8	20	81	33	18	4	0	0	0	0	0	167	38	33
Total	16	50	204	1111	3124	1964	556	97	11	1	0	1	0	7135		
%	0.2%	0.7%	2.9%	15.6%	43.8%	27.5%	7.8%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	08:00	11:00	11:00	10:00	10:00	08:00	07:00	06:00	06:00		03:00		10:00		
Vol.	2	2	16	79	250	174	61	10	2	1		1		523		
PM Peak	12:00	16:00	12:00	13:00	12:00	16:00	17:00	12:00	17:00					12:00		
Vol.	2	7	21	128	249	134	29	6	2					552		

Stats
15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 37 MPH
95th Percentile : 41 MPH

Mean Speed(Average) : 33 MPH
10 MPH Pace Speed : 30-39 MPH
Number in Pace : 5088
Percent in Pace : 71.3%
Number of Vehicles > 35 MPH : 2237
Percent of Vehicles > 35 MPH : 31.4%

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	1	0	3	0	108	10	0	118	10	0	11	0	21	4	97	0	0	101	243
7:15 AM	5	1	3	0	9	0	134	17	0	151	17	1	14	0	32	9	113	0	0	122	314
7:30 AM	11	1	1	0	13	0	163	20	0	183	25	0	12	0	37	10	132	0	0	142	375
7:45 AM	15	1	4	0	20	0	163	16	0	179	16	0	8	0	24	6	141	2	0	149	372
Total	33	3	9	0	45	0	568	63	0	631	68	1	45	0	114	29	483	2	0	514	1304
8:00 AM	7	2	1	0	10	0	131	23	0	154	13	0	21	0	34	10	115	1	0	126	324
8:15 AM	4	2	1	0	7	0	137	36	0	173	34	0	22	0	56	15	116	1	0	132	368
8:30 AM	4	2	4	0	10	0	122	24	0	146	34	3	29	0	66	17	113	1	0	131	353
8:45 AM	2	0	1	0	3	0	106	21	0	127	24	2	23	0	49	12	100	2	0	114	293
Total	17	6	7	0	30	0	496	104	0	600	105	5	95	0	205	54	444	5	0	503	1338
Grand Total	50	9	16	0	75	0	1064	167	0	1231	173	6	140	0	319	83	927	7	0	1017	2642
Approach %	66.7	12.0	21.3	0.0		0.0	86.4	13.6	0.0		54.2	1.9	43.9	0.0		8.2	91.2	0.7	0.0		
Total %	1.9	0.3	0.6	0.0	2.8	0.0	40.3	6.3	0.0	46.6	6.5	0.2	5.3	0.0	12.1	3.1	35.1	0.3	0.0	38.5	
Exiting Leg Total	13					1116					259					1254					2642
Cars	49	9	16	0	74	0	982	156	0	1138	166	6	132	0	304	79	864	7	0	950	2466
% Cars	98.0	100.0	100.0	0.0	98.7	0.0	92.3	93.4	0.0	92.4	96.0	100.0	94.3	0.0	95.3	95.2	93.2	100.0	0.0	93.4	93.3
Exiting Leg Total	13					1046					244					1163					2466
Heavy Vehicles	1	0	0	0	1	0	82	11	0	93	7	0	8	0	15	4	63	0	0	67	176
% Heavy Vehicles	2.0	0.0	0.0	0.0	1.3	0.0	7.7	6.6	0.0	7.6	4.0	0.0	5.7	0.0	4.7	4.8	6.8	0.0	0.0	6.6	6.7
Exiting Leg Total	0					70					15					91					176

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	11	1	1	0	13	0	163	20	0	183	25	0	12	0	37	10	132	0	0	142	375
7:45 AM	15	1	4	0	20	0	163	16	0	179	16	0	8	0	24	6	141	2	0	149	372
8:00 AM	7	2	1	0	10	0	131	23	0	154	13	0	21	0	34	10	115	1	0	126	324
8:15 AM	4	2	1	0	7	0	137	36	0	173	34	0	22	0	56	15	116	1	0	132	368
Total Volume	37	6	7	0	50	0	594	95	0	689	88	0	63	0	151	41	504	4	0	549	1439
% Approach Total	74.0	12.0	14.0	0.0		0.0	86.2	13.8	0.0		58.3	0.0	41.7	0.0		7.5	91.8	0.7	0.0		
PHF	0.617	0.750	0.438	0.000	0.625	0.000	0.911	0.660	0.000	0.941	0.647	0.000	0.716	0.000	0.674	0.683	0.894	0.500	0.000	0.921	0.959
Cars	37	6	7	0	50	0	554	87	0	641	85	0	58	0	143	39	476	4	0	519	1353
Cars %	100.0	100.0	100.0	0.0	100.0	0.0	93.3	91.6	0.0	93.0	96.6	0.0	92.1	0.0	94.7	95.1	94.4	100.0	0.0	94.5	94.0
Heavy Vehicles	0	0	0	0	0	0	40	8	0	48	3	0	5	0	8	2	28	0	0	30	86
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	6.7	8.4	0.0	7.0	3.4	0.0	7.9	0.0	5.3	4.9	5.6	0.0	0.0	5.5	6.0
Cars Enter Leg	37	6	7	0	50	0	554	87	0	641	85	0	58	0	143	39	476	4	0	519	1353
Heavy Enter Leg	0	0	0	0	0	0	40	8	0	48	3	0	5	0	8	2	28	0	0	30	86
Total Entering Leg	37	6	7	0	50	0	594	95	0	689	88	0	63	0	151	41	504	4	0	549	1439
Cars Exiting Leg					4					568					132					649	1353
Heavy Exiting Leg					0					31					10					45	86
Total Exiting Leg					4					599					142					694	1439

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**



Count Date: **Friday, April 20, 2018**

Start Time: **7:00 AM**

End Time: **9:00 AM**

Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	1	0	3	0	97	9	0	106	8	0	10	0	18	4	92	0	0	96	223
7:15 AM	5	1	3	0	9	0	120	15	0	135	16	1	13	0	30	9	102	0	0	111	285
7:30 AM	11	1	1	0	13	0	154	18	0	172	23	0	11	0	34	9	127	0	0	136	355
7:45 AM	15	1	4	0	20	0	150	15	0	165	15	0	8	0	23	5	134	2	0	141	349
Total	33	3	9	0	45	0	521	57	0	578	62	1	42	0	105	27	455	2	0	484	1212
8:00 AM	7	2	1	0	10	0	119	20	0	139	13	0	20	0	33	10	108	1	0	119	301
8:15 AM	4	2	1	0	7	0	131	34	0	165	34	0	19	0	53	15	107	1	0	123	348
8:30 AM	3	2	4	0	9	0	112	24	0	136	33	3	29	0	65	17	105	1	0	123	333
8:45 AM	2	0	1	0	3	0	99	21	0	120	24	2	22	0	48	10	89	2	0	101	272
Total	16	6	7	0	29	0	461	99	0	560	104	5	90	0	199	52	409	5	0	466	1254
Grand Total	49	9	16	0	74	0	982	156	0	1138	166	6	132	0	304	79	864	7	0	950	2466
Approach %	66.2	12.2	21.6	0.0		0.0	86.3	13.7	0.0		54.6	2.0	43.4	0.0		8.3	90.9	0.7	0.0		
Total %	2.0	0.4	0.6	0.0	3.0	0.0	39.8	6.3	0.0	46.1	6.7	0.2	5.4	0.0	12.3	3.2	35.0	0.3	0.0	38.5	
Exiting Leg Total	13					1046					244					1163					2466

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	11	1	1	0	13	0	154	18	0	172	23	0	11	0	34	9	127	0	0	136	355
7:45 AM	15	1	4	0	20	0	150	15	0	165	15	0	8	0	23	5	134	2	0	141	349
8:00 AM	7	2	1	0	10	0	119	20	0	139	13	0	20	0	33	10	108	1	0	119	301
8:15 AM	4	2	1	0	7	0	131	34	0	165	34	0	19	0	53	15	107	1	0	123	348
Total Volume	37	6	7	0	50	0	554	87	0	641	85	0	58	0	143	39	476	4	0	519	1353
% Approach Total	74.0	12.0	14.0	0.0		0.0	86.4	13.6	0.0		59.4	0.0	40.6	0.0		7.5	91.7	0.8	0.0		
PHF	0.617	0.750	0.438	0.000	0.625	0.000	0.899	0.640	0.000	0.932	0.625	0.000	0.725	0.000	0.675	0.650	0.888	0.500	0.000	0.920	0.953
Entering Leg	37	6	7	0	50	0	554	87	0	641	85	0	58	0	143	39	476	4	0	519	1353
Exiting Leg	4					568					132					649					1353
Total	54					1209					275					1168					2706

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	11	1	0	12	2	0	1	0	3	0	5	0	0	5	20
7:15 AM	0	0	0	0	0	0	14	2	0	16	1	0	1	0	2	0	11	0	0	11	29
7:30 AM	0	0	0	0	0	0	9	2	0	11	2	0	1	0	3	1	5	0	0	6	20
7:45 AM	0	0	0	0	0	0	13	1	0	14	1	0	0	0	1	1	7	0	0	8	23
Total	0	0	0	0	0	0	47	6	0	53	6	0	3	0	9	2	28	0	0	30	92
8:00 AM	0	0	0	0	0	0	12	3	0	15	0	0	1	0	1	0	7	0	0	7	23
8:15 AM	0	0	0	0	0	0	6	2	0	8	0	0	3	0	3	0	9	0	0	9	20
8:30 AM	1	0	0	0	1	0	10	0	0	10	1	0	0	0	1	0	8	0	0	8	20
8:45 AM	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	2	11	0	0	13	21
Total	1	0	0	0	1	0	35	5	0	40	1	0	5	0	6	2	35	0	0	37	84
Grand Total	1	0	0	0	1	0	82	11	0	93	7	0	8	0	15	4	63	0	0	67	176
Approach %	100.0	0.0	0.0	0.0		0.0	88.2	11.8	0.0		46.7	0.0	53.3	0.0		6.0	94.0	0.0	0.0		
Total %	0.6	0.0	0.0	0.0	0.6	0.0	46.6	6.3	0.0	52.8	4.0	0.0	4.5	0.0	8.5	2.3	35.8	0.0	0.0	38.1	
Exiting Leg Total	0					70					15					91					176
Buses	1	0	0	0	1	0	43	10	0	53	7	0	5	0	12	3	29	0	0	32	98
% Buses	100.0	0.0	0.0	0.0	100.0	0.0	52.4	90.9	0.0	57.0	100.0	0.0	62.5	0.0	80.0	75.0	46.0	0.0	0.0	47.8	55.7
Exiting Leg Total	0					36					13					49					98
Single-Unit Trucks	0	0	0	0	0	0	32	1	0	33	0	0	3	0	3	1	30	0	0	31	67
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	39.0	9.1	0.0	35.5	0.0	0.0	37.5	0.0	20.0	25.0	47.6	0.0	0.0	46.3	38.1
Exiting Leg Total	0					30					2					35					67
Articulated Trucks	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	11
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	6.0	6.3
Exiting Leg Total	0					4					0					7					11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	14	2	0	16	1	0	1	0	2	0	11	0	0	11	29
7:30 AM	0	0	0	0	0	0	9	2	0	11	2	0	1	0	3	1	5	0	0	6	20
7:45 AM	0	0	0	0	0	0	13	1	0	14	1	0	0	0	1	1	7	0	0	8	23
8:00 AM	0	0	0	0	0	0	12	3	0	15	0	0	1	0	1	0	7	0	0	7	23
Total Volume	0	0	0	0	0	0	48	8	0	56	4	0	3	0	7	2	30	0	0	32	95
% Approach Total	0.0	0.0	0.0	0.0		0.0	85.7	14.3	0.0		57.1	0.0	42.9	0.0		6.3	93.8	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.857	0.667	0.000	0.875	0.500	0.000	0.750	0.000	0.583	0.500	0.682	0.000	0.000	0.727	0.819
Buses	0	0	0	0	0	0	30	8	0	38	4	0	2	0	6	2	15	0	0	17	61
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	62.5	100.0	0.0	67.9	100.0	0.0	66.7	0.0	85.7	100.0	50.0	0.0	0.0	53.1	64.2
Single-Unit Trucks	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	0	14	0	0	14	29
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	29.2	0.0	0.0	25.0	0.0	0.0	33.3	0.0	14.3	0.0	46.7	0.0	0.0	43.8	30.5
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.1	5.3
Buses	0	0	0	0	0	0	30	8	0	38	4	0	2	0	6	2	15	0	0	17	61
Single-Unit Trucks	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	0	14	0	0	14	29
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total Entering Leg	0	0	0	0	0	0	48	8	0	56	4	0	3	0	7	2	30	0	0	32	95
Buses						19					10					32					61
Single-Unit Trucks						14					0					15					29
Articulated Trucks						1					0					4					5
Total Exiting Leg	0					34					10					51					95

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	0	0	2	0	85	8	0	93	7	0	9	0	16	3	85	0	0	88	199
7:15 AM	5	1	3	0	9	0	108	14	0	122	14	1	13	0	28	9	91	0	0	100	259
7:30 AM	11	1	1	0	13	0	141	17	0	158	21	0	11	0	32	9	119	0	0	128	331
7:45 AM	15	0	4	0	19	0	137	13	0	150	13	0	7	0	20	4	122	2	0	128	317
Total	33	2	8	0	43	0	471	52	0	523	55	1	40	0	96	25	417	2	0	444	1106
8:00 AM	7	2	1	0	10	0	106	18	0	124	11	0	17	0	28	9	92	1	0	102	264
8:15 AM	4	2	1	0	7	0	120	33	0	153	33	0	19	0	52	15	98	1	0	114	326
8:30 AM	3	2	4	0	9	0	101	22	0	123	32	3	29	0	64	15	92	1	0	108	304
8:45 AM	2	0	1	0	3	0	90	18	0	108	21	2	21	0	44	10	80	2	0	92	247
Total	16	6	7	0	29	0	417	91	0	508	97	5	86	0	188	49	362	5	0	416	1141
Grand Total	49	8	15	0	72	0	888	143	0	1031	152	6	126	0	284	74	779	7	0	860	2247
Approach %	68.1	11.1	20.8	0.0		0.0	86.1	13.9	0.0		53.5	2.1	44.4	0.0		8.6	90.6	0.8	0.0		
Total %	2.2	0.4	0.7	0.0	3.2	0.0	39.5	6.4	0.0	45.9	6.8	0.3	5.6	0.0	12.6	3.3	34.7	0.3	0.0	38.3	
Exiting Leg Total	13					946					225					1063					2247

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	11	1	1	0	13	0	141	17	0	158	21	0	11	0	32	9	119	0	0	128	331
7:45 AM	15	0	4	0	19	0	137	13	0	150	13	0	7	0	20	4	122	2	0	128	317
8:00 AM	7	2	1	0	10	0	106	18	0	124	11	0	17	0	28	9	92	1	0	102	264
8:15 AM	4	2	1	0	7	0	120	33	0	153	33	0	19	0	52	15	98	1	0	114	326
Total Volume	37	5	7	0	49	0	504	81	0	585	78	0	54	0	132	37	431	4	0	472	1238
% Approach Total	75.5	10.2	14.3	0.0		0.0	86.2	13.8	0.0		59.1	0.0	40.9	0.0		7.8	91.3	0.8	0.0		
PHF	0.617	0.625	0.438	0.000	0.645	0.000	0.894	0.614	0.000	0.926	0.591	0.000	0.711	0.000	0.635	0.617	0.883	0.500	0.000	0.922	0.935
Entering Leg	37	5	7	0	49	0	504	81	0	585	78	0	54	0	132	37	431	4	0	472	1238
Exiting Leg	4					516					123					595					1238
Total	53					1101					255					1067					2476

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Light Goods Vehicle

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	1	0	1	0	12	1	0	13	1	0	1	0	2	1	7	0	0	8	24
7:15 AM	0	0	0	0	0	0	12	1	0	13	2	0	0	0	2	0	11	0	0	11	26
7:30 AM	0	0	0	0	0	0	13	1	0	14	2	0	0	0	2	0	7	0	0	7	23
7:45 AM	0	1	0	0	1	0	13	2	0	15	2	0	1	0	3	1	12	0	0	13	32
Total	0	1	1	0	2	0	50	5	0	55	7	0	2	0	9	2	37	0	0	39	105
8:00 AM	0	0	0	0	0	0	12	1	0	13	2	0	3	0	5	1	16	0	0	17	35
8:15 AM	0	0	0	0	0	0	11	1	0	12	1	0	0	0	1	0	9	0	0	9	22
8:30 AM	0	0	0	0	0	0	11	2	0	13	1	0	0	0	1	2	13	0	0	15	29
8:45 AM	0	0	0	0	0	0	9	3	0	12	3	0	1	0	4	0	9	0	0	9	25
Total	0	0	0	0	0	0	43	7	0	50	7	0	4	0	11	3	47	0	0	50	111
Grand Total	0	1	1	0	2	0	93	12	0	105	14	0	6	0	20	5	84	0	0	89	216
Approach %	0.0	50.0	50.0	0.0		0.0	88.6	11.4	0.0		70.0	0.0	30.0	0.0		5.6	94.4	0.0	0.0		
Total %	0.0	0.5	0.5	0.0	0.9	0.0	43.1	5.6	0.0	48.6	6.5	0.0	2.8	0.0	9.3	2.3	38.9	0.0	0.0	41.2	
Exiting Leg Total	0					99					18					99					216

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	1	0	0	1	0	13	2	0	15	2	0	1	0	3	1	12	0	0	13	32
8:00 AM	0	0	0	0	0	0	12	1	0	13	2	0	3	0	5	1	16	0	0	17	35
8:15 AM	0	0	0	0	0	0	11	1	0	12	1	0	0	0	1	0	9	0	0	9	22
8:30 AM	0	0	0	0	0	0	11	2	0	13	1	0	0	0	1	2	13	0	0	15	29
Total Volume	0	1	0	0	1	0	47	6	0	53	6	0	4	0	10	4	50	0	0	54	118
% Approach Total	0.0	100.0	0.0	0.0		0.0	88.7	11.3	0.0		60.0	0.0	40.0	0.0		7.4	92.6	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.904	0.750	0.000	0.883	0.750	0.000	0.333	0.000	0.500	0.500	0.781	0.000	0.000	0.794	0.843
Entering Leg	0	1	0	0	1	0	47	6	0	53	6	0	4	0	10	4	50	0	0	54	118
Exiting Leg	0					56					11					51					118
Total	1					109					21					105					236

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	6	1	0	7	2	0	0	0	2	0	1	0	0	1	10
7:15 AM	0	0	0	0	0	0	11	2	0	13	1	0	1	0	2	0	5	0	0	5	20
7:30 AM	0	0	0	0	0	0	6	2	0	8	2	0	0	0	2	1	2	0	0	3	13
7:45 AM	0	0	0	0	0	0	8	1	0	9	1	0	0	0	1	1	4	0	0	5	15
Total	0	0	0	0	0	0	31	6	0	37	6	0	1	0	7	2	12	0	0	14	58
8:00 AM	0	0	0	0	0	0	5	3	0	8	0	0	1	0	1	0	4	0	0	4	13
8:15 AM	0	0	0	0	0	0	2	1	0	3	0	0	3	0	3	0	6	0	0	6	12
8:30 AM	1	0	0	0	1	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	8
8:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	7
Total	1	0	0	0	1	0	12	4	0	16	1	0	4	0	5	1	17	0	0	18	40
Grand Total	1	0	0	0	1	0	43	10	0	53	7	0	5	0	12	3	29	0	0	32	98
Approach %	100.0	0.0	0.0	0.0		0.0	81.1	18.9	0.0		58.3	0.0	41.7	0.0		9.4	90.6	0.0	0.0		
Total %	1.0	0.0	0.0	0.0	1.0	0.0	43.9	10.2	0.0	54.1	7.1	0.0	5.1	0.0	12.2	3.1	29.6	0.0	0.0	32.7	
Exiting Leg Total	0					36					13					49					98

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	11	2	0	13	1	0	1	0	2	0	5	0	0	5	20
7:30 AM	0	0	0	0	0	0	6	2	0	8	2	0	0	0	2	1	2	0	0	3	13
7:45 AM	0	0	0	0	0	0	8	1	0	9	1	0	0	0	1	1	4	0	0	5	15
8:00 AM	0	0	0	0	0	0	5	3	0	8	0	0	1	0	1	0	4	0	0	4	13
Total Volume	0	0	0	0	0	0	30	8	0	38	4	0	2	0	6	2	15	0	0	17	61
% Approach Total	0.0	0.0	0.0	0.0		0.0	78.9	21.1	0.0		66.7	0.0	33.3	0.0		11.8	88.2	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.682	0.667	0.000	0.731	0.500	0.000	0.500	0.000	0.750	0.500	0.750	0.000	0.000	0.850	0.763
Entering Leg	0	0	0	0	0	0	30	8	0	38	4	0	2	0	6	2	15	0	0	17	61
Exiting Leg	0					19					10					32					61
Total	0					57					16					49					122

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	2	0	0	2	8
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8
7:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	7
7:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Total	0	0	0	0	0	0	13	0	0	13	0	0	2	0	2	0	14	0	0	14	29
8:00 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	8
8:15 AM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	8
8:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9
8:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	7	0	0	8	13
Total	0	0	0	0	0	0	19	1	0	20	0	0	1	0	1	1	16	0	0	17	38
Grand Total	0	0	0	0	0	0	32	1	0	33	0	0	3	0	3	1	30	0	0	31	67
Approach %	0.0	0.0	0.0	0.0		0.0	97.0	3.0	0.0		0.0	0.0	100.0	0.0		3.2	96.8	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	47.8	1.5	0.0	49.3	0.0	0.0	4.5	0.0	4.5	1.5	44.8	0.0	0.0	46.3	
Exiting Leg Total	0					30					2					35					67

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
8:00 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	0	2	8
8:15 AM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	3	0	0	0	3	8
8:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	0	4	9
8:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	7	0	0	0	8	13
Total Volume	0	0	0	0	0	0	19	1	0	20	0	0	1	0	1	1	16	0	0	0	17	38
% Approach Total	0.0	0.0	0.0	0.0		0.0	95.0	5.0	0.0		0.0	0.0	100.0	0.0		5.9	94.1	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.792	0.250	0.000	0.833	0.000	0.000	0.250	0.000	0.250	0.250	0.571	0.000	0.000	0.531		0.731
Entering Leg	0	0	0	0	0	0	19	1	0	20	0	0	1	0	1	1	16	0	0	0	17	38
Exiting Leg																					20	38
Total	0					36					3					37					76	

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	5
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	3
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	0	6
Grand Total	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	0	11
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	63.6	0.0	0.0	63.6	0.0	0.0	0.0	0.0	0.0	0.0	36.4	0.0	0.0	36.4	
Exiting Leg Total	0					4					0					7					11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	3
Total Volume	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.583
Entering Leg	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
Exiting Leg	0					2					0					5					7
Total	0					7					0					7					14

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							1							1							2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	2	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	2	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	2	
Exiting Leg	0							0							1							1							2
Total	0							0							3							1							4

PDI File #: **186177 A**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	0	0	0	0	2	0	2	5	
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	2	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	
Total	0	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	4	1	5	9
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	3	1	4	0	0	0	0	0	2	2	0	0	0	0	6	1	7	14
Approach %	0	0	0	0	0	0	100		0	0	0	0	75	25		0	0	0	0	0	100		0	0	0	0	85.7	14.3		
Total %	0	0	0	0	0	0	7.14	7.14	0	0	0	0	21.4	7.14	28.6	0	0	0	0	0	14.3	14.3	0	0	0	0	42.9	7.14	50	
Exiting Leg Total	1							4							2							7							14	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Total Volume	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	4	1	5	9
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	80.0	20.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.500	0.250	0.625	0.563
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	4	1	5	9
Exiting Leg	1							2							1							5							9
Total	2							4							2							10							18

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	3	0	6	1	152	20	0	173	27	3	19	0	49	6	177	4	0	187	415
4:15 PM	3	4	1	0	8	0	171	31	0	202	23	3	9	0	35	5	153	4	0	162	407
4:30 PM	3	2	2	0	7	1	180	21	0	202	30	2	5	0	37	10	161	2	0	173	419
4:45 PM	6	3	2	0	11	2	182	27	0	211	24	1	9	0	34	11	210	11	0	232	488
Total	12	12	8	0	32	4	685	99	0	788	104	9	42	0	155	32	701	21	0	754	1729
5:00 PM	1	2	1	0	4	2	140	29	0	171	39	4	7	0	50	13	204	8	0	225	450
5:15 PM	2	2	1	0	5	5	158	30	0	193	35	3	7	0	45	8	217	10	0	235	478
5:30 PM	5	0	0	0	5	1	123	30	0	154	25	3	5	0	33	7	192	7	0	206	398
5:45 PM	1	3	1	0	5	6	143	24	0	173	15	2	5	0	22	3	168	5	0	176	376
Total	9	7	3	0	19	14	564	113	0	691	114	12	24	0	150	31	781	30	0	842	1702
Grand Total	21	19	11	0	51	18	1249	212	0	1479	218	21	66	0	305	63	1482	51	0	1596	3431
Approach %	41.2	37.3	21.6	0.0		1.2	84.4	14.3	0.0		71.5	6.9	21.6	0.0		3.9	92.9	3.2	0.0		
Total %	0.6	0.6	0.3	0.0	1.5	0.5	36.4	6.2	0.0	43.1	6.4	0.6	1.9	0.0	8.9	1.8	43.2	1.5	0.0	46.5	
Exiting Leg Total	90					1711					294					1336					3431
Cars	21	19	8	0	48	18	1212	209	0	1439	212	21	63	0	296	61	1423	50	0	1534	3317
% Cars	100.0	100.0	72.7	0.0	94.1	100.0	97.0	98.6	0.0	97.3	97.2	100.0	95.5	0.0	97.0	96.8	96.0	98.0	0.0	96.1	96.7
Exiting Leg Total	89					1643					289					1296					3317
Heavy Vehicles	0	0	3	0	3	0	37	3	0	40	6	0	3	0	9	2	59	1	0	62	114
% Heavy Vehicles	0.0	0.0	27.3	0.0	5.9	0.0	3.0	1.4	0.0	2.7	2.8	0.0	4.5	0.0	3.0	3.2	4.0	2.0	0.0	3.9	3.3
Exiting Leg Total	1					68					5					40					114

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	3	2	2	0	7	1	180	21	0	202	30	2	5	0	37	10	161	2	0	173	419
4:45 PM	6	3	2	0	11	2	182	27	0	211	24	1	9	0	34	11	210	11	0	232	488
5:00 PM	1	2	1	0	4	2	140	29	0	171	39	4	7	0	50	13	204	8	0	225	450
5:15 PM	2	2	1	0	5	5	158	30	0	193	35	3	7	0	45	8	217	10	0	235	478
Total Volume	12	9	6	0	27	10	660	107	0	777	128	10	28	0	166	42	792	31	0	865	1835
% Approach Total	44.4	33.3	22.2	0.0		1.3	84.9	13.8	0.0		77.1	6.0	16.9	0.0		4.9	91.6	3.6	0.0		
PHF	0.500	0.750	0.750	0.000	0.614	0.500	0.907	0.892	0.000	0.921	0.821	0.625	0.778	0.000	0.830	0.808	0.912	0.705	0.000	0.920	0.940
Cars	12	9	5	0	26	10	639	106	0	755	125	10	28	0	163	41	770	31	0	842	1786
Cars %	100.0	100.0	83.3	0.0	96.3	100.0	96.8	99.1	0.0	97.2	97.7	100.0	100.0	0.0	98.2	97.6	97.2	100.0	0.0	97.3	97.3
Heavy Vehicles	0	0	1	0	1	0	21	1	0	22	3	0	0	0	3	1	22	0	0	23	49
Heavy Vehicles %	0.0	0.0	16.7	0.0	3.7	0.0	3.2	0.9	0.0	2.8	2.3	0.0	0.0	0.0	1.8	2.4	2.8	0.0	0.0	2.7	2.7
Cars Enter Leg	12	9	5	0	26	10	639	106	0	755	125	10	28	0	163	41	770	31	0	842	1786
Heavy Enter Leg	0	0	1	0	1	0	21	1	0	22	3	0	0	0	3	1	22	0	0	23	49
Total Entering Leg	12	9	6	0	27	10	660	107	0	777	128	10	28	0	166	42	792	31	0	865	1835
Cars Exiting Leg	51					900					156					679					1786
Heavy Exiting Leg	0					26					2					21					49
Total Exiting Leg	51					926					158					700					1835

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**



Count Date: **Friday, April 20, 2018**

Start Time: **4:00 PM**

End Time: **6:00 PM**

Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	1	0	4	1	151	20	0	172	26	3	17	0	46	6	171	4	0	181	403
4:15 PM	3	4	1	0	8	0	165	30	0	195	21	3	8	0	32	4	147	4	0	155	390
4:30 PM	3	2	2	0	7	1	176	20	0	197	28	2	5	0	35	9	157	2	0	168	407
4:45 PM	6	3	2	0	11	2	177	27	0	206	23	1	9	0	33	11	206	11	0	228	478
Total	12	12	6	0	30	4	669	97	0	770	98	9	39	0	146	30	681	21	0	732	1678
5:00 PM	1	2	0	0	3	2	133	29	0	164	39	4	7	0	50	13	198	8	0	219	436
5:15 PM	2	2	1	0	5	5	153	30	0	188	35	3	7	0	45	8	209	10	0	227	465
5:30 PM	5	0	0	0	5	1	118	30	0	149	25	3	5	0	33	7	176	6	0	189	376
5:45 PM	1	3	1	0	5	6	139	23	0	168	15	2	5	0	22	3	159	5	0	167	362
Total	9	7	2	0	18	14	543	112	0	669	114	12	24	0	150	31	742	29	0	802	1639
Grand Total	21	19	8	0	48	18	1212	209	0	1439	212	21	63	0	296	61	1423	50	0	1534	3317
Approach %	43.8	39.6	16.7	0.0		1.3	84.2	14.5	0.0		71.6	7.1	21.3	0.0		4.0	92.8	3.3	0.0		
Total %	0.6	0.6	0.2	0.0	1.4	0.5	36.5	6.3	0.0	43.4	6.4	0.6	1.9	0.0	8.9	1.8	42.9	1.5	0.0	46.2	
Exiting Leg Total	89					1643					289					1296					3317

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	3	2	2	0	7	1	176	20	0	197	28	2	5	0	35	9	157	2	0	168	407
4:45 PM	6	3	2	0	11	2	177	27	0	206	23	1	9	0	33	11	206	11	0	228	478
5:00 PM	1	2	0	0	3	2	133	29	0	164	39	4	7	0	50	13	198	8	0	219	436
5:15 PM	2	2	1	0	5	5	153	30	0	188	35	3	7	0	45	8	209	10	0	227	465
Total Volume	12	9	5	0	26	10	639	106	0	755	125	10	28	0	163	41	770	31	0	842	1786
% Approach Total	46.2	34.6	19.2	0.0		1.3	84.6	14.0	0.0		76.7	6.1	17.2	0.0		4.9	91.4	3.7	0.0		
PHF	0.500	0.750	0.625	0.000	0.591	0.500	0.903	0.883	0.000	0.916	0.801	0.625	0.778	0.000	0.815	0.788	0.921	0.705	0.000	0.923	0.934
Entering Leg	12	9	5	0	26	10	639	106	0	755	125	10	28	0	163	41	770	31	0	842	1786
Exiting Leg					51					900					156					679	1786
Total	77					1655					319					1521					3572

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	2	0	2	0	1	0	0	1	1	0	2	0	3	0	6	0	0	0	6	12
4:15 PM	0	0	0	0	0	0	6	1	0	7	2	0	1	0	3	1	6	0	0	0	7	17
4:30 PM	0	0	0	0	0	0	4	1	0	5	2	0	0	0	2	1	4	0	0	0	5	12
4:45 PM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	4	0	0	0	4	10
Total	0	0	2	0	2	0	16	2	0	18	6	0	3	0	9	2	20	0	0	0	22	51
5:00 PM	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	0	6	0	0	0	6	14
5:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	0	0	0	8	13
5:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	16	1	0	0	17	22
5:45 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	9	0	0	0	9	14
Total	0	0	1	0	1	0	21	1	0	22	0	0	0	0	0	0	39	1	0	0	40	63
Grand Total	0	0	3	0	3	0	37	3	0	40	6	0	3	0	9	2	59	1	0	0	62	114
Approach %	0.0	0.0	100.0	0.0		0.0	92.5	7.5	0.0		66.7	0.0	33.3	0.0		3.2	95.2	1.6	0.0			
Total %	0.0	0.0	2.6	0.0	2.6	0.0	32.5	2.6	0.0	35.1	5.3	0.0	2.6	0.0	7.9	1.8	51.8	0.9	0.0	0.0	54.4	
Exiting Leg Total	1					68					5					40					114	
Buses	0	0	3	0	3	0	15	2	0	17	4	0	3	0	7	1	33	0	0	0	34	61
% Buses	0.0	0.0	100.0	0.0	100.0	0.0	40.5	66.7	0.0	42.5	66.7	0.0	100.0	0.0	77.8	50.0	55.9	0.0	0.0	0.0	54.8	53.5
Exiting Leg Total	0					40					3					18					61	
Single-Unit Trucks	0	0	0	0	0	0	17	1	0	18	2	0	0	0	2	1	24	1	0	0	26	46
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	45.9	33.3	0.0	45.0	33.3	0.0	0.0	0.0	22.2	50.0	40.7	100.0	0.0	0.0	41.9	40.4
Exiting Leg Total	1					26					2					17					46	
Articulated Trucks	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	0	2	7
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.2	6.1
Exiting Leg Total	0					2					0					5					7	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
5:00 PM	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	0	6	0	0	0	6	14
5:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	0	0	0	8	13
5:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	16	1	0	0	17	22
5:45 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	9	0	0	0	9	14
Total Volume	0	0	1	0	1	0	21	1	0	22	0	0	0	0	0	0	39	1	0	0	40	63
% Approach Total	0.0	0.0	100.0	0.0		0.0	95.5	4.5	0.0		0.0	0.0	0.0	0.0		0.0	97.5	2.5	0.0			
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.750	0.250	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.000	0.609	0.250	0.000	0.588	0.716	
Buses	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	24	0	0	0	24	35
Buses %	0.0	0.0	100.0	0.0	100.0	0.0	42.9	100.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	61.5	0.0	0.0	0.0	60.0	55.6
Single-Unit Trucks	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	14	1	0	0	15	22
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	0.0	35.9	100.0	0.0	0.0	37.5	34.9
Articulated Trucks	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	0	1	6
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	23.8	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.5	9.5
Buses	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	24	0	0	0	24	35
Single-Unit Trucks	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	14	1	0	0	15	22
Articulated Trucks	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	0	1	6
Total Entering Leg	0	0	1	0	1	0	21	1	0	22	0	0	0	0	0	0	39	1	0	0	40	63
Buses	0					25					1					9					35	
Single-Unit Trucks	1					14					0					7					22	
Articulated Trucks	0					1					0					5					6	
Total Exiting Leg	1					40					1					21					63	

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	1	0	4	1	133	13	0	147	24	3	16	0	43	5	159	4	0	168	362
4:15 PM	3	4	1	0	8	0	148	29	0	177	20	3	7	0	30	3	127	4	0	134	349
4:30 PM	3	2	2	0	7	1	162	19	0	182	28	2	4	0	34	9	136	2	0	147	370
4:45 PM	6	3	2	0	11	2	161	27	0	190	22	1	9	0	32	10	184	10	0	204	437
Total	12	12	6	0	30	4	604	88	0	696	94	9	36	0	139	27	606	20	0	653	1518
5:00 PM	1	2	0	0	3	1	117	29	0	147	37	4	6	0	47	13	184	7	0	204	401
5:15 PM	2	2	1	0	5	4	137	27	0	168	33	2	4	0	39	5	193	10	0	208	420
5:30 PM	5	0	0	0	5	1	107	27	0	135	20	3	3	0	26	6	159	5	0	170	336
5:45 PM	1	3	1	0	5	6	129	20	0	155	14	2	5	0	21	3	147	5	0	155	336
Total	9	7	2	0	18	12	490	103	0	605	104	11	18	0	133	27	683	27	0	737	1493
Grand Total	21	19	8	0	48	16	1094	191	0	1301	198	20	54	0	272	54	1289	47	0	1390	3011
Approach %	43.8	39.6	16.7	0.0		1.2	84.1	14.7	0.0		72.8	7.4	19.9	0.0		3.9	92.7	3.4	0.0		
Total %	0.7	0.6	0.3	0.0	1.6	0.5	36.3	6.3	0.0	43.2	6.6	0.7	1.8	0.0	9.0	1.8	42.8	1.6	0.0	46.2	
Exiting Leg Total	83					1495					264					1169					3011

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	3	2	2	0	7	1	162	19	0	182	28	2	4	0	34	9	136	2	0	147	370
4:45 PM	6	3	2	0	11	2	161	27	0	190	22	1	9	0	32	10	184	10	0	204	437
5:00 PM	1	2	0	0	3	1	117	29	0	147	37	4	6	0	47	13	184	7	0	204	401
5:15 PM	2	2	1	0	5	4	137	27	0	168	33	2	4	0	39	5	193	10	0	208	420
Total Volume	12	9	5	0	26	8	577	102	0	687	120	9	23	0	152	37	697	29	0	763	1628
% Approach Total	46.2	34.6	19.2	0.0		1.2	84.0	14.8	0.0		78.9	5.9	15.1	0.0		4.8	91.3	3.8	0.0		
PHF	0.500	0.750	0.625	0.000	0.591	0.500	0.890	0.879	0.000	0.904	0.811	0.563	0.639	0.000	0.809	0.712	0.903	0.725	0.000	0.917	0.931
Entering Leg	12	9	5	0	26	8	577	102	0	687	120	9	23	0	152	37	697	29	0	763	1628
Exiting Leg	46					822					148					612					1628
Total	72					1509					300					1375					3256

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Light Goods Vehicle

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	18	7	0	25	2	0	1	0	3	1	12	0	0	13	41
4:15 PM	0	0	0	0	0	0	17	1	0	18	0	0	1	0	1	1	19	0	0	20	39
4:30 PM	0	0	0	0	0	0	13	1	0	14	0	0	1	0	1	0	19	0	0	19	34
4:45 PM	0	0	0	0	0	0	16	0	0	16	1	0	0	0	1	1	22	1	0	24	41
Total	0	0	0	0	0	0	64	9	0	73	3	0	3	0	6	3	72	1	0	76	155
5:00 PM	0	0	0	0	0	1	16	0	0	17	2	0	1	0	3	0	14	1	0	15	35
5:15 PM	0	0	0	0	0	1	16	3	0	20	2	0	3	0	5	3	16	0	0	19	44
5:30 PM	0	0	0	0	0	0	11	3	0	14	5	0	2	0	7	1	16	1	0	18	39
5:45 PM	0	0	0	0	0	0	10	3	0	13	1	0	0	0	1	0	12	0	0	12	26
Total	0	0	0	0	0	2	53	9	0	64	10	0	6	0	16	4	58	2	0	64	144
Grand Total	0	0	0	0	0	2	117	18	0	137	13	0	9	0	22	7	130	3	0	140	299
Approach %	0.0	0.0	0.0	0.0		1.5	85.4	13.1	0.0		59.1	0.0	40.9	0.0		5.0	92.9	2.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.7	39.1	6.0	0.0	45.8	4.3	0.0	3.0	0.0	7.4	2.3	43.5	1.0	0.0	46.8	
Exiting Leg Total	5					143					25					126					299

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	0	0	0	0	0	0	16	0	0	16	1	0	0	0	1	1	22	1	0	24	41
5:00 PM	0	0	0	0	0	1	16	0	0	17	2	0	1	0	3	0	14	1	0	15	35
5:15 PM	0	0	0	0	0	1	16	3	0	20	2	0	3	0	5	3	16	0	0	19	44
5:30 PM	0	0	0	0	0	0	11	3	0	14	5	0	2	0	7	1	16	1	0	18	39
Total Volume	0	0	0	0	0	2	59	6	0	67	10	0	6	0	16	5	68	3	0	76	159
% Approach Total	0.0	0.0	0.0	0.0		3.0	88.1	9.0	0.0		62.5	0.0	37.5	0.0		6.6	89.5	3.9	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.922	0.500	0.000	0.838	0.500	0.000	0.500	0.000	0.571	0.417	0.773	0.750	0.000	0.792	0.903
Entering Leg	0	0	0	0	0	2	59	6	0	67	10	0	6	0	16	5	68	3	0	76	159
Exiting Leg					5					78					11					65	159
Total					5					145					27					141	318

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	2	0	2	0	0	0	0	0	1	0	2	0	3	0	3	0	0	3	8
4:15 PM	0	0	0	0	0	0	3	1	0	4	2	0	1	0	3	1	3	0	0	4	11
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:45 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	5
Total	0	0	2	0	2	0	6	1	0	7	4	0	3	0	7	1	9	0	0	10	26
5:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
5:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	10	0	0	10	12
5:45 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	7	0	0	7	10
Total	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	24	0	0	24	35
Grand Total	0	0	3	0	3	0	15	2	0	17	4	0	3	0	7	1	33	0	0	34	61
Approach %	0.0	0.0	100.0	0.0		0.0	88.2	11.8	0.0		57.1	0.0	42.9	0.0		2.9	97.1	0.0	0.0		
Total %	0.0	0.0	4.9	0.0	4.9	0.0	24.6	3.3	0.0	27.9	6.6	0.0	4.9	0.0	11.5	1.6	54.1	0.0	0.0	55.7	
Exiting Leg Total	0					40					3					18					61

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane							
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total			
5:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	7	
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	0	4	6	
5:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	10	0	0	0	10	12	
5:45 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	7	0	0	0	7	10	
Total Volume	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	24	0	0	0	24	35	
% Approach Total	0.0	0.0	100.0	0.0		0.0	90.0	10.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0				
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.750	0.250	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.600	0.729		
Entering Leg	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	24	0	0	0	24	35	
Exiting Leg																					9	35	
Total	1					35					1					33					70		

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
4:30 PM	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	1	3	0	0	4	10
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
Total	0	0	0	0	0	0	10	1	0	11	2	0	0	0	2	1	10	0	0	11	24
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4
5:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	1	0	7	9
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	14	1	0	15	22
Grand Total	0	0	0	0	0	0	17	1	0	18	2	0	0	0	2	1	24	1	0	26	46
Approach %	0.0	0.0	0.0	0.0		0.0	94.4	5.6	0.0		100.0	0.0	0.0	0.0		3.8	92.3	3.8	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	37.0	2.2	0.0	39.1	4.3	0.0	0.0	0.0	4.3	2.2	52.2	2.2	0.0	56.5	
Exiting Leg Total	1					26					2					17					46

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	6
4:30 PM	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	1	3	0	0	4	10	
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	6
Total Volume	0	0	0	0	0	0	12	1	0	13	2	0	0	0	2	1	11	0	0	12	27	
% Approach Total	0.0	0.0	0.0	0.0		0.0	92.3	7.7	0.0		100.0	0.0	0.0	0.0		8.3	91.7	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.250	0.000	0.813	0.250	0.000	0.000	0.000	0.250	0.250	0.917	0.000	0.000	0.750	0.675	
Entering Leg	0	0	0	0	0	0	12	1	0	13	2	0	0	0	2	1	11	0	0	12	27	
Exiting Leg																					12	27
Total	0					26					4					24					54	

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	6
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	
Exiting Leg Total	0					2					0					5					7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	3
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	0	6
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.500
Entering Leg	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	0	6
Exiting Leg	0					1					0					5					6
Total	0					6					0					6					12

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total	0							1							0							0							1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg	0							1							0							0							1
Total	0							1							0							1							2

PDI File #: **186177 AA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Friday, April 20, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	3
5:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	1	0	1	7
Grand Total	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	2	4	6	0	0	0	0	1	0	1	11
Approach %	0	0	0	0	66.7	33.3		0	0	0	0	100	0		0	0	0	0	33.3	66.7		0	0	0	0	100	0		
Total %	0	0	0	0	18.2	9.09	27.3	0	0	0	0	9.09	0	9.09	0	0	0	0	18.2	36.4	54.5	0	0	0	0	9.09	0	9.09	
Exiting Leg Total	3							1							6							1							11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	3
5:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	1	0	1	7
% Approach Total	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	25.0	75.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.750	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.583
Entering Leg	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	1	0	1	7
Exiting Leg	2							0							4							1							7
Total	4							0							8							2							14

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	2	1	1	0	4	0	96	14	0	110	11	0	9	0	20	3	92	2	0	97	231
11:15 AM	3	1	2	0	6	0	131	20	0	151	18	2	4	0	24	2	108	3	0	113	294
11:30 AM	5	0	1	0	6	0	132	15	0	147	17	2	7	0	26	9	107	1	0	117	296
11:45 AM	2	1	3	0	6	0	117	11	0	128	18	5	6	0	29	3	121	1	0	125	288
Total	12	3	7	0	22	0	476	60	0	536	64	9	26	0	99	17	428	7	0	452	1109
12:00 PM	0	2	3	0	5	0	115	25	0	140	18	0	10	0	28	5	137	0	0	142	315
12:15 PM	3	0	2	0	5	0	97	28	0	125	12	2	13	0	27	3	118	0	0	121	278
12:30 PM	1	1	0	0	2	1	109	20	0	130	16	2	6	0	24	2	126	5	0	133	289
12:45 PM	4	1	2	0	7	0	106	21	0	127	23	0	6	0	29	5	109	3	0	117	280
Total	8	4	7	0	19	1	427	94	0	522	69	4	35	0	108	15	490	8	0	513	1162
1:00 PM	1	2	0	0	3	0	120	21	0	141	17	3	8	0	28	6	122	2	0	130	302
1:15 PM	2	3	0	0	5	1	119	19	0	139	22	1	4	0	27	0	121	2	0	123	294
1:30 PM	2	5	1	0	8	0	116	13	0	129	16	3	9	0	28	4	112	1	0	117	282
1:45 PM	1	1	0	0	2	0	112	13	0	125	10	3	3	0	16	3	104	1	0	108	251
Total	6	11	1	0	18	1	467	66	0	534	65	10	24	0	99	13	459	6	0	478	1129
Grand Total	26	18	15	0	59	2	1370	220	0	1592	198	23	85	0	306	45	1377	21	0	1443	3400
Approach %	44.1	30.5	25.4	0.0		0.1	86.1	13.8	0.0		64.7	7.5	27.8	0.0		3.1	95.4	1.5	0.0		
Total %	0.8	0.5	0.4	0.0	1.7	0.1	40.3	6.5	0.0	46.8	5.8	0.7	2.5	0.0	9.0	1.3	40.5	0.6	0.0	42.4	
Exiting Leg Total	46					1590					283					1481					3400
Cars	26	18	13	0	57	1	1336	217	0	1554	192	23	83	0	298	44	1342	20	0	1406	3315
% Cars	100.0	100.0	86.7	0.0	96.6	50.0	97.5	98.6	0.0	97.6	97.0	100.0	97.6	0.0	97.4	97.8	97.5	95.2	0.0	97.4	97.5
Exiting Leg Total	44					1547					279					1445					3315
Heavy Vehicles	0	0	2	0	2	1	34	3	0	38	6	0	2	0	8	1	35	1	0	37	85
% Heavy Vehicles	0.0	0.0	13.3	0.0	3.4	50.0	2.5	1.4	0.0	2.4	3.0	0.0	2.4	0.0	2.6	2.2	2.5	4.8	0.0	2.6	2.5
Exiting Leg Total	2					43					4					36					85

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:15 AM	3	1	2	0	6	0	131	20	0	151	18	2	4	0	24	2	108	3	0	113	294
11:30 AM	5	0	1	0	6	0	132	15	0	147	17	2	7	0	26	9	107	1	0	117	296
11:45 AM	2	1	3	0	6	0	117	11	0	128	18	5	6	0	29	3	121	1	0	125	288
12:00 PM	0	2	3	0	5	0	115	25	0	140	18	0	10	0	28	5	137	0	0	142	315
Total Volume	10	4	9	0	23	0	495	71	0	566	71	9	27	0	107	19	473	5	0	497	1193
% Approach Total	43.5	17.4	39.1	0.0		0.0	87.5	12.5	0.0		66.4	8.4	25.2	0.0		3.8	95.2	1.0	0.0		
PHF	0.500	0.500	0.750	0.000	0.958	0.000	0.938	0.710	0.000	0.937	0.986	0.450	0.675	0.000	0.922	0.528	0.863	0.417	0.000	0.875	0.947
Cars	10	4	9	0	23	0	481	70	0	551	68	9	27	0	104	19	459	5	0	483	1161
Cars %	100.0	100.0	100.0	0.0	100.0	0.0	97.2	98.6	0.0	97.3	95.8	100.0	100.0	0.0	97.2	100.0	97.0	100.0	0.0	97.2	97.3
Heavy Vehicles	0	0	0	0	0	0	14	1	0	15	3	0	0	0	3	0	14	0	0	14	32
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.4	0.0	2.7	4.2	0.0	0.0	0.0	2.8	0.0	3.0	0.0	0.0	2.8	2.7
Cars Enter Leg	10	4	9	0	23	0	481	70	0	551	68	9	27	0	104	19	459	5	0	483	1161
Heavy Enter Leg	0	0	0	0	0	0	14	1	0	15	3	0	0	0	3	0	14	0	0	14	32
Total Entering Leg	10	4	9	0	23	0	495	71	0	566	71	9	27	0	107	19	473	5	0	497	1193
Cars Exiting Leg	14					536					93					518					1161
Heavy Exiting Leg	0					17					1					14					32
Total Exiting Leg	14					553					94					532					1193

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**



Count Date: **Saturday, April 21, 2018**

Start Time: **11:00 AM**

End Time: **2:00 PM**

Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	2	1	1	0	4	0	94	14	0	108	11	0	8	0	19	3	89	2	0	94	225
11:15 AM	3	1	2	0	6	0	127	20	0	147	18	2	4	0	24	2	105	3	0	110	287
11:30 AM	5	0	1	0	6	0	129	15	0	144	17	2	7	0	26	9	106	1	0	116	292
11:45 AM	2	1	3	0	6	0	113	11	0	124	18	5	6	0	29	3	115	1	0	119	278
Total	12	3	7	0	22	0	463	60	0	523	64	9	25	0	98	17	415	7	0	439	1082
12:00 PM	0	2	3	0	5	0	112	24	0	136	15	0	10	0	25	5	133	0	0	138	304
12:15 PM	3	0	2	0	5	0	94	27	0	121	12	2	13	0	27	3	116	0	0	119	272
12:30 PM	1	1	0	0	2	0	107	20	0	127	16	2	6	0	24	2	123	4	0	129	282
12:45 PM	4	1	0	0	5	0	103	21	0	124	22	0	6	0	28	5	106	3	0	114	271
Total	8	4	5	0	17	0	416	92	0	508	65	4	35	0	104	15	478	7	0	500	1129
1:00 PM	1	2	0	0	3	0	117	20	0	137	17	3	7	0	27	5	118	2	0	125	292
1:15 PM	2	3	0	0	5	1	118	19	0	138	20	1	4	0	25	0	120	2	0	122	290
1:30 PM	2	5	1	0	8	0	111	13	0	124	16	3	9	0	28	4	110	1	0	115	275
1:45 PM	1	1	0	0	2	0	111	13	0	124	10	3	3	0	16	3	101	1	0	105	247
Total	6	11	1	0	18	1	457	65	0	523	63	10	23	0	96	12	449	6	0	467	1104
Grand Total	26	18	13	0	57	1	1336	217	0	1554	192	23	83	0	298	44	1342	20	0	1406	3315
Approach %	45.6	31.6	22.8	0.0		0.1	86.0	14.0	0.0		64.4	7.7	27.9	0.0		3.1	95.4	1.4	0.0		
Total %	0.8	0.5	0.4	0.0	1.7	0.0	40.3	6.5	0.0	46.9	5.8	0.7	2.5	0.0	9.0	1.3	40.5	0.6	0.0	42.4	
Exiting Leg Total	44					1547					279					1445					3315

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:15 AM	3	1	2	0	6	0	127	20	0	147	18	2	4	0	24	2	105	3	0	110	287
11:30 AM	5	0	1	0	6	0	129	15	0	144	17	2	7	0	26	9	106	1	0	116	292
11:45 AM	2	1	3	0	6	0	113	11	0	124	18	5	6	0	29	3	115	1	0	119	278
12:00 PM	0	2	3	0	5	0	112	24	0	136	15	0	10	0	25	5	133	0	0	138	304
Total Volume	10	4	9	0	23	0	481	70	0	551	68	9	27	0	104	19	459	5	0	483	1161
% Approach Total	43.5	17.4	39.1	0.0		0.0	87.3	12.7	0.0		65.4	8.7	26.0	0.0		3.9	95.0	1.0	0.0		
PHF	0.500	0.500	0.750	0.000	0.958	0.000	0.932	0.729	0.000	0.937	0.944	0.450	0.675	0.000	0.897	0.528	0.863	0.417	0.000	0.875	0.955
Entering Leg	10	4	9	0	23	0	481	70	0	551	68	9	27	0	104	19	459	5	0	483	1161
Exiting Leg	14					536					93					518					1161
Total	37					1087					197					1001					2322

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	6
11:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
11:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
11:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	10
Total	0	0	0	0	0	0	13	0	0	13	0	0	1	0	1	0	13	0	0	13	27
12:00 PM	0	0	0	0	0	0	3	1	0	4	3	0	0	0	3	0	4	0	0	4	11
12:15 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	6
12:30 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3	1	0	4	7
12:45 PM	0	0	2	0	2	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	9
Total	0	0	2	0	2	1	11	2	0	14	4	0	0	0	4	0	12	1	0	13	33
1:00 PM	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	4	0	0	5	10
1:15 PM	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	1	0	0	1	4
1:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
1:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	0	0	0	0	10	1	0	11	2	0	1	0	3	1	10	0	0	11	25
Grand Total	0	0	2	0	2	1	34	3	0	38	6	0	2	0	8	1	35	1	0	37	85
Approach %	0.0	0.0	100.0	0.0		2.6	89.5	7.9	0.0		75.0	0.0	25.0	0.0		2.7	94.6	2.7	0.0		
Total %	0.0	0.0	2.4	0.0	2.4	1.2	40.0	3.5	0.0	44.7	7.1	0.0	2.4	0.0	9.4	1.2	41.2	1.2	0.0	43.5	
Exiting Leg Total	2					43					4					36					85
Buses	0	0	2	0	2	0	17	1	0	18	2	0	1	0	3	0	15	1	0	16	39
% Buses	0.0	0.0	100.0	0.0	100.0	0.0	50.0	33.3	0.0	47.4	33.3	0.0	50.0	0.0	37.5	0.0	42.9	100.0	0.0	43.2	45.9
Exiting Leg Total	1					19					1					18					39
Single-Unit Trucks	0	0	0	0	0	1	15	2	0	18	3	0	1	0	4	1	17	0	0	18	40
% Single-Unit	0.0	0.0	0.0	0.0	0.0	100.0	44.1	66.7	0.0	47.4	50.0	0.0	50.0	0.0	50.0	100.0	48.6	0.0	0.0	48.6	47.1
Exiting Leg Total	1					20					3					16					40
Articulated Trucks	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	6
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.3	16.7	0.0	0.0	0.0	12.5	0.0	8.6	0.0	0.0	8.1	7.1
Exiting Leg Total	0					4					0					2					6

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:45 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
11:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	0	6	10
12:00 PM	0	0	0	0	0	0	3	1	0	4	3	0	0	0	3	0	4	0	0	0	4	11
12:15 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	2	0	0	0	2	6
12:30 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3	1	0	0	4	7
Total Volume	0	0	0	0	0	1	12	2	0	15	3	0	0	0	3	0	15	1	0	0	16	34
% Approach Total	0.0	0.0	0.0	0.0		6.7	80.0	13.3	0.0		100.0	0.0	0.0	0.0		0.0	93.8	6.3	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.750	0.500	0.000	0.938	0.250	0.000	0.000	0.000	0.250	0.000	0.625	0.250	0.000	0.667	0.773	
Buses	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	0	6	1	0	0	7	15
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	46.7	33.3	0.0	0.0	0.0	33.3	0.0	40.0	100.0	0.0	0.0	43.8	44.1
Single-Unit Trucks	0	0	0	0	0	1	5	1	0	7	1	0	0	0	1	0	7	0	0	0	7	15
Single-Unit %	0.0	0.0	0.0	0.0	0.0	100.0	41.7	50.0	0.0	46.7	33.3	0.0	0.0	0.0	33.3	0.0	46.7	0.0	0.0	0.0	43.8	44.1
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	0	2	4
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	6.7	33.3	0.0	0.0	0.0	33.3	0.0	13.3	0.0	0.0	0.0	12.5	11.8
Buses	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	0	6	1	0	0	7	15
Single-Unit Trucks	0	0	0	0	0	1	5	1	0	7	1	0	0	0	1	0	7	0	0	0	7	15
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	0	2	4
Total Entering Leg	0	0	0	0	0	1	12	2	0	15	3	0	0	0	3	0	15	1	0	0	16	34
Buses	1					7					1					6					15	
Single-Unit Trucks	1					8					1					5					15	
Articulated Trucks	0					3					0					1					4	
Total Exiting Leg	2					18					2					12					34	

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Cars

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	2	1	1	0	4	0	84	13	0	97	10	0	8	0	18	3	82	2	0	87	206
11:15 AM	2	0	2	0	4	0	111	19	0	130	18	1	4	0	23	2	93	3	0	98	255
11:30 AM	5	0	1	0	6	0	119	14	0	133	16	1	7	0	24	9	96	1	0	106	269
11:45 AM	2	1	2	0	5	0	102	11	0	113	16	5	5	0	26	3	109	1	0	113	257
Total	11	2	6	0	19	0	416	57	0	473	60	7	24	0	91	17	380	7	0	404	987
12:00 PM	0	2	2	0	4	0	95	22	0	117	15	0	9	0	24	5	123	0	0	128	273
12:15 PM	3	0	2	0	5	0	85	23	0	108	11	2	13	0	26	3	106	0	0	109	248
12:30 PM	1	1	0	0	2	0	102	15	0	117	14	1	5	0	20	2	113	4	0	119	258
12:45 PM	2	1	0	0	3	0	94	20	0	114	19	0	6	0	25	5	95	3	0	103	245
Total	6	4	4	0	14	0	376	80	0	456	59	3	33	0	95	15	437	7	0	459	1024
1:00 PM	0	2	0	0	2	0	105	18	0	123	16	3	7	0	26	4	107	2	0	113	264
1:15 PM	2	3	0	0	5	1	98	19	0	118	18	1	4	0	23	0	109	2	0	111	257
1:30 PM	2	5	0	0	7	0	101	12	0	113	15	2	9	0	26	4	95	1	0	100	246
1:45 PM	1	1	0	0	2	0	102	13	0	115	10	2	3	0	15	3	89	1	0	93	225
Total	5	11	0	0	16	1	406	62	0	469	59	8	23	0	90	11	400	6	0	417	992
Grand Total	22	17	10	0	49	1	1198	199	0	1398	178	18	80	0	276	43	1217	20	0	1280	3003
Approach %	44.9	34.7	20.4	0.0		0.1	85.7	14.2	0.0		64.5	6.5	29.0	0.0		3.4	95.1	1.6	0.0		
Total %	0.7	0.6	0.3	0.0	1.6	0.0	39.9	6.6	0.0	46.6	5.9	0.6	2.7	0.0	9.2	1.4	40.5	0.7	0.0	42.6	
Exiting Leg Total	39					1405					259					1300					3003

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:15 AM	2	0	2	0	4	0	111	19	0	130	18	1	4	0	23	2	93	3	0	98	255
11:30 AM	5	0	1	0	6	0	119	14	0	133	16	1	7	0	24	9	96	1	0	106	269
11:45 AM	2	1	2	0	5	0	102	11	0	113	16	5	5	0	26	3	109	1	0	113	257
12:00 PM	0	2	2	0	4	0	95	22	0	117	15	0	9	0	24	5	123	0	0	128	273
Total Volume	9	3	7	0	19	0	427	66	0	493	65	7	25	0	97	19	421	5	0	445	1054
% Approach Total	47.4	15.8	36.8	0.0		0.0	86.6	13.4	0.0		67.0	7.2	25.8	0.0		4.3	94.6	1.1	0.0		
PHF	0.450	0.375	0.875	0.000	0.792	0.000	0.897	0.750	0.000	0.927	0.903	0.350	0.694	0.000	0.933	0.528	0.856	0.417	0.000	0.869	0.965
Entering Leg	9	3	7	0	19	0	427	66	0	493	65	7	25	0	97	19	421	5	0	445	1054
Exiting Leg	12					493					88					461					1054
Total	31					986					185					906					2108

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Light Goods Vehicle

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	10	1	0	11	1	0	0	0	1	0	7	0	0	7	19
11:15 AM	1	1	0	0	2	0	16	1	0	17	0	1	0	0	1	0	12	0	0	12	32
11:30 AM	0	0	0	0	0	0	9	1	0	10	1	1	0	0	2	0	10	0	0	10	22
11:45 AM	0	0	1	0	1	0	10	0	0	10	2	0	0	0	2	0	6	0	0	6	19
Total	1	1	1	0	3	0	45	3	0	48	4	2	0	0	6	0	35	0	0	35	92
12:00 PM	0	0	1	0	1	0	15	2	0	17	0	0	1	0	1	0	10	0	0	10	29
12:15 PM	0	0	0	0	0	0	8	4	0	12	1	0	0	0	1	0	9	0	0	9	22
12:30 PM	0	0	0	0	0	0	5	5	0	10	2	1	1	0	4	0	9	0	0	9	23
12:45 PM	2	0	0	0	2	0	9	1	0	10	3	0	0	0	3	0	10	0	0	10	25
Total	2	0	1	0	3	0	37	12	0	49	6	1	2	0	9	0	38	0	0	38	99
1:00 PM	1	0	0	0	1	0	12	2	0	14	1	0	0	0	1	1	11	0	0	12	28
1:15 PM	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	0	10	0	0	10	32
1:30 PM	0	0	0	0	0	0	10	1	0	11	1	1	0	0	2	0	14	0	0	14	27
1:45 PM	0	0	0	0	0	0	9	0	0	9	0	1	0	0	1	0	12	0	0	12	22
Total	1	0	0	0	1	0	51	3	0	54	4	2	0	0	6	1	47	0	0	48	109
Grand Total	4	1	2	0	7	0	133	18	0	151	14	5	2	0	21	1	120	0	0	121	300
Approach %	57.1	14.3	28.6	0.0		0.0	88.1	11.9	0.0		66.7	23.8	9.5	0.0		0.8	99.2	0.0	0.0		
Total %	1.3	0.3	0.7	0.0	2.3	0.0	44.3	6.0	0.0	50.3	4.7	1.7	0.7	0.0	7.0	0.3	40.0	0.0	0.0	40.3	
Exiting Leg Total	5					136					20					139					300

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:45 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:45 PM	2	0	0	0	2	0	9	1	0	10	3	0	0	0	3	0	10	0	0	10	25
1:00 PM	1	0	0	0	1	0	12	2	0	14	1	0	0	0	1	1	11	0	0	12	28
1:15 PM	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	0	10	0	0	10	32
1:30 PM	0	0	0	0	0	0	10	1	0	11	1	1	0	0	2	0	14	0	0	14	27
Total Volume	3	0	0	0	3	0	51	4	0	55	7	1	0	0	8	1	45	0	0	46	112
% Approach Total	100.0	0.0	0.0	0.0		0.0	92.7	7.3	0.0		87.5	12.5	0.0	0.0		2.2	97.8	0.0	0.0		
PHF	0.375	0.000	0.000	0.000	0.375	0.000	0.638	0.500	0.000	0.688	0.583	0.250	0.000	0.000	0.667	0.250	0.804	0.000	0.000	0.821	0.875
Entering Leg	3	0	0	0	3	0	51	4	0	55	7	1	0	0	8	1	45	0	0	46	112
Exiting Leg	1					52					5					54					112
Total	4					107					13					100					

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Buses

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total		
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total			
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
11:15 AM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	1	4
11:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1	2
11:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	4	0	0	4	9
12:00 PM	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	0	3	0	0	0	3	6
12:15 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	3	4
12:45 PM	0	0	2	0	2	0	0	2	0	0	2	1	0	0	0	1	0	1	0	0	0	1	6
Total	0	0	2	0	2	0	0	7	1	0	8	2	0	0	0	2	0	6	1	0	0	7	19
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	2
1:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
1:30 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5
1:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	0	0	0	0	0	0	5	0	0	5	0	0	0	1	0	1	0	5	0	0	5	11
Grand Total	0	0	2	0	2	0	0	17	1	0	18	2	0	1	0	3	0	15	1	0	0	16	39
Approach %	0.0	0.0	100.0	0.0		0.0	0.0	94.4	5.6	0.0		66.7	0.0	33.3	0.0		0.0	93.8	6.3	0.0			
Total %	0.0	0.0	5.1	0.0	5.1	0.0	0.0	43.6	2.6	0.0	46.2	5.1	0.0	2.6	0.0	7.7	0.0	38.5	2.6	0.0	41.0		
Exiting Leg Total	1					19					1					18					39		

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
12:00 PM	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	0	3	0	0	3	6
12:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	4
12:45 PM	0	0	2	0	2	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	6
Total Volume	0	0	2	0	2	0	7	1	0	8	2	0	0	0	2	0	6	1	0	7	19
% Approach Total	0.0	0.0	100.0	0.0		0.0	87.5	12.5	0.0		100.0	0.0	0.0	0.0		0.0	85.7	14.3	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.583	0.250	0.000	0.667	0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.250	0.000	0.583	0.792
Entering Leg	0	0	2	0	2	0	7	1	0	8	2	0	0	0	2	0	6	1	0	7	19
Exiting Leg	1					10					1					7					19
Total	3					18					3					14					38

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Single-Unit Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	2	0	0	2	5
11:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
11:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
Total	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	8	0	0	8	16
12:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
12:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	3
12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	0	0	0	1	4	1	0	6	1	0	0	0	1	0	5	0	0	5	12
1:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	1	2	0	0	3	6
1:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2
1:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	4	1	0	5	2	0	0	0	2	1	4	0	0	5	12
Grand Total	0	0	0	0	0	1	15	2	0	18	3	0	1	0	4	1	17	0	0	18	40
Approach %	0.0	0.0	0.0	0.0		5.6	83.3	11.1	0.0		75.0	0.0	25.0	0.0		5.6	94.4	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	2.5	37.5	5.0	0.0	45.0	7.5	0.0	2.5	0.0	10.0	2.5	42.5	0.0	0.0	45.0	
Exiting Leg Total	1					20					3					16					40

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	2	0	0	2	5
11:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
11:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
Total Volume	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	8	0	0	8	16
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.875	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.667
Entering Leg	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	8	0	0	8	16
Exiting Leg	0					8					0					8					16
Total	0					15					1					16					32

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Articulated Trucks

	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	2
1:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Grand Total	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	6
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	16.7	0.0	0.0	0.0	16.7	0.0	50.0	0.0	0.0	50.0	
Exiting Leg Total	0					4					0					2					6

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	I-84 Ramps					Silver Lane					Mercer Avenue					Silver Lane					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	2
Total Volume	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	4
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	4
Exiting Leg	0					3					0					1					4
Total	0					4					1					3					8

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Approach %	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1							0							0							0							1

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane								
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							1						0														0		1	
Total							2						0														0		2	

PDI File #: **186177 AAA**
 Location: **N: I-84 Ramps S: Mercer Avenue**
 Location: **E: Silver Lane W: Silver Lane**
 City, State: **East Hartford, CT**
 Client: **Greenman-Pedersen/ J. DeBarros**
 Site Code: **TBA**
 Count Date: **Saturday, April 21, 2018**
 Start Time: **11:00 AM**
 End Time: **2:00 PM**
 Class:



Pedestrians

	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total		
	from North							from East							from South							from West									
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total			
11:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	
11:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	0	4	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	
Total	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	1	5	6	0	0	0	0	0	0	1	1	10
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	2	
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	1	0	1	5	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	2	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3	4	0	0	0	0	0	0	0	5	
Grand Total	0	0	0	0	3	0	3	0	0	0	0	0	2	2	0	0	0	0	4	9	13	0	0	0	0	1	1	2	20		
Approach %	0	0	0	0	100	0		0	0	0	0	0	100		0	0	0	0	30.8	69.2		0	0	0	0	50	50				
Total %	0	0	0	0	15	0	15	0	0	0	0	0	10	10	0	0	0	0	20	45	65	0	0	0	0	5	5	10			
Exiting Leg Total	3							2							13							2							20		

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	I-84 Ramps							Silver Lane							Mercer Avenue							Silver Lane							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
11:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
11:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	0	4	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	
Total Volume	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	1	5	6	0	0	0	0	0	1	1	10	
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	0.0	0.0	100.0			
PHF	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.250		0.000	0.000	0.000	0.000	0.250	0.417	0.500	0.000	0.000	0.000	0.000	0.250	0.250		0.625	
Entering Leg	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	1	5	6	0	0	0	0	0	1	1	10	
Exiting Leg	2							1							6							1							10	
Total	4							2							12							2							20	

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

TRAFFIC-VOLUME ADJUSTMENT DATA

TRAFFIC VOLUME ADJUSTMENT FACTORS

Automatic Traffic Recorder Report (2015)

Prepared by the ConnDOT

West Hartford - I-84, West of Prospect Avenue Station 049						
Month	Avg. Friday	Adj. To Avg.	Adj. To Peak	Avg. Saturday	Adj. To Avg.	Adj. To Peak
January	128,484	1.075	1.140	96,874	1.216	1.296
February	135,890	1.016	1.078	102,496	1.150	1.225
March	133,089	1.037	1.100	112,596	1.047	1.115
April	139,252	0.992	1.052	122,200	0.964	1.028
May	144,219	0.957	1.016	124,704	0.945	1.007
June	146,455	0.943	1.000	124,490	0.947	1.009
July	140,674	0.982	1.041	114,197	1.032	1.100
August	141,634	0.975	1.034	125,591	0.938	1.000
September	141,355	0.977	1.036	124,024	0.950	1.013
October	142,199	0.971	1.030	123,821	0.952	1.014
November	137,237	1.006	1.067	122,735	0.960	1.023
December	126,427	1.092	1.158	120,299	0.980	1.044
Year Avg.	138,076			117,835		
Peak	146,455			125,591		

Traffic Growth Factor Worksheet

Count Stations

(Source: ConnDOT)

STA.	CITY/TOWN	ROUTE/STREET	LOCATION	2009	2010	2011	2012	2013	2014	2015	Average % Growth
16	EAST HARTFORD	ROUTE 502	W. OF MERCER AVENUE	14,300	14,100	14,200	14,000	13,800	14,100	13,900	-0.5%
37	EAST HARTFORD	ROUTE 502	AT EAST HARTFORD T.L.	17,400	17,100	17,300	18,300	18,200	18,400	15,000	-2.1%
61	EAST HARTFORD	ROUTE 502	E. OF WARREN DRIVE #1	16,600	16,400	16,400	17,400	17,300	17,500	16,200	-0.3%
72	EAST HARTFORD	ROUTE 502	E. OF FORBES STREET	9,200	9,100	9,200	10,500	10,400	10,600	10,300	2.0%
213	EAST HARTFORD	ROUTE 502	E. OF US ROUTE 5	8,600	8,500	8,600	9,000	8,900	9,000	9,900	2.4%
331	EAST HARTFORD	ROUTE 502	E. OF ROUTE 2 WB OFF-RAMP	5,300	5,200	5,300	6,400	6,400	6,400	6,200	2.9%
333	EAST HARTFORD	ROUTE 502	E. OF ROUTE 15 SB RAMP	11,800	11,600	11,800	11,400	11,300	11,500	11,200	-0.8%

Average Growth: 0.5%

Say	1.0%
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TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

PUBLIC TRANSIT INFORMATION

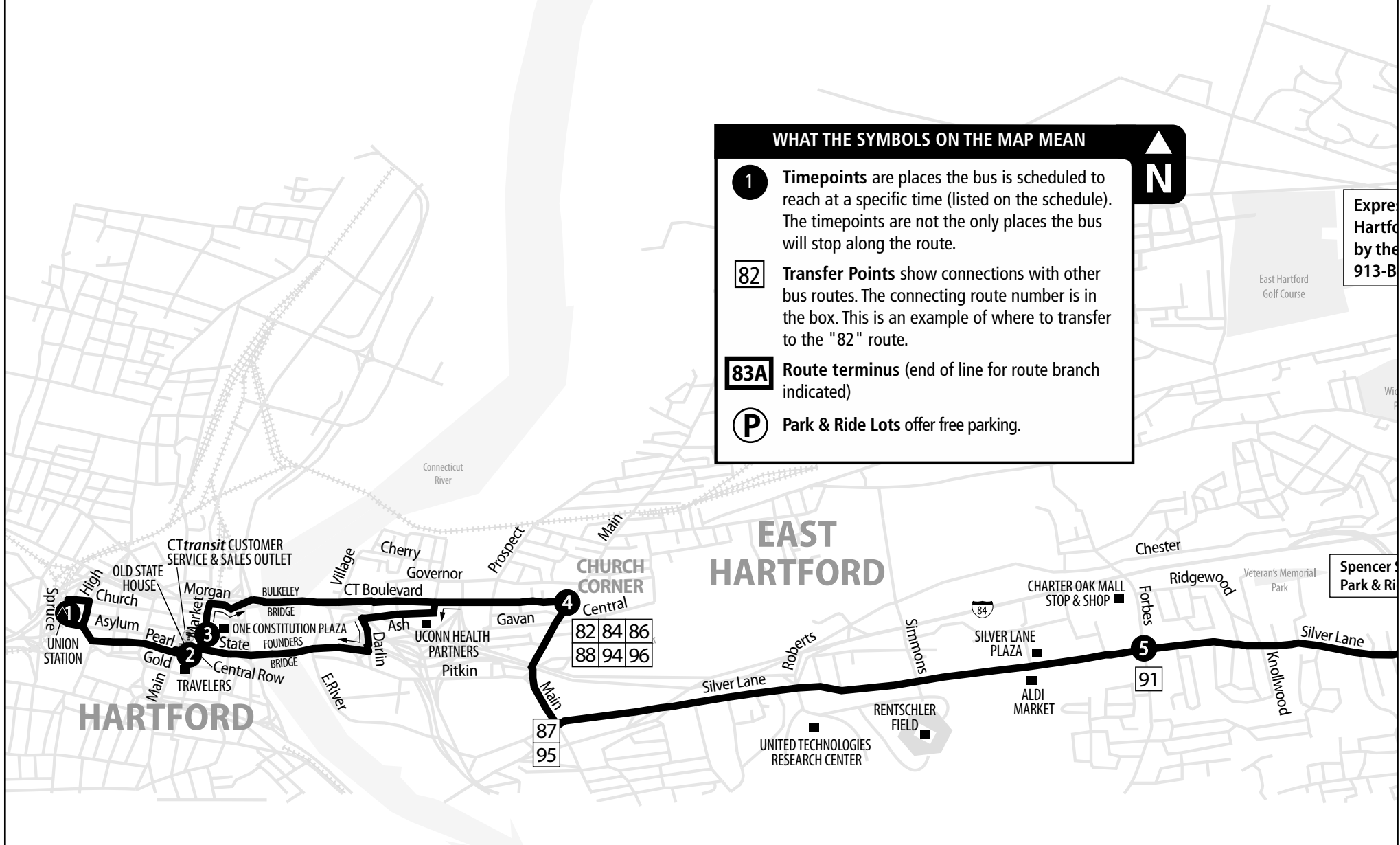
83 SILVER LANE

Bus Schedule Effective August 13, 2017

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills

WHAT THE SYMBOLS ON THE MAP MEAN

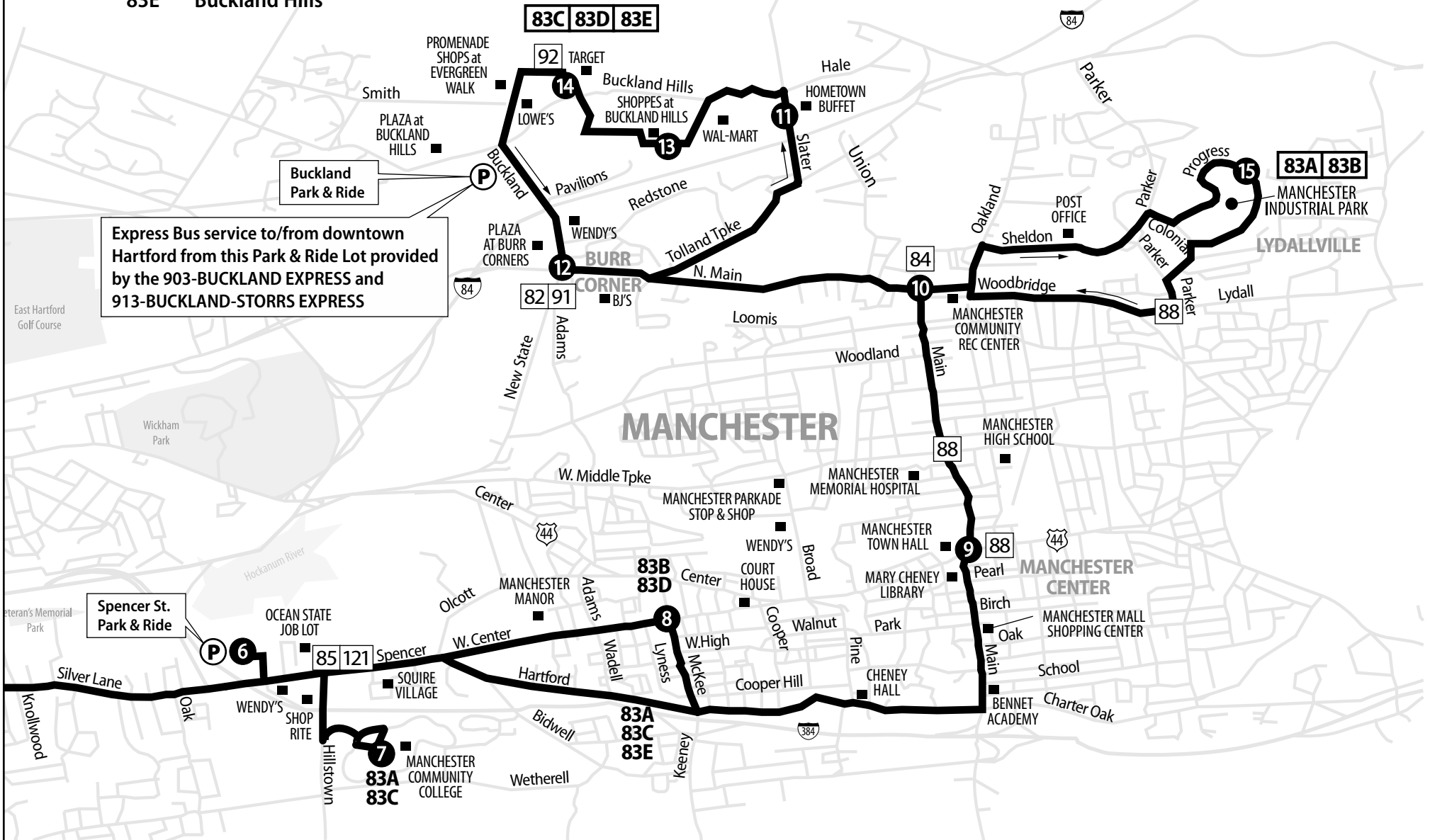
- 1** Timepoints are places the bus is scheduled to reach at a specific time (listed on the schedule). The timepoints are not the only places the bus will stop along the route.
- 82** Transfer Points show connections with other bus routes. The connecting route number is in the box. This is an example of where to transfer to the "82" route.
- 83A** Route terminus (end of line for route branch indicated)
- P** Park & Ride Lots offer free parking.



83 SILVER LANE

Bus Schedule Effective August 13, 2017

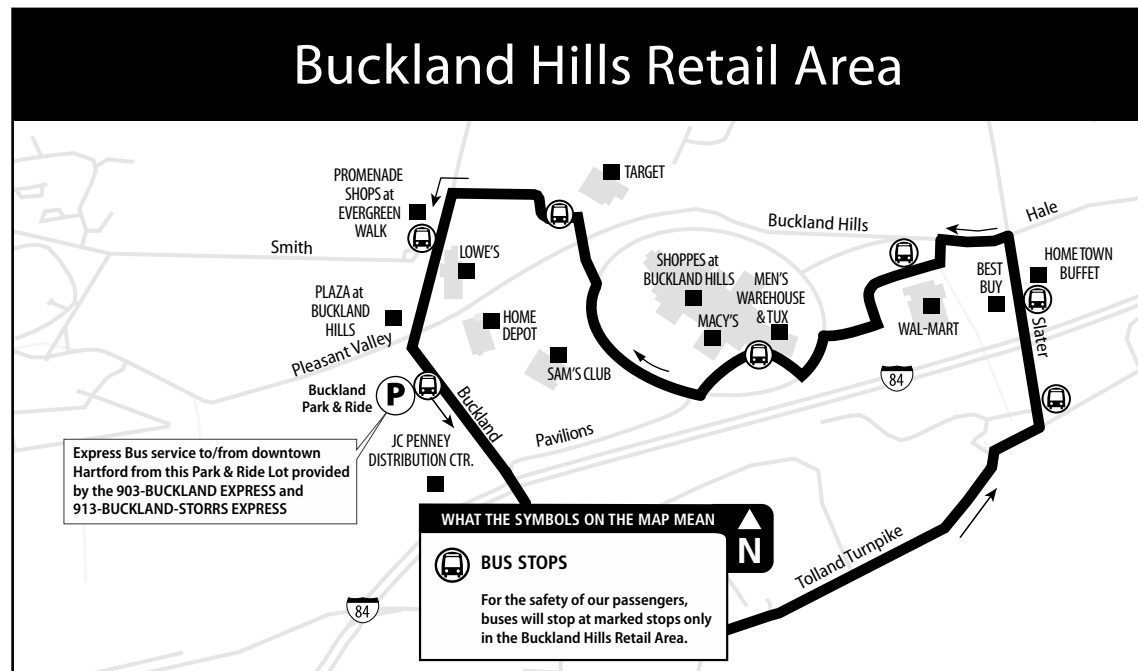
- | | |
|-----|---|
| 83A | Manchester Business Park via MCC |
| 83B | Manchester Business Park via McKee Street |
| 83C | Buckland Hills via MCC |
| 83D | Buckland Hills via McKee Street |
| 83E | Buckland Hills |



83 SILVER LANE

Bus Schedule Effective August 13, 2017

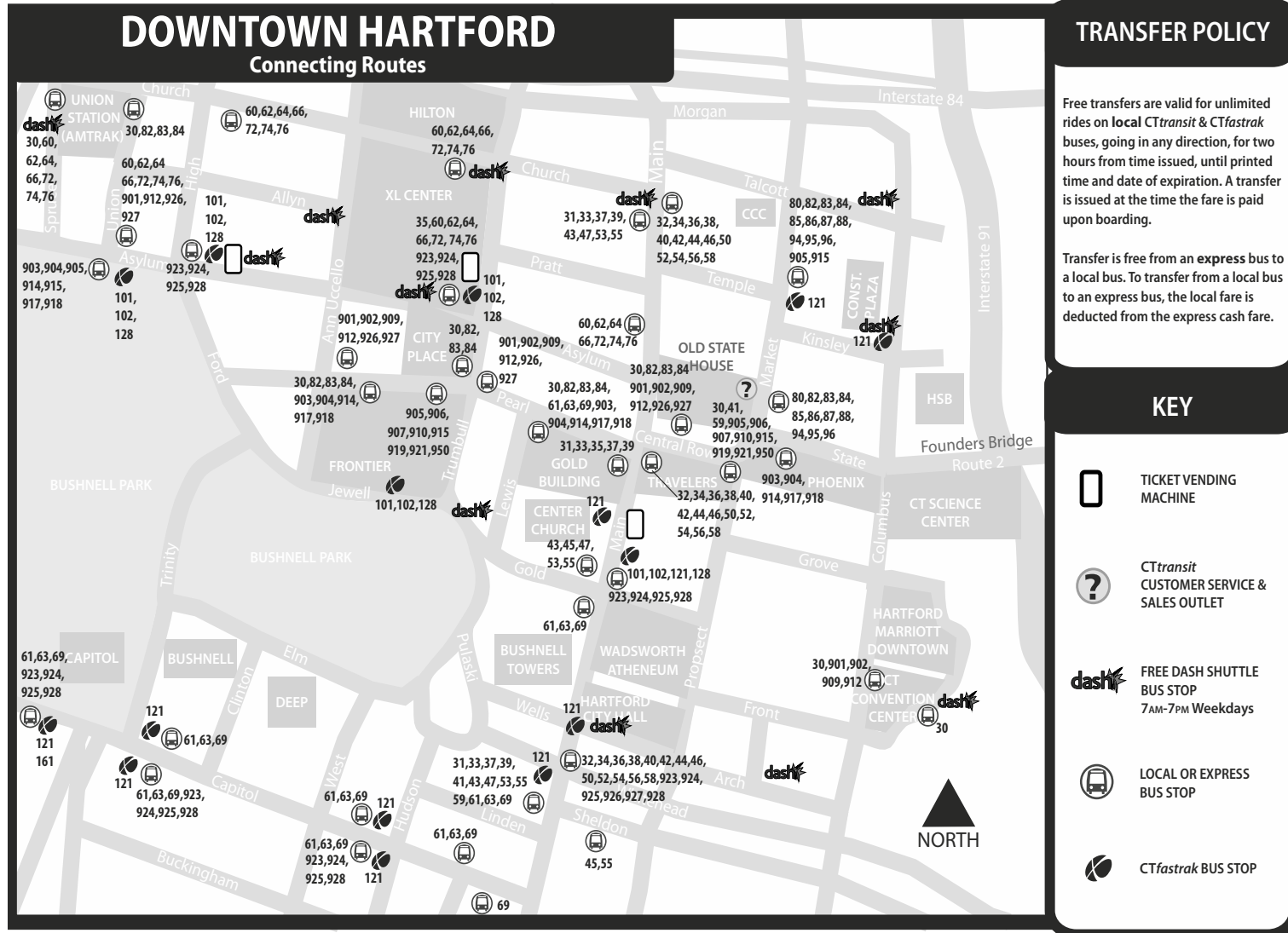
- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills



83 SILVER LANE

Bus Schedule Effective August 13, 2017

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills



- 83A Manchester Business Park via MCC
 83B Manchester Business Park via McKee Street
 83C Buckland Hills via MCC
 83D Buckland Hills via McKee Street

WEEKDAY SERVICE

Hartford ➤ via Silver Lane ➤ Manchester													
Timepoints	1	3	4	5	6	7	8	9	10	11	13	14	15
Route	Union Station Transit Center Union Place	Downtown Hartford Market St. & Kinsley One Constitution Plaza	Church Corner CT Blvd & Main St.	Silver & Forbes	Spencer Street Park & Ride Lot	Manchester Comm. Col. AST Tower	West Center & McKee	Manchester Center Main & Center	Depot Square Main St. & No. Main	Slater Street at Home Town Buffet	The Shoppes at Buckland Hills, Macy's	Target & Lowe's	Manchester Business Pk. Progress Drive
83B	5:03	5:10	5:15	5:24	..	..	5:30	5:39	5:44	..	..	..	5:51
83B	5:33	5:40	5:45	5:54	..	..	6:00	6:09	6:14	..	..	..	6:21
83A	6:03	6:10	6:15	6:24	..	6:28	..	6:43	6:48	..	..	..	6:55
83B	6:33	6:40	6:47	6:57	..	..	7:05	7:14	7:19	..	..	..	7:27
83A	7:03	7:10	7:17	7:27	..	7:33	..	7:48	7:53	..	..	..	8:01
83B	7:33	7:40	7:47	7:57	..	..	8:05	8:14	8:19	..	..	..	8:27
83C	8:03	8:10	8:17	8:27	..	8:33	..	8:48	8:53	8:58	9:03	9:27	..
83B	8:38	8:45	8:52	9:02	..	..	9:10	9:19	9:24	..	..	..	9:32
83C	9:13	9:20	9:27	9:38	..	9:45	..	10:01	10:06	10:11	10:16	10:27	..
83B	9:43	9:50	9:57	10:08	..	..	10:17	10:27	10:32	..	..	..	10:39
83C	10:13	10:20	10:27	10:38	..	10:45	..	11:01	11:06	11:11	11:16	11:27	..
83B	10:43	10:50	10:57	11:08	..	..	11:17	11:27	11:32	..	..	..	11:39
PM													
83C	11:13	11:20	11:27	11:38	..	11:45	..	12:01	12:06	12:11	12:16	12:27	..
83B	11:43	11:50	11:57	12:08	..	..	12:17	12:27	12:32	..	..	..	12:39
83C	12:13	12:20	12:27	12:38	..	12:45	..	1:01	1:06	1:11	1:16	1:25	..
83B	12:43	12:50	12:57	1:08	..	..	1:17	1:27	1:32	..	..	..	1:39
83C	1:13	1:20	1:27	1:38	..	1:45	..	2:01	2:06	2:11	2:16	2:25	..
83B	1:43	1:50	1:57	2:08	..	..	2:17	2:27	2:32	..	..	..	2:39
83C	2:13	2:20	2:27	2:39	R2:44	2:49	..	3:05	3:11	3:16	3:21	3:30	..
83B	2:43	2:50	2:57	3:09	R3:14	..	3:21	3:32	3:38	..	..	..	3:44
83C	3:18	3:25	3:32	3:44	R3:49	3:54	..	4:10	4:16	4:21	4:26	4:30	..
83B	3:48	3:55	4:02	4:14	R4:19	..	4:26	4:37	4:43	..	..	..	4:49
83C	4:08	4:15	4:22	4:34	R4:39	4:44	..	5:00	5:06	5:11	5:16	5:19	..
83B	4:28	4:35	4:42	4:54	R4:59	..	5:06	5:17	5:23	..	..	..	5:29
83C	4:48	4:55	5:02	5:14	R5:19	5:24	..	5:40	5:46	5:51	5:56	5:59	..
83B	5:08	5:15	5:22	5:34	R5:39	..	5:46	5:57	6:03	..	..	..	6:09
83C	5:28	5:35	5:42	5:54	R5:59	6:04	..	6:20	6:26	6:31	6:36	6:39	..
83B	5:48	5:55	6:02	6:14	R6:19	..	6:26	6:37	6:43	..	..	..	6:49
83C	6:08	6:15	6:22	6:34	R6:39	6:44	..	7:00	7:06	7:11	7:16	7:19	..
83D	7:09	T7:16	7:22	7:31	..	..	7:40	7:49	7:54	7:59	8:04	8:19	..
83C	8:14	T8:21	8:27	8:36	..	8:42	..	8:53	8:58	9:03	9:08	9:11	..
83C	9:19	T9:26	9:32	9:41	..	9:47	..	9:58	10:03	10:08	10:13	10:16	..
83D	10:39	T10:46	10:52	11:01	..	..	11:07	11:13	11:18	11:23	11:28	11:31	..
AM													
88	..	YT12:21	Y12:27	..	..	..	..	Y12:43	Y12:47	..	..	..	..

ROUTE

- 83A Manchester Bus Pk via MCC
 83B Manchester Bus Pk via McKee St
 83C Buckland Hills via MCC
 83D Buckland Hills via McKee St
 88 BURNSIDE AVE–Manchester Ctr

- 83A Manchester Business Park via MCC
 83B Manchester Business Park via McKee Street
 83C Buckland Hills via MCC
 83D Buckland Hills via McKee Street

WEEKDAY SERVICE

Manchester ➤ via Silver Lane ➤ Hartford														
Timepoints	15	11	13	14	12	10	9	8	7	6	5	4	2	1
Route	Manchester Business Pk. Progress Drive	Slater Street at Home Town Buffet	The Shoppes at Buckland Hills, Macy's	Target & Lowe's	Tolland & Buckland	Depot Square Woodbridge & Main St.	Manchester Center Main & Center	West Center & McKee	Manchester Comm. Col. AST Tower	Spencer Street Park & Ride Lot	Silver & Forbes	Church Corner CT Blvd & Main St.	Downtown Hartford Central Row North Old State House	Union Station Transit Center Union Place
83	..	..	..	..	5:00	5:05	5:10	5:19	..	5:26	5:31	5:41	5:48	5:54
83	5:41	..	..	..	..	5:46	5:51	6:00	..	6:07	6:12	6:22	6:30	6:36
83	5:58	..	..	..	..	6:03	6:08	..	6:21	6:27	6:32	6:42	6:50	6:56
83	6:17	..	..	..	..	6:22	6:28	6:39	..	6:46	6:51	7:02	7:10	7:16
83	6:37	..	..	..	..	6:42	6:48	6:59	..	7:06	7:11	7:22	7:30	7:36
83	6:54	..	..	..	..	7:01	7:07	..	7:20	7:26	7:31	7:42	7:50	7:56
83	7:17	..	..	..	..	7:22	7:28	7:39	..	7:46	7:51	8:02	8:10	8:16
83	..	7:21	7:29	7:32	7:37	7:42	7:48	7:59	..	8:06	8:11	8:22	8:30	8:36
83	..	..	..	..	7:57	8:02	8:08	8:19	..	8:26	8:31	8:42	8:50	8:56
83	8:24	..	..	..	..	8:31	8:37	..	8:50	8:56	9:01	9:12	9:20	9:26
83	8:52	..	..	..	..	8:59	9:06	9:16	..	..	9:26	9:37	9:45	9:51
83	..	8:58	9:24	9:27	9:32	9:37	9:44	..	9:58	..	10:06	10:17	10:25	10:31
83	9:52	..	..	..	..	9:59	10:06	10:16	..	..	10:26	10:37	10:45	10:51
83	..	10:11	10:24	10:27	10:32	10:37	10:44	..	10:58	..	11:06	11:17	11:25	11:31
83	10:52	..	..	..	..	10:59	11:06	11:16	..	..	11:26	11:37	11:45	11:51
PM														
83	..	11:11	11:24	11:27	11:32	11:37	11:44	..	11:58	..	12:06	12:17	12:25	12:31
83	11:52	..	..	..	..	11:59	12:06	12:16	..	..	12:26	12:37	12:45	12:51
83	..	12:11	12:24	12:27	12:32	12:37	12:44	..	12:58	..	1:06	1:17	1:25	1:31
83	12:51	..	..	..	..	12:59	1:06	1:16	..	..	1:26	1:37	1:45	1:51
83	..	1:11	1:22	1:25	1:31	1:37	1:44	..	2:01	..	2:09	2:22	2:30	2:36
83	2:04	..	..	..	..	2:14	2:21	2:31	..	..	2:39	2:52	3:00	3:06
83	..	2:11	2:22	2:25	2:31	2:37	2:44	..	3:01	..	3:09	3:22	3:30	3:36
83	3:04	..	..	..	..	3:14	3:21	3:31	..	..	3:39	3:52	4:00	4:06
83	..	3:16	3:27	3:30	3:36	3:42	3:49	..	4:06	..	4:14	4:27	4:35	4:41
83	4:09	..	..	..	..	4:19	4:26	4:36	..	..	4:44	4:57	5:05	5:11
83	..	4:21	4:27	4:30	4:36	4:42	4:49	..	5:06	..	5:14	5:27	5:35	5:41
83	4:59	..	..	..	..	5:09	5:16	5:26	..	..	5:34	5:47	5:55	6:01
83	..	..	5:12	5:15	5:21	5:27	5:34	..	5:51	..	5:59	6:12	6:20	6:26
83	5:44	..	..	..	..	5:54	6:01	6:11	..	..	6:19	6:32	6:40	6:46
83	..	..	5:52	5:55	6:01	6:07	6:14	..	6:31	..	6:39	6:52	7:00	7:06
83	..	..	6:24	6:27	6:33	6:39	6:46	6:56	..	..	7:04	7:17	7:25	7:31
83	..	7:06	7:11	7:14	7:19	7:24	7:29	..	7:41	..	7:48	7:57	8:05	8:11
83	..	7:59	8:16	8:19	8:24	8:29	8:34	..	8:46	..	8:53	9:02	9:10	9:16
83	..	9:35	9:40	9:43	9:48	9:52	9:57	..	10:09	..	10:16	10:25	10:30	10:36
83	..	10:39	10:44	10:47	10:52	10:56	11:01	11:08	..	..	11:16	11:25	11:30	11:36

ROUTE

83 Downtown Hartford

- 83A** Manchester Business Park via MCC
- 83B** Manchester Business Park via McKee Street
- 83C** Buckland Hills via MCC
- 83D** Buckland Hills via McKee Street

NOTES

Timepoints are places the bus is scheduled to reach at a specific time. The timepoints are not the only places the bus will stop along the route.

.. No service is provided to that timepoint.

R Trip operates into Spencer Street Park & Ride lot upon request only.

T Trip also stops at Central Row South Side (Travelers).

Y Trip follows 88 route to Manchester Center then continues to Depot Square via Main Street.

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills

SATURDAY SERVICE

	Hartford ➤ via Silver Lane ➤ Manchester										
Timepoints	1	3	4	5	7	8	9	10	11	13	14
Route	Union Station Transit Center Union Place	Downtown Hartford Market St. & Kinsley One Constitution Plaza	Church Corner CT Blvd & Main St.	Silver & Forbes	Manchester Comm. Col. AST Tower	West Center & McKee	Manchester Center Main & Center	Depot Square Main St. & No. Main	Slater Street at Home Town Buffet	The Shoppes at Buckland Hills, Macy's	Target & Lowe's
83D	6:13	6:20	6:26	6:36	..	6:45	6:52	6:57	7:02	7:07	7:27
83C	6:58	7:05	7:12	7:22	7:30	..	7:45	7:50	7:55	8:00	8:07
83D	7:38	7:45	7:52	8:02	..	8:11	8:18	8:23	8:28	8:33	8:50
83C	8:18	8:25	8:32	8:42	8:50	..	9:05	9:10	9:15	9:20	9:27
83C	8:58	9:05	9:12	9:22	9:30	..	9:45	9:50	9:55	10:00	10:10
83D	9:38	9:45	9:52	10:02	..	10:11	10:18	10:23	10:28	10:33	10:50
83D	10:18	10:25	10:32	10:42	..	10:51	10:58	11:03	11:08	11:13	11:30
83D	10:58	11:05	11:12	11:22	..	11:31	11:38	11:43	11:48	11:53	12:07
PM											
83D	11:38	11:45	11:52	12:02	..	12:11	12:18	12:23	12:28	12:33	12:50
83C	12:18	12:25	12:32	12:42	12:50	..	1:05	1:10	1:15	1:20	1:30
83D	12:58	1:05	1:12	1:22	..	1:31	1:38	1:43	1:48	1:53	2:07
83D	1:38	1:45	1:52	2:02	..	2:11	2:18	2:23	2:28	2:33	2:50
83C	2:18	2:25	2:32	2:42	2:50	..	3:05	3:10	3:15	3:20	3:30
83D	2:58	3:05	3:12	3:22	..	3:31	3:38	3:43	3:48	3:53	4:07
83D	3:38	3:45	3:52	4:02	..	4:11	4:18	4:23	4:28	4:33	4:50
83C	4:13	4:20	4:27	4:37	4:45	..	5:00	5:05	5:10	5:15	5:18
83D	4:58	5:05	5:12	5:22	..	5:31	5:38	5:43	5:48	5:53	6:11
83D	5:38	5:45	5:52	6:02	..	6:11	6:18	6:23	6:28	6:33	6:36
83D	6:09	T6:16	6:22	6:32	..	6:42	6:50	6:55	7:00	7:05	7:16
83D	7:09	T7:16	7:22	7:31	..	7:40	7:49	7:54	7:59	8:04	8:21
83D	8:14	T8:21	8:27	8:36	..	8:45	8:54	8:59	9:04	9:09	9:11
83D	9:19	T9:26	9:32	9:41	..	9:50	9:59	10:04	10:09	10:14	10:16
83D	10:39	T10:46	10:52	11:01	..	11:07	11:13	11:18	11:23	11:28	11:31

ROUTE

- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee St

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills

SATURDAY SERVICE

	Manchester ➤ via Silver Lane ➤ Hartford											
Timepoints	11	13	14	12	10	9	8	7	5	4	2	1
Route	Slater Street at Home Town Buffet	The Shoppes at Buckland Hills, Macy's	Target & Lowe's	Tollard & Buckland	Depot Square Woodbridge & Main St.	Manchester Center Main & Center	West Center & McKee	Manchester Comm. Col. AST Tower	Silver & Forbes	Church Corner CT Blvd & Main St.	Downtown Hartford Central Row North Old State House	Union Station Transit Center Union Place
83	..	..	..	6:09	6:14	6:19	6:27	..	6:36	6:47	6:55	7:01
83	..	..	..	6:49	6:54	6:59	7:07	..	7:16	7:27	7:35	7:41
83	7:02	7:24	7:27	7:33	7:38	7:43	..	7:56	8:03	8:14	8:22	8:28
83	7:55	8:04	8:07	8:13	8:18	8:23	..	8:36	8:43	8:54	9:02	9:08
83	8:28	8:47	8:50	8:56	9:01	9:06	9:14	..	9:23	9:34	9:42	9:48
83	9:15	9:24	9:27	9:33	9:38	9:43	..	9:56	10:03	10:14	10:22	10:28
83	9:55	10:07	10:10	10:16	10:21	10:26	10:34	..	10:43	10:54	11:02	11:08
83	10:28	10:47	10:50	10:56	11:01	11:06	11:14	..	11:23	11:34	11:42	11:48
83	11:08	11:27	11:30	11:36	11:41	11:46	11:54	..	12:03	12:14	12:22	12:28
PM												
83	11:48	12:04	12:07	12:13	12:18	12:23	..	12:36	12:43	12:54	1:02	1:08
83	12:28	12:47	12:50	12:56	1:01	1:06	1:14	..	1:23	1:34	1:42	1:48
83	1:15	1:27	1:30	1:36	1:41	1:46	1:54	..	2:03	2:14	2:22	2:28
83	1:48	2:04	2:07	2:13	2:18	2:23	..	2:36	2:43	2:54	3:02	3:08
83	2:28	2:47	2:50	2:56	3:01	3:06	3:14	..	3:23	3:34	3:42	3:48
83	3:15	3:27	3:30	3:36	3:41	3:46	3:54	..	4:03	4:14	4:22	4:28
83	3:48	4:04	4:07	4:13	4:18	4:23	..	4:36	4:43	4:54	5:02	5:08
83	4:28	4:47	4:50	4:56	5:01	5:06	5:14	..	5:23	5:34	5:42	5:48
83	5:10	5:15	5:18	5:24	5:29	5:34	5:42	..	5:51	6:02	6:10	6:16
83	5:48	6:09	6:11	6:17	6:22	6:27	6:35	..	6:43	6:52	7:00	7:06
83	7:00	7:14	7:16	7:22	7:27	7:32	7:40	..	7:48	7:57	8:05	8:11
83	7:59	8:19	8:21	8:27	8:32	8:37	8:45	..	8:53	9:02	9:10	9:16
83	9:39	9:44	9:47	9:52	9:56	10:01	10:08	..	10:16	10:25	10:30	10:36
83	10:39	10:44	10:47	10:52	10:56	11:01	11:08	..	11:16	11:25	11:30	11:36

ROUTE

83 Downtown Hartford

NOTES

Timepoints are places the bus is scheduled to reach at a specific time.

The timepoints are not the only places the bus will stop along the route.

.. No service is provided to that timepoint.

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills

SUNDAY SERVICE

Hartford ➤ Manchester										
Timepoints	1	3	4	5	8	9	10	11	13	
Route	Union Station Transit Center Union Place	Downtown Hartford Market Street & Kinsley One Constitution Plaza	Church Corner CT Blvd & Main St	Silver & Forbes	West Center & McKee	Manchester Center Main & Center	Depot Square Woodbridge & Main St	Slater Street at Hometown Buffet	The Shoppes at Buckland Hills, Macy's	
83E	6:44	T6:51	6:57	7:07	..	7:21	7:26	7:31	7:36	8:03
83D	7:54	T8:01	8:08	8:18	8:27	8:34	8:39	8:44	8:49	9:11
83E	9:04	T9:11	9:18	9:28	..	9:42	9:47	9:52	9:57	10:23
83D	10:14	T10:21	10:28	10:38	10:47	10:54	10:59	11:04	11:09	11:31
PM										
83E	11:24	T11:31	11:38	11:48	..	12:02	12:07	12:12	12:17	12:43
83D	12:34	T12:41	12:48	12:58	1:07	1:14	1:19	1:24	1:29	1:51
83E	1:44	T1:51	1:58	2:08	..	2:22	2:27	2:32	2:37	3:03
83D	2:54	T3:01	3:08	3:18	3:29	3:34	3:39	3:44	3:49	4:11
83E	4:04	T4:11	4:18	4:28	..	4:42	4:47	4:52	4:57	5:23
83D	5:14	T5:21	5:28	5:38	5:47	5:54	5:59	6:04	6:09	6:31
83E	6:24	T6:31	6:38	6:48	..	7:02	7:07	7:12	7:17	7:19
83D	7:34	T7:41	7:47	7:57	8:06	8:13	8:18	8:23	8:28	8:30

ROUTE

- 83D Buckland Hills via McKee St
- 83E Buckland Hills

- 83A Manchester Business Park via MCC
- 83B Manchester Business Park via McKee Street
- 83C Buckland Hills via MCC
- 83D Buckland Hills via McKee Street
- 83E Buckland Hills

SUNDAY SERVICE

Manchester ➤ Hartford											
Timepoints	11	13	14	12	10	9	8	5	4	2	1
Route	Slater Street at Hometown Buffet	The Shoppes at Buckland Hills, Macy's	Target & Lowe's	Tolland & Buckland	Depot Square Woodbridge. & Main St	Manchester Center Main & Center	West Center & McKee	Silver & Forbes	Church Corner CT Blvd & Main	Downtown Hartford Central Row North Old State House	Union Station Transit Center Union Place
83	6:43	6:48	6:51	6:57	7:02	7:07	7:15	7:24	7:35	7:42	7:48
83	7:31	8:00	8:03	8:09	8:14	8:19	..	8:35	8:46	8:53	8:59
83	8:44	9:08	9:11	9:17	9:22	9:27	9:35	9:44	9:55	10:02	10:08
83	9:52	10:20	10:23	10:29	10:34	10:39	..	10:55	11:06	11:13	11:19
83	11:04	11:28	11:31	11:37	11:42	11:47	11:55	12:04	12:15	12:22	12:28
PM											
83	12:12	12:40	12:43	12:49	12:54	12:59	..	1:14	1:25	1:32	1:38
83	1:24	1:48	1:51	1:57	2:02	2:07	2:15	2:24	2:35	2:42	2:48
83	2:32	3:00	3:03	3:09	3:14	3:19	..	3:34	3:45	3:52	3:58
83	3:44	4:08	4:11	4:17	4:22	4:27	4:35	4:44	4:55	5:02	5:08
83	4:52	5:20	5:23	5:29	5:34	5:39	..	5:54	6:05	6:12	6:18
83	6:04	6:28	6:31	6:37	6:42	6:47	6:55	7:04	7:15	7:22	7:28

ROUTE

83 Downtown Hartford

NOTES

Timepoints are places the bus is scheduled to reach at a specific time.

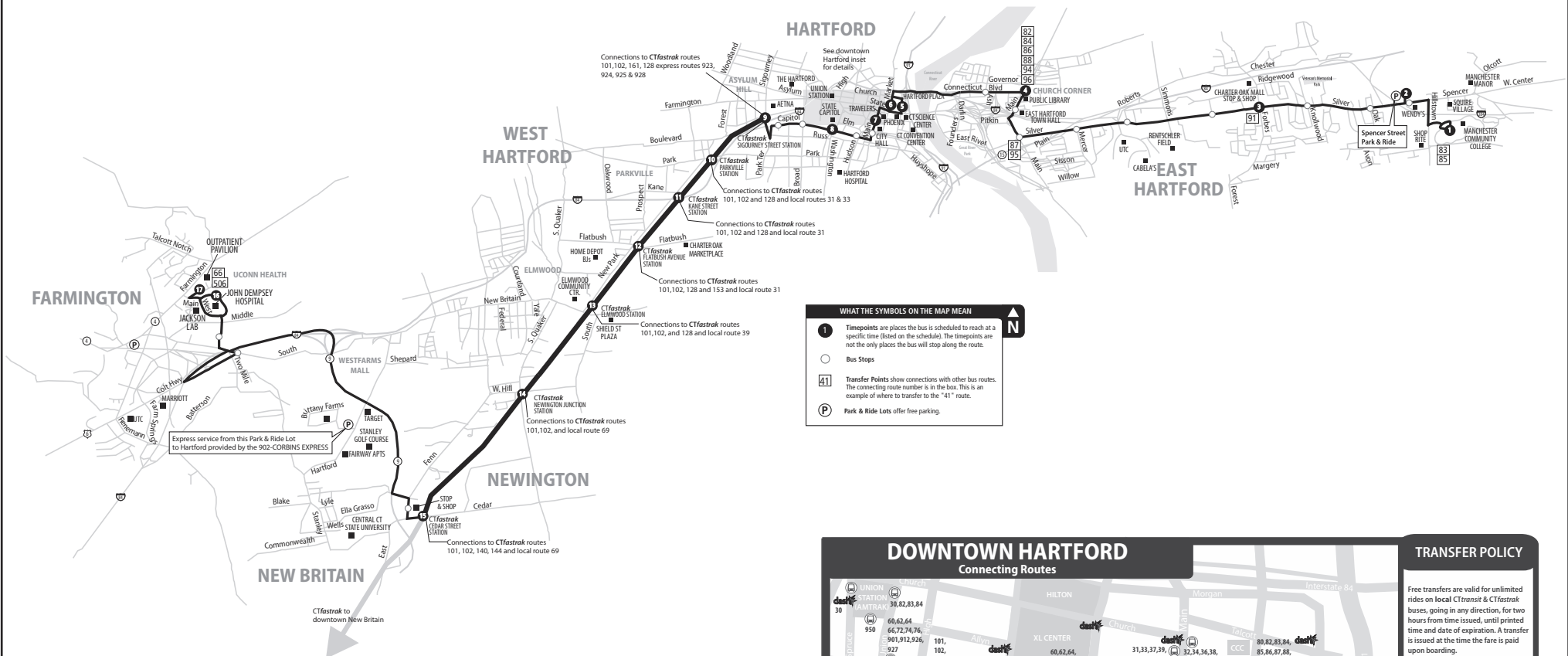
The timepoints are not the only places the bus will stop along the route.

.. No service is provided to that timepoint.

T Trip also stops at Central Row South Side (Travelers) one minute earlier.

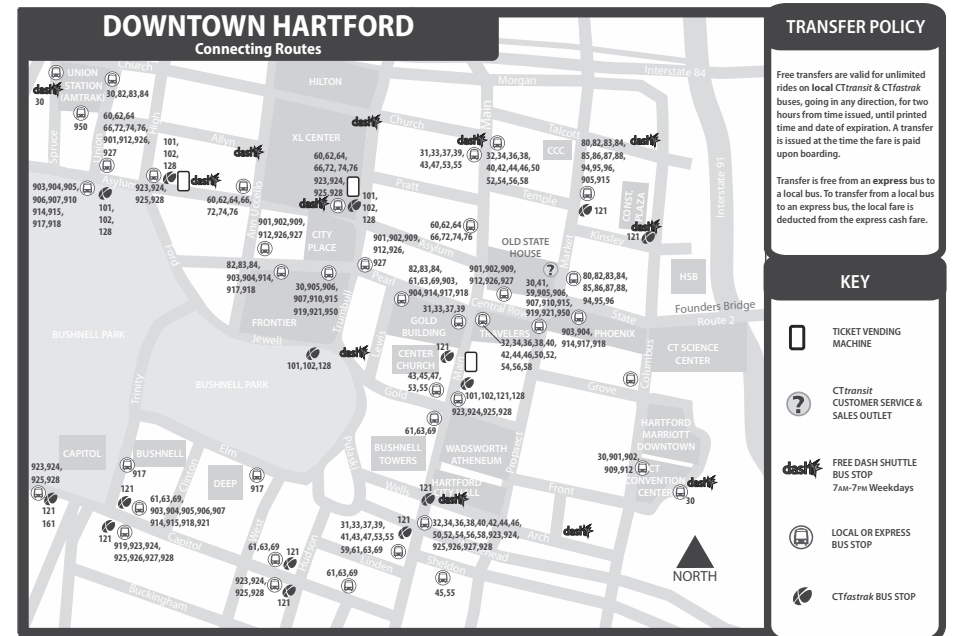
121 MANCHESTER COMMUNITY COLLEGE/HARTFORD/ UConn HEALTH

Bus Schedule Effective April 16, 2017



WHAT THE SYMBOLS ON THE MAP MEAN

- 1** Timepoints are places the bus is scheduled to reach at a specific time (listed on the schedule). The timepoints are not the only places the bus will stop along the route.
- Bus Stops
- 41** Transfer Points show connections with other bus routes. The connecting route number is in the box. This is an example of where to transfer to the "41" route.
- P** Park & Ride Lots offer free parking.



WEEKDAY SERVICE

Manchester Community College ➤ Hartford ➤ via CTfastrak ➤ UCONN Health																	
Timepoints	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	
Route	Manchester Community College / AST Tower	Spencer Street Park & Ride	East Hartford Silver & Forbes	Church Corner Connecticut Blvd & Main	Columbus & Kinsley	Ancient Burying Ground Main between Pearl & Gold	The Bushnell Capitol & Trinity	CTfastrak Sigourney Street Station Platform B	CTfastrak Parkville Station Platform B	CTfastrak Kane Street Station Platform B	CTfastrak Flatbush Avenue Station Platform B	CTfastrak Elmwood Station Platform B	CTfastrak Newington Junction Station Platform B	CTfastrak Cedar Street Station Bus Stop D	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	Continues to route
AM																	
121	..	..	..	..	4:56	5:00	5:04	5:09	5:11	5:13	5:15	5:17	5:20	5:23	5:33	5:35	121
121	..	..	..	..	5:16	5:20	5:24	5:29	5:31	5:33	5:35	5:37	5:40	5:43	5:53	5:55	121
121	5:10	5:15	5:20	5:29	5:33	5:40	5:44	5:49	5:51	5:53	5:55	5:57	6:00	6:03	6:13	6:15	121
121	5:30	5:35	5:40	5:49	5:53	6:00	6:04	6:09	6:11	6:13	6:15	6:17	6:20	6:23	6:34	6:36	121
121	5:50	5:55	6:00	6:09	6:13	6:20	6:24	6:29	6:31	6:33	6:35	6:37	6:40	6:43	6:54	6:56	121
121	6:10	6:15	6:20	6:29	6:33	6:40	6:44	6:50	6:51	6:54	6:56	6:58	7:01	7:04	7:16	7:18	121
121	6:30	6:35	6:40	6:49	6:53	7:00	7:04	7:10	7:12	7:14	7:16	7:18	7:21	7:24	7:36	7:38	121
121	6:50	6:55	7:00	7:09	7:13	7:20	7:24	7:30	7:32	7:34	7:36	7:38	7:41	7:44	7:56	7:58	121
121	7:10	7:15	7:20	7:29	7:33	7:40	7:44	7:50	7:52	7:54	7:56	7:58	8:01	8:04	8:16	8:18	121
121	7:30	7:35	7:40	7:49	7:53	8:00	8:04	8:10	8:12	8:14	8:16	8:18	8:21	8:24	8:36	8:38	121
121	7:50	7:55	8:00	8:09	8:13	8:20	8:24	8:30	8:32	8:34	8:36	8:38	8:41	8:44	8:56	8:58	121
121	8:10	8:15	8:20	8:29	8:33	8:40	8:44	8:50	8:52	8:54	8:56	8:58	9:01	9:04	9:16	9:18	..
121	8:30	8:35	8:40	8:49	8:53	9:00	9:04	9:10	9:12	9:14	9:16	9:18	9:21	9:24	9:35	9:37	121
121	9:00	9:05	9:10	9:19	9:23	9:30	9:34	9:40	9:42	9:44	9:46	9:48	9:51	9:54	10:05	10:07	121
121	9:30	9:35	9:40	9:49	9:53	10:00	10:04	10:09	10:11	10:13	10:15	10:17	10:20	10:23	10:33	10:35	121
121	10:05	..	10:12	10:21	10:23	10:30	10:34	10:39	10:41	10:43	10:45	10:47	10:50	10:53	11:03	11:05	121
121	10:35	..	10:42	10:51	10:55	11:00	11:04	11:09	11:11	11:13	11:15	11:17	11:20	11:23	11:33	11:35	121
121	11:05	..	11:12	11:21	11:25	11:30	11:34	11:39	11:41	11:43	11:45	11:47	11:50	11:53	12:03	12:05	121

Manchester Community College ▶ Hartford ▶ via CTfastrak ▶ UCONN Health

Timepoints	1	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	
	Manchester Community College / AST Tower	Spencer Street Park & Ride	East Hartford Silver & Forbes	Church Corner Connecticut Blvd & Main	Columbus & Kinsley	Ancient Burying Ground Main between Pearl & Gold	The Bushnell Capitol & Trinity	CTfastrak Sigourney Street Station Platform B	CTfastrak Parkville Station Platform B	CTfastrak Kane Street Station Station Platform B	CTfastrak Flatbush Avenue Station Station Platform B	CTfastrak Elmwood Station Station Platform B	CTfastrak Newington Junction Station Platform B	CTfastrak Cedar Street Station Bus Stop D	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	
Route																	Continues to route
	PM																
121	11:35	..	11:42	11:51	11:55	12:00	12:04	12:09	12:11	12:13	12:15	12:17	12:20	12:23	12:33	12:35	121
121	12:05	..	12:12	12:21	12:25	12:30	12:34	12:39	12:41	12:43	12:45	12:47	12:50	12:53	1:03	1:05	121
121	12:35	..	12:42	12:51	12:55	1:00	1:04	1:09	1:11	1:13	1:15	1:17	1:20	1:23	1:33	1:35	121
121	1:02	..	1:09	1:19	1:22	1:27	1:31	1:36	1:38	1:40	1:42	1:44	1:47	1:50	2:00	2:02	121
121	1:32	..	1:39	1:49	1:53	2:00	2:04	2:09	2:11	2:13	2:15	2:17	2:20	2:23	2:33	2:35	121
121	2:02	..	2:09	2:19	2:23	2:30	2:34	2:39	2:41	2:43	2:45	2:47	2:50	2:53	3:03	3:05	121
121	2:32	..	2:39	2:49	2:53	3:00	3:04	3:10	3:12	3:14	3:16	3:18	3:21	3:24	3:34	3:36	121
121	2:52	..	2:59	3:09	3:13	3:20	3:24	3:30	3:32	3:34	3:36	3:38	3:41	3:44	3:54	3:56	121
121	3:12	..	3:19	3:29	3:33	3:40	3:44	3:50	3:52	3:54	3:56	3:58	4:01	4:04	4:14	4:16	121
121	3:32	..	3:39	3:49	3:53	4:00	4:04	4:10	4:12	4:14	4:16	4:18	4:21	4:24	4:34	4:36	121
121	3:52	..	3:59	4:09	4:13	4:20	4:24	4:30	4:32	4:34	4:36	4:38	4:41	4:44	4:54	4:56	121
121	4:12	..	4:19	4:29	4:33	4:40	4:44	4:50	4:52	4:54	4:56	4:58	5:01	5:04	5:14	5:16	121
121	4:32	..	4:39	4:49	4:53	5:00	5:04	5:10	5:12	5:14	5:16	5:18	5:21	5:24	5:34	5:36	121
121	4:52	..	4:59	5:09	5:13	5:20	5:24	5:30	5:32	5:34	5:36	5:38	5:41	5:44	5:54	5:56	121
121	5:12	..	5:19	5:29	5:33	5:40	5:44	5:50	5:52	5:54	5:56	5:58	6:01	6:04	6:14	6:16	121
121	5:32	..	5:39	5:49	5:53	6:00	6:04	6:09	6:11	6:13	6:15	6:17	6:20	6:23	6:33	6:35	121
121	5:52	..	5:59	6:09	6:13	6:20	6:24	6:29	6:31	6:33	6:35	6:37	6:40	6:43	6:53	6:55	121
121	6:12	..	6:19	6:29	6:33	6:40	6:44	6:49	6:51	6:53	6:55	6:57	7:00	7:03	7:13	7:15	..
121	6:33	..	6:40	6:49	6:53	7:00	7:04	7:09	7:11	7:13	7:15	7:17	7:20	7:23	7:33	7:35	..
121	7:03	..	7:10	7:19	7:23	7:30	7:34	7:39	7:41	7:43	7:45	7:47	7:50	7:53	8:03	8:05	121
121	8:03	..	8:10	8:19	8:23	8:30	8:34	8:39	8:41	8:43	8:45	8:47	8:50	8:53	9:03	9:05	121
121	9:03	..	9:10	9:19	9:23	9:30	9:34	9:39	9:41	9:43	9:45	9:47	9:50	9:53	10:03	10:05	121
121	10:03	..	10:10	10:19	10:23	10:30	10:34	10:39	10:41	10:43	10:45	10:47	10:50	10:53	11:03	11:05	121
121	11:03	..	11:10	11:19	11:23	11:30	11:34	11:39	11:41	11:43	11:45	11:47	11:50	11:53	12:03	12:05	121
	AM																
121	12:03	..	12:10	12:19	12:23	12:30	12:34	12:39	..	..	..	..	..	..	..	..	..

121 MANCHESTER COMMUNITY COLLEGE/HARTFORD/ UConn Health

Bus Service Effective April 16, 2017

WEEKDAY SERVICE

UConn Health ▶ Hartford ▶ via CTfastrak ▶ Manchester Community College																	
Timepoints	16	17	15	14	13	12	11	10	9	8	7	6	4	3	2	1	
	UConn Health John Dempsey Hospital	UConn Health Outpatient Pavilion	CTfastrak Cedar Street Station Bus Stop C	CTfastrak Newington Junction Station Platform A	CTfastrak Elmwood Station Platform A	CTfastrak Flatbush Avenue Station Platform A	CTfastrak Kane Street Station Platform A	CTfastrak Parkville Station Platform A	CTfastrak Sigourney Street Station Platform D	The Bushnell Capitol & Trinity	Travelers Main & Atheneum Sq	100 Constitution Plaza Market & Talcott	Church Corner Connecticut Blvd & Main	East Hartford Silver & Forbes	Spencer Street Park & Ride (drop off only-upon request)	Manchester Community College / AST Tower	
Route																	Continues to route
	AM																
121	:	:	:	:	:	:	:	:	4:53	4:58	5:05	5:07	5:11	5:18	..	5:24	121
121	:	:	:	:	:	:	:	:	5:13	5:18	5:25	5:27	5:31	5:38	..	5:44	121
121	:	5:10	5:20	5:23	5:25	5:27	5:29	5:31	5:33	5:38	5:45	5:47	5:51	5:58	..	6:04	121
121	:	5:29	5:39	5:42	5:44	5:47	5:49	5:51	5:53	5:58	6:03	6:07	6:12	6:21	..	6:27	121
121	5:33	5:48	6:00	6:03	6:05	6:08	6:10	6:12	6:14	6:19	6:24	6:27	6:32	6:41	..	6:47	121
121	5:53	6:07	6:19	6:22	6:24	6:27	6:29	6:31	6:33	6:38	6:43	6:47	6:52	7:01	..	7:07	121
121	6:13	6:27	6:39	6:42	6:44	6:47	6:49	6:51	6:53	6:58	7:05	7:07	7:12	7:21	..	7:27	121
121	6:34	6:47	6:59	7:02	7:04	7:07	7:09	7:11	7:13	7:18	7:25	7:27	7:32	7:41	..	7:47	121
121	6:54	7:07	7:19	7:22	7:24	7:27	7:29	7:31	7:33	7:38	7:45	7:47	7:52	8:01	..	8:07	121
121	7:14	7:27	7:39	7:42	7:44	7:47	7:49	7:51	7:53	7:58	8:05	8:07	8:12	8:21	..	8:27	121
121	7:36	7:47	7:59	8:02	8:04	8:07	8:09	8:11	8:13	8:18	8:25	8:27	8:32	8:41	..	8:47	121
121	7:56	8:07	8:19	8:22	8:24	8:27	8:29	8:31	8:33	8:38	8:45	8:47	8:52	9:01	..	9:07	121
121	8:16	8:27	8:39	8:42	8:44	8:47	8:49	8:51	8:53	8:58	9:05	9:07	9:13	9:22	..	9:28	..
121	8:36	8:47	8:59	9:02	9:04	9:07	9:09	9:11	9:13	9:18	9:25	9:27	9:33	9:42	..	9:48	121
121	8:56	9:17	9:29	9:32	9:34	9:37	9:39	9:41	9:43	9:48	9:55	9:57	10:03	10:12	..	10:18	121
121	9:35	9:47	9:59	10:02	10:04	10:07	10:09	10:11	10:13	10:18	10:25	10:27	10:33	10:42	..	10:48	121
121	10:05	10:17	10:29	10:32	10:34	10:37	10:39	10:41	10:43	10:48	10:55	10:57	11:03	11:12	..	11:18	121
121	10:33	10:47	10:59	11:02	11:04	11:07	11:09	11:11	11:13	11:18	11:25	11:27	11:33	11:42	..	11:48	121
121	11:03	11:17	11:29	11:32	11:34	11:37	11:39	11:41	11:43	11:48	11:55	11:57	12:03	12:12	R12:16	12:20	121

121 MANCHESTER COMMUNITY COLLEGE/HARTFORD/ UCONN HEALTH

Bus Service Effective April 16, 2017

WEEKDAY SERVICE

UCONN Health ► Hartford ► via CTfastrak ► Manchester Community College																	
Timepoints	16	17	15	14	13	12	11	10	9	8	7	6	4	3	2	1	
Route	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	CTfastrak Cedar Street Station Bus Stop C	CTfastrak Newington Junction Station Platform A	CTfastrak Elmwood Station Platform A	CTfastrak Flatbush Avenue Station Platform A	CTfastrak Kane Street Station Platform A	CTfastrak Parkville Station Platform A	CTfastrak Sigourney Street Station Platform D	The Bushnell Capitol & Trinity	Travelers Main & Atheneum Sq	100 Constitution Plaza Market & Talcott	Church Corner Connecticut Blvd & Main	East Hartford Silver & Forbes	Spencer Street Park & Ride (drop off only-upon request)	Manchester Community College / AST Tower	Continues to route
PM																	
121	11:33	11:47	11:59	12:02	12:04	12:07	12:09	12:11	12:13	12:18	12:25	12:27	12:33	12:42	R12:46	12:50	121
121	12:03	12:17	12:29	12:32	12:34	12:37	12:39	12:41	12:43	12:48	12:55	12:57	1:03	1:12	R1:16	1:20	121
121	12:33	12:47	12:59	1:02	1:04	1:07	1:09	1:11	1:13	1:18	1:25	1:27	1:33	1:42	R1:46	1:50	121
121	1:03	1:17	1:29	1:32	1:34	1:37	1:39	1:41	1:43	1:48	1:55	1:57	2:03	2:12	R2:16	2:20	121
121	1:33	1:47	1:59	2:02	2:04	2:07	2:09	2:11	2:13	2:18	2:25	2:27	2:33	2:43	R2:47	2:51	121
121	2:00	2:17	2:29	2:32	2:34	2:37	2:39	2:41	2:43	2:48	2:55	2:57	3:03	3:13	R3:17	3:21	121
121	2:33	2:46	2:58	3:01	3:03	3:06	3:08	3:10	3:12	3:17	3:25	3:27	3:33	3:43	R3:47	3:51	121
121	..	3:06	3:18	3:21	3:23	3:26	3:28	3:30	3:32	3:37	3:45	3:47	3:53	4:03	R4:07	4:11	121
121	3:03	3:24	3:38	3:41	3:43	3:46	3:48	3:50	3:52	3:57	4:05	4:07	4:13	4:23	R4:27	4:32	121
121	3:34	3:44	3:58	4:01	4:03	4:06	4:08	4:10	4:12	4:17	4:25	4:27	4:33	4:43	R4:47	4:52	121
121	3:54	4:04	4:18	4:21	4:23	4:26	4:28	4:30	4:32	4:37	4:45	4:47	4:53	5:03	R5:07	5:12	121
121	4:14	4:24	4:38	4:41	4:43	4:46	4:48	4:50	4:52	4:57	5:05	5:07	5:13	5:23	R5:27	5:32	121
121	4:34	4:44	4:58	5:01	5:03	5:06	5:08	5:10	5:12	5:17	5:25	5:27	5:33	5:43	R5:47	5:52	121
121	4:54	5:04	5:18	5:21	5:23	5:26	5:28	5:30	5:32	5:37	5:45	5:47	5:53	6:03	R6:07	6:12	121
121	5:14	5:24	5:38	5:41	5:43	5:46	5:48	5:50	5:52	5:57	6:05	6:07	6:13	6:23	R6:27	6:32	121
121	5:34	5:44	5:58	6:01	6:03	6:06	6:08	6:10	6:12	6:17	6:25	6:27	6:33	6:43	R6:47	6:52	121
121	5:54	6:07	6:19	6:22	6:24	6:27	6:29	6:31	6:33	6:38	6:45	6:47	6:53	7:03	R7:07	7:12	..
121	6:14	6:27	6:39	6:42	6:44	6:47	6:49	6:51	6:53	6:58	7:05	7:07	7:12	7:21	R7:25	7:29	121
121	6:33	7:00	7:10	7:13	7:15	7:17	7:19	7:21	7:23	7:28	7:35	7:37	7:42	7:51	R7:55	7:59	..
121	6:53	7:20	7:30	7:33	7:35	7:37	7:39	7:41	7:43	7:48	7:55	7:57	8:02	8:11	R8:15	8:19	121
121	8:03	8:20	8:30	8:33	8:35	8:37	8:39	8:41	8:43	8:48	8:55	8:57	9:02	9:11	R9:15	9:19	121
121	9:03	9:20	9:30	9:33	9:35	9:37	9:39	9:41	9:43	9:48	9:55	9:57	10:02	10:11	R10:15	10:19	121
121	10:03	10:10	10:20	10:23	10:25	10:27	10:29	10:31	10:33	10:38	10:45	10:47	10:52	11:01	R11:05	11:09	121
121	11:03	11:10	11:20	11:23	11:25	11:27	11:29	11:31	11:33	11:38	11:45	11:47	11:52	12:01	R12:05	12:09	..
AM																	
121	12:03	12:05	12:15	12:18	12:20	12:22	12:24	12:26	12:28	12:33	..	..	..	..	..	..	..

121 MANCHESTER COMMUNITY COLLEGE/HARTFORD/ UConn Health

Bus Service Effective April 16, 2017

ROUTE KEY

121 UConn Health
121 Hartford

ROUTE KEY

121 MCC
121 Hartford

NOTES

Timepoints are places the bus is scheduled to reach at a specific time. The timepoints are not the only places the bus will stop along the route.

.. No service is provided to that timepoint.

R Trip drops off at Park & Ride Lot upon request.

SATURDAY SERVICE

Manchester Community College ➤ Hartford ➤ via CTfastrak ➤ UCONN Health															
Timepoints	1	3	4	5	7	8	9	10	11	12	13	14	15	16	17
	Manchester Community College / AST Tower	East Hartford Silver & Forbes	Church Corner Connecticut Blvd & Main	Columbus & Kinsley	Ancient Burying Ground Main between Pearl & Gold	The Bushnell Capitol & Trinity	CTfastrak Sigourney Street Station Platform B	CTfastrak Parkville Station Platform B	CTfastrak Kane Street Station Platform B	CTfastrak Flatbush Avenue Station Platform B	CTfastrak Elmwood Station Platform B	CTfastrak Newington Junction Station Platform B	CTfastrak Cedar Street Station Bus Stop D	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion
Route	AM														
121	.	.	.	5:25	5:30	5:34	5:39	5:41	5:43	5:45	5:47	5:49	5:52	6:04	6:07
121	5:33	5:40	5:49	5:55	6:00	6:04	6:11	6:13	6:15	6:17	6:19	6:21	6:24	6:36	6:39
121	6:03	6:10	6:19	6:25	6:30	6:34	6:41	6:43	6:45	6:47	6:49	6:51	6:54	7:06	7:09
121	6:33	6:40	6:49	6:55	7:00	7:04	7:11	7:13	7:15	7:17	7:19	7:21	7:24	7:36	7:39
121	7:03	7:10	7:19	7:25	7:30	7:34	7:41	7:43	7:45	7:47	7:49	7:51	7:54	8:06	8:09
121	7:33	7:40	7:49	7:55	8:00	8:04	8:11	8:13	8:15	8:17	8:19	8:21	8:24	8:36	8:39
121	8:03	8:10	8:19	8:25	8:30	8:34	8:41	8:43	8:45	8:47	8:49	8:51	8:54	9:06	9:09
121	8:33	8:40	8:49	8:55	9:00	9:04	9:11	9:13	9:15	9:17	9:19	9:21	9:24	9:36	9:39
121	9:03	9:10	9:19	9:25	9:30	9:34	9:41	9:43	9:45	9:47	9:49	9:51	9:54	10:06	10:09
121	9:33	9:40	9:49	9:55	10:00	10:04	10:11	10:13	10:15	10:17	10:19	10:21	10:24	10:36	10:39
121	10:03	10:10	10:19	10:25	10:30	10:34	10:41	10:43	10:45	10:47	10:49	10:51	10:54	11:06	11:09
121	10:33	10:40	10:49	10:55	11:00	11:04	11:11	11:13	11:15	11:17	11:19	11:21	11:24	11:36	11:39
121	11:03	11:10	11:19	11:25	11:30	11:34	11:41	11:43	11:45	11:47	11:49	11:51	11:54	12:06	12:09

SATURDAY SERVICE

Manchester Community College ► Hartford ► via CTfastrak ► UCONN Health																
Timepoints	1	3	4	5	7	8	9	10	11	12	13	14	15	16	17	
Route	Manchester Community College / AST Tower	East Hartford Silver & Forbes	Church Corner Connecticut Blvd & Main	Columbus & Kinsley	Ancient Burying Ground Main between Pearl & Gold	The Bushnell Capitol & Trinity	CTfastrak Sigourney Street Station Platform B	CTfastrak Parkville Station Platform B	CTfastrak Kane Street Station Platform B	CTfastrak Flatbush Avenue Station Platform B	CTfastrak Elmwood Station Platform B	CTfastrak Newington Junction Station Platform B	CTfastrak Cedar Street Station Bus Stop D	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	
PM																
121	11:33	11:40	11:49	11:55	12:00	12:04	12:11	12:13	12:15	12:17	12:19	12:21	12:24	12:36	12:39	
121	12:03	12:10	12:19	12:25	12:30	12:34	12:41	12:43	12:45	12:47	12:49	12:51	12:54	1:06	1:09	
121	12:33	12:40	12:49	12:55	1:00	1:04	1:11	1:13	1:15	1:17	1:19	1:21	1:24	1:36	1:39	
121	1:03	1:10	1:19	1:25	1:30	1:34	1:41	1:43	1:45	1:47	1:49	1:51	1:54	2:06	2:09	
121	1:33	1:40	1:49	1:55	2:00	2:04	2:11	2:13	2:15	2:17	2:19	2:21	2:24	2:36	2:39	
121	2:03	2:10	2:19	2:25	2:30	2:34	2:41	2:43	2:45	2:47	2:49	2:51	2:54	3:06	3:09	
121	2:33	2:40	2:49	2:55	3:00	3:04	3:11	3:13	3:15	3:17	3:19	3:21	3:24	3:36	3:39	
121	3:03	3:10	3:19	3:25	3:30	3:34	3:41	3:43	3:45	3:47	3:49	3:51	3:54	4:06	4:09	
121	3:33	3:40	3:49	3:55	4:00	4:04	4:11	4:13	4:15	4:17	4:19	4:21	4:24	4:36	4:39	
121	4:03	4:10	4:19	4:25	4:30	4:34	4:41	4:43	4:45	4:47	4:49	4:51	4:54	5:06	5:09	
121	4:33	4:40	4:49	4:55	5:00	5:04	5:11	5:13	5:15	5:17	5:19	5:21	5:24	5:36	5:39	
121	5:03	5:10	5:19	5:25	5:30	5:34	5:41	5:43	5:45	5:47	5:49	5:51	5:54	6:06	6:09	
121	5:33	5:40	5:49	5:55	6:00	6:04	6:11	6:13	6:15	6:17	6:19	6:21	6:24	6:36	6:39	
121	6:03	6:10	6:19	6:25	6:30	6:34	6:41	6:43	6:45	6:47	6:49	6:51	6:54	7:06	7:09	
121	6:33	6:40	6:49	6:53	6:58	7:02	7:09	..	..	..	..	..	..	..	..	
121	7:03	7:10	7:19	7:25	7:30	7:34	7:40	7:42	7:44	7:46	7:48	7:50	7:53	8:05	8:08	
121	8:03	8:10	8:19	8:25	8:30	8:34	8:40	8:42	8:44	8:46	8:48	8:50	8:53	9:05	9:08	
121	9:03	9:10	9:19	9:25	9:30	9:34	9:40	9:42	9:44	9:46	9:48	9:50	9:53	10:05	10:08	
121	10:03	10:10	10:19	10:25	10:30	10:33	10:39	10:41	10:43	10:45	10:47	10:49	10:52	11:04	11:07	
121	11:03	11:10	11:19	11:25	11:30	11:33	11:39	11:41	11:43	11:45	11:47	11:49	11:52	12:04	12:07	
AM																
121	12:13	12:20	12:29	12:31	12:36	12:39	12:45	..	..	..	..	..	..	..	..	

SATURDAY SERVICE

	UCONN Health ➤ Hartford ➤ via CTfastrak ➤ Manchester Community College														
Timepoints	16	17	15	14	13	12	11	10	9	8	7	6	4	3	1
Route	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	CTfastrak Cedar Street Station Bus Stop C	CTfastrak Newington Junction Sta- tion Platform A	CTfastrak Elmwood Station Platform A	CTfastrak Flatbush Avenue Station Platform A	CTfastrak Kane Street Station Platform A	CTfastrak Parkville Station Platform A	CTfastrak Sigourney Street Station Platform D	The Bushnell Capitol & Trinity	Travelers Main & Atheneum Sq	100 Constitution Plaza Market & Talcott	Church Corner Connecticut Blvd & Main	East Hartford Silver & Forbes	Manchester Community College / AST Tower
	AM														
121	..	..	..	..	..	..	..	..	5:45	5:49	5:55	5:57	6:01	6:08	6:14
121	..	5:45	5:58	6:01	6:03	6:06	6:08	6:10	6:12	6:18	6:25	6:28	6:32	6:41	6:47
121	6:04	6:15	6:28	6:31	6:33	6:36	6:38	6:40	6:42	6:48	6:55	6:58	7:02	7:11	7:17
121	6:36	6:45	6:58	7:01	7:03	7:06	7:08	7:10	7:12	7:18	7:25	7:28	7:32	7:41	7:47
121	7:06	7:15	7:28	7:31	7:33	7:36	7:38	7:40	7:42	7:48	7:55	7:58	8:02	8:11	8:17
121	7:36	7:45	7:58	8:01	8:03	8:06	8:08	8:10	8:12	8:18	8:25	8:28	8:32	8:41	8:47
121	8:06	8:15	8:28	8:31	8:33	8:36	8:38	8:40	8:42	8:48	8:55	8:58	9:02	9:11	9:17
121	8:36	8:45	8:58	9:01	9:03	9:06	9:08	9:10	9:12	9:18	9:25	9:28	9:32	9:41	9:47
121	9:06	9:15	9:28	9:31	9:33	9:36	9:38	9:40	9:42	9:48	9:55	9:58	10:02	10:11	10:17
121	9:36	9:45	9:58	10:01	10:03	10:06	10:08	10:10	10:12	10:18	10:25	10:28	10:32	10:41	10:47
121	10:06	10:15	10:28	10:31	10:33	10:36	10:38	10:40	10:42	10:48	10:55	10:58	11:02	11:11	11:17
121	10:36	10:45	10:58	11:01	11:03	11:06	11:08	11:10	11:12	11:18	11:25	11:28	11:32	11:41	11:47
121	11:06	11:15	11:28	11:31	11:33	11:36	11:38	11:40	11:42	11:48	11:55	11:58	12:02	12:11	12:17

SATURDAY SERVICE

UCONN Health ► Hartford ► via CTfastrak ► Manchester Community College															
Timepoints	16	17	15	14	13	12	11	10	9	8	7	6	4	3	1
Route	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	CTfastrak Cedar Street Station Bus Stop C	CTfastrak Newington Junction Sta- tion Platform A	CTfastrak Elmwood Station Platform A	CTfastrak Flatbush Avenue Station Platform A	CTfastrak Kane Street Station Platform A	CTfastrak Parkville Station Platform A	CTfastrak Sigourney Street Station Platform D	The Bushnell Capitol & Trinity	Travelers Main & Atheneum Sq	100 Constitution Plaza Market & Talcott	Church Corner Connecticut Blvd & Main	East Hartford Silver & Forbes	Manchester Community College / AST Tower
PM															
121	11:36	11:45	11:58	12:01	12:03	12:06	12:08	12:10	12:12	12:18	12:25	12:28	12:32	12:41	12:47
121	12:06	12:15	12:28	12:31	12:33	12:36	12:38	12:40	12:42	12:48	12:55	12:58	1:02	1:11	1:17
121	12:36	12:45	12:58	1:01	1:03	1:06	1:08	1:10	1:12	1:18	1:25	1:28	1:32	1:41	1:47
121	1:06	1:15	1:28	1:31	1:33	1:36	1:38	1:40	1:42	1:48	1:55	1:58	2:02	2:11	2:17
121	1:36	1:45	1:58	2:01	2:03	2:06	2:08	2:10	2:12	2:18	2:25	2:28	2:32	2:41	2:47
121	2:06	2:15	2:28	2:31	2:33	2:36	2:38	2:40	2:42	2:48	2:55	2:58	3:02	3:11	3:17
121	2:36	2:45	2:58	3:01	3:03	3:06	3:08	3:10	3:12	3:18	3:25	3:28	3:32	3:41	3:47
121	3:06	3:15	3:28	3:31	3:33	3:36	3:38	3:40	3:42	3:48	3:55	3:58	4:02	4:11	4:17
121	3:36	3:45	3:58	4:01	4:03	4:06	4:08	4:10	4:12	4:18	4:25	4:28	4:32	4:41	4:47
121	4:06	4:15	4:28	4:31	4:33	4:36	4:38	4:40	4:42	4:48	4:55	4:58	5:02	5:11	5:17
121	4:36	4:45	4:58	5:01	5:03	5:06	5:08	5:10	5:12	5:18	5:25	5:28	5:32	5:41	5:47
121	5:06	5:15	5:28	5:31	5:33	5:36	5:38	5:40	5:42	5:48	5:55	5:58	6:02	6:11	6:17
121	5:36	5:45	5:58	6:01	6:03	6:06	6:08	6:10	6:12	6:18	6:25	6:28	6:32	6:41	6:47
121	6:06	6:15	6:28	6:31	6:33	6:36	6:38	6:40	6:42	6:48	6:55	6:58	7:02	7:11	7:17
121	6:36	6:44	6:57	7:00	7:02	7:05	7:07	7:09	7:11	7:16	7:23	7:25	..	..	..
121	7:06	7:16	7:29	7:32	7:34	7:37	7:39	7:41	7:43	7:48	7:55	7:57	8:02	8:11	8:17
121	8:05	8:16	8:29	8:32	8:34	8:37	8:39	8:41	8:43	8:48	8:55	8:57	9:02	9:11	9:17
121	9:05	9:16	9:29	9:32	9:34	9:37	9:39	9:41	9:43	9:48	9:55	9:57	10:02	10:11	10:17
121	10:05	10:08	10:21	10:24	10:26	10:29	10:31	10:33	10:35	10:39	10:45	10:47	10:52	11:01	11:07
121	11:04	11:08	11:21	11:24	11:26	11:29	11:31	11:33	11:35	11:39	11:45	11:47	11:52	12:01	12:07
AM															
121	12:04	12:08	12:21	12:24	12:26	12:29	12:31	12:33	12:35	12:39	12:43	12:45	..	..	..

121 MANCHESTER COMMUNITY COLLEGE/ HARTFORD/UCONN HEALTH

Bus Schedule Effective April 16, 2017

ROUTE KEY

121 UCONN Health
121 Hartford

ROUTE KEY

121 MCC
121 Hartford

NOTES

Timepoints are places the bus is scheduled to reach at a specific time. The timepoints are not the only places the bus will stop along the route.

- .. No service is provided to that timepoint.
- L Trip makes all local bus stops along the route in East Hartford & Manchester.
- R Trip drops off at Park & Ride Lot upon request.

SUNDAY SERVICE

Manchester Community College ➤ Hartford ➤ via CTfastrak ➤ UCONN Health																
Timepoints	1	3	4	5	7	8	9	10	11	12	13	14	15	16	17	
Route	Manchester Community College / AST Tower	East Hartford Silver & Forbes	Church Corner Connecticut Blvd & Main	Columbus & Kinsley	Ancient Burying Ground Main between Pearl & Gold	The Bushnell Capitol & Trinity	CTfastrak Sigourney Street Station Platform B	CTfastrak Parkville Station Platform B	CTfastrak Kane Street Station Platform B	CTfastrak Flatbush Avenue Station Platform B	CTfastrak Elmwood Station Platform B	CTfastrak Newington Junction Station Platform B	CTfastrak Cedar Street Station Bus Stop D	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	
AM																
121	..	..	..	6:20	6:30	6:34	6:41	6:43	6:45	6:47	6:49	6:51	6:54	7:06	7:09	
121	7:03	7:10	7:19	7:25	7:30	7:34	7:41	7:43	7:45	7:47	7:49	7:51	7:54	8:06	8:09	
121	8:03	8:10	8:19	8:25	8:30	8:34	8:41	8:43	8:45	8:47	8:49	8:51	8:54	9:06	9:09	
121	9:03	9:10	9:19	9:25	9:30	9:34	9:41	9:43	9:45	9:47	9:49	9:51	9:54	10:06	10:09	
121	10:03	10:10	10:19	10:25	10:30	10:34	10:41	10:43	10:45	10:47	10:49	10:51	10:54	11:06	11:09	
121	11:03	11:10	11:19	11:25	11:30	11:34	11:41	11:43	11:45	11:47	11:49	11:51	11:54	12:06	12:09	
PM																
121	12:03	12:10	12:19	12:25	12:30	12:34	12:41	12:43	12:45	12:47	12:49	12:51	12:54	1:06	1:09	
121	1:03	1:10	1:19	1:25	1:30	1:34	1:41	1:43	1:45	1:47	1:49	1:51	1:54	2:06	2:09	
121	2:03	2:10	2:19	2:25	2:30	2:34	2:41	2:43	2:45	2:47	2:49	2:51	2:54	3:06	3:09	
121	3:03	3:10	3:19	3:25	3:30	3:34	3:41	3:43	3:45	3:47	3:49	3:51	3:54	4:06	4:09	
121	4:03	4:10	4:19	4:25	4:30	4:34	4:41	4:43	4:45	4:47	4:49	4:51	4:54	5:06	5:09	
121	5:03	5:10	5:19	5:25	5:30	5:34	5:41	5:43	5:45	5:47	5:49	5:51	5:54	6:06	6:09	
121	6:03	6:10	6:19	6:25	6:30	6:34	6:41	6:43	6:45	6:47	6:49	6:51	6:54	7:06	7:09	
121	7:03	7:10	7:19	7:25	7:30	7:34	7:41	7:43	7:45	7:47	7:49	7:51	7:54	8:06	8:09	
121	8:03	8:10	8:19	8:25	8:30	8:34	8:41	8:43	8:45	8:47	8:49	8:51	8:54	9:06	9:09	
121	9:23	9:30	9:39	9:43	9:46	9:49	9:55	..	..	..	..	..	..	..	..	

ROUTE KEY

121 UCONN Health
121 Hartford

SUNDAY SERVICE

UCONN Health ➤ Hartford ➤ via CTfastrak ➤ Manchester Community College															
Timepoints	16	17	15	14	13	12	11	10	9	8	7	6	4	3	1
Route	UCONN Health John Dempsey Hospital	UCONN Health Outpatient Pavilion	CTfastrak Cedar Street Station Bus Stop C	CTfastrak Newington Junction Station Platform A	CTfastrak Elmwood Station Platform A	CTfastrak Flatbush Avenue Station Platform A	CTfastrak Kane Street Station Platform A	CTfastrak Parkville Station Platform A	CTfastrak Sigourney Street Station Platform D	The Bushnell Capitol & Trinity	Travelers Main & Atheneum Sq	100 Constitution Plaza Market & Talcott	Church Corner Connecticut Blvd & Main	East Hartford Silver & Forbes	Manchester Community College / AST Tower
	AM														
121	..	..	..	..	..	..	..	..	6:42	6:48	6:55	6:58	7:02	7:11	7:18
121	7:06	7:15	7:28	7:31	7:33	7:36	7:38	7:40	7:42	7:48	7:55	7:58	8:02	8:11	8:18
121	8:06	8:15	8:28	8:31	8:33	8:36	8:38	8:40	8:42	8:48	8:55	8:58	9:02	9:11	9:18
121	9:06	9:15	9:28	9:31	9:33	9:36	9:38	9:40	9:42	9:48	9:55	9:58	10:02	10:11	10:18
121	10:06	10:15	10:28	10:31	10:33	10:36	10:38	10:40	10:42	10:48	10:55	10:58	11:02	11:11	11:18
121	11:06	11:15	11:28	11:31	11:33	11:36	11:38	11:40	11:42	11:48	11:55	11:58	12:02	12:11	12:18
	PM														
121	12:06	12:15	12:28	12:31	12:33	12:36	12:38	12:40	12:42	12:48	12:55	12:58	1:02	1:11	1:18
121	1:06	1:15	1:28	1:31	1:33	1:36	1:38	1:40	1:42	1:48	1:55	1:58	2:02	2:11	2:18
121	2:06	2:15	2:28	2:31	2:33	2:36	2:38	2:40	2:42	2:48	2:55	2:58	3:02	3:11	3:18
121	3:06	3:15	3:28	3:31	3:33	3:36	3:38	3:40	3:42	3:48	3:55	3:58	4:02	4:11	4:18
121	4:06	4:15	4:28	4:31	4:33	4:36	4:38	4:40	4:42	4:48	4:55	4:58	5:02	5:11	5:18
121	5:06	5:15	5:28	5:31	5:33	5:36	5:38	5:40	5:42	5:48	5:55	5:58	6:02	6:11	6:18
121	6:06	6:15	6:28	6:31	6:33	6:36	6:38	6:40	6:42	6:48	6:55	6:58	7:02	7:11	7:18
121	7:06	7:16	7:29	7:32	7:34	7:37	7:39	7:41	7:43	7:48	7:55	7:57	8:02	8:11	8:18
121	8:06	8:16	8:29	8:32	8:34	8:37	8:39	8:41	8:43	8:48	8:55	8:57	9:02	9:11	9:18
121	9:06	9:11	9:24	9:27	9:29	9:32	9:34	9:36	9:38	9:43	9:48	9:50	..	..	..

ROUTE KEY

121 MCC
121 Hartford

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

TRIP-GENERATION CALCULATIONS

TOTAL SITE-GENERATED TRIPS PER USE

		<u>Retail</u>	<u>Restaurant</u>	<u>Entertainment</u>	<u>Residential</u>	<u>Hotel</u>	<u>Office</u>
ITE Land Use Codes:		960	934				
Size:		10	1,400				
Measurement:		VFP	SF	SEATS	UNITS	ROOMS	SF
Weekday Daily	Entering	1,153	330	0	0	0	0
	<u>Exiting</u>	<u>1,153</u>	<u>330</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	2306	660	0	0	0	0
Weekday AM Peak Hour	Entering	141	29	0	0	0	0
	<u>Exiting</u>	<u>140</u>	<u>27</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	281	56	0	0	0	0
Weekday PM Peak Hour	Entering	115	24	0	0	0	0
	<u>Exiting</u>	<u>115</u>	<u>22</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	230	46	0	0	0	0
Saturday Daily	Entering	1,458	432	0	0	0	0
	<u>Exiting</u>	<u>1,458</u>	<u>432</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	2916	864	0	0	0	0
Saturday Midday Peak Hour	Entering	117	39	0	0	0	0
	<u>Exiting</u>	<u>116</u>	<u>38</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	233	77	0	0	0	0
Name of Development:		Irving Oil					
Date:		4/24/2018					
Analyst:		Susannah E. Theriault, P.E.					

Note: Fill in cells highlighted in blue only. All others calculated automatically

	External Total Trips			Pass-By Trips			New Trips		
	Convenient Store and Gas Station LUC 960	Fast Food with Drive-Through LUC 934	Total	Convenient Store and Gas Station LUC 960	Fast Food with Drive-Through LUC 934	Total	Convenient Store and Gas Station LUC 960	Fast Food with Drive-Through LUC 934	Total
Weekday Daily									
In	1,018	234	1,252	208	43	251	810	191	1,001
Out	<u>1,057</u>	<u>195</u>	<u>1,252</u>	<u>208</u>	<u>43</u>	<u>251</u>	<u>849</u>	<u>152</u>	<u>1,001</u>
Total	2,075	429	2,504	416	86	502	1,659	343	2,002
Weekday AM									
In	137	14	151	26	4	30	111	10	121
Out	<u>125</u>	<u>23</u>	<u>148</u>	<u>26</u>	<u>4</u>	<u>30</u>	<u>99</u>	<u>19</u>	<u>118</u>
Total	262	37	299	52	8	60	210	29	239
Weekday PM									
In	106	17	123	21	3	24	85	14	99
Out	<u>108</u>	<u>13</u>	<u>121</u>	<u>21</u>	<u>3</u>	<u>24</u>	<u>87</u>	<u>10</u>	<u>97</u>
Total	214	30	244	42	6	48	172	24	196
Saturday Daily									
In	1,398	307	1,705	273	68	341	1,125	239	1,364
Out	<u>1,333</u>	<u>372</u>	<u>1,705</u>	<u>273</u>	<u>68</u>	<u>341</u>	<u>1,060</u>	<u>304</u>	<u>1,364</u>
Total	2,731	679	3,410	546	136	682	2,185	543	2,728
Saturday Middy									
In	112	28	140	22	6	28	90	22	112
Out	<u>105</u>	<u>33</u>	<u>138</u>	<u>22</u>	<u>6</u>	<u>28</u>	<u>83</u>	<u>27</u>	<u>110</u>
Total	217	61	278	44	12	56	173	49	222

ITE Pass-By Percentages		
	LUC 945	LUC 934
AM	62%	49%
PM	56%	50%
SAT	56%	49%
MAX ALLOWED	20%	20%

Analyst: Susannah E. Theriault, P.E.
Date: April 24, 2018

The diagram illustrates the trip distribution for six land use sections, each with its own ITE LUC, Size, and VFP table. The sections are:

- Section 1: RETAIL** (ITE LUC 960, Size 10, VFP 1018)
- Section 2: RESIDENTIAL** (ITE LUC 0, Size 0, VFP 1018)
- Section 3: RESTAURANT** (ITE LUC 934, Size 1,400, VFP 195)
- Section 4: HOTEL** (ITE LUC 0, Size 0, VFP 234)
- Section 5: ENTERTAINMENT** (ITE LUC 0, Size 0 SEATS, VFP 0)
- Section 6: OFFICE** (ITE LUC 0, Size 0 SF, VFP 0)

Each section's table includes columns for Total, Internal, and External trips, with sub-columns for Enter, Exit, and Percent. The diagram also shows various demand and balanced flow boxes between sections, such as Demand 10% 115, Balanced 0, Demand 42% 0, etc. A summary table at the bottom right shows the Net External Trips for each section:

	Enter	Exit
Section 1	1018	1057
Section 2	0	0
Section 3	234	195
Section 4	0	0

Net External Trips for Multi-Use Development				
	Enter	Exit	Total	Single-Use Trip Gen Est.
Section 1	1018	1057	2075	2306
Section 2	0	0	0	0
Section 3	234	195	429	660
Section 4	0	0	0	0
Section 5	0	0	0	0
Section 6	0	0	0	0
TOTAL	1252	1252	2504	2966

16% *Internal Capture*

Based on an average of Weekday AM or PM from ITE Trip Generation Handbook, 3rd Edition, August 2014.

Analyst: Susannah E. Theriault, P.E.
Date: April 24, 2018

	Enter	Exit	Total	Single-Use Trip Gen Est.
Section 1	137	125	262	281
Section 2	0	0	0	0
Section 3	14	23	37	56
Section 4	0	0	0	0
Section 5	0	0	0	0
Section 6	0	0	0	0
TOTAL	151	148	299	337
				11%

Based on ITE Trip Generation Handbook, 3rd Edition, August 2014.

Analyst: Susannah E. Theriault, P.E.
Date: April 24, 2018

The diagram illustrates a multi-zone building system with six sections, each with its own flow and demand data. The sections are:

- Section 1: RETAIL** (ITE LUC 960, Size 10, VFP)

	Total	Internal	External
Enter	115	9	106
Exit	115	7	108
Total	230	16	214
Percent	100%	7%	93%
- Section 2: RESIDENTIAL** (ITE LUC 0, Size 0, UNITS)

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Percent	100%	0%	100%
- Section 3: RESTAURANT** (ITE LUC 934, Size 1,400, SF)

	Total	Internal	External
Enter	24	7	17
Exit	22	9	13
Total	46	16	30
Percent	100%	35%	65%
- Section 4: HOTEL** (ITE LUC 0, Size 0, ROOMS)

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Percent	100%	0%	100%
- Section 5: ENTERTAINMENT** (ITE LUC 0, Size 0 SEATS)

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Percent	100%	0%	100%
- Section 6: OFFICE** (ITE LUC 0, Size 0, SF)

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Percent	100%	0%	100%

The diagram also shows various demand and balanced flow nodes between sections and to/from external areas, such as:

- Section 1 to Section 2:** Demand 10% 12, Balanced 0, Demand 42% 0
- Section 1 to Section 3:** Demand 26% 30, Balanced 0, Demand 46% 0
- Section 1 to Section 4:** Demand 21% 0, Balanced 0, Demand 14% 3
- Section 1 to Section 5:** Demand 29% 33, Demand 7, Demand 29% 7
- Section 1 to Section 6:** Demand 50% 58, Demand 9, Demand 41% 9
- Section 2 to Section 3:** Demand 5% 6, Balanced 0, Demand 17% 0
- Section 2 to Section 4:** Demand 3% 0, Balanced 0, Demand 12% 0
- Section 2 to Section 5:** Demand 0% 0, Balanced 0, Demand 2% 0
- Section 2 to Section 6:** Demand 0% 0, Balanced 0, Demand 4% 0
- Section 3 to Section 4:** Demand 5% 1, Balanced 0, Demand 68% 0
- Section 3 to Section 5:** Demand 7% 2, Balanced 0, Demand 71% 0
- Section 3 to Section 6:** Demand 3% 1, Balanced 0, Demand 30% 0
- Section 4 to Section 5:** Demand 0% 0, Balanced 0, Demand 2% 0
- Section 4 to Section 6:** Demand 0% 0, Balanced 0, Demand 4% 0
- Section 5 to Section 6:** Demand 1% 0, Balanced 0, Demand 0% 0
- Section 5 to Section 1:** Demand 8% 9, Balanced 0, Demand 20% 0
- Section 5 to Section 2:** Demand 2% 2, Balanced 0, Demand 31% 0
- Section 6 to Section 1:** Demand 0% 0, Balanced 0, Demand 0% 0
- Section 6 to Section 2:** Demand 0% 0, Balanced 0, Demand 0% 0
- Section 6 to Section 3:** Demand 0% 0, Balanced 0, Demand 0% 0
- Section 6 to Section 4:** Demand 0% 0, Balanced 0, Demand 0% 0
- Section 6 to Section 5:** Demand 0% 0, Balanced 0, Demand 0% 0

The diagram also includes a table for Net External Trips for Multiple Sections:

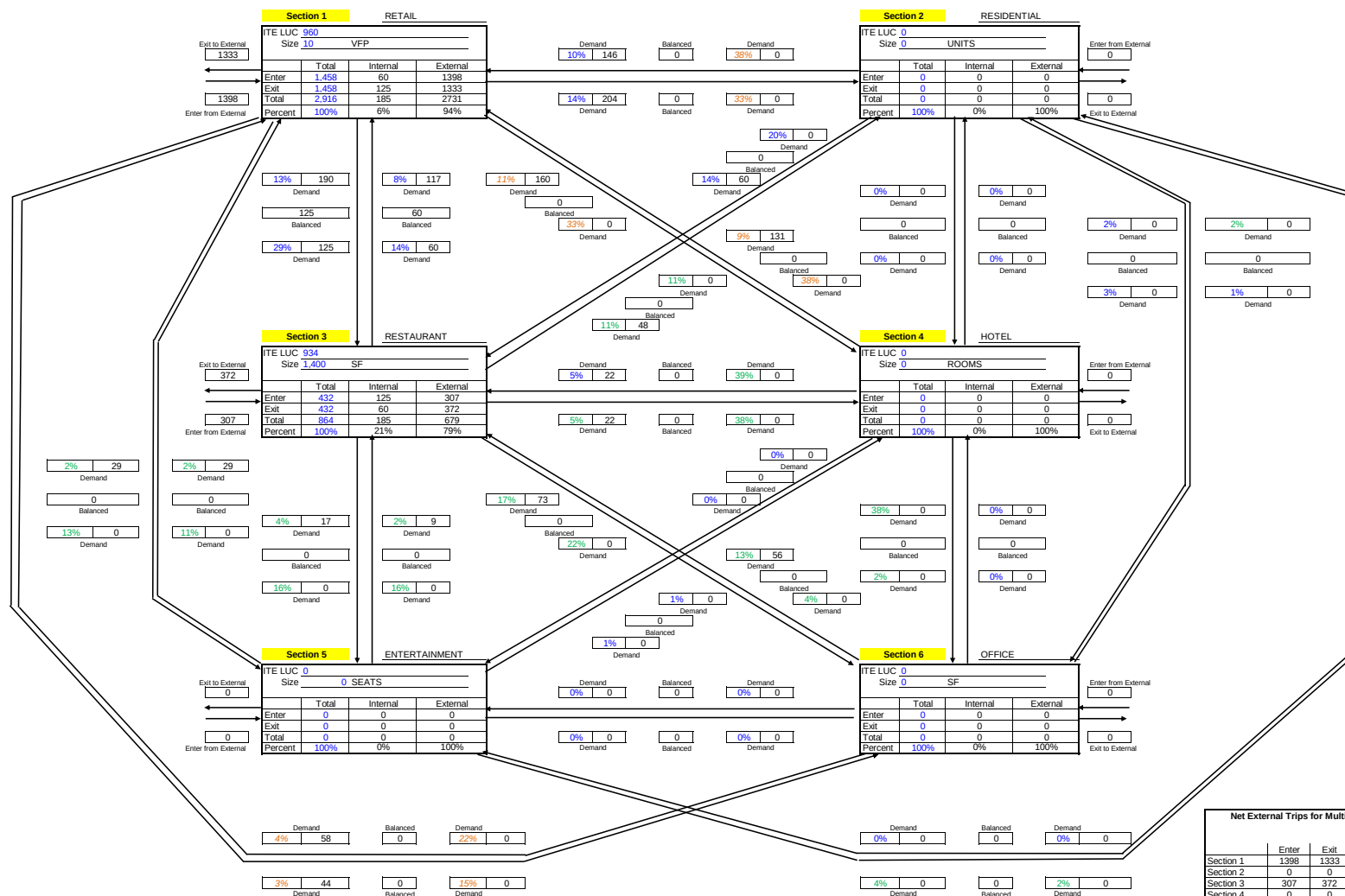
	Enter	Exit
Section 1	106	108
Section 2	0	0
Section 3	17	13
Section 4	0	0

Net External Trips for Multi-Use Development				
	Enter	Exit	Total	Single-Use Trip Gen Est.
Section 1	106	108	214	230
Section 2	0	0	0	0
Section 3	17	13	30	46
Section 4	0	0	0	0
Section 5	0	0	0	0
Section 6	0	0	0	0
TOTAL	123	121	244	276
				12%

Based on ITE Trip Generation Handbook, 3rd Edition, August 2014.

Analyst: Susannah E. Theriault, P.E.
Date: April 24, 2018

Name of Dvlpt: Irving Oil
Time Period: Saturday Daily



Net External Trips for Multi-Use Development				
	Enter	Exit	Total	Single-Use Trip Gen Est.
Section 1	1398	1333	2731	2916
Section 2	0	0	0	0
Section 3	307	372	679	864
Section 4	0	0	0	0
Section 5	0	0	0	0
Section 6	0	0	0	0
TOTAL	1705	1705	3410	3780

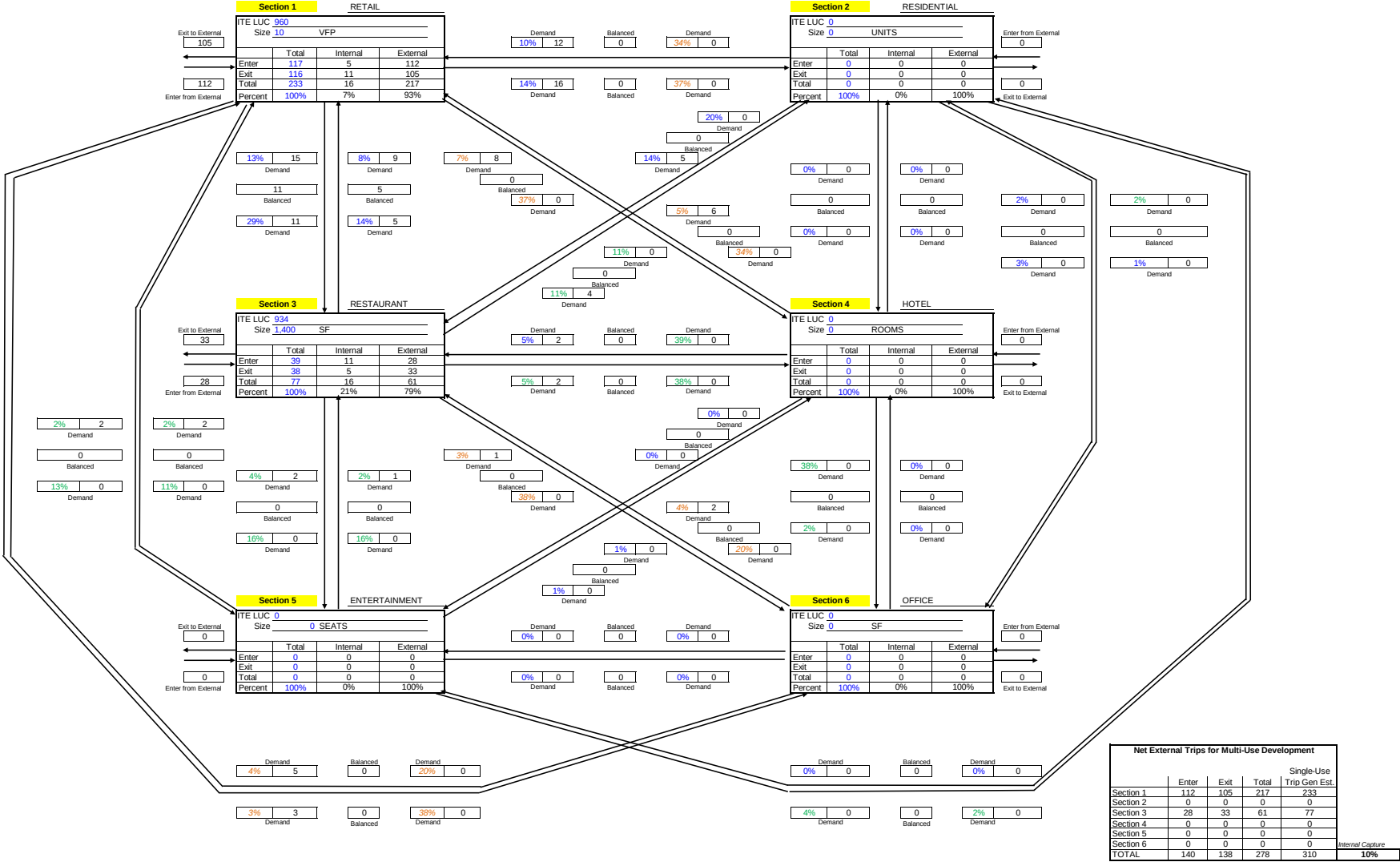
Internal Capture **10%**

Based on most conservative of Weekday AM or PM from ITE Trip Generation Handbook, 3rd Edition, August 2014.
Based on an average of Weekday AM or PM from ITE Trip Generation Handbook, 3rd Edition, August 2014.
Based on ITE Trip Generation Handbook, 2nd Edition, June 2004.

Analyst: Susannah E. Theriault, P.E.
Date: April 24, 2018

**MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY**

Name of Dvlpt: Irving Oil
Time Period: Saturday Midday



Based on most conservative of Weekday AM or PM from ITE Trip Generation Handbook, 3rd Edition, August 2014.
Based on an average of Weekday AM or PM from ITE Trip Generation Handbook, 3rd Edition, August 2014.
Based on ITE Trip Generation Handbook, 2nd Edition, June 2004.

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 960 - Super Convenience Market/Gas Station

General Urban/Suburban

Average Vehicle Trips Ends vs: Vehicle Fueling Positions

Independent Variable (X): 10

AVERAGE WEEKDAY DAILY

$$T = 230.52 * (X)$$

$$T = 230.52 * 10$$

$$T = 2305.20$$

$$T = 2,306 \text{ vehicle trips}$$

with 50% (1,153 vpd) entering and 50% (1,153 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 28.08 * (X)$$

$$T = 28.08 * 10$$

$$T = 280.80$$

$$T = 281 \text{ vehicle trips}$$

with 50% (141 vph) entering and 50% (140 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 22.96 * (X)$$

$$T = 22.96 * 10$$

$$T = 229.60$$

$$T = 230 \text{ vehicle trips}$$

with 50% (115 vph) entering and 50% (115 vph) exiting.

AVERAGE SATURDAY DAILY

$$T = 291.67 * (X)$$

$$T = 291.67 * 0$$

$$T = 2916.70$$

$$T = 2,916 \text{ vehicle trips}$$

with 50% (1,458 vpd) entering and 50% (1,458 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$$T = 23.26 * (X)$$

$$T = 23.26 * 10$$

$$T = 232.60$$

$$T = 233 \text{ vehicle trips}$$

with 50% (117 vph) entering and 50% (116 vph) exiting.

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 934 - Fast-Food Restaurant with Drive-Through Window

General Urban/Suburban

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Floor Area

Independent Variable (X): 1.400

AVERAGE WEEKDAY DAILY

$$T = 470.95 * (X)$$

$$T = 470.95 * 1.40$$

$$T = 659.33$$

$$T = 660 \text{ vehicle trips}$$

with 50% (330 vpd) entering and 50% (330 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 40.19 * (X)$$

$$T = 40.19 * 1.40$$

$$T = 56.27$$

$$T = 56 \text{ vehicle trips}$$

with 51% (29 vph) entering and 49% (27 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 32.67 * (X)$$

$$T = 32.67 * 1.40$$

$$T = 45.74$$

$$T = 46 \text{ vehicle trips}$$

with 52% (24 vph) entering and 48% (22 vph) exiting.

SATURDAY DAILY

$$T = 616.12 * (X)$$

$$T = 616.12 * 1.40$$

$$T = 862.57$$

$$T = 864 \text{ vehicle trips}$$

with 50% (432 vpd) entering and 50% (432 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$$T = 54.86 * (X)$$

$$T = 54.86 * 1.40$$

$$T = 76.80$$

$$T = 77 \text{ vehicle trips}$$

with 51% (39 vph) entering and 49% (38 vph) exiting.

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

CAPACITY ANALYSIS METHODOLOGY

CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).⁹ The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year. A description of the operating condition under each level of service is provided below:

- *LOS A* describes conditions with little to no delay to motorists.
- *LOS B* represents a desirable level with relatively low delay to motorists.
- *LOS C* describes conditions with average delays to motorists.
- *LOS D* describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- *LOS E* represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- *LOS F* is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection control

⁹ *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000.
Highway Capacity Manual 2010, Transportation Research Board; Washington, D.C.; 2010.

(STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for unsignalized intersections are shown in Tables A-1 and A-2 based on HCM 2000 and HCM 2010, respectively.

Signalized Intersections

Levels of service for signalized intersections are also calculated using the operational analysis methodology of the HCM. The methodology for signalized intersections assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on average *control* delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Tables A-1 and A-2 summarize the relationship between level of service and average control delay based on HCM 2000 and HCM 2010, respectively.

Table A-1
LEVEL-OF-SERVICE CRITERIA FOR INTERSECTIONS

Level of Service	Unsignalized Intersection Criteria	Signalized Intersection Criteria
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle)
A	≤10	≤10
B	>10 and ≤15	>10 and ≤20
C	>15 and ≤25	>20 and ≤35
D	>25 and ≤35	>35 and ≤55
E	>35 and ≤50	>55 and ≤80
F	>50	>80

Source: *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000.
Pages 10-16 and 17-2.

Table A-2
LEVEL-OF-SERVICE CRITERIA FOR INTERSECTIONS

Level of Service	Unsignalized Intersection Criteria	Signalized Intersection Criteria
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50 or $v/c > 1.0$	> 80 or $v/c > 1.0$

Source: *Highway Capacity Manual 2010*, Transportation Research Board; Washington, D.C.; 2010.
Pages 18-6 and 19-2.

For signalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to the entire intersection. For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups or to individual intersection approaches.

TRAFFIC IMPACT AND ACCESS STUDY

Irving Oil – East Hartford, Connecticut

CAPACITY AND QUEUE ANALYSIS WORKSHEETS

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	530	43	100	625	0	66	0	93	7	6	39
Future Volume (vph)	4	530	43	100	625	0	66	0	93	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	623	0	106	665	0	0	99	139	0	21	62
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	20.0	20.0		8.0	20.0		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	60.0	60.0		18.0	78.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	48.8%	48.8%		14.6%	63.4%		20.3%	20.3%	20.3%	20.3%	20.3%	20.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.73		0.26	0.62			0.41	0.34		0.07	0.18
Control Delay	13.5	22.1		7.7	12.4			36.9	9.7		32.2	11.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	13.5	22.1		7.7	12.4			36.9	9.7		32.2	11.3
Queue Length 50th (ft)	1	166		10	112			32	0		6	0
Queue Length 95th (ft)	8	539		58	453			91	17		26	14
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	618	1470		588	1638			457	638		567	604
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.42		0.18	0.41			0.22	0.22		0.04	0.10

Intersection Summary

Area Type: Other
Cycle Length: 123

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday AM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	16%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday AM

Actuated Cycle Length: 67.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
18 s	60 s	20 s	25 s
 Ø6			 Ø8
78 s			25 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2018 Existing
Timing Plan: Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	530	43	100	625	0	66	0	93	7	6	39
Future Volume (vph)	4	530	43	100	625	0	66	0	93	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	1.00
Satd. Flow (prot)	1805	1771		1671	1776			1671	1568		1852	1615
Flt Permitted	0.39	1.00		0.23	1.00			0.74	1.00		0.85	1.00
Satd. Flow (perm)	744	1771		398	1776			1308	1568		1623	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Adj. Flow (vph)	4	576	47	106	665	0	99	0	139	11	10	62
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	113	0	0	51
Lane Group Flow (vph)	4	621	0	106	665	0	0	99	26	0	21	11
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	32.5	32.5		41.4	41.4			12.5	12.5		12.5	12.5
Effective Green, g (s)	32.5	32.5		41.4	41.4			12.5	12.5		12.5	12.5
Actuated g/C Ratio	0.48	0.48		0.61	0.61			0.18	0.18		0.18	0.18
Clearance Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	356	847		353	1082			240	288		298	297
v/s Ratio Prot		c0.35		0.03	c0.37							
v/s Ratio Perm	0.01			0.16				c0.08	0.02		0.01	0.01
v/c Ratio	0.01	0.73		0.30	0.61			0.41	0.09		0.07	0.04
Uniform Delay, d1	9.3	14.2		7.9	8.3			24.5	23.0		22.9	22.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	3.5		0.5	1.2			1.2	0.1		0.1	0.1
Delay (s)	9.3	17.7		8.4	9.5			25.6	23.1		23.0	22.8
Level of Service	A	B		A	A			C	C		C	C
Approach Delay (s)		17.7			9.3			24.2			22.9	
Approach LOS		B			A			C			C	

Intersection Summary

HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	833	44	113	694	11	29	11	135	6	9	13
Future Volume (vph)	33	833	44	113	694	11	29	11	135	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	953	0	123	766	0	0	48	163	0	25	21
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	20.0	20.0		8.0	20.0		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	60.0	60.0		18.0	78.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	48.8%	48.8%		14.6%	63.4%		20.3%	20.3%	20.3%	20.3%	20.3%	20.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.08	0.83		0.40	0.55			0.34	0.54		0.16	0.10
Control Delay	10.7	23.1		7.6	8.3			46.8	14.3		42.1	0.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	10.7	23.1		7.6	8.3			46.8	14.3		42.1	0.9
Queue Length 50th (ft)	6	299		9	109			24	0		12	0
Queue Length 95th (ft)	35	#1030		55	466			66	49		29	0
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	437	1154		442	1540			334	488		375	417
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.08	0.83		0.28	0.50			0.14	0.33		0.07	0.05

Intersection Summary

Area Type: Other

Cycle Length: 123

Actuated Cycle Length: 88.8

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	16%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Weekday PM

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
18 s	60 s	20 s	25 s
 Ø6			 Ø8
78 s			25 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2018 Existing
Timing Plan: Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	833	44	113	694	11	29	11	135	6	9	13
Future Volume (vph)	33	833	44	113	694	11	29	11	135	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	1.00
Satd. Flow (prot)	1805	1832		1787	1841			1833	1583		1855	1615
Flt Permitted	0.36	1.00		0.12	1.00			0.77	1.00		0.87	1.00
Satd. Flow (perm)	693	1832		223	1841			1461	1583		1640	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Adj. Flow (vph)	36	905	48	123	754	12	35	13	163	10	15	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	147	0	0	19
Lane Group Flow (vph)	36	952	0	123	766	0	0	48	16	0	25	2
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	55.9	55.9		66.8	66.8			8.7	8.7		8.7	8.7
Effective Green, g (s)	55.9	55.9		66.8	66.8			8.7	8.7		8.7	8.7
Actuated g/C Ratio	0.62	0.62		0.74	0.74			0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	429	1134		301	1361			140	152		158	155
v/s Ratio Prot		c0.52		0.04	c0.42							
v/s Ratio Perm	0.05			0.27				c0.03	0.01		0.02	0.00
v/c Ratio	0.08	0.84		0.41	0.56			0.34	0.10		0.16	0.01
Uniform Delay, d1	6.9	13.6		12.7	5.2			38.1	37.2		37.4	36.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	5.8		0.9	0.7			1.5	0.3		0.5	0.0
Delay (s)	7.0	19.5		13.6	5.9			39.6	37.5		37.9	36.9
Level of Service	A	B		B	A			D	D		D	D
Approach Delay (s)		19.0			7.0			38.0			37.5	
Approach LOS		B			A			D			D	

Intersection Summary

HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Saturday MIDDAY

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	486	20	73	509	0	28	9	73	9	4	10
Future Volume (vph)	5	486	20	73	509	0	28	9	73	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Peak Hour Factor	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	575	0	78	541	0	0	40	79	0	13	10
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	20.0	20.0		8.0	20.0		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	60.0	60.0		18.0	78.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	48.8%	48.8%		14.6%	63.4%		20.3%	20.3%	20.3%	20.3%	20.3%	20.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.55		0.14	0.42			0.18	0.26		0.06	0.03
Control Delay	11.0	15.2		5.3	7.6			30.9	11.5		30.6	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	11.0	15.2		5.3	7.6			30.9	11.5		30.6	0.2
Queue Length 50th (ft)	1	118		5	59			10	0		3	0
Queue Length 95th (ft)	9	380		38	271			57	43		26	0
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	798	1670		766	1744			586	667		582	682
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.34		0.10	0.31			0.07	0.12		0.02	0.01

Intersection Summary

Area Type: Other

Cycle Length: 123

Actuated Cycle Length: 56.6

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
Lanes, Volumes, Timings

2018 Existing
Timing Plan: Saturday MIDDAY

Lane Group Ø9

Lane Configurations

Traffic Volume (vph)

Future Volume (vph)

Ideal Flow (vphpl)

Storage Length (ft)

Storage Lanes

Taper Length (ft)

Right Turn on Red

Link Speed (mph)

Link Distance (ft)

Travel Time (s)

Peak Hour Factor

Heavy Vehicles (%)

Shared Lane Traffic (%)

Lane Group Flow (vph)

Turn Type

Protected Phases 9

Permitted Phases

Detector Phase

Switch Phase

Minimum Initial (s) 5.0

Minimum Split (s) 20.0

Total Split (s) 20.0

Total Split (%) 16%

Yellow Time (s) 2.0

All-Red Time (s) 0.0

Lost Time Adjust (s)

Total Lost Time (s)

Lead/Lag

Lead-Lag Optimize?

Recall Mode None

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn

Reduced v/c Ratio

Intersection Summary

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2018 Existing
Timing Plan: Saturday MIDDAY

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
18 s	60 s	20 s	25 s
 Ø6			 Ø8
78 s			25 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2018 Existing
Timing Plan: Saturday MIDDAY

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	486	20	73	509	0	28	9	73	9	4	10
Future Volume (vph)	5	486	20	73	509	0	28	9	73	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	1.00
Satd. Flow (prot)	1805	1836		1787	1845			1831	1553		1836	1615
Flt Permitted	0.46	1.00		0.30	1.00			0.77	1.00		0.77	1.00
Satd. Flow (perm)	878	1836		555	1845			1466	1553		1460	1615
Peak-hour factor, PHF	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	6	552	23	78	541	0	30	10	79	9	4	10
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	70	0	0	9
Lane Group Flow (vph)	6	574	0	78	541	0	0	40	9	0	13	1
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	30.6	30.6		38.9	38.9			6.4	6.4		6.4	6.4
Effective Green, g (s)	30.6	30.6		38.9	38.9			6.4	6.4		6.4	6.4
Actuated g/C Ratio	0.52	0.52		0.66	0.66			0.11	0.11		0.11	0.11
Clearance Time (s)	5.0	5.0		3.0	5.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	453	947		474	1210			158	167		157	174
v/s Ratio Prot		c0.31		0.01	c0.29							
v/s Ratio Perm	0.01			0.09				c0.03	0.01		0.01	0.00
v/c Ratio	0.01	0.61		0.16	0.45			0.25	0.05		0.08	0.01
Uniform Delay, d1	7.0	10.1		4.9	5.0			24.3	23.7		23.8	23.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	1.3		0.2	0.4			0.8	0.1		0.2	0.0
Delay (s)	7.0	11.4		5.1	5.3			25.1	23.9		24.0	23.6
Level of Service	A	B		A	A			C	C		C	C
Approach Delay (s)		11.3			5.3			24.3			23.9	
Approach LOS		B			A			C			C	

Intersection Summary

HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	535	43	101	631	0	67	0	94	7	6	39
Future Volume (vph)	4	535	43	101	631	0	67	0	94	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	629	0	107	671	0	0	100	140	0	21	62
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9		1.0	1.9		1.2	1.2	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.73		0.28	0.62			0.44	0.36		0.07	0.18
Control Delay	16.0	24.7		9.1	14.1			42.1	10.6		36.4	5.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	16.0	24.7		9.1	14.1			42.1	10.6		36.4	5.1
Queue Length 50th (ft)	1	191		12	130			37	0		7	0
Queue Length 95th (ft)	9	#657		70	544			100	16		28	0
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	569	1377		546	1602			410	587		506	568
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.46		0.20	0.42			0.24	0.24		0.04	0.11

Intersection Summary

Area Type: Other
Cycle Length: 133.1

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday AM

Lane Group Ø9

Lane Configurations

Traffic Volume (vph)

Future Volume (vph)

Ideal Flow (vphpl)

Storage Length (ft)

Storage Lanes

Taper Length (ft)

Right Turn on Red

Link Speed (mph)

Link Distance (ft)

Travel Time (s)

Confl. Bikes (#/hr)

Peak Hour Factor

Heavy Vehicles (%)

Shared Lane Traffic (%)

Lane Group Flow (vph)

Turn Type

Protected Phases 9

Permitted Phases

Detector Phase

Switch Phase

Minimum Initial (s) 5.0

Minimum Split (s) 28.0

Total Split (s) 28.0

Total Split (%) 21%

Yellow Time (s) 4.0

All-Red Time (s) 0.0

Lost Time Adjust (s)

Total Lost Time (s)

Lead/Lag

Lead-Lag Optimize?

Recall Mode None

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn

Reduced v/c Ratio

Intersection Summary

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday AM

Actuated Cycle Length: 74.6

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2019 No-Build
Timing Plan: Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	535	43	101	631	0	67	0	94	7	6	39
Future Volume (vph)	4	535	43	101	631	0	67	0	94	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	1.00
Satd. Flow (prot)	1805	1771		1671	1776			1671	1568		1852	1615
Flt Permitted	0.39	1.00		0.22	1.00			0.74	1.00		0.85	1.00
Satd. Flow (perm)	733	1771		378	1776			1308	1568		1616	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Adj. Flow (vph)	4	582	47	107	671	0	100	0	140	11	10	62
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	117	0	0	52
Lane Group Flow (vph)	4	627	0	107	671	0	0	100	23	0	21	10
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	36.2	36.2		46.3	46.3			12.9	12.9		12.9	12.9
Effective Green, g (s)	36.2	36.2		46.3	46.3			12.9	12.9		12.9	12.9
Actuated g/C Ratio	0.47	0.47		0.60	0.60			0.17	0.17		0.17	0.17
Clearance Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	344	832		329	1067			219	262		270	270
v/s Ratio Prot		c0.35		0.03	c0.38							
v/s Ratio Perm	0.01			0.17				c0.08	0.01		0.01	0.01
v/c Ratio	0.01	0.75		0.33	0.63			0.46	0.09		0.08	0.04
Uniform Delay, d1	10.9	16.7		9.5	9.8			28.9	27.1		27.0	26.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	4.1		0.6	1.3			1.5	0.1		0.1	0.1
Delay (s)	10.9	20.9		10.1	11.2			30.4	27.2		27.2	26.9
Level of Service	B	C		B	B			C	C		C	C
Approach Delay (s)		20.8			11.0			28.6			27.0	
Approach LOS		C			B			C			C	

Intersection Summary

HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	19.1
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	841	44	114	701	11	29	11	136	6	9	13
Future Volume (vph)	33	841	44	114	701	11	29	11	136	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	962	0	124	774	0	0	48	164	0	25	21
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9		1.0	1.9		1.2	1.2	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.09	0.87		0.47	0.57			0.35	0.55		0.16	0.09
Control Delay	13.3	28.0		13.3	10.2			50.1	15.0		45.2	0.8
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	13.3	28.0		13.3	10.2			50.1	15.0		45.2	0.8
Queue Length 50th (ft)	6	339		11	123			24	0		12	0
Queue Length 95th (ft)	41	#1209		86	585			71	51		32	0
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	407	1112		392	1502			322	476		360	426
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.09	0.87		0.32	0.52			0.15	0.34		0.07	0.05

Intersection Summary

Area Type: Other
Cycle Length: 133.1
Actuated Cycle Length: 93

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	21%
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Weekday PM

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
HCM Signalized Intersection Capacity Analysis

2019 No-Build
Timing Plan: Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	841	44	114	701	11	29	11	136	6	9	13
Future Volume (vph)	33	841	44	114	701	11	29	11	136	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	1.00
Satd. Flow (prot)	1805	1832		1787	1841			1833	1583		1855	1615
Flt Permitted	0.35	1.00		0.09	1.00			0.77	1.00		0.87	1.00
Satd. Flow (perm)	673	1832		164	1841			1461	1583		1638	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Adj. Flow (vph)	36	914	48	124	762	12	35	13	164	10	15	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	149	0	0	19
Lane Group Flow (vph)	36	961	0	124	774	0	0	48	15	0	25	2
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	56.5	56.5		68.6	68.6			8.9	8.9		8.9	8.9
Effective Green, g (s)	56.5	56.5		68.6	68.6			8.9	8.9		8.9	8.9
Actuated g/C Ratio	0.59	0.59		0.71	0.71			0.09	0.09		0.09	0.09
Clearance Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	395	1075		253	1312			135	146		151	149
v/s Ratio Prot		c0.52		0.04	c0.42							
v/s Ratio Perm	0.05			0.31				c0.03	0.01		0.02	0.00
v/c Ratio	0.09	0.89		0.49	0.59			0.36	0.10		0.17	0.01
Uniform Delay, d1	8.7	17.3		16.8	6.8			41.0	40.0		40.2	39.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	9.9		1.5	0.8			1.6	0.3		0.5	0.0
Delay (s)	8.8	27.2		18.3	7.6			42.6	40.3		40.7	39.7
Level of Service	A	C		B	A			D	D		D	D
Approach Delay (s)		26.5			9.1			40.8			40.3	
Approach LOS		C			A			D			D	

Intersection Summary

HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	19.1
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Saturday MIDDAY

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	491	20	74	514	0	28	9	74	9	4	10
Future Volume (vph)	5	491	20	74	514	0	28	9	74	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	140		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			1375			634			680	
Travel Time (s)		20.0			26.8			17.3			15.5	
Peak Hour Factor	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	581	0	79	547	0	0	40	80	0	13	10
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9		1.0	1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.56		0.15	0.42			0.19	0.27		0.06	0.03
Control Delay	13.0	17.4		6.4	8.7			35.8	10.7		35.4	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	13.0	17.4		6.4	8.7			35.8	10.7		35.4	0.2
Queue Length 50th (ft)	1	134		6	67			11	0		4	0
Queue Length 95th (ft)	10	460		46	336			65	40		30	0
Internal Link Dist (ft)		945			1295			554			600	
Turn Bay Length (ft)	375			140					150			150
Base Capacity (vph)	770	1618		723	1705			549	637		548	660
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.36		0.11	0.32			0.07	0.13		0.02	0.02

Intersection Summary

Area Type: Other

Cycle Length: 133.1

Actuated Cycle Length: 62.9

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Saturday MIDDAY

Lane Group Ø9

Lane Configurations

Traffic Volume (vph)

Future Volume (vph)

Ideal Flow (vphpl)

Storage Length (ft)

Storage Lanes

Taper Length (ft)

Right Turn on Red

Link Speed (mph)

Link Distance (ft)

Travel Time (s)

Peak Hour Factor

Heavy Vehicles (%)

Shared Lane Traffic (%)

Lane Group Flow (vph)

Turn Type

Protected Phases 9

Permitted Phases

Detector Phase

Switch Phase

Minimum Initial (s) 5.0

Minimum Split (s) 28.0

Total Split (s) 28.0

Total Split (%) 21%

Yellow Time (s) 4.0

All-Red Time (s) 0.0

Lost Time Adjust (s)

Total Lost Time (s)

Lead/Lag

Lead-Lag Optimize?

Recall Mode None

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn

Reduced v/c Ratio

Intersection Summary

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 No-Build
Timing Plan: Saturday MIDDAY

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2019 No-Build
Timing Plan: Saturday MIDDAY

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	491	20	74	514	0	28	9	74	9	4	10
Future Volume (vph)	5	491	20	74	514	0	28	9	74	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	1.00
Satd. Flow (prot)	1805	1836		1787	1845			1831	1553		1836	1615
Flt Permitted	0.46	1.00		0.28	1.00			0.77	1.00		0.77	1.00
Satd. Flow (perm)	874	1836		522	1845			1466	1553		1464	1615
Peak-hour factor, PHF	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	6	558	23	79	547	0	30	10	80	9	4	10
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	72	0	0	9
Lane Group Flow (vph)	6	580	0	79	547	0	0	40	8	0	13	1
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	33.3	33.3		42.8	42.8			6.7	6.7		6.7	6.7
Effective Green, g (s)	33.3	33.3		42.8	42.8			6.7	6.7		6.7	6.7
Actuated g/C Ratio	0.50	0.50		0.64	0.64			0.10	0.10		0.10	0.10
Clearance Time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	434	912		437	1178			146	155		146	161
v/s Ratio Prot		c0.32		0.01	c0.30							
v/s Ratio Perm	0.01			0.10				c0.03	0.01		0.01	0.00
v/c Ratio	0.01	0.64		0.18	0.46			0.27	0.05		0.09	0.01
Uniform Delay, d1	8.5	12.4		6.2	6.2			27.9	27.3		27.4	27.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	1.6		0.2	0.4			1.0	0.1		0.3	0.0
Delay (s)	8.6	14.0		6.4	6.6			28.9	27.4		27.6	27.2
Level of Service	A	B		A	A			C	C		C	C
Approach Delay (s)		14.0			6.6			27.9			27.4	
Approach LOS		B			A			C			C	

Intersection Summary

HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	589	43	113	684	0	67	0	106	7	6	39
Future Volume (vph)	4	589	43	113	684	0	67	0	106	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	80		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			0			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			136			634			680	
Travel Time (s)		20.0			2.6			17.3			15.5	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	687	0	120	728	0	0	100	158	0	21	62
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9		1.0	1.9		1.2	1.2	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.76		0.33	0.62			0.50	0.42		0.09	0.19
Control Delay	16.2	26.1		9.4	13.7			47.9	11.1		39.2	5.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	16.2	26.1		9.4	13.7			47.9	11.1		39.2	5.3
Queue Length 50th (ft)	1	223		14	149			44	0		9	0
Queue Length 95th (ft)	10	#808		77	619			103	15		29	0
Internal Link Dist (ft)		945			56			554			600	
Turn Bay Length (ft)	375			80					150			150
Base Capacity (vph)	499	1273		490	1554			341	525		419	488
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.54		0.24	0.47			0.29	0.30		0.05	0.13

Intersection Summary

Area Type: Other
Cycle Length: 133.1

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday AM

Lane Group Ø9

Lane Configurations

Traffic Volume (vph)

Future Volume (vph)

Ideal Flow (vphpl)

Storage Length (ft)

Storage Lanes

Taper Length (ft)

Right Turn on Red

Link Speed (mph)

Link Distance (ft)

Travel Time (s)

Confl. Bikes (#/hr)

Peak Hour Factor

Heavy Vehicles (%)

Shared Lane Traffic (%)

Lane Group Flow (vph)

Turn Type

Protected Phases 9

Permitted Phases

Detector Phase

Switch Phase

Minimum Initial (s) 5.0

Minimum Split (s) 28.0

Total Split (s) 28.0

Total Split (%) 21%

Yellow Time (s) 4.0

All-Red Time (s) 0.0

Lost Time Adjust (s)

Total Lost Time (s)

Lead/Lag

Lead-Lag Optimize?

Recall Mode None

v/c Ratio

Control Delay

Queue Delay

Total Delay

Queue Length 50th (ft)

Queue Length 95th (ft)

Internal Link Dist (ft)

Turn Bay Length (ft)

Base Capacity (vph)

Starvation Cap Reductn

Spillback Cap Reductn

Storage Cap Reductn

Reduced v/c Ratio

Intersection Summary

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday AM

Actuated Cycle Length: 83.6

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2019 Build
Timing Plan: Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	589	43	113	684	0	67	0	106	7	6	39
Future Volume (vph)	4	589	43	113	684	0	67	0	106	7	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	1.00
Satd. Flow (prot)	1805	1773		1671	1776			1671	1568		1852	1615
Flt Permitted	0.37	1.00		0.19	1.00			0.74	1.00		0.85	1.00
Satd. Flow (perm)	695	1773		333	1776			1308	1568		1608	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.67	0.67	0.67	0.63	0.63	0.63
Adj. Flow (vph)	4	640	47	120	728	0	100	0	158	11	10	62
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	135	0	0	53
Lane Group Flow (vph)	4	685	0	120	728	0	0	100	23	0	21	9
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	6%	5%	8%	7%	0%	8%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	42.7	42.7		55.2	55.2			12.8	12.8		12.8	12.8
Effective Green, g (s)	42.7	42.7		55.2	55.2			12.8	12.8		12.8	12.8
Actuated g/C Ratio	0.50	0.50		0.64	0.64			0.15	0.15		0.15	0.15
Clearance Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	344	879		345	1138			194	233		239	240
v/s Ratio Prot		c0.39		0.03	c0.41							
v/s Ratio Perm	0.01			0.19				c0.08	0.01		0.01	0.01
v/c Ratio	0.01	0.78		0.35	0.64			0.52	0.10		0.09	0.04
Uniform Delay, d1	11.0	17.8		10.3	9.4			33.8	31.7		31.6	31.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	4.7		0.6	1.3			2.3	0.2		0.2	0.1
Delay (s)	11.0	22.5		10.9	10.7			36.1	31.9		31.8	31.4
Level of Service	B	C		B	B			D	C		C	C
Approach Delay (s)		22.5			10.8			33.5			31.5	
Approach LOS		C			B			C			C	

Intersection Summary

HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	19.1
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 methodology does not support exclusive ped or hold phases.

2: Enter-Only Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	646	56	43	797	0	0
Future Volume (vph)	646	56	43	797	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			35	30	
Link Distance (ft)	136			134	338	
Travel Time (s)	3.1			2.6	7.7	
Peak Hour Factor	0.93	0.93	0.94	0.94	0.90	0.90
Heavy Vehicles (%)	6%	2%	2%	7%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	755	0	46	848	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2: Enter-Only Site Driveway & Silver Lane HCM Unsignalized Intersection Capacity Analysis

2019 Build
Timing Plan: Weekday AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	646	56	43	797	0	0
Future Volume (Veh/h)	646	56	43	797	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.94	0.94	0.90	0.90
Hourly flow rate (vph)	695	60	46	848	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	136					
pX, platoon unblocked			0.68		0.68	0.68
vC, conflicting volume			755		1665	725
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			411		1741	367
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	100
cM capacity (veh/h)			785		61	464
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	755	46	848			
Volume Left	0	46	0			
Volume Right	60	0	0			
cSH	1700	785	1700			
Volume to Capacity	0.44	0.06	0.50			
Queue Length 95th (ft)	0	5	0			
Control Delay (s)	0.0	9.9	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	0.5				
Approach LOS						
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			45.3%	ICU Level of Service		A
Analysis Period (min)			15			

3: Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	622	24	28	759	81	67
Future Volume (vph)	622	24	28	759	81	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			35	30	
Link Distance (ft)	134			1093	353	
Travel Time (s)	3.0			21.3	8.0	
Peak Hour Factor	0.93	0.93	0.94	0.94	0.90	0.90
Heavy Vehicles (%)	6%	2%	2%	7%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	695	0	0	837	90	74
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

3: Site Driveway & Silver Lane HCM 2010 TWSC

2019 Build
Timing Plan: Weekday AM

Intersection

Int Delay, s/veh 6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	622	24	28	759	81	67
Future Vol, veh/h	622	24	28	759	81	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	94	94	90	90
Heavy Vehicles, %	6	2	2	7	2	2
Mvmt Flow	669	26	30	807	90	74

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	695
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	901
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	901
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	60
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	118	450	-	-	901	-
HCM Lane V/C Ratio	0.763	0.165	-	-	0.033	-
HCM Control Delay (s)	97.5	14.6	-	-	9.1	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	4.3	0.6	-	-	0.1	-

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	885	44	124	744	11	29	11	146	6	9	13
Future Volume (vph)	33	885	44	124	744	11	29	11	146	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	80		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			0			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			138			634			680	
Travel Time (s)		20.0			2.7			17.3			15.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	1010	0	135	821	0	0	48	176	0	25	21
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.1	12.1	12.1	12.1	12.1	12.1
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9		1.0	1.9		1.2	1.2	1.2	1.2	1.2	1.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.10	0.91		0.55	0.60			0.35	0.57		0.16	0.09
Control Delay	13.8	32.6		23.0	10.9			50.3	15.0		45.4	0.8
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	13.8	32.6		23.0	10.9			50.3	15.0		45.4	0.8
Queue Length 50th (ft)	7	382		17	137			25	0		13	0
Queue Length 95th (ft)	42	#1301		117	653			71	52		32	0
Internal Link Dist (ft)		945			58			554			600	
Turn Bay Length (ft)	375			80					150			150
Base Capacity (vph)	376	1107		368	1497			320	484		359	424
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.10	0.91		0.37	0.55			0.15	0.36		0.07	0.05

Intersection Summary

Area Type: Other
Cycle Length: 133.1
Actuated Cycle Length: 93.4

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	21%
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday PM

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane HCM Signalized Intersection Capacity Analysis

2019 Build
Timing Plan: Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	885	44	124	744	11	29	11	146	6	9	13
Future Volume (vph)	33	885	44	124	744	11	29	11	146	6	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	1.00
Satd. Flow (prot)	1805	1832		1787	1841			1833	1583		1855	1615
Flt Permitted	0.33	1.00		0.07	1.00			0.77	1.00		0.87	1.00
Satd. Flow (perm)	622	1832		124	1841			1461	1583		1638	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.61	0.61	0.61
Adj. Flow (vph)	36	962	48	135	809	12	35	13	176	10	15	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	160	0	0	19
Lane Group Flow (vph)	36	1009	0	135	821	0	0	48	16	0	25	2
Heavy Vehicles (%)	0%	3%	2%	1%	3%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	56.5	56.5		69.0	69.0			8.9	8.9		8.9	8.9
Effective Green, g (s)	56.5	56.5		69.0	69.0			8.9	8.9		8.9	8.9
Actuated g/C Ratio	0.59	0.59		0.72	0.72			0.09	0.09		0.09	0.09
Clearance Time (s)	6.0	6.0		4.0	6.0			5.1	5.1		5.1	5.1
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	364	1072		235	1316			134	145		151	148
v/s Ratio Prot		c0.55		0.05	c0.45							
v/s Ratio Perm	0.06			0.36				c0.03	0.01		0.02	0.00
v/c Ratio	0.10	0.94		0.57	0.62			0.36	0.11		0.17	0.01
Uniform Delay, d1	8.8	18.5		21.4	7.1			41.1	40.2		40.4	39.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	15.5		3.4	1.1			1.6	0.3		0.5	0.0
Delay (s)	9.0	34.0		24.8	8.1			42.8	40.5		40.9	39.8
Level of Service	A	C		C	A			D	D		D	D
Approach Delay (s)		33.2			10.5			41.0			40.4	
Approach LOS		C			B			D			D	

Intersection Summary

HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	19.1
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 methodology does not support exclusive ped or hold phases.

2: Enter-Only Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	990	47	34	879	0	0
Future Volume (vph)	990	47	34	879	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			35	30	
Link Distance (ft)	138			122	365	
Travel Time (s)	3.1			2.4	8.3	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1140	0	37	955	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2: Enter-Only Site Driveway & Silver Lane HCM Unsignalized Intersection Capacity Analysis

2019 Build
Timing Plan: Weekday PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	990	47	34	879	0	0
Future Volume (Veh/h)	990	47	34	879	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.90	0.90
Hourly flow rate (vph)	1088	52	37	955	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	138					
pX, platoon unblocked			0.46		0.46	0.46
vC, conflicting volume			1140		2143	1114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			724		2886	668
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	100
cM capacity (veh/h)			408		8	213
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	1140	37	955			
Volume Left	0	37	0			
Volume Right	52	0	0			
cSH	1700	408	1700			
Volume to Capacity	0.67	0.09	0.56			
Queue Length 95th (ft)	0	7	0			
Control Delay (s)	0.0	14.7	0.0			
Lane LOS		B				
Approach Delay (s)	0.0	0.5				
Approach LOS						
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			58.3%	ICU Level of Service		B
Analysis Period (min)			15			

3: Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Weekday PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	970	20	22	849	64	57
Future Volume (vph)	970	20	22	849	64	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			35	30	
Link Distance (ft)	122			1115	382	
Travel Time (s)	2.8			21.7	8.7	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1088	0	0	947	71	63
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

3: Site Driveway & Silver Lane HCM 2010 TWSC

2019 Build
Timing Plan: Weekday PM

Intersection

Int Delay, s/veh	11.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	970	20	22	849	64	57
Future Vol, veh/h	970	20	22	849	64	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	1066	22	24	923	71	63

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1088
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	641
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	641
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	185.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	56	266	-	-	641	-
HCM Lane V/C Ratio	1.27	0.238	-	-	0.037	-
HCM Control Delay (s)	\$ 331.1	22.7	-	-	10.8	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	6.2	0.9	-	-	0.1	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build

Timing Plan: Saturday MIDDAY

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	541	20	85	563	0	28	9	85	9	4	10
Future Volume (vph)	5	541	20	85	563	0	28	9	85	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	80		0	0		150	0		150
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			0			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			30	
Link Distance (ft)		1025			138			634			680	
Travel Time (s)		20.0			2.7			17.3			15.5	
Peak Hour Factor	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	638	0	90	599	0	0	40	92	0	13	10
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		9.0	21.0		12.0	12.0	12.0	12.0	12.0	12.0
Total Split (s)	61.0	61.0		19.0	80.0		25.1	25.1	25.1	25.1	25.1	25.1
Total Split (%)	45.8%	45.8%		14.3%	60.1%		18.9%	18.9%	18.9%	18.9%	18.9%	18.9%
Yellow Time (s)	4.1	4.1		3.0	4.1		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9		1.0	1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Min	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.01	0.59		0.18	0.45			0.20	0.32		0.07	0.03
Control Delay	12.8	17.8		6.5	8.9			37.6	13.0		37.1	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	12.8	17.8		6.5	8.9			37.6	13.0		37.1	0.2
Queue Length 50th (ft)	1	156		7	78			12	0		4	0
Queue Length 95th (ft)	11	530		51	382			66	51		30	0
Internal Link Dist (ft)		945			58			554			600	
Turn Bay Length (ft)	375			80					150			150
Base Capacity (vph)	712	1573		680	1704			504	594		502	614
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.01	0.41		0.13	0.35			0.08	0.15		0.03	0.02

Intersection Summary

Area Type: Other

Cycle Length: 133.1

Actuated Cycle Length: 66.6

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Saturday MIDDAY

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	21%
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

1: Mercer Ave/I-84 HOV Ramp & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Saturday MIDDAY

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Mercer Ave/I-84 HOV Ramp & Silver Lane

 Ø1	 Ø2	 Ø9	 Ø4
19 s	61 s	28 s	25.1 s
 Ø6			 Ø8
80 s			25.1 s

1: Mercer Ave/I-84 HOV Ramp & Silver Lane
HCM Signalized Intersection Capacity Analysis

2019 Build
Timing Plan: Saturday MIDDAY

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	541	20	85	563	0	28	9	85	9	4	10
Future Volume (vph)	5	541	20	85	563	0	28	9	85	9	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	1.00
Satd. Flow (prot)	1805	1837		1787	1845			1831	1553		1836	1615
Flt Permitted	0.44	1.00		0.25	1.00			0.77	1.00		0.77	1.00
Satd. Flow (perm)	833	1837		473	1845			1466	1553		1461	1615
Peak-hour factor, PHF	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	6	615	23	90	599	0	30	10	92	9	4	10
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	83	0	0	9
Lane Group Flow (vph)	6	637	0	90	599	0	0	40	9	0	13	1
Heavy Vehicles (%)	0%	3%	0%	1%	3%	0%	0%	0%	4%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	37.2	37.2		46.8	46.8			6.7	6.7		6.7	6.7
Effective Green, g (s)	37.2	37.2		46.8	46.8			6.7	6.7		6.7	6.7
Actuated g/C Ratio	0.52	0.52		0.66	0.66			0.09	0.09		0.09	0.09
Clearance Time (s)	6.0	6.0		4.0	6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0	4.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	435	959		414	1212			137	146		137	151
v/s Ratio Prot		c0.35		0.02	c0.32							
v/s Ratio Perm	0.01			0.13				c0.03	0.01		0.01	0.00
v/c Ratio	0.01	0.66		0.22	0.49			0.29	0.06		0.09	0.01
Uniform Delay, d1	8.2	12.4		6.6	6.2			30.0	29.4		29.5	29.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	1.9		0.3	0.4			1.2	0.2		0.3	0.0
Delay (s)	8.2	14.4		6.9	6.6			31.2	29.6		29.8	29.2
Level of Service	A	B		A	A			C	C		C	C
Approach Delay (s)		14.3			6.7			30.1			29.5	
Approach LOS		B			A			C			C	

Intersection Summary

HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 methodology does not support exclusive ped or hold phases.

2: Enter-Only Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Saturday MIDDAY

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	582	53	39	648	0	0
Future Volume (vph)	582	53	39	648	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Link Speed (mph)	30			35	30	
Link Distance (ft)	138			132	346	
Travel Time (s)	3.1			2.6	7.9	
Peak Hour Factor	0.90	0.90	0.94	0.94	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	706	0	41	689	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

2: Enter-Only Site Driveway & Silver Lane HCM Unsignalized Intersection Capacity Analysis

2019 Build
Timing Plan: Saturday MIDDAY

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	582	53	39	648	0	0
Future Volume (Veh/h)	582	53	39	648	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.94	0.94	0.90	0.90
Hourly flow rate (vph)	647	59	41	689	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	138					
pX, platoon unblocked			0.74		0.74	0.74
vC, conflicting volume			706		1448	676
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			430		1429	390
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	100
cM capacity (veh/h)			838		105	488
Direction, Lane #	EB 1	WB 1	WB 2			
Volume Total	706	41	689			
Volume Left	0	41	0			
Volume Right	59	0	0			
cSH	1700	838	1700			
Volume to Capacity	0.42	0.05	0.41			
Queue Length 95th (ft)	0	4	0			
Control Delay (s)	0.0	9.5	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	0.5				
Approach LOS						
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			37.4%	ICU Level of Service		A
Analysis Period (min)			15			

3: Site Driveway & Silver Lane Lanes, Volumes, Timings

2019 Build
Timing Plan: Saturday MIDDAY

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	560	22	26	613	74	64
Future Volume (vph)	560	22	26	613	74	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			35	30	
Link Distance (ft)	132			1105	367	
Travel Time (s)	3.0			21.5	8.3	
Peak Hour Factor	0.90	0.90	0.94	0.94	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	3%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	646	0	0	680	82	71
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

3: Site Driveway & Silver Lane HCM 2010 TWSC

2019 Build
Timing Plan: Saturday MIDDAY

Intersection

Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	560	22	26	613	74	64
Future Vol, veh/h	560	22	26	613	74	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	94	94	90	90
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	622	24	28	652	82	71

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	647
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	939
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	939
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	32.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	160	479	-	-	939	-
HCM Lane V/C Ratio	0.514	0.148	-	-	0.029	-
HCM Control Delay (s)	49.1	13.8	-	-	9	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	2.5	0.5	-	-	0.1	-