CES INC Engineers • Environmental Scientists • Surveyors

LETTER OF TRANSMITTAL

Date: May 25, 2106 **JN:** 11293.001 | 10973.002

To: Town of Hampden
106 Western Avenue
Hampden, ME 04444

Re: Proposed Fiberight Facility

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1	May 25, 2016	Traffic Impact Study
1	MAY 25	CD

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SENSIBLE SOLUTIONS

CES INC

TRAFFIC IMPACT STUDY

FOR

PROPOSED FIBERIGHT FACILITY
Hampden, Maine

MAY 25, 2016
JN: 11293.001 | 10973.002

Report Prepared By:
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Engineers ◆ Environmental Scientists ◆ Surveyors

TRAFFIC IMPACT STUDY – MAY 25, 2016

Traffic at the proposed Fiberight waste processing facility will enter and exit at a single point of access located at the northeast corner of the property. The facility entrance will be located at the end of a proposed 4,460 foot long access road which will enter onto the Coldbrook Road directly across from the existing HO Bouchard truck facility. The proposed access road will consist of two 12-foot travel lanes with 3-foot shoulders. A Maine Department of Transportation (MaineDOT) Entrance Permit Application for the access road entrance onto Coldbrook Road was submitted and an Entrance Permit was subsequently issued by the MaineDOT.

The main traffic generators at this proposed facility will be the incoming MSW deliveries, employees, and to a lesser extent the outgoing waste and commodities. These materials will enter and exit the facility in trucks ranging from packer trucks to trailer trucks. Passenger vehicles will make up the remainder of the facilities traffic and will be spread out over the full 24-hours of the day as employees will be needed for multiple shifts throughout the day. No MaineDOT Traffic Movement Permit is required because the project's estimated overall traffic volume is less than 100 passenger car equivalents during the peak hour.

TRAFFIC VOLUMES

Traffic to the facility will be composed of varying traffic components. The two primary components will be employees and incoming haul trucks carrying MSW. Additional traffic components will include general deliveries, outgoing waste residues and recyclables generated by processing, material deliveries related to the processing facility, and the outgoing product deliveries. These traffic components are broken down as follows.

Employees, Visitors, and General Deliveries

The facility is expected to employ 66 employees at full operation. These employees will work different shifts and will enter and exit the facility at different times of the day. Peak traffic movements for employees will occur around the 7:00 AM peak hour and 3:00 PM peak hour when the majority of the employees are arriving or departing their work stations. It is anticipated that these employees will arrive and depart in personal vehicles such as passenger cars and trucks.

Employees fall into three distinct groups and will be staffed as follows for the purposes of this traffic study:

General Plant Staffing	(9 employees, Monday-Friday, 7:00 AM-3:00 PM)
MSW side of plant	
Day shift	(21 employees, Monday-Friday, 7:00 AM-3:00 PM)
Evening shift	(16 employees, Monday-Friday, 3:00 PM-11:00 PM
Wet side of plant	
Day shift 1	(4 employees, Monday-Friday, 7:00 AM-3:00 PM)
Day shift 2	(4 employees, 7 days/week, 7:00 AM-7:00 PM)
Night shift	(4 employees, 7 days/week, 7:00 PM-7:00 AM)

It should be noted that by contract this plant will be required to accept MSW between the hours of 6:00 AM to 6:00 PM. The MSW side of the plant will be required to have earlier employee hours then the rest of plant in order for the contract to be fulfilled.

AM and PM peak employee traffic movements are provided in the Appendix. The AM peak hour for employees will occur between 6:30-7:30 AM with 38 employees entering and 4 employees exiting. The PM peak hour for employees will occur between 2:30-3:30 PM with 16 employees entering and 34 employees exiting. Both of these peak hours will occur ½ hour before shift change to ½ hour after shift change.
Notes:

1) There are 8 additional employees that do not come to the plant on any given day. These employees are required to staff the rotating seven day/week 12-hour shifts on the wet side of the plant.
2) Production employees in general do not leave their work station after clocking in. General plant staffing will have the ability to leave the site to perform work related activities.

Visitors and general day to day deliveries may account for an additional 20-25% increase above and beyond the total number of employees for a total of 84 employees, visitors, and general deliveries per day. This equates to 168 total daily vehicle trips for this facility during ordinary operations. It is not expected that these additional trips will occur during shift changes and will not impact the peak hour traffic.

Incoming MSW
MSW generation varies by time of year which will correspondingly result in an increase or decrease of shipments into the facility. Peak daily MSW deliveries to the facility will generally occur during the month of July based upon the monthly volumes provided by MRC. The peak monthly tonnage was calculated from 2015 data and amounts to 17,260 Tons brought to the facility. Using 20 delivery days in a month this equals an average of 863 Tons delivered each day.

Delivery methods are known for the MRC communities that send MSW to the proposed processing facility. The included MSW generator sheets were created using the 2015 tonnage data and knowing the delivery method we have calculated the daily deliveries assuming 20 delivery days per month. The daily MSW deliveries to the facility during the month of July will be 81 deliveries.

To account for variations in daily deliveries we have factored the peak delivery day by a factor of 1.1. This brings the peak daily tonnage to 950 Tons/day which corresponds to the peak expected daily tonnage provided in the MDEP Application. The highest expected total MSW deliveries to this facility on any given day will be 89 deliveries. All peak hour traffic volumes will be based on 89 truck deliveries to the facility in a day.

Additional Traffic Sources
The facility will generate a daily average of 82-130 Tons of residue waste and recyclables which will need to be shipped to a landfill for disposal or to the recycling commodities market. Residue waste and recyclables will be transported in trailers containing 28 Tons of material per trailer. This equates to a daily total of 4-5 trailers exiting the facility daily. These deliveries will be scheduled outside of the peak hours of traffic generation for the facility.

The plant's boiler is expected to generate 1,825 ton/year of ash. Ash will be transported to a landfill for disposal using 40 CY roll-offs. At 1.5 tons/CY this equates to 69 trips/year or 1 trip every 4-5 days.

Phosphoric acid is used during processing at the proposed facility. It is estimated that 19,000 gal/year will be required. Phosphoric acid will be delivered to the facility in 55 gallon drums or totes in truckload quantities. Deliveries of phosphoric acid will equate to 4-5 deliveries per year.

DELIVERY TRUCK HAUL ROUTES

Six distinct origins have been developed for MSW originating from the MRC communities. These routes, MSW generation, delivery methods, and daily trucks are provided on the MSW Generator sheets in the Appendix. The summary below shows the routes through the Town of Hampden and the adjusted peak daily deliveries that will use these routes.

US 1A/Western Ave./US Route 202/Coldbrook Road	8 trucks/day
US Route 202/Route 69/I-95 NB/Coldbrook Road	6 trucks/day
US Route 2/Coldbrook Road *	3 trucks/day
I-95 NB/Coldbrook Road	13 trucks/day
I-95 SB/Coldbrook Road	39 trucks/day
I-395 WB/US Route 202/Coldbrook Road	21 trucks/day

*As noted on the I-95 NB MSW Generator Sheet we have assigned the Town of Hermon's and the Town of Carmel's MSW deliveries to US Route 2 and the Coldbrook Road.

The total daily truck deliveries listed above sum to 90 deliveries/day. This is due to rounding error.

The enclosed drawing titled DAILY TRUCKS shows the daily expected turning movements along the proposed haul routes through the Town of Hampden.

Due to concerns brought up by the Planning Board, MRC will attempt to negotiate contracts with southern municipalities that will attempt to mandate delivery trucks avoid the downtown area of Hampden to include Route 1A and Hampden. The number of trucks using this route is eight/day and has been included in the analysis for completeness.

DELIVERY TRUCKS USING INTERSECTION OF ROUTE 1A AND COLDBROOK ROAD

The intersection of Route 1A and Coldbrook Road poses a concern based on limited sight distance. We do not believe that any trucks from across the Penobscot River delivering MSW to the facility will use this intersection due to the presence of the Route 202 connector off from I-395. A search of Google Maps shows the preferred route being either I-395 to Route 202 to Coldbrook Road or I-395 to I-95 to Exit 180 and the Coldbrook Road. The mileage and travel time for both routes is given as 7.2 miles and 8minutes. We believe that Route 202 will be used because the mileage is the same as the I-95 preferred route, travel time is the same, the 202 exit is located before I-95, trucks will not have to use the I-95 cloverleaf on-ramp, and all turns to the facility will be right turns as opposed to left turns.

Route 1A to Coldbrook Road is not a preferred route because it is longer (7.4 miles), it exits onto a busy road therefore having a longer transit time due to a lower speed limit (12 minutes), and trucks will not want to deal with the traffic issues of Route 1A and it many curb cuts vs. Route 202 which is a control of access roadway. Again we do not project any truck traffic to voluntarily use 1A as a route to this facility with the other options available.

PEAK HOUR TRAFFIC

The traffic volumes section of this report explained the various shifts during operation of the Proposed MSW processing facility and the numbers of employees each shift contained. Employees will create two distinct peak hour traffic movements at the proposed facility. The AM Peak hour traffic movement will occur between 6:30 AM to 7:30 AM and will consist of 38 employees entering the facility and 4 employees leaving the facility. The second peak hour traffic movement will occur between 2:30 PM and 3:30 PM and will consist of 16 employees entering the facility and 34 employees leaving the facility.

Employee traffic was distributed to the roadway system using a basic distribution model based on the populations of the neighboring towns. This population model and the included towns are included in the Appendices. The peak hour employee traffic distributions are shown on the included sheets titled AM PEAK EMPLOYEES and PM PEAK EMPLOYEES.

To determine the peak truck movements during any hour we counted the truck traffic at the existing PERC plant in Orrington to determine how arrivals and departures are distributed throughout the day. The trucks were counted from 6:00 AM until 6:15 PM on April 19th. The AM peak hour movements and PM peak hour movements were found and a percentage factor created versus the daily total number of movements. The AM factor was computed to be 0.103 and the PM factor was computed to be 0.12.

The AM and PM peak hour truck were then determined by multiplying the appropriate factor to the daily truck numbers. Doing this we assume that every truck that enters during the hour is able to leave in that same hour. The AM peak truck movements for this facility will be 19 trucks. The PM peak truck movements for the facility will be 22 trucks. These AM and PM peak truck movements were then distributed to the system based on the probable truck routes determined above. The AM and PM peak truck movements are shown on the included sheets titled AM PEAK TRUCKS and PM PEAK TRUCKS.

To determine the total passenger car equivalents (PCE) for the proposed facility in the AM and PM peak hour an addition needs to be made. The peak hour traffic generated by the employees is added to the peak hour traffic generated by the trucks multiplied by 2. For the proposed facility we get the following peak traffic movements:

AM Peak	80 PCE
PM Peak	94 PCE

These trips are distributed through the system by combining the peak hour employees with the peak hour truck movements. These diagrams titled PEAK AM PCE and PEAK PM PCE are attached.

Production facilities such as the proposed facility work in set shifts much the same way paper mills do. These shifts are set and are not affected by the needs of the public as a call center or retail establishment would be. This facility will accept incoming MSW from 6:00 AM to 6:00 PM so it is our assertion that if any shift changes do occur it will be on the MSW side of the plant and shifts for these employees will move earlier reducing the peak traffic movements to the facility and also moving them farther away from the peak hour traffic of the adjacent street.

The MSW side of the plant is the most heavily staffed area with 21 day shift employees and 16 evening employees. This staffing accounts for over half of the plant staffing on any given shift

and any change to accommodate the 6:00 AM receiving of MSW will cut the peak hour traffic to the facility by roughly half (since these employees will arrive one hour earlier than the rest of the staffing) as well as move the traffic associated with these employees to a less busy time of day on the adjacent street.

We believe that our analysis has accommodated the worst case scenario in terms of traffic movement to the proposed plant by bringing all employees to the plant during a 7:00 AM and 3:00 PM shift change. These shifts are known and highly unlikely to change based on its similarity to other production type facilities.

The traffic study was completed assuming that all employees begin their day at 7:00 AM. As stated above most likely the MSW side of the plant will be required to begin work at 6:00 AM to accommodate the needs of the contract.

OTHER DEVELOPMENT VOLUMES

Inquiries have been made to the Town of Hampden and to the MaineDOT concerning potential developments that have been approved or are seeking approval in the area of the proposed facility. According to both sources there are no potential developments within the study area.

SAFETY ANALYSIS

The access road to the facility will intersect with the Coldbrook Road directly across from the HO Bouchard truck facility entrance. This location provides safe access to the Coldbrook Road and is located to eliminate potential conflict points with the existing entrance across the Coldbrook Road.

The Coldbrook Road is a 2-lane roadway with 12-foot travel lanes and 10-foot paved shoulders designed to move trucks between US Route 202 and Interstate 95 at exit 180. Sight distance along the Coldbrook Road is very good and provides safe access for all vehicles.

A Maine Department of Transportation inventory and analysis of traffic crashes is included for the entire Coldbrook Road corridor from the southbound off-ramp of Interstate 95 to the intersection of US Route 202. Analysis of this report shows that there are no locations along that corridor, including the intersections, which are classified as High Crash Locations (HCL) as defined by MaineDOT. An HCL is defined as any roadway segment or intersection with more than 8 crashes in any 3-year period and has a Critical Rate Factor greater than 1.0.

Analysis of the data shows that the Coldbrook Road and the related intersections are very safe. The average number of crashes on any roadway segment along Coldbrook Road ranges from 0-4 in the latest 3-year period. The intersections show similar numbers except for the intersection of Coldbrook Road and US Route 202.

This intersection of Coldbrook Road and US Route 202 shows 11 crashes in the latest 3-year period but does not have a Critical Rate Factor greater than 1.0 and therefore it is not defined as an HCL. Analysis of the crash reports show that there are no identifiable safety issues with this intersection. The crashes were broken down as follows; 6 red light running crashes, 4 rear end crashes, and 1 failure to yield crash. This type of crash history shows that there are no safety design issues with the intersection itself.

An inventory and analysis of traffic crashes is also included for the following roadways:

1) US Route 202 from I-395 to the intersection of Western Avenue; and

2) Western Avenue from the intersection with US Route 202 to Main Street.

Analysis of this data also shows that there are no defined HCL's on these roadways. There were 5 locations that stood out as having a higher number of crashes than the surrounding area. We obtained the crash reports from Maine DOT to determine if there were any safety issues with these five locations. The five locations are as follows.

1) Intersection of Coldbrook Road and US Route 202. There were eleven crashes there as mentioned above. There is no indication of unsafe conditions at this intersection.

2) Intersection of Main Road and Western Avenue. There were 7 crashes at this intersection consisting of 2 rear end collisions, 3 failure to yield crashes, 1 incorrect lane change, and 1 truck crossing lanes during a right turn. This crash history suggests that there are no significant safety issues with this intersection.

3) The section of Route 202 from Crosby Way to Main Trail. There were 14 crashes on this section of Route 202. Thirteen of the crashes were deer hits and there was one other crash associated with poor roadway conditions. There are no correctable safety issues with this section of roadway other then reducing the deer population.

4) Intersection of US Route 202 and Western Avenue. This intersection had the most crashes at 18 and all but one were rear-end collisions which is not a sign of safety issues but driver inattention. The other crash at this location occurred due to poor road conditions.

A thorough review of the crash reports was conducted and is summarized below:

Crash 1	#2013-3268 Rear End Collision with a stopped vehicle on US Route 202 Reason Cited – Following too closely
Crash 2	#2013-12569 Rear End Collision on US Route 202 Reason Cited – Driver Error with clutch
Crash 3	#2013-33075 Rear End Collision on US Route 202 Reason Cited – Following too closely
Crash 4	#2014-15294 Rear End Collision on US Route 202 Reason Cited – Distracted Driver w/electronic device (summons)
Crash 5	#2014-15666 Rear End Collision with a stopped vehicle on US Route 202 Reason Cited – Following too closely
Crash 6	#2014-27957 Rear End Collision with a stopped vehicle on US Route 202 Reason Cited – Following too closely
Crash 7	#2014-29449 Rear End Collision on US Route 202 Reason Cited – Distracted Driver
Crash 8	#2015-6571 Rear End Collision with a stopped vehicle on US Route 202 Reason Cited – None (Late Report)

Crash 9	#2015-8593 Rear End Collision on US Route 202 Reason – Right turn vehicle had to stop for oncoming traffic and was rear ended
Crash 10	#2015-12022 Rear End Collision on US Route 202 Reason Cited – Distracted Driver
Crash 11	#2013-5080 Rear End Collision with a stopped vehicle on Western Ave (snow) Reason Cited – Driving too fast for conditions
Crash 12	#2013-36003 Rear End Collision on Western Ave (snow) Reason Cited – Following too closely
Crash 13	#2014-2621 Rear End Collision with a stopped vehicle on Western Ave Reason Cited – Distracted Driver
Crash 14	#2014-5171 Rear End Collision with a stopped vehicle on Western Ave Reason Cited – None (Left the Scene)
Crash 15	#2014-17474 Rear End Collision with a stopped vehicle on Western Ave Reason Cited – Operating in a careless, negligent, or aggressive manner
Crash 16	#2014-24389 Rear End Collision with a stopped vehicle on Western Ave Reason Cited – Driver thought light turned green
Crash 17	#2014-25845 Rear End Collision on Western Ave Reason Cited – Distracted Driver
Crash 18	#2015-40311 Rear End Collision with a stopped vehicle on Western Ave Reason Cited – Driver thought traffic had started moving

From the compilation above it can be seen that clearly 9 of the crashes are due in large part to some form of driver error or inattention (crashes #2, 4, 7, 10, 13, 15, 16, 17, and 18) and two crashes can in some way be attributed to road conditions (crashes #11 and 12). Removing these obvious driver error and weather related crashes from the total leave 7 crashes that may or may not be attributed to deficiencies in signal timing.

It is our opinion that 7 rear end type crashes at a signalized intersection that accommodates this volume of traffic is typical of many similar signalized intersections. Rear end type crashes are typically the trade-off you make for the increased capacity of the signal.

5) The intersection of US Route 202 and the Mecaw Road had a total of 6 crashes. Five of the 6 crashes were the result of failure to yield right-of-way. The other crash at this location was the result of improper passing on the right.

The data shows the roadways around the proposed MSW processing facility are safe and can safely handle the increase in traffic associated with the facility.

SIGHT DISTANCE

The proposed access road will be located onto the Coldbrook Road directly across the road from the HO Bouchard truck terminal. The sight distance to the left is more than 2,000 feet in this direction. The sight distance to the right is 740 feet in this direction. These sight distances exceed the requirements for a Maine Department of Transportation Entrance Permit which, as noted above, has been issued for the access road. The existing sight distance will thus provide safe and efficient access to the Coldbrook Road.

CAPACITY ANALYSIS

Capacity analyses were conducted for intersections where the peak lane movements were greater than 25 PCE for left turns or a combination of left turns and through movements. This criterion was met at the proposed access road to the facility and at the southbound ramps at the intersection with I-95. Future and full build analyses were conducted at the proposed access road. Existing conditions, future no build conditions, and full build conditions were analyzed for the SB ramps. All analyses were conducted using Trafficware's Synchro 6 traffic capacity software.

Capacity analyses for existing conditions were completed using traffic volumes factored to the 30th highest hour. Analyses for future no-build conditions were completed using the 30th highest traffic volumes increased by 2% per year for the 2 years until the beginning of operations in 2018. Full build conditions were analyzed by adding the expected facility traffic to the future traffic volumes.

Level of service rankings are assigned to each intersection movement based on the control delay per vehicle. The letter rankings are similar to academic rankings where an 'A' is very good with little delay and an 'F' represents poor conditions with excessive delay. If an unsignalized intersection falls below a 'D' then traffic signal warrants should be evaluated to determine whether a traffic signal is needed.

Control delay is computed using the peak 15 minute period of the peak hour. This ensures that the absolute worst conditions are modeled for an intersection. When the peak hour is looked at as a whole the average control delay decreases to a delay much closer to the threshold levels of LOS "F".

The relationship between delay and the level of service is given in the table below for unsignalized intersections.

Level of Service Criteria (Unsignalized Intersections)

Level of Service	Control Delay/Vehicle (sec)
A	Less than 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Over 50.0

The intersection created by the new access road was analyzed for future no-build and full build conditions. Existing conditions were not analyzed because there are no apparent issues with the HO Bouchard entrance. The capacity analysis for the new intersection is summarized in the table below:

Movement	AM Future No Build	AM Future Full Build	PM Future No Build	PM Future Full Build
NB Coldbrook	A (0.3)	A (0.0.3)	A (0.1)	A (0.1)
SB Coldbrook	A (0.0)	A (1.6)	A (0.0)	A (1.0)
HO Bouchard	B (11.8)	B (14.6)	B (13.5)	C (16.2)
Access Road	NA	B(13.1)	NA	C (16.3)

(Control Delay in seconds)

As the summary above shows there are no capacity concerns during the AM or PM peak hour at the proposed access road.

As part of the capacity analysis for the proposed access road, left and right-turn lane warrants were investigated for Coldbrook Road. These diagrams (attached) show that a left-turn lane is not warranted for Coldbrook Road.

The intersection of Coldbrook Road and the I-95 southbound and northbound ramps are the only other intersection which approaches the 25 PCE thresholds and was analyzed for the facilities peak hour of traffic movement. This intersection was analyzed for existing, future no-build, and full build-out conditions. The results are summarized below for the AM and PM peak hours.

Intersection of Coldbrook and I-95 SB Ramps
AM Peak Hour

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (2.0)	A (2.1)	A (2.2)
SB Coldbrook	A (0.0)	A (0.0)	A (0.1)
I95 Off-ramp LT	D (29.8)	E (35.7)	E (47.7)

(Control Delay in seconds)

Intersection of Coldbrook and I-95 SB Ramps
PM Peak Hour

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (1.4)	A (1.4)	A (1.5)
SB Coldbrook	A (0.0)	A (0.0)	A (0.0)
I95 Off-ramp LT	E (45.8)	F (58.6)	F (73.5)

(Control Delay in seconds)

It needs to be noted that analyses of these types are heavily influenced by the peak 15 minute traffic volumes. In the situation of the PM peak hour the counted 15 minute volumes for the left out of the I-95 SB ramp were 51, 53, 38, and 83 vehicles. A large peak during any given 15 minute period (such as the 83 counted) will amplify the traffic volumes used during analysis and create a higher control delay. If the intersection movements have traffic volume spikes during different 15 minute periods during the count these movements also get amplified during the analysis. For example, if the identical traffic volumes are used for the full buildout PM peak and are relatively spread out over the hour long period of consideration, then the PM peak control delay for the left turn off from the I-95 SB ramp is computed to be 26.4 seconds for a LOS of D. This indicates that the intersection can and does move the traffic volumes through the intersection during any given hour.

The table below shows the 15 minute time periods for the PM 2:30-3:30 time period at the SB ramps. We have analyzed each 15-minute period as if all of the facility traffic occurred within that 15 minute period. This will not be the case but it will be a conservative view of what happens during each 15 minute time period.

Intersection of Coldbrook and I-95 SB Ramps
PM Peak Hour (15 minute intervals)
SB Ramp Left-Turn

Time	Full Build
2:30-2:45	C (19.0)
2:45-3:00	C (16.7)
3:00-3:15	C (15.1)
3:15-3:30	F (71.7)

(Control Delay in seconds)

The second reason to look closely at what is happening to this intersection is that capacity issues as seen in this analysis usually manifest themselves as safety issues and higher crash rates due to the overcapacity issues. The crash summary indicates that there are not a large number of crashes at this intersection and it is not considered a High Crash Location by the MaineDOT.

We believe that the high control delay numbers are a product of 15 minute peaks that do not coincide with the peak volumes expected at the facility. The one day count showed a peak movement (83 left-turns) during the 3:15 to 3:30 period which significantly skewed the total 1-hour count of left-movements out of the SB off-ramp used in the analysis.

It should be noted that this intersection is in the Town of Herman and we have contacted the MaineDOT concerning this issue. We are working with MaineDOT to determine whether this is an issue or not and what the solution will be.

The intersection of the NB Ramps were analyzed to determine if the newly added thru traffic from the SB off-ramp would affect the capacity of the NB ramps. The results of the analysis are summarized in the tables below.

Intersection of Coldbrook and I-95 NB Ramps
AM Peak Hour

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (0.0)	A (0.0)	A (0.0)
SB Coldbrook	A (5.9)	A (6.0)	A (5.9)
I95 NB Off-ramp	C (17.5)	C (18.2)	C (19.0)

(Control Delay in seconds)

Intersection of Coldbrook and I-95 NB Ramps
PM Peak Hour

Movement	Existing	Future No Build	Full Build
NB Coldbrook	A (0.0)	A (0.0)	A (0.0)
SB Coldbrook	A (4.1)	A (4.1)	A (4.1)
I95 NB Off-ramp	C (16.7)	C (17.5)	C (18.3)

(Control Delay in seconds)

The tables above show that the northbound I-95 ramps show very little change in control delay due to the increased traffic volumes from the facility. We believe that the northbound ramps provide more than adequate capacity to handle the traffic generated by the proposed facility.

SUMMARY

Based on the above information and previous information provided, the project has been designed to provide adequate provisions for safe and uncongested traffic movement into, out of, and within the proposed facility for the estimated peak day traffic volume of 348 vehicle trips/day.

The estimated peak daily traffic volume will be spread out throughout the entire day and will not create a congestion issue during either of the typical AM or PM peak hours on Coldbrook Road or the closest intersections that does not already exist. The left turn out of the I-95 SB off-ramp presently operates at a computed LOS D for existing, and a LOS E for the future no-build, and future full-build AM conditions. The left turn out of the I-95 SB off-ramp presently operates at a computed LOS E for existing, and a LOS F for the future no-build, and future full-build PM conditions. We believe that these Levels of Service are skewed because of a peak 15 minute period and that while there are times where there will be a control delay of 1 minute or slightly more the situation clears itself relatively quickly. We are working with MaineDOT to provide a striping solution to the SB off-ramp which will help alleviate the congestion.

The I-95 NB ramps show ample capacity to handle the increased traffic generated by the proposed facility. No changes will be required to these intersections.

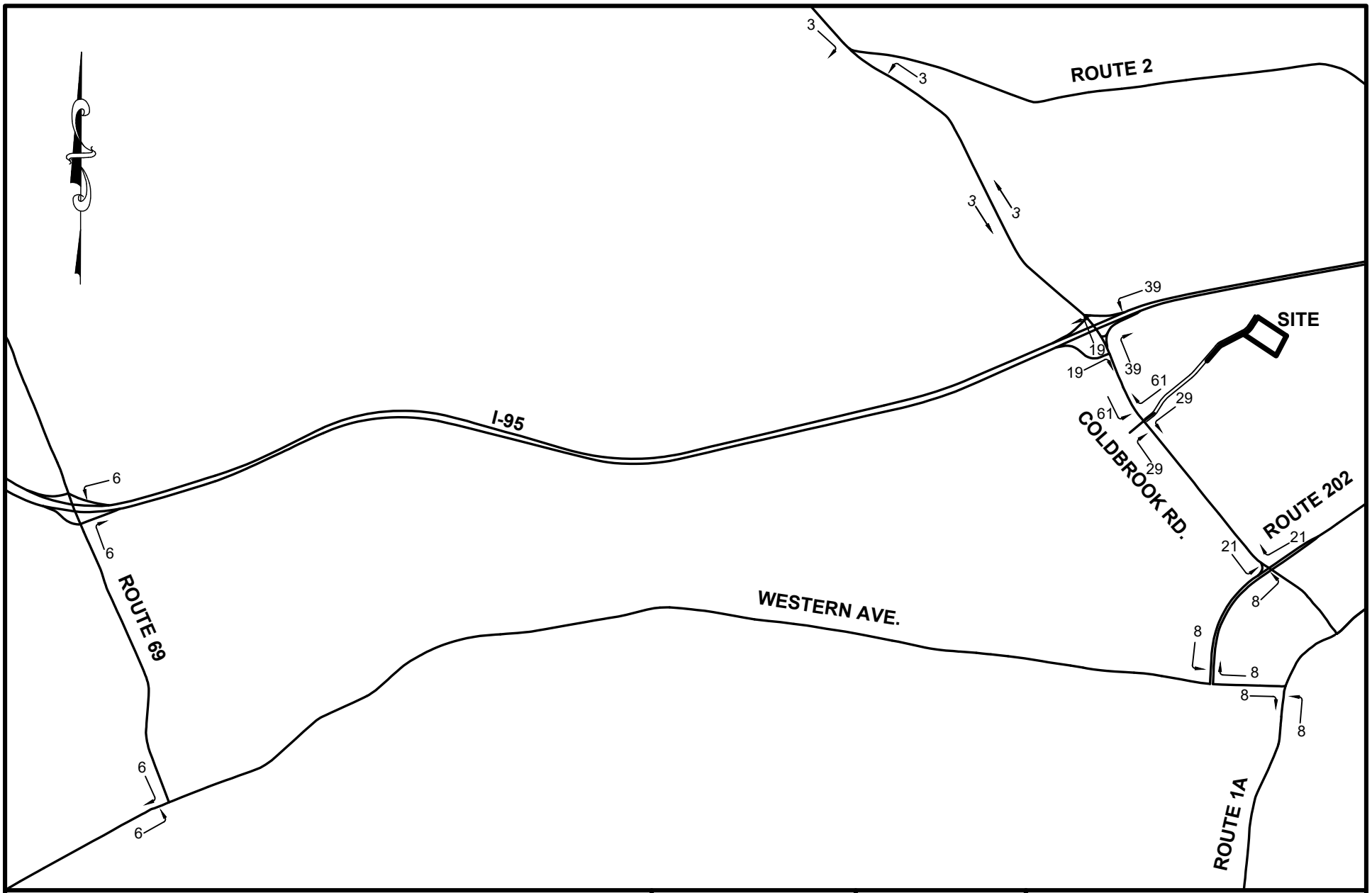
The Coldbrook Road and its intersections with US Route 202 and Interstate I-95 are designed for the largest trucks expected at the proposed facility and the crash data supports that there are no safety issues along this corridor.

There is no indication that any vehicles connected with this facility will use the intersection of US Route 1A and Coldbrook Road. All indications based on Google Earth and GPS data indicate that all of the traffic from the north of the facility will use I-395 to US Route 202 to access the facility.

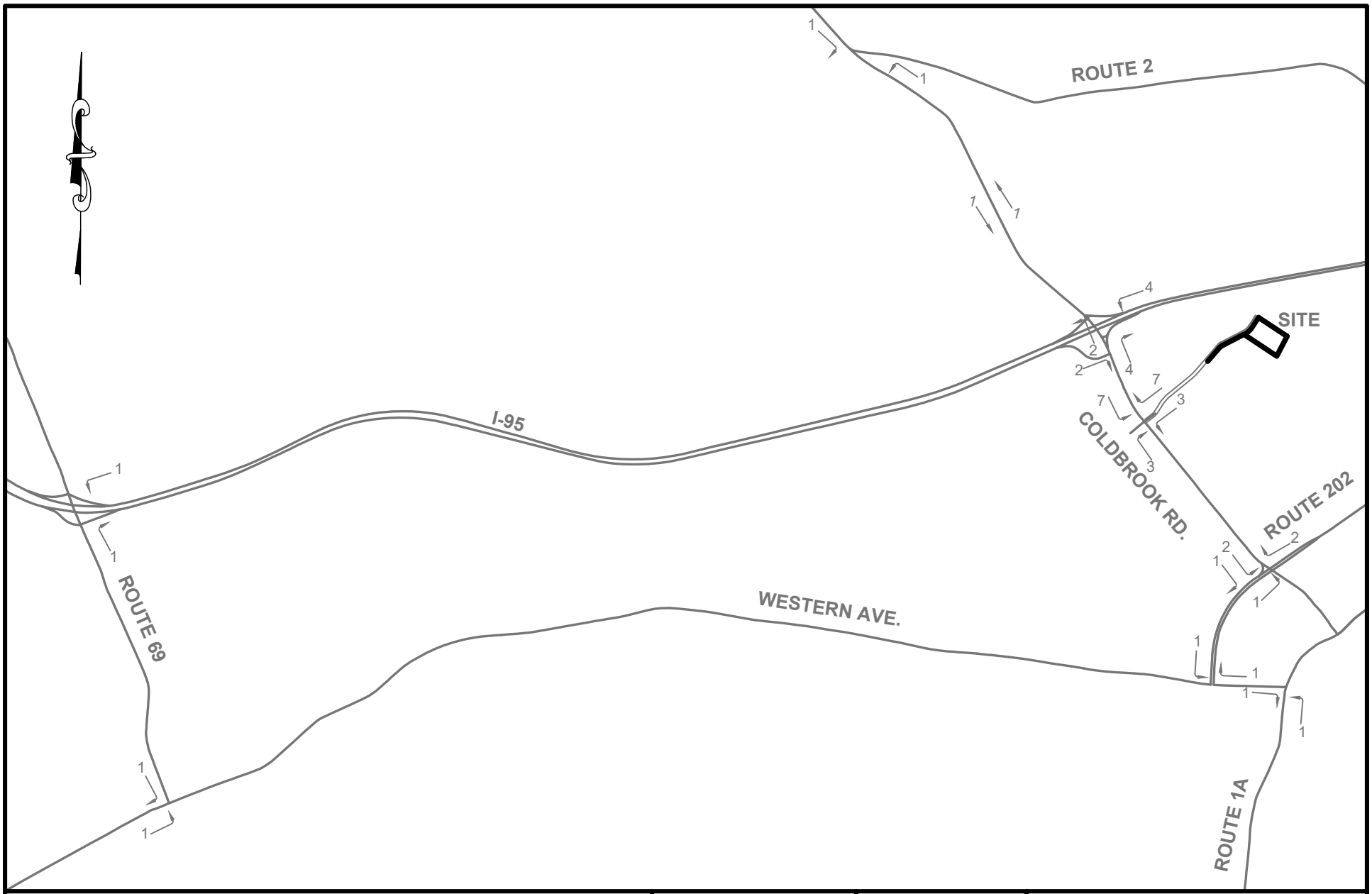
The entrance onto Coldbrook Road and the interior road network have been designed with adequate sight distance and provide for safe traffic movements. The proposed entrance with Coldbrook Road will provide ample capacity to handle the traffic generated by the proposed facility.

STATE OF MAINE
VICTOR J. SMITH
No. 8604
LICENSED
PROFESSIONAL ENGINEER

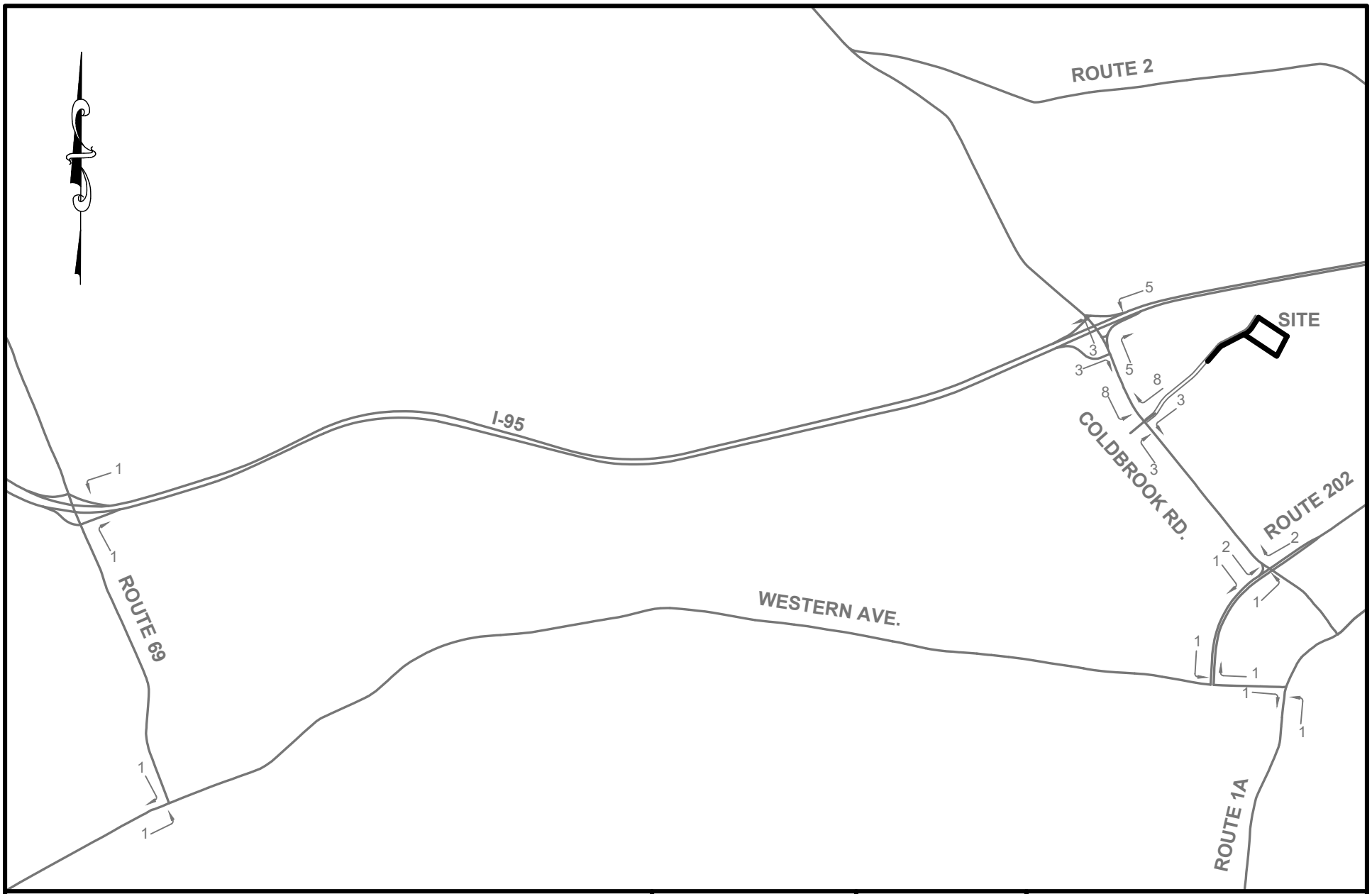
5/25/16



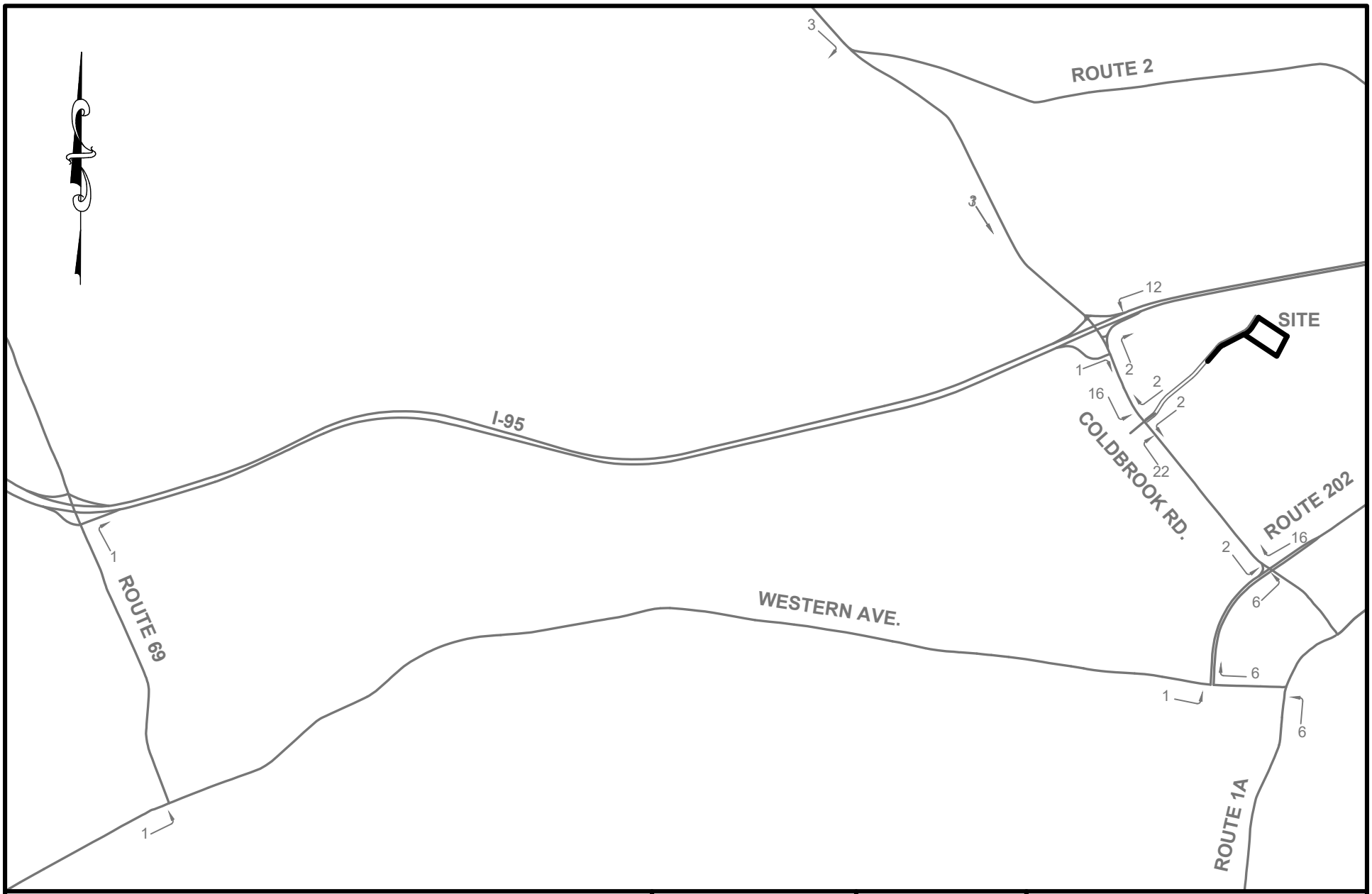
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK101**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **DAILY TRUCKS**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



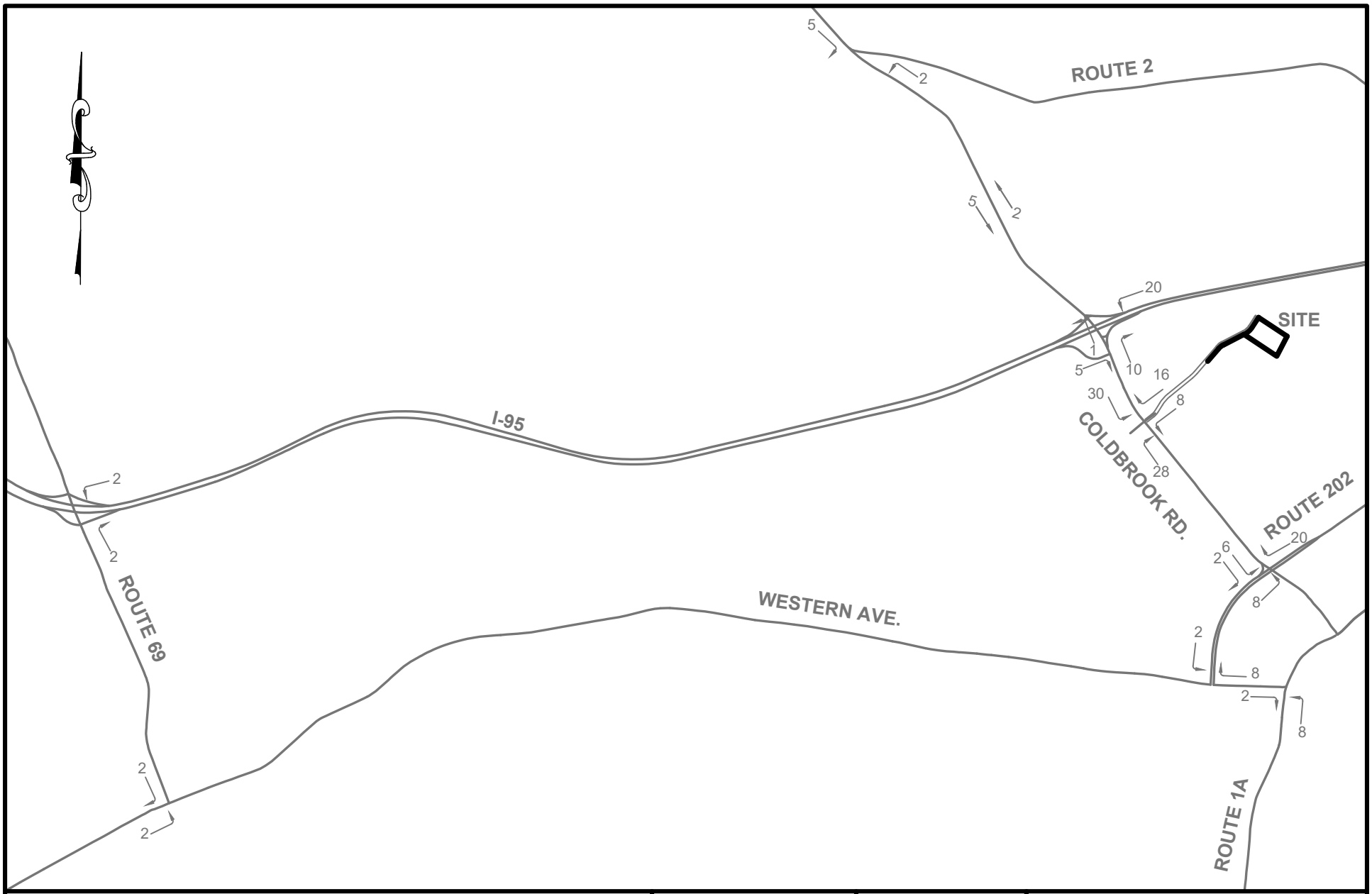
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK102**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **AM PEAK TRUCKS**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



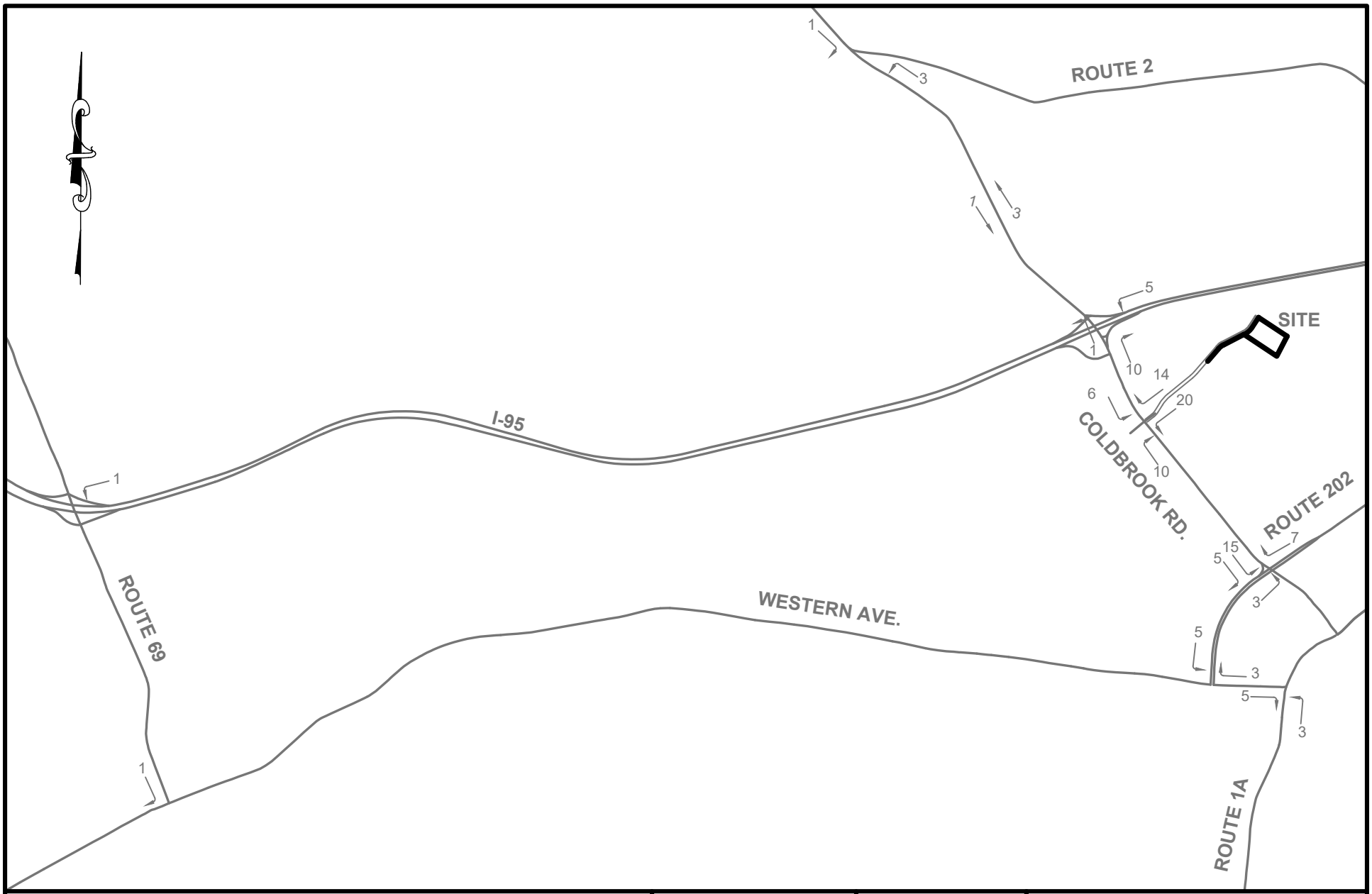
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK103**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **PM PEAK TRUCKS**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



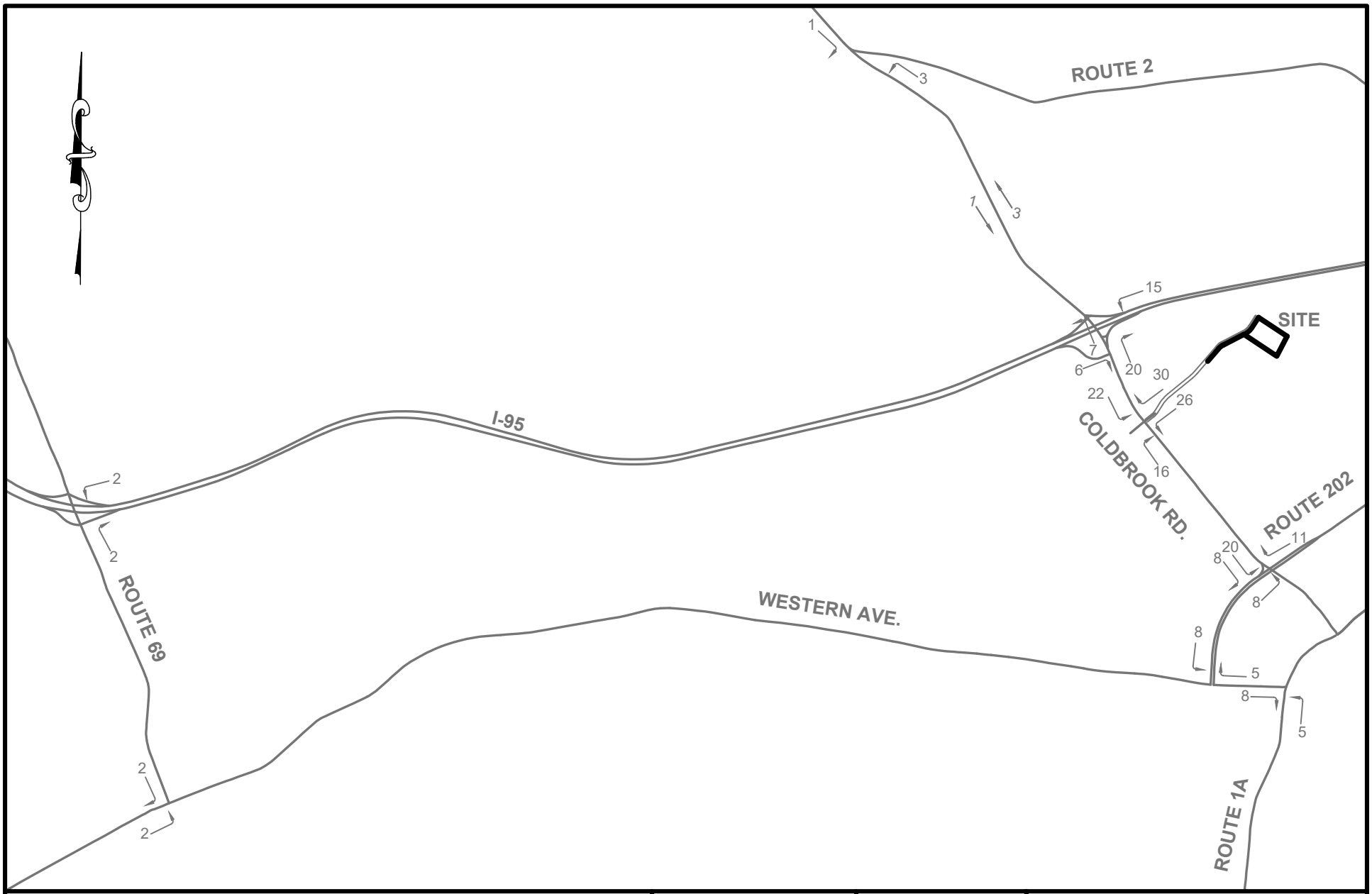
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK104**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **AM PEAK EMPLOYEES**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



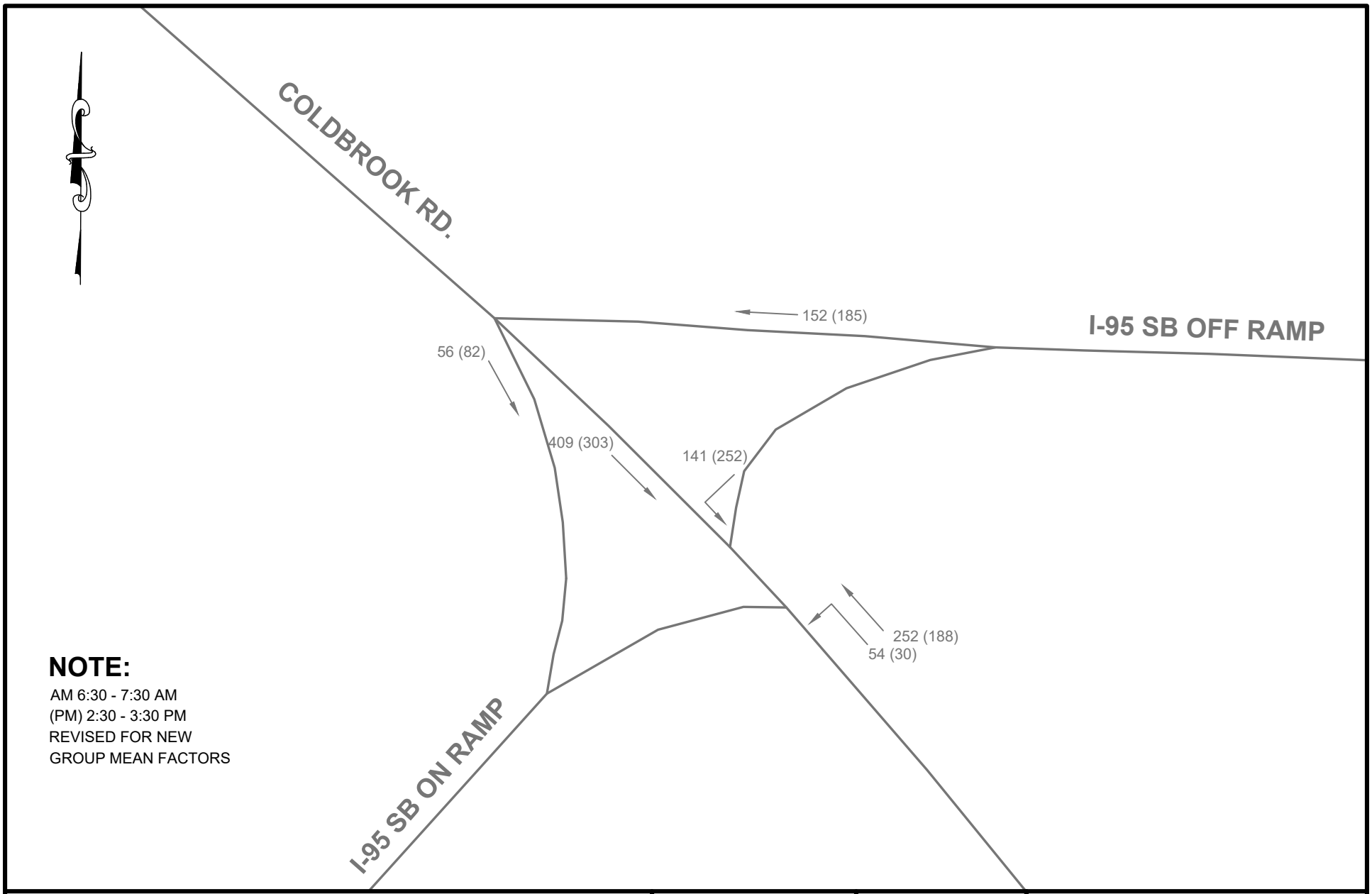
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK105**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **AM PEAK PCE**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK106**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **PM PEAK EMPLOYEES**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



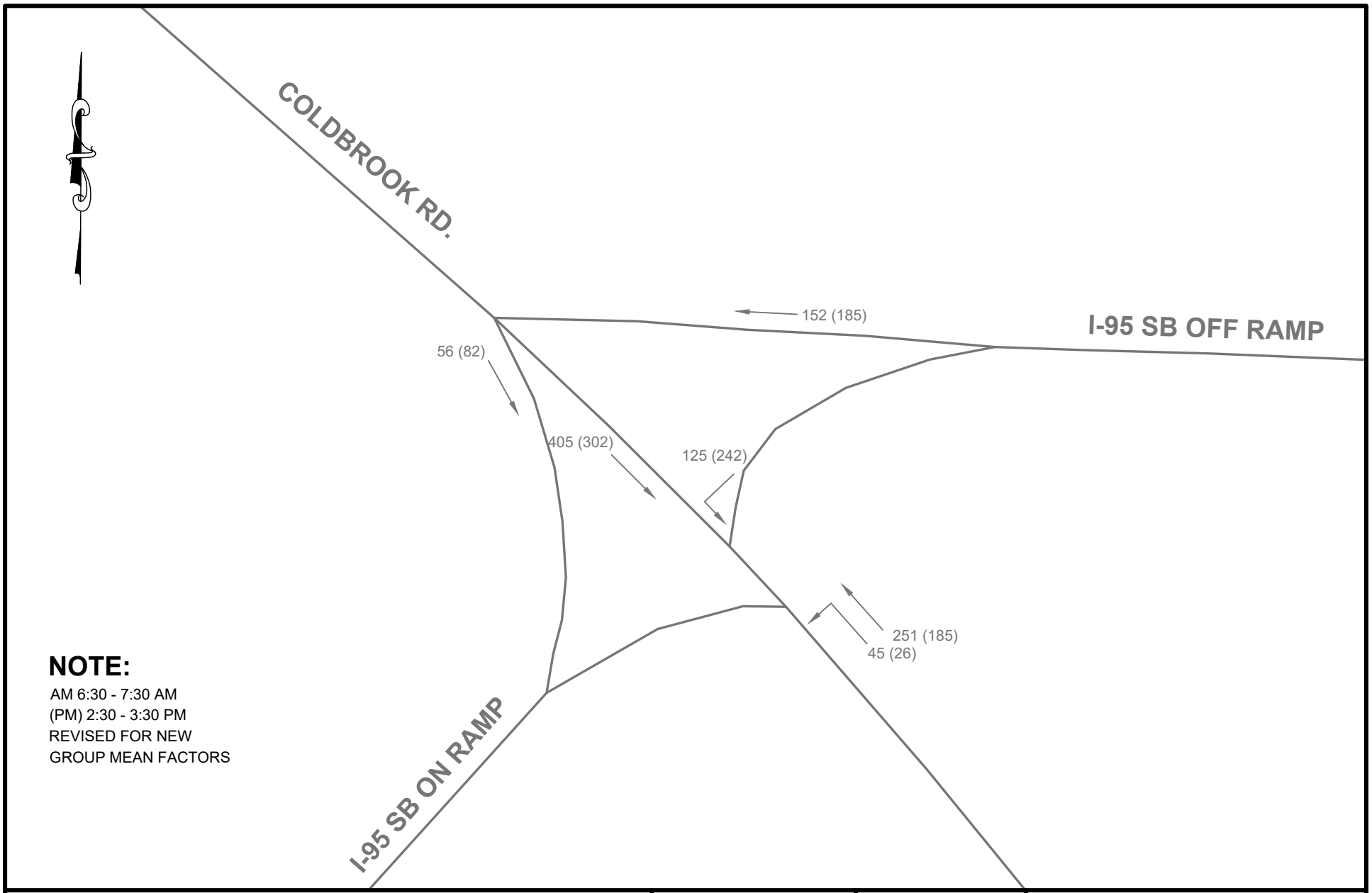
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK107**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **PM PEAK PCE**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

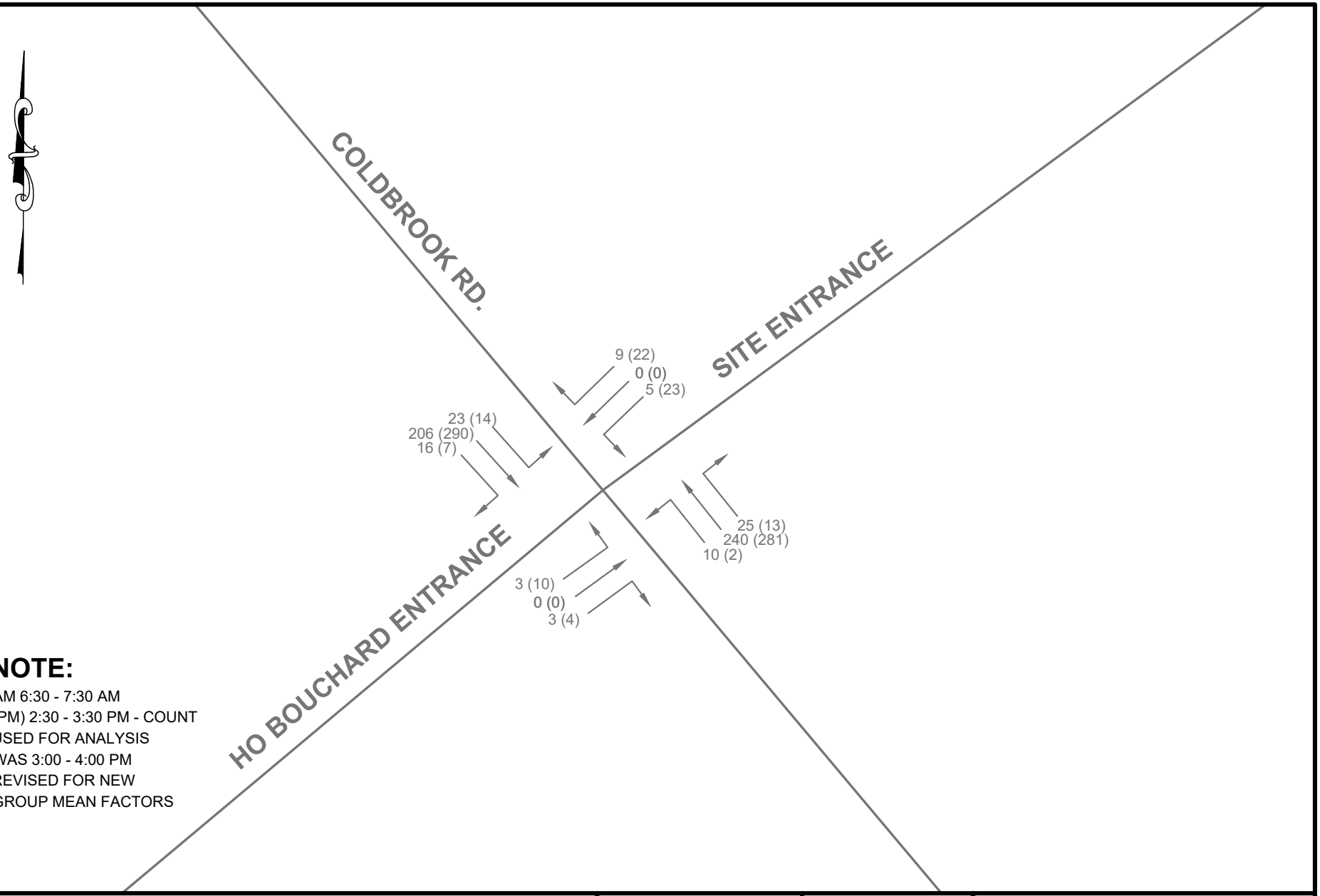
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK108**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS FUTURE TRAFFIC (2018) FULL BUILDOUT**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

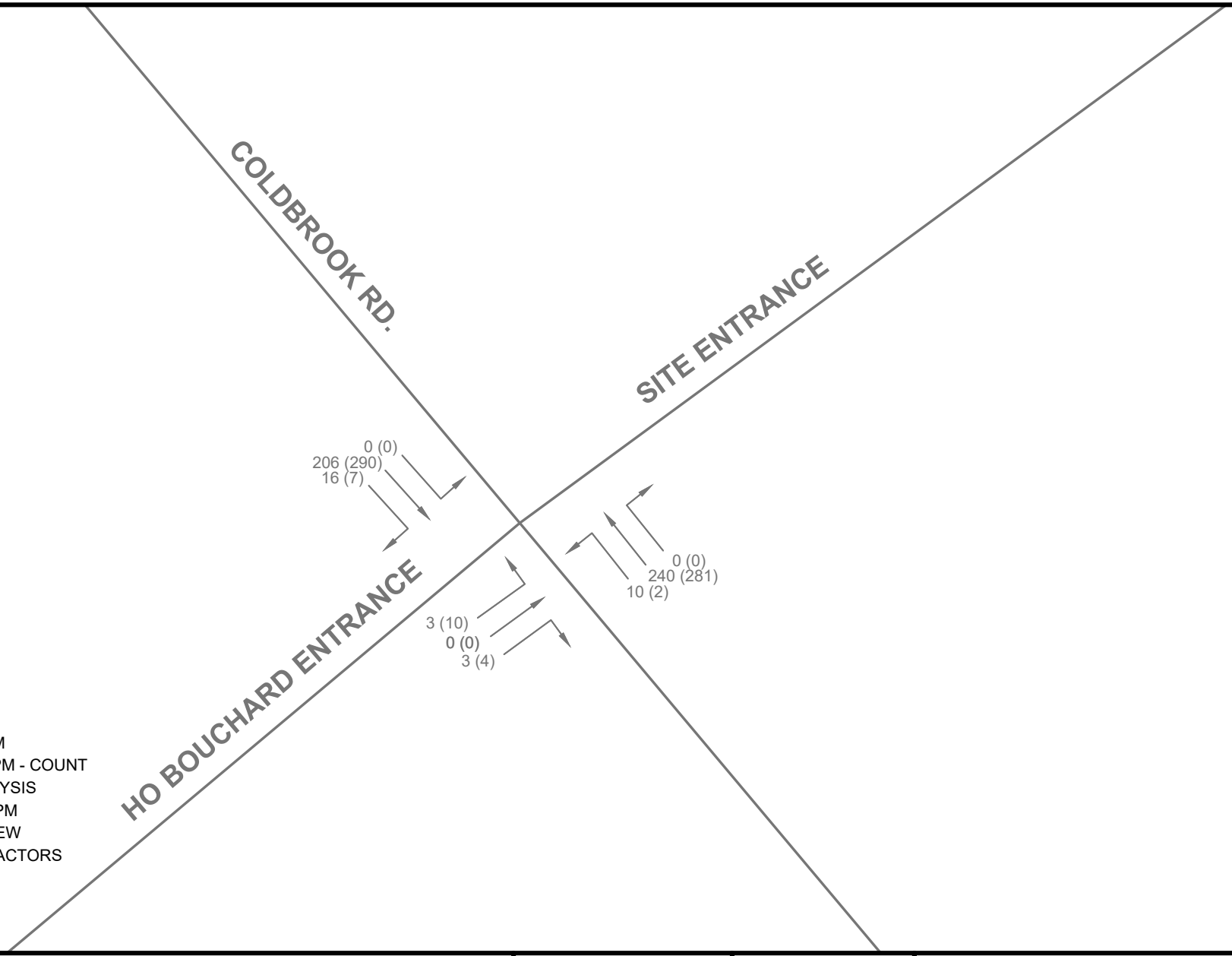
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK109**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS FUTURE TRAFFIC (2018) NO BUILD**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM - COUNT
USED FOR ANALYSIS
WAS 3:00 - 4:00 PM
REVISED FOR NEW
GROUP MEAN FACTORS

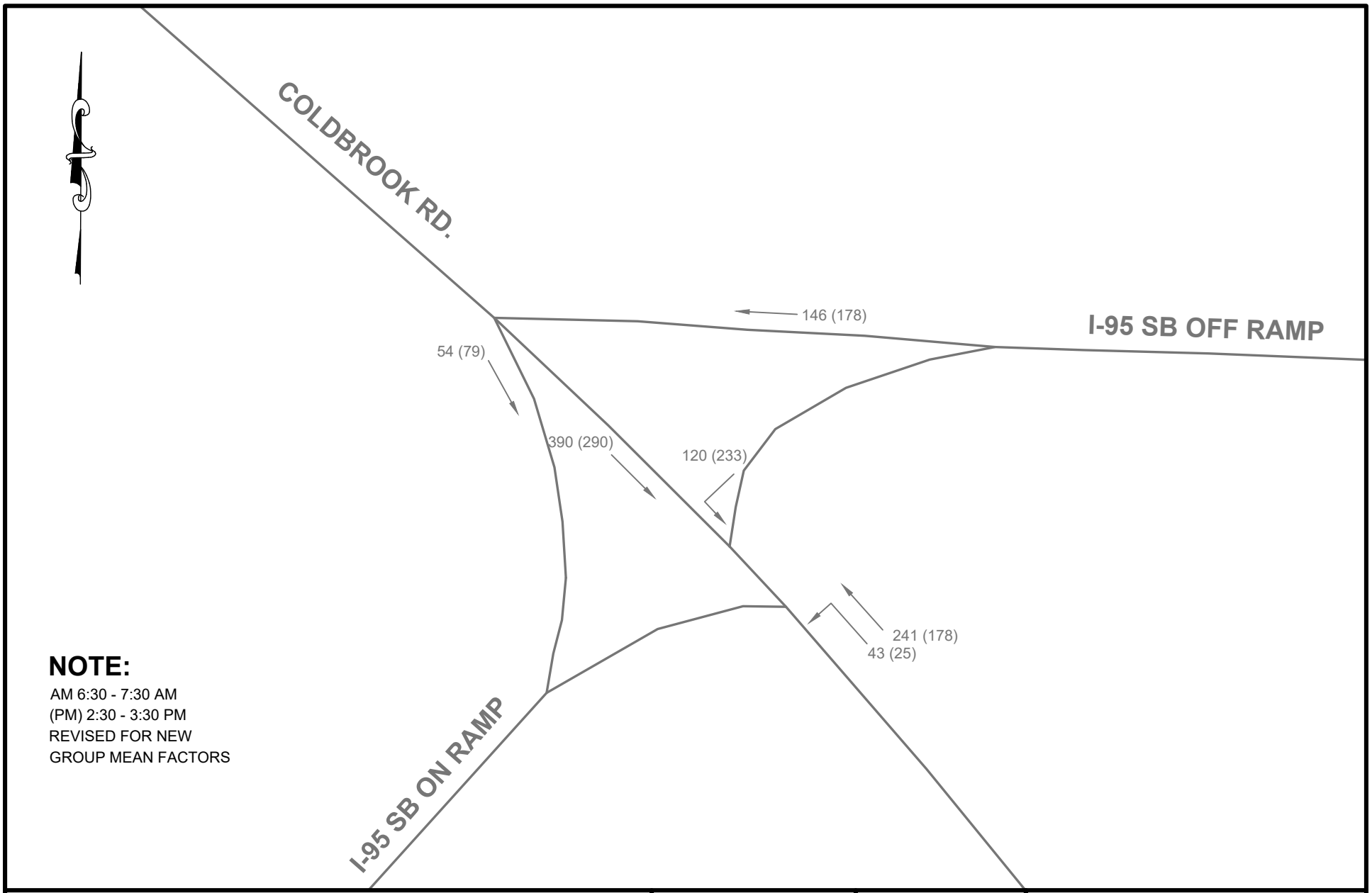
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK110**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **FUTURE TRAFFIC (2018) FULL BUILDOUT**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM - COUNT
USED FOR ANALYSIS
WAS 3:00 - 4:00 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK111**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **FUTURE TRAFFIC (2018) NO BUILD**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK112**	BY: BTH	CES INC Engineers ▪ Environmental Scientists ▪ Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS EXISTING TRAFFIC**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	

Traffic Counts (morning)

Date: 4-21-2016

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
6:00	17/2	0/1	12/3	0/0	0/1	0/0
6:15	15/6	3/0	31/2	2/0	0/3	0/1
6:30	17/4	4/0	35/4	2/0	0/1	0/0
6:45	44/4	5/0	60/5	0/0	1/0	1/0
7:00	48/11	2/0	48/3	5/0	0/0	1/1
7:15	49/7	3/0	50/9	2/0	1/0	0/0

	SB CB Thru	SB CB RT.	NB CB Thru	NB CB Left	HOB RT	HOB Left
7:30	44/10	1/0	68/9	2/0	1/0	0/0
7:45	52/11	1/0	76/9	1/0	0/0	0/0
8:00	46/9	0/0	52/8	0/0	0/0	0/0
8:15	30/9	1/0	40/2	0/0	0/0	1/0
8:30	28/5	0/0	46/7	1/0	0/0	0/0
8:45	34/6	1/0	42/4	1/0	0/0	1/0

NOTES:

Checkmark for a passenger vehicle-group by 5
T for truck
NB Coldbrook is traffic heading towards the interstate

Traffic Counts (afternoon) Date: 4-21-16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
15:00	57/7	3/0	62/8	0/0	2/0	3/0
15:15	51/2	1/0	43/8	0/2	0/0	1/0
15:30	59/10	1/0	52/10	0/0	1/1	2/0
15:45	68/4	0/1	55/12	0/0	0/0	3/0
16:00	66/3	0/0	48/7	1/0	2/0	2/0
16:15	75/3	1/0	44/3	1/0	1/0	3/0

	SB	SB CB RT	NB	NB CB LT	HOB(R)	HOB(L)
16:30	72/3	2/1	55/7	0/0	0/0	5/0
16:45	84/5	0/1	45/5	0/0	1/0	2/0
17:00	92/4	2/0	90/7	0/0	2/0	16/0
17:15	92/1	0/0	54/5	0/0	1/0	1/0
17:30	60/4	0/0	45/1	0/0	0/0	1/0
17:45	56/1	2/0	49/5	0/0	0/0	0/0

NOTES:

Checkmark for a passenger vehicle-group by 5
T for truck
NB Coldbrook is traffic heading towards the interstate

Traffic Counts (morning)

Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	45/10	7/4	23/9	7	13/1	26/2
6:30	62/12	3/4	27/12	6/1	21/1	19/2
6:45	73/8	7/13	62/5	10/0	25/0	45/7

4/27/16

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	OFFRAMP ~~HOB~~ Right	OFFRAMP ~~HOB~~ Left
7:00	74/15	8/8	49/14	13/1	33/5	31/2
7:15	125/8	4/5	53/11	11/0	32/3	34/2
7:30	127/13	9/14	48/8	10/1	31/9	31/2
7:45	105/15	9/7	56/12	7/2	36/8	34/1

4/27/16

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	OFFRAMP ~~HOB~~ Right	OFFRAMP ~~HOB~~ Left
8:00	90/29	7/16	32/12	9/1	27/5	15/1
8:15	72/25	11/12	30/17	9/2	35/5	26/1
8:30	68/15	5/9	30/13	10/1	24/11	18/1
8:45	70/14	4/7	30/15	3/0	26/12	18/1

Traffic Counts (Afternoon)

Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	70/9	7/8	28/11	6/0	51/0	38/8
14:45	57/8	8/11	27/9	3/0	51/2	25/11
15:00	63/11	6/14	30/9	5/1	36/2	34/15
15:15	57/6	9/13	41/17	8/1	80/3	34/7

4/27/16

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	OFFRAMP ~~HOB~~ Right	OFFRAMP ~~HOB~~ Left
15:30	84/15	11/7	30/13	4/1	46/7	45/6
15:45	48/7	16/8	24/9	6/2	47/14	67/2
16:00	66/3	16/7	37/14	12/1	48/13	55/0
16:15	63/4	12/12	31/8	10/0	58/15	75/1

Traffic Counts (morning)

Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	28/4	35/2	22/7	41/2	26/2	10/0
6:45	36/5	43/10	20/2	27/1	27/4	6/0
7:00	46/3	62/8	20/8	38/1	19/5	13/0
7:15	58/7	80/5	36/2	56/1	22/4	11/1

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
7:30	48/2	81/16	43/9	66/0	28/4	14/1
7:45	50/8	80/9	33/7	81/0	30/7	11/1
8:00	30/7	42/11	30/12	43/1	19/6	10/2
8:15	39/10	56/21	23/9	39/1	18/7	6/3

Traffic Counts (Afternoon)

Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
14:30	52/3	42/8	34/7	27/1	11/7	5/2
14:45	67/5	33/2	28/6	42/1	5/6	6/0
15:00	69/6	34/5	25/4	37/1	9/4	5/1
15:15	81/4	37/4	24/3	26/1	6/8	4/1

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	~~HOB~~ NB OFFRAMP Right	~~HOB~~ NB OFFRAMP Left
15:30	94/3	54/6	33/7	31/3	5/0	9/7
15:45	82/5	50/6	28/1	31/1	4/1	9/16
16:00	92/3	38/1	44/3	34/2	14/0	10/8
16:15	65/2	46/2	27/3	29	13/0	11/10

Traffic Counts (AM) Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
6:00	19	1	15	0	1	0
6:15	21	3	33	2	3	1
6:30	21	4	39	2	1	0
6:45	48	5	65	0	1	1
7:00	59	2	51	5	0	2
7:15	56	3	59	2	1	0
7:30	54	1	97	2	1	0
7:45	63	1	85	1	0	0
8:00	55	0	60	0	0	0
8:15	39	1	42	0	0	1
8:30	33	0	53	1	0	0
8:45	40	1	46	1	0	1

NOTES:

NB Coldbrook is traffic heading towards the interstate

6:30 - 7:30 Peak Flows to the MSW Processing Facility

184	14	214	9	3	3

Traffic Counts (AM) Factored Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
6:00	20	1	16	0	1	0
6:15	23	3	36	2	3	1
6:30	23	4	42	2	1	0
6:45	52	5	70	0	1	1
7:00	64	2	55	5	0	2
7:15	60	3	64	2	1	0
7:30	58	1	105	2	1	0
7:45	68	1	92	1	0	0
8:00	59	0	65	0	0	0
8:15	42	1	45	0	0	1
8:30	36	0	57	1	0	0
8:45	43	1	50	1	0	1

NOTES:

NB Coldbrook is traffic heading towards the interstate

30th Highest hour factor (Group 1) 0.96/ 0.89= 1.07865

6:30 - 7:30 Peak Flows to the MSW Processing Facility

198	15	231	10	3	3

Traffic Counts (AM) Future Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
6:00	21	1	17	0	1	0
6:15	24	3	37	2	3	1
6:30	24	4	44	2	1	0
6:45	54	6	73	0	1	1
7:00	66	2	57	6	0	2
7:15	63	3	66	2	1	0
7:30	61	1	109	2	1	0
7:45	71	1	95	1	0	0
8:00	62	0	67	0	0	0
8:15	44	1	47	0	0	1
8:30	37	0	59	1	0	0
8:45	45	1	52	1	0	1

NOTES:

NB Coldbrook is traffic heading towards the interstate

Future Growth (2%/year) Factor 1.0404
Build out 2018

6:30 - 7:30 Peak Flows to the MSW Processing Facility

206	16	240	10	3	3

Traffic Counts (PM)

Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
15:00	64	3	70	0	2	3
15:15	53	1	51	2	0	1
15:30	69	1	62	0	2	2
15:45	72	1	67	0	0	3
16:00	69	0	55	1	2	2
16:15	78	1	47	1	1	3
16:30	75	3	62	0	0	5
16:45	89	1	50	0	1	2
17:00	96	2	97	0	2	16
17:15	93	0	59	0	1	1
17:30	64	0	46	0	0	1
17:45	57	2	54	0	0	0

NOTES:

NB Coldbrook is traffic heading towards the interstate

3:00-4:00 PM Peak (MSW Processing Facility Peak occurs between 2:30 - 3:30)

258	6	250	2	4	9

Traffic Counts (PM) Factored Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
15:00	69	3	76	0	2	3
15:15	57	1	55	2	0	1
15:30	74	1	67	0	2	2
15:45	78	1	72	0	0	3
16:00	74	0	59	1	2	2
16:15	84	1	51	1	1	3
16:30	81	3	67	0	0	5
16:45	96	1	54	0	1	2
17:00	104	2	105	0	2	17
17:15	100	0	64	0	1	1
17:30	69	0	50	0	0	1
17:45	61	2	58	0	0	0

NOTES:

NB Coldbrook is traffic heading towards the interstate

30th Highest hour factor (Group 1) 0.96/ 0.89= 1.07865

3:00-4:00 PM Peak (MSW Processing Facility Peak occurs between 2:30 - 3:30)

278	6	270	2	4	10

Traffic Counts (PM) Future Date: 4/21/16

Intersection of Coldbrook Road and HO Bouchard

Start time	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	HOB Right	HOB Left
15:00	72	3	79	0	2	3
15:15	59	1	57	2	0	1
15:30	77	1	70	0	2	2
15:45	81	1	75	0	0	3
16:00	77	0	62	1	2	2
16:15	88	1	53	1	1	3
16:30	84	3	70	0	0	6
16:45	100	1	56	0	1	2
17:00	108	2	109	0	2	18
17:15	104	0	66	0	1	1
17:30	72	0	52	0	0	1
17:45	64	2	61	0	0	0

NOTES:

NB Coldbrook is traffic heading towards the interstate

Future Growth (2%/year) Factor 1.0404
Build out 2018

3:00-4:00 PM Peak (MSW Processing Facility Peak occurs between 2:30 - 3:30)

290	7	281	2	4	10

Traffic Counts (AM) Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	55	11	32	7	14	28
6:30	74	7	39	7	22	21
6:45	81	20	67	10	25	47
7:00	89	16	63	14	33	38
7:15	133	9	64	11	36	35
7:30	140	23	56	11	33	40
7:45	120	16	68	9	35	44
8:00	119	23	44	10	16	32
8:15	97	23	47	11	27	40
8:30	83	14	43	11	19	35
8:45	84	11	45	3	19	38

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

377	52	233	42	116	141

Traffic Counts (AM) Factored Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	57	11	33	7	14	29
6:30	76	7	40	7	23	22
6:45	84	21	69	10	26	49
7:00	92	17	65	14	34	39
7:15	137	9	66	11	37	36
7:30	145	24	58	11	34	41
7:45	124	17	70	9	36	45
8:00	123	24	45	10	17	33
8:15	100	24	49	11	28	41
8:30	86	14	44	11	20	36
8:45	87	11	47	3	20	39

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

390	54	241	43	120	146

30th Highest hour factor= 0.92/0.89 1.033707865

Traffic Counts (AM) Future Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
6:00						
6:15	59	12	34	8	15	30
6:30	80	8	42	8	24	23
6:45	87	22	72	11	27	51
7:00	96	17	68	15	35	41
7:15	143	10	69	12	39	38
7:30	151	25	60	12	35	43
7:45	129	17	73	10	38	47
8:00	128	25	47	11	17	34
8:15	104	25	51	12	29	43
8:30	89	15	46	12	20	38
8:45	90	12	48	3	20	41

NOTES:

NB Coldbrook is traffic heading towards the Dysart's

Peak for Processing Facility occurs between 6:30 to 7:30 AM

405	56	251	45	125	152

Assume 2% growth rate for 2 years to full build (2018)

Factor = 1.0404

Traffic Counts (PM) Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	79	15	39	6	51	46
14:45	65	19	36	3	53	36
15:00	74	20	39	6	38	49
15:15	63	22	58	9	83	41
15:30	99	18	43	5	45	53
15:45	55	24	33	8	69	61
16:00	69	23	51	13	55	61
16:15	67	24	39	10	76	73

NB Coldbrook is traffic heading towards the Dysart's

Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

281	76	172	24	225	172

Traffic Counts (PM) Factored Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	82	16	40	6	53	48
14:45	67	20	37	3	55	37
15:00	76	21	40	6	39	51
15:15	65	23	60	9	86	42
15:30	102	19	44	5	47	55
15:45	57	25	34	8	71	63
16:00	71	24	53	13	57	63
16:15	69	25	40	10	79	75

NB Coldbrook is traffic heading towards the Dysart's

Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

290	79	178	25	233	178

30th Highest hour factor = 0.92/0.89 1.033707865

Traffic Counts (PM) Future Date: 4/27/2016

Intersection of Coldbrook Road and SouthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Right	NB Coldbrook thru	NB CB Left	Offramp Left	Offramp Right
14:30	85	16	42	6	55	49
14:45	70	20	39	3	57	39
15:00	80	22	42	6	41	53
15:15	68	24	62	10	89	44
15:30	106	19	46	5	48	57
15:45	59	26	35	9	74	66
16:00	74	25	55	14	59	66
16:15	72	26	42	11	82	79

NB Coldbrook is traffic heading towards the Dysart's

Peak hour of Processing facility is 2:30 to 3:30 PM

Peak hour totals

302	82	185	26	242	185

Assume 2% growth rate for 2 years to full build (2018)

Factor = 1.0404

3:30-4:30

312	96	179	39	263	267

Traffic Counts (AM) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	32	37	29	43	28	10
6:45	41	53	22	28	31	6
7:00	49	70	28	39	24	13
7:15	65	85	38	57	26	12
7:30	50	97	52	66	32	15
7:45	58	89	40	81	37	12
8:00	37	53	42	44	25	12
8:15	49	77	32	40	25	9
	187	245	117	167	109	41

NOTES:

NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal

Traffic Counts (AM factored) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	33	38	30	44	29	10
6:45	42	55	23	29	32	6
7:00	51	72	29	40	25	13
7:15	67	88	39	59	27	12
7:30	52	100	54	68	33	16
7:45	60	92	41	84	38	12
8:00	38	55	43	45	26	12
8:15	51	80	33	41	26	9

Factored to 30th highest hour

Factor= 0.92/0.89= 1.033707865

Facility Peak Hour occurs between 6:30 to 7:30

193	253	121	173	113	42

NOTES:
NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal

Traffic Counts (AM future) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	34	40	31	46	30	11
6:45	44	57	24	30	33	6
7:00	53	75	30	42	26	14
7:15	70	91	41	61	28	13
7:30	54	104	56	71	34	16
7:45	62	96	43	87	40	13
8:00	40	57	45	47	27	13
8:15	53	83	34	43	27	10

Full buildout in 2018 (Assume 2% increase/year)

Growth= 1.02*1.02= 1.0404

Facility Peak Hour occurs between 6:30 to 7:30

201	263	126	180	117	44

NOTES:
NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal

Traffic Counts (PM) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
2:30	55	50	41	28	18	7
2:45	72	35	34	43	11	6
3:00	75	39	29	38	13	6
3:15	85	41	27	27	14	5
3:30	97	60	40	34	16	5
3:45	87	56	29	32	23	5
4:00	95	39	47	36	18	14
4:15	67	48	30	29	21	13
	287	165	131	136	56	24

NOTES:

NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal

Traffic Counts (PM factored) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	57	52	42	29	19	7
6:45	74	36	35	44	11	6
7:00	78	40	30	39	13	6
7:15	88	42	28	28	14	5
7:30	100	62	41	35	17	5
7:45	90	58	30	33	24	5
8:00	98	40	49	37	19	14
8:15	69	50	31	30	22	13

Factored to 30th highest hour

Factor= 0.92/0.89= 1.033707865

Facility Peak Hour occurs between 2:30 to 3:30

297	171	135	141	58	25

NOTES:
NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal

Traffic Counts (PM future) Date: 5/5/2016

Intersection of Coldbrook Road and NorthBound I95 Ramps

Start	SB Coldbrook thru	SB CB Left	NB Coldbrook thru	NB CB Right	NB Offramp Left	NB Offramp Right
6:30	59	54	44	30	19	8
6:45	77	38	37	46	12	6
7:00	81	42	31	41	14	6
7:15	91	44	29	29	15	5
7:30	104	65	43	37	17	5
7:45	94	60	31	34	25	5
8:00	102	42	51	39	19	15
8:15	72	52	32	31	23	14

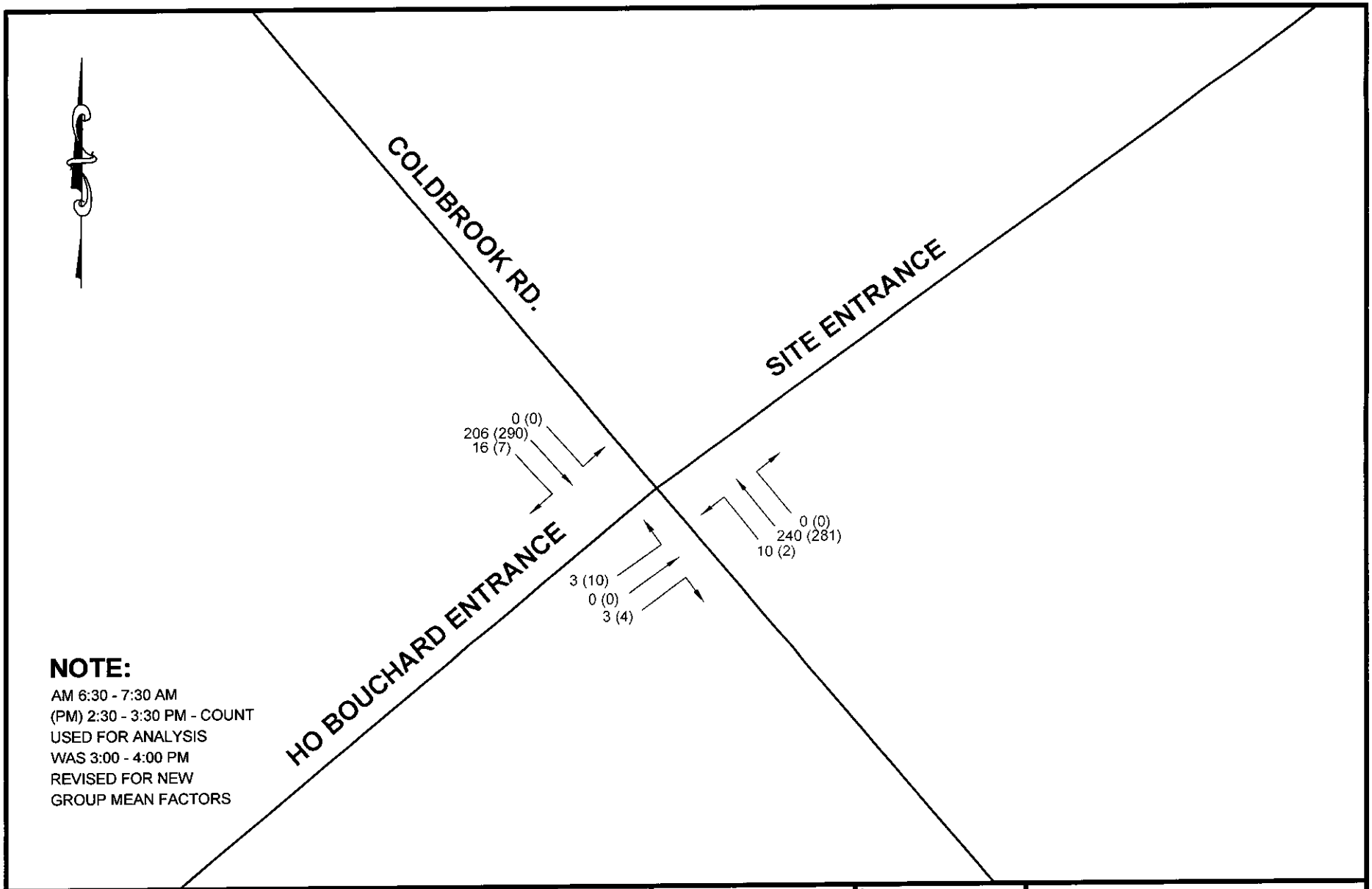
Full buildout in 2018 (Assume 2% increase/year)

Growth= 1.02*1.02= 1.0404

Facility Peak Hour occurs between 2:30 to 3:30

309	177	141	146	60	26

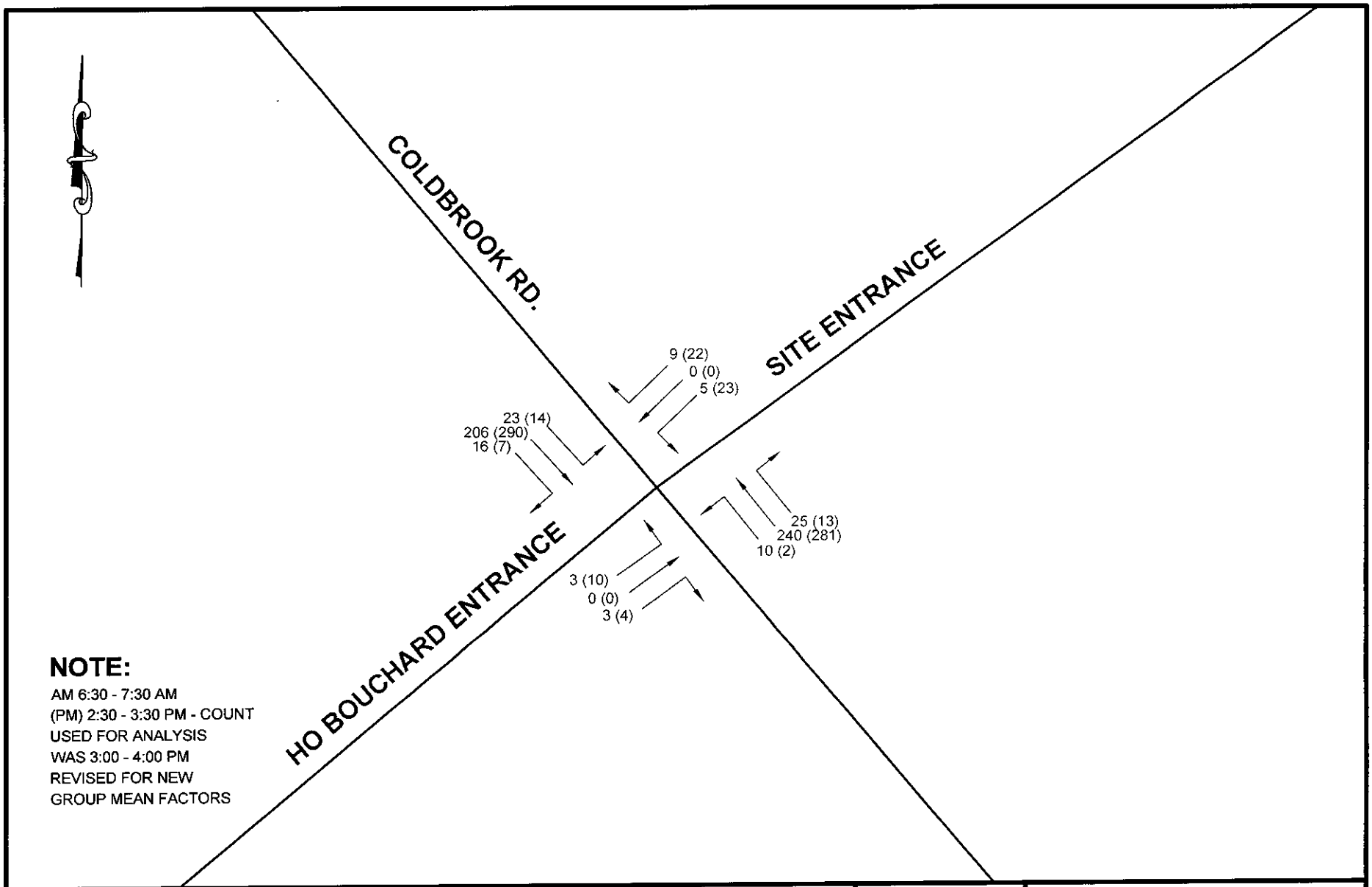
NOTES:
NB Coldbrook is traffic heading towards Dysart's Truck Stop and the traffic signal



NOTE:

AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM - COUNT
USED FOR ANALYSIS
WAS 3:00 - 4:00 PM
REVISED FOR NEW
GROUP MEAN FACTORS

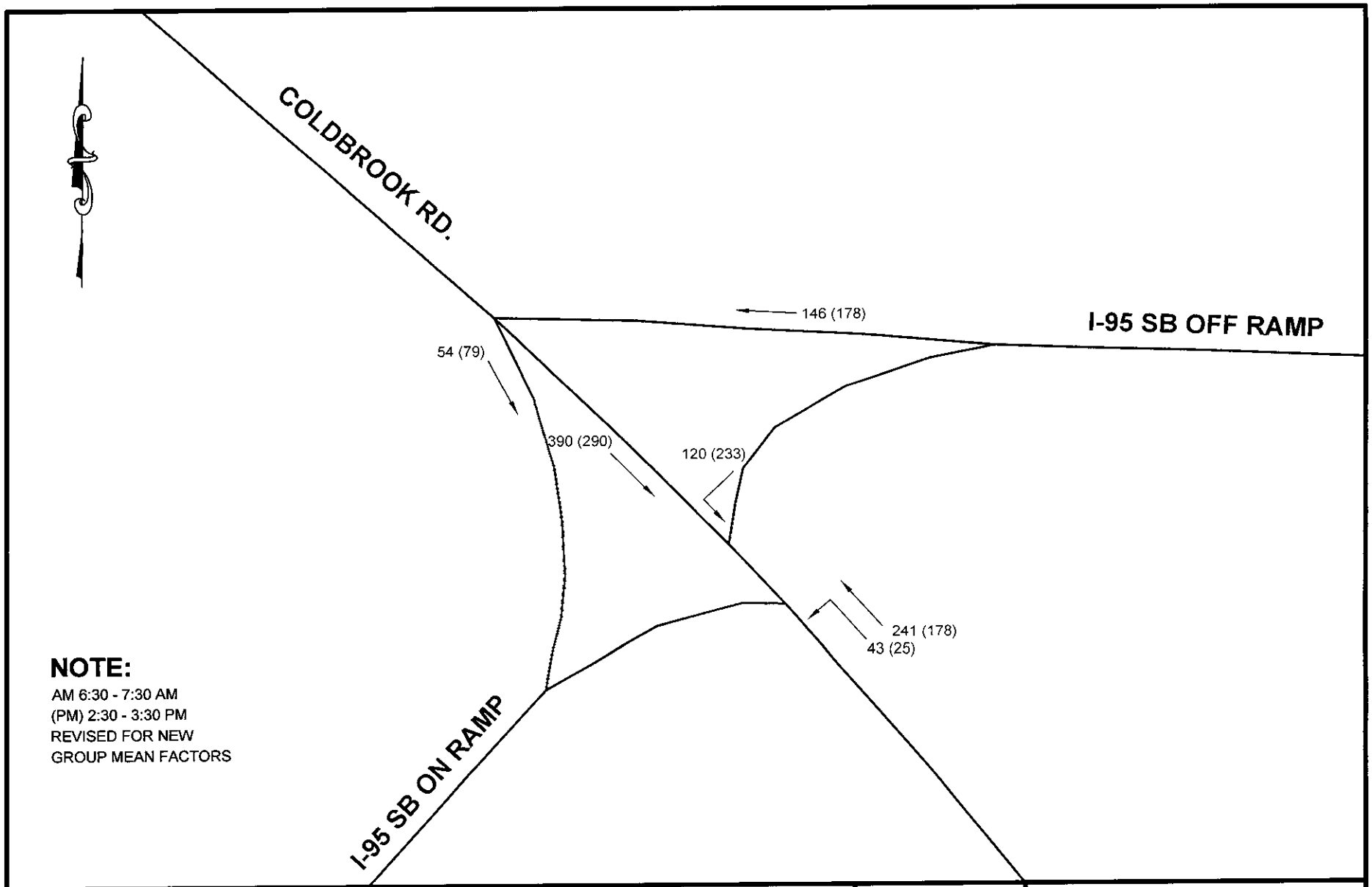
PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK111**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **FUTURE TRAFFIC (2018) NO BUILD**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:

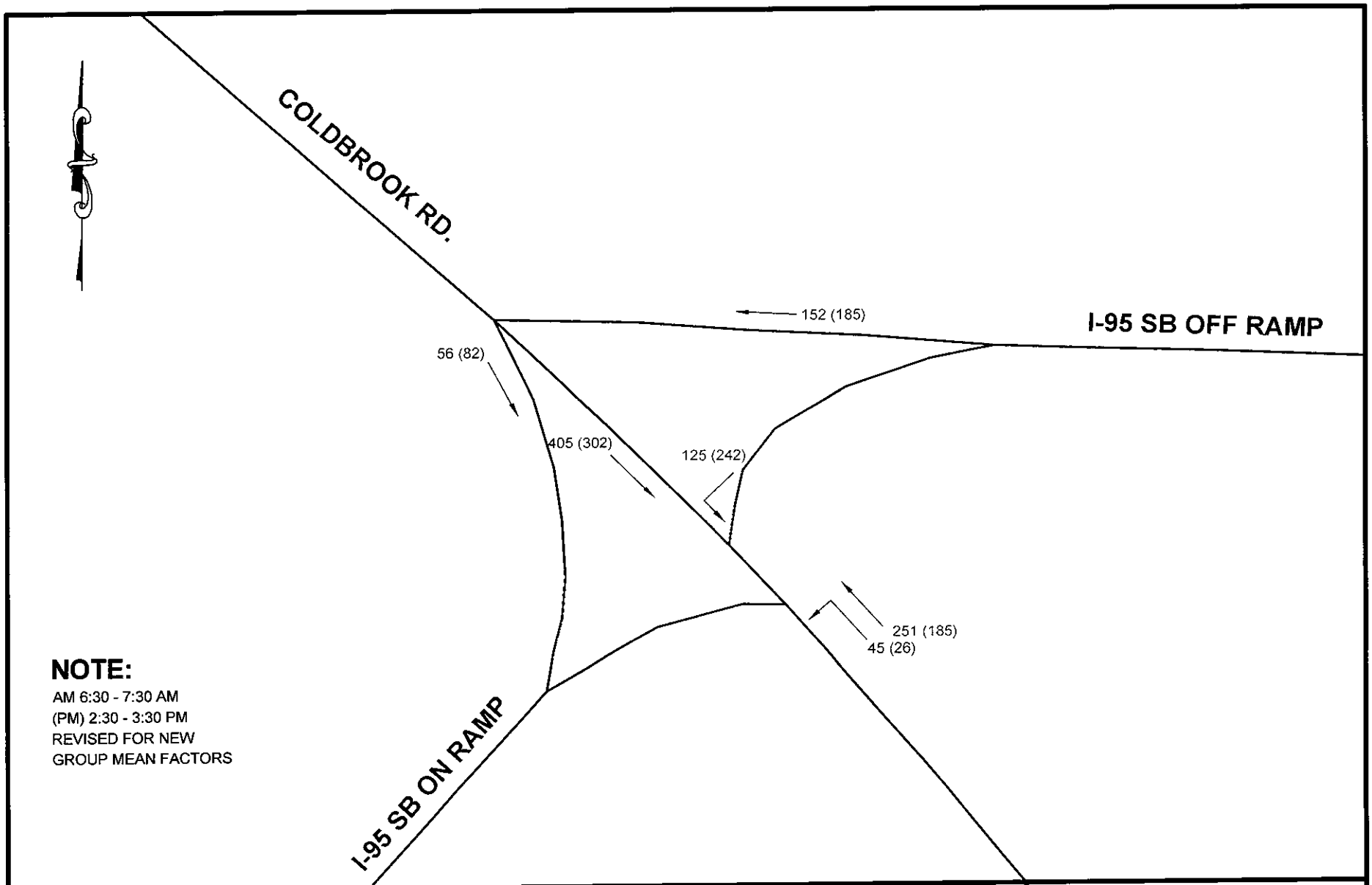
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM - COUNT
USED FOR ANALYSIS
WAS 3:00 - 4:00 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK110**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **FUTURE TRAFFIC (2018) FULL BUILDOUT**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



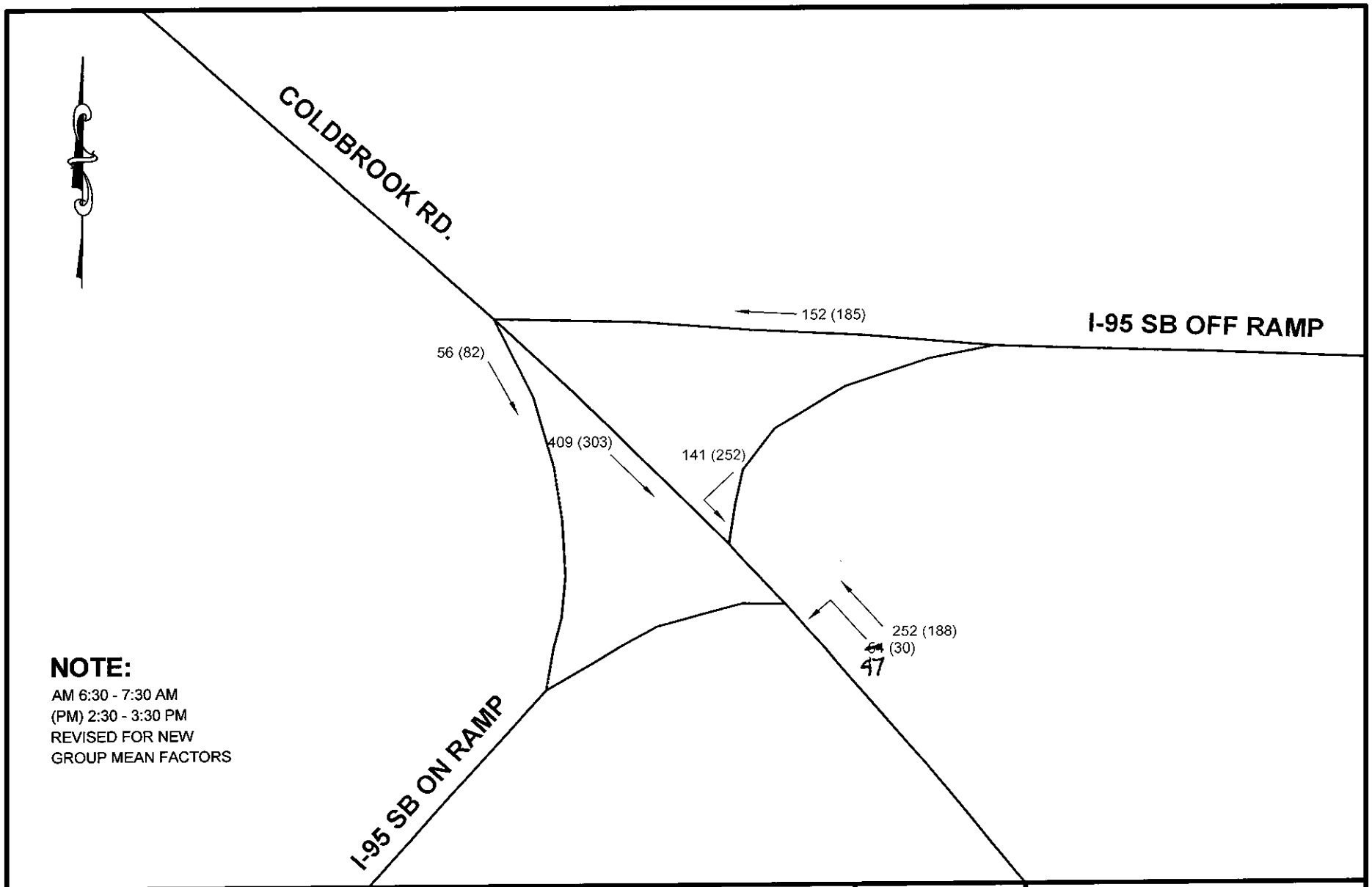
NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK112**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS EXISTING TRAFFIC**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



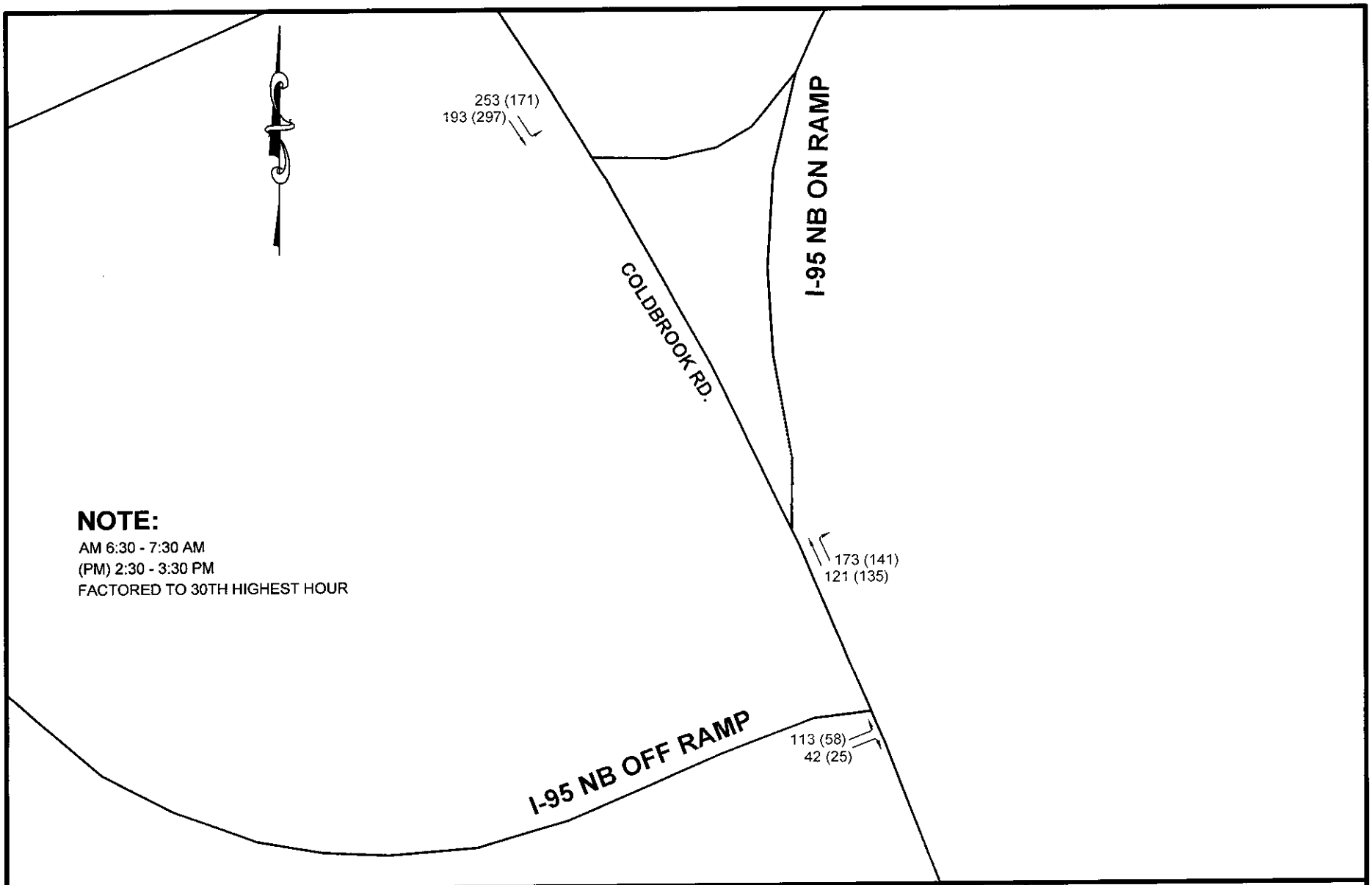
NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK109**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS FUTURE TRAFFIC (2018) NO BUILD**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



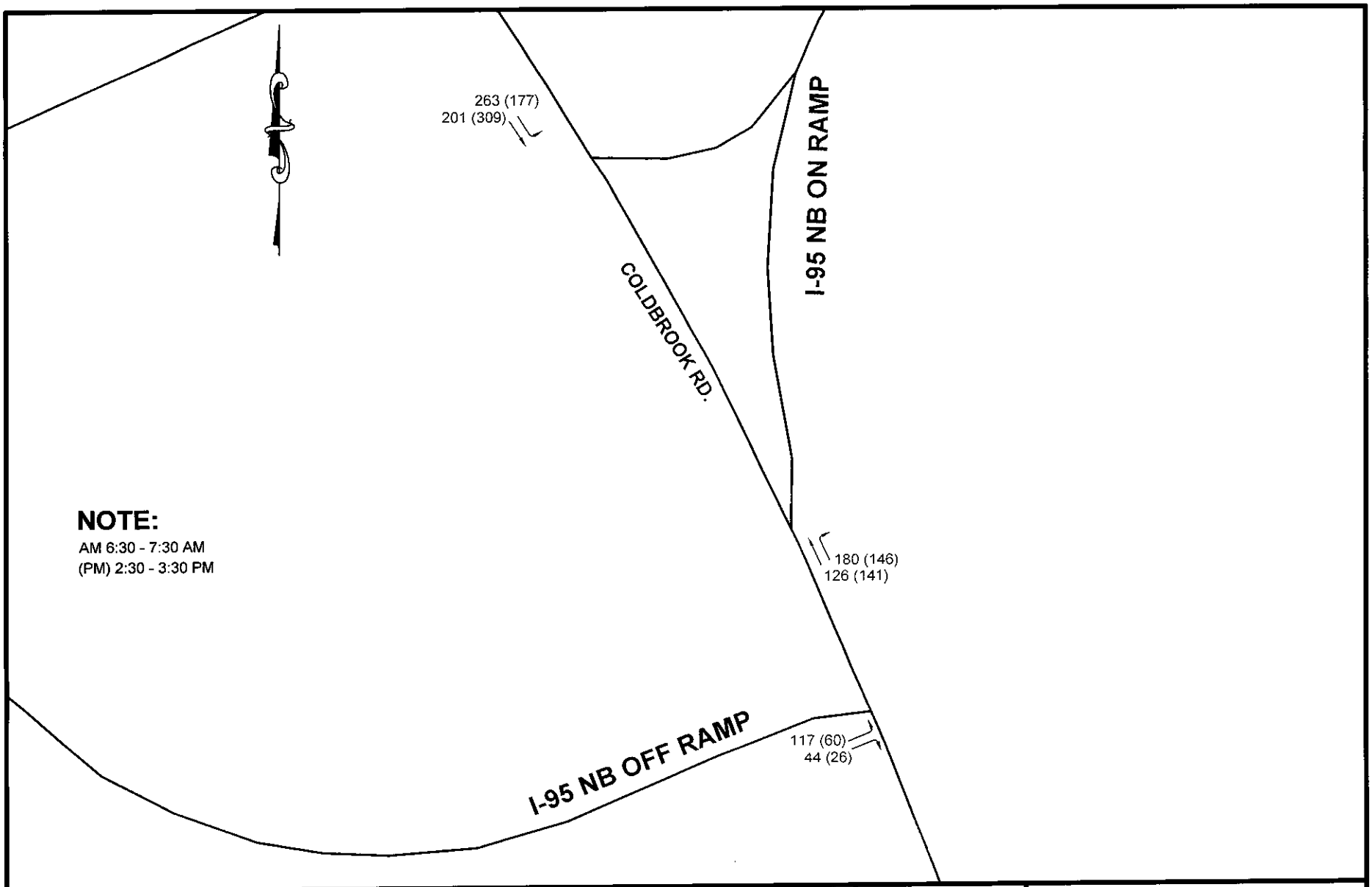
NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
REVISED FOR NEW
GROUP MEAN FACTORS

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK108**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 SB RAMPS FUTURE TRAFFIC (2018) FULL BUILDOUT**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



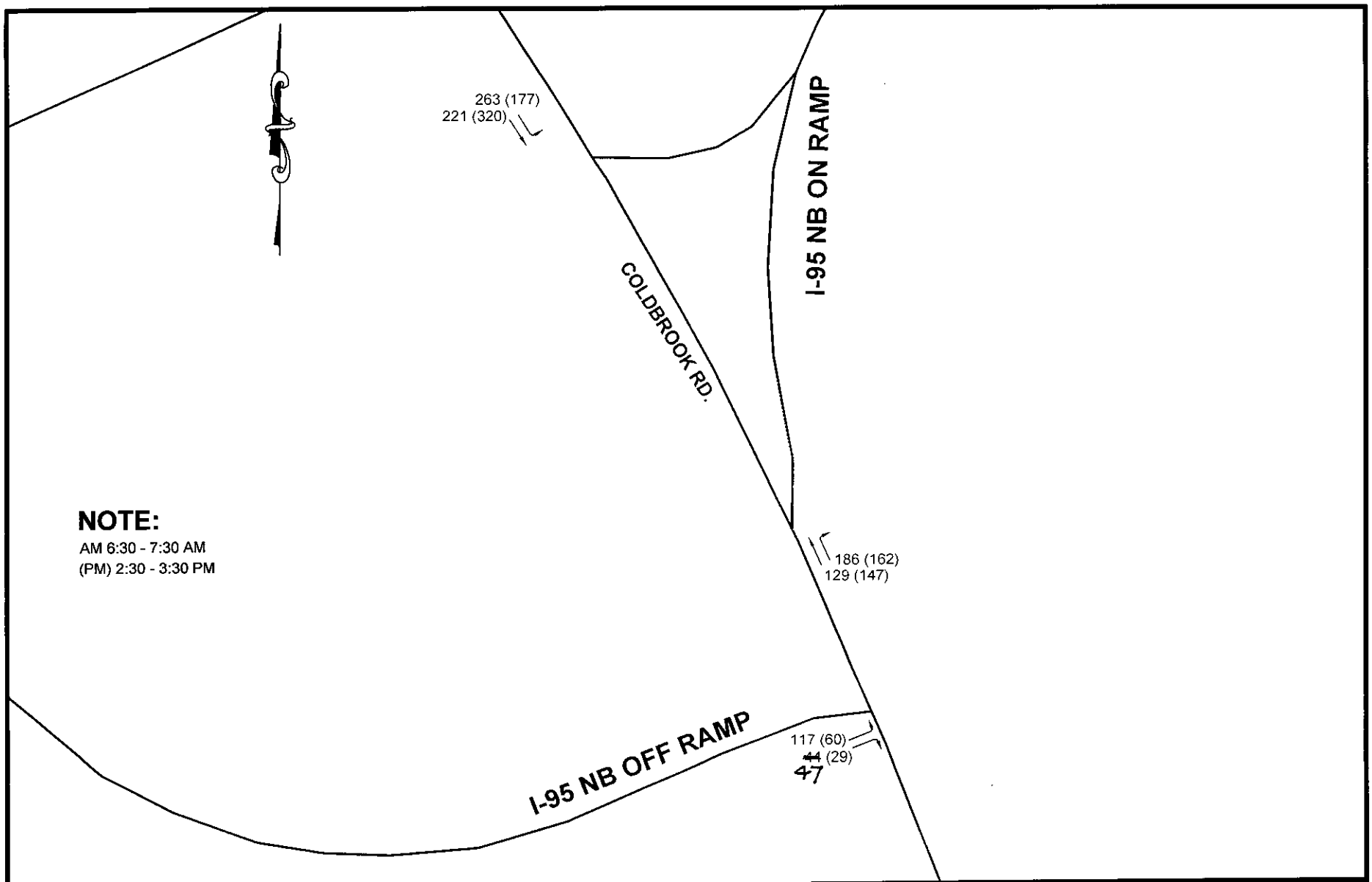
NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM
FACTORED TO 30TH HIGHEST HOUR

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK113**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 NB RAMPS EXISTING TRAFFIC**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK114**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 NB RAMPS FUTURE TRAFFIC 2018**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	



NOTE:
AM 6:30 - 7:30 AM
(PM) 2:30 - 3:30 PM

PROJECT TITLE: **SOLID WASTE PROCESSING FACILITY HAMPDEN, MAINE**	DWG: **SK115**	BY: BTH	CES INC Engineers • Environmental Scientists • Surveyors
		DATE: 5/6/2016	
SHEET TITLE: **I-95 NB RAMPS FULL BUILDOUT 2018**	JN: 11293.001	REV:	
	SCALE: NTS	REV DATE:	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	240	0	0	206	16	0	0	0	3	0	3
Peak Hour Factor	0.95	0.82	0.95	0.95	0.77	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	293	0	0	268	17	0	0	0	3	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	284			293			593	598	293	590	590	276
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	284			293			593	598	293	590	590	276
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	99	100	100
cM capacity (veh/h)	1278			1269			413	412	747	417	417	763

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	303	284	0	7
Volume Left	11	0	0	3
Volume Right	0	17	0	3
cSH	1278	1269	1700	539
Volume to Capacity	0.01	0.00	0.00	0.01
Queue Length 95th (ft)	1	0	0	1
Control Delay (s)	0.3	0.0	0.0	11.8
Lane LOS	A		A	B
Approach Delay (s)	0.3	0.0	0.0	11.8
Approach LOS			A	B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	240	25	23	206	16	5	0	9	3	0	3
Peak Hour Factor	0.95	0.82	0.50	0.50	0.77	0.95	0.50	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	11	293	50	46	268	17	10	0	18	3	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	284			343			685	690	293	700	732	276
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	284			343			685	690	293	700	732	276
tC, single (s)	4.1			4.4			7.7	6.5	6.2	7.9	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.5			4.0	4.0	3.3	4.2	4.0	3.3
p0 queue free %	99			96			96	100	98	99	100	100
cM capacity (veh/h)	1278			1076			282	350	747	255	331	763

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	303	50	330	28	7
Volume Left	11	0	46	10	3
Volume Right	0	50	17	18	3
cSH	1278	1700	1076	470	382
Volume to Capacity	0.01	0.03	0.04	0.06	0.02
Queue Length 95th (ft)	1	0	3	5	1
Control Delay (s)	0.3	0.0	1.6	13.1	14.6
Lane LOS	A		A	B	B
Approach Delay (s)	0.3		1.6	13.1	14.6
Approach LOS				B	B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	281	0	0	290	7	0	0	0	10	0	4
Peak Hour Factor	0.95	0.90	0.95	0.95	0.89	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	312	0	0	326	7	0	0	0	11	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	333			312			650	650	312	646	646	330
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	333			312			650	650	312	646	646	330
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	100			100			100	100	100	97	100	99
cM capacity (veh/h)	1226			1248			379	388	728	384	390	662

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	314	333	0	15
Volume Left	2	0	0	11
Volume Right	0	7	0	4
cSH	1226	1248	1700	436
Volume to Capacity	0.00	0.00	0.00	0.03
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.1	0.0	0.0	13.5
Lane LOS	A		A	B
Approach Delay (s)	0.1	0.0	0.0	13.5
Approach LOS			A	B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	281	13	14	290	7	23	0	22	10	0	4
Peak Hour Factor	0.95	0.80	0.50	0.50	0.89	0.95	0.50	0.92	0.50	0.92	0.92	0.92
Hourly flow rate (vph)	2	351	26	28	326	7	46	0	44	11	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	333			377			745	745	351	785	767	330
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	333			377			745	745	351	785	767	330
tC, single (s)	4.1			4.7			7.2	6.5	6.5	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.7			3.6	4.0	3.6	3.5	4.0	3.5
p0 queue free %	100			97			85	100	93	96	100	99
cM capacity (veh/h)	1226			935			307	332	624	281	322	662

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	353	26	361	90	15
Volume Left	2	0	28	46	11
Volume Right	0	26	7	44	4
cSH	1226	1700	935	408	337
Volume to Capacity	0.00	0.02	0.03	0.22	0.05
Queue Length 95th (ft)	0	0	2	21	4
Control Delay (s)	0.1	0.0	1.0	16.3	16.2
Lane LOS	A		A	C	C
Approach Delay (s)	0.1		1.0	16.3	16.2
Approach LOS				C	C

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	43	241	0	0	390	54	120	0	146	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.71	0.81	0.92	0.73	0.92	0.92	0.92
Hourly flow rate (vph)	57	277	0	0	557	76	148	0	200	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	557			277			987	949	277	987	987	595
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	557			277			987	949	277	987	987	595
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	94			100			30	100	73	100	100	100
cM capacity (veh/h)	1004			1286			211	246	745	158	233	464

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	334	633	348
Volume Left	57	0	148
Volume Right	0	76	200
cSH	1004	1700	496
Volume to Capacity	0.06	0.37	0.70
Queue Length 95th (ft)	5	0	136
Control Delay (s)	2.0	0.0	29.8
Lane LOS	A		D
Approach Delay (s)	2.0	0.0	29.8
Approach LOS			D

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	45	251	0	0	405	56	125	0	152	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.71	0.81	0.92	0.73	0.92	0.92	0.92
Hourly flow rate (vph)	60	289	0	0	579	79	154	0	208	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	579			289			1027	987	289	1027	1027	618
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	579			289			1027	987	289	1027	1027	618
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	94			100			22	100	72	100	100	100
cM capacity (veh/h)	985			1273			198	232	734	145	220	450

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	349	657	363
Volume Left	60	0	154
Volume Right	0	79	208
cSH	985	1700	465
Volume to Capacity	0.06	0.39	0.78
Queue Length 95th (ft)	5	0	173
Control Delay (s)	2.1	0.0	35.7
Lane LOS	A		E
Approach Delay (s)	2.1	0.0	35.7
Approach LOS			E

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	47	252	0	0	409	56	141	0	152	0	0	0
Peak Hour Factor	0.75	0.87	0.50	0.50	0.70	0.71	0.81	0.92	0.73	0.92	0.92	0.92
Hourly flow rate (vph)	63	290	0	0	584	79	174	0	208	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	584			290			1039	999	290	1039	1039	624
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	584			290			1039	999	290	1039	1039	624
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	94			100			10	100	72	100	100	100
cM capacity (veh/h)	980			1272			193	228	733	142	216	446

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	352	663	382
Volume Left	63	0	174
Volume Right	0	79	208
cSH	980	1700	425
Volume to Capacity	0.06	0.39	0.90
Queue Length 95th (ft)	5	0	240
Control Delay (s)	2.2	0.0	47.7
Lane LOS	A		E
Approach Delay (s)	2.2	0.0	47.7
Approach LOS			E

Intersection Summary			
Average Delay	13.6		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	25	178	0	0	290	79	233	0	178	0	0	0
Peak Hour Factor	0.75	0.89	0.50	0.50	0.88	0.87	0.67	0.92	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	33	200	0	0	330	91	348	0	202	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	330			200			642	596	200	642	642	375
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	330			200			642	596	200	642	642	375
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	97			100			6	100	75	100	100	100
cM capacity (veh/h)	1219			1372			371	405	823	286	382	623

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	233	420	550
Volume Left	33	0	348
Volume Right	0	91	202
cSH	1219	1700	587
Volume to Capacity	0.03	0.25	0.94
Queue Length 95th (ft)	2	0	306
Control Delay (s)	1.4	0.0	45.8
Lane LOS	A		E
Approach Delay (s)	1.4	0.0	45.8
Approach LOS			E

Intersection Summary			
Average Delay	21.2		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	26	185	0	0	302	82	242	0	185	0	0	0
Peak Hour Factor	0.75	0.89	0.50	0.50	0.88	0.87	0.67	0.92	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	35	208	0	0	343	94	361	0	210	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	343			208			668	620	208	668	668	390
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	343			208			668	620	208	668	668	390
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	97			100			0	100	74	100	100	100
cM capacity (veh/h)	1205			1363			356	392	815	270	368	611

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	243	437	571
Volume Left	35	0	361
Volume Right	0	94	210
cSH	1205	1700	563
Volume to Capacity	0.03	0.26	1.01
Queue Length 95th (ft)	2	0	379
Control Delay (s)	1.4	0.0	58.6
Lane LOS	A		F
Approach Delay (s)	1.4	0.0	58.6
Approach LOS			F

Intersection Summary			
Average Delay	27.0		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	188	0	0	303	82	252	0	185	0	0	0
Peak Hour Factor	0.75	0.89	0.50	0.50	0.88	0.87	0.67	0.92	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	40	211	0	0	344	94	376	0	210	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	344			211			683	636	211	683	683	391
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	344			211			683	636	211	683	683	391
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	97			100			0	100	74	100	100	100
cM capacity (veh/h)	1204			1359			347	383	812	262	359	610

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	251	439	586
Volume Left	40	0	376
Volume Right	0	94	210
cSH	1204	1700	540
Volume to Capacity	0.03	0.26	1.09
Queue Length 95th (ft)	3	0	450
Control Delay (s)	1.5	0.0	73.5
Lane LOS	A		F
Approach Delay (s)	1.5	0.0	73.5
Approach LOS			F

Intersection Summary			
Average Delay	34.1		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	188	0	0	303	82	252	0	185	0	0	0
Peak Hour Factor	0.92	0.92	0.50	0.50	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	204	0	0	329	89	274	0	201	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	329			204			643	599	204	643	643	374
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329			204			643	599	204	643	643	374
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	97			100			26	100	75	100	100	100
cM capacity (veh/h)	1219			1367			370	404	819	285	381	624

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	237	418	475
Volume Left	33	0	274
Volume Right	0	89	201
cSH	1219	1700	642
Volume to Capacity	0.03	0.25	0.74
Queue Length 95th (ft)	2	0	163
Control Delay (s)	1.3	0.0	26.4
Lane LOS	A		D
Approach Delay (s)	1.3	0.0	26.4
Approach LOS			D

Intersection Summary			
Average Delay	11.4		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	168	0	0	380	64	220	0	196	0	0	0
Peak Hour Factor	1.00	1.00	0.50	0.50	1.00	1.00	1.00	0.92	1.00	0.92	0.92	0.92
Hourly flow rate (vph)	24	168	0	0	380	64	220	0	196	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	380			168			628	596	168	628	628	412
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	380			168			628	596	168	628	628	412
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	98			100			42	100	77	100	100	100
cM capacity (veh/h)	1168			1410			381	408	858	300	391	593

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	192	444	416
Volume Left	24	0	220
Volume Right	0	64	196
cSH	1168	1700	720
Volume to Capacity	0.02	0.26	0.58
Queue Length 95th (ft)	2	0	93
Control Delay (s)	1.2	0.0	19.0
Lane LOS	A		C
Approach Delay (s)	1.2	0.0	19.0
Approach LOS			C

Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	16	159	0	0	281	80	238	0	156	0	0	0
Peak Hour Factor	1.00	1.00	0.50	0.50	1.00	1.00	1.00	0.92	1.00	0.92	0.92	0.92
Hourly flow rate (vph)	16	159	0	0	281	80	238	0	156	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	281			159			512	472	159	512	512	321
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	281			159			512	472	159	512	512	321
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	99			100			48	100	82	100	100	100
cM capacity (veh/h)	1270			1420			459	484	868	384	459	670

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	175	361	394
Volume Left	16	0	238
Volume Right	0	80	156
cSH	1270	1700	759
Volume to Capacity	0.01	0.21	0.52
Queue Length 95th (ft)	1	0	76
Control Delay (s)	0.8	0.0	16.7
Lane LOS	A		C
Approach Delay (s)	0.8	0.0	16.7
Approach LOS			C

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	28	171	0	0	321	88	174	0	212	0	0	0
Peak Hour Factor	1.00	1.00	0.50	0.50	1.00	1.00	1.00	0.92	1.00	0.92	0.92	0.92
Hourly flow rate (vph)	28	171	0	0	321	88	174	0	212	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	321			171			592	548	171	592	592	365
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	321			171			592	548	171	592	592	365
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	98			100			57	100	75	100	100	100
cM capacity (veh/h)	1228			1406			402	434	855	309	409	632

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	199	409	386
Volume Left	28	0	174
Volume Right	0	88	212
cSH	1228	1700	892
Volume to Capacity	0.02	0.24	0.43
Queue Length 95th (ft)	2	0	55
Control Delay (s)	1.3	0.0	15.1
Lane LOS	A		C
Approach Delay (s)	1.3	0.0	15.1
Approach LOS			C

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	44	251	0	0	273	96	366	0	96	0	0	0
Peak Hour Factor	1.00	1.00	0.50	0.50	1.00	1.00	1.00	0.92	1.00	0.92	0.92	0.92
Hourly flow rate (vph)	44	251	0	0	273	96	366	0	96	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									12			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	273			251			660	612	251	660	660	321
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	273			251			660	612	251	660	660	321
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.5
p0 queue free %	97			100			0	100	88	100	100	100
cM capacity (veh/h)	1279			1314			359	394	771	321	370	670

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	295	369	462
Volume Left	44	0	366
Volume Right	0	96	96
cSH	1279	1700	453
Volume to Capacity	0.03	0.22	1.02
Queue Length 95th (ft)	3	0	344
Control Delay (s)	1.5	0.0	71.7
Lane LOS	A		F
Approach Delay (s)	1.5	0.0	71.7
Approach LOS			F

Intersection Summary			
Average Delay	29.8		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	201	0	0	294	113	42
Peak Hour Factor	0.72	0.92	0.92	0.75	0.88	0.77
Hourly flow rate (vph)	279	0	0	392	128	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		671	279
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		671	279
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		68	93
cM capacity (veh/h)			1284		404	760

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	392	183
Volume Left	0	0	128
Volume Right	0	0	55
cSH	1700	1700	469
Volume to Capacity	0.16	0.23	0.39
Queue Length 95th (ft)	0	0	46
Control Delay (s)	0.0	0.0	17.5
Lane LOS			C
Approach Delay (s)	0.0	0.0	17.5
Approach LOS			C

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	253	193	121	173	0	0
Peak Hour Factor	0.73	0.71	0.75	0.74	0.92	0.92
Hourly flow rate (vph)	347	272	161	234	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	161				1243	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	161				1243	278
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	75				100	100
cM capacity (veh/h)	1370				144	761

Direction, Lane #	EB 1	WB 1
Volume Total	618	395
Volume Left	347	0
Volume Right	0	234
cSH	1370	1700
Volume to Capacity	0.25	0.23
Queue Length 95th (ft)	25	0
Control Delay (s)	5.9	0.0
Lane LOS	A	
Approach Delay (s)	5.9	0.0
Approach LOS		

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	201	0	0	306	117	44
Peak Hour Factor	0.72	0.92	0.92	0.75	0.88	0.77
Hourly flow rate (vph)	279	0	0	408	133	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		687	279
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		687	279
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		66	92
cM capacity (veh/h)			1284		395	760

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	408	190
Volume Left	0	0	133
Volume Right	0	0	57
cSH	1700	1700	461
Volume to Capacity	0.16	0.24	0.41
Queue Length 95th (ft)	0	0	50
Control Delay (s)	0.0	0.0	18.2
Lane LOS			C
Approach Delay (s)	0.0	0.0	18.2
Approach LOS			C

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	263	201	126	180	0	0
Peak Hour Factor	0.73	0.71	0.75	0.74	0.92	0.92
Hourly flow rate (vph)	360	283	168	243	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	168				1293	290
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				1293	290
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	74				100	100
cM capacity (veh/h)	1363				132	750

Direction, Lane #	EB 1	WB 1
Volume Total	643	411
Volume Left	360	0
Volume Right	0	243
cSH	1363	1700
Volume to Capacity	0.26	0.24
Queue Length 95th (ft)	27	0
Control Delay (s)	6.0	0.0
Lane LOS	A	
Approach Delay (s)	6.0	0.0
Approach LOS		

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	221	0	0	305	117	44
Peak Hour Factor	0.72	0.92	0.92	0.75	0.88	0.77
Hourly flow rate (vph)	307	0	0	407	133	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			307		714	307
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			307		714	307
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		65	92
cM capacity (veh/h)			1254		381	733

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	307	407	190
Volume Left	0	0	133
Volume Right	0	0	57
cSH	1700	1700	445
Volume to Capacity	0.18	0.24	0.43
Queue Length 95th (ft)	0	0	52
Control Delay (s)	0.0	0.0	19.0
Lane LOS			C
Approach Delay (s)	0.0	0.0	19.0
Approach LOS			C

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	263	221	129	186	0	0
Peak Hour Factor	0.73	0.71	0.75	0.74	0.92	0.92
Hourly flow rate (vph)	360	311	172	251	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	172				1329	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	172				1329	298
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	73				100	100
cM capacity (veh/h)	1358				125	742

Direction, Lane #	EB 1	WB 1
Volume Total	672	423
Volume Left	360	0
Volume Right	0	251
cSH	1358	1700
Volume to Capacity	0.27	0.25
Queue Length 95th (ft)	27	0
Control Delay (s)	5.9	0.0
Lane LOS	A	
Approach Delay (s)	5.9	0.0
Approach LOS		

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	297	0	0	276	58	25
Peak Hour Factor	0.84	0.92	0.92	0.87	0.74	0.86
Hourly flow rate (vph)	354	0	0	317	78	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			354		671	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			354		671	354
tC, single (s)			4.1		6.8	6.4
tC, 2 stage (s)						
tF (s)			2.2		3.9	3.5
p0 queue free %			100		78	96
cM capacity (veh/h)			1205		363	658

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	354	317	107
Volume Left	0	0	78
Volume Right	0	0	29
cSH	1700	1700	413
Volume to Capacity	0.21	0.19	0.26
Queue Length 95th (ft)	0	0	26
Control Delay (s)	0.0	0.0	16.7
Lane LOS			C
Approach Delay (s)	0.0	0.0	16.7
Approach LOS			C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	171	297	135	141	0	0
Peak Hour Factor	0.81	0.85	0.80	0.83	0.92	0.92
Hourly flow rate (vph)	211	349	169	170	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	169				1025	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	169				1025	254
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	84				100	100
cM capacity (veh/h)	1350				220	785

Direction, Lane #	EB 1	WB 1
Volume Total	561	339
Volume Left	211	0
Volume Right	0	170
cSH	1350	1700
Volume to Capacity	0.16	0.20
Queue Length 95th (ft)	14	0
Control Delay (s)	4.1	0.0
Lane LOS	A	
Approach Delay (s)	4.1	0.0
Approach LOS		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	309	0	0	287	60	26
Peak Hour Factor	0.84	0.92	0.92	0.87	0.74	0.86
Hourly flow rate (vph)	368	0	0	330	81	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			368		698	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			368		698	368
tC, single (s)			4.1		6.8	6.4
tC, 2 stage (s)						
tF (s)			2.2		3.9	3.5
p0 queue free %			100		77	95
cM capacity (veh/h)			1191		350	645

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	368	330	111
Volume Left	0	0	81
Volume Right	0	0	30
cSH	1700	1700	399
Volume to Capacity	0.22	0.19	0.28
Queue Length 95th (ft)	0	0	28
Control Delay (s)	0.0	0.0	17.5
Lane LOS			C
Approach Delay (s)	0.0	0.0	17.5
Approach LOS			C

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	177	309	141	146	0	0
Peak Hour Factor	0.81	0.85	0.80	0.83	0.92	0.92
Hourly flow rate (vph)	219	364	176	176	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	176				1065	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	176				1065	264
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	84				100	100
cM capacity (veh/h)	1342				206	774

Direction, Lane #	EB 1	WB 1
Volume Total	582	352
Volume Left	219	0
Volume Right	0	176
cSH	1342	1700
Volume to Capacity	0.16	0.21
Queue Length 95th (ft)	15	0
Control Delay (s)	4.1	0.0
Lane LOS	A	
Approach Delay (s)	4.1	0.0
Approach LOS		

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	320	0	0	309	60	29
Peak Hour Factor	0.84	0.92	0.92	0.87	0.74	0.86
Hourly flow rate (vph)	381	0	0	355	81	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			381		736	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			381		736	381
tC, single (s)			4.1		6.8	6.4
tC, 2 stage (s)						
tF (s)			2.2		3.9	3.5
p0 queue free %			100		76	95
cM capacity (veh/h)			1178		331	634

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	381	355	115
Volume Left	0	0	81
Volume Right	0	0	34
cSH	1700	1700	385
Volume to Capacity	0.22	0.21	0.30
Queue Length 95th (ft)	0	0	31
Control Delay (s)	0.0	0.0	18.3
Lane LOS			C
Approach Delay (s)	0.0	0.0	18.3
Approach LOS			C

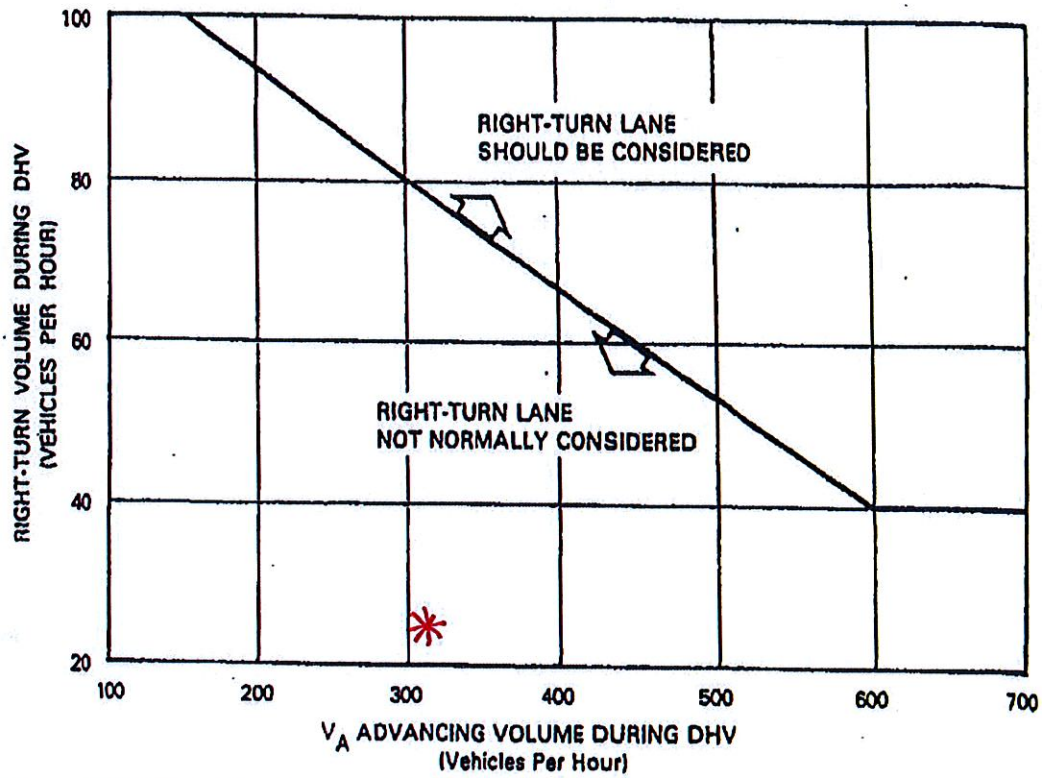
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	177	320	147	162	0	0
Peak Hour Factor	0.81	0.85	0.80	0.83	0.92	0.92
Hourly flow rate (vph)	219	376	184	195	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	184				1095	281
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	184				1095	281
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	84				100	100
cM capacity (veh/h)	1333				198	758

Direction, Lane #	EB 1	WB 1
Volume Total	595	379
Volume Left	219	0
Volume Right	0	195
cSH	1333	1700
Volume to Capacity	0.16	0.22
Queue Length 95th (ft)	15	0
Control Delay (s)	4.1	0.0
Lane LOS	A	
Approach Delay (s)	4.1	0.0
Approach LOS		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

SITE ENTRANCE



Note: For highways with a design speed below 50 mph *and* DHV<300 *and* Right Turns>40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

AM PEAK HOUR

$V_A = 303$

$V_{RT} = 25$

NO RT LANE REQUIRED

Given: Design Speed = 40 mph
V_A = 250 vph
Right Turns = 100 vph

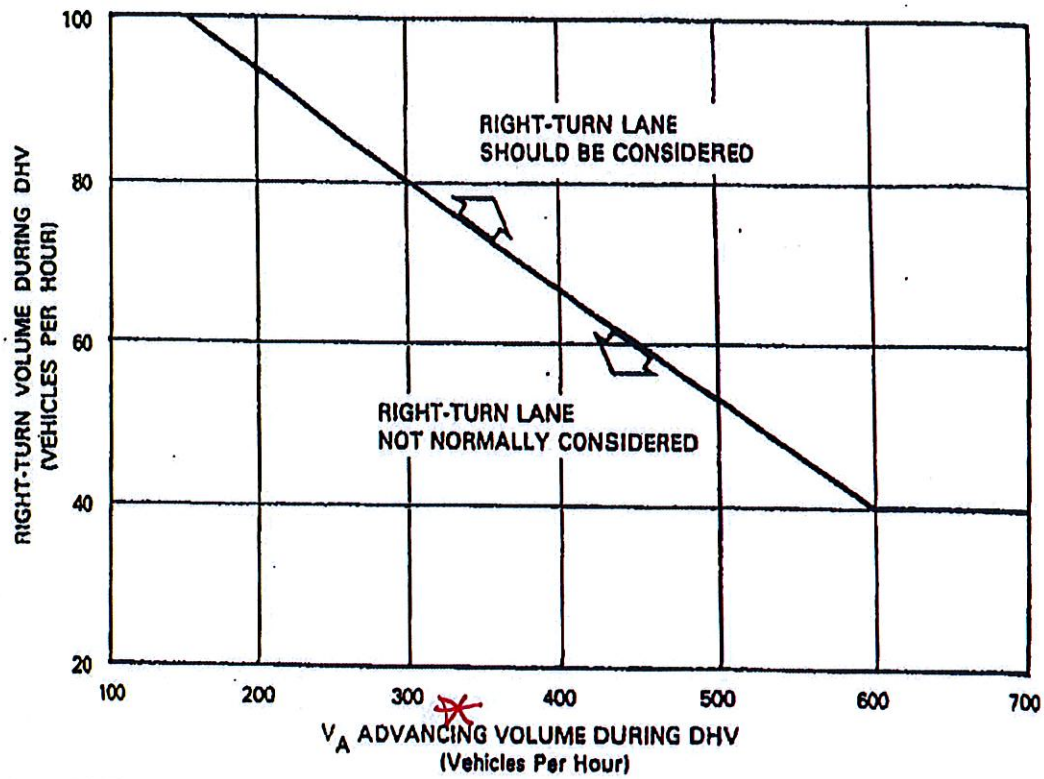
Problem: Determine if a right-turn lane should be considered.

Solution: To read the vertical axis, use 100-20 = 80 vph. The figure indicates that a right-turn lane should not normally be considered, unless other factors (e.g., high accident rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS

Figure 8-16

SITE ENTRANCE



Note: For highways with a design speed below 50 mph *and* DHV<300 *and* Right Turns>40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

PM PEAK

$V_A = 327$

$V_{RT} = 13$

NO RT LANE REQUIRED

Example

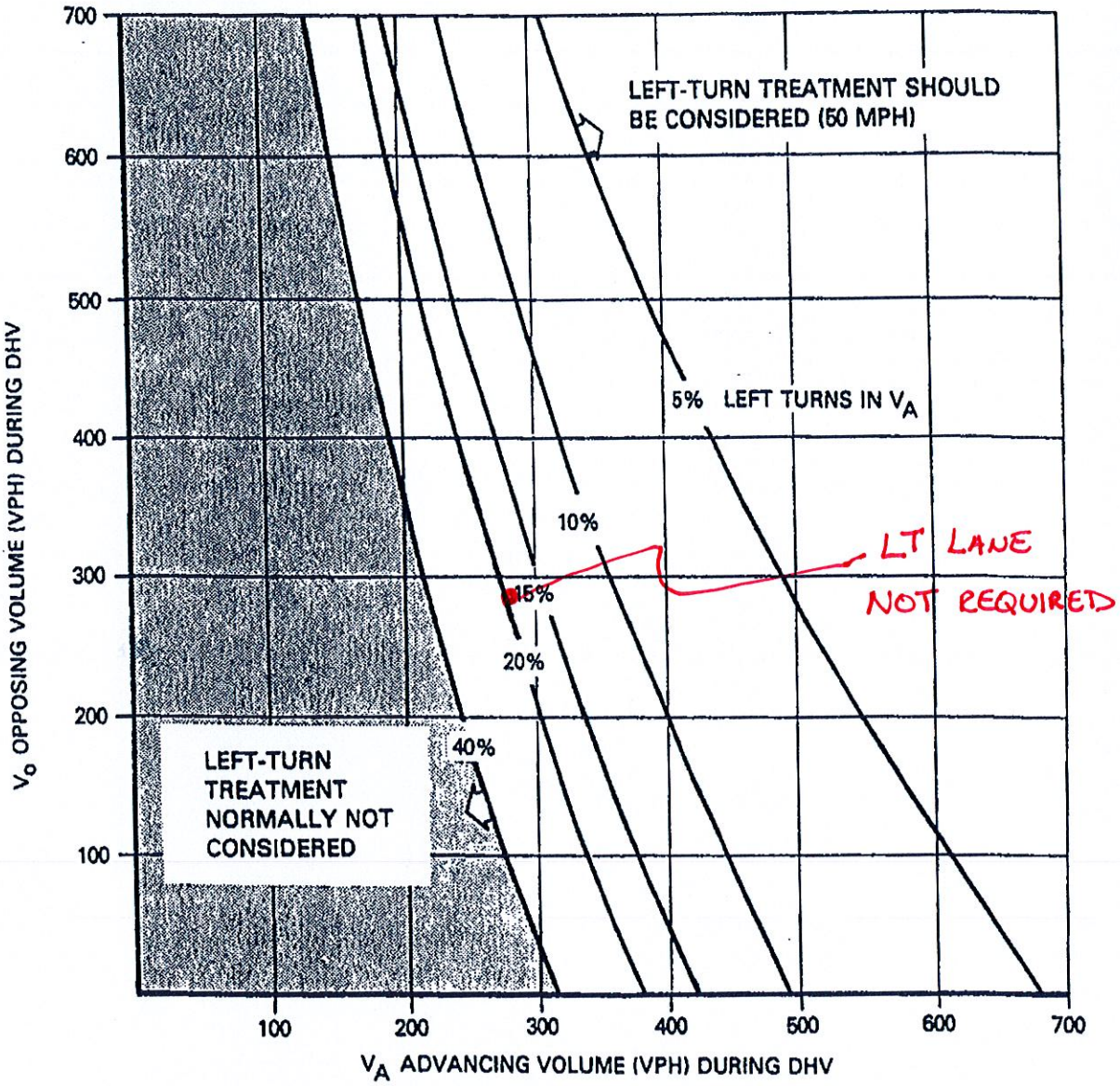
Given: Design Speed = 40 mph
V_A = 250 vph
Right Turns = 100 vph

Problem: Determine if a right-turn lane should be considered.

Solution: To read the vertical axis, use 100-20 = 80 vph. The figure indicates that a right-turn lane should not normally be considered, unless other factors (e.g., high accident rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES
AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS

Figure 8-16



Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.

2. Read V_A and V_O into the chart and locate the intersection of the two volumes.

3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

AM PEAK

V_A = 282

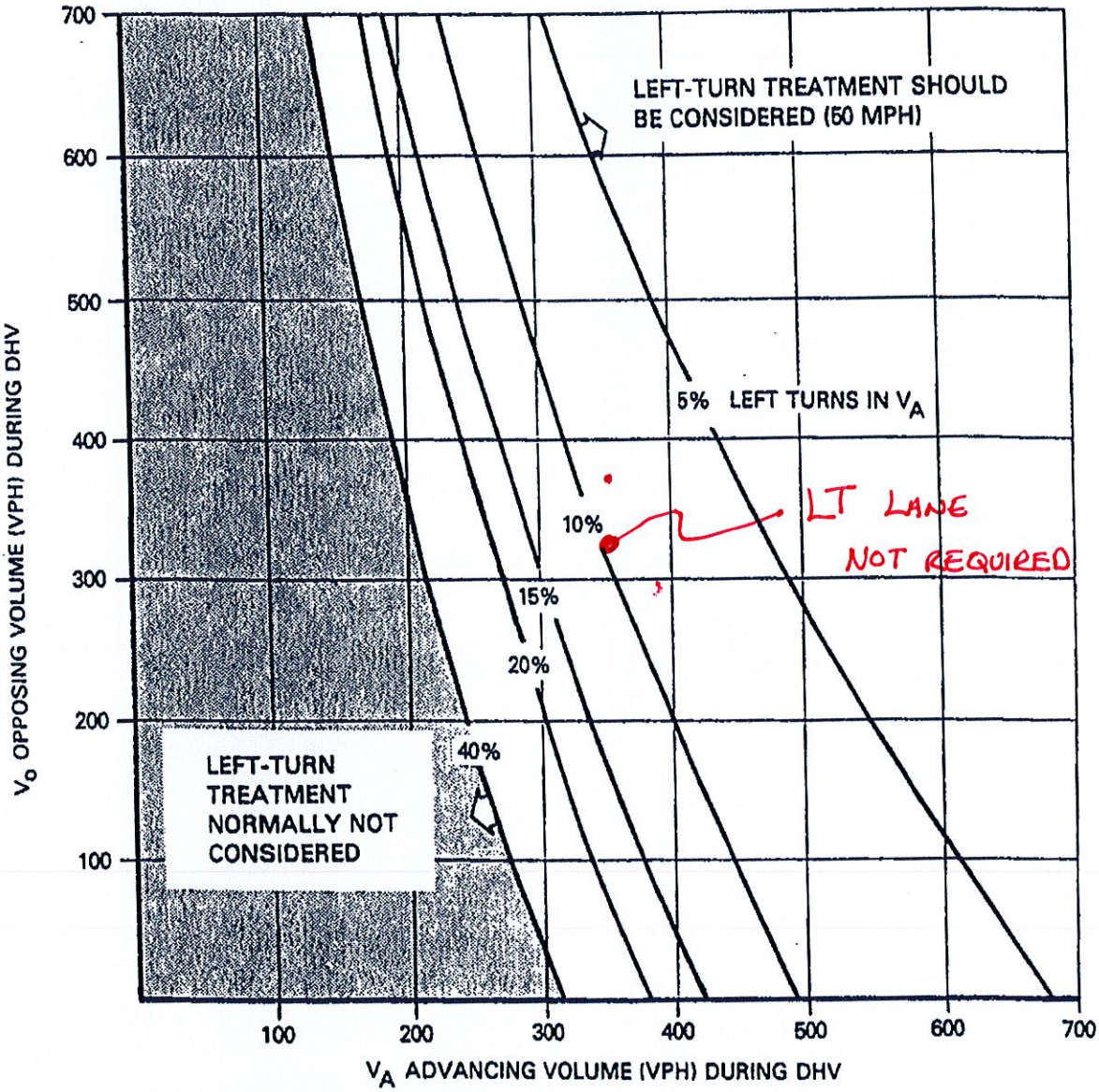
LT = 30

V_O = 285

% LT = 10.6%

VOLUME WARRANTS FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (50 mph)

Figure 8-18



Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.

PM PEAK

$V_A = 351$

$LT = 22$

$V_O = 321$

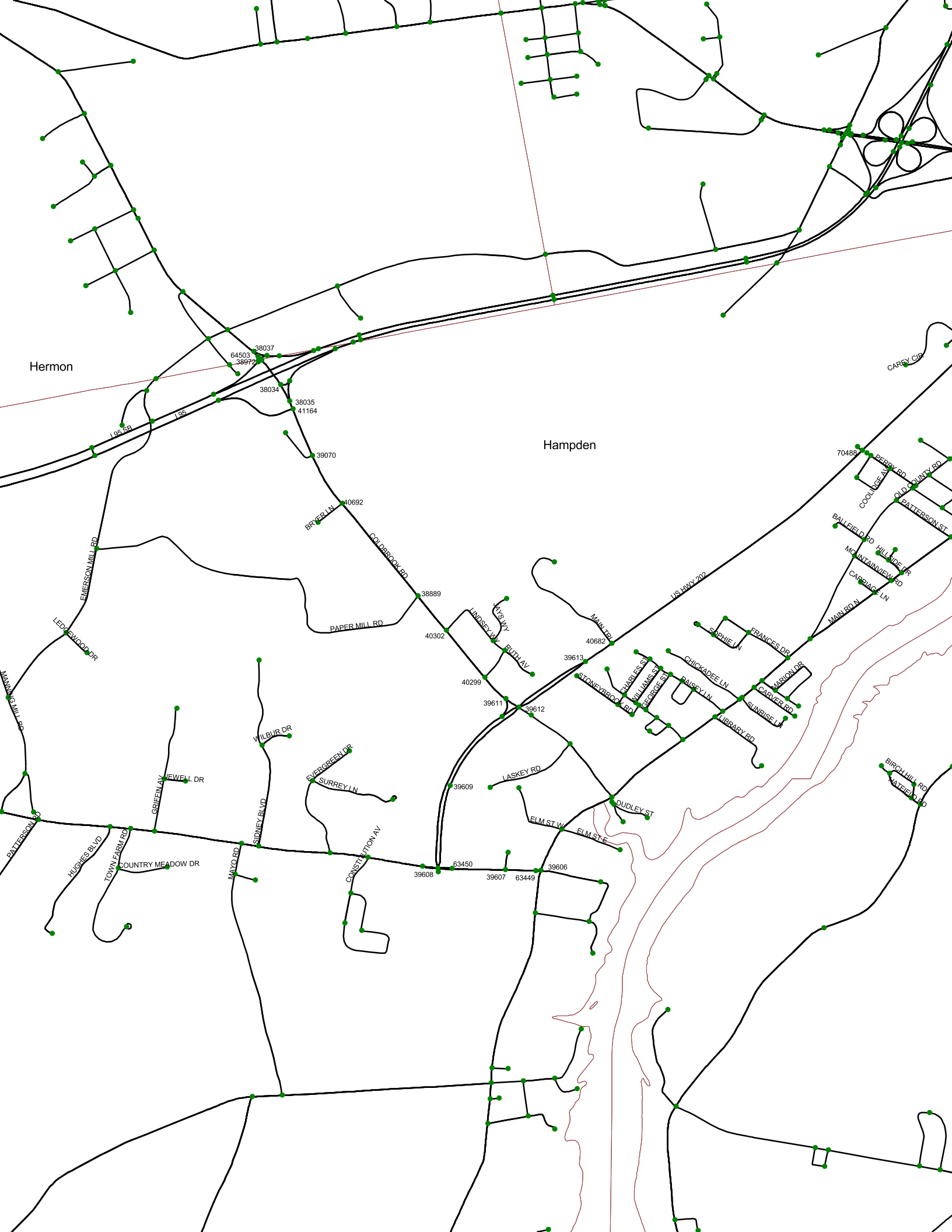
$\%LT = 6\%$

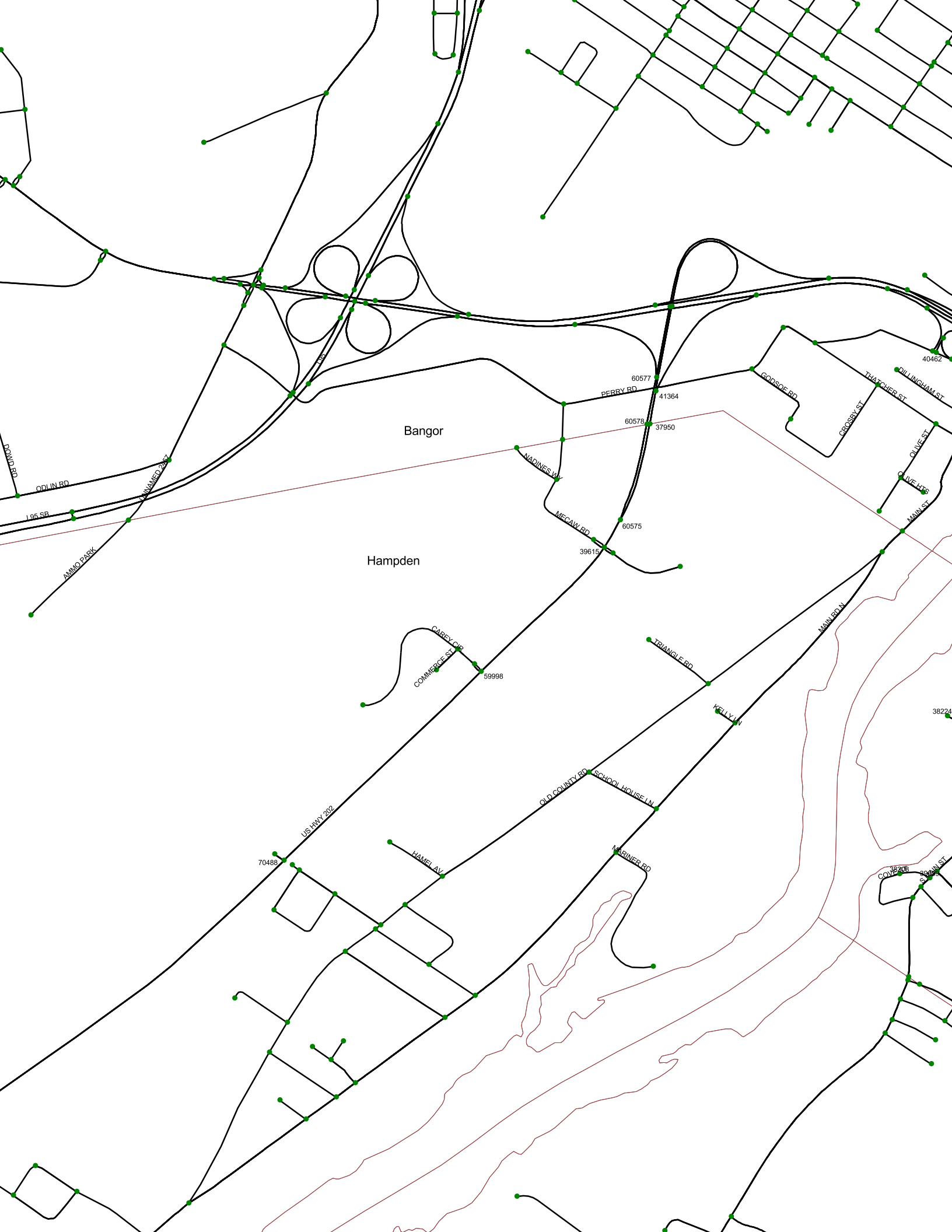
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.

3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.

VOLUME WARRANTS FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (50 mph)

Figure 8-18


Hermon
Hampden
38037
64503
38972
38034
38035
41164
I95
I95 SB
39070
40692
BRYER LN
COLDBROOK RD
38889
PAPER MILL RD
EMERSON MILL RD
LEDGEWOOD DR
MANNING MILL RD
40302
LINDSEY WY
JAYS WY
RUTH AV
40299
39611
39612
39613
40682
MAIN TRL
US HWY 202
STONEYBROOK RD
CHARLES ST
WILLIAMS ST
GEORGE ST
CHICKADEE LN
PAISEY LN
SOPHIE LN
FRANCES DR
MARION DR
CARVER RD
SUNRISE LN
LIBRARY RD
MAIN RD N
CARRIAGE LN
MOUNTAINVIEW RD
HILLSIDE DR
BALLFIELD RD
PATTERSON ST
OLD COUNTY RD
PERRY RD
COOLIDGE AV
70488
CAREY CIR
BIRCH HILL RD
HATFIELD RD
WILBUR DR
EVERGREEN DR
SURREY LN
LASKEY RD
39609
DUDLEY ST
ELM ST W
ELM ST E
GRIFFIN AV
NEWELL DR
SIDNEY BLVD
PATTERSON LP
HUGHES BLVD
TOWN FARM RD
COUNTRY MEADOW DR
MAYO RD
CONSTITUTION AV
39608
63450
39607
63449
39606


Bangor
Hampden
PERRY RD
60577
41364
60578
37950
40462
GODSOE RD
THATCHER ST
DILLINGHAM ST
CROSBY ST
OLIVE ST
OLIVE HTS
MAIN ST
NADINES WY
MECAW RD
60575
39615
DOWD RD
ODLIN RD
UNNAMED 2267
I 95 SB
AMMO PARK
CAREY CIR
COMMERCE ST
59998
TRIANGLE RD
MAIN RD N
KELLY AV
38224
OLD COUNTY RD
SCHOOL HOUSE LN
US HWY 202
70488
HAMEL AV
MARINER RD
COVE RD
38208
39208
MAIN ST

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☑ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Rte 202 Cold Brook Rd and Western Ave area in Hampden

REPORT PARAMETERS

Year 2013, Start Month 1 through Year 2015 End Month: 12

Route: **1900553**	Start Node: **38037**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **39612**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0202X**	Start Node: **39608**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **41364**	End Offset: **0**	☐ **Exclude Last Node**
Route: **0202S**	Start Node: **39613**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **39612**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0202S**	Start Node: **39612**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **39608**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0202S**	Start Node: **60576**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **60575**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0009X**	Start Node: **39608**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **39606**	End Offset: **0**	☐ **Exclude Last Node**
Route: **0009W**	Start Node: **63450**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **39608**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0009W**	Start Node: **39606**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **63449**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

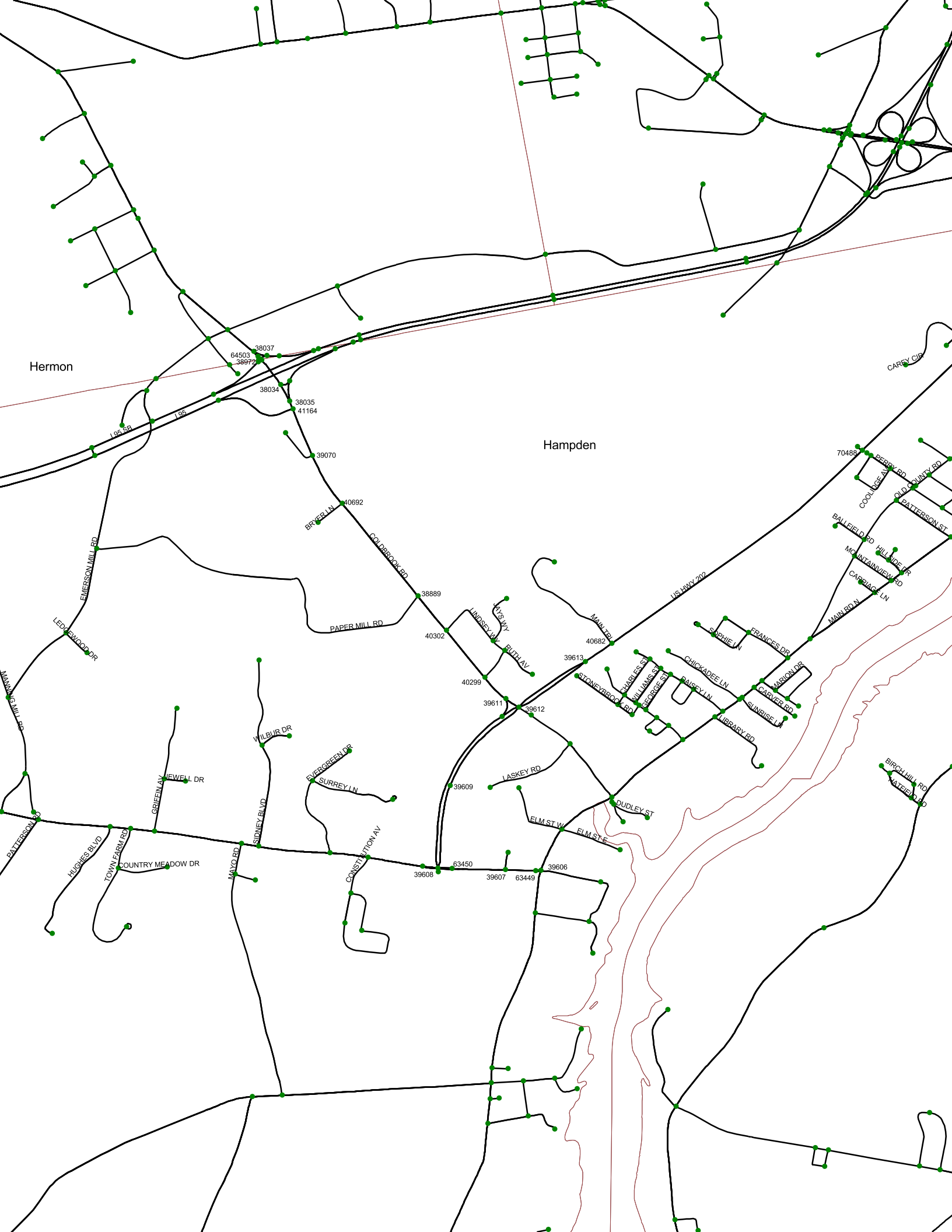
Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
A38037	1900553 - 1.97	Int of COLDBROOK RD RAMP OFF TO COLD BROOK RD	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.03	
A64503	1900553 - 2	Int of COLDBROOK RD RD INV 3201739	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.03	
A38972	1900553 - 2.02	TL Hampden Hermon	1	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.03	
P41276	1900553 - 2.03	Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	1	4	0	0	2	0	2	50.0	5.557	0.24	0.11	2.20
												Statewide Crash Rate:	0.03	
38034	1900553 - 2.16	Int of COLDBROOK RD RAMP CON	1	2	0	0	0	0	2	0.0	2.821	0.24	0.12	1.90
												Statewide Crash Rate:	0.03	
38035	1900553 - 2.23	Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD	1	0	0	0	0	0	0	0.0	2.308	0.00	0.13	0.00
												Statewide Crash Rate:	0.03	
41164	1900553 - 2.27	Int of COLDBROOK RD RAMP E OFF TO COLD BROOK RD	1	2	0	0	0	0	2	0.0	3.080	0.22	0.12	1.76
												Statewide Crash Rate:	0.03	
39070	1900553 - 2.47	Int of COLDBROOK RD, OLD COLDBROOK RD	1	0	0	0	0	0	0	0.0	2.291	0.00	0.41	0.00
												Statewide Crash Rate:	0.13	
40692	1900553 - 2.70	Int of BRYER LN COLDBROOK RD	1	1	0	0	0	0	1	0.0	2.196	0.15	0.42	0.00
												Statewide Crash Rate:	0.13	
38889	1900553 - 3.18	Int of COLDBROOK RD, PAPER MILL RD	1	0	0	0	0	0	0	0.0	2.157	0.00	0.42	0.00
												Statewide Crash Rate:	0.13	
40302	1900553 - 3.36	Int of COLDBROOK RD LINDSEY WY	1	0	0	0	0	0	0	0.0	2.022	0.00	0.42	0.00
												Statewide Crash Rate:	0.13	
40299	1900553 - 3.60	Int of COLDBROOK RD, EMERSON DR	1	0	0	0	0	0	0	0.0	2.085	0.00	0.42	0.00
												Statewide Crash Rate:	0.13	
39611	1900553 - 3.72	Int of COLDBROOK RD RAMP CON	1	0	0	0	0	0	0	0.0	1.660	0.00	0.45	0.00
												Statewide Crash Rate:	0.13	
39608	0202X - 164.61	Int of ENT HAMPDEN ACADEMY US HWY 202 WESTERN A	9	18	0	0	1	5	12	33.3	5.534	1.08	1.16	0.00
												Statewide Crash Rate:	0.67	
39609	0202X - 164.95	BRG 6079 US HWY 202 over SOUADABSCOOK STREAM	1	0	0	0	0	0	0	0.0	2.122	0.00	0.37	0.00
												Statewide Crash Rate:	0.11	
39612	0202X - 165.37	Int of COLD BROOK RD COLDBROOK RD US HWY 202	9	11	0	0	0	1	10	9.1	4.726	0.78	1.19	0.00
												Statewide Crash Rate:	0.67	
39613	0202X - 165.69	Non Int US HWY 202	1	0	0	0	0	0	0	0.0	3.184	0.00	0.33	0.00
												Statewide Crash Rate:	0.11	
40682	0202X - 165.82	Int of MAIN TRL US HWY 202	1	2	0	0	1	1	0	100.0	3.313	0.20	0.33	0.00
												Statewide Crash Rate:	0.11	
70488	0202X - 167.09	Int of CROSBY WY US HWY 202	1	0	0	0	0	0	0	0.0	1.646	0.00	0.39	0.00
												Statewide Crash Rate:	0.11	
59998	0202X - 167.69	Int of CAREY CIR US HWY 202	1	1	0	1	0	0	0	100.0	3.146	0.11	0.34	0.00
												Statewide Crash Rate:	0.11	
39615	0202X - 168.08	Int of MECAW RD PENOBSCOT MEADOW DR US HWY 202	1	6	0	2	1	0	3	50.0	4.139	0.48	0.31	1.55
												Statewide Crash Rate:	0.11	
60575	0202X - 168.15	Non Int US HWY 202	1	0	0	0	0	0	0	0.0	3.877	0.00	0.32	0.00
												Statewide Crash Rate:	0.11	

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
37950	0202X - 168.37	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.891	0.00	0.43	0.00
												Statewide Crash Rate:	0.13	
41364	0202X - 168.44	Int of RAMP ON FROM US 202 US 202	2	0	0	0	0	0	0	0.0	1.891	0.00	0.41	0.00
												Statewide Crash Rate:	0.12	
60571	0202S - 1.77	Int of RAMP CON US HWY 202	1	0	0	0	0	0	0	0.0	2.218	0.00	0.37	0.00
												Statewide Crash Rate:	0.11	
60576	0202S - 0.88	Int of RAMP OFF TO US-202, US HWY 202	2	0	0	0	0	0	0	0.0	1.048	0.00	0.46	0.00
												Statewide Crash Rate:	0.12	
60577	0202S - 1.04	Int of RAMP OFF TO US 202 US HWY 202	2	0	0	0	0	0	0	0.0	1.920	0.00	0.41	0.00
												Statewide Crash Rate:	0.12	
60578	0202S - 1.15	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.955	0.00	0.43	0.00
												Statewide Crash Rate:	0.13	
63450	0009X - 188.40	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.842	0.00	0.32	0.00
												Statewide Crash Rate:	0.11	
39607	0009X - 188.61	Int of DEWEY ST WESTERN AV	1	0	0	0	0	0	0	0.0	3.529	0.00	0.33	0.00
												Statewide Crash Rate:	0.11	
63449	0009X - 188.73	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.367	0.00	0.33	0.00
												Statewide Crash Rate:	0.11	
39606	0009X - 188.75	Int of CANOE CLUB RD MAIN RD N WESTERN AV	9	7	0	0	0	1	6	14.3	4.855	0.48	1.19	0.00
												Statewide Crash Rate:	0.67	
Study Years:	3.00	**NODE TOTALS:**		54	0	3	5	8	38	29.6	84.380	0.21	0.27	0.78


Hermon
Hampden
38037
64503
38972
38034
38035
41164
I95
I95 SB
39070
40692
BRYER LN
COLDBROOK RD
38889
PAPER MILL RD
EMERSON MILL RD
LEDGEWOOD DR
MANNING MILL RD
40302
LINDSEY WY
JAYS WY
RUTH AV
40299
39611
39612
39613
40682
MAIN TRL
US HWY 202
STONEYBROOK RD
CHARLES ST
WILLIAMS ST
GEORGE ST
CHICKADEE LN
PAISEY LN
SOPHIE LN
FRANCES DR
MARION DR
CARVER RD
SUNRISE LN
LIBRARY RD
MAIN RD N
CARRIAGE LN
MOUNTAINVIEW RD
HILLSIDE DR
BALLFIELD RD
PATTERSON ST
OLD COUNTY RD
PERRY RD
COOLIDGE AV
70488
CAREY CIR
BIRCH HILL RD
HATFIELD RD
WILBUR DR
EVERGREEN DR
SURREY LN
LASKEY RD
39609
DUDLEY ST
ELM ST W
ELM ST E
GRIFFIN AV
NEWELL DR
SIDNEY BLVD
PATTERSON LP
HUGHES BLVD
TOWN FARM RD
COUNTRY MEADOW DR
MAYO RD
CONSTITUTION AV
39608
63450
39607
63449
39606

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☑ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Rte 202 Cold Brook Rd and Western Ave area in Hampden

REPORT PARAMETERS

Year 2013, Start Month 1 through Year 2015 End Month: 12

Route: 1900553	Start Node: 38037	Start Offset: 0	☐ Exclude First Node
	End Node: 39612	End Offset: 0	☑ Exclude Last Node
Route: 0202X	Start Node: 39608	Start Offset: 0	☐ Exclude First Node
	End Node: 41364	End Offset: 0	☐ Exclude Last Node
Route: 0202S	Start Node: 39613	Start Offset: 0	☑ Exclude First Node
	End Node: 39612	End Offset: 0	☑ Exclude Last Node
Route: 0202S	Start Node: 39612	Start Offset: 0	☑ Exclude First Node
	End Node: 39608	End Offset: 0	☑ Exclude Last Node
Route: 0202S	Start Node: 60576	Start Offset: 0	☐ Exclude First Node
	End Node: 60575	End Offset: 0	☑ Exclude Last Node
Route: 0009X	Start Node: 39608	Start Offset: 0	☑ Exclude First Node
	End Node: 39606	End Offset: 0	☐ Exclude Last Node
Route: 0009W	Start Node: 63450	Start Offset: 0	☑ Exclude First Node
	End Node: 39608	End Offset: 0	☑ Exclude Last Node
Route: 0009W	Start Node: 39606	Start Offset: 0	☑ Exclude First Node
	End Node: 63449	End Offset: 0	☑ Exclude Last Node

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
37950	0202X - 168.37	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.891	0.00	0.43	0.00
												Statewide Crash Rate:	0.13	
41364	0202X - 168.44	Int of RAMP ON FROM US 202 US 202	2	0	0	0	0	0	0	0.0	1.891	0.00	0.41	0.00
												Statewide Crash Rate:	0.12	
60571	0202S - 1.77	Int of RAMP CON US HWY 202	1	0	0	0	0	0	0	0.0	2.218	0.00	0.37	0.00
												Statewide Crash Rate:	0.11	
60576	0202S - 0.88	Int of RAMP OFF TO US-202, US HWY 202	2	0	0	0	0	0	0	0.0	1.048	0.00	0.46	0.00
												Statewide Crash Rate:	0.12	
60577	0202S - 1.04	Int of RAMP OFF TO US 202 US HWY 202	2	0	0	0	0	0	0	0.0	1.920	0.00	0.41	0.00
												Statewide Crash Rate:	0.12	
60578	0202S - 1.15	TL Bangor Hampden	2	0	0	0	0	0	0	0.0	1.955	0.00	0.43	0.00
												Statewide Crash Rate:	0.13	
63450	0009X - 188.40	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.842	0.00	0.32	0.00
												Statewide Crash Rate:	0.11	
39607	0009X - 188.61	Int of DEWEY ST WESTERN AV	1	0	0	0	0	0	0	0.0	3.529	0.00	0.33	0.00
												Statewide Crash Rate:	0.11	
63449	0009X - 188.73	Non Int WESTERN AV	1	0	0	0	0	0	0	0.0	3.367	0.00	0.33	0.00
												Statewide Crash Rate:	0.11	
39606	0009X - 188.75	Int of CANOE CLUB RD MAIN RD N WESTERN AV	9	7	0	0	0	1	6	14.3	4.855	0.48	1.19	0.00
												Statewide Crash Rate:	0.67	
Study Years:	3.00	NODE TOTALS:		54	0	3	5	8	38	29.6	84.380	0.21	0.27	0.78

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
38037	64503	3116304	0 - 0.03	1900553 - 1.97	0.03	1	0	0	0	0	0	0	0.0	0.00087	0.00	638.37	0.00
Int of COLDBROOK RD RAMP OFF TO COLD BROOK RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
64503	38972	3120227	0 - 0.02	1900553 - 2	0.02	1	0	0	0	0	0	0	0.0	0.00053	0.00	702.02	0.00
Int of COLDBROOK RD RD INV 3201739				RD INV 19 00553											Statewide Crash Rate: 171.11		
38972	41276	3110802	0 - 0.01	1900553 - 2.02	0.01	1	0	0	0	0	0	0	0.0	0.00034	0.00	736.38	0.00
TL Hampden Hermon				RD INV 19 00553											Statewide Crash Rate: 171.11		
41276	38034	3944372	0 - 0.13	1900553 - 2.03	0.13	1	2	0	0	0	0	2	0.0	0.00458	145.69	422.28	0.00
Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
38034	38035	3110617	0 - 0.07	1900553 - 2.16	0.07	1	0	0	0	0	0	0	0.0	0.00149	0.00	563.65	0.00
Int of COLDBROOK RD RAMP CON				RD INV 19 00553											Statewide Crash Rate: 171.11		
38035	41164	3110619	0 - 0.04	1900553 - 2.23	0.04	1	0	0	0	0	0	0	0.0	0.00100	0.00	619.99	0.00
Int of COLDBROOK RD RAMP ON FROM COLD BROOK RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
39070	41164	3124219	0 - 0.20	1900553 - 2.27	0.20	1	4	0	0	0	0	4	0.0	0.00469	284.32	419.66	0.00
Int of COLDBROOK RD, OLD COLDBROOK RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
39070	40692	3110833	0 - 0.23	1900553 - 2.47	0.23	1	1	0	0	0	0	1	0.0	0.00511	65.21	410.61	0.00
Int of COLDBROOK RD, OLD COLDBROOK RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
38889	40692	3110751	0 - 0.48	1900553 - 2.70	0.48	1	3	0	0	0	0	3	0.0	0.01035	96.66	346.27	0.00
Int of COLDBROOK RD, PAPER MILL RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
38889	40302	3110750	0 - 0.18	1900553 - 3.18	0.18	1	1	0	0	0	1	0	100.0	0.00367	90.92	446.96	0.00
Int of COLDBROOK RD, PAPER MILL RD				RD INV 19 00553											Statewide Crash Rate: 171.11		
40299	40302	3111224	0 - 0.24	1900553 - 3.36	0.24	1	1	0	0	1	0	0	100.0	0.00475	70.25	418.40	0.00
Int of COLDBROOK RD, EMERSON DR				RD INV 19 00553											Statewide Crash Rate: 171.11		
39611	40299	3110964	0 - 0.12	1900553 - 3.60	0.12	1	0	0	0	0	0	0	0.0	0.00260	0.00	488.35	0.00
Int of COLDBROOK RD RAMP CON				RD INV 19 00553											Statewide Crash Rate: 171.11		
39611	39612	3132117	0 - 0.06	1900553 - 3.72	0.06	1	0	0	0	0	0	0	0.0	0.00069	0.00	670.09	0.00
Int of COLDBROOK RD RAMP CON				RD INV 19 00553											Statewide Crash Rate: 171.11		
39608	39609	3115292	0 - 0.34	0202X - 164.61	0.34	1	3	0	0	0	1	2	33.3	0.00721	138.62	256.53	0.00
Int of ENT HAMPDEN ACADEMY US HWY 202 WESTERN AV				US 202											Statewide Crash Rate: 102.42		
39609	39612	3939665	0 - 0.42	0202X - 164.95	0.42	1	1	0	0	0	0	1	0.0	0.00891	37.41	243.16	0.00
BRG 6079 US HWY 202 over SOUADABSCOOK STREAM				US 202											Statewide Crash Rate: 102.42		
39612	39613	3140142	0 - 0.32	0202X - 165.37	0.32	1	1	0	0	0	0	1	0.0	0.00510	65.35	280.49	0.00
Int of COLD BROOK RD COLDBROOK RD US HWY 202				US 202											Statewide Crash Rate: 102.42		
39613	40682	3121370	0 - 0.13	0202X - 165.69	0.13	1	0	0	0	0	0	0	0.0	0.00413	0.00	296.18	0.00
Non Int US HWY 202				US 202											Statewide Crash Rate: 102.42		
70488	40682	3562196	0 - 1.27	0202X - 165.82	1.27	1	14	0	0	0	0	14	0.0	0.04177	111.72	172.07	0.00
Int of CROSBY WY US HWY 202				US 202											Statewide Crash Rate: 102.42		

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
59998	70488	3562195	0 - 0.60	0202X - 167.09	0.60	1	3	0	0	0	0	3	0.0	0.01973	50.67	201.12	0.00
Int of CAREY CIR US HWY 202				US 202											Statewide Crash Rate: 102.42		
59998	39615	3939462	0 - 0.39	0202X - 167.69	0.39	1	3	0	0	0	1	2	33.3	0.01168	85.60	227.41	0.00
Int of CAREY CIR US HWY 202				US 202											Statewide Crash Rate: 102.42		
60575	39615	2079512	0 - 0.07	0202X - 168.08	0.07	1	2	0	0	0	0	2	0.0	0.00269	247.65	330.60	0.00
Non Int US HWY 202				US 202											Statewide Crash Rate: 102.42		
37950	60575	3139144	0 - 0.22	0202X - 168.15	0.22	1	0	0	0	0	0	0	0.0	0.00416	0.00	295.70	0.00
TL Bangor Hampden				US 202											Statewide Crash Rate: 102.42		
37950	41364	3132064	0 - 0.07	0202X - 168.37	0.07	2	0	0	0	0	0	0	0.0	0.00132	0.00	615.53	0.00
TL Bangor Hampden				US 202											Statewide Crash Rate: 185.19		
39613	39612	3139140	0 - 0.32	0202S - 1.37	0.32	1	2	0	0	0	0	2	0.0	0.00508	131.30	280.83	0.00
Non Int US HWY 202				US 202 SB											Statewide Crash Rate: 102.42		
39612	60571	3121371	0 - 0.08	0202S - 1.69	0.08	1	0	0	0	0	0	0	0.0	0.00096	0.00	414.65	0.00
Int of COLD BROOK RD COLDBROOK RD US HWY 202				US 202 SB											Statewide Crash Rate: 102.42		
60571	39608	3115295	0 - 0.70	0202S - 1.77	0.70	1	2	0	0	1	0	1	50.0	0.01553	42.94	212.48	0.00
Int of RAMP CON US HWY 202				US 202 SB											Statewide Crash Rate: 102.42		
60576	60577	3121373	0 - 0.16	0202S - 0.88	0.16	2	0	0	0	0	0	0	0.0	0.00168	0.00	580.12	0.00
Int of RAMP OFF TO US-202, US HWY 202				US 202 SB											Statewide Crash Rate: 185.19		
60577	60578	3118435	0 - 0.11	0202S - 1.04	0.11	2	0	0	0	0	0	0	0.0	0.00215	0.00	544.16	0.00
Int of RAMP OFF TO US 202 US HWY 202				US 202 SB											Statewide Crash Rate: 185.19		
60578	60575	3116045	0 - 0.22	0202S - 1.15	0.22	1	0	0	0	0	0	0	0.0	0.00430	0.00	293.19	0.00
TL Bangor Hampden				US 202 SB											Statewide Crash Rate: 102.42		
63450	39608	3120362	0 - 0.06	0009X - 188.34	0.06	1	0	0	0	0	0	0	0.0	0.00120	0.00	397.78	0.00
Non Int WESTERN AV				ST RTE 9											Statewide Crash Rate: 102.42		
39607	63450	3116114	0 - 0.21	0009X - 188.40	0.21	1	1	0	0	1	0	0	100.0	0.00771	43.24	252.22	0.00
Int of DEWEY ST WESTERN AV				ST RTE 9											Statewide Crash Rate: 102.42		
63449	39607	3139582	0 - 0.12	0009X - 188.61	0.12	1	0	0	0	0	0	0	0.0	0.00404	0.00	297.97	0.00
Non Int WESTERN AV				ST RTE 9											Statewide Crash Rate: 102.42		
39606	63449	3129073	0 - 0.02	0009X - 188.73	0.02	1	0	0	0	0	0	0	0.0	0.00034	0.00	427.68	0.00
Int of CANOE CLUB RD MAIN RD N WESTERN AV				ST RTE 9											Statewide Crash Rate: 102.42		
63450	39608	3116115	0 - 0.06	0009W - 0.48	0.06	1	0	0	0	0	0	0	0.0	0.00100	0.00	411.80	0.00
Non Int WESTERN AV				ST RTE 9W											Statewide Crash Rate: 102.42		
39606	63449	3139583	0 - 0.02	0009W - 0.46	0.02	1	0	0	0	0	0	0	0.0	0.00034	0.00	427.68	0.00
Int of CANOE CLUB RD MAIN RD N WESTERN AV				ST RTE 9W											Statewide Crash Rate: 102.42		
Study Years:	3.00			**Section Totals:**	7.72		44	0	0	3	3	38	13.6	0.19169	76.51	155.43	0.49
				Grand Totals:	7.72		98	0	3	8	11	76	22.4	0.19169	170.41	189.96	0.90

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
38037	64503	3116304	0 - 0.03	1900553 - 1.97	0	0	0	0	0	0				
64503	38972	3120227	0 - 0.02	1900553 - 2	0	0	0	0	0	0				
38972	41276	3110802	0 - 0.01	1900553 - 2.02	0	0	0	0	0	0				
41276	38034	3944372	0 - 0.13	1900553 - 2.03	2	0	0	0	0	2	2014-37966	06/30/2014	2.12	PD
											2013-872	01/08/2013	2.14	PD
38034	38035	3110617	0 - 0.07	1900553 - 2.16	0	0	0	0	0	0				
38035	41164	3110619	0 - 0.04	1900553 - 2.23	0	0	0	0	0	0				
39070	41164	3124219	0 - 0.20	1900553 - 2.27	4	0	0	0	0	4	2014-4916	02/09/2014	2.31	PD
											2015-14980	05/18/2015	2.34	PD
											2014-25819	09/24/2014	2.37	PD
											2014-6614	02/20/2014	2.43	PD
39070	40692	3110833	0 - 0.23	1900553 - 2.47	1	0	0	0	0	1	2015-49288	11/24/2015	2.61	PD
38889	40692	3110751	0 - 0.48	1900553 - 2.70	3	0	0	0	0	3	2014-26560	10/01/2014	3	PD
											2015-47370	10/28/2015	3.03	PD
											2014-31104	11/10/2014	3.14	PD
38889	40302	3110750	0 - 0.18	1900553 - 3.18	1	0	0	0	1	0	2013-20271	08/12/2013	3.24	C
40299	40302	3111224	0 - 0.24	1900553 - 3.36	1	0	0	1	0	0	2013-12961	05/16/2013	3.48	B
39611	40299	3110964	0 - 0.12	1900553 - 3.60	0	0	0	0	0	0				
39611	39612	3132117	0 - 0.06	1900553 - 3.72	0	0	0	0	0	0				
39608	39609	3115292	0 - 0.34	0202X - 164.61	3	0	0	0	1	2	2013-28349	11/08/2013	164.79	C
											2014-30706	11/10/2014	164.84	PD
											2013-15804	06/27/2013	164.94	PD
39609	39612	3939665	0 - 0.42	0202X - 164.95	1	0	0	0	0	1	2013-18770	07/31/2013	165.20	PD
39612	39613	3140142	0 - 0.32	0202X - 165.37	1	0	0	0	0	1	2014-27490	10/11/2014	165.67	PD
39613	40682	3121370	0 - 0.13	0202X - 165.69	0	0	0	0	0	0				

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
70488	40682	3562196	0 - 1.27	0202X - 165.82	14	0	0	0	0	14	2014-35455	12/15/2014	166.01	PD
											2014-27936	10/16/2014	166.02	PD
											2013-1285	01/14/2013	166.38	PD
											2014-7799	02/22/2014	166.38	PD
											2014-9797	03/22/2014	166.53	PD
											2014-36937	12/25/2014	166.60	PD
											2013-7297	03/15/2013	166.62	PD
											2015-41219	09/02/2015	166.69	PD
											2015-18808	06/28/2015	166.82	PD
											2014-2093	01/11/2014	166.82	PD
											2015-17546	06/08/2015	166.82	PD
											2014-32863	11/25/2014	166.83	PD
											2014-9800	03/21/2014	166.95	PD
											2014-9799	03/27/2014	166.98	PD
59998	70488	3562195	0 - 0.60	0202X - 167.09	3	0	0	0	0	3	2013-18991	08/03/2013	167.14	PD
											2015-14752	05/13/2015	167.35	PD
											2014-32869	11/26/2014	167.56	PD
59998	39615	3939462	0 - 0.39	0202X - 167.69	3	0	0	0	1	2	2015-13192	04/22/2015	167.76	PD
											2014-36491	12/18/2014	167.98	C
											2015-48800	11/22/2015	168.02	PD
60575	39615	2079512	0 - 0.07	0202X - 168.08	2	0	0	0	0	2	2013-25491	10/14/2013	168.11	PD
											2015-18463	06/23/2015	168.12	PD
37950	60575	3139144	0 - 0.22	0202X - 168.15	0	0	0	0	0	0				
37950	41364	3132064	0 - 0.07	0202X - 168.37	0	0	0	0	0	0				
39613	39612	3139140	0 - 0.32	0202S - 1.37	2	0	0	0	0	2	2015-47950	11/15/2015	1.46	PD
											2013-27931	11/06/2013	1.54	PD
39612	60571	3121371	0 - 0.08	0202S - 1.69	0	0	0	0	0	0				
60571	39608	3115295	0 - 0.70	0202S - 1.77	2	0	0	1	0	1	2014-31630	11/16/2014	1.87	PD
											2013-6782	03/04/2013	2.06	B
60576	60577	3121373	0 - 0.16	0202S - 0.88	0	0	0	0	0	0				
60577	60578	3118435	0 - 0.11	0202S - 1.04	0	0	0	0	0	0				
60578	60575	3116045	0 - 0.22	0202S - 1.15	0	0	0	0	0	0				
63450	39608	3120362	0 - 0.06	0009X - 188.34	0	0	0	0	0	0				
39607	63450	3116114	0 - 0.21	0009X - 188.40	1	0	0	1	0	0	2014-23227	08/15/2014	188.42	B

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
63449	39607	3139582	0 - 0.12	0009X - 188.61	0	0	0	0	0	0				
39606	63449	3129073	0 - 0.02	0009X - 188.73	0	0	0	0	0	0				
63450	39608	3116115	0 - 0.06	0009W - 0.48	0	0	0	0	0	0				
39606	63449	3139583	0 - 0.02	0009W - 0.46	0	0	0	0	0	0				
				Totals:	44	0	0	3	3	38				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM													
	Hour of Day																									
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	2	2	0	2	0	0	1	0	0	11
MONDAY	0	0	1	2	0	0	1	1	2	0	1	0	1	0	1	0	4	1	0	0	2	1	1	0	0	19
TUESDAY	0	0	0	0	0	0	1	2	1	0	1	0	1	0	0	0	1	2	1	1	1	0	0	0	0	12
WEDNESDAY	0	0	0	0	1	1	0	1	2	1	1	1	0	0	2	1	0	2	3	0	1	0	0	0	0	17
THURSDAY	0	0	1	0	0	0	0	0	1	0	0	2	1	2	1	2	1	0	2	2	1	0	0	0	0	16
FRIDAY	0	1	0	0	0	0	0	0	2	0	0	3	0	0	1	0	2	1	1	1	1	0	0	0	0	13
SATURDAY	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	3	0	1	0	1	1	0	1	0	0	10
Totals	0	1	2	2	1	1	2	4	10	1	3	6	4	4	5	8	10	9	7	7	7	1	3	0	0	**98**

Vehicle Counts by Type

Unit Type	Total	Unit Type	Total
1-Passenger Car	91	23-Bicyclist	0
2-(Sport) Utility Vehicle	29	24-Witness	13
3-Passenger Van	7	25-Other	4
4-Cargo Van (10K lbs or Less)	2	**Total**	**176**
5-Pickup	20		
6-Motor Home	0		
7-School Bus	0		
8-Transit Bus	0		
9-Motor Coach	0		
10-Other Bus	0		
11-Motorcycle	3		
12-Moped	0		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	0		
17-Medium/Heavy Trucks (More than 10,000 lbs)	7		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	0		

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	59	33	3	0	0	0	95
Ran Off Roadway	2	0	0	0	0	0	2
Failed to Yield Right-of-Way	17	1	1	0	0	0	19
Ran Red Light	3	2	0	0	0	0	5
Ran Stop Sign	1	0	0	0	0	0	1
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	4	3	0	0	0	0	7
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	1	0	0	0	0	1
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	2	9	1	0	0	0	12
Failed to Keep in Proper Lane	1	2	0	0	0	0	3
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	1	2	0	0	0	0	3
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	2	0	0	0	0	0	2
Over-Correcting/Over-Steering	0	1	0	0	0	0	1
Other Contributing Action	5	3	0	0	0	0	8
Unknown	0	0	0	0	0	0	0
Total	**97**	**57**	**5**	**0**	**0**	**0**	**159**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	97	56	5	0	0	0	158
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
Total	**97**	**57**	**5**	**0**	**0**	**0**	**159**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	17	0	0	0	0	17
20-24	13	0	0	0	0	13
25-29	19	0	0	0	0	19
30-39	27	0	0	0	0	27
40-49	23	0	0	0	0	23
50-59	33	0	0	0	0	33
60-69	15	0	0	0	0	15
70-79	8	0	0	0	0	8
80-Over	5	0	0	0	0	5
Unknown	3	0	0	0	0	3
Total	**163**	**0**	**0**	**0**	**0**	**163**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total
1-Overturn / Rollover	3
2-Fire / Explosion	0
3-Immersion	0
4-Jackknife	0
5-Cargo / Equipment Loss Or Shift	0
6-Fell / Jumped from Motor Vehicle	0
7-Thrown or Falling Object	2
8-Other Non-Collision	4
9-Pedestrian	0
10-Pedalcycle	0
11-Railway Vehicle - Train, Engine	0
12-Animal	25
13-Motor Vehicle in Transport	118
14-Parked Motor Vehicle	1
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	1
16-Work Zone / Maintenance Equipment	1
17-Other Non-Fixed Object	0
18-Impact Attenuator / Crash Cushion	0
19-Bridge Overhead Structure	0
20-Bridge Pier or Support	0
21-Bridge Rail	0
22-Cable Barrier	0
23-Culvert	0
24-Curb	0
25-Ditch	0
26-Embankment	1
27-Guardrail Face	1
28-Guardrail End	1
29-Concrete Traffic Barrier	0
30-Other Traffic Barrier	0
31-Tree (Standing)	1
32-Utility Pole / Light Support	0
33-Traffic Sign Support	0
34-Traffic Signal Support	0
35-Fence	0
36-Mailbox	0
37-Other Post Pole or Support	1
38-Other Fixed Object (wall, building, tunnel, etc.)	0
39-Unknown	0
40-Gate or Cable	0
41-Pressure Ridge	0
Total	**160**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	35
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	1
5-Stop Signs - Other	9
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	51
14-Other	1
Total	**98**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	3	3
B	8	10
C	11	16
PD	76	0
Total	**98**	**29**

Road Character

Road Grade	Total
1-Level	87
2-On Grade	11
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**98**

Light

Light Condition	Total
1-Daylight	55
2-Dawn	1
3-Dusk	4
4-Dark - Lighted	14
5-Dark - Not Lighted	24
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**98**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2013	2014	2015	Total
JANUARY	4	4	2	10
FEBRUARY	4	4	3	11
MARCH	5	5	1	11
APRIL	0	1	4	5
MAY	3	3	2	8
JUNE	1	5	4	10
JULY	2	0	0	2
AUGUST	3	1	2	6
SEPTEMBER	2	4	3	9
OCTOBER	1	5	1	7
NOVEMBER	3	5	4	12
DECEMBER	4	3	0	7
Total	**32**	**40**	**26**	**98**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	2	1	4	26	0	1	0	0	0	0	0	0	0	34
Head-on / Sideswipe	1	0	0	0	0	0	1	0	0	0	0	0	0	2
Intersection Movement	0	0	5	16	0	0	0	0	0	0	0	0	0	21
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	6	0	0	0	0	0	0	1	0	0	0	0	0	7
All Other Animal	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	0	1	0	0	2	1	0	0	0	0	0	0	5
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	25	1	0	0	0	0	0	0	0	0	0	0	0	26
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**38**	**2**	**10**	**42**	**0**	**3**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**98**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	9	2	0	0	0	0	0	0	0	0	0	11
Dark - Not Lighted	18	1	0	0	0	0	0	0	0	0	1	20
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	1	0	0	0	0	0	0	0	0	0	0	1
Daylight	37	0	0	0	0	0	0	3	0	0	1	41
Dusk	0	0	0	0	0	0	0	1	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	1	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	5	0	0	0	0	0	0	1	0	0	1	7
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	3	3
Dusk	0	0	0	0	0	0	0	0	0	0	2	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	1	0	0	0	0	0	0	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	1	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	1	0	0	1	2
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	1	1	0	0	0	0	0	1	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	1	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**72**	**6**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**98**