March 5, 2020

Mr. Chuck Marshall
Stewart's Shops
P.O. Box 435
Saratoga Springs, NY 12866

RE: Traffic Assessment, Stewart's Shop, 8 West Bridge Street, Village of Catskill, Greene County, New York; CM Project No. 120-028

Dear Mr. Marshall:

Creighton Manning Engineering, LLP has completed a traffic assessment for the proposed construction of a *Stewart's Shop* located in the northwest quadrant of the signalized West Bridge Street (NY Route 385)/West Main Street intersection in the Village of Catskill. This evaluation is based on information provided in the "Proposed Site Plan," prepared by *Stewart's Shops* dated January 2, 2020 included under Attachment A and supplements the *Trip Generation Assessment* letter dated January 24, 2020.

1.0 Project Description

The proposed project includes construction of a 3,996 square foot (SF) *Stewart's Shop* convenience market with six fueling positions (three pumps) at 8 West Bridge Street. The project site will combine four parcels and remove two existing buildings associated with the *Mountain T-Shirts* graphics store and the *Solid Mahogany Tables* furniture store. Access to the existing parcels on this intersection corner is provided via two curb cuts on West Bridge Street and one curb cut on West Main Street. It is noted that access to four garage openings on West Main Street is also provided. The existing driveway on West Main Street will remain. In addition, the driveway on West Bridge Street located on the western edge of the property will remain while the second driveway located closer to the traffic signal will be removed. The four access points associated with the garage openings will also be eliminated. The removal of the curb cut on West Bridge Street and access points on West Main Street promotes positive access management. The study area is shown on Figure 1.

2.0 Existing Conditions

<u>Roadways Serving the Site</u>
West Bridge Street (NY Route 385) provides east-west travel in the the Village of Catskill from US Route 9W/NY Route 23A to Water Street and is classified as an urban major collector. West Bridge Street is a two lane roadway with eight foot wide shoulders provided on both sides of the road for on-street parking in the project vicinity. Data published by the New York State Department of Transportation (NYSDOT) in the latest version (2017) of the *Pavement Data Report* indicates that the pavement on West Bridge Street is in fair condition near the project site. Sidewalks are provided on both sides of the street adjacent to the site and the posted speed limit is 30-mph within the Village of Catskill. The latest available traffic volume data published by NYSDOT shows that West Bridge Street serves approximately 6,470 vehicles per day (vpd) near the site. Land uses along West Bridge Street generally include commercial and residential uses, the *Catskill Senior High School,* and *Elliot Park*.

West Main Street is a local road that provides north-south travel between Edgemere Hill Road and Grandview Avenue Extension in the Village of Catskill. West Main Street is a two lane roadway with one to two foot shoulders in the project vicinity. A 150-foot long sidewalk is provided on the west side of the road north of the project site near the *Catskill Senior High School.* The posted speed limit within the Village

of Catskill is 30-mph; however, a 20-mph school speed zone is located north of the project site adjacent to the school. Land uses along West Main Street include commercial and residential uses and the *Catskill Senior High School*.

Study Intersections

The West Bridge Street/West Main Street intersection is an offset four leg intersection operating under a semi-actuated traffic signal. Each approach provides a single lane for shared travel movements. Sidewalks are provided on West Bridge Street and for a short 40-foot section on the east side of West Main Street south of West Bridge Street. Faded marked crosswalks are provided on all intersection approaches and pedestrian push buttons with countdown timers are provided at this intersection.

Data Collection

Turning movement counts were conducted at the study area intersection and existing curb cuts on Tuesday, March 3, 2020 during the morning peak period from 7:00 to 9:00 a.m. and on Thursday, February 27, 2020 during the afternoon peak period from 2:30 to 6:00 p.m. This traffic study focuses on the weekday AM and PM peak periods since these time periods correspond to peak operations at the site, peak traffic conditions on the surrounding roadway network, and peak conditions of the nearby school. The raw traffic volumes are included under Attachment B. These peak hour traffic counts provide existing traffic conditions at the study area intersection and are shown on Figure 2-1. These counts form the basis for all traffic analysis.

3.0 Traffic Assessment

Trip Generation

Trip generation determines the quantity of traffic expected to travel to/from a given site. The Institute of Transportation Engineers (ITE) *Trip Generation*, 10th edition, is the industry standard used for estimating trip generation for proposed land uses based on data collected at similar uses. The trip generation of the proposed *Stewart's Shop* was estimated using land use code (LUC) 853 for a Convenience Market with Gasoline Pumps.

It can be expected that some trips to the gas station/convenience market originate from traffic that is already passing the site on West Bridge Street and West Main Street. Pass-by trips are vehicles that will stop at the site before continuing on to their primary destination. For example, a driver traveling eastbound on West Bridge Street leaving work may stop at the convenience store and then continue eastbound towards home. This type of trip is considered a pass-by trip. Based on a review of data published by ITE, a pass-by trip percentage (60% to 65%) was applied to trips generated by the site as shown on Table 1.

The proposed development of the site will replace the existing graphics store and furniture store land uses. It is not anticipated that these stores currently generate a significant amount of peak hour traffic; therefore, in order to provide a conservative assessment, the proposed total external trip generation of the site was not reduced by the amount of external trips currently generated by the existing land uses. The peak hour trip generation estimate is summarized in Table 1.

Table 1 – Trip Generation Summary

Land Use	Size (SF)	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Proposed Stewart's Shop	3,996	81	81	162	99	98	197
Pass By Trips (60% AM Peak/65% PM peak)		-49	-49	-98	-64	-64	-128
Proposed Primary Trips		**32**	**32**	**64**	**35**	**34**	**69**

Accounting for pass-by trips, the proposed development will generate a total of 64 new vehicle trips during the AM peak hour and 69 new vehicle trips during the PM peak hour. The total number of trips expected at the Site Driveways is the sum of the new trips and the pass-by trips. The magnitude of the new vehicle trips generated at the site is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one intersection approach for needing off-site intersection analysis. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off site intersections and screen out locations from requiring detailed analysis that do not reach the 100 vehicle threshold indicating that additional detailed intersection analysis is not needed and that the site generated traffic will be accommodated by the existing roadway network.

Future Traffic Volumes

To evaluate the impact of the proposed development, traffic projections were prepared for the expected year of completion. Full build-out of the project is expected this year (2020), and therefore a general background growth rate was not applied. Additionally, the Village of Catskill indicated that there are no other developments currently planned or under construction in the project area.

Trips associated with the proposed project were distributed at the study intersection and site driveways based on existing and anticipated travel patterns for patrons of the proposed *Stewart's Shop*. The primary trip distribution patterns are shown on Figure 2-2 while the pass-by trip distribution patterns are shown on Figure 3-1. Primary and Pass-by trips were assigned to the study area and site driveway intersections as shown on Figure 3-2 and Figure 4-1. The 2020 Build traffic volumes represent future traffic volumes after construction and occupancy of the site and are illustrated on Figure 4-2.

Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using Synchro Software, which automates the procedures contained in the *Highway Capacity Manual.* Table 2 summarizes the results of the level of service calculations for the proposed project. The detailed levels of service analyses are included under Attachment C.

Table 2 – Level of Service Summary

Intersection		Control	AM Peak Hour		PM Peak Hour	
			2020 Existing	2020 Build	2020 Existing	2020 Build
West Bridge Street/West Main Street		S				
West Bridge Street EB	LTR		A (7.1)	A (7.2)	A (7.7)	A (7.9)
West Bridge Street WB	LTR		A (6.5)	A (6.5)	A (7.3)	A (7.4)
West Main Street NB	LTR		B (11.5)	B (11.5)	B (11.9)	B (11.9)
West Main Street SB	LTR		B (13.4)	B (13.4)	B (12.6)	B (12.6)
	Overall		A (8.7)	A (8.7)	A (8.4)	A (8.6)
West Bridge Street/Site Driveway		U				
West Bridge Street EB	L		A (0.0)	A (7.9)	A (0.0)	A (8.3)
Existing Site Driveway SB	LR		A (0.0)	B (12.6)	B (10.7)	C (15.8)
West Main Street/Site Driveway		U				
West Main Street NB	L		A (7.6)	A (7.6)	A (0.0)	A (7.5)
Site Driveway EB	LR		A (9.3)	B (10.0)	A (0.0)	A (9.5)

S, U = Signalized or Unsignalized intersection
EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
L, T, R = Left-turn, Through, and/or Right-turn movements
X (Y.Y) = Level of service (Average delay in seconds per vehicle)
-- = Not Applicable

The following observations are noted regarding the capacity evaluations:

- West Bridge Street/West Main Street – The evaluation shows that this intersection currently operates at an overall LOS A during the AM and PM peak hours with all approaches operating at LOS B or better. Overall intersection and lane movement levels of service are maintained through Build conditions during both peak hours with minimal increase in average vehicle delay (one second or less). No level of service changes are expected at the intersection between Existing and Build conditions; therefore, no mitigation is recommended.

- West Bridge Street/Site Driveway (Existing and Proposed) – The level of service analysis indicates that after development of the *Stewart's Shop*, the southbound Site Driveway approach will operate at LOS B/C during Build conditions. In addition, the eastbound left turn movement on West Bridge Street will continue to operate at LOS A during both peak hours through Build conditions. It is recommended that the southbound Site Driveway approach operate under stop sign control and that a single lane entering and exiting be provided.

- West Main Street/Site Driveway (Existing and Proposed) – The level of service analysis indicates that after development of the *Stewart's Shop*, the eastbound Site Driveway approach will operate at LOS B or better during Build conditions. In addition, the northbound left turn movement on West Main Street will operate at LOS A during both peak hours through Build conditions. It is recommended that the eastbound Site Driveway approach operate under stop sign control and that a single lane entering and exiting be provided.

A review of the existing conditions SimTraffic simulation indicates that the analysis is consistent with field observations and confirms that adequate access will be provided after re-development of the site. It is recommended that sidewalks be provided on the south and east sides of the parcel and that ADA compliant curb ramps be provided at the marked crosswalks. In addition, it is noted that the existing pedestrian signal and push button provided on the northwest corner of the signalized intersection used to cross the north leg of West Main Street is located approximately 60-feet from the applicable crosswalk. It is recommended that the pedestrian signal and push button be relocated closer to curb ramp and

crosswalk for West Main Street in order to meet MUTCD guidelines, subject to NYSDOT review and a Highway Work Permit (HWP).

Queuing Evaluation

A queuing evaluation was conducted on West Bridge Street and West Main Street adjacent to the proposed *Stewart's Shop* to determine if queuing associated with the traffic signal located at the West Bridge Street/West Main Street intersection will impact the unsignalized Site Driveway intersections (included under Attachment B). The Site Driveway on West Bridge Street will be located approximately 13-feet west of the stop line while the Site Driveway on West Main Street will be located approximately 29-feet north of the stop line. It is noted that the eastbound West Bridge Street and southbound West Main Street approaches can accommodate approximately one vehicle in queue before operations of the Site Driveways will be impacted.

Observations of existing queues on the eastbound West Bridge Street approach indicate that the average vehicle queue is approximately three vehicles (75-feet) during the AM and PM peak hours while the 95th percentile queue is approximately five to six vehicles (125 to 150-feet) during the peak hours. In addition, observations of existing queues on the southbound West Main Street approach indicate that the average vehicle queue is approximately two to three vehicles (50 to 75-feet) during the AM and PM peak hours while the 95th percentile queue is approximately three to five vehicles (75 to 125-feet) during the peak hours. This indicates that eastbound and southbound traffic will typically block the Site Driveway intersections on West Bridge Street and West Main Street during the peak hours. Field observations indicate that the traffic signal completes approximately 60 cycles during the AM and PM peak hours. Existing traffic conditions indicate that the eastbound and southbound queues typically dissipate during the green phase of the adjacent traffic signal which provides gaps in traffic for use by patrons exiting the site. It is noted that mainline vehicles would often provide courtesy gaps in order to allow vehicles to enter and exit the Site Driveways on West Bridge Street and West Main Street. The use of courtesy gaps is common during peak travel periods at unsignalized driveways located adjacent to traffic signals in built up corridors.

The intersection analysis results summarized in Table 2 and the SimTraffic simulation indicate that development of the *Stewart's Shop* will have negligible impacts to the operations of the adjacent traffic signal; therefore, queuing along the site frontage will not noticeably change as a result of the project. The SimTraffic simulation indicates that adequate gaps will be provided to access the Site Driveway on West Bridge Street and West Main Street.

4.0 Conclusions

The proposed project includes construction of a 3,996 SF *Stewart's Shop* convenience market with six fueling positions (three pumps) at 8 West Bridge Street. The project site will combine four parcels and remove two existing buildings associated with the *Mountain T-Shirts* graphics store and the *Solid Mahogany Tables* furniture store. Access to the existing parcels on this intersection corner is provided via two curb cuts on West Bridge Street and one curb cut on West Main Street. It is noted that access to four garage openings on West Main Street is also provided. The existing driveway on West Main Street will remain. In addition, the driveway on West Bridge Street located on the western edge of the property will remain while the second driveway located closer to the traffic signal will be removed. The four access points associated with the garage openings will also be eliminated. The removal of the curb cut on West Bridge Street and access points on West Main Street promotes positive access management. The project is expected to be completed and operational this year (2020). The following conclusions are noted:

- The proposed project is expected to generate 64 new primary vehicle trips during the AM peak hour and 69 new primary vehicle trips during the PM peak hour.
- The West Bridge Street/West Main Street intersection will continue to operate at an overall LOS B during both peak hours with minor increases in average vehicle delay after development of the site.
- The Site Driveway intersections on West Bridge Street and West Main Street will provide good levels of service after development of the *Stewart's Shop.*
- It is recommended that sidewalks be provided on the south and east sides of the parcel and that ADA compliant curb ramps be provided at the marked crosswalks.
- It is noted that the existing pedestrian signal and push button provided on the northwest corner of the signalized intersection used to cross the north leg of West Main Street is located approximately 60-feet from the applicable crosswalk. It is recommended that the pedestrian signal and push button be relocated closer to curb ramp and crosswalk for West Main Street in order to meet MUTCD guidelines subject to NYSDOT review and a Highway Work Permit.
- An AM and PM peak hour queuing assessment on West Bridge Street and West Main Street indicates that the Site Driveways will typically be blocked during peak hours during the red phases of the adjacent traffic signal; however, a review of existing traffic conditions indicates that eastbound and southbound queues generally dissipate during the green phase of the traffic signal which provides gaps in traffic for use by patrons exiting the site. The development of the *Stewart's Shop* will have minor impacts to the operations of the adjacent traffic signal; therefore, queuing along the site frontage will not noticeably change as a result of the project. Adequate gaps will be provided to access the Site Driveways on West Bridge Street and West Main Street. Vehicles exiting the Site Driveways during the peak hours will also be served by courtesy gaps provided by mainline drivers. The use of courtesy gaps is common during peak travel periods at unsignalized driveways located adjacent to traffic signals in built up corridors.

Based on the completed traffic evaluation, adequate access and traffic operations will be provided after development of the *Stewart's Shop*.

Please call our office if you have any questions or comments regarding the above analysis.

Respectfully submitted,
Creighton Manning Engineering, LLP

Mark D. Nadolny
Associate

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PROJECT LOCATION

STEWART'S SHOP
VILLAGE OF CATSKILL, NEW YORK

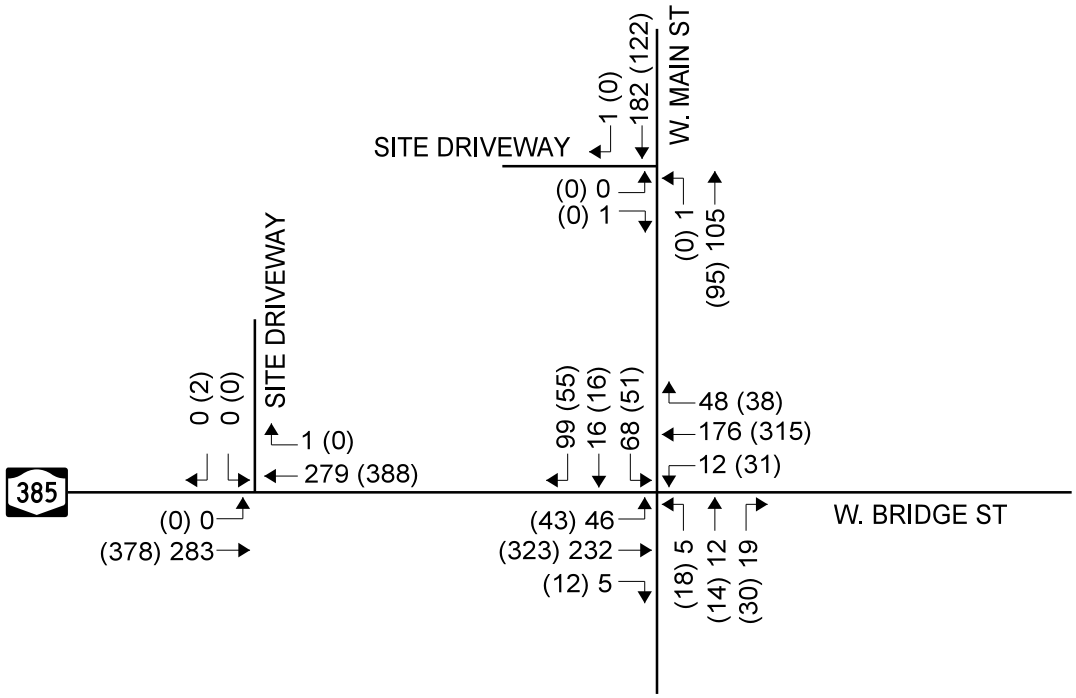
Creighton Manning

PROJECT: 120-028	DATE: 01/2020	FIGURE: 1

Path: N:\Projects\2020\120-028 Stewarts - Stewarts Catskill\Working\CADD\gis\120028_project_location_20200123.mxd

1

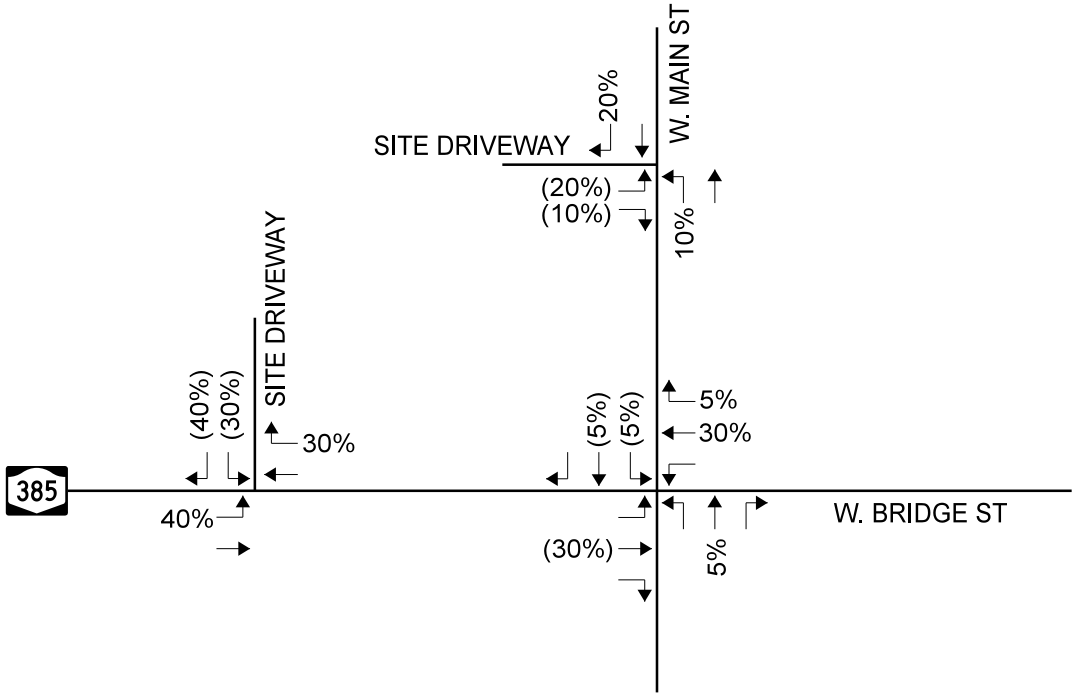
2020 EXISTING
TRAFFIC VOLUMES



AM PEAK HOUR (PM PEAK HOUR)

2

TRIP DISTRIBUTION
PRIMARY



ENTERING (EXITING)

TRAFFIC FIGURE

STEWART'S SHOP
VILLAGE OF CATSKILL
GREENE COUNTY, NEW YORK

Creighton Manning

PROJECT:	120-028	DATE:	3/2020	FIGURE:	2

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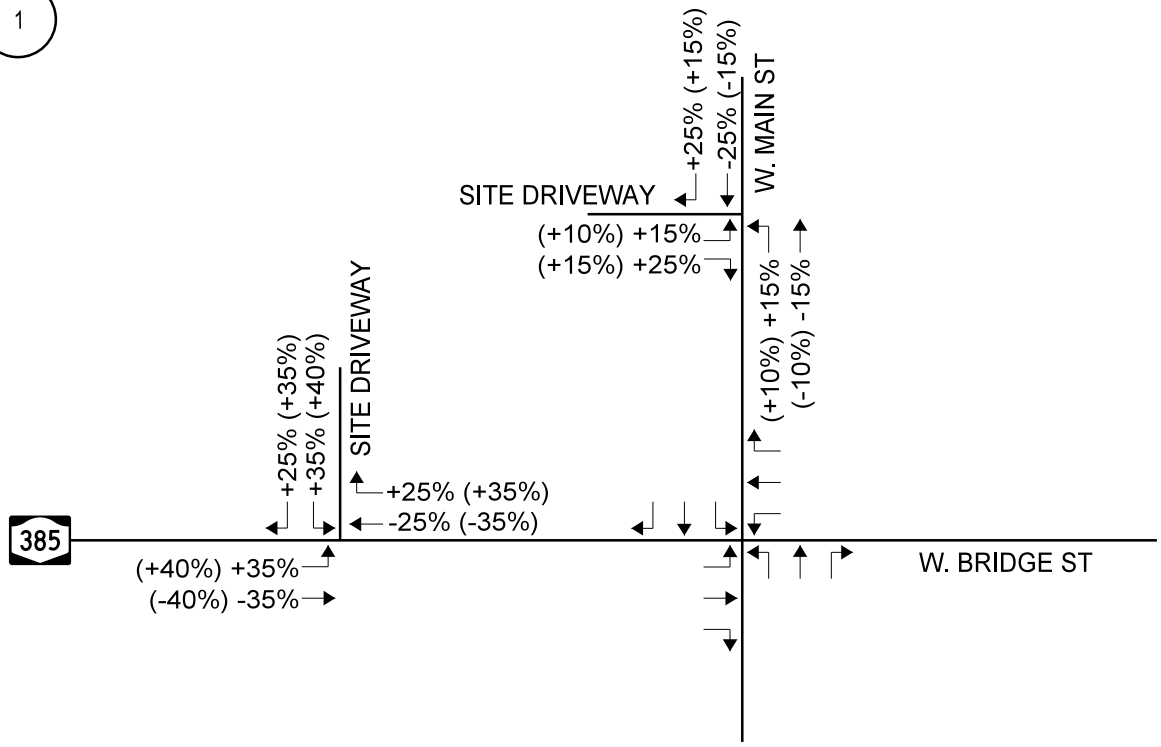
1

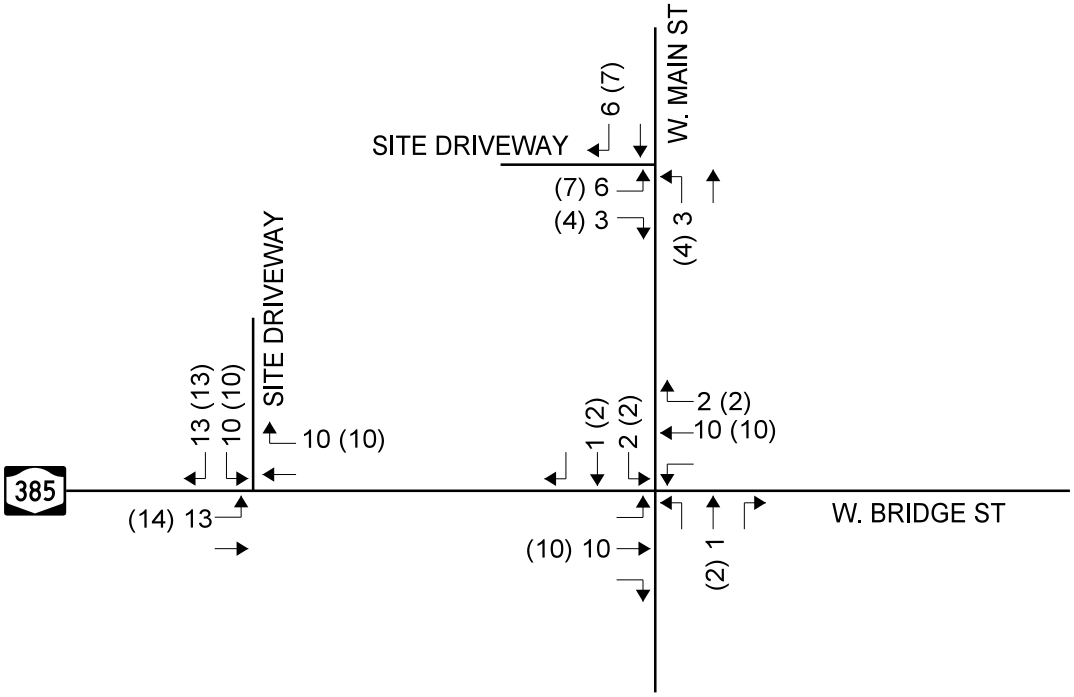
TRIP DISTRIBUTION
PASS-BY



AM PEAK HOUR (PM PEAK HOUR)

2

TRIP ASSIGNMENT
PRIMARY



AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC FIGURE

STEWART'S SHOP
VILLAGE OF CATSKILL
GREENE COUNTY, NEW YORK

Creighton Manning

PROJECT:	120-028	DATE:	3/2020	FIGURE:	3

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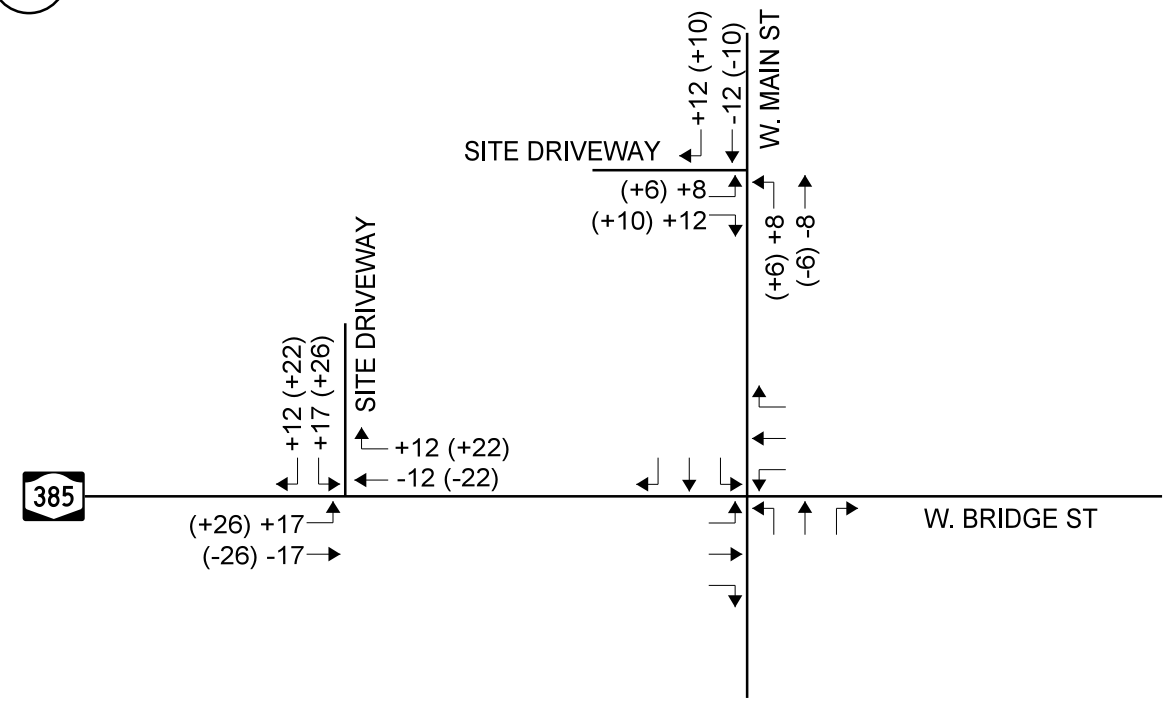
1

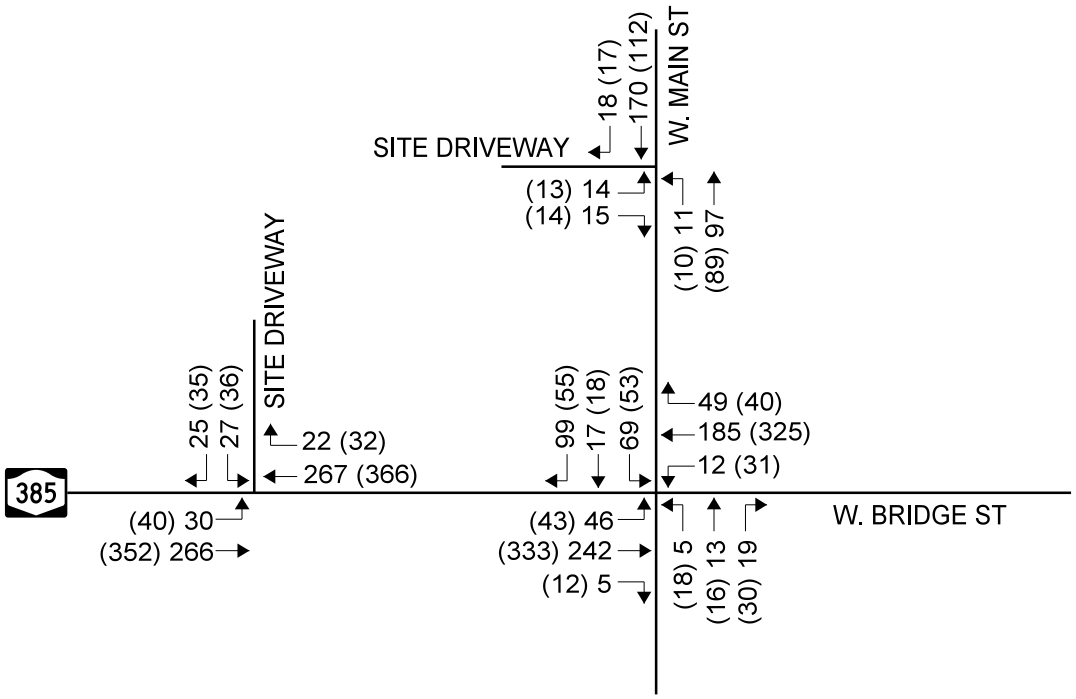
TRIP ASSIGNMENT
PASS-BY



AM PEAK HOUR (PM PEAK HOUR)

2

2020 BUILD
TRAFFIC VOLUMES



AM PEAK HOUR (PM PEAK HOUR)

TRAFFIC FIGURE

STEWART'S SHOP
VILLAGE OF CATSKILL
GREENE COUNTY, NEW YORK

Creighton Manning

PROJECT:	120-028	DATE:	3/2020	FIGURE:	4

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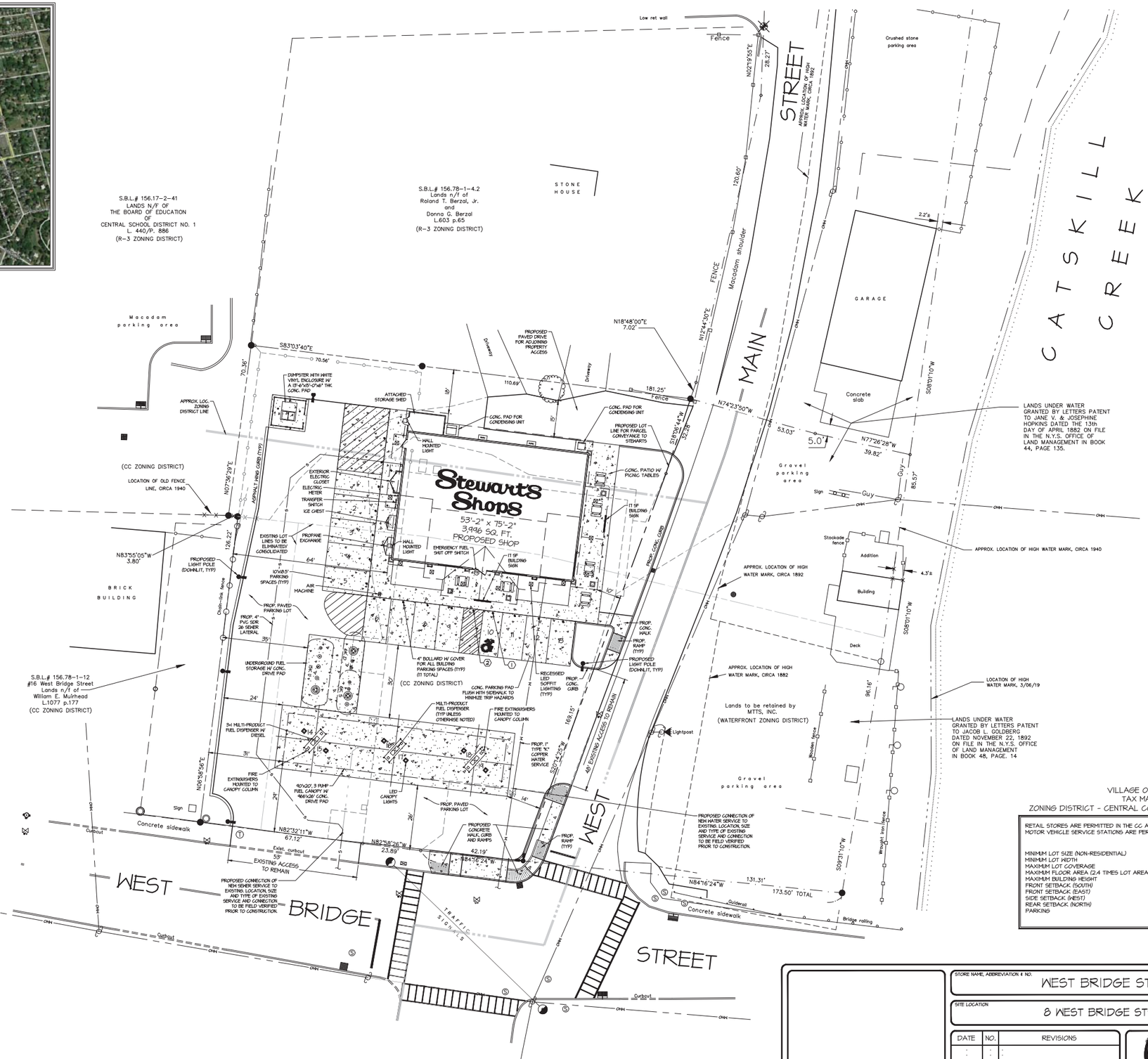
Attachment A
Concept Plan

Stewart's Shop
Village of Catskill, New York

SITE LOCATION MAP

SCALE: N.T.S.



LEGEND

PROPERTY LINE	
FIRE HYDRANT	
WATER VALVE	WV
GAS VALVE	GV
SEWER MANHOLE	S
SEWER CLEANOUT	
CURB INLET	
CATCH BASIN	
GUY WIRE	
UTILITY POLE	
SIGNPOST	
TRAFFIC SIGNAL CONTROL BOX	
POLE LIGHT	
WELL	W
BOLLARD	
IRRIGATION SLEEVE	IR
OVERHEAD UTILITIES	OHW
WATER SERVICE, 1" TYPE "K" COPPER	W
SEWER SERVICE, 4" SDR 26	S
STORM PIPE, PROPOSED, HDPE	
STORM PIPE, EXISTING	
STOCKADE FENCE	
CHAINLINK FENCE	
SPLITRAIL FENCE	
U/G ELECTRICAL/TELE SERVICE	UE/UT
U/G ELECTRICAL CONDUIT	UE
U/G GAS LINE	G
U/G CAMERAL CONDUIT	CAM
DIESEL PRODUCT LINE	DSL
SUPER PRODUCT LINE	SUP
UNLEADED PRODUCT LINE	UNL
EXISTING MAJOR CONTOUR	
EXISTING MINOR CONTOUR	100
PROPOSED MAJOR CONTOUR	100
PROPOSED MINOR CONTOUR	100
PROPOSED SPOT ELEVATION	100.00
EXISTING UNCHANGED SPOT ELEVATION	100.00

NOTES:

1. SOME FEATURES IN LEGEND MAY NOT HAVE BEEN USED.
2. DARKER LINES INDICATE NEW WORK.
3. DOTTED LINES INDICATE REMOVED ITEMS.

SIGN KEY:

1) ALL SIGNS ARE TO CONFORM WITH N.Y.S.D.O.T. STANDARD SECTION 645.

2) SIGN POST TO BE SECURED IN BOLLARD WITH SAND

3) SIGNS SHALL BE MOUNTED TO GALVANIZED U CHANNEL POSTES IN THE LOCATIONS INDICATED ON THE PLAN.

1 — RESERVED PARKING / VAN ACCESSIBLE — HANDICAP SIGN
R7-8 12"x18"
R7-8A 12"x6"
5'-0" MOUNTING HEIGHT MIN., SEE PLAN FOR LOCATION

2 — NO PARKING ANY TIME — NO PARKING SIGN
R7-1 12"x18"
5'-0" MOUNTING HEIGHT MIN, SEE PLAN FOR LOCATION

VILLAGE OF CATSKILL - GREENE COUNTY
TAX MAP S.B.L.# 156.78-1-4.1,13,14&15
ZONING DISTRICT - CENTRAL COMMERCIAL (CC) & COMMERCIAL RESIDENCE (R-3)

RETAIL STORES ARE PERMITTED IN THE CC AND R-3 DISTRICTS
MOTOR VEHICLE SERVICE STATIONS ARE PERMITTED IN THE CC DISTRICT SUBJECT TO A SPECIAL USE PERMIT.

	REQUIRED	PROPOSED
MINIMUM LOT SIZE (NON-RESIDENTIAL)	NO REQUIREMENT	30,880 SQ. FT. (0.71 ACRES)
MINIMUM LOT WIDTH	NO REQUIREMENT	133 FEET
MAXIMUM LOT COVERAGE	NO REQUIREMENT	89%
MAXIMUM FLOOR AREA (2.4 TIMES LOT AREA)	74,352 SQ. FT.	3,996 SQ. FT.
MAXIMUM BUILDING HEIGHT	42 FEET	1-STORY (24 FEET)
FRONT SETBACK (SOUTH)	0 FEET	24 FEET
FRONT SETBACK (EAST)	0 FEET	10 FEET
SIDE SETBACK (WEST)	0 FEET	31 FEET
REAR SETBACK (NORTH)	0 FEET	18 FEET
PARKING	1 PER 300 SQ. FT. FLOOR AREA 3,996/300=13 SPACES	14 SPACES

ALTERATIONS TO THIS DOCUMENT BY OTHER THAN AN AUTHORIZED LICENSED PROFESSIONAL ENGINEER IS ILLEGAL AND A VIOLATION OF THE NEW YORK STATE EDUCATION LAW

STORE NAME, ABBREVIATION & NO.: WEST BRIDGE STREET - WBS1 - 129

SITE LOCATION: 8 WEST BRIDGE STREET - CATSKILL, NY

DATE	NO.	REVISIONS

Stewart's Shops
SARATOGA SPRINGS, NY 12866
TEL. (518)581-1200 FAX (518)581-1204

DRAWN BY: JRG
SCALE: 1"=20'
DATE: 1/2/20

DRAWING NO. S-1

TITLE: PROPOSED SITE PLAN

Attachment B
Traffic Volume Data

Stewart's Shop
Village of Catskill, New York

Project No.: 120-028
Counted By: BP
Location: W.Bridge St./W.Main St.
Comments: AM Peak

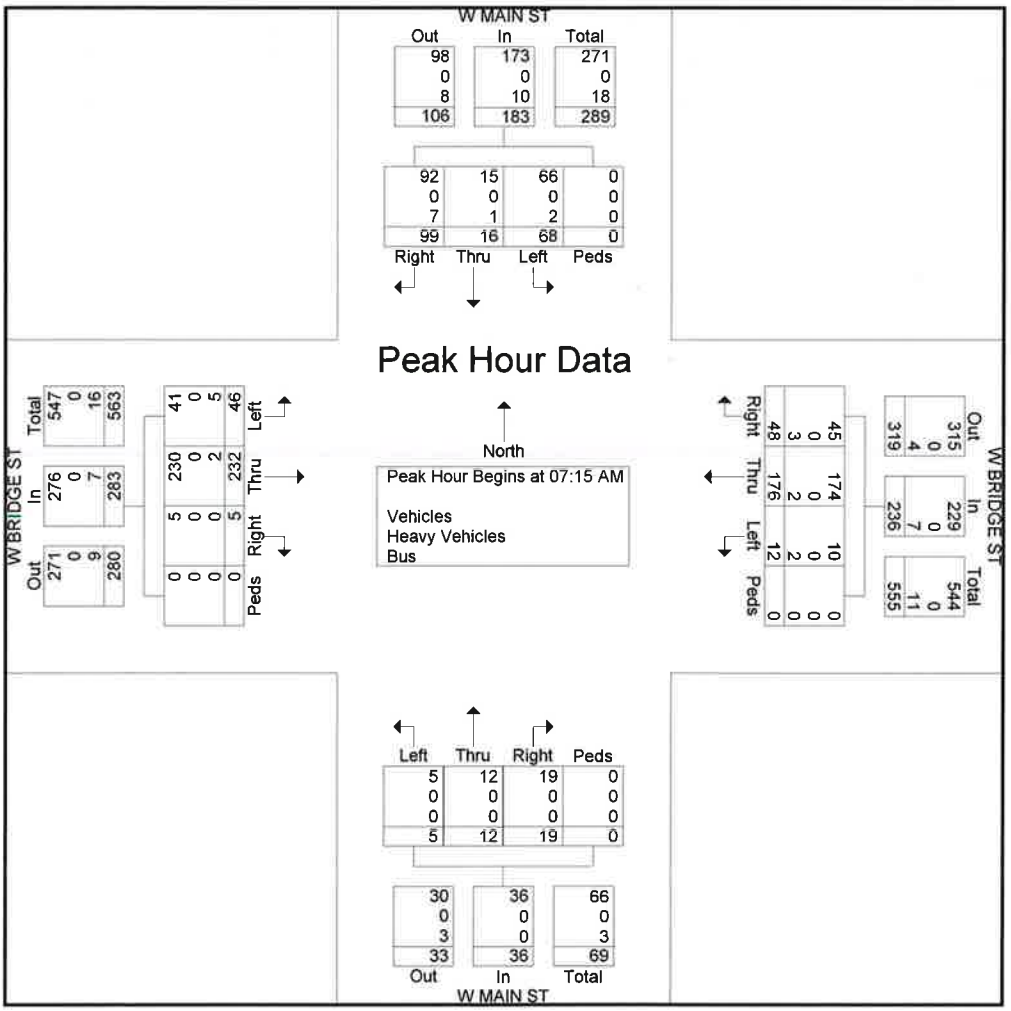
File Name : 120028-WBridgeSt-WMainSt-AM-20200303
Site Code : 12002801
Start Date : 3/3/2020
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles - Bus

	W BRIDGE ST Eastbound					W BRIDGE ST Westbound					W MAIN ST Northbound					W MAIN ST Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	12	38	0	0	50	4	21	13	0	38	0	5	4	0	9	6	7	14	0	27	124
07:15 AM	32	41	0	0	73	0	46	31	0	77	2	3	5	0	10	27	4	48	0	79	239
07:30 AM	9	83	1	0	93	3	51	11	0	65	1	4	5	0	10	21	5	26	0	52	220
07:45 AM	2	49	1	0	52	4	42	4	0	50	2	4	7	0	13	5	4	12	0	21	136
Total	55	211	2	0	268	11	160	59	0	230	5	16	21	0	42	59	20	100	0	179	719
08:00 AM	3	59	3	0	65	5	37	2	0	44	0	1	2	0	3	15	3	13	0	31	143
08:15 AM	4	83	1	0	88	6	52	3	0	61	1	1	7	0	9	7	3	16	0	26	184
08:30 AM	3	87	1	0	91	4	49	4	0	57	1	4	5	0	10	2	3	16	0	21	179
08:45 AM	7	73	3	0	83	3	67	4	0	74	0	4	6	0	10	10	5	5	0	20	187
Total	17	302	8	0	327	18	205	13	0	236	2	10	20	0	32	34	14	50	0	98	693
Grand Total	72	513	10	0	595	29	365	72	0	466	7	26	41	0	74	93	34	150	0	277	1412
Apprch %	12.1	86.2	1.7	0		6.2	78.3	15.5	0		9.5	35.1	55.4	0		33.6	12.3	54.2	0		
Total %	5.1	36.3	0.7	0	42.1	2.1	25.8	5.1	0	33	0.5	1.8	2.9	0	5.2	6.6	2.4	10.6	0	19.6	
Vehicles	65	509	10	0	584	22	362	69	0	453	7	26	41	0	74	91	33	141	0	265	1376
% Vehicles	90.3	99.2	100	0	98.2	75.9	99.2	95.8	0	97.2	100	100	100	0	100	97.8	97.1	94	0	95.7	97.5
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	7	4	0	0	11	7	3	3	0	13	0	0	0	0	0	2	1	9	0	12	36
% Bus	9.7	0.8	0	0	1.8	24.1	0.8	4.2	0	2.8	0	0	0	0	0	2.2	2.9	6	0	4.3	2.5

File Name : 120028-WBridgeSt-WMainSt-AM-20200303
Site Code : 12002801
Start Date : 3/3/2020
Page No : 2

	W BRIDGE ST Eastbound					W BRIDGE ST Westbound					W MAIN ST Northbound					W MAIN ST Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**32**	41	0	0	73	0	46	**31**	0	**77**	**2**	3	5	0	10	**27**	4	**48**	0	**79**	**239**
07:30 AM	9	**83**	1	0	**93**	3	**51**	11	0	65	1	**4**	5	0	10	21	**5**	26	0	52	220
07:45 AM	2	49	1	0	52	4	42	4	0	50	2	4	**7**	0	**13**	5	4	12	0	21	136
08:00 AM	3	59	**3**	0	65	**5**	37	2	0	44	0	1	2	0	3	15	3	13	0	31	143
Total Volume	46	232	5	0	283	12	176	48	0	236	5	12	19	0	36	68	16	99	0	183	738
% App. Total	16.3	82	1.8	0		5.1	74.6	20.3	0		13.9	33.3	52.8	0		37.2	8.7	54.1	0		
PHF	.359	.699	.417	.000	.761	.600	.863	.387	.000	.766	.625	.750	.679	.000	.692	.630	.800	.516	.000	.579	.772
Vehicles	41	230	5	0	276	10	174	45	0	229	5	12	19	0	36	66	15	92	0	173	714
% Vehicles	89.1	99.1	100	0	97.5	83.3	98.9	93.8	0	97.0	100	100	100	0	100	97.1	93.8	92.9	0	94.5	96.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus	5	2	0	0	7	2	2	3	0	7	0	0	0	0	0	2	1	7	0	10	24
% Bus	10.9	0.9	0	0	2.5	16.7	1.1	6.3	0	3.0	0	0	0	0	0	2.9	6.3	7.1	0	5.5	3.3



Project No.: 120-028
Counted By: BP
Location: W. Bridge St./W. Main St.
Comments: PM Peak

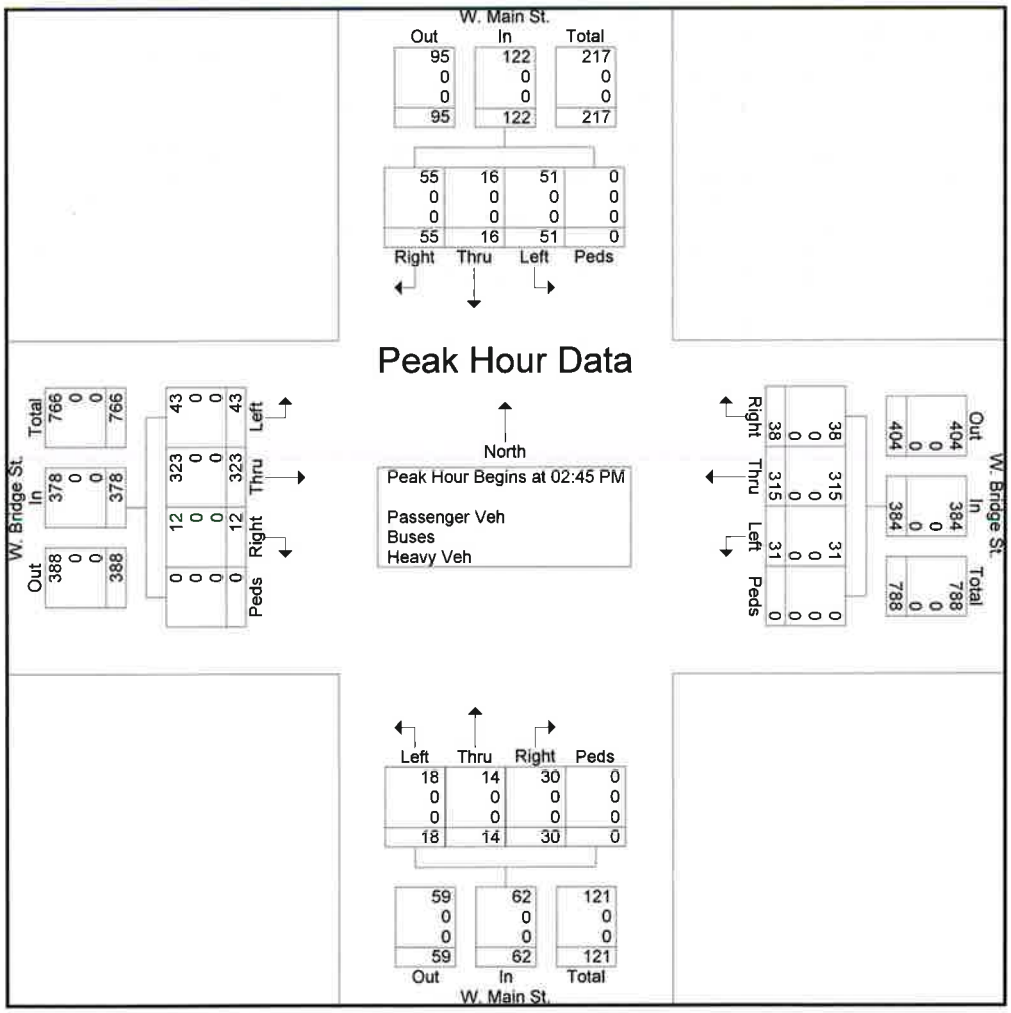
File Name : 120028-WBridgeSt-WMainSt PM_20200227
Site Code : 00120028
Start Date : 2/27/2020
Page No : 1

Groups Printed- Passenger Veh - Buses - Heavy Veh

	W. Bridge St. Eastbound					W. Bridge St. Westbound					W. Main St. Northbound					W. Main St. Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
02:30 PM	9	71	4	0	84	7	78	12	0	97	4	6	3	0	13	5	8	6	0	19	213
02:45 PM	19	79	1	0	99	6	66	6	0	78	4	2	6	0	12	13	4	20	0	37	226
Total	28	150	5	0	183	13	144	18	0	175	8	8	9	0	25	18	12	26	0	56	439
03:00 PM	8	79	7	0	94	8	94	6	0	108	6	4	5	0	15	14	1	15	0	30	247
03:15 PM	10	67	2	0	79	9	78	17	0	104	2	3	6	0	11	11	6	9	0	26	220
03:30 PM	6	98	2	0	106	8	77	9	0	94	6	5	13	0	24	13	5	11	0	29	253
03:45 PM	5	81	3	0	89	6	66	11	0	83	0	4	2	0	6	5	8	8	0	21	199
Total	29	325	14	0	368	31	315	43	0	389	14	16	26	0	56	43	20	43	0	106	919
04:00 PM	2	68	9	0	79	8	90	5	0	103	4	6	11	0	21	8	4	4	0	16	219
04:15 PM	2	75	1	0	78	8	81	9	0	98	2	3	4	0	9	3	1	5	0	9	194
04:30 PM	8	74	7	0	89	10	103	18	0	131	2	8	4	0	14	8	8	7	0	23	257
04:45 PM	3	65	3	0	71	9	83	9	0	101	1	8	10	0	19	5	12	5	0	22	213
Total	15	282	20	0	317	35	357	41	0	433	9	25	29	0	63	24	25	21	0	70	883
05:00 PM	6	74	3	0	83	6	111	15	0	132	2	7	7	0	16	4	6	10	0	20	251
05:15 PM	3	86	0	0	89	6	82	5	0	93	0	1	5	0	6	4	6	4	0	14	202
05:30 PM	5	73	3	0	81	2	68	7	0	77	2	5	5	0	12	9	1	3	0	13	183
05:45 PM	5	74	5	0	84	9	60	7	0	76	2	2	6	0	10	7	4	5	0	16	186
Total	19	307	11	0	337	23	321	34	0	378	6	15	23	0	44	24	17	22	0	63	822
Grand Total	91	1064	50	0	1205	102	1137	136	0	1375	37	64	87	0	188	109	74	112	0	295	3063
Apprch %	7.6	88.3	4.1	0		7.4	82.7	9.9	0		19.7	34	46.3	0		36.9	25.1	38	0		
Total %	3	34.7	1.6	0	39.3	3.3	37.1	4.4	0	44.9	1.2	2.1	2.8	0	6.1	3.6	2.4	3.7	0	9.6	
Passenger Veh	91	1064	50	0	1205	102	1137	136	0	1375	37	64	87	0	188	109	74	112	0	295	3063
% Passenger Veh	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name : 120028-WBridgeSt-WMainSt PM_20200227
Site Code : 00120028
Start Date : 2/27/2020
Page No : 2

	W. Bridge St. Eastbound					W. Bridge St. Westbound					W. Main St. Northbound					W. Main St. Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	**19**	79	1	0	99	6	66	6	0	78	4	2	6	0	12	13	4	**20**	0	**37**	226
03:00 PM	8	79	**7**	0	94	8	**94**	6	0	**108**	**6**	4	5	0	15	**14**	1	15	0	30	247
03:15 PM	10	67	2	0	79	**9**	78	**17**	0	104	2	3	6	0	11	11	**6**	9	0	26	220
03:30 PM	6	**98**	2	0	**106**	8	77	9	0	94	6	**5**	**13**	0	**24**	13	5	11	0	29	**253**
Total Volume	43	323	12	0	378	31	315	38	0	384	18	14	30	0	62	51	16	55	0	122	946
% App. Total	11.4	85.4	3.2	0		8.1	82	9.9	0		29	22.6	48.4	0		41.8	13.1	45.1	0		
PHF	.566	.824	.429	.000	.892	.861	.838	.559	.000	.889	.750	.700	.577	.000	.646	.911	.667	.688	.000	.824	.935
Passenger Veh	43	323	12	0	378	31	315	38	0	384	18	14	30	0	62	51	16	55	0	122	946
% Passenger Veh	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Veh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Existing Driveway Counts

Project #: 120-028
Date: 2/27/20
Counted By: MF

Time	W. Bridge St/West Driveway				W. Bridge St/East Driveway				W. Main St/South Driveway				W. Main St/Garage Driveway			
	Entering		Exiting		Entering		Exiting		Entering		Exiting		Entering		Exiting	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Project #: 120-028
Date: 2/27/20
Counted By: BP

Time	W. Bridge St/West Driveway				W. Bridge St/East Driveway				W. Main St/South Driveway				W. Main St/Garage Driveway			
	Entering		Exiting		Entering		Exiting		Entering		Exiting		Entering		Exiting	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
2:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Job: 120-028 Date: 2/27/2020
Intersection: W Bridge St/ W Main St Time of Day: 7AM - 9AM
Recorder: MPF

	Direction			Direction			Direction			Direction	
Time	EB	SB	Time	EB	SB	Time	EB	SB	Time	EB	SB
7:00			7:30	2	8	8:00	1	2	8:30	3	
7:01		1	7:31		13	8:01	2		8:31	1	1
7:02	1	1	7:32	5	10	8:02		2	8:32	3	2
7:03	1	1	7:33	1	5	8:03			8:33	2	
7:04	1		7:34	6	3	8:04	2	1	8:34	2	2
7:05			7:35	8	3	8:05	3		8:35	3	
7:06	1		7:36		2	8:06		1	8:36	3	2
7:07	0	1	7:37	2		8:07	3		8:37	2	1
7:08	2	2	7:38		1	8:08	1	1	8:38		3
7:09	5		7:39			8:09	3	3	8:39		2
7:10		2	7:40	1	1	8:10		2	8:40	6	2
7:11		2	7:41	2		8:11	1	2	8:41	9	3
7:12	3	2	7:42	2	2	8:12	3		8:42		
7:13	1	1	7:43		1	8:13			8:43	3	
7:14	6		7:44	1	2	8:14	1		8:44	4	
7:15	5	5	7:45	4		8:15	2		8:45	2	
7:16	2	1	7:46	2	2	8:16	2		8:46	4	1
7:17	2		7:47			8:17	1		8:47		
7:18	6	2	7:48		1	8:18	2		8:48	2	
7:19	1		7:49	1		8:19	1		8:49	1	2
7:20	1	3	7:50	1	2	8:20			8:50	2	
7:21	3	3	7:51			8:21	1		8:51	1	
7:22	6	4	7:52		4	8:22	8		8:52		2
7:23	10		7:53	3	1	8:23	2	4	8:53	1	
7:24	3	3	7:54			8:24	5	2	8:54	5	1
7:25	2		7:55		2	8:25	1		8:55	3	5
7:26	8	4	7:56			8:26	5	2	8:56	2	
7:27	2	5	7:57	4		8:27	1		8:57	2	2
7:28	10	7	7:58			8:28	2		8:58	8	1
7:29	9		7:59		1	8:29	2		8:59		1

SB		**EB**	
average queue	3.1	average queue	3.3
85th	4.8	85th	6.0

Job: 120-028 Date: 2/27/2020
Intersection: W Bridge St/ W Main St Time of Day: 2:30PM-6:00PM
Recorder: BP

	Direction			Direction			Direction			Direction			Direction			Direction			Direction	
Time	EB	SB	Time	EB	SB	Time	EB	SB	Time	EB	SB	Time	EB	SB	Time	EB	SB	Time	EB	SB
2:30			3:00	2		3:30	4	1	4:00			4:30		1	5:00	3	1	5:30	5	
2:31	4		3:01	7	2	3:31	1		4:01		1	4:31	2		5:01			5:31		
2:32	2		3:02	2	1	3:32		2	4:02	1		4:32	1		5:02	4		5:32	1	
2:33	1		3:03	4		3:33	4	2	4:03	4		4:33			5:03	2	2	5:33	1	2
2:34	1	2	3:04	4	1	3:34	4		4:04			4:34	5		5:04	1		5:34	4	
2:35	2	1	3:05	1	1	3:35	2	1	4:05	3		4:35			5:05	5		5:35	1	2
2:36	6		3:06			3:36	2		4:06	2	2	4:36			5:06	1	3	5:36	1	
2:37		1	3:07	4		3:37	6	4	4:07	2		4:37	8	8	5:07	1	1	5:37	5	
2:38	2		3:08	2	3	3:38	5		4:08	1		4:38		3	5:08	4		5:38	2	1
2:39	2		3:09	1	2	3:39	2	1	4:09	1	2	4:39	1		5:09			5:39		1
2:40	2	3	3:10	2		3:40	2	1	4:10	2		4:40		3	5:10		1	5:40	4	
2:41			3:11		1	3:41	6	2	4:11			4:41	1		5:11	5		5:41	3	
2:42	1	1	3:12	2	1	3:42	3	1	4:12	6	2	4:42	1	1	5:12	4	3	5:42		
2:43	2	1	3:13	4		3:43	3		4:13		2	4:43		1	5:13		1	5:43		
2:44			3:14		1	3:44	1	2	4:14	2	3	4:44			5:14			5:44	3	
2:45		2	3:15	1	3	3:45	2		4:15			4:45	3	1	5:15	3	2	5:45		
2:46	3	1	3:16		2	3:46	2		4:16			4:46	1		5:16	2		5:46	2	
2:47	2	1	3:17	2		3:47			4:17			4:47	2	2	5:17	2	1	5:47	5	
2:48	4	2	3:18	1	1	3:48	5		4:18	2		4:48	1		5:18	2		5:48		
2:49	7	2	3:19			3:49			4:19	3	1	4:49	3	1	5:19	2		5:49	3	
2:50	5		3:20	1	4	3:50	2		4:20	1		4:50		1	5:20	2	1	5:50		
2:51	3		3:21			3:51	4	2	4:21		1	4:51	2	1	5:21	3		5:51	2	
2:52	1		3:22	5	3	3:52	5		4:22	3		4:52	2	4	5:22			5:52		
2:53			3:23	4		3:53		1	4:23			4:53			5:23	4	1	5:53		
2:54	2		3:24			3:54			4:24	4		4:54			5:24	2		5:54	2	5
2:55	3	3	3:25	1	2	3:55			4:25			4:55			5:25	3	1	5:55		
2:56			3:26	2		3:56	1	1	4:26		1	4:56	1	2	5:26			5:56	2	
2:57		2	3:27			3:57	4	1	4:27	1		4:57			5:27	1		5:57	4	2
2:58	2	5	3:28		1	3:58	5		4:28	1		4:58		1	5:28	5	3	5:58	4	
2:59	6	4	3:29	3	2	3:59	1	1	4:29	2	3	4:59			5:29	3		5:59		

SB		EB	
average qu	1.9	average queue	3.0
85th	3.0	85th	5.0

Attachment C
Level of Service Analysis

Stewart's Shop
Village of Catskill, New York

LOS Definitions

The following is an excerpt from the Highway Capacity Manual, 6th Edition (HCM).

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay *and* volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The v/c ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following paragraphs describe each LOS.

LOS A describes operations with a control delay of 10 s/veh or less and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operations with control delay between 10 and 20 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operations with control delay between 20 and 35 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operations with control delay between 35 and 55 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operations with control delay between 55 and 80 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operations with control delay exceeding 80 s/veh or a v/c ratio greater than 1.0. This level is typically assigned when the v/c ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 s/veh when the v/c ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and v/c ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

Average control delay and queue length at roundabout controlled intersections are calculated using SIDRA Intersection. The physical geometry such as entry lane width and approach flare, and traffic volume at the roundabout are factors that influence the intersection's performance. The average delay reported using SIDRA Intersection is based on the signalized HCM Method of Delay for Level-of-Service.

Level of Service Criteria for Unsignalized Intersections

Level of service (LOS) for Two-Way Stop-Controlled (TWSC) intersections is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns by using criteria given in Exhibit 20-2. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. LOS F is assigned to the movement if the volume-to-capacity (v/c) ratio for the movement exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections are somewhat different from the criteria used in Chapter 18 for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce users' delay tolerance.

The LOS criteria for All-Way Stop-Controlled (AWSC) intersections are given in Exhibit 21-8. LOS F is assigned if the v/c ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

Exhibits 20-2/21-8:
Level-of-Service Criteria for Stop Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	**v/c ≥ 1.0**
10.0	A	F
>10.0 and ≤ 15.0	B	F
>15.0 and ≤ 25.0	C	F
>25.0 and ≤ 35.0	D	F
>35.0 and ≤ 50.0	E	F
>50.0	F	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	232	5	12	176	48	5	12	19	68	16	99
Future Volume (veh/h)	46	232	5	12	176	48	5	12	19	68	16	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	50	252	5	13	191	52	5	13	21	74	17	108
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	168	659	12	106	665	173	117	176	226	223	77	213
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	134	1334	24	28	1347	350	67	672	863	389	295	812
Grp Volume(v), veh/h	307	0	0	256	0	0	39	0	0	199	0	0
Grp Sat Flow(s),veh/h/ln	1492	0	0	1725	0	0	1603	0	0	1496	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	3.6	0.0	0.0	0.7	0.0	0.0	4.4	0.0	0.0
Prop In Lane	0.16		0.02	0.05		0.20	0.13		0.54	0.37		0.54
Lane Grp Cap(c), veh/h	839	0	0	944	0	0	519	0	0	512	0	0
V/C Ratio(X)	0.37	0.00	0.00	0.27	0.00	0.00	0.08	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	1878	0	0	2172	0	0	1057	0	0	1017	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.5	0.0	0.0	6.1	0.0	0.0	11.4	0.0	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	0.0	0.0	6.5	0.0	0.0	11.5	0.0	0.0	13.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		307			256			39			199	
Approach Delay, s/veh		7.1			6.5			11.5			13.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.2		15.7		25.2		15.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		25.0		50.0		25.0				
Max Q Clear Time (g_c+I1), s		7.0		2.7		5.6		6.4				
Green Ext Time (p_c), s		2.3		0.1		1.9		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		8.7	
HCM 6th LOS		A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	242	5	12	185	49	5	13	19	69	17	99
Future Volume (veh/h)	46	242	5	12	185	49	5	13	19	69	17	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	50	263	5	13	201	53	5	14	21	75	18	108
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	164	664	12	105	670	169	116	183	221	223	79	211
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	127	1345	24	27	1357	343	64	699	844	392	300	804
Grp Volume(v), veh/h	318	0	0	267	0	0	40	0	0	201	0	0
Grp Sat Flow(s),veh/h/ln	1495	0	0	1727	0	0	1608	0	0	1497	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	3.7	0.0	0.0	0.8	0.0	0.0	4.4	0.0	0.0
Prop In Lane	0.16		0.02	0.05		0.20	0.12		0.52	0.37		0.54
Lane Grp Cap(c), veh/h	840	0	0	944	0	0	520	0	0	513	0	0
V/C Ratio(X)	0.38	0.00	0.00	0.28	0.00	0.00	0.08	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	1879	0	0	2173	0	0	1060	0	0	1016	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	0.0	0.0	6.2	0.0	0.0	11.4	0.0	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.0	0.0	0.0	0.2	0.0	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	0.0	0.0	6.5	0.0	0.0	11.5	0.0	0.0	13.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		318			267			40			201	
Approach Delay, s/veh		7.2			6.5			11.5			13.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.2		15.7		25.2		15.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		25.0		50.0		25.0				
Max Q Clear Time (g_c+I1), s		7.2		2.8		5.7		6.4				
Green Ext Time (p_c), s		2.4		0.1		2.0		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		8.7	
HCM 6th LOS		A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	323	12	31	315	38	18	14	30	51	16	55
Future Volume (veh/h)	43	323	12	31	315	38	18	14	30	51	16	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	47	351	13	34	342	41	20	15	33	55	17	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	696	24	129	761	87	184	138	196	243	96	178
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	90	1396	49	66	1527	174	273	541	767	458	376	695
Grp Volume(v), veh/h	411	0	0	417	0	0	68	0	0	132	0	0
Grp Sat Flow(s),veh/h/ln	1535	0	0	1766	0	0	1580	0	0	1530	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	6.0	0.0	0.0	1.3	0.0	0.0	2.5	0.0	0.0
Prop In Lane	0.11		0.03	0.08		0.10	0.29		0.49	0.42		0.45
Lane Grp Cap(c), veh/h	863	0	0	976	0	0	519	0	0	516	0	0
V/C Ratio(X)	0.48	0.00	0.00	0.43	0.00	0.00	0.13	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	1940	0	0	2227	0	0	1064	0	0	1047	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	6.6	0.0	0.0	11.7	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.7	0.0	0.0	0.4	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	0.0	7.3	0.0	0.0	11.9	0.0	0.0	12.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		411			417			68			132	
Approach Delay, s/veh		7.7			7.3			11.9			12.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	25.2	15.4	25.2	15.4
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	50.0	25.0	50.0	25.0
Max Q Clear Time (g_c+I1), s	9.0	3.3	8.0	4.5
Green Ext Time (p_c), s	3.3	0.2	3.3	0.5

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	333	12	31	325	40	18	16	30	53	18	55
Future Volume (veh/h)	43	333	12	31	325	40	18	16	30	53	18	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	47	362	13	34	353	43	20	17	33	58	20	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	142	696	24	127	758	88	181	148	192	245	103	171
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	88	1400	47	64	1526	177	262	577	749	466	400	666
Grp Volume(v), veh/h	422	0	0	430	0	0	70	0	0	138	0	0
Grp Sat Flow(s),veh/h/ln	1535	0	0	1766	0	0	1588	0	0	1532	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	0.0	6.3	0.0	0.0	1.3	0.0	0.0	2.7	0.0	0.0
Prop In Lane	0.11		0.03	0.08		0.10	0.29		0.47	0.42		0.43
Lane Grp Cap(c), veh/h	861	0	0	973	0	0	522	0	0	519	0	0
V/C Ratio(X)	0.49	0.00	0.00	0.44	0.00	0.00	0.13	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	1936	0	0	2223	0	0	1065	0	0	1047	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.0	0.0	0.0	6.7	0.0	0.0	11.7	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.8	0.0	0.0	0.4	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.9	0.0	0.0	7.4	0.0	0.0	11.9	0.0	0.0	12.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		422			430			70			138	
Approach Delay, s/veh		7.9			7.4			11.9			12.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.2		15.5		25.2		15.5				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		25.0		50.0		25.0				
Max Q Clear Time (g_c+I1), s		9.2		3.3		8.3		4.7				
Green Ext Time (p_c), s		3.4		0.2		3.5		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			8.6
HCM 6th LOS			A

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	283	279	1	0	0
Future Vol, veh/h	0	283	279	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	0	308	303	1	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	304	0	-	0	612	304
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	308	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1268	-	-	-	460	740
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1268	-	-	-	460	740
Mov Cap-2 Maneuver	-	-	-	-	460	-
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	750	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1268	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	266	267	22	27	25
Future Vol, veh/h	30	266	267	22	27	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	0	0	0
Mvmt Flow	33	289	290	24	29	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	314	0	-	0	657	302
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1258	-	-	-	433	742
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1258	-	-	-	420	742
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	714	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1258	-	-	-	531
HCM Lane V/C Ratio	0.026	-	-	-	0.106
HCM Control Delay (s)	7.9	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	378	388	0	0	2
Future Vol, veh/h	0	378	388	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	0
Mvmt Flow	0	411	422	0	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	422	0	-	0	833	422
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1148	-	-	-	341	636
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1148	-	-	-	341	636
Mov Cap-2 Maneuver	-	-	-	-	341	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	674	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1148	-	-	-	636
HCM Lane V/C Ratio	-	-	-	-	0.003
HCM Control Delay (s)	0	-	-	-	10.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	352	366	32	36	35
Future Vol, veh/h	40	352	366	32	36	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	0
Mvmt Flow	43	383	398	35	39	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	433	0	-	0	885	416
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1137	-	-	-	318	641
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1137	-	-	-	303	641
Mov Cap-2 Maneuver	-	-	-	-	303	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	634	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1137	-	-	-	409
HCM Lane V/C Ratio	0.038	-	-	-	0.189
HCM Control Delay (s)	8.3	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	1	105	182	1
Future Vol, veh/h	0	1	1	105	182	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	0	1	1	114	198	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	315	199	199	0	-	0
Stage 1	199	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	682	847	1385	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	681	847	1385	-	-	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	914	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1385	-	847	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.6	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	15	11	97	170	18
Future Vol, veh/h	14	15	11	97	170	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	15	16	12	105	185	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	324	195	205	0	-	0
Stage 1	195	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	674	851	1378	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	668	851	1378	-	-	-
Mov Cap-2 Maneuver	668	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1378	-	752	-	-
HCM Lane V/C Ratio	0.009	-	0.042	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	95	122	0
Future Vol, veh/h	0	0	0	95	122	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	0	0	103	133	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	236	133	133	0	-	0
Stage 1	133	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	757	922	1464	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	757	922	1464	-	-	-
Mov Cap-2 Maneuver	757	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1464	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	14	10	89	112	17
Future Vol, veh/h	13	14	10	89	112	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	14	15	11	97	122	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	250	131	140	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	119	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	743	924	1456	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	737	924	1456	-	-	-
Mov Cap-2 Maneuver	737	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1456	-	823	-	-
HCM Lane V/C Ratio	0.007	-	0.036	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-