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August 27, 2019

VIA EMAIL

Town of Cortlandt Planning Board
1 Heady Street
Cortlandt Manor, NY 10567

Re: Gasland Cortlandt
AKRF Review Comments
MC Project No. 19003182A

Dear Members of the Planning Board:

The following items are in response to the AKRF memorandum to the Planning Board, dated July 19, 2019. The items are numbered according to their review comments.

AKRF General Comments

1. It should be noted that the intersection of Jacobs Hill Road, Conklin Avenue, and the Bear Mountain Parkway eastbound on/off ramp/Project Driveway intersections are equipped with preemption devices.

Response: *Comment noted. The preemption devices that are present at these locations would be maintained under the future improvement conditions, including at the replacement signal as currently proposed at the Bear Mountain Parkway eastbound on/off ramp and Route 6 intersection.*

2. It should be noted in Table 1 that ITE land use code 853 was used for the weekday AM and PM peak hours and absent Saturday data for land use code 853, trip generation rates for land use code 945 were used to develop Saturday peak hour volumes.

Response: *Comment noted. Land Use 945 - Gas with Convenience Store was used for computing the Saturday peak hour traffic volume estimates as the appropriate use for the expected operations.*



3. It should be noted that the significant impacts to the northbound left-turn movement and southbound approach at the intersection of U.S. Route 6 and Bear Mountain Parkway westbound on/off ramps/Sinclair gas station during all peak periods is unmitigated without the installation of a traffic signal.

Response: *The northbound left turn movement and southbound approach at Route 6 and the Bear Mountain Parkway westbound on/off ramp are currently operating at poor levels of service as identified in the traffic study. The installation of a traffic signal would be required to improve the operation of these movements. Note that the additional traffic at this intersection generated by the Gasland project is estimated to be an approximately 2% to 3% increase in the total intersection traffic volumes during peak hours above the No-Build conditions.*

4. It should be noted that as the existing Route 6 ATCS system terminates at Jerome Drive, the intersection of Route 6 and Locust Avenue would need to be retrofitted with ATCS capability in order to provide a complete ATCS system. Presently, ATCS capabilities are proposed at the Jacobs Hill Road and Bear Mountain Parkway Ramps/Site Driveway intersections.

Response: *Comment noted. In the initial discussions with the New York State Department of Transportation (NYSDOT), the requested Adaptive Traffic Control System for the Bear Mountain Parkway and Jacobs Hill Road intersection was discussed, and it was noted that Route 6 and Locust Avenue is currently not in the ATCS and they would decide how that would be handled. This will be coordinated with NYSDOT and the Town under the Highway Work Permit (HWP).*

5. The proposed signal timing improvements include shifts in the allocated signal timing as well as removal of the split phasing which prevents Bear Mountain Parkway and the existing driveway traffic from entering the intersection at the same time. As this location exceeds the statewide average crash rate, NYSDOT should be consulted regarding removal of the split phasing.

Response: *The split phasing operation would be maintained unless approved by NYSDOT. The potential of permitting the left turns exiting the site and the left turn off of the parkway was proposed to be modified to run concurrently*

only if acceptable to the NYSDOT. The crash data has been obtained and summarized as attached. It will also be submitted to NYSDOT as part of the HWP review.

6. As actuation and/or coordination improvements are provided as proposed improvements, the signalized intersections in the study area should be evaluated using Synchro Percentile Delay Methodology which is designed to model coordination and actuation in detail. Based on the results provided by the consultant, the westbound shared left-turn/through lane and shared through/right-turn lanes would be impacted in the PM peak hour as well as the southbound left-turn lane. In addition, based on the Synchro Percentile Delay Methodology, the southbound Bear Mountain Parkway left-turn lane at the intersection with the site driveway would not be fully mitigated with the proposed improvement measures.

Response: The Synchro Percentile Delay Methodology requested is summarized in the attached Table No. 2S. This is in addition to the HCM results as required by NYSDOT. The analysis with the westbound shared left through was run in response to a previous comment from AKRF. The proposal is not to allow westbound left turns from Route 6 into the site at that access. This configuration appears to provide the better operation and eliminates left turn conflicts.

AKRF Synchro Comments

7. There are discrepancies between the NYSDOT signal timing plan and the Synchro inputs at the intersection of Jacobs Hill Road and Route 6. The reference phase should include both directions of U.S. Route 6 and should be referenced to beginning of green. In addition, the minimum splits should not be overridden in the analysis and a minimum of 5 pedestrian calls should be included for signalized crosswalks. It should be noted that these revisions do not affect the findings of the report.

Response: The NYSDOT normally requires the end of green reference phase, however the updates will be coordinated with AKRF, including the pedestrian calls as noted. Also as noted, these adjustments do not change the findings of the analysis.



8. There are discrepancies between the NYSDOT signal timing plan and the Synchro inputs at the Bear Mountain State Parkway Ramps/Site Driveway and Route 6 intersection. The NYSDOT signal timing plans indicate that the signal is uncoordinated; however, the Synchro files analyze the intersection as coordinated. Per guidance from NYSDOT, the total split in Synchro should include the max 1 (i.e. max green), yellow clearance and red clearance. These revisions affect the level of service results.

Response: *Adjustments to the signal timings have been made to reflect the NYSDOT timings for the intersection of Route 6 and the Bear Mountain Parkway Ramps and the results are reflected in Table No. 2S. Under existing conditions, this signal is uncoordinated with the adjacent signal. However, it is proposed that it will be coordinated under future conditions. The analysis has been updated to reflect this.*

Site Plan and Emergency Access Comments

9. The westbound approach at Route and the Site Driveway should be striped as a through only lane and a share through/right-turn lane to reiterate the left-turn ban.

Response: *We agree with this comment based on initial discussion with NYSDOT, no left turn from Route 6 westbound will be permitted into the site driveway. This approach would be striped as a through-only lane and the westbound approach would be striped as a through-only lane and a shared right through lane with appropriate left turn sign restrictions to be posted to advise motorists of this configuration.*

10. Crosswalks should be provided across both site driveways to Route 6 to provide a continuous pedestrian network. In addition, the sidewalk and crosswalk across the entrance only right-turn driveway should be parallel to Route 6 and located directly adjacent to the roadway to provide better sight distance of crossing pedestrians to motorists.

Response: *The plans have been updated to include crosswalks as noted (see Drawing CIP-1).*



11. Having three driveways to the site, two of which being entrance only driveways, could create circulation issues during peak periods. In addition, the three curb cuts are considered excessive for a site of this size and does not align with NYSDOT's access management initiative. Alternative driveway configurations should be evaluated.

Response: *The site currently has three driveways serving the current facilities including a full access driveway to Parkway Drive. The site plan proposes two entry-only driveway and a full movement driveway opposite the Bear Mountain Parkway Ramp. The right turn entry driveway from Route 6 is provided to accommodate fuel deliveries and other traffic approaching from the west to access the site. This helps eliminate potential conflicts of the fuel deliveries in the vicinity of the main signalized driveway by allowing other vehicles to enter and access the pump islands. The entry-only access on Parkway Drive is provided to accommodate left turns from Route 6 at the controlled intersection.*

12. Truck turning maneuvers should be provided for all the feasible movements to/from the site as well as within the site for fueling trucks/refuse.

Response: *Truck turning diagrams have been completed by Chazen to show the fueling deliveries and other vehicle movements.*

If you have any questions regarding the above, please do not hesitate to contact us.

Very truly yours,

MASER CONSULTING P.A.

A handwritten signature in black ink, appearing to read 'Philip J. Grealy', with a long horizontal stroke extending to the right.

Philip J. Grealy, Ph.D., P.E.

Principal/Department Manager

PJG/ces
Enclosures

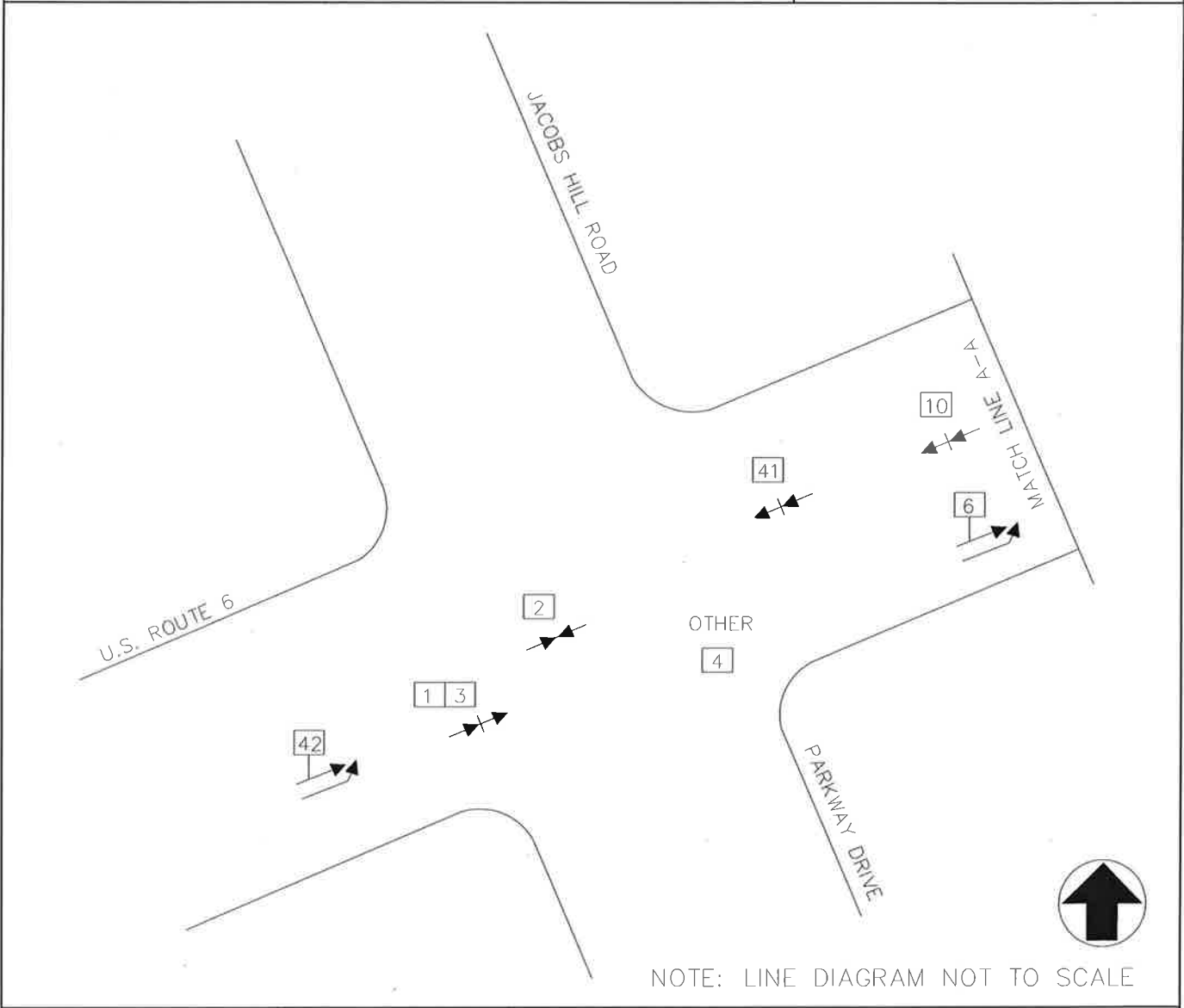
TABLE A

ACCIDENT SUMMARY - TOWN ACCIDENT DATA
VARIOUS INTERSECTIONS IN THE TOWN OF CORTLANDT, WESTCHESTER COUNTY, NY

Node/Link	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	# of Vehicles Injured	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors	
U.S. ROUTE 6 & JACOBS HILL ROAD/PARKWAY DRIVE													
E MAIN ST	At Int. w/ Pike Plz	6 87033001	07/18/2016	09:16am	TRAFFIC SIGNAL	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	UNSAFE SPEED	1
E MAIN ST	At Int. w/ Pike Plz	6 87033001	11/23/2016	01:37pm	TRAFFIC SIGNAL	PDO & I	2-2	DAYLIGHT	DRY	CLEAR	HEAD ON	FAILURE TO YIELD RIGHT OF WAY	2
E MAIN ST	At Int. w/ Pike Plz	6 87033001	12/01/2016	04:50pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	3
PARKWAY DR	At Int. w/ E Main St	N/P	12/03/2016	06:19pm	TRAFFIC SIGNAL	N/R	2-0	DUSK	DRY	CLEAR	OTHER	UNSAFE LANE CHANGE	4
U.S. ROUTE 6 & BEAR MOUNTAIN PARKWAY EB ON/OFF RAMP/SITE ACCESS													
E MAIN ST	At Int. w/ Ramp	6 87033002	05/14/2016	09:58am	TRAFFIC SIGNAL	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	REACTION TO OTHER UNINVOLVED VEHICL	5
E MAIN ST	At Int. w/ Ramp	6 87033002	07/30/2016	09:06pm	TRAFFIC SIGNAL	I	2-2	DARK-ROAD LIGHTED	WET	RAIN	OVERTAKING	FAILURE TO YIELD RIGHT OF WAY	6
E MAIN ST	At Int. w/ Ramp	6 87033002	10/21/2016	12:10pm	TRAFFIC SIGNAL	PDO	3-0	DAYLIGHT	DRY	RAIN	OTHER	FOLLOWING TOO CLOSELY	7
E MAIN ST	At Int. w/ Ramp	6 87033002	04/13/2017	05:00pm	TRAFFIC SIGNAL	PDO & I	4-1	DAYLIGHT	DRY	CLOUDY	OTHER	FOLLOWING TOO CLOSELY	8
E MAIN ST	At Int. w/ Ramp	6 87033002	10/24/2017	08:55am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	RAIN	LEFT TURN (WITH OTHER CAR)	FAILURE TO YIELD RIGHT OF WAY	9
E MAIN ST	At Int. w/ Ramp	6 87033002	11/20/2017	02:00pm	TRAFFIC SIGNAL	PDO & I	2-2	DAYLIGHT	DRY	CLOUDY	REAR END	UNSAFE SPEED	10
E MAIN ST	At Int. w/ Ramp	6 87033002	12/27/2017	12:41pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	UNSAFE LANE CHANGE	11
U.S. ROUTE 6 & BEAR MOUNTAIN PARKWAY WB ON/OFF RAMP/SINCLAIR GAS STATION													
E MAIN ST	At Int. w/ Ramp	6 87033003	01/28/2016	06:40pm	STOP SIGN	N/R	3-0	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	FAILURE TO YIELD RIGHT OF WAY	12
E MAIN ST	At Int. w/ Ramp	6 87033003	08/25/2016	08:57pm	NONE	PDO & I	2-1	DARK-ROAD LIGHTED	DRY	CLEAR	RIGHT ANGLE	NOT APPLICABLE	13
E MAIN ST	At Int. w/ Ramp	6 87033002	09/15/2016	12:30pm	NO PASSING ZONE	N/R	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	UNSAFE LANE CHANGE	14
E MAIN ST	At Int. w/ Ramp	6 87033003	10/22/2016	03:52pm	STOP SIGN	PDO & I	2-1	DAYLIGHT	WET	RAIN	RIGHT ANGLE	NOT APPLICABLE	15
E MAIN ST	At Int. w/ Ramp	6 87033003	04/03/2017	09:23pm	STOP SIGN	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLOUDY	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY	16
E MAIN ST	At Int. w/ Ramp	6 87033003	08/23/2017	06:50pm	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	NOT APPLICABLE	17
E MAIN ST	At Int. w/ Ramp	6 87033003	11/27/2017	08:27pm	NONE	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLOUDY	OVERTAKING	UNSAFE LANE CHANGE	18
E MAIN ST	At Int. w/ Ramp	6 87033003	12/05/2017	06:45pm	NO PASSING ZONE	PDO	2-0	DARK-ROAD LIGHTED	WET	RAIN	REAR END	FOLLOWING TOO CLOSELY	19
E MAIN ST	At Int. w/ Ramp	6 87033002	01/04/2018	01:43am	NONE	PDO	2-0	DARK-ROAD UNLIGHTED	SNOW/ICE	CLOUDY	RIGHT ANGLE	BACKING UNSAFELY	20
E MAIN ST	At Int. w/ Ramp	6 87033003	05/24/2018	06:25pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	UNSAFE LANE CHANGE	21
E MAIN ST	At Int. w/ Ramp	6 87033003	08/14/2018	03:51pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY	22
E MAIN ST	At Int. w/ Ramp	6 87033003	09/18/2018	05:43pm	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	23
E MAIN ST	At Int. w/ Ramp	6 87033003	12/29/2018	04:14am	STOP SIGN	N/R	2-0	DARK-ROAD LIGHTED	WET	FOG/SMOG/SMOKE	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY	24
RAMP	At Int. w/ E Main St	N/P	08/09/2016	08:49am	STOP SIGN	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	HEAD ON	TURNING IMPROPER	25
NON-INTERSECTION													
N/P	Non-Intersection	N/P	03/01/2017	04:22pm	STOP SIGN	PDO	2-0	DUSK	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY	26
[Route] 6	Non-Intersection	6 87033002	08/16/2017	04:10pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION	27
[Route] 6	Non-Intersection	6 87033003	09/09/2017	01:15pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	FAILURE TO YIELD RIGHT OF WAY	28
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	05/10/2017	06:29pm	YIELD SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	FAILURE TO YIELD RIGHT OF WAY	29
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	06/23/2017	05:15pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	OVERTAKING	FAILURE TO YIELD RIGHT OF WAY	30
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	02/07/2018	10:00am	NONE	PDO	1-0	DAYLIGHT	SNOW/ICE	SNOW	OTHER	PAVEMENT SLIPPERY	31
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	02/14/2018	06:45pm	STOP SIGN	PDO	2-0	DARK-ROAD UNLIGHTED	DRY	CLOUDY	OVERTAKING	DRIVER INATTENTION	32
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	05/28/2018	03:34pm	NONE	N/R	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	TIRE FAILURE/INADEQUATE	33
BEAR MOUNTAIN STATE PKWY	Non-Intersection	N/P	07/17/2018	06:40pm	NONE	PDO & I	2-1	DAYLIGHT	WET	CLOUDY	OVERTAKING	FAILURE TO YIELD RIGHT OF WAY	34
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	09/20/2016	03:26pm	STOP SIGN	PDO & I	2-3	DAYLIGHT	DRY	CLOUDY	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY	35
BEAR MOUNTAIN STATE PKWY	Non-Intersection	987H87012007	07/08/2017	11:16am	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	NOT APPLICABLE	36
E MAIN ST	Non-Intersection	6 87033002	02/13/2016	04:20pm	STOP SIGN	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION	37
E MAIN ST	Non-Intersection	6 87033002	09/17/2016	01:54pm	HIGHWAY WORK AREA	N/R	2-0	DAYLIGHT	DRY	CLOUDY	OVERTAKING	REACTION TO OTHER UNINVOLVED VEHICL	38
E MAIN ST	Non-Intersection	6 87033002	10/19/2018	05:53pm	NONE	-	2-0	DUSK	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	DRIVER INATTENTION	39
E MAIN ST	Non-Intersection	6 87033002	09/26/2016	04:10pm	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	HEAD ON	UNSAFE SPEED	40
E MAIN ST	Non-Intersection	6 87033002	09/18/2018	09:10am	NONE	PDO	2-0	DAYLIGHT	WET	CLOUDY	REAR END	DRIVER INATTENTION	41
E MAIN ST	Non-Intersection	6 87033001	09/22/2017	06:15pm	NO PASSING ZONE	N/R	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	OVERTAKING	ALCOHOL INVOLVEMENT	42
E MAIN ST	Non-Intersection	6 87033003	08/04/2016	04:00pm	NO PASSING ZONE	I	3-2	DAYLIGHT	DRY	CLEAR	OTHER	REACTION TO OTHER UNINVOLVED VEHICL	43
E MAIN ST	Non-Intersection	6 87033003	10/26/2016	12:42pm	NO PASSING ZONE	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	44
E MAIN ST	Non-Intersection	6 87033002	12/02/2016	12:53pm	NO PASSING ZONE	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	45
E MAIN ST	Non-Intersection	6 87033002	12/22/2016	09:14am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY	46
E MAIN ST	Non-Intersection	6 87033003	01/05/2017	02:20pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	OVERTAKING	UNSAFE LANE CHANGE	47
E MAIN ST	Non-Intersection	6 87033002	03/02/2017	01:23pm	UNKNOWN	PDO	2-0	UNKNOWN	UNKNOWN	UNKNOWN	REAR END	NOT ENTERED	48
E MAIN ST	Non-Intersection	6 87033002	03/13/2017	08:30pm	NO PASSING ZONE	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	49
E MAIN ST	Non-Intersection	6 87033002	10/03/2017	06:08am	TRAFFIC SIGNAL	N/R	2-0	DAWN	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	50
E MAIN ST	Non-Intersection	6 87033002	02/19/2018	11:53am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	51
E MAIN ST	Non-Intersection	6 87033002	05/06/2018	02:20pm	TRAFFIC SIGNAL	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION	52
E MAIN ST	Non-Intersection	6 87033002	06/29/2018	11:13am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY	53
E MAIN ST	Non-Intersection	N/P	11/27/2018	07:20pm	NO PASSING ZONE	PDO	2-0	DARK-ROAD UNLIGHTED	DRY	CLOUDY	LEFT TURN (AGAINST OTHER CAR)	FAILURE TO YIELD RIGHT OF WAY	54

COLLISION DIAGRAM

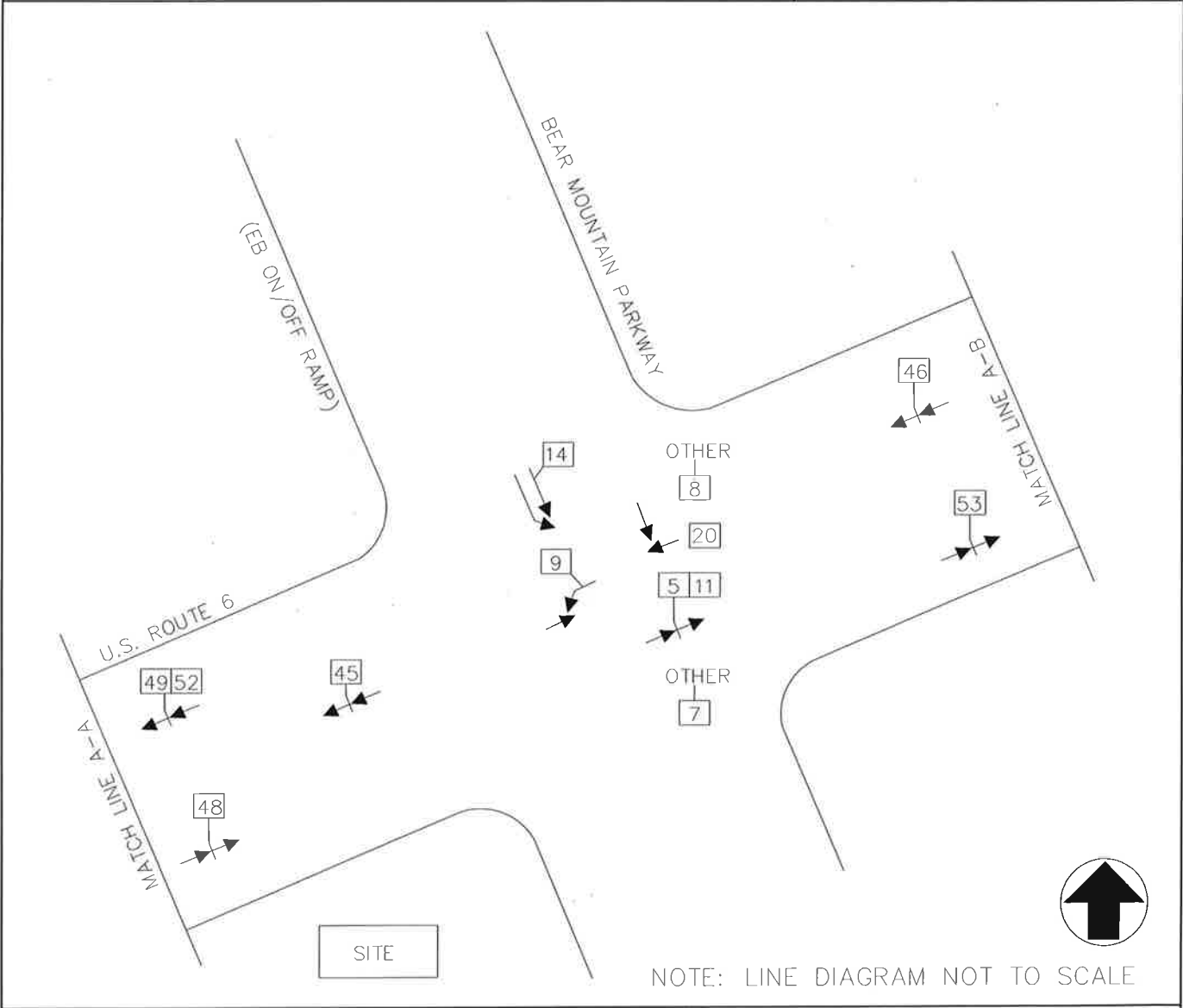
MUNICIPALITY: <u>TOWN OF CORTLANDT</u>	COUNTY: <u>WESTCHESTER</u>	LOCATION # : <u>1</u>
INTERSECTION: <u>U.S. ROUTE 6 & JACOBS HILL ROAD/PARKWAY DRIVE</u>	REF MARKER: <u>687033001--3004</u>	
PERIOD: <u>3</u> YEARS <u>3</u> FROM <u>1/1/2016</u> TO <u>1/30/2019</u>	BY: <u>MASER</u> DATE: <u>7/15/2019</u>	



NUMBER OF ACCIDENTS	SYMBOLS	MANNER OF COLLISION
NON-REPORTABLE <u>3</u>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>→ MOVING VEHICLE</p> <p>→-M→ MOTORCYCLE</p> <p>←←←← BACKING VEHICLE</p> <p>● → STOPPED VEHICLE</p> <p>○ PERSONAL INJURY</p> <p>□ FIXED OBJECT</p> </div> <div style="width: 45%;"> <p>▭ PARKED VEHICLE</p> <p>→-R→ PEDESTRAIN</p> <p>→-B→ BICYCLE</p> <p>→-A→ ANIMAL</p> <p>● FATAL INJURY</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>→+→ REAR END</p> <p>→→ OVERTAKE</p> <p>~→ OUT OF CONTROL</p> <p>→ SKIDDING</p> <p>○ → OVERTURN</p> </div> <div style="width: 45%;"> <p>→← HEAD ON</p> <p>→↘ LEFT TURN</p> <p>→↗ RIGHT TURN</p> <p>→↓ RIGHT ANGLE</p> <p>→← SIDE SWIPE</p> </div> </div>
PROPERTY DAMAGE <u>2</u>		
INJURY <u>0</u>		
FATALITY <u>0</u>		
UNKNOWN <u>0</u>		
PD & I <u>3</u>		
TOTAL ACCIDENTS <u>8</u>		

COLLISION DIAGRAM

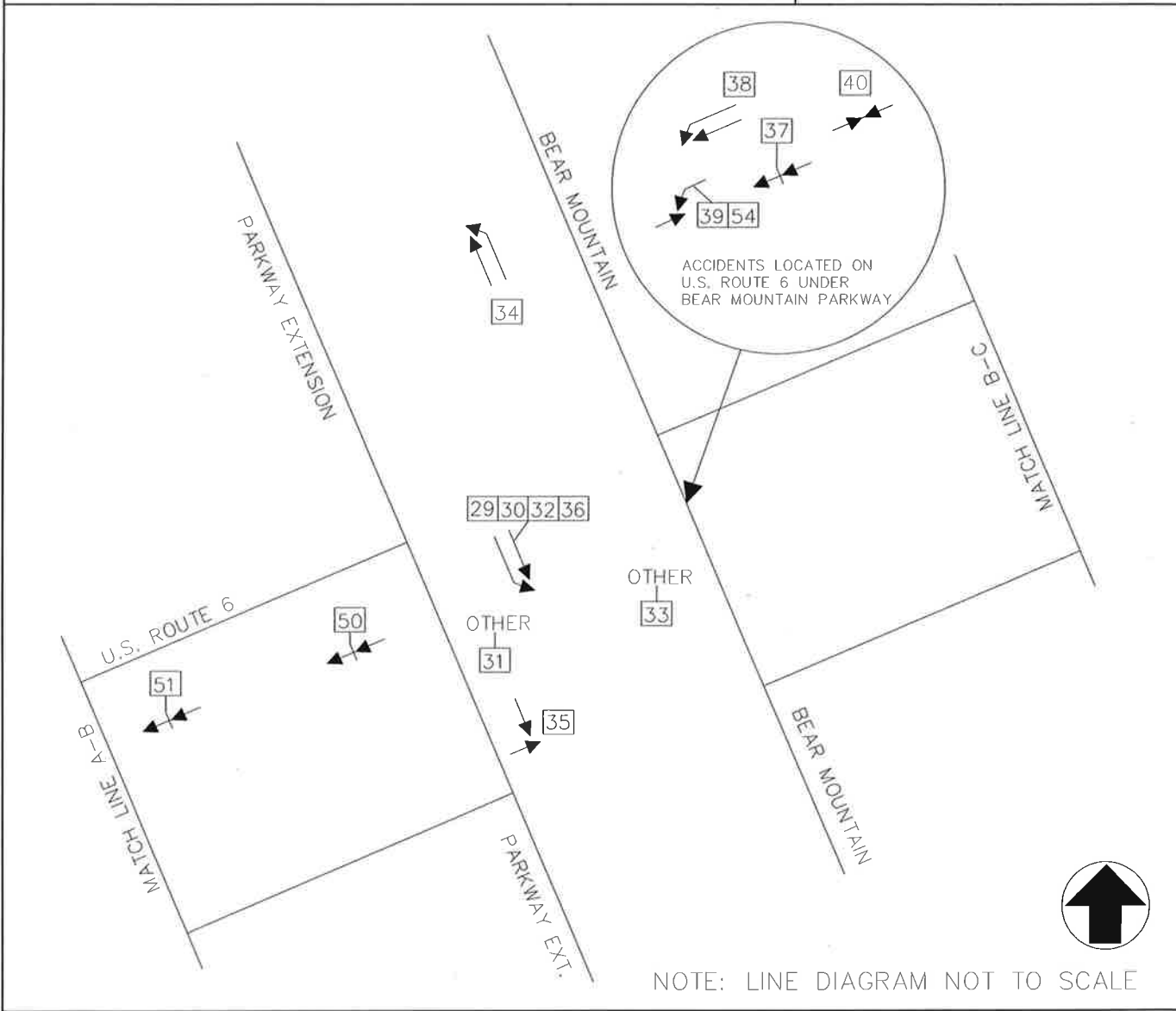
MUNICIPALITY: TOWN OF CORTLANDT COUNTY: WESTCHESTER LOCATION # : 2
 INTERSECTION: U.S. ROUTE 6 & BEAR MOUNTAIN PKWY EB RAMP/SITE REF MARKER: 687033001-3004
 PERIOD: 3 YEARS 3 FROM 1/1/2016 TO 1/30/2019 BY: MASER DATE: 7/15/2019



NUMBER OF ACCIDENTS	SYMBOLS	MANNER OF COLLISION
NON-REPORTABLE <u>4</u>	→ MOVING VEHICLE	→ → REAR END
PROPERTY DAMAGE <u>8</u>	→-M→ MOTORCYCLE	→ → HEAD ON
INJURY <u>0</u>	←←←← BACKING VEHICLE	→ ↘ LEFT TURN
FATALITY <u>0</u>	●→ STOPPED VEHICLE	→ ↗ RIGHT TURN
UNKNOWN <u>0</u>	○ PERSONAL INJURY	→ ↓ RIGHT ANGLE
PD & I <u>1</u>	● FATAL INJURY	→ ↖ SIDE SWIPE
TOTAL ACCIDENTS <u>13</u>	□ FIXED OBJECT	
	▭ PARKED VEHICLE	
	--R→ PEDESTRAIN	
	-B→ BICYCLE	
	-A→ ANIMAL	
	~→ OUT OF CONTROL	
	↘ SKIDDING	
	○→ OVERTURN	

COLLISION DIAGRAM

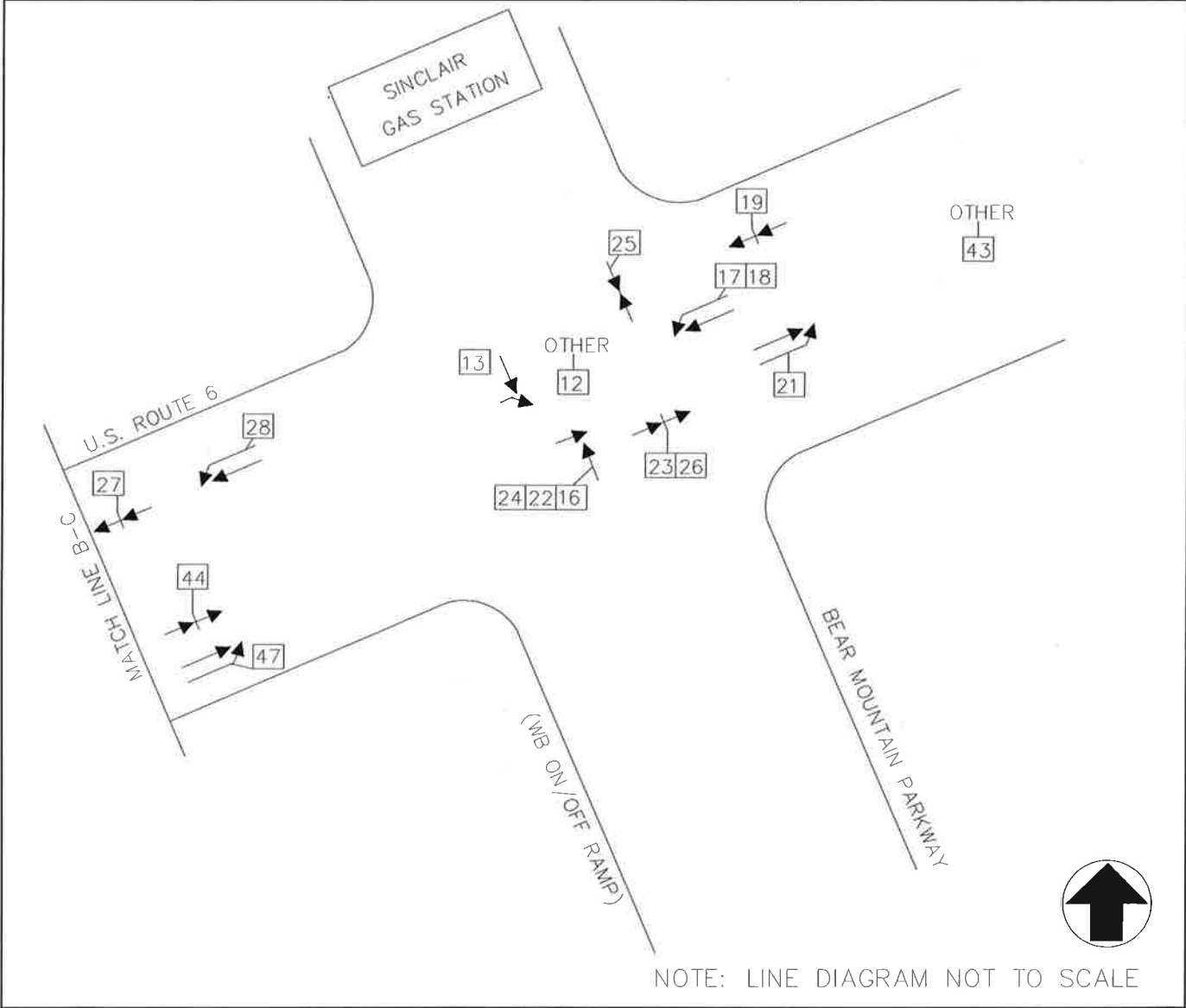
MUNICIPALITY: TOWN OF CORTLANDT COUNTY: WESTCHESTER LOCATION # : 3
 INTERSECTION: U.S. ROUTE 6 & BEAR MNT. PKWY EXT./UNDERPASS REF MARKER: 687033001-3004
 PERIOD: 3 YEARS 3 FROM 1/1/2016 TO 1/30/2019 BY: MASER DATE: 7/15/2019



NUMBER OF ACCIDENTS	SYMBOLS	MANNER OF COLLISION
NON-REPORTABLE <u>4</u>	<div style="display: inline-block; vertical-align: middle;"> MOVING VEHICLE </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> PARKED VEHICLE </div>	<div style="display: inline-block; vertical-align: middle;"> REAR END </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> HEAD ON </div>
PROPERTY DAMAGE <u>8</u>	<div style="display: inline-block; vertical-align: middle;"> MOTORCYCLE </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> PEDESTRIAN </div>	<div style="display: inline-block; vertical-align: middle;"> OVERTAKE </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> LEFT TURN </div>
INJURY <u>0</u>	<div style="display: inline-block; vertical-align: middle;"> BACKING VEHICLE </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> BICYCLE </div>	<div style="display: inline-block; vertical-align: middle;"> OUT OF CONTROL </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> RIGHT TURN </div>
FATALITY <u>0</u>	<div style="display: inline-block; vertical-align: middle;"> STOPPED VEHICLE </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> ANIMAL </div>	<div style="display: inline-block; vertical-align: middle;"> SKIDDING </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> RIGHT ANGLE </div>
UNKNOWN <u>1</u>	<div style="display: inline-block; vertical-align: middle;"> PERSONAL INJURY </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> FATAL INJURY </div>	<div style="display: inline-block; vertical-align: middle;"> OVERTURN </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> SIDE SWIPE </div>
PD & I <u>2</u>	<div style="display: inline-block; vertical-align: middle;"> FIXED OBJECT </div>	
TOTAL ACCIDENTS <u>15</u>		

COLLISION DIAGRAM

MUNICIPALITY: TOWN OF CORTLANDT COUNTY: WESTCHESTER LOCATION # : 4
 INTERSECTION: U.S. ROUTE 6 & BEAR MTN PKWY WB RAMP/SINCLAIR REF MARKER: 687033001-3004
 PERIOD: 3 YEARS 3 FROM 1/1/2016 TO 1/30/2019 BY: MASER DATE: 7/15/2019



NUMBER OF ACCIDENTS	SYMBOLS	MANNER OF COLLISION
NON-REPORTABLE <u>2</u>	MOVING VEHICLE PARKED VEHICLE MOTORCYCLE PEDESTRAIN BACKING VEHICLE BICYCLE STOPPED VEHICLE ANIMAL PERSONAL INJURY FATAL INJURY FIXED OBJECT	REAR END HEAD ON OVERTAKE LEFT TURN OUT OF CONTROL RIGHT TURN SKIDDING RIGHT ANGLE OVERTURN SIDE SWIPE
PROPERTY DAMAGE <u>11</u>		
INJURY <u>1</u>		
FATALITY <u>0</u>		
UNKNOWN <u>0</u>		
PD & I <u>3</u>		
TOTAL ACCIDENTS <u>17</u>		

TABLE NO. 25

LEVEL OF SERVICE SUMMARY TABLE
(SYNCHRO PERCENTILE METHODOLOGY DELAY)

		NO EXIT TO PARKWAY DRIVE												
		2019 EXISTING			2021 NO-BUILD			2021 BUILD			% CHANGE NO-BUILD TO BUILD			
		AM	PM	SATURDAY	AM	PM	SATURDAY	AM	PM	SATURDAY	AM	PM	SATURDAY	
1	U.S. ROUTE 6 & JACOBS HILL ROAD/ PARKWAY DRIVE	SIGNALIZED												
	EB L	A[7.3]	A[7.7]	A[8.2]	A[7.3]	A[8.1]	A[9.2]	A[7.5]	A[8.3]	A[9.5]	2.7%	2.5%	3.3%	
	EB T/ TR	B[10.2]	B[11.9]	B[12.3]	B[10.8]	B[13.4]	B[14.2]	B[14.3]	B[19.7]	C[21.0]	32.4%	47.0%	47.9%	
	EB APPROACH	B[10.1]	B[11.7]	B[12.1]	B[10.7]	B[13.2]	B[14.0]	B[14.1]	B[19.3]	C[20.6]	31.8%	46.2%	47.1%	
	WB L	A[7.0]	A[7.0]	A[7.4]	A[7.0]	A[7.0]	A[7.6]	A[7.8]	A[9.4]	B[10.7]	11.4%	34.3%	40.8%	
	WB T/ TR	B[13.2]	B[15.6]	B[18.3]	B[14.8]	B[18.3]	C[30.2]	B[15.5]	B[19.6]	D[37.2]	4.7%	7.1%	23.2%	
	WB APPROACH	B[13.2]	B[15.6]	B[18.2]	B[14.8]	B[18.3]	C[30.0]	B[15.1]	B[19.1]	D[35.9]	2.0%	4.4%	19.7%	
	NB LT	C[23.8]	C[24.0]	C[24.0]	C[23.8]	C[24.0]	C[24.0]	C[23.8]	C[24.0]	C[24.0]	0.0%	0.0%	0.0%	
	NB R	A[0.0]	A[0.0]	A[0.0]	A[0.0]	A[0.0]	A[0.0]	A[0.0]	A[0.0]	A[0.0]	0.0%	0.0%	0.0%	
	NB APPROACH	B[10.6]	C[24.0]	A[3.0]	B[10.6]	C[24.0]	A[3.0]	B[10.6]	C[24.0]	A[3.0]	0.0%	0.0%	0.0%	
	SB LT	C[24.7]	C[25.6]	C[25.3]	C[24.7]	C[25.7]	C[25.4]	C[24.7]	C[25.8]	C[25.5]	0.0%	0.4%	0.4%	
	SB R	A[0.2]	A[2.2]	A[0.2]	A[0.2]	A[2.6]	A[0.2]	A[0.2]	A[2.6]	A[0.2]	0.0%	0.0%	0.0%	
	SB APPROACH	B[14.5]	B[14.7]	B[16.2]	B[14.5]	B[14.8]	B[16.2]	B[15.6]	B[16.9]	B[16.9]	7.6%	5.4%	4.3%	
	OVERALL	B[11.8]	B[13.6]	B[15.2]	B[12.9]	B[15.6]	C[21.9]	B[14.6]	C[28.1]	13.2%	21.8%	28.3%		
2	U.S. ROUTE 6 & BEAR MOUNTAIN PARKWAY EB ON/OFF RAMPS/ SITE ACCESS DRIVEWAY	SIGNALIZED												
	EB L	B[11.3]	B[13.9]	B[16.7]	B[13.2]	B[16.1]	C[23.4]	-	-	-	-	-	-	
	EB T/ TR	B[12.8]	B[16.3]	B[15.2]	B[13.5]	B[17.2]	B[17.5]	-	-	-	-	-	-	
	EB APPROACH	B[12.7]	B[16.3]	B[15.3]	B[13.5]	B[17.2]	B[17.8]	-	-	-	-	-	-	
	WB T/ TR	B[19.4]	C[26.7]	C[27.5]	C[23.2]	C[26.5]	D[50.2]	-	-	-	-	-	-	
	WB APPROACH	B[19.4]	C[26.7]	C[27.5]	C[23.2]	C[26.5]	D[50.2]	-	-	-	-	-	-	
	NB LTR	A[0.0]	A[0.2]	A[0.5]	A[0.0]	A[0.2]	A[0.5]	-	-	-	-	-	-	
	NB APPROACH	A[0.0]	A[0.2]	A[0.5]	A[0.0]	A[0.2]	A[0.5]	-	-	-	-	-	-	
	SB L	C[25.1]	C[29.8]	D[40.5]	C[29.3]	D[40.1]	E[55.4]	-	-	-	-	-	-	
	SB TR	A[6.6]	A[0.1]	A[7.9]	A[6.1]	A[0.4]	A[6.1]	-	-	-	-	-	-	
	SB APPROACH	C[21.0]	C[26.7]	D[36.2]	C[22.3]	C[32.6]	D[43.6]	-	-	-	-	-	-	
		OVERALL	B[17.5]	C[22.5]	C[24.5]	B[19.5]	C[24.0]	D[36.5]	-	-	-	-	-	
	W/ RECONSTRUCTED SITE DRIVEWAY	EB L	-	-	-	-	-	B[19.5]	C[26.6]	C[31.0]	47.7%	65.2%	32.5%	
	EB T/ TR	-	-	-	-	-	-	C[21.1]	C[28.8]	D[39.5]	56.3%	67.4%	125.7%	
	EB APPROACH	-	-	-	-	-	-	C[21.0]	C[28.7]	D[39.1]	55.6%	66.9%	119.7%	
	WB T/ TR	-	-	-	-	-	-	C[33.2]	D[40.1]	F[105.9]	43.1%	51.3%	111.0%	
	WB APPROACH	-	-	-	-	-	-	C[33.2]	D[40.1]	F[105.9]	43.1%	51.3%	111.0%	
	NB L	-	-	-	-	-	-	E[62.6]	E[72.3]	F[83.9]	-	-	-	
	NB LT	-	-	-	-	-	-	F[113.0]	F[147.9]	F[141.5]	-	-	-	
	NB R	-	-	-	-	-	-	A[1.1]	A[1.5]	A[1.4]	-	-	-	
	NB APPROACH	-	-	-	-	-	-	D[53.5]	E[65.8]	E[66.3]	-	-	-	
	SB L	-	-	-	-	-	-	D[46.7]	E[77.9]	F[104.8]	59.4%	94.3%	89.2%	
	SB TR	-	-	-	-	-	-	B[10.4]	B[11.3]	B[10.1]	70.5%	2725.0%	65.6%	
	SB APPROACH	-	-	-	-	-	-	C[34.2]	E[62.1]	E[78.8]	53.4%	90.5%	80.7%	
		OVERALL	-	-	-	-	-	C[30.6]	D[41.5]	E[74.9]	56.9%	72.9%	105.2%	
	W/ RECONSTRUCTED SITE DRIVEWAY & SIGNAL TIMING IMPROVEMENTS	EB L	-	-	-	-	-	B[14.2]	C[24.0]	D[54.5]	7.6%	49.1%	132.9%	
	EB T/ TR	-	-	-	-	-	-	B[13.1]	C[21.9]	C[27.4]	-3.0%	27.3%	56.6%	
	EB APPROACH	-	-	-	-	-	-	B[13.2]	C[21.9]	C[28.6]	-2.2%	27.3%	60.7%	
	WB T/ TR	-	-	-	-	-	-	C[22.2]	D[35.4]	D[49.6]	-4.3%	33.6%	-1.2%	
	WB APPROACH	-	-	-	-	-	-	C[22.2]	D[35.4]	D[49.6]	-4.3%	33.6%	-1.2%	
	NB L	-	-	-	-	-	-	D[51.4]	E[70.1]	F[85.2]	-	-	-	
	NB LT	-	-	-	-	-	-	D[50.9]	E[70.0]	F[81.7]	-	-	-	
	NB R	-	-	-	-	-	-	A[2.4]	A[7.3]	A[9.4]	-	-	-	
	NB APPROACH	-	-	-	-	-	-	C[31.6]	D[43.9]	D[52.3]	-	-	-	
	SB L	-	-	-	-	-	-	D[46.7]	D[51.4]	E[56.8]	59.4%	28.2%	2.5%	
	SB TR	-	-	-	-	-	-	A[9.0]	A[9.9]	A[8.9]	47.5%	2375.0%	45.9%	
	SB APPROACH	-	-	-	-	-	-	C[33.7]	D[41.5]	D[43.6]	51.1%	27.3%	0.0%	
	OVERALL	-	-	-	-	-	C[22.4]	C[31.9]	D[41.0]	14.9%	32.9%	12.3%		
3	U.S. ROUTE 6 & BEAR MOUNTAIN PARKWAY WB ON/OFF RAMPS/ SINCLAIR GAS STATION	UNSIGNALIZED												
	EB LTR	A [9.0]	A [9.7]	B [10.9]	A [9.4]	B [10.4]	B [11.9]	A [9.5]	B [10.6]	B [12.2]	1.1%	1.9%	2.5%	
	WB LTR	B [11.3]	C [17.3]	C [20.2]	B [12.7]	D [28.4]	E [40.6]	B [13.3]	D [31.9]	E [46.2]	4.7%	12.3%	13.8%	
	NB L	F [60.8]	F [386.7]	F [*]	F [110.1]	F [*]	F [*]	F [155.1]	F [*]	F [*]	40.9%	0.0%	0.0%	
	NB TR	C [15.0]	B [13.8]	B [14.6]	C [16.6]	C [17.6]	C [17.9]	C [17.6]	C [18.4]	C [18.4]	6.0%	3.1%	2.8%	
	SB LTR	D [30.0]	F [111.4]	F [325.4]	E [44.0]	F [*]	F [*]	F [50.4]	F [*]	F [*]	14.5%	0.0%	0.0%	
	W/ SIGNALIZATION	EB LT/ TR	-	-	-	A[5.7]	B[15.5]	C[21.5]	A[2.4]	A[6.0]	B[11.3]	-57.9%	-61.3%	-47.4%
	EB APPROACH	-	-	-	A[5.7]	B[15.5]	C[21.5]	A[2.4]	A[6.0]	B[11.3]	-57.9%	-61.3%	-47.4%	
	WB L	-	-	-	A[6.4]	D[38.1]	D[52.2]	A[8.4]	D[42.3]	D[52.3]	31.3%	11.0%	0.2%	
	WB T/ TR	-	-	-	A[1.7]	A[2.3]	A[2.8]	A[2.2]	A[2.0]	A[3.1]	29.4%	-13.0%	10.7%	
	WB APPROACH	-	-	-	A[2.7]	B[10.7]	B[12.7]	A[3.5]	B[11.2]	B[12.7]	29.6%	4.7%	0.0%	
	NB L	-	-	-	D[46.6]	D[50.0]	D[54.6]	D[48.7]	E[73.5]	F[81.2]	4.5%	47.0%	48.7%	
	NB TR	-	-	-	B[19.8]	A[0.8]	A[1.4]	B[19.1]	A[0.7]	A[1.0]	-3.5%	-12.5%	-28.6%	
NB APPROACH	-	-	-	C[28.6]	B[19.2]	B[19.9]	C[30.9]	C[32.0]	C[31.5]	8.0%	66.7%	58.3%		
SB LTR	-	-	-	C[27.9]	C[25.7]	C[23.4]	C[27.1]	C[33.3]	C[30.9]	-2.9%	29.6%	32.1%		
SB APPROACH	-	-	-	C[27.9]	C[25.7]	C[23.4]	C[27.1]	C[33.3]	C[30.9]	-2.9%	29.6%	32.1%		
	OVERALL	-	-	-	A[5.1]	B[13.6]	B[17.3]	A[4.0]	A[9.3]	B[12.9]	-21.6%	-31.6%	-25.4%	
4	PARKWAY DRIVE & SITE ACCESS DRIVEWAY	UNSIGNALIZED												
	EB LTR	-	-	-	-	-	-	A [7.3]	A [7.3]	A [7.4]	-	-	-	

NOTES:






















1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS.

2) SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

3) * REPRESENTS ESTIMATED AVERAGE VEHICLE DELAYS GREATER THAN 500 SECONDS.

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	26	0	18	4	0	5	23	515	0	1	561	42
Future Volume (vph)	26	0	18	4	0	5	23	515	0	1	561	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%			-1%	
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850						0.989
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1796	1456	0	1916	1503	1661	3177	0	1719	3292	0
Flt Permitted		0.755			0.740		0.360			0.444		
Satd. Flow (perm)	0	1428	1456	0	1492	1503	629	3177	0	803	3292	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85						11
Link Speed (mph)		30			30			40				40
Link Distance (ft)		153			327			315				316
Travel Time (s)		3.5			7.4			5.4				5.4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	11%	2%	2%	20%	4%	5%	2%	2%	5%	10%
Adj. Flow (vph)	27	0	19	4	0	5	24	536	0	1	584	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	19	0	4	5	24	536	0	1	628	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effect Green (s)		25.0	25.0		25.0	25.0	54.4	53.0		52.3	50.3	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.60	0.59		0.58	0.56	
v/c Ratio		0.07	0.04		0.01	0.01	0.05	0.29		0.00	0.34	
Control Delay		24.7	0.2		23.8	0.0	7.3	10.2		7.0	12.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	1.0	
Total Delay		24.7	0.2		23.8	0.0	7.3	10.2		7.0	13.2	
LOS		C	A		C	A	A	B		A	B	
Approach Delay		14.5			10.6			10.1			13.2	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		11	0		2	0	5	68		0	80	
Queue Length 95th (ft)		32	0		10	0	14	127		2	155	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		396	465		414	478	499	1870		586	1845	
Starvation Cap Reductn		0	0		0	0	0	0		0	909	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.07	0.04		0.01	0.01	0.05	0.29		0.00	0.67	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 11.8

Intersection LOS: B

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

Intersection Capacity Utilization 37.7% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road



2019 Existing Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	1	0	1	301	2	85	28	517	1	1	518	146
Future Volume (vph)	1	0	1	301	2	85	28	517	1	1	518	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt		0.932			0.853						0.967	
Flt Protected		0.976		0.950			0.950					
Satd. Flow (prot)	0	1694	0	1745	1582	0	1669	3276	0	0	3222	0
Flt Permitted				0.950			0.284				0.954	
Satd. Flow (perm)	0	1736	0	1745	1582	0	499	3276	0	0	3074	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			94							37
Link Speed (mph)		30			30			40				40
Link Distance (ft)		126			290			316				430
Travel Time (s)		2.9			6.6			5.4				7.3
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	4%	6%	2%	2%	4%	5%
Adj. Flow (vph)	1	0	1	334	2	94	31	574	1	1	576	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	334	96	0	31	575	0	0	739	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2019 Existing Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0				0.0
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0	41.0	
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%	39.4%	
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0	35.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)										8.0	8.0	
Flash Dont Walk (s)										18.0	18.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)		5.7		17.7	17.7		27.4	23.1				19.9
Actuated g/C Ratio		0.10		0.32	0.32		0.49	0.41				0.36
v/c Ratio		0.01		0.61	0.17		0.08	0.42				0.66
Control Delay		0.0		25.1	6.6		11.3	12.7				19.4
Queue Delay		0.0		0.0	0.0		0.0	0.0				0.0
Total Delay		0.0		25.1	6.6		11.3	12.8				19.4
LOS		A		C	A		B	B				B
Approach Delay					21.0			12.7				19.4
Approach LOS					C			B				B
Queue Length 50th (ft)		0		77	0		3	61				80
Queue Length 95th (ft)		0		267	37		25	147				242
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		481		897	858		536	2826				2167
Starvation Cap Reductn		0		0	0		0	243				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.00		0.37	0.11		0.06	0.22				0.34

Intersection Summary






Area Type:	Other
Cycle Length:	104
Actuated Cycle Length:	55.9
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019

Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

 Ø2	 Ø1	 Ø4	 Ø8
41 s	16 s	16 s	31 s
 Ø6			
57 s			

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Volume (vph)	3	2	11	13	2	25	2	772	41	189	635	15
Future Volume (vph)	3	2	11	13	2	25	2	772	41	189	635	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.905			0.860			0.992			0.997	
Flt Protected		0.991		0.950						0.950		
Satd. Flow (prot)	0	1679	0	1745	1605	0	0	3363	0	1711	3462	0
Flt Permitted		0.991		0.950						0.950		
Satd. Flow (perm)	0	1679	0	1745	1605	0	0	3363	0	1711	3462	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		117			261			430			307	
Travel Time (s)		2.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	1		1				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	6%	5%	2%	4%	2%
Adj. Flow (vph)	3	2	12	14	2	27	2	821	44	201	676	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	14	29	0	0	867	0	201	692	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.8%
Analysis Period (min)	15
	ICU Level of Service A

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	2.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	3	2	11	13	2	25	2	772	41	189	635	15
Future Vol, veh/h	3	2	11	13	2	25	2	772	41	189	635	15
Conflicting Peds, #/hr	1	0	1	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	4	2	6	5	2	4	2
Mvmt Flow	3	2	12	14	2	27	2	821	44	201	676	16























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1504	1956	348	1589	1942	434	693	0	0	865	0	0
Stage 1	1087	1087	-	847	847	-	-	-	-	-	-	-
Stage 2	417	869	-	742	1095	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.74	5.74	6.58	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.34	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	91	70	654	103	99	592	898	-	-	774	-	-
Stage 1	245	308	-	390	454	-	-	-	-	-	-	-
Stage 2	598	386	-	441	367	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	68	52	653	78	73	591	897	-	-	774	-	-
Mov Cap-2 Maneuver	68	52	-	78	73	-	-	-	-	-	-	-
Stage 1	244	228	-	388	452	-	-	-	-	-	-	-
Stage 2	566	384	-	317	271	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	30	29.9	0	2.5
HCM LOS	D	D		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	897	-	-	78	387	161	774	-
HCM Lane V/C Ratio	0.002	-	-	0.177	0.074	0.106	0.26	-
HCM Control Delay (s)	9	0	-	60.8	15	30	11.3	-
HCM Lane LOS	A	A	-	F	C	D	B	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.2	0.3	1	-

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

													
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	51	0	45	1	0	0	38	806	2	1	688	61	
Future Volume (vph)	51	0	45	1	0	0	38	806	2	1	688	61	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13	
Grade (%)		-7%			-3%			2%			-1%		
Storage Length (ft)	0		0	0		75	115		0	90		0	
Storage Lanes	0		1	0		1	1		0	1		0	
Taper Length (ft)	25			25			86			86			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor							1.00					1.00	
Frt			0.850									0.988	
Flt Protected		0.950			0.950		0.950			0.950			
Satd. Flow (prot)	0	1832	1584	0	1916	2080	1694	3270	0	1719	3390	0	
Flt Permitted		0.757			0.721		0.263			0.285			
Satd. Flow (perm)	0	1459	1584	0	1454	2080	468	3270	0	516	3390	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			85									13	
Link Speed (mph)		30			30		40			40			
Link Distance (ft)		153			327		315			316			
Travel Time (s)		3.5			7.4		5.4			5.4			
Confl. Peds. (#/hr)							4					4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	55	0	48	1	0	0	41	867	2	1	740	66	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	55	48	0	1	0	41	869	0	1	806	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		0			0		11			11			
Link Offset(ft)		0			0		0			0			
Crosswalk Width(ft)		16			16		16			16			
Two way Left Turn Lane													
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	2	2	1	2	2	2	2		2	2		
Detector Template	Left			Left									
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83		
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5		
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5		
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		43	43		43	43	43	43		43	43		
Detector 2 Size(ft)		40	40		40	40	40	40		40	40		
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 2 Channel													

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0		54.5	53.0		50.8	47.8	
Actuated g/C Ratio		0.28	0.28		0.28		0.61	0.59		0.56	0.53	
v/c Ratio		0.14	0.10		0.00		0.11	0.45		0.00	0.45	
Control Delay		25.6	2.2		24.0		7.7	11.9		7.0	14.7	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.9	
Total Delay		25.6	2.2		24.0		7.7	11.9		7.0	15.6	
LOS		C	A		C		A	B		A	B	
Approach Delay		14.7			24.0			11.7			15.6	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		23	0		0		9	125		0	153	
Queue Length 95th (ft)		53	10		4		21	223		2	210	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)							115			90		
Base Capacity (vph)		405	501		403		422	1925		442	1807	
Starvation Cap Reductn		0	0		0		0	0		0	671	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.14	0.10		0.00		0.10	0.45		0.00	0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2019 Existing Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	1	0	5	402	0	47	31	821	0	2	702	151
Future Volume (vph)	1	0	5	402	0	47	31	821	0	2	702	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt		0.887			0.850						0.973	
Flt Protected		0.992		0.950			0.950					
Satd. Flow (prot)	0	1639	0	1762	1576	0	1686	3404	0	0	3314	0
Flt Permitted				0.950			0.184				0.953	
Satd. Flow (perm)	0	1652	0	1762	1576	0	326	3404	0	0	3158	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			430						26	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			391			316			430	
Travel Time (s)		2.9			8.9			5.4			7.3	
Confl. Peds. (#/hr)							3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	1	0	5	423	0	49	33	864	0	2	739	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	423	49	0	33	864	0	0	900	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2019 Existing Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0				0.0
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0	41.0	
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%	39.4%	
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0	35.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)										8.0	8.0	
Flash Dont Walk (s)										18.0	18.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)		5.3		25.3	25.3		33.0	30.3				24.6
Actuated g/C Ratio		0.08		0.36	0.36		0.47	0.43				0.35
v/c Ratio		0.02		0.66	0.06		0.13	0.59				0.80
Control Delay		0.2		29.8	0.1		13.9	16.2				26.7
Queue Delay		0.0		0.0	0.0		0.0	0.1				0.0
Total Delay		0.2		29.8	0.1		13.9	16.3				26.7
LOS		A		C	A		B	B				C
Approach Delay		0.2			26.7			16.3				26.7
Approach LOS		A			C			B				C
Queue Length 50th (ft)		0		165	0		7	131				186
Queue Length 95th (ft)		0		#419	0		25	232				312
Internal Link Dist (ft)		46			311			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		382		664	862		383	2597				1679
Starvation Cap Reductn		0		0	0		0	626				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.02		0.64	0.06		0.09	0.44				0.54

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 70
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80

Intersection Signal Delay: 22.5 Intersection LOS: C

Intersection Capacity Utilization 64.7% ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↖ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Volume (vph)	4	3	19	15	0	28	12	1140	71	265	826	14
Future Volume (vph)	4	3	19	15	0	28	12	1140	71	265	826	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.901			0.850			0.991			0.998	
Flt Protected		0.992		0.950						0.950		
Satd. Flow (prot)	0	1638	0	1745	1484	0	0	3490	0	1711	3532	0
Flt Permitted		0.992		0.950						0.950		
Satd. Flow (perm)	0	1638	0	1745	1484	0	0	3490	0	1711	3532	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		115			268			430			307	
Travel Time (s)		2.6			6.1			7.3			5.2	
Confl. Peds. (#/hr)	3		3				3					3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	5%	2%	2%	11%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	19	15	0	29	12	1163	72	270	843	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	15	29	0	0	1247	0	270	857	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.5%
Analysis Period (min)	15
	ICU Level of Service D

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	5.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	4	3	19	15	0	28	12	1140	71	265	826	14
Future Vol, veh/h	4	3	19	15	0	28	12	1140	71	265	826	14
Conflicting Peds, #/hr	3	0	3	0	0	0	3	0	0	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	5	2	2	11	2	2	2	2	2	2
Mvmt Flow	4	3	19	15	0	29	12	1163	72	270	843	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2002	2652	435	2189	2623	621	860	0	0	1235	0	0
Stage 1	1393	1393	-	1223	1223	-	-	-	-	-	-	-
Stage 2	609	1259	-	966	1400	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.9	6.74	5.74	6.72	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.35	3.52	4.02	3.41	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	39	26	568	41	42	438	777	-	-	560	-	-
Stage 1	161	224	-	249	328	-	-	-	-	-	-	-
Stage 2	464	258	-	339	280	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	22	13	565	20	21	437	775	-	-	560	-	-
Mov Cap-2 Maneuver	22	13	-	20	21	-	-	-	-	-	-	-
Stage 1	152	116	-	236	311	-	-	-	-	-	-	-
Stage 2	410	245	-	165	144	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	111.4	143.9	0.3	4.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	775	-	-	20	437	58	560	-
HCM Lane V/C Ratio	0.016	-	-	0.765	0.065	0.457	0.483	-
HCM Control Delay (s)	9.7	0.2	-	386.7	13.8	111.4	17.3	-
HCM Lane LOS	A	A	-	F	B	F	C	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0.2	1.8	2.6	-

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕	↗	↖	↕↗		↖	↕↗	
Traffic Volume (vph)	44	0	25	1	0	7	44	867	2	10	871	61
Future Volume (vph)	44	0	25	1	0	7	44	867	2	10	871	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%				-1%
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt			0.850			0.850					0.990	
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1832	1584	0	1916	1768	1694	3270	0	1594	3392	0
Flt Permitted		0.757			0.726		0.193			0.262		
Satd. Flow (perm)	0	1459	1584	0	1464	1768	344	3270	0	440	3392	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85						10
Link Speed (mph)		30			30			40				40
Link Distance (ft)		153			327			315				316
Travel Time (s)		3.5			7.4			5.4				5.4
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	10%	2%	5%
Adj. Flow (vph)	47	0	27	1	0	7	47	922	2	11	927	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	27	0	1	7	47	924	0	11	992	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0	25.0	54.5	52.9		50.8	47.7	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.61	0.59		0.56	0.53	
v/c Ratio		0.12	0.05		0.00	0.01	0.15	0.48		0.04	0.55	
Control Delay		25.3	0.2		24.0	0.0	8.2	12.3		7.4	16.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	1.9	
Total Delay		25.3	0.2		24.0	0.0	8.2	12.3		7.4	18.3	
LOS		C	A		C	A	A	B		A	B	
Approach Delay		16.2			3.0			12.1			18.2	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)		20	0		0	0	10	136		2	205	
Queue Length 95th (ft)		47	0		4	0	23	244		8	276	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		405	501		406	552	360	1922		390	1803	
Starvation Cap Reductn		0	0		0	0	0	0		0	616	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.12	0.05		0.00	0.01	0.13	0.48		0.03	0.84	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2019 Existing Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019

Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2019 Existing Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	6	0	8	419	2	61	40	875	3	8	875	199
Future Volume (vph)	6	0	8	419	2	61	40	875	3	8	875	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%				0%
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor					0.99							0.99
Frt		0.923			0.855							0.972
Flt Protected		0.979		0.950			0.950					
Satd. Flow (prot)	0	1583	0	1762	1565	0	1702	3404	0	0	3308	0
Flt Permitted				0.950			0.126				0.947	
Satd. Flow (perm)	0	1617	0	1762	1565	0	226	3404	0	0	3133	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			64							28
Link Speed (mph)		30			30			40				40
Link Distance (ft)		126			290			316				430
Travel Time (s)		2.9			6.6			5.4				7.3
Confl. Peds. (#/hr)						1	4					4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	17%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	6	0	8	441	2	64	42	921	3	8	921	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	441	66	0	42	924	0	0	1138	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2019 Existing Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0	41.0	
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%	39.4%	
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0	35.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)										8.0	8.0	
Flash Dont Walk (s)										18.0	18.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)		5.1		25.3	25.3		43.8	41.5				35.4
Actuated g/C Ratio		0.06		0.31	0.31		0.54	0.51				0.44
v/c Ratio		0.06		0.80	0.12		0.20	0.53				0.82
Control Delay		0.5		40.5	7.9		16.7	14.7				27.5
Queue Delay		0.0		0.0	0.0		0.0	0.5				0.0
Total Delay		0.5		40.5	7.9		16.7	15.2				27.5
LOS		A		D	A		B	B				C
Approach Delay		0.5			36.2			15.3				27.5
Approach LOS		A			D			B				C
Queue Length 50th (ft)		0		212	1		9	143				266
Queue Length 95th (ft)		0		#446	32		30	253				#484
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		339		550	533		321	2170				1386
Starvation Cap Reductn		0		0	0		0	753				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.04		0.80	0.12		0.13	0.65				0.82

Intersection Summary

Area Type:	Other
Cycle Length:	104
Actuated Cycle Length:	80.8
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82

Intersection Signal Delay: 24.5 Intersection LOS: C

Intersection Capacity Utilization 76.2% ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↖ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak Saturday Hour
 07/29/2019

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	4	4	29	25	0	49	11	1223	63	267	1032	27
Future Volume (vph)	4	4	29	25	0	49	11	1223	63	267	1032	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.893			0.850			0.993			0.996	
Flt Protected		0.995		0.950						0.950		
Satd. Flow (prot)	0	1663	0	1711	1615	0	0	3497	0	1711	3525	0
Flt Permitted		0.995		0.950						0.950		
Satd. Flow (perm)	0	1663	0	1711	1615	0	0	3497	0	1711	3525	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		117			261			430			307	
Travel Time (s)		2.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	4		4				4					4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	4	30	26	0	51	11	1274	66	278	1075	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	26	51	0	0	1351	0	278	1103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 83.5% ICU Level of Service E
 Analysis Period (min) 15

2019 Existing Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak Saturday Hour
 07/29/2019

Intersection												
Int Delay, s/veh	24.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↵	↶			↕		↵	↶	
Traffic Vol, veh/h	4	4	29	25	0	49	11	1223	63	267	1032	27
Future Vol, veh/h	4	4	29	25	0	49	11	1223	63	267	1032	27
Conflicting Peds, #/hr	4	0	4	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	30	26	0	51	11	1274	66	278	1075	28

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2312	3011	560	2429	2992	674	1107	0	0	1340	0	0
Stage 1	1649	1649	-	1329	1329	-	-	-	-	-	-	-
Stage 2	663	1362	-	1100	1663	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.78	5.74	6.54	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	23	16	479	28	26	428	626	-	-	510	-	-
Stage 1	113	170	-	216	299	-	-	-	-	-	-	-
Stage 2	432	231	-	285	221	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	11	7	475	~ 8	11	426	624	-	-	510	-	-
Mov Cap-2 Maneuver	11	7	-	~ 8	11	-	-	-	-	-	-	-
Stage 1	105	77	-	201	278	-	-	-	-	-	-	-
Stage 2	352	215	-	114	100	-	-	-	-	-	-	-























Approach	SE	NW	NE	SW
HCM Control Delay, s\$	325.4	\$ 658.2	0.5	4.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	624	-	-	8	426	37	510	-
HCM Lane V/C Ratio	0.018	-	-	3.255	0.12	1.042	0.545	-
HCM Control Delay (s)	10.9	0.4	\$ 1919.8	14.6	\$ 325.4	20.2	-	-
HCM Lane LOS	B	A	-	F	B	F	C	-
HCM 95th %tile Q(veh)	0.1	-	-	4.5	0.4	3.9	3.2	-

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

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	27	0	19	4	0	5	24	630	0	1	689	44
Future Volume (vph)	27	0	19	4	0	5	24	630	0	1	689	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%			-1%	
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850					0.991	
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1796	1456	0	1916	1503	1661	3177	0	1719	3301	0
Flt Permitted		0.755			0.739		0.296			0.377		
Satd. Flow (perm)	0	1428	1456	0	1490	1503	518	3177	0	682	3301	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85						9
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		153			327			315			316	
Travel Time (s)		3.5			7.4			5.4			5.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	11%	2%	2%	20%	4%	5%	2%	2%	5%	10%
Adj. Flow (vph)	28	0	20	4	0	5	25	656	0	1	718	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	20	0	4	5	25	656	0	1	764	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0	25.0	54.4	53.0		52.3	50.3	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.60	0.59		0.58	0.56	
v/c Ratio		0.07	0.04		0.01	0.01	0.06	0.35		0.00	0.41	
Control Delay		24.7	0.2		23.8	0.0	7.3	10.8		7.0	13.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	1.7	
Total Delay		24.7	0.2		23.8	0.0	7.3	10.8		7.0	14.8	
LOS		C	A		C	A	A	B		A	B	
Approach Delay		14.5			10.6			10.7			14.8	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		12	0		2	0	5	87		0	104	
Queue Length 95th (ft)		33	0		10	0	14	160		2	196	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		396	465		413	478	443	1870		526	1848	
Starvation Cap Reductn		0	0		0	0	0	0		0	865	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.07	0.04		0.01	0.01	0.06	0.35		0.00	0.78	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 12.9

Intersection LOS: B

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

Intersection Capacity Utilization 41.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road



2021 No-Build Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	1	0	1	323	2	137	35	626	1	1	596	163
Future Volume (vph)	1	0	1	323	2	137	35	626	1	1	596	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor							1.00					1.00
Frt		0.932			0.852							0.968
Flt Protected		0.976		0.950			0.950					
Satd. Flow (prot)	0	1694	0	1745	1580	0	1669	3276	0	0	3226	0
Flt Permitted				0.950			0.225				0.954	
Satd. Flow (perm)	0	1736	0	1745	1580	0	395	3276	0	0	3078	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			152							36
Link Speed (mph)		30			30			40				40
Link Distance (ft)		126			290			316				430
Travel Time (s)		2.9			6.6			5.4				7.3
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	4%	6%	2%	2%	4%	5%
Adj. Flow (vph)	1	0	1	359	2	152	39	696	1	1	662	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	359	154	0	39	697	0	0	844	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 No-Build Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0				0.0
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm		NA
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2		2
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0		10.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0		16.0
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0		41.0
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%		39.4%
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0		35.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0				0.0
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0				6.0
Lead/Lag							Lag			Lead		Lead
Lead-Lag Optimize?							Yes			Yes		Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Recall Mode	None	None		None	None		None	Min		Min		Min
Walk Time (s)										8.0		8.0
Flash Dont Walk (s)										18.0		18.0
Pedestrian Calls (#/hr)										5		5
Act Effct Green (s)		5.6		20.0	20.0		31.6	28.4				23.0
Actuated g/C Ratio		0.09		0.31	0.31		0.50	0.45				0.36
v/c Ratio		0.01		0.65	0.26		0.13	0.48				0.74
Control Delay		0.0		29.3	6.1		13.2	13.4				23.2
Queue Delay		0.0		0.0	0.0		0.0	0.1				0.0
Total Delay		0.0		29.3	6.1		13.2	13.5				23.2
LOS		A		C	A		B	B				C
Approach Delay					22.3			13.5				23.2
Approach LOS					C			B				C
Queue Length 50th (ft)		0		129	1		8	88				155
Queue Length 95th (ft)		0		#331	47		29	182				286
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		437		776	786		458	2602				1929
Starvation Cap Reductn		0		0	0		0	600				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.00		0.46	0.20		0.09	0.35				0.44

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 63.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.74

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019

Intersection Signal Delay: 19.5 Intersection LOS: B

Intersection Capacity Utilization 63.6% ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↖ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	3	2	11	18	2	35	2	863	81	208	724	16
Future Volume (vph)	3	2	11	18	2	35	2	863	81	208	724	16
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.905			0.858			0.987			0.997	
Flt Protected		0.991		0.950						0.950		
Satd. Flow (prot)	0	1679	0	1745	1600	0	0	3348	0	1711	3462	0
Flt Permitted		0.991		0.950						0.950		
Satd. Flow (perm)	0	1679	0	1745	1600	0	0	3348	0	1711	3462	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		91			261			430			307	
Travel Time (s)		2.1			5.9			7.3			5.2	
Confl. Peds. (#/hr)	1		1				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	6%	5%	2%	4%	2%
Adj. Flow (vph)	3	2	12	19	2	37	2	918	86	221	770	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	19	39	0	0	1006	0	221	787	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.0%
Analysis Period (min)	15
	ICU Level of Service B

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	3											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	3	2	11	18	2	35	2	863	81	208	724	16
Future Vol, veh/h	3	2	11	18	2	35	2	863	81	208	724	16
Conflicting Peds, #/hr	1	0	1	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	4	2	6	5	2	4	2
Mvmt Flow	3	2	12	19	2	37	2	918	86	221	770	17






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1687	2230	396	1794	2195	503	788	0	0	1004	0	0
Stage 1	1222	1222	-	965	965	-	-	-	-	-	-	-
Stage 2	465	1008	-	829	1230	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.74	5.74	6.58	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.34	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	67	48	610	75	73	538	827	-	-	686	-	-
Stage 1	204	268	-	339	411	-	-	-	-	-	-	-
Stage 2	561	335	-	398	326	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	45	32	609	52	49	537	826	-	-	686	-	-
Mov Cap-2 Maneuver	45	32	-	52	49	-	-	-	-	-	-	-
Stage 1	203	181	-	337	409	-	-	-	-	-	-	-
Stage 2	516	333	-	261	221	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	44	47.2	0	2.8
HCM LOS	E	E		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	826	-	-	52	349	109	686	-
HCM Lane V/C Ratio	0.003	-	-	0.368	0.113	0.156	0.323	-
HCM Control Delay (s)	9.4	0	-	110.1	16.6	44	12.7	-
HCM Lane LOS	A	A	-	F	C	E	B	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.4	0.5	1.4	-

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	53	0	47	1	0	0	40	1003	2	1	866	63
Future Volume (vph)	53	0	47	1	0	0	40	1003	2	1	866	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%				-1%
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00					1.00
Frt			0.850									0.990
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1832	1584	0	1916	2080	1694	3270	0	1719	3398	0
Flt Permitted		0.757			0.720		0.191			0.203		
Satd. Flow (perm)	0	1459	1584	0	1452	2080	340	3270	0	367	3398	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85									11
Link Speed (mph)		30			30			40				40
Link Distance (ft)		153			327			315				316
Travel Time (s)		3.5			7.4			5.4				5.4
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	0	51	1	0	0	43	1078	2	1	931	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	51	0	1	0	43	1080	0	1	999	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0		54.5	53.0		50.8	47.8	
Actuated g/C Ratio		0.28	0.28		0.28		0.61	0.59		0.56	0.53	
v/c Ratio		0.14	0.10		0.00		0.14	0.56		0.00	0.55	
Control Delay		25.7	2.6		24.0		8.1	13.4		7.0	16.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	1.9	
Total Delay		25.7	2.6		24.0		8.1	13.4		7.0	18.3	
LOS		C	A		C		A	B		A	B	
Approach Delay		14.8			24.0			13.2			18.3	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		24	0		0		9	171		0	206	
Queue Length 95th (ft)		55	12		4		21	300		2	278	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)							115			90		
Base Capacity (vph)		405	501		403		358	1925		369	1808	
Starvation Cap Reductn		0	0		0		0	0		0	617	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.14	0.10		0.00		0.12	0.56		0.00	0.84	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2021 No-Build Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	1	0	5	446	0	104	42	1009	0	2	825	180
Future Volume (vph)	1	0	5	446	0	104	42	1009	0	2	825	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt		0.887			0.850							0.973
Flt Protected		0.992		0.950			0.950					
Satd. Flow (prot)	0	1639	0	1762	1576	0	1686	3404	0	0	3313	0
Flt Permitted				0.950			0.144				0.953	
Satd. Flow (perm)	0	1652	0	1762	1576	0	255	3404	0	0	3158	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			415							27
Link Speed (mph)		30			30			40				40
Link Distance (ft)		126			290			316				430
Travel Time (s)		2.9			6.6			5.4				7.3
Confl. Peds. (#/hr)							3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	1	0	5	469	0	109	44	1062	0	2	868	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	469	109	0	44	1062	0	0	1059	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 No-Build Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0				0.0
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0	41.0	
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%	39.4%	
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0	35.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)										8.0	8.0	
Flash Dont Walk (s)										18.0	18.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)		5.1		25.6	25.6		40.5	38.1				32.2
Actuated g/C Ratio		0.07		0.33	0.33		0.52	0.49				0.41
v/c Ratio		0.02		0.81	0.14		0.19	0.64				0.80
Control Delay		0.2		40.1	0.4		16.1	16.7				26.5
Queue Delay		0.0		0.0	0.0		0.0	0.5				0.0
Total Delay		0.2		40.1	0.4		16.1	17.2				26.5
LOS		A		D	A		B	B				C
Approach Delay		0.2			32.6			17.2				26.5
Approach LOS		A			C			B				C
Queue Length 50th (ft)		0		231	0		10	174				237
Queue Length 95th (ft)		0		#482	0		31	305				#425
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		353		579	796		337	2283				1468
Starvation Cap Reductn		0		0	0		0	707				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.02		0.81	0.14		0.13	0.67				0.72

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 77.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81

Intersection Signal Delay: 24.0 Intersection LOS: C

Intersection Capacity Utilization 76.3% ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↖ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕↕		↕	↕↕	
Traffic Volume (vph)	4	3	20	26	0	44	12	1303	140	304	967	15
Future Volume (vph)	4	3	20	26	0	44	12	1303	140	304	967	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.900			0.850			0.986			0.998	
Flt Protected		0.993		0.950						0.950		
Satd. Flow (prot)	0	1637	0	1745	1484	0	0	3472	0	1711	3532	0
Flt Permitted		0.993		0.950						0.950		
Satd. Flow (perm)	0	1637	0	1745	1484	0	0	3472	0	1711	3532	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		114			261			430			307	
Travel Time (s)		2.6			5.9			7.3			5.2	
Confl. Peds. (#/hr)	3		3				3					3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	5%	2%	2%	11%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	20	27	0	45	12	1330	143	310	987	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	27	45	0	0	1485	0	310	1002	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	84.7%
ICU Level of Service	E
Analysis Period (min)	15

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	47.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	4	3	20	26	0	44	12	1303	140	304	967	15
Future Vol, veh/h	4	3	20	26	0	44	12	1303	140	304	967	15
Conflicting Peds, #/hr	3	0	3	0	0	0	3	0	0	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	5	2	2	11	2	2	2	2	2	2
Mvmt Flow	4	3	20	27	0	45	12	1330	143	310	987	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2310	3115	507	2544	3051	740	1005	0	0	1473	0	0
Stage 1	1618	1618	-	1426	1426	-	-	-	-	-	-	-
Stage 2	692	1497	-	1118	1625	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.9	6.74	5.74	6.72	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.35	3.52	4.02	3.41	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	23	13	510	~ 24	24	369	685	-	-	454	-	-
Stage 1	118	176	-	195	274	-	-	-	-	-	-	-
Stage 2	416	200	-	283	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	8	4	507	~ 4	7	368	683	-	-	454	-	-
Mov Cap-2 Maneuver	8	4	-	~ 4	7	-	-	-	-	-	-	-
Stage 1	105	56	-	174	245	-	-	-	-	-	-	-
Stage 2	326	179	-	81	72	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	\$ 572.4	\$ 1586.5	0.5	6.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	683	-	-	4	368	21	454	-
HCM Lane V/C Ratio	0.018	-	-	6.633	0.122	1.312	0.683	-
HCM Control Delay (s)	10.4	0.5	\$ 4244.2	16.1	\$ 572.4	28.4	-	-
HCM Lane LOS	B	A	-	F	C	F	D	-
HCM 95th %tile Q(veh)	0.1	-	-	4.9	0.4	3.6	5.1	-

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

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕	↗	↖	↕↗		↖	↕↗	
Traffic Volume (vph)	46	0	26	1	0	7	46	1084	2	10	1105	63
Future Volume (vph)	46	0	26	1	0	7	46	1084	2	10	1105	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%				-1%
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt			0.850			0.850					0.992	
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1832	1584	0	1916	1768	1694	3270	0	1594	3401	0
Flt Permitted		0.757			0.725		0.117			0.177		
Satd. Flow (perm)	0	1459	1584	0	1462	1768	208	3270	0	297	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85						8
Link Speed (mph)		30			30			40				40
Link Distance (ft)		153			327			315				316
Travel Time (s)		3.5			7.4			5.4				5.4
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	10%	2%	5%
Adj. Flow (vph)	49	0	28	1	0	7	49	1153	2	11	1176	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	28	0	1	7	49	1155	0	11	1243	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0	25.0	54.5	52.9		50.8	47.7	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.61	0.59		0.56	0.53	
v/c Ratio		0.12	0.06		0.00	0.01	0.21	0.60		0.05	0.69	
Control Delay		25.4	0.2		24.0	0.0	9.2	14.2		7.6	19.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	10.9	
Total Delay		25.4	0.2		24.0	0.0	9.2	14.2		7.6	30.2	
LOS		C	A		C	A	A	B		A	C	
Approach Delay		16.2			3.0			14.0			30.0	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)		21	0		0	0	10	190		2	288	
Queue Length 95th (ft)		49	0		4	0	24	334		8	384	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		405	501		406	552	292	1922		321	1805	
Starvation Cap Reductn		0	0		0	0	0	0		0	548	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.12	0.06		0.00	0.01	0.17	0.60		0.03	0.99	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

2021 No-Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019

Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2021 No-Build Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↘		↙	↕			↕	
Traffic Volume (vph)	6	0	8	467	2	145	53	1081	3	8	1027	238
Future Volume (vph)	6	0	8	467	2	145	53	1081	3	8	1027	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor					0.99							0.99
Frt		0.923			0.852							0.972
Flt Protected		0.979		0.950			0.950					
Satd. Flow (prot)	0	1583	0	1762	1560	0	1702	3404	0	0	3308	0
Flt Permitted				0.950			0.097				0.946	
Satd. Flow (perm)	0	1617	0	1762	1560	0	174	3404	0	0	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			153							29
Link Speed (mph)		30			30			40				40
Link Distance (ft)		126			290			316				430
Travel Time (s)		2.9			6.6			5.4				7.3
Confl. Peds. (#/hr)						1	4					4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	17%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	6	0	8	492	2	153	56	1138	3	8	1081	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	492	155	0	56	1141	0	0	1340	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		2	2		1	2	
Detector Template	Left									Left		
Leading Detector (ft)	20	83		83	83		83	83		20	83	
Trailing Detector (ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Position(ft)	0	-5		-5	-5		-5	-5		0	-5	
Detector 1 Size(ft)	20	40		40	40		40	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43		43	43			43	
Detector 2 Size(ft)		40		40	40		40	40			40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 No-Build Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0		0.0	0.0				0.0
Turn Type	Perm	NA		Split	NA		pm+pt	NA		Perm	NA	
Protected Phases		4		8	8		1	6				2
Permitted Phases	4						6			2		
Detector Phase	4	4		8	8		1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)	16.0	16.0		31.0	31.0		16.0	57.0		41.0	41.0	
Total Split (%)	15.4%	15.4%		29.8%	29.8%		15.4%	54.8%		39.4%	39.4%	
Maximum Green (s)	10.0	10.0		25.0	25.0		10.0	51.0		35.0	35.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)										8.0	8.0	
Flash Dont Walk (s)										18.0	18.0	
Pedestrian Calls (#/hr)										5	5	
Act Effct Green (s)		5.0		25.2	25.2		45.2	44.1				35.3
Actuated g/C Ratio		0.06		0.30	0.30		0.54	0.53				0.42
v/c Ratio		0.06		0.92	0.27		0.29	0.63				1.00
Control Delay		0.5		55.4	6.1		23.4	16.2				50.2
Queue Delay		0.0		0.0	0.0		0.0	1.3				0.0
Total Delay		0.5		55.4	6.1		23.4	17.5				50.2
LOS		A		E	A		C	B				D
Approach Delay		0.5			43.6			17.8				50.2
Approach LOS		A			D			B				D
Queue Length 50th (ft)		0		247	1		12	194				~353
Queue Length 95th (ft)		0		#524	48		37	337				#636
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)		333		533	578		289	2101				1342
Starvation Cap Reductn		0		0	0		0	688				0
Spillback Cap Reductn		0		0	0		0	0				0
Storage Cap Reductn		0		0	0		0	0				0
Reduced v/c Ratio		0.04		0.92	0.27		0.19	0.81				1.00

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 83.3
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00

Intersection Signal Delay: 36.5 Intersection LOS: D

Intersection Capacity Utilization 86.6% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↖ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	4	4	30	38	0	72	11	1401	139	308	1209	28
Future Volume (vph)	4	4	30	38	0	72	11	1401	139	308	1209	28
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.893			0.850			0.987			0.997	
Flt Protected		0.995		0.950						0.950		
Satd. Flow (prot)	0	1663	0	1711	1615	0	0	3476	0	1711	3529	0
Flt Permitted		0.995		0.950						0.950		
Satd. Flow (perm)	0	1663	0	1711	1615	0	0	3476	0	1711	3529	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		94			261			430			307	
Travel Time (s)		2.1			5.9			7.3			5.2	
Confl. Peds. (#/hr)	4		4				4					4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	4	31	40	0	75	11	1459	145	321	1259	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	40	75	0	0	1615	0	321	1288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	96.6%
ICU Level of Service	F
Analysis Period (min)	15

2021 No-Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak Saturday Hour
 07/29/2019

Intersection												
Int Delay, s/veh	41											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	4	4	30	38	0	72	11	1401	139	308	1209	28
Future Vol, veh/h	4	4	30	38	0	72	11	1401	139	308	1209	28
Conflicting Peds, #/hr	4	0	4	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	31	40	0	75	11	1459	145	321	1259	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2676	3546	652	2832	3488	806	1292	0	0	1604	0	0
Stage 1	1920	1920	-	1554	1554	-	-	-	-	-	-	-
Stage 2	756	1626	-	1278	1934	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.78	5.74	6.54	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	12	7	418	~ 15	14	355	532	-	-	404	-	-
Stage 1	77	126	-	164	244	-	-	-	-	-	-	-
Stage 2	382	174	-	230	171	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 3	~ 1	415	-	2	354	530	-	-	404	-	-
Mov Cap-2 Maneuver	~ 3	~ 1	-	-	2	-	-	-	-	-	-	-
Stage 1	60	26	-	127	189	-	-	-	-	-	-	-
Stage 2	233	135	-	~ 37	35	-	-	-	-	-	-	-





















Approach	SE	NW	NE	SW
HCM Control Delay, \$ 3117.6			1.3	8.1
HCM LOS	F	-		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	530	-	-	-	354	7	404	-
HCM Lane V/C Ratio	0.022	-	-	-	0.212	5.655	0.794	-
HCM Control Delay (s)	11.9	1.3	-	-	17.9	3117.6	40.6	-
HCM Lane LOS	B	A	-	-	C	F	E	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8	6.4	6.9	-

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

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	27	6	19	4	0	5	24	673	0	46	733	50
Future Volume (vph)	27	6	19	4	0	5	24	673	0	46	733	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%			-1%	
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850					0.990	
Flt Protected		0.960			0.950		0.950			0.950		
Satd. Flow (prot)	0	1821	1456	0	1916	1503	1661	3177	0	1719	3297	0
Flt Permitted		0.834			0.735		0.289			0.326		
Satd. Flow (perm)	0	1582	1456	0	1482	1503	505	3177	0	590	3297	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85						10
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		153			327			315			316	
Travel Time (s)		3.5			7.4			5.4			5.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	11%	2%	2%	20%	4%	5%	2%	2%	5%	10%
Adj. Flow (vph)	28	6	20	4	0	5	25	701	0	48	764	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	34	20	0	4	5	25	701	0	48	816	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0	25.0	52.2	48.3		52.9	50.3	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.58	0.54		0.59	0.56	
v/c Ratio		0.08	0.04		0.01	0.01	0.07	0.41		0.11	0.44	
Control Delay		24.7	0.2		23.8	0.0	7.5	14.3		7.8	13.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	2.1	
Total Delay		24.7	0.2		23.8	0.0	7.5	14.3		7.8	15.5	
LOS		C	A		C	A	A	B		A	B	
Approach Delay		15.6			10.6			14.1			15.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		14	0		2	0	5	130		10	113	
Queue Length 95th (ft)		37	0		10	0	14	181		23	213	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		439	465		411	478	433	1704		481	1846	
Starvation Cap Reductn		0	0		0	0	0	0		0	843	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.08	0.04		0.01	0.01	0.06	0.41		0.10	0.81	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 14.6

Intersection LOS: B

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak AM Hour
 07/29/2019

Intersection Capacity Utilization 47.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road



2021 Build Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	51	25	51	323	33	137	35	626	45	0	640	163
Future Volume (vph)	51	25	51	323	33	137	35	626	45	0	640	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt			0.850		0.879			0.990			0.970	
Flt Protected	0.950	0.982		0.950			0.950					
Satd. Flow (prot)	1681	1738	1583	1745	1630	0	1669	3251	0	0	3234	0
Flt Permitted	0.381	0.260		0.950			0.179					
Satd. Flow (perm)	674	460	1583	1745	1630	0	314	3251	0	0	3234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157		152			10			33	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	4%	6%	2%	2%	4%	5%
Adj. Flow (vph)	57	28	57	359	37	152	39	696	50	0	711	181
Shared Lane Traffic (%)	28%											
Lane Group Flow (vph)	41	44	57	359	189	0	39	746	0	0	892	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2			2	
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83			83	
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Size(ft)	40	40	40	40	40		40	40			40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)	43	43	43	43	43		43	43			43	
Detector 2 Size(ft)	40	40	40	40	40		40	40			40	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 Build Traffic Volumes

Peak AM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases		4		8	8		1	6			2	
Permitted Phases	4		4				6					
Detector Phase	4	4	4	8	8		1	6			2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	10.0			10.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	16.0			16.0	
Total Split (s)	16.0	16.0	16.0	31.0	31.0		16.0	57.0			41.0	
Total Split (%)	15.4%	15.4%	15.4%	29.8%	29.8%		15.4%	54.8%			39.4%	
Maximum Green (s)	10.0	10.0	10.0	25.0	25.0		10.0	51.0			35.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	None	None	None	None		None	Min			Min	
Walk Time (s)											8.0	
Flash Dont Walk (s)											18.0	
Pedestrian Calls (#/hr)											5	
Act Effct Green (s)	10.5	10.5	10.5	21.5	21.5		35.8	33.1			27.4	
Actuated g/C Ratio	0.13	0.13	0.13	0.26	0.26		0.43	0.39			0.33	
v/c Ratio	0.49	0.77	0.17	0.80	0.36		0.18	0.58			0.83	
Control Delay	62.6	113.0	1.1	46.7	10.4		19.5	20.9			33.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2			0.0	
Total Delay	62.6	113.0	1.1	46.7	10.4		19.5	21.1			33.2	
LOS	E	F	A	D	B		B	C			C	
Approach Delay		53.5			34.2			21.0			33.2	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	25	27	0	198	17		13	163			250	
Queue Length 95th (ft)	#84	#105	0	#359	74		32	216			327	
Internal Link Dist (ft)		46			210			236			350	
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	84	57	334	544	613		322	2072			1431	
Starvation Cap Reductn	0	0	0	0	0		0	576			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.49	0.77	0.17	0.66	0.31		0.12	0.50			0.62	

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 83.9
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019

Intersection Signal Delay: 30.6 Intersection LOS: C

Intersection Capacity Utilization 63.6% ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

↙ Ø2	↗ Ø1	↕ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 Build Traffic Volumes

Peak AM Hour

3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	3	2	11	24	2	35	2	900	93	208	762	16
Future Volume (vph)	3	2	11	24	2	35	2	900	93	208	762	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.905			0.858			0.986			0.997	
Flt Protected		0.991		0.950						0.950		
Satd. Flow (prot)	0	1679	0	1745	1600	0	0	3344	0	1711	3462	0
Flt Permitted		0.991		0.950						0.950		
Satd. Flow (perm)	0	1679	0	1745	1600	0	0	3344	0	1711	3462	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		87			261			430			307	
Travel Time (s)		2.0			5.9			7.3			5.2	
Confl. Peds. (#/hr)	1		1				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	6%	5%	2%	4%	2%
Adj. Flow (vph)	3	2	12	26	2	37	2	957	99	221	811	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	26	39	0	0	1058	0	221	828	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.7%
Analysis Period (min)	15
	ICU Level of Service C

2021 Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	3.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	3	2	11	24	2	35	2	900	93	208	762	16
Future Vol, veh/h	3	2	11	24	2	35	2	900	93	208	762	16
Conflicting Peds, #/hr	1	0	1	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	4	2	6	5	2	4	2
Mvmt Flow	3	2	12	26	2	37	2	957	99	221	811	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1748	2323	416	1861	2282	529	829	0	0	1056	0	0
Stage 1	1263	1263	-	1011	1011	-	-	-	-	-	-	-
Stage 2	485	1060	-	850	1271	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.74	5.74	6.58	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.34	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	42	592	68	65	519	798	-	-	655	-	-
Stage 1	193	257	-	321	395	-	-	-	-	-	-	-
Stage 2	547	317	-	388	315	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	39	28	591	46	43	519	797	-	-	655	-	-
Mov Cap-2 Maneuver	39	28	-	46	43	-	-	-	-	-	-	-
Stage 1	192	170	-	319	393	-	-	-	-	-	-	-
Stage 2	502	315	-	249	209	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	50.4	71.7	0	2.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	797	-	-	46	325	96	655	-
HCM Lane V/C Ratio	0.003	-	-	0.555	0.121	0.177	0.338	-
HCM Control Delay (s)	9.5	0	-	155.1	17.6	50.4	13.3	-
HCM Lane LOS	A	A	-	F	C	F	B	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0.4	0.6	1.5	-

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak AM Hour
07/29/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	1	9	0	0	0
Future Volume (vph)	51	1	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	-3%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.953				
Satd. Flow (prot)	0	1716	1837	0	1810	0
Flt Permitted		0.953				
Satd. Flow (perm)	0	1716	1837	0	1810	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		327	206		71	
Travel Time (s)		7.4	4.7		1.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	57	1	10	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	58	10	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.98	0.98	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	12.9%
Analysis Period (min)	15
	ICU Level of Service A

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak AM Hour
07/29/2019

Intersection						
Int Delay, s/veh	6.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	51	1	9	0	0	0
Future Vol, veh/h	51	1	9	0	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, %	-	1	-3	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	57	1	10	0	0	0
























Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	10	0	-	0	125
Stage 1	-	-	-	-	10
Stage 2	-	-	-	-	115
Critical Hdwy	4.15	-	-	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	2.245	-	-	-	3.545
Pot Cap-1 Maneuver	1590	-	-	-	863
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	902
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1590	-	-	-	832
Mov Cap-2 Maneuver	-	-	-	-	832
Stage 1	-	-	-	-	969
Stage 2	-	-	-	-	902

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1590	-	-	-	-
HCM Lane V/C Ratio	0.036	-	-	-	-
HCM Control Delay (s)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

													
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	53	7	47	1	0	0	40	1052	2	51	914	70	
Future Volume (vph)	53	7	47	1	0	0	40	1052	2	51	914	70	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13	
Grade (%)		-7%			-3%			2%			-1%		
Storage Length (ft)	0		0	0		75	115		0	90		0	
Storage Lanes	0		1	0		1	1		0	1		0	
Taper Length (ft)	25			25			86			86			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor							1.00					1.00	
Frt		0.850										0.989	
Flt Protected		0.958			0.950		0.950			0.950			
Satd. Flow (prot)	0	1847	1584	0	1916	2080	1694	3270	0	1719	3395	0	
Flt Permitted		0.787			0.715		0.186			0.153			
Satd. Flow (perm)	0	1517	1584	0	1442	2080	331	3270	0	277	3395	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			85									11	
Link Speed (mph)		30			30			40				40	
Link Distance (ft)		153			327			315				316	
Travel Time (s)		3.5			7.4			5.4				5.4	
Confl. Peds. (#/hr)							4					4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	57	8	51	1	0	0	43	1131	2	55	983	75	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	65	51	0	1	0	43	1133	0	55	1058	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		0			0			11				11	
Link Offset(ft)		0			0			0				0	
Crosswalk Width(ft)		16			16			16				16	
Two way Left Turn Lane													
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors	1	2	2	1	2	2	2	2		2	2		
Detector Template	Left			Left									
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83		
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5		
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5		
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)		43	43		43	43	43	43		43	43		
Detector 2 Size(ft)		40	40		40	40	40	40		40	40		
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 2 Channel													

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0		51.6	46.1		51.6	47.8	
Actuated g/C Ratio		0.28	0.28		0.28		0.57	0.51		0.57	0.53	
v/c Ratio		0.15	0.10		0.00		0.15	0.68		0.22	0.59	
Control Delay		25.8	2.6		24.0		8.3	19.7		9.4	17.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	2.6	
Total Delay		25.8	2.6		24.0		8.3	19.7		9.4	19.6	
LOS		C	A		C		A	B		A	B	
Approach Delay		15.6			24.0			19.3			19.1	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		28	0		0		9	252		11	224	
Queue Length 95th (ft)		60	12		4		21	338		26	301	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)							115			90		
Base Capacity (vph)		421	501		400		350	1676		325	1807	
Starvation Cap Reductn		0	0		0		0	0		0	600	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.15	0.10		0.00		0.12	0.68		0.17	0.88	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak PM Hour
 07/29/2019

Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road






















 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2021 Build Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	56	28	60	446	35	104	42	1009	48	0	875	180
Future Volume (vph)	56	28	60	446	35	104	42	1009	48	0	875	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												1.00
Frt			0.850		0.888			0.993				0.974
Flt Protected	0.950	0.982		0.950			0.950					
Satd. Flow (prot)	1681	1738	1583	1762	1647	0	1686	3380	0	0	3318	0
Flt Permitted	0.396	0.271		0.950			0.105					
Satd. Flow (perm)	701	480	1583	1762	1647	0	186	3380	0	0	3318	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157		109			6			25	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)							3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	59	29	63	469	37	109	44	1062	51	0	921	189
Shared Lane Traffic (%)	28%											
Lane Group Flow (vph)	42	46	63	469	146	0	44	1113	0	0	1110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2			2	
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83			83	
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Size(ft)	40	40	40	40	40		40	40			40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)	43	43	43	43	43		43	43			43	
Detector 2 Size(ft)	40	40	40	40	40		40	40			40	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 Build Traffic Volumes

Peak PM Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases		4		8	8		1	6			2	
Permitted Phases	4		4				6					
Detector Phase	4	4	4	8	8		1	6			2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	10.0			10.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	16.0			16.0	
Total Split (s)	16.0	16.0	16.0	31.0	31.0		16.0	57.0			41.0	
Total Split (%)	15.4%	15.4%	15.4%	29.8%	29.8%		15.4%	54.8%			39.4%	
Maximum Green (s)	10.0	10.0	10.0	25.0	25.0		10.0	51.0			35.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	None	None	None	None		None	Min			Min	
Walk Time (s)											8.0	
Flash Dont Walk (s)											18.0	
Pedestrian Calls (#/hr)											5	
Act Effct Green (s)	10.0	10.0	10.0	25.1	25.1		42.8	40.7			34.3	
Actuated g/C Ratio	0.11	0.11	0.11	0.27	0.27		0.46	0.43			0.37	
v/c Ratio	0.57	0.90	0.20	1.00	0.28		0.26	0.76			0.90	
Control Delay	72.3	147.9	1.5	77.9	11.3		26.6	26.0			40.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	2.8			0.0	
Total Delay	72.3	147.9	1.5	77.9	11.3		26.6	28.8			40.1	
LOS	E	F	A	E	B		C	C			D	
Approach Delay		65.8			62.1			28.7			40.1	
Approach LOS		E			E			C			D	
Queue Length 50th (ft)	27	30	0	~326	18		15	283			344	
Queue Length 95th (ft)	#83	#109	0	#523	67		34	361			#487	
Internal Link Dist (ft)		46			210			236			350	
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	74	51	309	471	520		255	1847			1258	
Starvation Cap Reductn	0	0	0	0	0		0	593			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.57	0.90	0.20	1.00	0.28		0.17	0.89			0.88	

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 93.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00

Intersection Signal Delay: 41.5 Intersection LOS: D

Intersection Capacity Utilization 76.3% ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

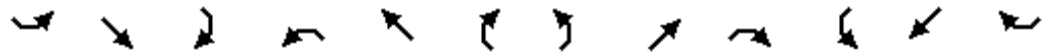
↙ Ø2	↗ Ø1	↕ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 Build Traffic Volumes

Peak PM Hour

3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Volume (vph)	4	3	20	33	0	44	12	1344	154	304	1008	15
Future Volume (vph)	4	3	20	33	0	44	12	1344	154	304	1008	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.900			0.850			0.985			0.998	
Flt Protected		0.993		0.950						0.950		
Satd. Flow (prot)	0	1637	0	1745	1484	0	0	3469	0	1711	3532	0
Flt Permitted		0.993		0.950						0.950		
Satd. Flow (perm)	0	1637	0	1745	1484	0	0	3469	0	1711	3532	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		117			261			430			307	
Travel Time (s)		2.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	3		3				3					3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	5%	2%	2%	11%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	20	34	0	45	12	1371	157	310	1029	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	34	45	0	0	1540	0	310	1044	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	89.2%
ICU Level of Service	E
Analysis Period (min)	15

2021 Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019

Intersection												
Int Delay, s/veh	10.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↗	↘			↕		↗	↘	
Traffic Vol, veh/h	4	3	20	33	0	44	12	1344	154	304	1008	15
Future Vol, veh/h	4	3	20	33	0	44	12	1344	154	304	1008	15
Conflicting Peds, #/hr	3	0	3	0	0	0	3	0	0	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	5	2	2	11	2	2	2	2	2	2
Mvmt Flow	4	3	20	34	0	45	12	1371	157	310	1029	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2373	3212	528	2613	3141	767	1047	0	0	1528	0	0
Stage 1	1660	1660	-	1474	1474	-	-	-	-	-	-	-
Stage 2	713	1552	-	1139	1667	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.9	6.74	5.74	6.72	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.74	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.35	3.52	4.02	3.41	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	21	12	494	~21	22	355	660	-	-	432	-	-
Stage 1	111	168	-	184	262	-	-	-	-	-	-	-
Stage 2	405	189	-	276	220	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	7	~3	491	-	5	354	658	-	-	432	-	-
Mov Cap-2 Maneuver	7	~3	-	-	5	-	-	-	-	-	-	-
Stage 1	96	47	-	159	226	-	-	-	-	-	-	-
Stage 2	304	163	-	70	62	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s\$	773.5		0.7	7.3
HCM LOS	F	-		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	658	-	-	-	354	17	432	-
HCM Lane V/C Ratio	0.019	-	-	-	0.127	1.621	0.718	-
HCM Control Delay (s)	10.6	0.7	-	-	16.6\$	773.5	31.9	-
HCM Lane LOS	B	A	-	-	C	F	D	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	3.9	5.6	-

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

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak PM Hour
07/29/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Volume (vph)	57	3	1	0	0	0
Future Volume (vph)	57	3	1	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	-3%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.954				
Satd. Flow (prot)	0	1718	1837	0	1810	0
Flt Permitted		0.954				
Satd. Flow (perm)	0	1718	1837	0	1810	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		327	206		71	
Travel Time (s)		7.4	4.7		1.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	63	3	1	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	66	1	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.98	0.98	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak PM Hour
07/29/2019

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	57	3	1	0	0	0
Future Vol, veh/h	57	3	1	0	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, %	-	1	-3	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	63	3	1	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	130
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	129
Critical Hdwy	4.15	-	-	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	2.245	-	-	-	3.545
Pot Cap-1 Maneuver	1602	-	-	-	857
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	890
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1602	-	-	-	824
Mov Cap-2 Maneuver	-	-	-	-	824
Stage 1	-	-	-	-	974
Stage 2	-	-	-	-	890

Approach	EB	WB	SB
HCM Control Delay, s	7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1602	-	-	-	-
HCM Lane V/C Ratio	0.04	-	-	-	-
HCM Control Delay (s)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔	↔	↔	↔↔		↔	↔↔	
Traffic Volume (vph)	46	6	26	1	0	7	46	1124	2	59	1145	69
Future Volume (vph)	46	6	26	1	0	7	46	1124	2	59	1145	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	14	15	11	10	12	11	11	13
Grade (%)		-7%			-3%			2%			-1%	
Storage Length (ft)	0		0	0		75	115		0	90		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00				1.00	
Frt			0.850			0.850					0.992	
Flt Protected		0.957			0.950		0.950			0.950		
Satd. Flow (prot)	0	1845	1584	0	1916	1768	1694	3270	0	1594	3400	0
Flt Permitted		0.793			0.721		0.114			0.132		
Satd. Flow (perm)	0	1529	1584	0	1454	1768	203	3270	0	222	3400	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85					9	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		153			327			315			316	
Travel Time (s)		3.5			7.4			5.4			5.4	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	10%	2%	5%
Adj. Flow (vph)	49	6	28	1	0	7	49	1196	2	63	1218	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	28	0	1	7	49	1198	0	63	1291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	1.00	0.98	0.90	0.86	1.06	1.11	1.01	1.04	1.04	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	2	1	2	2	2	2		2	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	83	83	20	83	83	83	83		83	83	
Trailing Detector (ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5	-5	0	-5	-5	-5	-5		-5	-5	
Detector 1 Size(ft)	20	40	40	20	40	40	40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43	43		43	43	43	43		43	43	
Detector 2 Size(ft)		40	40		40	40	40	40		40	40	
Detector 2 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8		8	6			2		
Detector Phase	4	4	4	8	8	8	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0	30.0	10.0	10.0	10.0	10.0	15.0		10.0	15.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	45.0		15.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%		16.7%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	10.0	40.0		10.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag								Lead	Lag		Lead	Lag
Lead-Lag Optimize?								Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0		2.0	2.0	
Recall Mode	Ped	Ped	Ped	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0									
Flash Dont Walk (s)	18.0	18.0	18.0									
Pedestrian Calls (#/hr)	5	5	5									
Act Effct Green (s)		25.0	25.0		25.0	25.0	51.4	45.9		51.7	47.7	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.57	0.51		0.57	0.53	
v/c Ratio		0.13	0.06		0.00	0.01	0.22	0.72		0.29	0.72	
Control Delay		25.5	0.2		24.0	0.0	9.5	21.0		10.7	20.0	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	17.2	
Total Delay		25.5	0.2		24.0	0.0	9.5	21.0		10.7	37.2	
LOS		C	A		C	A	A	C		B	D	
Approach Delay		16.9			3.0			20.6			35.9	
Approach LOS		B			A			C			D	
Queue Length 50th (ft)		23	0		0	0	10	276		13	306	
Queue Length 95th (ft)		53	0		4	0	24	373		29	407	
Internal Link Dist (ft)		73			247			235			236	
Turn Bay Length (ft)						75	115			90		
Base Capacity (vph)		424	501		403	552	287	1666		284	1805	
Starvation Cap Reductn		0	0		0	0	0	0		0	534	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.13	0.06		0.00	0.01	0.17	0.72		0.22	1.02	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:SWTL and 6:NETL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

2021 Build Traffic Volumes
 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

Peak Saturday Hour
 07/29/2019

Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 28.1	Intersection LOS: C
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: U.S. Route 6 & Parkway Drive/Jacobs Hill Road

 Ø1	 Ø2 (R)	 Ø4
15 s	45 s	30 s
 Ø5	 Ø6 (R)	 Ø8
15 s	45 s	30 s

2021 Build Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	53	23	55	467	31	145	53	1081	44	0	1076	238
Future Volume (vph)	53	23	55	467	31	145	53	1081	44	0	1076	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					0.99						0.99	
Frt			0.850		0.877			0.994			0.973	
Flt Protected	0.950	0.980		0.950			0.950					
Satd. Flow (prot)	1466	1635	1583	1762	1609	0	1702	3384	0	0	3312	0
Flt Permitted	0.400	0.283		0.950			0.097					
Satd. Flow (perm)	617	472	1583	1762	1609	0	174	3384	0	0	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157		153			5			27	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)						1	4					4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	17%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	56	24	58	492	33	153	56	1138	46	0	1133	251
Shared Lane Traffic (%)	30%											
Lane Group Flow (vph)	39	41	58	492	186	0	56	1184	0	0	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2			2	
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83			83	
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Size(ft)	40	40	40	40	40		40	40			40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)	43	43	43	43	43		43	43			43	
Detector 2 Size(ft)	40	40	40	40	40		40	40			40	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 Build Traffic Volumes

Peak Saturday Hour

2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases		4		8	8		1	6			2	
Permitted Phases	4		4				6					
Detector Phase	4	4	4	8	8		1	6			2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	10.0			10.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	16.0			16.0	
Total Split (s)	16.0	16.0	16.0	31.0	31.0		16.0	57.0			41.0	
Total Split (%)	15.4%	15.4%	15.4%	29.8%	29.8%		15.4%	54.8%			39.4%	
Maximum Green (s)	10.0	10.0	10.0	25.0	25.0		10.0	51.0			35.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	None	None	None	None		None	Min			Min	
Walk Time (s)											8.0	
Flash Dont Walk (s)											18.0	
Pedestrian Calls (#/hr)											5	
Act Effct Green (s)	10.0	10.0	10.0	25.1	25.1		45.5	44.4			35.1	
Actuated g/C Ratio	0.10	0.10	0.10	0.26	0.26		0.47	0.46			0.36	
v/c Ratio	0.62	0.85	0.19	1.09	0.35		0.33	0.77			1.14	
Control Delay	83.9	141.5	1.4	104.8	10.1		31.0	26.0			105.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	13.5			0.0	
Total Delay	83.9	141.5	1.4	104.8	10.1		31.0	39.5			105.9	
LOS	F	F	A	F	B		C	D			F	
Approach Delay		66.3			78.8			39.1			105.9	
Approach LOS		E			E			D			F	
Queue Length 50th (ft)	25	27	0	~356	16		19	311			~545	
Queue Length 95th (ft)	#86	#101	0	#580	73		41	392			#719	
Internal Link Dist (ft)		46			210			236			350	
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	63	48	303	452	527		245	1776			1209	
Starvation Cap Reductn	0	0	0	0	0		0	591			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.62	0.85	0.19	1.09	0.35		0.23	1.00			1.14	

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 97.5
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.14

Intersection Signal Delay: 74.9 Intersection LOS: E

Intersection Capacity Utilization 86.6% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

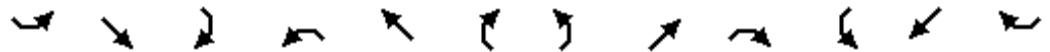
↙ Ø2	↗ Ø1	↕ Ø4	↘ Ø8
41 s	16 s	16 s	31 s
↙ Ø6			
57 s			

2021 Build Traffic Volumes

Peak Saturday Hour

3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Volume (vph)	4	4	30	44	0	72	11	1436	150	308	1244	28
Future Volume (vph)	4	4	30	44	0	72	11	1436	150	308	1244	28
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Fr _t		0.893			0.850			0.986			0.997	
Fl _t Protected		0.995		0.950						0.950		
Satd. Flow (prot)	0	1663	0	1711	1615	0	0	3472	0	1711	3529	0
Fl _t Permitted		0.995		0.950						0.950		
Satd. Flow (perm)	0	1663	0	1711	1615	0	0	3472	0	1711	3529	0
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		118			261			430			307	
Travel Time (s)		2.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	4		4				4					4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	4	31	46	0	75	11	1496	156	321	1296	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	46	75	0	0	1663	0	321	1325	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	99.2%
Analysis Period (min)	15
	ICU Level of Service F

2021 Build Traffic Volumes
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak Saturday Hour
 07/29/2019

Intersection												
Int Delay, s/veh	47.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Vol, veh/h	4	4	30	44	0	72	11	1436	150	308	1244	28
Future Vol, veh/h	4	4	30	44	0	72	11	1436	150	308	1244	28
Conflicting Peds, #/hr	4	0	4	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	65	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-4	-	-	1	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	31	46	0	75	11	1496	156	321	1296	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2731	3631	671	2892	3567	830	1329	0	0	1652	0	0
Stage 1	1957	1957	-	1596	1596	-	-	-	-	-	-	-
Stage 2	774	1674	-	1296	1971	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.34	6.84	6.78	5.74	6.54	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.34	-	5.78	4.74	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.54	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	6	406	~ 13	12	344	515	-	-	387	-	-
Stage 1	73	121	-	155	235	-	-	-	-	-	-	-
Stage 2	373	165	-	225	165	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 2	~ 1	403	-	1	343	513	-	-	387	-	-
Mov Cap-2 Maneuver	~ 2	~ 1	-	-	1	-	-	-	-	-	-	-
Stage 1	49	21	-	104	157	-	-	-	-	-	-	-
Stage 2	194	110	-	~ 28	28	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, \$ 3699.4			1.9	9
HCM LOS	F	-		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SWL	SWT	SWR
Capacity (veh/h)	513	-	-	-	343	6	387	-
HCM Lane V/C Ratio	0.022	-	-	-	0.219	6.597	0.829	-
HCM Control Delay (s)	12.2	2	-	-	18.4	3699.4	46.2	-
HCM Lane LOS	B	A	-	-	C	F	E	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8	6.5	7.6	-

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

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak Saturday Hour
07/29/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	54	12	8	0	0	0
Future Volume (vph)	54	12	8	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		1%	-3%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.961				
Satd. Flow (prot)	0	1730	1837	0	1810	0
Flt Permitted		0.961				
Satd. Flow (perm)	0	1730	1837	0	1810	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		327	206		71	
Travel Time (s)		7.4	4.7		1.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	60	13	9	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	73	9	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.98	0.98	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.6%
Analysis Period (min)	15
	ICU Level of Service A

2021 Build Traffic Volumes
4: Parkway Drive & Site Access

Peak Saturday Hour
07/29/2019

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	54	12	8	0	0	0
Future Vol, veh/h	54	12	8	0	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, %	-	1	-3	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	60	13	9	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	9	0	-	0	142
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	133
Critical Hdwy	4.15	-	-	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	2.245	-	-	-	3.545
Pot Cap-1 Maneuver	1591	-	-	-	844
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	886
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1591	-	-	-	812
Mov Cap-2 Maneuver	-	-	-	-	812
Stage 1	-	-	-	-	968
Stage 2	-	-	-	-	886

Approach	EB	WB	SB
HCM Control Delay, s	6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	-
HCM Lane V/C Ratio	0.038	-	-	-	-
HCM Control Delay (s)	7.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	3	2	11	18	2	35	2	863	81	208	724	16
Future Volume (vph)	3	2	11	18	2	35	2	863	81	208	724	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99						1.00			1.00	
Frt		0.905			0.858			0.987			0.997	
Flt Protected		0.991		0.950						0.950		
Satd. Flow (prot)	0	1661	0	1745	1600	0	0	3348	0	1711	3461	0
Flt Permitted		0.929		0.833				0.954		0.265		
Satd. Flow (perm)	0	1556	0	1530	1600	0	0	3194	0	477	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			37			18			8	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		74			261			430			307	
Travel Time (s)		1.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	1		1				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	6%	5%	2%	4%	2%
Adj. Flow (vph)	3	2	12	19	2	37	2	918	86	221	770	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	19	39	0	0	1006	0	221	787	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	14.0	14.0		14.0	14.0		67.0	67.0		19.0	86.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		67.0%	67.0%		19.0%	86.0%	
Maximum Green (s)	9.0	9.0		9.0	9.0		62.0	62.0		14.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		7.1		7.1	7.1			76.6		87.2	89.2	
Actuated g/C Ratio		0.07		0.07	0.07			0.77		0.87	0.89	
v/c Ratio		0.14		0.18	0.26			0.41		0.46	0.25	
Control Delay		27.9		46.6	19.8			5.2		6.4	1.7	
Queue Delay		0.0		0.0	0.0			0.4		0.0	0.0	
Total Delay		27.9		46.6	19.8			5.7		6.4	1.7	
LOS		C		D	B			A		A	A	
Approach Delay		27.9			28.6			5.7			2.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		3		12	1			112		19	40	
Queue Length 95th (ft)		24		34	33			162		38	63	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		151		138	178			2450		622	3089	
Starvation Cap Reductn		0		0	0			846		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.11		0.14	0.22			0.63		0.36	0.25	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	80 (80%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	5.1
Intersection Capacity Utilization:	63.7%
Intersection LOS:	A
ICU Level of Service:	B

Analysis Period (min) 15

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas



2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	4	3	20	26	0	44	12	1303	140	304	967	15
Future Volume (vph)	4	3	20	26	0	44	12	1303	140	304	967	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%			0%	
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.98						1.00			1.00	
Frt		0.900			0.850			0.986			0.998	
Flt Protected		0.993		0.950						0.950		
Satd. Flow (prot)	0	1611	0	1745	1484	0	0	3472	0	1711	3531	0
Flt Permitted		0.939		0.740				0.944		0.122		
Satd. Flow (perm)	0	1521	0	1359	1484	0	0	3278	0	220	3531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			251			21			6	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		74			261			430			307	
Travel Time (s)		1.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	3		3				3					3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	5%	2%	2%	11%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	20	27	0	45	12	1330	143	310	987	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	27	45	0	0	1485	0	310	1002	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	14.0	14.0		14.0	14.0		67.0	67.0		19.0	86.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		67.0%	67.0%		19.0%	86.0%	
Maximum Green (s)	9.0	9.0		9.0	9.0		62.0	62.0		14.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		7.4		7.4	7.4			66.3		84.7	85.7	
Actuated g/C Ratio		0.07		0.07	0.07			0.66		0.85	0.86	
v/c Ratio		0.21		0.27	0.13			0.68		0.80	0.33	
Control Delay		25.7		50.0	0.8			13.8		38.1	2.3	
Queue Delay		0.0		0.0	0.0			1.8		0.0	0.0	
Total Delay		25.7		50.0	0.8			15.5		38.1	2.3	
LOS		C		D	A			B		D	A	
Approach Delay		25.7			19.2			15.5			10.7	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		4		17	0			318		81	58	
Queue Length 95th (ft)		31		44	0			397		#223	84	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		155		122	361			2205		414	3027	
Starvation Cap Reductn		0		0	0			521		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.17		0.22	0.12			0.88		0.75	0.33	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	80 (80%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	13.6
Intersection Capacity Utilization:	87.2%
Intersection LOS:	B
ICU Level of Service:	E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

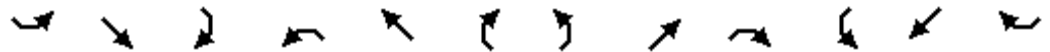
Queue shown is maximum after two cycles.

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas



2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Saturday Peak Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	4	4	30	38	0	72	11	1401	139	308	1209	28
Future Volume (vph)	4	4	30	38	0	72	11	1401	139	308	1209	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.98						1.00			1.00	
Frt		0.893			0.850			0.987			0.997	
Flt Protected		0.995		0.950						0.950		
Satd. Flow (prot)	0	1630	0	1711	1615	0	0	3476	0	1711	3527	0
Flt Permitted		0.955		0.732				0.943		0.093		
Satd. Flow (perm)	0	1563	0	1319	1615	0	0	3278	0	167	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			239			19			8	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		74			261			430			307	
Travel Time (s)		1.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)	4		4				4					4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	4	31	40	0	75	11	1459	145	321	1259	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	40	75	0	0	1615	0	321	1288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 No-Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Saturday Peak Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	14.0	14.0		14.0	14.0		67.0	67.0		19.0	86.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		67.0%	67.0%		19.0%	86.0%	
Maximum Green (s)	9.0	9.0		9.0	9.0		62.0	62.0		14.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		7.8		7.8	7.8			64.7		84.3	85.3	
Actuated g/C Ratio		0.08		0.08	0.08			0.65		0.84	0.85	
v/c Ratio		0.26		0.39	0.22			0.76		0.88	0.43	
Control Delay		23.4		54.6	1.4			16.2		52.2	2.8	
Queue Delay		0.0		0.0	0.0			5.3		0.0	0.0	
Total Delay		23.4		54.6	1.4			21.5		52.2	2.8	
LOS		C		D	A			C		D	A	
Approach Delay		23.4			19.9			21.5			12.7	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)		5		25	0			385		121	92	
Queue Length 95th (ft)		37		58	0			468		#288	120	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		168		118	362			2149		376	3009	
Starvation Cap Reductn		0		0	0			470		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.23		0.34	0.21			0.96		0.85	0.43	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	80 (80%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	17.3
Intersection Capacity Utilization:	99.1%
Intersection LOS:	B
ICU Level of Service:	F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas



2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak AM Hour
 07/29/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	51	25	51	323	33	137	35	626	45	0	640	163
Future Volume (vph)	51	25	51	323	33	137	35	626	45	0	640	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00					1.00
Frt			0.850		0.879			0.990				0.970
Flt Protected	0.950	0.983		0.950			0.950					
Satd. Flow (prot)	1681	1740	1583	1745	1630	0	1669	3251	0	0	3234	0
Flt Permitted	0.950	0.983		0.950			0.225					
Satd. Flow (perm)	1681	1740	1583	1745	1630	0	395	3251	0	0	3234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131		152			8			31	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	4%	6%	2%	2%	4%	5%
Adj. Flow (vph)	57	28	57	359	37	152	39	696	50	0	711	181
Shared Lane Traffic (%)	27%											
Lane Group Flow (vph)	42	43	57	359	189	0	39	746	0	0	892	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2				2
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83				83
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5				-5
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5				-5
Detector 1 Size(ft)	40	40	40	40	40		40	40				40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)	43	43	43	43	43		43	43				43
Detector 2 Size(ft)	40	40	40	40	40		40	40				40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak AM Hour
 07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases	2	2		6	6		7	4			8	
Permitted Phases			2				4					
Detector Phase	2	2	2	6	6		7	4			8	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	31.0	31.0	31.0	28.0	28.0		10.0	31.0			31.0	
Total Split (s)	31.0	31.0	31.0	28.0	28.0		10.0	41.0			31.0	
Total Split (%)	31.0%	31.0%	31.0%	28.0%	28.0%		10.0%	41.0%			31.0%	
Maximum Green (s)	26.0	26.0	26.0	23.0	23.0		5.0	36.0			26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0			2.0	
Recall Mode	None	None	None	Min	Min		None	C-Min			C-Min	
Walk Time (s)				7.0	7.0			7.0			8.0	
Flash Dont Walk (s)				16.0	16.0			14.0			18.0	
Pedestrian Calls (#/hr)				0	0			0			1	
Act Effct Green (s)	7.2	7.2	7.2	26.2	26.2		55.6	53.6			47.6	
Actuated g/C Ratio	0.07	0.07	0.07	0.26	0.26		0.56	0.54			0.48	
v/c Ratio	0.35	0.34	0.24	0.79	0.35		0.14	0.43			0.57	
Control Delay	51.4	50.9	2.4	46.7	9.0		14.2	12.9			22.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2			0.1	
Total Delay	51.4	50.9	2.4	46.7	9.0		14.2	13.1			22.2	
LOS	D	D	A	D	A		B	B			C	
Approach Delay		31.6			33.7			13.2			22.2	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	27	28	0	211	18		8	88			233	
Queue Length 95th (ft)	62	63	0	295	67		25	142			346	
Internal Link Dist (ft)		46			210			236			350	
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	437	452	508	470	550		283	1747			1556	
Starvation Cap Reductn	0	0	0	0	0		0	381			0	
Spillback Cap Reductn	0	0	0	0	3		0	0			77	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.10	0.10	0.11	0.76	0.35		0.14	0.55			0.60	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 36 (36%), Referenced to phase 4:NETL and 8:SWT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak AM Hour
 07/29/2019

Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp



2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕			↕		↕	↕	
Traffic Volume (vph)	3	2	11	24	2	35	2	900	93	208	762	16
Future Volume (vph)	3	2	11	24	2	35	2	900	93	208	762	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00			1.00	
Frt		0.905			0.858			0.986			0.997	
Flt Protected		0.991		0.950						0.950		
Satd. Flow (prot)	0	1679	0	1745	1600	0	0	3344	0	1711	3461	0
Flt Permitted		0.934		0.746				0.954		0.245		
Satd. Flow (perm)	0	1582	0	1370	1600	0	0	3191	0	441	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			37			20				8
Link Speed (mph)		30			30			40				40
Link Distance (ft)		74			261			430				307
Travel Time (s)		1.7			5.9			7.3				5.2
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	6%	5%	2%	4%	2%
Adj. Flow (vph)	3	2	12	26	2	37	2	957	99	221	811	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	26	39	0	0	1058	0	221	828	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak AM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	14.0	14.0		14.0	14.0		67.0	67.0		19.0	86.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		67.0%	67.0%		19.0%	86.0%	
Maximum Green (s)	9.0	9.0		9.0	9.0		62.0	62.0		14.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		7.6		7.6	7.6			73.6		84.5	85.5	
Actuated g/C Ratio		0.08		0.08	0.08			0.74		0.84	0.86	
v/c Ratio		0.13		0.25	0.25			0.45		0.49	0.28	
Control Delay		27.1		48.7	19.1			2.4		8.4	2.2	
Queue Delay		0.0		0.0	0.0			0.1		0.0	0.0	
Total Delay		27.1		48.7	19.1			2.4		8.4	2.2	
LOS		C		D	B			A		A	A	
Approach Delay		27.1			30.9			2.4			3.5	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		3		16	1			31		20	45	
Queue Length 95th (ft)		24		42	33			73		40	72	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		156		126	180			2354		583	2969	
Starvation Cap Reductn		0		0	0			218		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.11		0.21	0.22			0.50		0.38	0.28	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	80 (80%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	4.0
Intersection Capacity Utilization	67.2%
Intersection LOS:	A
ICU Level of Service	C






















Analysis Period (min) 15

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas



2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak PM Hour
 07/29/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	56	28	60	446	35	104	42	1009	48	0	875	180
Future Volume (vph)	56	28	60	446	35	104	42	1009	48	0	875	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												1.00
Frt			0.850		0.888			0.993				0.974
Flt Protected	0.950	0.983		0.950			0.950					
Satd. Flow (prot)	1681	1740	1583	1762	1647	0	1686	3380	0	0	3317	0
Flt Permitted	0.950	0.983		0.950			0.129					
Satd. Flow (perm)	1681	1740	1583	1762	1647	0	229	3380	0	0	3317	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101		109			5			20	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)							3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Adj. Flow (vph)	59	29	63	469	37	109	44	1062	51	0	921	189
Shared Lane Traffic (%)	27%											
Lane Group Flow (vph)	43	45	63	469	146	0	44	1113	0	0	1110	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2				2
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83				83
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5				-5
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5				-5
Detector 1 Size(ft)	40	40	40	40	40		40	40				40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)	43	43	43	43	43		43	43				43
Detector 2 Size(ft)	40	40	40	40	40		40	40				40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak PM Hour
 07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases	2	2		6	6		7	4				8
Permitted Phases			2				4					
Detector Phase	2	2	2	6	6		7	4				8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0				5.0
Minimum Split (s)	31.0	31.0	31.0	28.0	28.0		10.0	31.0				31.0
Total Split (s)	31.0	31.0	31.0	40.0	40.0		10.0	59.0				49.0
Total Split (%)	23.8%	23.8%	23.8%	30.8%	30.8%		7.7%	45.4%				37.7%
Maximum Green (s)	26.0	26.0	26.0	35.0	35.0		5.0	54.0				44.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0				4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0				1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0				5.0
Lead/Lag							Lag					Lead
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0				2.0
Recall Mode	None	None	None	Min	Min		None	C-Min				C-Min
Walk Time (s)				7.0	7.0			7.0				8.0
Flash Dont Walk (s)				16.0	16.0			14.0				18.0
Pedestrian Calls (#/hr)				0	0			0				3
Act Effct Green (s)	8.0	8.0	8.0	42.8	42.8		67.2	66.2				58.2
Actuated g/C Ratio	0.06	0.06	0.06	0.33	0.33		0.52	0.51				0.45
v/c Ratio	0.42	0.42	0.33	0.81	0.24		0.25	0.65				0.74
Control Delay	70.1	70.0	7.3	51.4	9.9		24.0	21.5				34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.3				0.7
Total Delay	70.1	70.0	7.3	51.4	9.9		24.0	21.9				35.4
LOS	E	E	A	D	A		C	C				D
Approach Delay		43.9			41.5			21.9				35.4
Approach LOS		D			D			C				D
Queue Length 50th (ft)	37	38	0	363	22		15	188				420
Queue Length 95th (ft)	78	81	14	459	65		38	275				#630
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	336	348	397	579	615		174	1724				1496
Starvation Cap Reductn	0	0	0	0	0		0	185				142
Spillback Cap Reductn	0	0	0	0	0		0	0				0
Storage Cap Reductn	0	0	0	0	0		0	0				0
Reduced v/c Ratio	0.13	0.13	0.16	0.81	0.24		0.25	0.72				0.82

Intersection Summary

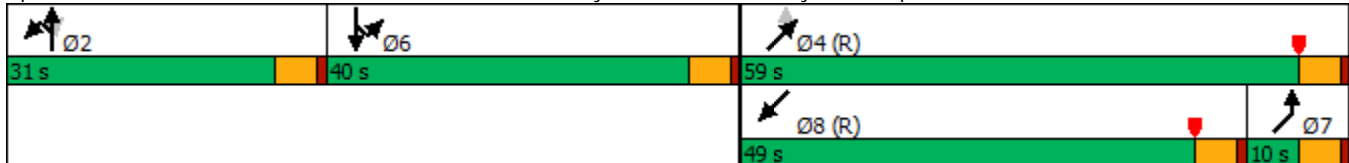
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 112 (86%), Referenced to phase 4:NETL and 8:SWT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Peak PM Hour
 07/29/2019

Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 31.9 Intersection LOS: C
 Intersection Capacity Utilization 74.6% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp



2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	4	3	20	33	0	44	12	1344	154	304	1008	15
Future Volume (vph)	4	3	20	33	0	44	12	1344	154	304	1008	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00			1.00	
Frt		0.900			0.850			0.985			0.998	
Flt Protected		0.993		0.950						0.950		
Satd. Flow (prot)	0	1637	0	1745	1484	0	0	3469	0	1711	3531	0
Flt Permitted		0.941		0.740				0.943		0.121		
Satd. Flow (perm)	0	1552	0	1359	1484	0	0	3271	0	218	3531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			285			19			6	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		74			261			430			307	
Travel Time (s)		1.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)							3					3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	5%	2%	2%	11%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	3	20	34	0	45	12	1371	157	310	1029	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	34	45	0	0	1540	0	310	1044	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Peak PM Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	13.0	13.0		13.0	13.0		89.0	89.0		28.0	117.0	
Total Split (%)	10.0%	10.0%		10.0%	10.0%		68.5%	68.5%		21.5%	90.0%	
Maximum Green (s)	8.0	8.0		8.0	8.0		84.0	84.0		23.0	112.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		7.9		7.9	7.9			92.6		114.2	115.2	
Actuated g/C Ratio		0.06		0.06	0.06			0.71		0.88	0.89	
v/c Ratio		0.24		0.41	0.13			0.66		0.81	0.33	
Control Delay		33.2		73.5	0.7			5.6		42.3	1.9	
Queue Delay		0.1		0.0	0.0			0.3		0.0	0.1	
Total Delay		33.3		73.5	0.7			6.0		42.3	2.0	
LOS		C		E	A			A		D	A	
Approach Delay		33.3			32.0			6.0			11.2	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		6		28	0			120		106	68	
Queue Length 95th (ft)		37		65	0			205		207	78	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		121		89	364			2343		462	3144	
Starvation Cap Reductn		0		0	0			276		0	0	
Spillback Cap Reductn		3		0	0			0		0	609	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.23		0.38	0.12			0.75		0.67	0.41	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	0 (0%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	9.3
Intersection Capacity Utilization:	91.7%
Intersection LOS:	A
ICU Level of Service:	F

Analysis Period (min) 15

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas



2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Saturday Peak Hour
 07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	53	23	55	467	31	145	53	1081	44	0	1076	238
Future Volume (vph)	53	23	55	467	31	145	53	1081	44	0	1076	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	10	11	11
Grade (%)		0%			-6%			1%			0%	
Storage Length (ft)	0		0	135		0	45		0	50		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					0.99						0.99	
Frt			0.850		0.877			0.994			0.973	
Flt Protected	0.950	0.980		0.950			0.950					
Satd. Flow (prot)	1466	1635	1583	1762	1608	0	1702	3384	0	0	3310	0
Flt Permitted	0.950	0.980		0.950			0.056					
Satd. Flow (perm)	1466	1635	1583	1762	1608	0	100	3384	0	0	3310	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			87		153			4			20	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		126			290			316			430	
Travel Time (s)		2.9			6.6			5.4			7.3	
Confl. Peds. (#/hr)						1	4					4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	17%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	56	24	58	492	33	153	56	1138	46	0	1133	251
Shared Lane Traffic (%)	30%											
Lane Group Flow (vph)	39	41	58	492	186	0	56	1184	0	0	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	1.01	0.96	1.05	1.05	1.01	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2	2	2	2		2	2			2	
Detector Template												
Leading Detector (ft)	83	83	83	83	83		83	83			83	
Trailing Detector (ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Position(ft)	-5	-5	-5	-5	-5		-5	-5			-5	
Detector 1 Size(ft)	40	40	40	40	40		40	40			40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)	43	43	43	43	43		43	43			43	
Detector 2 Size(ft)	40	40	40	40	40		40	40			40	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Saturday Peak Hour
 07/29/2019



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA			NA	
Protected Phases	2	2		6	6		7	4				8
Permitted Phases			2				4					
Detector Phase	2	2	2	6	6		7	4				8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0				5.0
Minimum Split (s)	31.0	31.0	31.0	28.0	28.0		10.0	31.0				31.0
Total Split (s)	31.0	31.0	31.0	46.0	46.0		12.0	73.0				61.0
Total Split (%)	20.7%	20.7%	20.7%	30.7%	30.7%		8.0%	48.7%				40.7%
Maximum Green (s)	26.0	26.0	26.0	41.0	41.0		7.0	68.0				56.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0				4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0				1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0				5.0
Lead/Lag							Lag					Lead
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0				2.0
Recall Mode	None	None	None	Min	Min		None	C-Min				C-Min
Walk Time (s)				7.0	7.0			7.0				8.0
Flash Dont Walk (s)				16.0	16.0			14.0				18.0
Pedestrian Calls (#/hr)				1	1			0				4
Act Effct Green (s)	8.6	8.6	8.6	51.5	51.5		77.9	76.9				67.9
Actuated g/C Ratio	0.06	0.06	0.06	0.34	0.34		0.52	0.51				0.45
v/c Ratio	0.46	0.44	0.34	0.81	0.29		0.49	0.68				0.92
Control Delay	85.2	81.7	9.4	56.8	8.9		54.5	27.0				47.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.4				2.1
Total Delay	85.2	81.7	9.4	56.8	8.9		54.5	27.4				49.6
LOS	F	F	A	E	A		D	C				D
Approach Delay		52.3			43.6			28.6				49.6
Approach LOS		D			D			C				D
Queue Length 50th (ft)	40	42	0	441	22		28	466				685
Queue Length 95th (ft)	81	85	19	572	77		61	603				#951
Internal Link Dist (ft)		46			210			236				350
Turn Bay Length (ft)				135			45					
Base Capacity (vph)	254	283	346	604	652		127	1737				1509
Starvation Cap Reductn	0	0	0	0	0		0	169				54
Spillback Cap Reductn	0	0	1	0	0		0	44				0
Storage Cap Reductn	0	0	0	0	0		0	0				0
Reduced v/c Ratio	0.15	0.14	0.17	0.81	0.29		0.44	0.76				0.95

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 136 (91%), Referenced to phase 4:NETL and 8:SWT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated








2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

Saturday Peak Hour

07/29/2019

Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 84.9%	ICU Level of Service E
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: U.S. Route 6 & Site Access Driveway/Bear Mountain Pkwy SB Ramp

 Ø2	 Ø6	 Ø4 (R)	
31 s	46 s	73 s	
		 Ø8 (R)	
		61 s	 Ø7
			12 s

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Saturday Peak Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↖	↗			↕		↖	↗	
Traffic Volume (vph)	4	4	30	44	0	72	11	1436	150	308	1244	28
Future Volume (vph)	4	4	30	44	0	72	11	1436	150	308	1244	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12	12	12	12	11	12	12
Grade (%)		-1%			-4%			1%				0%
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00			1.00	
Frt		0.893			0.850			0.986			0.997	
Flt Protected		0.995		0.950						0.950		
Satd. Flow (prot)	0	1663	0	1711	1615	0	0	3472	0	1711	3527	0
Flt Permitted		0.965		0.808				0.940		0.083		
Satd. Flow (perm)	0	1613	0	1455	1615	0	0	3264	0	149	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			325			11			5	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		74			261			430			307	
Travel Time (s)		1.7			5.9			7.3			5.2	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	4	4	31	46	0	75	11	1496	156	321	1296	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	46	75	0	0	1663	0	321	1325	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.02	0.97	0.97	1.01	1.01	1.01	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		2	2		1	2		2	2	
Detector Template	Left						Left					
Leading Detector (ft)	20	83		83	83		20	83		83	82	
Trailing Detector (ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Position(ft)	0	-5		-5	-5		0	-5		-5	-5	
Detector 1 Size(ft)	20	40		40	40		20	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43		43	43			43		43	42	
Detector 2 Size(ft)		40		40	40			40		40	40	
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	

2021 Build Traffic Volumes (W/ Signalization & Signal Timing Imp)
 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

Saturday Peak Hour
 07/29/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		23.0	23.0		10.0	23.0	
Total Split (s)	26.0	26.0		26.0	26.0		87.0	87.0		37.0	124.0	
Total Split (%)	17.3%	17.3%		17.3%	17.3%		58.0%	58.0%		24.7%	82.7%	
Maximum Green (s)	21.0	21.0		21.0	21.0		82.0	82.0		32.0	119.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Min	C-Min		Min	C-Min	
Act Effect Green (s)		10.3		10.3	10.3			97.7		129.7	129.7	
Actuated g/C Ratio		0.07		0.07	0.07			0.65		0.86	0.86	
v/c Ratio		0.28		0.46	0.18			0.78		0.78	0.43	
Control Delay		30.6		80.7	1.0			11.3		52.3	2.9	
Queue Delay		0.2		0.5	0.0			0.0		0.0	0.2	
Total Delay		30.9		81.2	1.0			11.3		52.3	3.1	
LOS		C		F	A			B		D	A	
Approach Delay		30.9			31.5			11.3			12.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		8		44	0			300		188	110	
Queue Length 95th (ft)		45		87	0			316		304	170	
Internal Link Dist (ft)		1			181			350			227	
Turn Bay Length (ft)				65								
Base Capacity (vph)		252		203	505			2130		467	3049	
Starvation Cap Reductn		0		0	0			14		0	0	
Spillback Cap Reductn		50		39	0			0		0	870	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.19		0.28	0.15			0.79		0.69	0.61	

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	3 (2%), Referenced to phase 4:NETL and 8:SWTL, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	12.9
Intersection Capacity Utilization:	101.7%
Intersection LOS:	B
ICU Level of Service:	G

Analysis Period (min) 15

Splits and Phases: 3: U.S. Route 6 & Bear Mountain Pkwy NB Ramp/Sinclair Gas

