



J·R ENGINEERING

May 15, 2019

Mr. Tommy Pucciano
Lokal Homes, LLC
8310 S. Valley Highway, Suite 115
Englewood, CO 80112

**Re: Traffic Letter for Brookhaven Condominiums Site Plan Amendment
Southwest Corner of E. Colorado Drive and S. Dunkirk Street, Aurora, CO
JR Engineering Project # 15986.00**

Dear Mr. Pucciano:

This Traffic Letter has been prepared to provide preliminary traffic information for the proposed amendment to the site plan of the Brookhaven condominiums development project located at the southwest corner of E. Colorado Drive and S. Dunkirk Street in Aurora, Colorado.

The site is located within the northeast 1/4 of Section 26, Township 4 South, Range 67 West of the 6th Principal Meridian, City of Aurora, Arapahoe County, State of Colorado. The site is bounded by E. Colorado Drive to the north, S. Dunkirk Street to the east, residential to the west, and E. Iliff Avenue to the south. As E. Iliff Avenue crosses S. Dunkirk Street it changes names to E. Jewell Avenue. The vicinity map is shown in Appendix A.

According to the Arapahoe County online mapping system, the property consists of a large common ownership parcel, a common ownership clubhouse parcel, and 160 condominium parcels, parcel IDs # 1975-22-3-44-001 through 1975-22-3-44-160, totaling 6.50 acres. The existing site is comprised of three (3) 20 unit condominium buildings with associated pavement, parking, sidewalks, and a clubhouse with swimming pool. There are four (4) vacant pads for future condominium buildings. A sidewalk runs along the north, east, and south sides of the property. The sidewalk is attached along E. Colorado Drive and E. Iliff Avenue, and is detached along S. Dunkirk Street.

The property owner is proposing to continue develop of the property by constructing five (5) condominium buildings on the four (4) vacant pads. Each building will contain 20 units. See Appendix A for the proposed site plan. The proposed additions are subject to the Site Plan Amendment approval process. JR Engineering understands that a full Traffic Impact Study is not required, but that a Traffic Letter is required to address the following topics:

- Trip Generation from the site
- Site Circulation Plan
- Signal Warrant Analysis of E. Colorado Drive and S. Dunkirk Street – Warrants 1, 2, and 3

Existing Roadway and Transportation Network

The project site is located at the southwest corner of E. Colorado Drive and S. Dunkirk Street.

The existing lane geometry on S. Dunkirk Street consists of the following:

- S. Dunkirk Street is a four-lane minor arterial roadway, running north and south with a posted speed limit of 35 MPH in the vicinity of the site.
- The S. Dunkirk Street cross section consists of two travel lanes in each of the northbound and southbound directions separated by a striped median.
- A dedicated bike lane exists for the northbound direction, with the southbound direction providing a shared bike lane with the vehicular lane.
- Left turn lanes are provided at the intersections with E. Colorado Drive and S. Jewell Avenue.
- An eight-foot wide attached sidewalk is provided on the east side of the street.
- A five-foot wide detached sidewalk is provided on the west side of the street.

The existing lane geometry on E. Colorado Drive consists of the following:

- E. Colorado Drive is a two-lane collector roadway, running east and west with a posted speed limit of 25 MPH in the vicinity of the site.
- On the north side of E. Colorado Drive is Side Creek Park.
- The E. Colorado Drive cross section consists of one travel lane in each of the eastbound and westbound directions.
- A five-foot wide attached sidewalk is provided on the north side of the street.
- A five-foot wide attached sidewalk is provided on the south side of the street.
- On-street, parallel parking is provided on both sides of the street.
- E. Colorado Drive is stop controlled on the approaches to S. Dunkirk Street.

The intersection of E. Colorado Drive and S. Dunkirk Street is located approximately 700 feet north of the E. Iliff Avenue and S. Dunkirk Street signalized intersection.

There are two Regional Transportation District (RTD) bus stops located along S. Dunkirk Street within close proximity to the project site. The following bus route connects to the stops:

- Route 131 runs east along E. Iliff Avenue from Tower Road, and turns north onto S. Dunkirk Street. It then continues north and turns right on S. Flanders Way, before heading south and turning left onto E. Jewell Avenue. The route then continues west on E. Jewell Avenue/E. Iliff Avenue towards Tower Road. There are two stops on S. Dunkirk Street in the vicinity of the site, and one on E. Jewell Avenue at the S. Dunkirk Street intersection.

Project Site Access

The site currently has two access points, and no additional accesses are proposed. One access is located on E. Colorado Drive, and is located approximately 350 feet west of S. Dunkirk Street. The other access is located on S. Dunkirk Street, and is approximately 450 feet north of E. Iliff Avenue and approximately 250 feet south of E. Colorado Drive. The access off of S. Dunkirk Street is a right-in, right-out only.

The project includes potential future restriping of S. Dunkirk Street to allow full movement access into and out of this site by the addition of a left-turn lane for northbound traffic on S. Dunkirk Street. The City of Aurora Traffic Engineering Staff do not support striping modifications at this time. Future striping is also proposed to shorten the existing storage length for the northbound left-turn lane from S. Dunkirk Street to E. Colorado Drive. Refer to Appendix B for an exhibit that shows the future striping.

The future striping for the northbound left-turn movements from S. Dunkirk Street into the site and onto E. Colorado Drive were designed per the State Highway Access Code (SHAC) criteria, specifically Table 4 – 5, Table 4 – 6, and Table 4 – 8, shown below. Given that S. Dunkirk Street is classified as an NR-B, the left turns need to include taper and storage, not deceleration length, per Table 4 – 5. Since the posted speed limit on S. Dunkirk Street is 35 MPH, the transition taper ratio is 10:1 per Table 4 – 6. The turn lane widths are both 10 feet, so the taper lengths must be 100 feet. The storage lengths are determined by the number of turning vehicles during the peak hour, as correlated in Table 4 – 8. The weekday peak hour traffic entering the site is 43, which corresponds to a 40-foot long storage length. To be conservative, a 50-foot storage length was designed. Based on the traffic counts, the northbound left peak hour volume was greatest in the PM at 37 counts, which corresponds to a 40-foot long storage length. Again, to be conservative, the storage length was designed to be 58 feet.

Table 4 - 5: Components of Speed Change Lane Length

Access Category	Left turn deceleration lane	Right turn deceleration lane	Acceleration lane
F-W	Design must meet federal interstate standards, and no less than E-X		
E-X	taper + decel.length+storage	taper + decel. length	accel.length + taper
R-A	* decel. length + storage	* decel. length	* accel. length
R-B	* decel. length + storage	* decel. length	* accel. length
NR-A	* decel. length + storage	* decel. length	* accel. length
NR-B	taper + storage	taper + storage	* accel. length
NR-B >40mph	* decel. length	*decel. length	* accel. length
NR-C	taper + storage	taper + storage	* accel. length
NR-C >40mph	* decel. length	* decel. length	* accel. length

Table 4 - 6: Design Criteria for Acceleration and Deceleration Lanes

Posted Speed Limit in MPH	25	30	35	40	45	50	55	60	65	70
Deceleration Length in feet	180	250	310	370	435	500	600	700	800	900
Acceleration Length in feet	N/A	190	270	380	550	760	960	1170	1380	1590
Transition Taper Ratio	7.5:1	8:1	10:1	12:1	13.5:1	15:1	18.5:1	25:1	25:1	25:1

Table 4 - 8: Storage Lengths

Turning Vehicles Per Peak Hour	below 30	30	60	100	200	300
Required Lane Length in Feet	25	40	50	100	200	300

In response to a comment from the City of Aurora, the intersection of E. Jewell Avenue and S. Dunkirk Street was analyzed in Synchro to determine if the existing storage length for the southbound left-turn movement has sufficient length. The storage length was shown to not have sufficient length to accommodate the queue length in the existing PM peak hour. The existing storage length is about 200 feet long with a 90-foot long taper for the 12-foot wide turn lane. Based on the traffic counts, taken March 28, 2019, and the signal timing plan, the existing 95th percentile queue lengths for the AM and PM peaks are 194 and 385 feet, respectively, for the southbound left. The 6th Edition of the Highway Capacity Manual (HCM) level of service (LOS) grades for this movement are F and E for AM and PM, respectively. Refer to Appendix C for the traffic counts, Appendix G for the signal timing plan, and Appendix H for the HCM LOS reports. It is beyond the scope of this letter to address recommendations to accommodate the queue length for this movement. Furthermore, the high traffic volumes for this movement, especially in the PM peak, are likely due to drivers connecting Interstate 225 to E-470. The City of Aurora has stated that the completion of the 6th Avenue Parkway Extension project is anticipated to relieve some of this traffic volume. The City of Aurora Traffic Engineering Staff do not support any striping modifications at this intersection at this time, unless other civil modifications and signal modifications at Dunkirk Street & Jewell Avenue are proposed.

Data Collection

Traffic counts (tube counts) were collected during January 29-31, 2019 on E. Colorado Drive and S. Dunkirk Street for a total of 72 hours. The existing Average Daily Traffic (ADT) for S. Dunkirk Street is 11,150, and the ADT for E. Colorado Drive is 865. Refer to Appendix C for overall count results.

Trip Generation Summary

Aurora standards state that trip generation should be calculated from the latest data contained within the Institute of Transportation Engineers' (ITE) Trip Generation Manual. Other industry

publications such as the ITE Journal or other sources may be approved by the City. Aurora staff has asked that the trip generation from the site be prepared and compared with the previous trip generation that was developed in 2001 under a Traffic Impact Study prepared by LSC Transportation Consultants, Inc. for the proposed Great Louisiana Purchase Apartments on this site. A comparison of the current trip generations and those from the Great Louisiana Purchase Apartments study are shown in Table 1 on page 6.

In the 2001 study, it was anticipated that all 160 units would be constructed by the end of 2002. Below are the anticipated trips generated for the site from the study:

- 1,061 weekday trips
- 82 AM peak hour vehicle trips, split 13 (16%) entering and 69 (84%) exiting
- 99 PM peak hour vehicle trips, split 67 (67%) entering and 32 (32%) exiting

These trip generation values are based on the 1997 Trip Generation Manual for Land Use No. 220, Apartment. The trip generation report from the 2001 study is included in Appendix D.

JR Engineering utilized the current version of the Trip Generation Manual, 10th Edition for this analysis. Changes from the 9th Edition of the manual removed the Apartment (220) land use, and reclassified the information. Below is an excerpt taken from the 10th Edition of the manual:

“The existing data from Apartment (220) was examined to identify the number of floors contained in each of the sites included in this land use. Each data point was then reclassified into the appropriate category (low-rise, mid-rise, and high-rise). If the number of floors could not be determined, the data points were deleted from the database. Further, all existing residential land uses that included multifamily dwellings (apartments, townhouses, and condominiums) were consolidated into the following three new multifamily housing land use categories: Multifamily Housing (Low-Rise)(220), Multifamily Housing (Mid-Rise)(221), and Multifamily Housing (High-Rise)(222).”

The current project site was studied to include condominium buildings with 3 floors. Based on this land use, JR classified the site under ITE Code 221 (Multifamily Housing (Mid-Rise)), and used the appropriate fitted curve equations, per the flow chart in the ITE Trip Generation Manual, for the traffic associated with the proposed condominium project. The project is expected to generate the approximate following number of trips at full build-out (160 units):

- 870 weekday trips
- 58 AM peak hour vehicle trips, split 15 (26%) entering and 43 (74%) exiting
- 70 PM peak hour vehicle trips, split 43 (61%) entering and 27 (39%) exiting

The trip generation reports are included in Appendix D. The reports show a summary of land use, trip generation rates, directional distribution, and the total volume added to the adjacent streets. No adjustments were made for internal capture trips or pass-by trips. Based on the data from current studies found in the 10th Edition of the Trip Generation Manual, this site is anticipated to produce fewer trips than originally anticipated and approved. Therefore, the

impact to the background traffic will not require additional improvements to the roadway system.

Table 1 – Trip Generation Comparison

Land Use	Description	Unit	Quantity	Total Vehicle Trips Generated				
				Average Weekday	AM Peak Hour		PM Peak Hour	
					In	Out	In	Out
	2001 TIS Trip Generation							
220	Great Louisiana Purchase Apartments	DU	160	1061	13	69	67	32
	2018 TIS Trip Generation							
221	Brookhaven Condominium	DU	160	870	15	43	43	27
	Trip Increase/Reduction			-191	+2	-26	-24	-5
	Percentage Increase/Reduction			-18%	+15%	-38%	-36%	-16%

Site Circulation

As previously noted, two (2) access points are currently in place for the site, and no additional accesses are proposed. The access off of E. Colorado Drive is a full-movement access, while the access off of S. Dunkirk Street is right-in, right-out only. In the 2001 study, it was anticipated that in the Year 2021, 35% of generated site traffic would use E. Iliff Avenue west, 30% would use S. Dunkirk Street north, 20% would use E. Jewell Avenue east, 9% would use S. Dunkirk Street south, 4% would use E. Colorado Drive west, and 2% would use E. Colorado Drive east. It is anticipated that there will not be a shift in these traffic patterns based on anticipated and existing growth in the area.

Based on the preliminary site plan, 26-foot drive aisles are provided throughout the site. The aisle width is sufficient for one-way or two-way traffic. In summary, the preliminary site plan provides for adequate vehicular circulation. All parking stalls appear to have adequate space for pull-in and back-out movements. The Site Circulation Plan is included in Appendix E.

Pedestrian Circulation

As previously noted, a five-foot wide detached sidewalk is provided on the west side of S. Dunkirk Street, and a five-foot wide attached sidewalk is provided on the south side of E. Colorado Drive. Internal sidewalks provide connectivity between each building to the parking areas and clubhouse. One (1) sidewalk connection point is provided from the parking lot to the sidewalk on S. Dunkirk Street. The project does not propose to install any additional sidewalk connection points to S. Dunkirk Street or E. Colorado Drive. The median in the site entrance off of S. Dunkirk Street could pose a conflict to pedestrian movement across the entrance by forcing pedestrians into the cross pan. It is recommended that the eastern nose of the median will be moved back to allow for unobstructed flow of pedestrian traffic. Pedestrian circulation can be seen in the Site Circulation Plan included in Appendix E.

Traffic Signal Warrant Analysis

As part of this study, a traffic signal warrant analysis was conducted at the E. Colorado Drive and S. Dunkirk Street intersection for the existing conditions, total traffic conditions in 2021, and total traffic conditions in 2040. The total conditions include traffic generated from the full buildout of the site. The traffic growth rate for S. Dunkirk Street is 2.64% and was calculated using the DRCOG travel model assigned traffic volumes for 2015 and 2040. The growth rate applied for E. Colorado Drive is 2.00%, which is the value given by the City of Aurora's Traffic Impact Study Guidelines. The DRCOG travel model does not assign traffic volumes for E. Colorado Drive. Based on direction from the City, the following warrants from the 2009 MUTCD were analyzed:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour

The traffic signal warrant analysis is discussed below.

Warrant 1, Eight-Hour Vehicular Volume

Per the 2009 MUTCD Warrant #1, the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersection street suffers excessive delay or conflict in entering or crossing the major street. It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then Warrant 1 is satisfied and an analysis of the combination of Conditions A and B is not needed.

The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exist for each of any 8 hours of any average day:

- A. The vehicles per hour given in both of the 100 percent columns of Condition A in MUTCD Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; or
- B. The vehicles per hour given in both of the 100 percent columns of Condition B in MUTCD Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

In applying each condition, the major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exist for each of any 8 hours of any average day:

- A. The vehicles per hour given in both of the 80 percent columns of Condition A in MUTCD Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B in MUTCD Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection.

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Utilizing the traffic volumes for each scenario, Warrant 1 was analyzed using the Warrants software. The analysis results are summarized in the table below. The detailed warrant reports are included in Appendix F.

Warrant 1, Eight-Hour Vehicular Volume

Scenario		Met?
Existing Conditions		No
	Condition A or B Met?	No
	Condition A and B Met?	No
Year 2021 Total Traffic		No
	Condition A or B Met?	No
	Condition A and B Met?	No
Year 2040 Total Traffic		No
	Condition A or B Met?	No
	Condition A and B Met?	No

As shown above, Warrant 1 will not be satisfied for any scenario.

Warrant 2, Four-Hour Vehicular Volume

Per the 2009 MUTCD Warrant #2, the Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in the MUTCD Figure 4C-1 for the existing combination of approach lanes. On the minor street,

the higher volume shall not be required to be on the same approach during each of these 4 hours.

Utilizing the traffic volumes for each scenario, Warrant 2 was analyzed using the Warrants software. The analysis results are summarized in the table below. The detailed warrant reports are included in Appendix F.

Warrant 2, Four-Hour Vehicular Volume

Scenario	Met?
Existing Conditions	No
Year 2021 Total Traffic	No
Year 2040 Total Traffic	No

As shown above, it is anticipated that Warrant 2 will not be satisfied for any scenario.

Warrant 3, Peak Hour

Per the 2009 MUTCD Warrant #3, Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

- A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds; 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and
 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and
 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve the MUTCD Figure 4C-3 for the existing combination of approach lanes.

Utilizing the traffic volumes for each scenario, Warrant 1 was analyzed using the Warrants software. The analysis results are summarized in the table below. The detailed warrant reports are included in Appendix F.

Warrant 3, Peak Hour

Scenario		Met?
Existing Conditions		No
	Condition A Met?	No
	Condition B Met?	No
Year 2021 Total Traffic		No
	Condition A Met?	No
	Condition B Met?	No
Year 2040 Total Traffic		No
	Condition A Met?	No
	Condition B Met?	No

As shown above, Warrant 3 is not satisfied for any scenario.

Conclusion

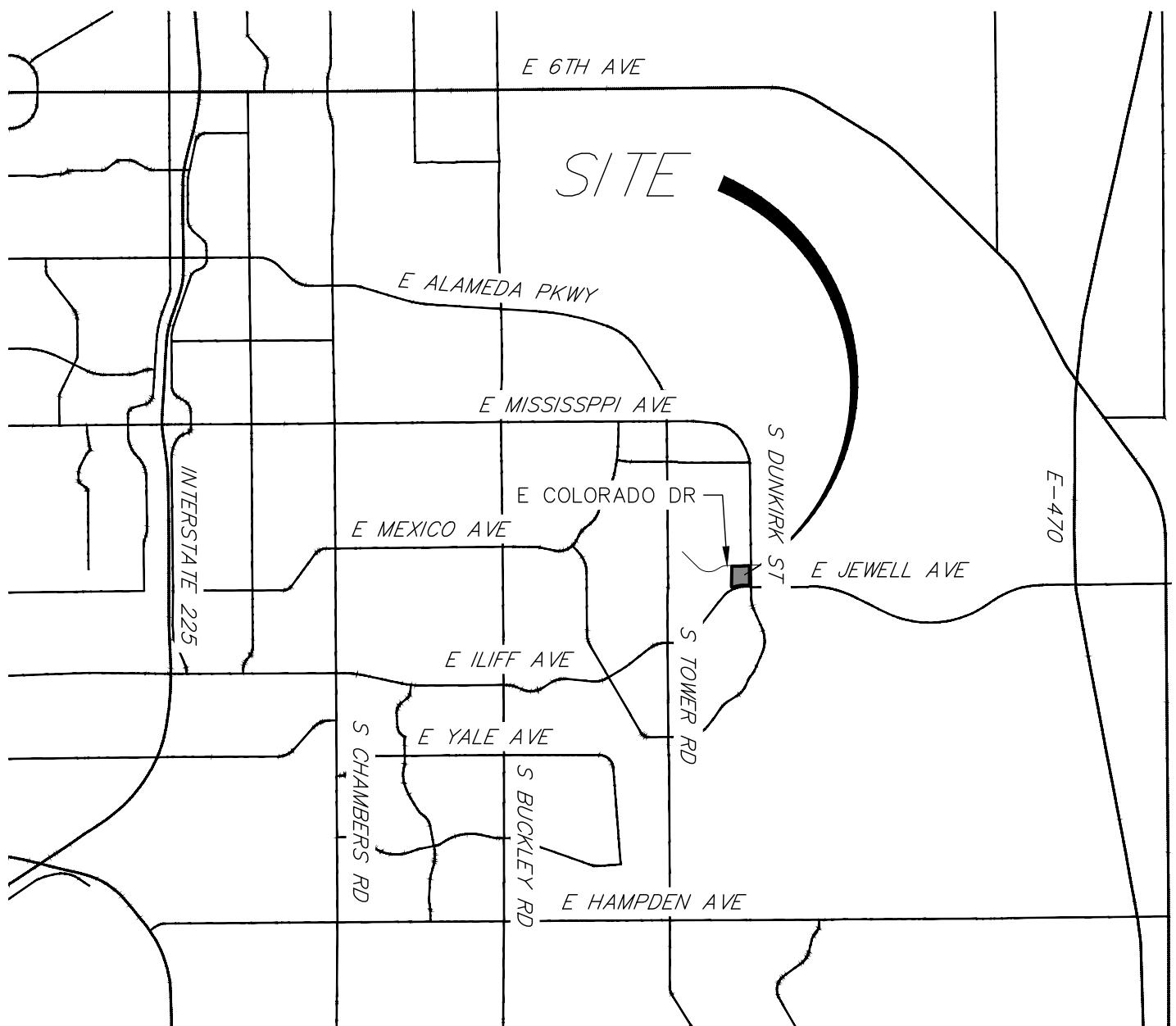
This Traffic Letter has been prepared to provide preliminary traffic information for the proposed condominium project located at the southwest corner of E. Colorado Drive and S. Dunkirk Street in Aurora, Colorado. Based on the data collected, and the warrants analyzed, the anticipated trips generated from the site will not have a significant impact to the existing traffic volumes or patterns. Additionally, based on Traffic Signal Warrants 1, 2, 3, a traffic signal at the intersection of S. Dunkirk Street and E. Colorado Drive is not warranted with the development of this site. If you have any questions or comments, please feel free to contact me at efarney@jrengineering.com or 303-267-6183.

Sincerely,
JR Engineering, LLC

Eli Farney, PE, PTOE
Project Manager – Transportation and Traffic

Attachments: Appendix A: Vicinity Map and Site Plan
Appendix B: Northbound Left on Dunkirk St
Appendix C: Traffic Counts
Appendix D: Trip Generation Summary Reports
Appendix E: Site Circulation Plan
Appendix F: Traffic Signal Warrant Reports
Appendix G: Traffic Signal Timing Data
Appendix H: HCM LOS Reports – Existing Conditions

APPENDIX A
VICINITY MAP AND SITE PLAN



5000 2500 0 5000

ORIGINAL SCALE: 1" = 5000'



VICINITY MAP
BROOKHAVEN CONDOMINIUMS
JOB NO. 15986.00
2/1/19
SHEET 1 OF 1



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A Westrian Company

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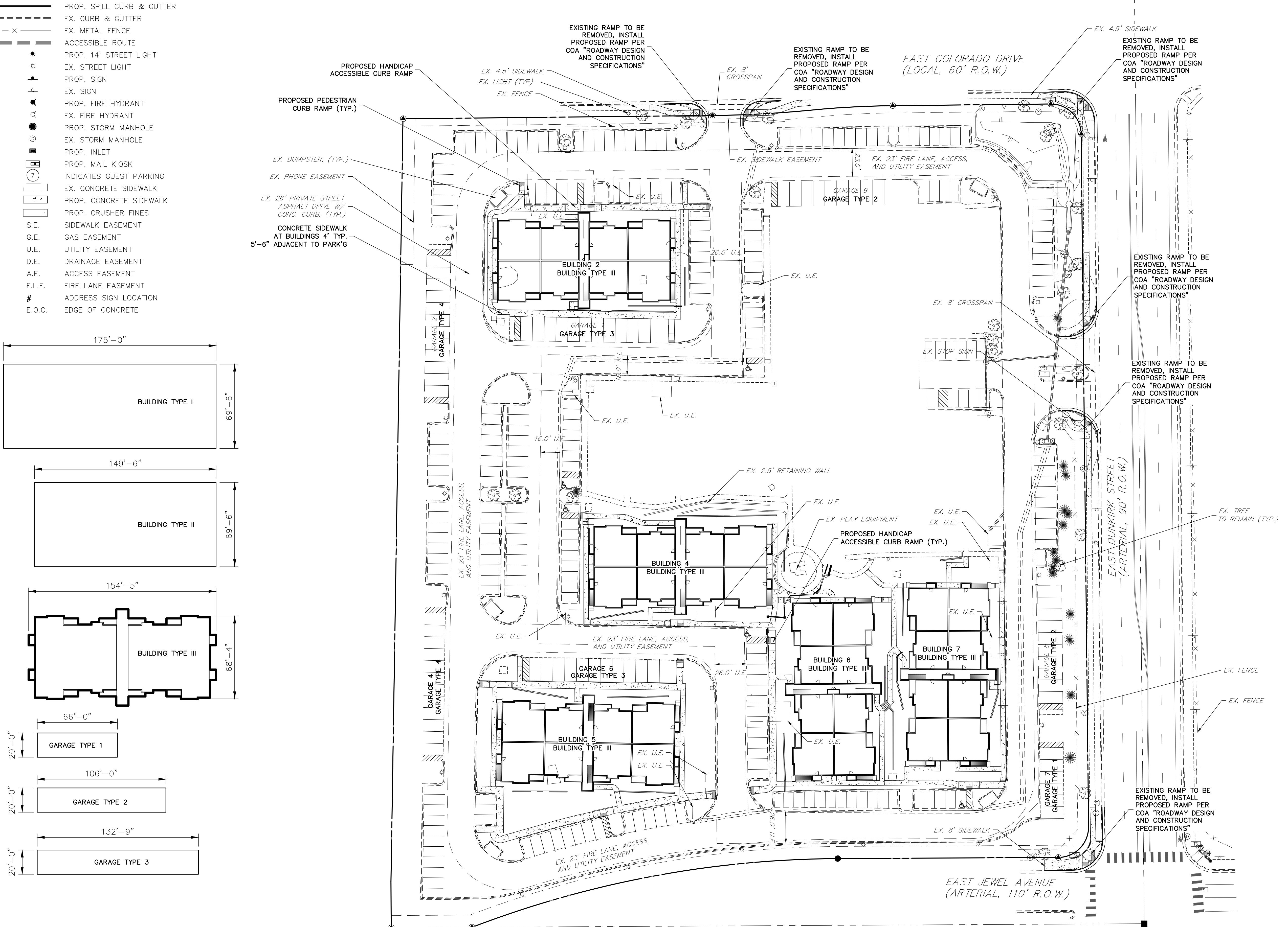
LEGEND

- PROP. RIGHT OF WAY
- EX. RIGHT OF WAY
- PROPERTY LINE
- BOUNDARY LINE
- CENTERLINE
- PROP. EASEMENT
- EX. EASEMENT
- SIGHT DISTANCE TRIANGLE
- PROP. CURB & GUTTER
- PROP. SPILL CURB & GUTTER
- EX. CURB & GUTTER
- EX. METAL FENCE
- ACCESSIBLE ROUTE
- * PROP. 14' STREET LIGHT
- EX. STREET LIGHT
- PROP. SIGN
- EX. SIGN
- PROP. FIRE HYDRANT
- EX. FIRE HYDRANT
- PROP. STORM MANHOLE
- EX. STORM MANHOLE
- PROP. INLET
- PROP. MAIL KIOSK
- INDICATES GUEST PARKING
- EX. CONCRETE SIDEWALK
- PROP. CONCRETE SIDEWALK
- PROP. CRUSHER FINES
- S.E. SIDEWALK EASEMENT
- G.E. GAS EASEMENT
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.E. ACCESS EASEMENT
- F.L.E. FIRE LANE EASEMENT
- # ADDRESS SIGN LOCATION
- E.O.C. EDGE OF CONCRETE

BROOKHAVEN CONDOMINIUMS SITE PLAN

A SITE PLAN AMENDMENT TO BROOKHAVEN CONDOMINIUMS,

LOCATED IN THE SOUTHWEST 1/4 OF SECTION 22

TOWNSHIP 4 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPLE MERIDIAN
CITY OF AURORA, COUNTY OF ARAPAHOE, STATE OF COLORADO

SITE PLAN
BROOKHAVEN CONDOMINIUMS
JOB NO. 15986.00
02/08/19
SHEET 2 OF

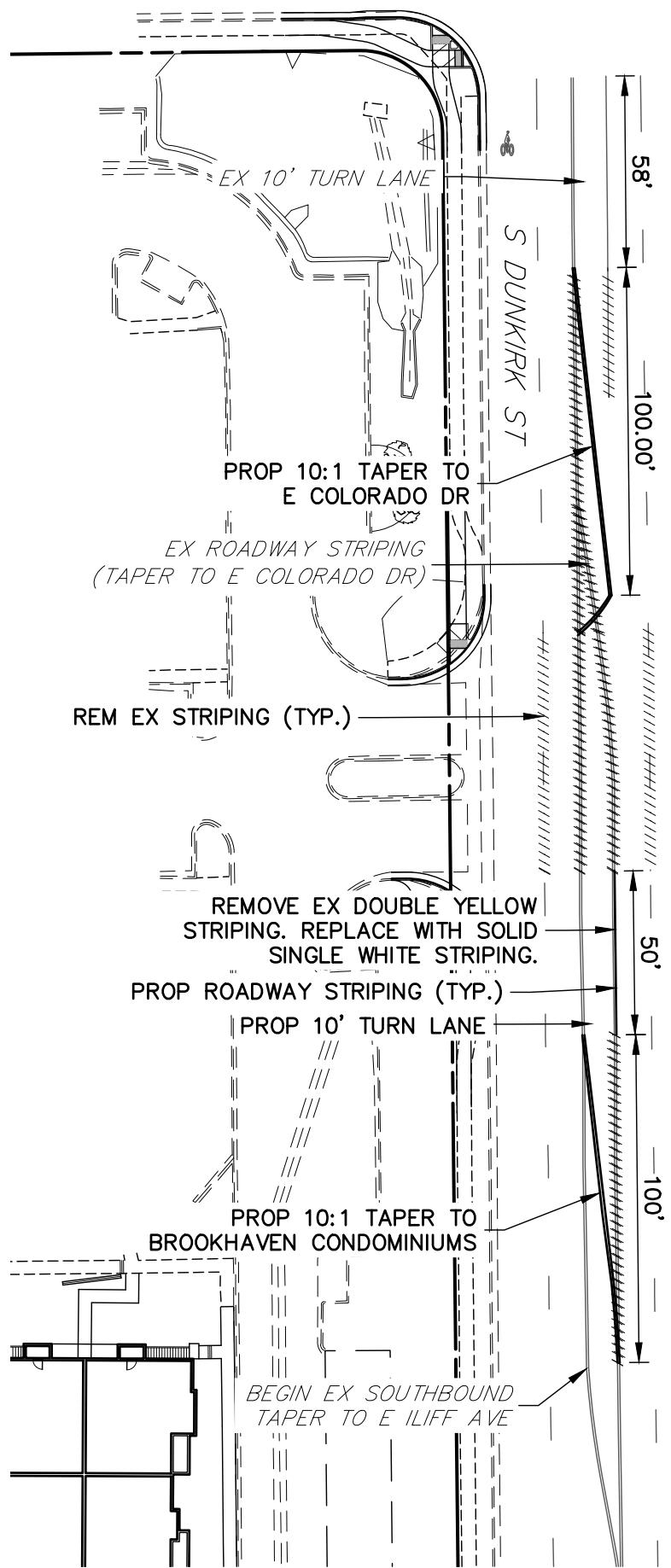
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APPENDIX B

NORTHBOUND LEFT ON DUNKIRK ST

THESE STRIPING MODIFICATIONS WILL NOT BE CONSTRUCTED WITH THIS PROJECT UNLESS ADDITIONAL MODIFICATIONS TO OTHER CITY INFRASTRUCTURE ARE PROPOSED.



50 25 0 50
ORIGINAL SCALE: 1" = 50

NORTHBOUND LEFT TURNS
ON DUNKIRK ST
BROOKHAVEN CONDOMINIUMS
JOB NO. 15986.00
5/15/19
SHEET 1 OF 1



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APPENDIX C
TRAFFIC COUNTS

All Traffic Data Services

Wheat Ridge, CO 80033

Page 1

Site Code: 2

Station ID: 2

DUNKIRK ST S.O E COLORADO DR

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/29/19	0	18	5	0	0	0	0	0	0	0	0	0	0	23
01:00	0	22	1	0	0	0	0	0	0	0	0	0	0	23
02:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14
03:00	0	34	7	0	0	0	0	0	0	0	0	0	0	41
04:00	0	93	15	0	0	0	0	1	0	0	0	0	0	109
05:00	0	216	44	2	4	0	0	0	1	0	0	0	0	267
06:00	14	480	88	1	6	0	1	2	1	1	0	1	0	595
07:00	9	704	110	3	6	2	2	3	1	1	1	1	0	843
08:00	4	456	76	3	7	1	0	3	0	0	0	0	0	550
09:00	1	269	44	3	2	2	0	1	0	0	0	0	0	322
10:00	0	189	22	2	5	1	0	0	0	0	0	0	0	219
11:00	1	202	23	2	3	2	0	0	0	0	0	0	0	233
12 PM	0	239	38	1	2	4	0	1	2	0	1	0	0	288
13:00	0	198	28	1	3	0	0	0	0	0	0	0	0	230
14:00	0	203	17	0	3	0	0	0	0	0	0	0	0	223
15:00	1	275	48	2	4	0	0	2	0	0	0	0	0	332
16:00	2	358	38	1	5	0	0	0	0	0	0	0	0	404
17:00	3	364	67	3	4	1	0	0	0	0	0	0	0	442
18:00	1	315	46	3	6	0	0	0	0	0	0	0	0	371
19:00	1	199	16	0	4	0	0	0	0	0	0	0	0	220
20:00	0	152	16	0	0	1	0	0	0	0	0	0	0	169
21:00	0	132	11	0	0	0	0	0	0	0	0	0	0	143
22:00	0	83	5	0	0	0	0	0	0	0	0	0	0	88
23:00	0	53	3	0	0	0	0	0	0	0	0	0	0	56
Day Total	37	5268	768	27	64	14	3	13	5	2	2	2	0	6205
Percent	0.6%	84.9%	12.4%	0.4%	1.0%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
AM Peak Vol.	06:00	07:00	07:00	07:00	08:00	07:00	07:00	07:00	05:00	06:00	07:00	06:00	07:00	07:00
PM Peak Vol.	17:00	17:00	17:00	17:00	18:00	12:00		15:00	12:00		12:00		17:00	
	3	364	67	3	6	4		2	2		1	1	1	442

All Traffic Data Services
Wheat Ridge, CO 80033

Page 2

Site Code: 2
Station ID: 2

DUNKIRK ST S.O E COLORADO DR

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/30/19	0	20	1	0	0	0	0	0	0	0	0	0	0	21
01:00	0	18	2	0	0	0	0	0	1	0	0	0	0	21
02:00	0	17	0	0	0	0	0	0	0	0	0	0	0	17
03:00	1	44	2	0	1	0	0	0	0	0	0	0	0	48
04:00	0	83	11	0	1	0	0	0	0	0	0	0	0	95
05:00	2	185	38	2	5	0	0	0	0	0	0	0	0	232
06:00	3	414	82	1	4	0	0	0	0	2	0	0	0	506
07:00	5	629	98	3	9	2	0	1	1	0	0	0	0	748
08:00	1	412	77	2	4	2	0	1	0	0	0	1	0	500
09:00	1	256	36	3	6	1	0	2	1	0	0	0	0	306
10:00	2	207	32	1	6	1	0	1	0	0	0	0	0	250
11:00	2	204	25	1	3	3	0	1	0	0	0	0	0	239
12 PM	0	227	35	1	2	4	0	1	2	0	1	0	0	273
13:00	0	187	27	1	3	0	0	0	0	0	0	0	0	218
14:00	0	192	17	0	3	0	0	0	0	0	0	0	0	212
15:00	1	260	45	2	4	0	0	2	0	0	0	0	0	314
16:00	2	340	35	1	5	0	0	0	0	0	0	0	0	383
17:00	3	345	63	3	4	1	0	0	0	0	0	0	0	419
18:00	1	298	43	3	6	0	0	0	0	0	0	0	0	351
19:00	1	188	16	0	4	0	0	0	0	0	0	0	0	209
20:00	0	144	16	0	0	1	0	0	0	0	0	0	0	161
21:00	0	125	11	0	0	0	0	0	0	0	0	0	0	136
22:00	0	79	5	0	0	0	0	0	0	0	0	0	0	84
23:00	0	50	3	0	0	0	0	0	0	0	0	0	0	53
Day Total	25	4924	720	24	70	15	0	9	5	2	1	1	0	5796
Percent	0.4%	85.0%	12.4%	0.4%	1.2%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.	07:00 5	07:00 629	07:00 98	07:00 3	07:00 9	11:00 3		09:00 2	01:00 1	06:00 2		08:00 1		07:00 748
PM Peak Vol.	17:00 3	17:00 345	17:00 63	17:00 3	18:00 6	12:00 4		15:00 2	12:00 2		12:00 1			17:00 419

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Wheat Ridge, CO 80033

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Site Code: 2

Station ID: 2

DUNKIRK ST S.O E COLORADO DR

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/31/19	0	20	1	0	0	0	0	0	0	0	0	0	0	21
01:00	0	18	2	0	0	0	0	0	1	0	0	0	0	21
02:00	0	16	0	0	0	0	0	0	0	0	0	0	0	16
03:00	1	42	2	0	1	0	0	0	0	0	0	0	0	46
04:00	0	78	11	0	1	0	0	0	0	0	0	0	0	90
05:00	2	175	36	2	5	0	0	0	0	0	0	0	0	220
06:00	3	391	78	1	4	0	0	0	0	2	0	0	0	479
07:00	5	596	93	3	9	2	0	1	1	0	0	0	0	710
08:00	1	389	73	2	4	2	0	1	0	0	0	1	0	473
09:00	1	243	35	3	6	1	0	2	1	0	0	0	0	292
10:00	2	196	30	1	6	1	0	1	0	0	0	0	0	237
11:00	1	211	25	1	3	2	0	1	1	0	0	0	0	245
12 PM	0	180	18	2	2	1	0	0	0	0	0	0	0	203
13:00	2	226	23	2	2	2	0	0	1	0	0	0	0	258
14:00	0	255	40	5	6	3	0	1	0	0	0	0	0	310
15:00	1	252	49	3	3	1	1	1	0	0	1	0	0	312
16:00	2	311	38	1	6	0	0	2	0	0	0	0	0	360
17:00	3	364	67	3	4	1	0	0	0	0	0	0	0	442
18:00	1	315	46	3	6	0	0	0	0	0	0	0	0	371
19:00	1	199	16	0	4	0	0	0	0	0	0	0	0	220
20:00	0	152	16	0	0	1	0	0	0	0	0	0	0	169
21:00	0	132	11	0	0	0	0	0	0	0	0	0	0	143
22:00	0	83	5	0	0	0	0	0	0	0	0	0	0	88
23:00	0	53	3	0	0	0	0	0	0	0	0	0	0	56
Day Total	26	4897	718	32	72	17	1	10	5	2	1	1	0	5782
Percent	0.4%	84.7%	12.4%	0.6%	1.2%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.	07:00 5	07:00 596	07:00 93	07:00 3	07:00 9	07:00 2		09:00 2	01:00 1	06:00 2		08:00 1		07:00 710
PM Peak Vol.	17:00 3	17:00 364	17:00 67	14:00 5	14:00 6	14:00 3	15:00 1	16:00 2	13:00 1	15:00 1				17:00 442
Grand Total	88	15089	2206	83	206	46	4	32	15	6	4	4	0	17783
Percent	0.5%	84.9%	12.4%	0.5%	1.2%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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Station ID: 2

DUNKIRK ST S.O E COLORADO DR

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/29/19	0	21	4	0	0	0	0	0	0	0	0	0	0	25
01:00	0	18	4	0	0	0	0	0	0	0	0	0	0	22
02:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
03:00	0	7	3	0	1	0	0	0	1	0	0	0	0	12
04:00	0	17	4	0	1	0	0	0	0	0	0	0	0	22
05:00	0	89	14	0	2	0	0	1	0	0	0	0	0	106
06:00	0	173	31	2	4	1	2	1	0	0	0	0	0	214
07:00	4	359	58	5	8	1	0	0	1	0	0	0	0	436
08:00	0	203	32	3	3	0	0	1	1	0	0	0	0	243
09:00	0	137	24	0	3	3	0	2	0	1	0	0	0	170
10:00	0	163	35	1	2	1	0	0	0	0	0	1	0	203
11:00	0	242	42	0	5	4	0	1	0	0	0	0	0	294
12 PM	1	197	21	0	7	1	0	0	0	0	0	0	0	227
13:00	1	177	35	2	3	3	1	1	0	0	0	1	0	224
14:00	1	247	39	0	3	0	0	2	0	0	0	0	0	292
15:00	0	387	64	0	7	1	2	0	2	1	0	1	0	465
16:00	7	529	91	3	7	0	0	2	2	0	0	1	0	642
17:00	11	542	85	0	7	2	2	3	0	0	0	0	0	652
18:00	3	363	35	0	9	1	0	1	0	0	0	0	0	412
19:00	1	187	37	0	1	1	0	0	0	0	0	0	0	227
20:00	0	138	26	0	1	0	0	0	0	0	0	0	0	165
21:00	0	118	16	0	0	0	0	0	0	0	0	0	0	134
22:00	0	69	4	0	2	0	0	0	0	0	0	0	0	75
23:00	0	62	6	0	0	0	0	0	0	0	0	0	0	68
Day Total	29	4455	711	16	76	19	7	15	7	2	0	4	0	5341
Percent	0.5%	83.4%	13.3%	0.3%	1.4%	0.4%	0.1%	0.3%	0.1%	0.0%	0.0%	0.1%	0.0%	
AM Peak Vol.	07:00 4	07:00 359	07:00 58	07:00 5	07:00 8	11:00 4	06:00 2	09:00 2	03:00 1	09:00 1		10:00 1		07:00 436
PM Peak Vol.	17:00 11	17:00 542	16:00 91	16:00 3	18:00 9	13:00 3	15:00 2	17:00 3	15:00 2	15:00 1		13:00 1		17:00 652

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Site Code: 2

Station ID: 2

DUNKIRK ST S.O E COLORADO DR

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/30/19	0	32	7	0	0	0	0	0	0	0	0	0	0	39
01:00	0	16	3	0	0	0	0	0	0	0	0	0	0	19
02:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
03:00	0	8	5	0	1	0	0	0	0	0	0	0	0	14
04:00	0	23	4	0	0	0	0	0	0	0	0	0	0	27
05:00	1	74	13	1	1	0	0	0	0	0	0	0	0	90
06:00	0	175	33	1	3	0	0	0	0	0	0	0	0	212
07:00	0	267	34	0	3	0	0	0	0	0	0	0	2	306
08:00	2	180	35	1	6	0	0	1	0	0	0	0	0	225
09:00	1	156	30	0	4	3	0	0	0	0	0	0	0	194
10:00	2	187	30	1	1	2	1	0	0	0	0	0	0	224
11:00	2	204	28	1	4	2	0	0	1	0	0	0	0	242
12 PM	2	194	47	1	3	3	0	0	1	0	0	0	0	251
13:00	1	194	26	0	4	1	0	1	0	0	0	0	0	227
14:00	2	267	36	0	4	0	0	0	0	0	0	0	0	309
15:00	4	415	69	0	7	1	0	2	0	0	0	0	0	498
16:00	4	554	81	4	10	2	1	2	0	1	0	0	0	659
17:00	5	510	75	0	8	1	1	3	0	3	1	1	0	608
18:00	1	347	59	0	1	1	0	0	0	0	0	0	0	409
19:00	0	218	25	0	3	0	0	1	0	0	0	0	0	247
20:00	0	160	13	0	0	0	0	0	0	0	0	0	0	173
21:00	1	110	12	0	0	0	1	0	0	0	0	0	0	124
22:00	0	80	3	0	2	0	0	0	0	0	0	0	0	85
23:00	0	52	5	0	0	0	0	0	0	0	0	0	0	57
Day Total	28	4435	673	10	65	16	4	10	2	4	1	1	2	5251
Percent	0.5%	84.5%	12.8%	0.2%	1.2%	0.3%	0.1%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak Vol.	08:00 2	07:00 267	08:00 35	05:00 1	08:00 6	09:00 3	10:00 1	08:00 1	11:00 1				07:00 2	07:00 306
PM Peak Vol.	17:00 5	16:00 554	16:00 81	16:00 4	16:00 10	12:00 3	16:00 1	17:00 3	12:00 1	17:00 3	17:00 1	17:00 1	16:00 659	

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Site Code: 2

Station ID: 2

DUNKIRK ST S.O E COLORADO DR

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
01/31/19	0	22	3	0	0	0	0	0	0	0	0	0	0	25
01:00	0	21	5	0	0	0	0	0	0	0	0	0	0	26
02:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
03:00	0	14	3	0	0	0	0	0	0	0	0	0	0	17
04:00	0	32	1	0	1	0	0	0	0	0	0	0	0	34
05:00	0	84	12	3	1	0	0	0	2	0	0	0	0	102
06:00	0	165	29	0	2	0	0	0	0	0	0	0	0	196
07:00	1	250	29	0	5	0	0	1	1	0	0	0	0	287
08:00	0	186	35	0	4	1	0	0	0	0	0	0	0	226
09:00	1	165	33	0	2	2	0	1	0	0	0	0	0	204
10:00	0	182	33	1	5	4	0	0	1	0	0	0	0	226
11:00	2	216	30	0	3	1	1	1	0	0	0	0	0	254
12 PM	1	209	25	0	3	1	0	1	0	0	0	0	0	240
13:00	0	151	17	0	5	1	0	0	0	0	0	0	0	174
14:00	3	317	52	6	5	1	1	0	0	1	0	0	0	386
15:00	2	392	72	2	8	3	0	5	1	0	0	0	0	485
16:00	4	580	80	0	4	4	0	1	1	2	1	0	0	677
17:00	3	566	86	0	4	6	2	1	0	0	0	2	0	670
18:00	1	346	42	1	3	0	0	2	0	0	0	1	0	396
19:00	0	200	28	0	2	0	0	0	0	0	0	0	0	230
20:00	0	141	17	0	2	1	0	0	0	0	0	0	0	161
21:00	1	99	10	0	0	0	0	0	0	0	0	0	0	110
22:00	0	63	7	0	1	0	0	0	0	0	0	0	0	71
23:00	1	31	5	0	0	0	0	0	0	0	0	0	0	37
Day Total	20	4442	655	13	60	25	4	13	6	3	1	3	0	5245
Percent	0.4%	84.7%	12.5%	0.2%	1.1%	0.5%	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	
AM Peak Vol.	11:00 2	07:00 250	08:00 35	05:00 3	07:00 5	10:00 4	11:00 1	07:00 1	05:00 2					07:00 287
PM Peak Vol.	16:00 4	16:00 580	17:00 86	14:00 6	15:00 8	17:00 6	17:00 2	15:00 5	15:00 1	16:00 2	16:00 1	17:00 2		16:00 677
Grand Total	77	13332	2039	39	201	60	15	38	15	9	2	8	2	15837
Percent	0.5%	84.2%	12.9%	0.2%	1.3%	0.4%	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	

All Traffic Data Services

Wheat Ridge, CO 80033

Site Code: 1

Station ID: 1

E COLORADO DR W/O S DUNKIRK ST

EB

All Traffic Data Services

Wheat Ridge, CO 80033

Site Code: 1

Station ID: 1

E COLORADO DR W/O S DUNKIRK ST

EB

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E COLORADO DR W/O S DUNKIRK ST

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E COLORADO DR W/O S DUNKIRK ST

WB

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DUNKIRK ST

E COLORADO DR W/O S DUNKIRK ST

WB

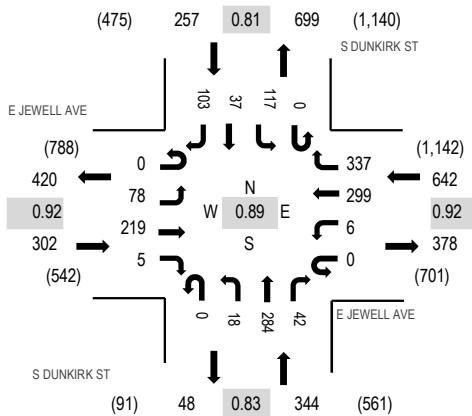
Location: 1 S DUNKIRK ST & E JEWELL AVE AM

Date: Thursday, March 28, 2019

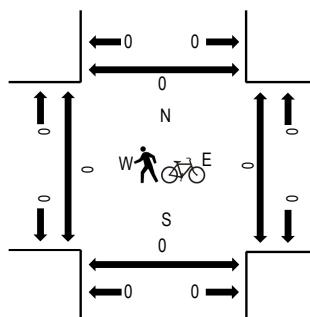
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E JEWELL AVE Eastbound				E JEWELL AVE Westbound				S DUNKIRK ST Northbound				S DUNKIRK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
7:00 AM	0	20	43	1	0	0	77	79	0	3	75	5	0	24	7	21	355	1,545	0	0	0	0
7:15 AM	0	23	60	1	0	2	77	95	0	5	85	13	0	29	14	32	436	1,492	0	0	0	0
7:30 AM	0	17	55	2	0	2	68	85	0	5	66	12	0	41	10	29	392	1,366	0	0	0	0
7:45 AM	0	18	61	1	0	2	77	78	0	5	58	12	0	23	6	21	362	1,269	0	0	0	0
8:00 AM	0	13	56	2	0	2	64	60	0	1	43	8	0	19	11	23	302	1,175	0	0	0	0
8:15 AM	0	5	51	0	0	0	71	62	0	3	50	7	0	21	7	33	310	0	0	0	0	
8:30 AM	0	10	50	1	0	2	65	47	0	3	53	8	0	30	8	18	295	0	0	0	0	
8:45 AM	0	9	43	0	0	2	70	55	0	2	34	5	0	25	8	15	268	0	0	0	0	
Count Total	0	115	419	8	0	12	569	561	0	27	464	70	0	212	71	192	2,720	0	0	0	0	
Peak Hour	0	78	219	5	0	6	299	337	0	18	284	42	0	117	37	103	1,545	0	0	0	0	

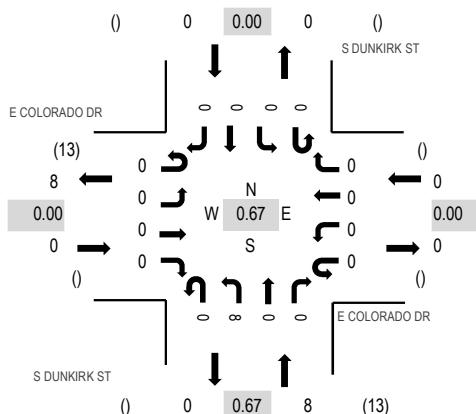
Location: 2 S DUNKIRK ST & E COLORADO DR AM

Date: Thursday, March 28, 2019

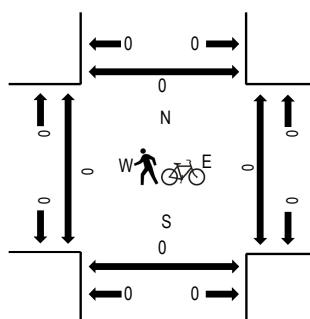
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E COLORADO DR Eastbound				E COLORADO DR Westbound				S DUNKIRK ST Northbound				S DUNKIRK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right		West	East	South	North													
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	8	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	6	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	6	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	0	0	0	0	0



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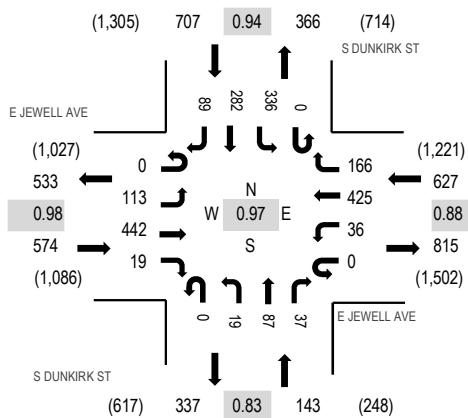
Location: 1 S DUNKIRK ST & E JEWELL AVE PM

Date: Thursday, March 28, 2019

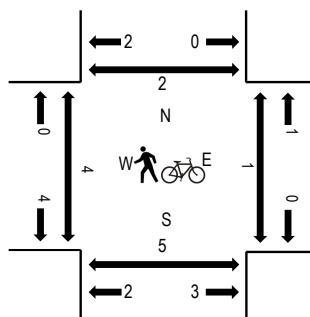
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E JEWELL AVE Eastbound				E JEWELL AVE Westbound				S DUNKIRK ST Northbound				S DUNKIRK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
4:00 PM	0	23	90	3	0	7	80	36	0	4	22	5	0	73	60	20	423	1,949	0	0	1	0
4:15 PM	0	25	99	2	1	10	95	40	0	0	28	5	0	85	82	24	496	2,020	0	0	1	0
4:30 PM	0	25	106	6	0	6	116	42	0	7	22	11	0	80	74	24	519	2,051	0	0	2	0
4:45 PM	0	25	120	2	0	10	102	45	0	3	18	1	0	92	75	18	511	1,985	0	0	0	0
5:00 PM	0	32	108	4	0	8	99	36	0	7	20	16	0	74	68	22	494	1,911	0	0	0	0
5:15 PM	0	31	108	7	0	12	108	43	0	2	27	9	0	90	65	25	527	0	0	0	0	2
5:30 PM	0	30	98	5	0	23	119	43	0	1	10	5	0	55	38	26	453	0	0	0	0	0
5:45 PM	0	29	102	6	0	8	88	44	0	5	18	2	0	67	36	32	437	0	1	2	0	0
Count Total	0	220	831	35	1	84	807	329	0	29	165	54	0	616	498	191	3,860	0	1	6	2	
Peak Hour	0	113	442	19	0	36	425	166	0	19	87	37	0	336	282	89	2,051	0	0	2	2	

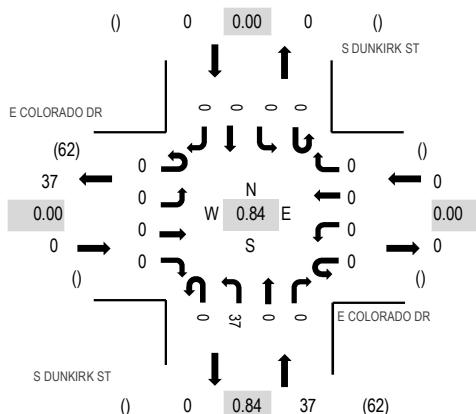
Location: 2 S DUNKIRK ST & E COLORADO DR PM

Date: Thursday, March 28, 2019

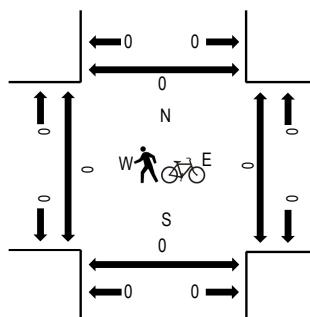
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E COLORADO DR Eastbound				E COLORADO DR Westbound				S DUNKIRK ST Northbound				S DUNKIRK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	Total	West	East	South	North													
4:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	25	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	32	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	28	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	32	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11	37	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	62	0	0	0	0	0	0	62	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37	0	0	0	0	0

APPENDIX D
TRIP GENERATION SUMMARY REPORTS

Trip Generation Summary

Alternative: Alternative 1

Phase:

Project: Brookhaven Condominiums

Open Date: 2/18/2019

Analysis Date: 2/18/2019

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic					
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
221	MID-RISE 1 160 Dwelling Units		435	435	870		15	43	58		43	27	70
	Unadjusted Volume	435	435	870		15	43	58		43	27	70	
	Internal Capture Trips	0	0	0		0	0	0		0	0	0	
	Pass-By Trips	0	0	0		0	0	0		0	0	0	
	Volume Added to Adjacent Streets	435	435	870		15	43	58		43	27	70	

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

Detailed Land Use Data
 For 160 Dwelling Units of MID-RISE 1
 (221) Multifamily Housing (Mid-Rise)

Project: Brookhaven Condominiums

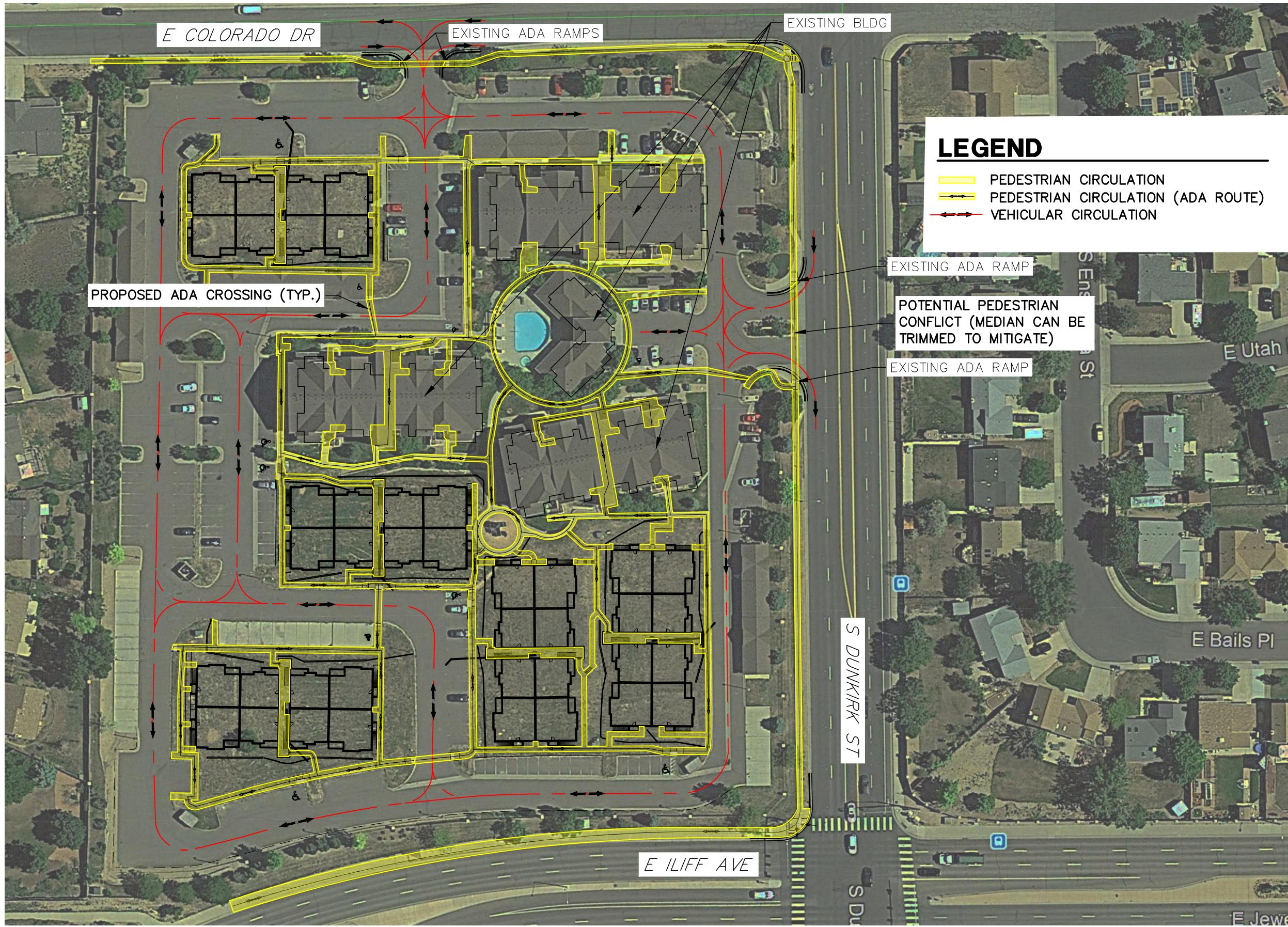
Open Date: 2/18/2019
 Analysis Date: 2/18/2019

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips Source : Trip Generation Manual 10th Edition	870	0	5.44	1.27	12.5	2.03	205	50	50	False	$T = 5.45(X) - 1.75$	0.77
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	58	0	0.36	0.06	1.61	0.19	207	26	74	False	$\ln(T) = 0.98 \ln(X) - 0.98$	0.67
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	70	0	0.44	0.15	1.11	0.19	208	61	39	False	$\ln(T) = 0.96 \ln(X) - 0.63$	0.72

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

APPENDIX E
SITE CIRCULATION PLAN



SITE CIRCULATION PLAN
BROOKHAVEN CONDOMINIUMS
JOB NO. 15986.00
5/15/19
SHEET 1 OF 1

 **J·R ENGINEERING**
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Fort Collins 970-491-9888 • www.jrengineering.com

APPENDIX F
TRAFFIC SIGNAL WARRANT REPORTS

Warrants Summary Report

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

Intersection Information

Major Street		Minor Street
Street Name	S. Dunkirk Street	E. Colorado Drive
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	35	25

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met?	No	0 Hours met (8 required)
Condition A and B Met?	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

Intersection Information

Major Street Name: S. Dunkirk Street
 Major Street Direction: NB/SB
 Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met?	No	0 Hours met (8 required)
Condition B Met?	No	0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles		100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
		Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column	Condition A 80% Column	Condition B 80% Column
00:00 to 01:00	52	4		No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
00:15 to 01:15	49	2		No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
00:30 to 01:30	49	3		No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

00:45 to 01:45	47	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
01:00 to 02:00	46	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
01:15 to 02:15	39	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
01:30 to 02:30	30	1	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
01:45 to 02:45	23	1	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

02:00 to 03:00	26	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
02:15 to 03:15	30	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
02:30 to 03:30	32	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
02:45 to 03:45	46	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
03:00 to 04:00	59	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

03:15 to 04:15		66	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
03:30 to 04:30		82	3	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
03:45 to 04:45		104	3	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
04:00 to 05:00		125	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
04:15 to 05:15		159	2	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

04:30 to 05:30	218	4	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
04:45 to 05:45	270	8	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
05:00 to 06:00	338	9	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
05:15 to 06:15	426	18	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
05:30 to 06:30	506	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

05:45 to 06:45		606	25	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			
06:00 to 07:00		728	36	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No			
06:15 to 07:15		875	43	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No			
06:30 to 07:30		1,023	48	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No			
06:45 to 07:45		1,103	56	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

07:00 to 08:00		1,102	57	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No			
07:15 to 08:15		1,007	46	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No			
07:30 to 08:30		904	38	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No			
07:45 to 08:45		804	29	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No			
08:00 to 09:00		737	20	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

08:15 to 09:15	668	20	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
08:30 to 09:30	601	22	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
08:45 to 09:45	549	22	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
09:00 to 10:00	493	25	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
09:15 to 10:15	500	26	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

Time Period	Total Volume	Peak Volume	Decision 1	Decision 2	Decision 3	Decision 4	Decision 5
09:30 to 10:30	465	25	No	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No			
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			
09:45 to 10:45	443	25	No	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No			
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			
10:00 to 11:00	451	26	No	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No			
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			
10:15 to 11:15	433	31	No	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No			
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			
10:30 to 11:30	484	38	No	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No			
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No			
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No			
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

10:45 to 11:45		504	38	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
11:00 to 12:00		499	37	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
11:15 to 12:15		504	30	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
11:30 to 12:30		470	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
11:45 to 12:45		484	23	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

12:00 to 13:00	494	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
12:15 to 13:15	477	25	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
12:30 to 13:30	465	21	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
12:45 to 13:45	451	23	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
13:00 to 14:00	442	19	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

13:15 to 14:15	470	19	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
13:30 to 14:30	494	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
13:45 to 14:45	541	26	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
14:00 to 15:00	576	33	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
14:15 to 15:15	629	35	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

14:30 to 15:30	688	39	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
14:45 to 15:45	752	39	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
15:00 to 16:00	799	37	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
15:15 to 16:15	858	40	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
15:30 to 16:30	929	40	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

15:45 to 16:45	961	39	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
16:00 to 17:00	1,035	40	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
16:15 to 17:15	1,087	37	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
16:30 to 17:30	1,097	39	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
16:45 to 17:45	1,077	42	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

17:00 to 18:00	1,068	44	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
17:15 to 18:15	982	47	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	Yes	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
17:30 to 18:30	891	44	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
17:45 to 18:45	855	37	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		
18:00 to 19:00	767	33	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No		
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	Yes	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

18:15 to 19:15		678	28	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
18:30 to 19:30		615	25	No	No	No	No
Condition A	Volume \geq 100% column (600)?	Yes	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
18:45 to 19:45		519	26	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	Yes	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
19:00 to 20:00		449	26	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			
19:15 to 20:15		435	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No			
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No			
	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No			
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No			

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

19:30 to 20:30	393	24	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
19:45 to 20:45	360	20	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
20:00 to 21:00	331	16	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
20:15 to 21:15	294	15	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
20:30 to 21:30	296	13	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

20:45 to 21:45	286	12	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
21:00 to 22:00	262	11	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
21:15 to 22:15	238	9	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
21:30 to 22:30	203	8	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
21:45 to 22:45	181	7	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

22:00 to 23:00	165	7	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
22:15 to 23:15	157	6	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
22:30 to 23:30	146	5	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
22:45 to 23:45	128	5	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
23:00 to 00:00	110	4	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 1: Eight-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

23:15 to 00:15	93	5	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
23:30 to 00:30	73	4	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		
23:45 to 00:45	60	4	No	No	No	No
Condition A	Volume \geq 100% column (600)?	No	Volume \geq 100% column (900)?	No		
	Volume \geq 80% column (480)?	No	Volume \geq 80% column (720)?	No		
Condition B	Volume \geq 100% column (900)?	No	Volume \geq 100% column (75)?	No		
	Volume \geq 80% column (720)?	No	Volume \geq 80% column (60)?	No		

Warrant 2: Four-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

Intersection Information

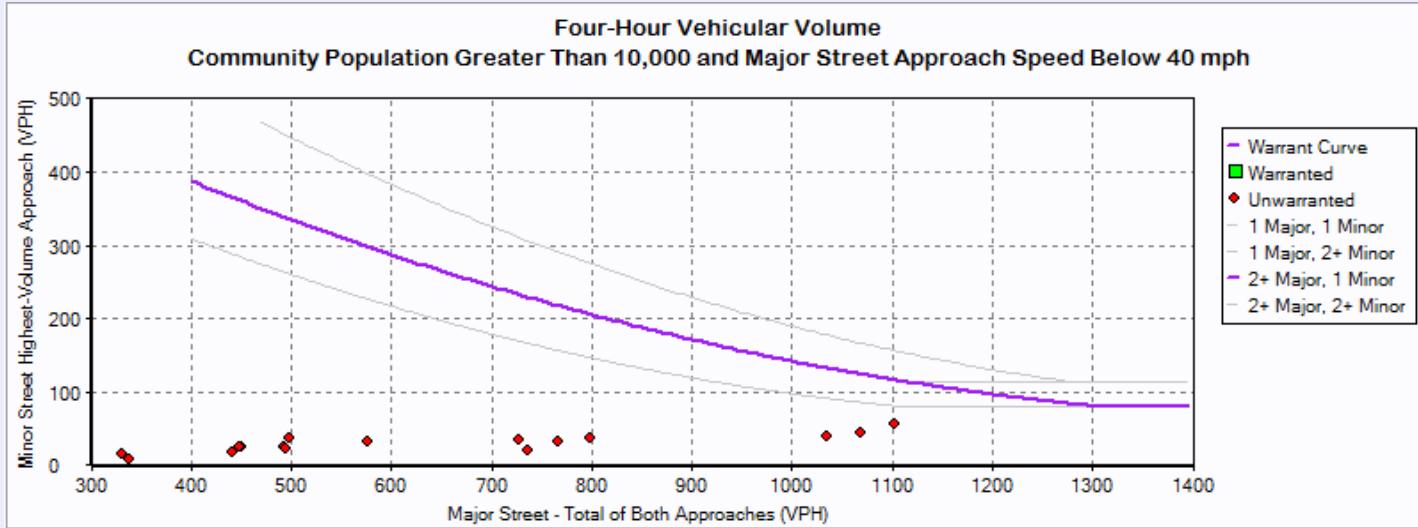
Major Street		Minor Street	
Street Name	S. Dunkirk Street	E. Colorado Drive	
Direction	NB/SB	EB/WB	
Number of Lanes	2	1	
Approach Speed	35	25	

Warrant 2 Met?

No

Details:

Notes	0 Hours met (4 required)
Low population	No



Warrant 2: Four-hour Vehicular Volume**1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive****Hourly Volumes**

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	52	4
01:00:00 - 02:00:00	46	2
02:00:00 - 03:00:00	26	2
03:00:00 - 04:00:00	59	2
04:00:00 - 05:00:00	125	2
05:00:00 - 06:00:00	338	9
06:00:00 - 07:00:00	728	36
07:00:00 - 08:00:00	1,102	57
08:00:00 - 09:00:00	737	20
09:00:00 - 10:00:00	493	25
10:00:00 - 11:00:00	451	26
11:00:00 - 12:00:00	499	37
12:00:00 - 13:00:00	494	24
13:00:00 - 14:00:00	442	19
14:00:00 - 15:00:00	576	33
15:00:00 - 16:00:00	799	37
16:00:00 - 17:00:00	1,035	40
17:00:00 - 18:00:00	1,068	44
18:00:00 - 19:00:00	767	33
19:00:00 - 20:00:00	449	26
20:00:00 - 21:00:00	331	16
21:00:00 - 22:00:00	262	11
22:00:00 - 23:00:00	165	7

Warrant 2: Four-hour Vehicular Volume

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

	23:00:00 - 00:00:00	110	4	
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Warranted Hours

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)

Note: Only data of hours warranted is represented in the above table.

Warrant 3: Peak Hour

1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive

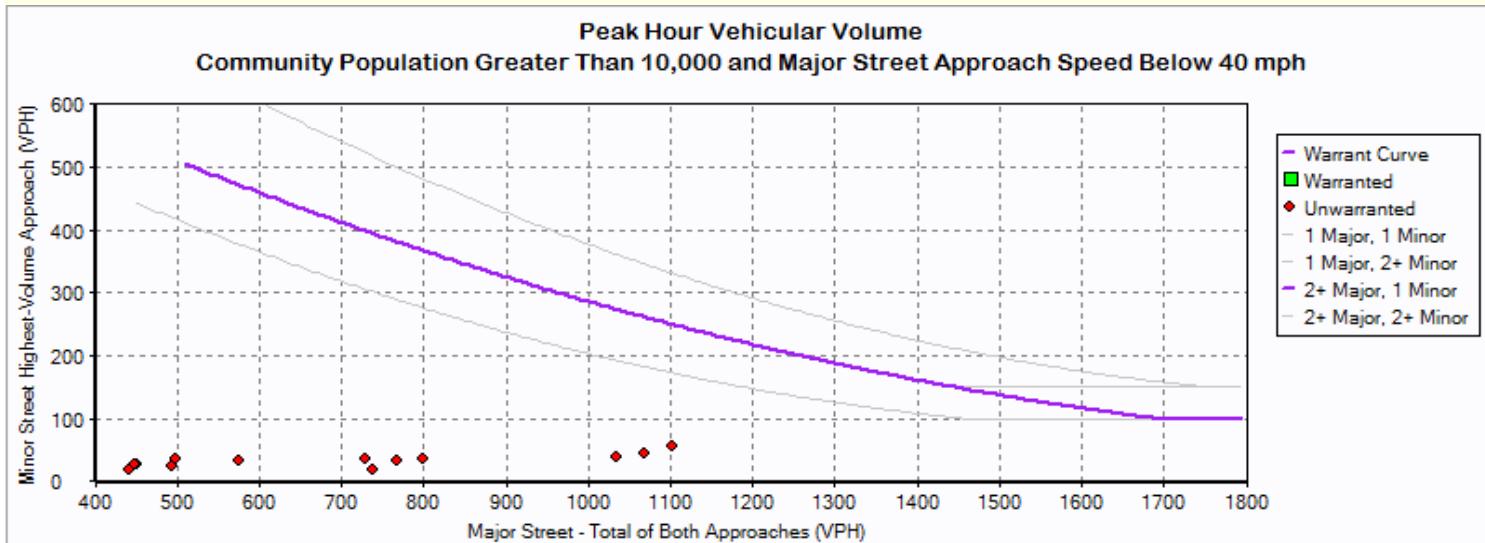
Intersection Information

Major Street		Minor Street	
Street Name	S. Dunkirk Street	E. Colorado Drive	
Direction	NB/SB	EB/WB	
Number of Lanes	2	1	
Approach Speed	35	25	

Warrant 3 Met? No

Details

Low Population?	No		
Condition A Met?	No	Condition B Met?	No
Notes	0 Hours met (1 required)	Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met		
Minor Approach Volume Condition Met?	Not Met		
Total Entering Intersection Volume Condition Met?	Not Met		



Warrant 3: Peak Hour**1: Existing Conditions - S. Dunkirk Street & E. Colorado Drive**

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	52	4
1:00	46	2
2:00	26	2
3:00	59	2
4:00	125	2
5:00	338	9
6:00	728	36
7:00	1,102	57
8:00	737	20
9:00	493	25
10:00	451	26
11:00	499	37
12:00	494	24
13:00	442	19
14:00	576	33
15:00	799	37
16:00	1,035	40
17:00	1,068	44
18:00	767	33
19:00	449	26
20:00	331	16
21:00	262	11
22:00	165	7
23:00	110	4

Warrants Summary Report

1: Year 2021 Total - Dunkirk & Colorado

Intersection Information

Major Street		Minor Street
Street Name	Dunkirk	Colorado
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	35	25

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B Met	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: Year 2021 Total - Dunkirk & Colorado

Intersection Information

Major Street Name: Dunkirk

Major Street Direction: NB/SB

Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 0 Hours met (8 required)

Condition B Met? No 0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
			Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
00:00 to 01:00	54	4	No	No	No	No
Condition A	Volume \geq 100% column (600)? Volume \geq 80% column (480)?	No No	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No		
Condition B	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No	Volume \geq 100% column (75)? Volume \geq 80% column (60)?	No No		
00:15 to 01:15	51	2	No	No	No	No
Condition A	Volume \geq 100% column (600)? Volume \geq 80% column (480)?	No No	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No		
Condition B	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No	Volume \geq 100% column (75)? Volume \geq 80% column (60)?	No No		
00:30 to 01:30	51	3	No	No	No	No
Condition A	Volume \geq 100% column (600)? Volume \geq 80% column (480)?	No No	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No		
Condition B	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No	Volume \geq 100% column (75)? Volume \geq 80% column (60)?	No No		
00:45 to 01:45	49	2	No	No	No	No
Condition A	Volume \geq 100% column (600)? Volume \geq 80% column (480)?	No No	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No		
Condition B	Volume \geq 100% column (900)? Volume \geq 80% column (720)?	No No	Volume \geq 100% column (75)? Volume \geq 80% column (60)?	No No		

01:00 to 02:00	47	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:15 to 02:15	40	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:30 to 02:30	32	1	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:45 to 02:45	25	1	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:00 to 03:00	28	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:15 to 03:15	32	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:30 to 03:30	33	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

02:45 to 03:45	47	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:00 to 04:00	61	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:15 to 04:15	68	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:30 to 04:30	86	3	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:45 to 04:45	111	3	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:00 to 05:00	135	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:15 to 05:15	172	2	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

04:30 to 05:30	234	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:45 to 05:45	289	10	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:00 to 06:00	362	12	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:15 to 06:15	456	22	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:30 to 06:30	543	28	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:45 to 06:45	651	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
06:00 to 07:00	782	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

06:15 to 07:15	941	50	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
06:30 to 07:30	1,100	57	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
06:45 to 07:45	1,186	67	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:00 to 08:00	1,186	68	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:15 to 08:15	1,082	56	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
07:30 to 08:30	971	46	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
07:45 to 08:45	864	35	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

08:00 to 09:00	791	26	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
08:15 to 09:15	720	26	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
08:30 to 09:30	648	28	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
08:45 to 09:45	593	28	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
09:00 to 10:00	533	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
09:15 to 10:15	539	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
09:30 to 10:30	502	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

09:45 to 10:45	477	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
10:00 to 11:00	485	31	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
10:15 to 11:15	467	36	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
10:30 to 11:30	523	44	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
10:45 to 11:45	546	45	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
11:00 to 12:00	541	44	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
11:15 to 12:15	545	37	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

11:30 to 12:30	507	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
11:45 to 12:45	522	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
12:00 to 13:00	533	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
12:15 to 13:15	515	31	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
12:30 to 13:30	503	27	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
12:45 to 13:45	488	28	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
13:00 to 14:00	478	24	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

13:15 to 14:15	508	24	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
13:30 to 14:30	533	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
13:45 to 14:45	583	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
14:00 to 15:00	620	37	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
14:15 to 15:15	676	36	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
14:30 to 15:30	739	40	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
14:45 to 15:45	808	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

15:00 to 16:00	858	38	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
15:15 to 16:15	922	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
15:30 to 16:30	998	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
15:45 to 16:45	1,033	39	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
16:00 to 17:00	1,114	40	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
16:15 to 17:15	1,170	46	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
16:30 to 17:30	1,182	48	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

16:45 to 17:45	1,160	49	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
17:00 to 18:00	1,150	48	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
17:15 to 18:15	1,058	48	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
17:30 to 18:30	960	45	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
17:45 to 18:45	920	38	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
18:00 to 19:00	824	34	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
18:15 to 19:15	729	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

18:30 to 19:30	662	27	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
18:45 to 19:45	559	28	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
19:00 to 20:00	486	29	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
19:15 to 20:15	471	27	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
19:30 to 20:30	424	26	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
19:45 to 20:45	388	22	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:00 to 21:00	355	22	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

20:15 to 21:15	314	19	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:30 to 21:30	317	16	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:45 to 21:45	306	13	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:00 to 22:00	280	11	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:15 to 22:15	254	9	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:30 to 22:30	217	8	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:45 to 22:45	194	7	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

22:00 to 23:00	178	7	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:15 to 23:15	170	6	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:30 to 23:30	158	5	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:45 to 23:45	139	5	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:00 to 00:00	118	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:15 to 00:15	99	5	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:30 to 00:30	76	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

23:45 to 00:45

61

4

No

No

No

No

Condition A

Volume >= 100%
column (600)?

No

Volume >= 100%
column (900)?

No

Volume >= 80%
column (480)?

No

Volume >= 80%
column (720)?

No

Condition B

Volume >= 100%
column (900)?
Volume >= 80%
column (720)?

No

Volume >= 100%
column (75)?
Volume >= 80%
column (60)?

No

Warrant 2: Four-hour Vehicular Volume

1: Year 2021 Total - Dunkirk & Colorado

Intersection Information

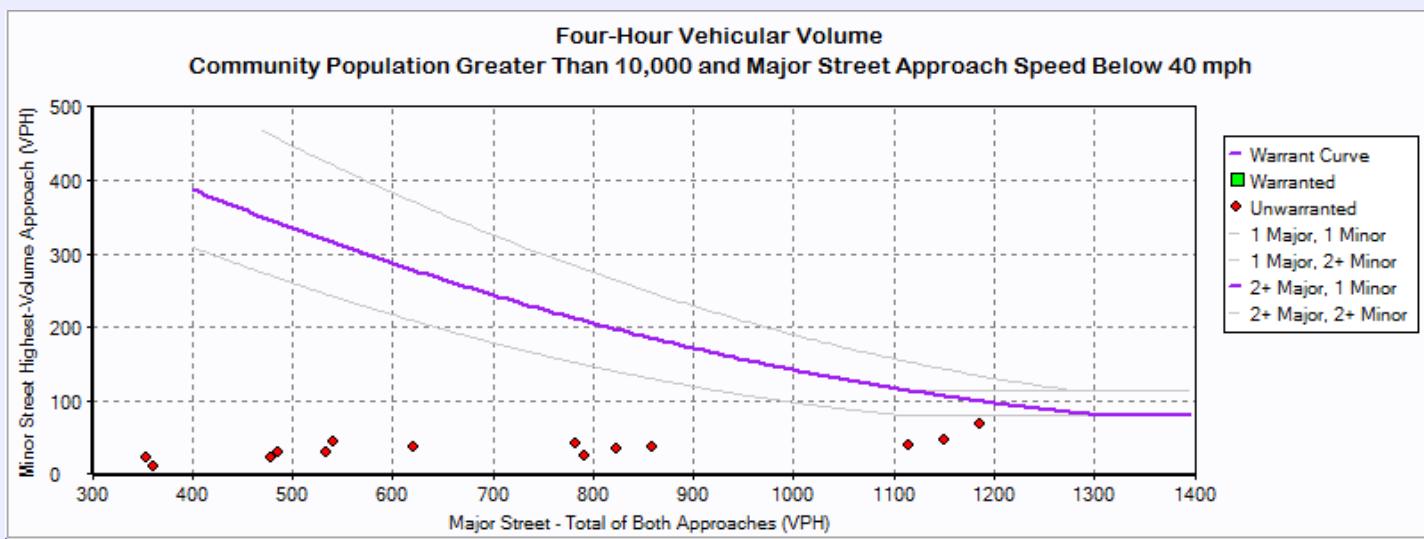
Major Street		Minor Street	
Street Name	Dunkirk	Colorado	
Direction	NB/SB	EB/WB	
Number of Lanes	2	1	
Approach Speed	35	25	

Warrant 2 Met? No

Details:

Notes 0 Hours met (4 required)

Low population No



Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	54.00	4.00
01:00:00 - 02:00:00	47.00	2.00
02:00:00 - 03:00:00	28.00	2.00
03:00:00 - 04:00:00	61.00	2.00
04:00:00 - 05:00:00	135.00	2.00
05:00:00 - 06:00:00	362.00	12.00
06:00:00 - 07:00:00	782.00	41.00
07:00:00 - 08:00:00	1,186.00	68.00
08:00:00 - 09:00:00	791.00	26.00
09:00:00 - 10:00:00	533.00	30.00
10:00:00 - 11:00:00	485.00	31.00
11:00:00 - 12:00:00	541.00	44.00
12:00:00 - 13:00:00	533.00	30.00
13:00:00 - 14:00:00	478.00	24.00
14:00:00 - 15:00:00	620.00	37.00
15:00:00 - 16:00:00	858.00	38.00
16:00:00 - 17:00:00	1,114.00	40.00
17:00:00 - 18:00:00	1,150.00	48.00
18:00:00 - 19:00:00	824.00	34.00
19:00:00 - 20:00:00	486.00	29.00
20:00:00 - 21:00:00	355.00	22.00
21:00:00 - 22:00:00	280.00	11.00
22:00:00 - 23:00:00	178.00	7.00
23:00:00 - 00:00:00	118.00	4.00

Warranted Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)

Warrant 3: Peak Hour

1: Year 2021 Total - Dunkirk & Colorado

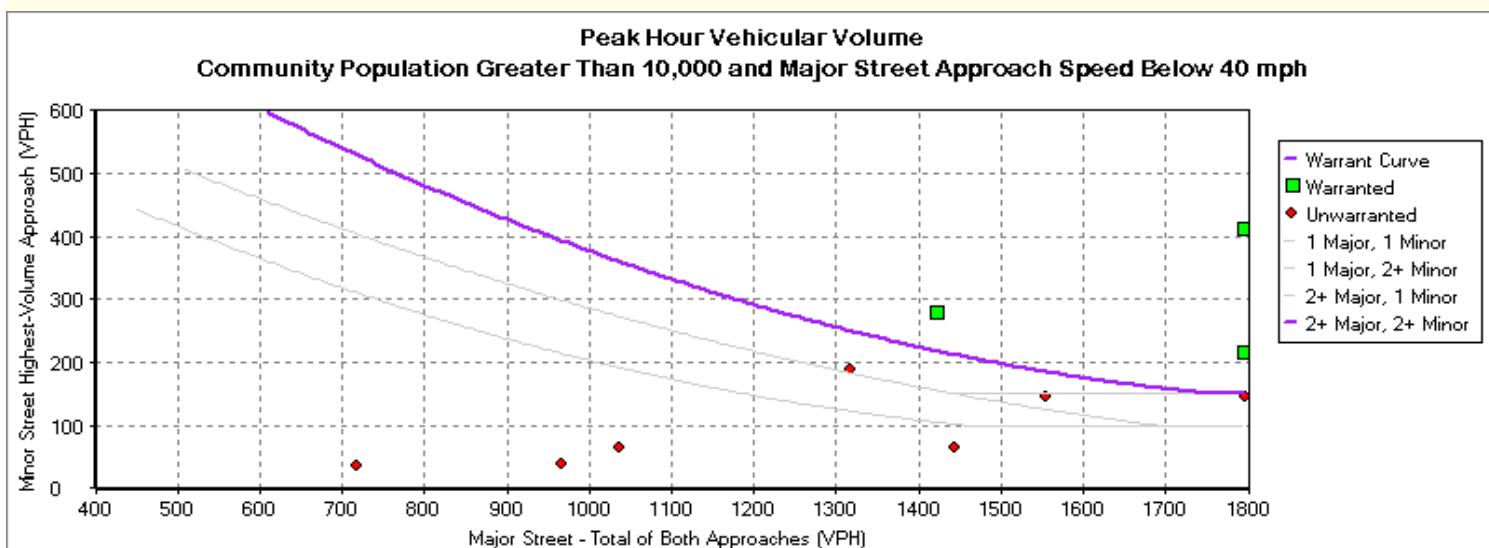
Intersection Information

Major Street		Minor Street	
Street Name	Dunkirk	Colorado	
Direction	NB/SB	EB/WB	
Number of Lanes	2	1	
Approach Speed	35	25	

Warrant 3 Met? No

Details

Low Population?	No
Condition A Met?	No
Notes	0 Hours met (1 required)
Condition B Met?	No
Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Not Met
Total Entering Intersection Volume Condition Met?	Not Met



Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	54	4
1:00	47	2
2:00	28	2
3:00	61	2
4:00	135	2
5:00	362	12
6:00	782	41
7:00	1,186	68
8:00	791	26
9:00	533	30
10:00	485	31
11:00	541	44
12:00	533	30
13:00	478	24
14:00	620	37
15:00	858	38
16:00	1,114	40
17:00	1,150	48
18:00	824	34
19:00	486	29
20:00	355	22
21:00	280	11
22:00	178	7
23:00	118	4

Warrants Summary Report

1: Year 2040 Total - S. Dunkirk Street & E. Colorado Drive

Intersection Information

	Major Street	Minor Street
Street Name	S. Dunkirk Street	E. Colorado Drive
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	35	25

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
Condition A or B Met	No	
Condition A and B Met	No	1 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
Condition A Met?	No	1 Hours met (4 required)
Warrant 3, Peak Hour		
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)

Warrant 1: Eight-hour Vehicular Volume

1: Year 2040 Total - S. Dunkirk Street & E. Colorado Drive

Intersection Information

Major Street Name: S. Dunkirk Street

Major Street Direction: NB/SB

Minor Street Direction: EB/WB

WARRANT 1 MET? No

Details:

Condition A Met? No 1 Hours met (8 required)

Condition B Met? No 0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)	High Volume Minor Approach Vehicles	100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
			Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
00:00 to 01:00	89	6	No	No	No	No
Condition A	Volume >= 100% column (600)? Volume >= 80% column (480)?	No No	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No		
Condition B	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No	Volume >= 100% column (75)? Volume >= 80% column (60)?	No No		
00:15 to 01:15	82	3	No	No	No	No
Condition A	Volume >= 100% column (600)? Volume >= 80% column (480)?	No No	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No		
Condition B	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No	Volume >= 100% column (75)? Volume >= 80% column (60)?	No No		
00:30 to 01:30	83	3	No	No	No	No
Condition A	Volume >= 100% column (600)? Volume >= 80% column (480)?	No No	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No		
Condition B	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No	Volume >= 100% column (75)? Volume >= 80% column (60)?	No No		
00:45 to 01:45	79	3	No	No	No	No
Condition A	Volume >= 100% column (600)? Volume >= 80% column (480)?	No No	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No		
Condition B	Volume >= 100% column (900)? Volume >= 80% column (720)?	No No	Volume >= 100% column (75)? Volume >= 80% column (60)?	No No		

01:00 to 02:00	77	3	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:15 to 02:15	67	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:30 to 02:30	52	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
01:45 to 02:45	41	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:00 to 03:00	47	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:15 to 03:15	53	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
02:30 to 03:30	55	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

02:45 to 03:45	78	3	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:00 to 04:00	101	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:15 to 04:15	113	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:30 to 04:30	143	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
03:45 to 04:45	182	5	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:00 to 05:00	219	4	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:15 to 05:15	279	5	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

04:30 to 05:30	381	8	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
04:45 to 05:45	474	17	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:00 to 06:00	593	19	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
05:15 to 06:15	746	32	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
05:30 to 06:30	887	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
05:45 to 06:45	1,063	43	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
06:00 to 07:00	1,277	60	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		

06:15 to 07:15	1,536	72	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
06:30 to 07:30	1,794	81	No	Yes*	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	Yes		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
06:45 to 07:45	1,932	94	No	Yes	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	Yes		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:00 to 08:00	1,928	94	No	Yes	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	Yes		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:15 to 08:15	1,760	77	No	Yes	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	Yes		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:30 to 08:30	1,579	63	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
07:45 to 08:45	1,404	47	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

08:00 to 09:00	1,287	35	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
08:15 to 09:15	1,169	35	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
08:30 to 09:30	1,052	38	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
08:45 to 09:45	962	39	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
09:00 to 10:00	866	43	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
09:15 to 10:15	877	43	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
09:30 to 10:30	816	42	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

09:45 to 10:45	778	42	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
10:00 to 11:00	790	44	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
10:15 to 11:15	760	52	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
10:30 to 11:30	850	63	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
10:45 to 11:45	885	63	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
11:00 to 12:00	878	61	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
11:15 to 12:15	884	50	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

11:30 to 12:30	824	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
11:45 to 12:45	848	40	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
12:00 to 13:00	863	42	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
12:15 to 13:15	835	44	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
12:30 to 13:30	815	37	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
12:45 to 13:45	791	39	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
13:00 to 14:00	777	33	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

13:15 to 14:15	825	33	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
13:30 to 14:30	868	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
13:45 to 14:45	948	40	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
14:00 to 15:00	1,009	52	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
14:15 to 15:15	1,101	54	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
14:30 to 15:30	1,206	59	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
14:45 to 15:45	1,318	59	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

15:00 to 16:00	1,403	56	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
15:15 to 16:15	1,507	60	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
15:30 to 16:30	1,627	60	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
15:45 to 16:45	1,685	58	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
16:00 to 17:00	1,812	59	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
16:15 to 17:15	1,903	64	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
16:30 to 17:30	1,921	67	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		

16:45 to 17:45	1,886	69	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
17:00 to 18:00	1,869	68	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
17:15 to 18:15	1,718	71	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
17:30 to 18:30	1,559	67	No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	Yes		
17:45 to 18:45	1,495	57	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
18:00 to 19:00	1,340	51	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
18:15 to 19:15	1,186	44	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		

18:30 to 19:30	1,077	39	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
18:45 to 19:45	909	41	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	Yes	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
19:00 to 20:00	790	42	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
19:15 to 20:15	764	39	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	Yes	Volume >= 80% column (60)?	No		
19:30 to 20:30	689	38	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
19:45 to 20:45	630	31	No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:00 to 21:00	578	30	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

20:15 to 21:15	514	27	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:30 to 21:30	518	22	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
20:45 to 21:45	501	19	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:00 to 22:00	458	17	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:15 to 22:15	415	14	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:30 to 22:30	354	14	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
21:45 to 22:45	315	12	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

22:00 to 23:00	288	13	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:15 to 23:15	274	12	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:30 to 23:30	254	10	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
22:45 to 23:45	222	9	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:00 to 00:00	189	7	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:15 to 00:15	160	8	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		
23:30 to 00:30	124	7	No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No		
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No		
Condition B	Volume >= 100% column (900)?	No	Volume >= 100% column (75)?	No		
	Volume >= 80% column (720)?	No	Volume >= 80% column (60)?	No		

23:45 to 00:45

102

7

No

No

No

No

Condition A

Volume >= 100%
column (600)?

No

Volume >= 100%
column (900)?

No

Volume >= 80%
column (480)?

No

Volume >= 80%
column (720)?

No

Condition B

Volume >= 100%
column (900)?
Volume >= 80%
column (720)?

No

Volume >= 100%
column (75)?
Volume >= 80%
column (60)?

No

Warrant 2: Four-hour Vehicular Volume

1: Year 2040 Total - S. Dunkirk Street & E. Colorado Drive

Intersection Information

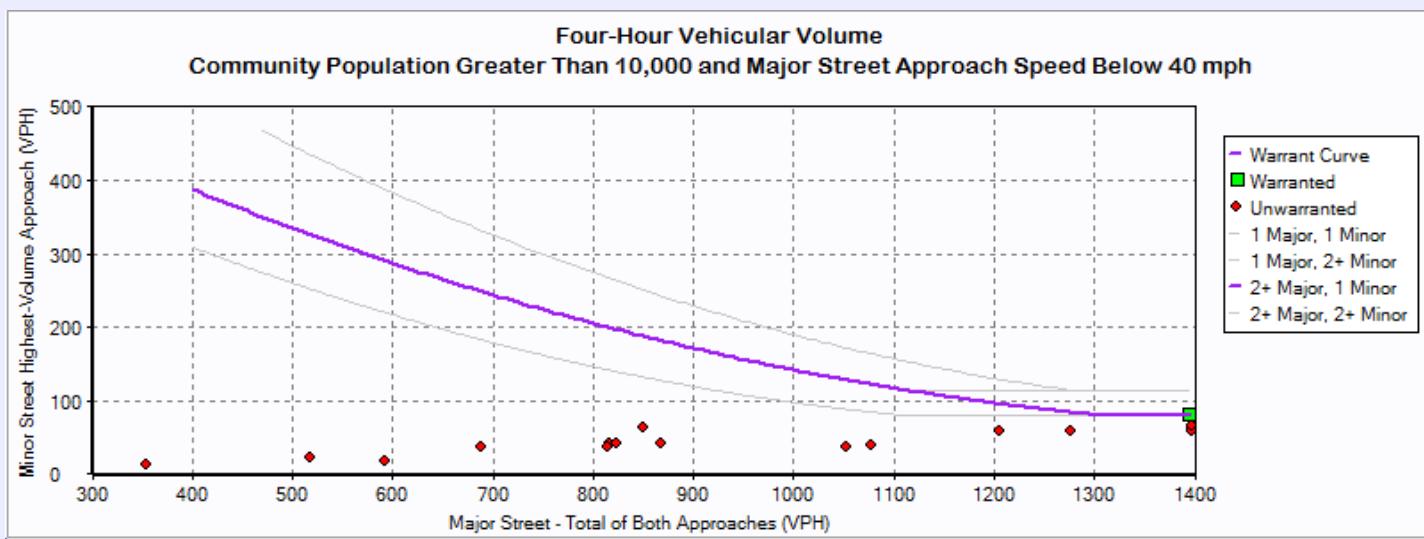
	Major Street	Minor Street
Street Name	S. Dunkirk Street	E. Colorado Drive
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	35	25

Warrant 2 Met? No

Details:

Notes 1 Hours met (4 required)

Low population No



Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	89.00	6.00
01:00:00 - 02:00:00	77.00	3.00
02:00:00 - 03:00:00	47.00	4.00
03:00:00 - 04:00:00	101.00	4.00
04:00:00 - 05:00:00	219.00	4.00
05:00:00 - 06:00:00	593.00	19.00
06:00:00 - 07:00:00	1,277.00	60.00
07:00:00 - 08:00:00	1,928.00	94.00
08:00:00 - 09:00:00	1,287.00	35.00
09:00:00 - 10:00:00	866.00	43.00
10:00:00 - 11:00:00	790.00	44.00
11:00:00 - 12:00:00	878.00	61.00
12:00:00 - 13:00:00	863.00	42.00
13:00:00 - 14:00:00	777.00	33.00
14:00:00 - 15:00:00	1,009.00	52.00
15:00:00 - 16:00:00	1,403.00	56.00
16:00:00 - 17:00:00	1,812.00	59.00
17:00:00 - 18:00:00	1,869.00	68.00
18:00:00 - 19:00:00	1,340.00	51.00
19:00:00 - 20:00:00	790.00	42.00
20:00:00 - 21:00:00	578.00	30.00
21:00:00 - 22:00:00	458.00	17.00
22:00:00 - 23:00:00	288.00	13.00
23:00:00 - 00:00:00	189.00	7.00

Warranted Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
06:30:00 - 07:30:00	1,794.00	81.00

Warrant 3: Peak Hour

1: Year 2040 Total - S. Dunkirk Street & E. Colorado Drive

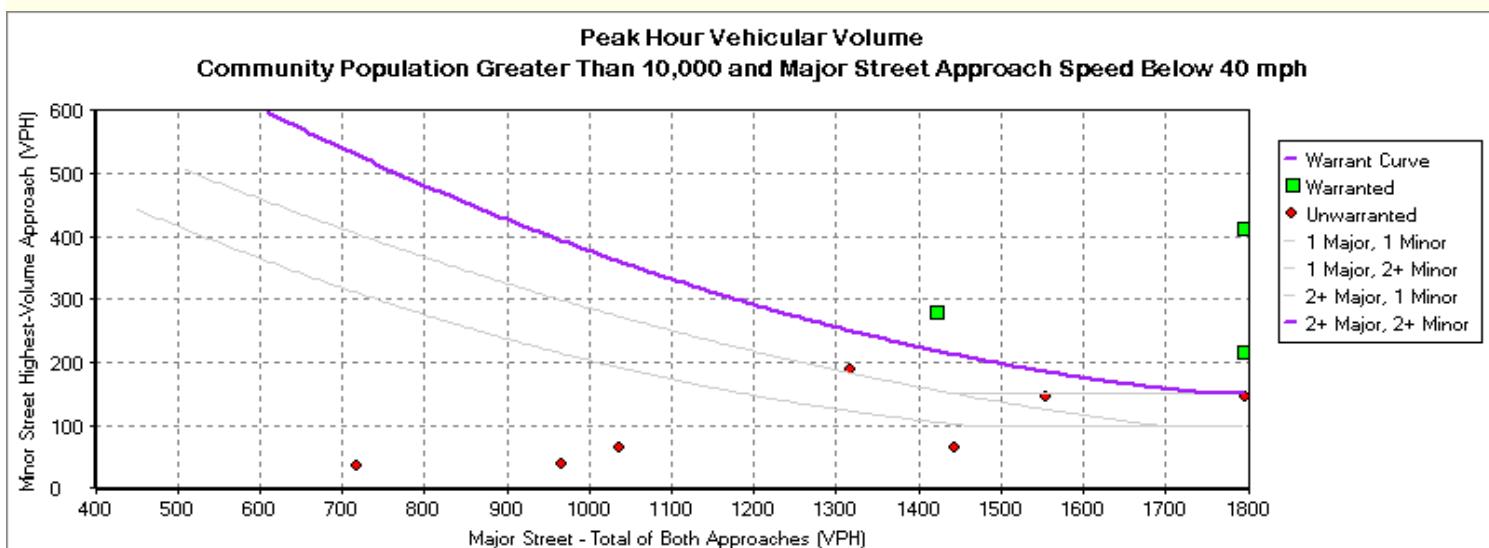
Intersection Information

	Major Street	Minor Street
Street Name	S. Dunkirk Street	E. Colorado Drive
Direction	NB/SB	EB/WB
Number of Lanes	2	1
Approach Speed	35	25

Warrant 3 Met? No

Details

Low Population?	No
Condition A Met?	No
Notes	0 Hours met (1 required)
Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Not Met
Total Entering Intersection Volume Condition Met?	Not Met
Condition B Met?	No
Notes	0 Hours met (1 required)



Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
0:00	89	6
1:00	77	3
2:00	47	4
3:00	101	4
4:00	219	4
5:00	593	19
6:00	1,277	60
7:00	1,928	94
8:00	1,287	35
9:00	866	43
10:00	790	44
11:00	878	61
12:00	863	42
13:00	777	33
14:00	1,009	52
15:00	1,403	56
16:00	1,812	59
17:00	1,869	68
18:00	1,340	51
19:00	790	42
20:00	578	30
21:00	458	17
22:00	288	13
23:00	189	7

APPENDIX G
TRAFFIC SIGNAL TIMING DATA

SEPAC ECOM All Data

8/18/2017

9:18:22AM

Intersection Name: JewellDunkirk Non Sys

Intersection Alias: 330

Access Data

1 :1200 Baud

3 :19200 Baud

Access Code: 0

Channel:

Address: 1

Revision: 3.33e

IP Address: 10.10.2.105

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	0-None	2-Red	0-None	1-Inact	0-None 1-Inact	2-Red	0-None	1-Inact	0-None							

PHASE DATA

Phase	Vehical Basic Timings						Misc Timings				Pedestrian Timings				Actuated			
	Min	Green	Passage	Max1	Max2	All Yellow	Red	Green Delay	Yellow Delay	Walk Offset	Walk Offset Mode	Bike Green	Bike Psg	Ped Walk	Alt Clr	Flash Walk	Ext Ped Clr	Rest in Walk
1	10	4.0	25	99	0	4.0	1.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
2	5	3.0	30	99	0	4.0	1.5	0.0	0.0	0	0-Advance	0	0	5	22	No	0	No
3	10	4.0	25	99	0	4.0	1.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
4	4	2.0	20	99	0	3.0	2.0	0.0	0.0	0	0-Advance	0	0	5	26	No	0	No
5	10	3.0	25	99	0	4.0	1.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
6	5	3.0	30	99	0	4.0	1.5	0.0	0.0	0	0-Advance	0	0	5	20	No	0	No
7	10	4.0	25	99	0	4.0	1.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
8	4	2.0	20	99	0	3.0	2.0	0.0	0.0	0	0-Advance	0	0	5	14	No	0	No
9	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
10	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
11	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
12	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
13	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
14	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
15	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No
16	0	0.0	0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0	0	0	0	No	0	No

Ph.	Vehicle Density Timings						General Control				Miscellaneous				No Simu	Special Sequence		
	Added	Max	Time B4	Car B4	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	Gap Out	Omit	Minus Yel	Omit Call
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	NonActH	Max	None	0	Yes	Yes	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	NonActH	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	NonActH	Max	None	0	Yes	Yes	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	NonActH	None	0	Yes	Yes	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0.0		None	None	None	0		No	No	No	No	No	0	0	0
Vehical Detector Phase Assignment							Pedestrian Detector							Special Detector Phase Assignment					
Assign Phase							Switch Mode							Assign Phase					
Veh Det:5	4	Veh	0	0.0	0		Phase	Mode	Phase	Extend	Delay			Switch	Mode	Phase	Extend	Delay	
Veh Det:6	4	Veh	0	0.0	0														
Veh Det:7	8	Veh	0	0.0	0														
Default Data							Default Data							Default Data					
Veh Det:3	5	Veh	0	0.0	0														

Unit Data

General Control

	Input	Output
Ring	Respons	Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

I/O Modes:
 ABC Input(Entry) Modes: 0 D Input(Entry) Modes: 0
 ABC Output(O/STS) Modes: 0 D Output(O/STS) Modes: 0

Remote Flash

Test A = Flash

Phase Entry Exit

Default Data

- No Flash

Default Data

- No Flash

Overlaps

Overlaps																	
Phase(s)		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps																	
Phase(s)		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Minus PED

Overlaps																	
Phase(s)		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stop Grn/Yel Phase	0.1	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase	Phase(s)															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	1	3	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
4	1	1	5	5	7	7	2	2	4	4								
6	2	7	6	6	8	8	5	6	7	8								
8	2	5																

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40
0	Used	No	No
1	Used	No	No
8	Used	No	No
16	Used	No	No

Signal Driver Output

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
2=Permissive Yield
Coordination Mode: 0=Permissive

Maximun Mode: 0=Inhibit

Correction Mode: 3=Short Way Plus

Offset Mode: 1=End Grn

Force Mode: 0=Plan

Max Dwell Time: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	60 140
2/1	50 120
2/2	55 80
3/1	60 90

Yield Period: 0

Dial 1/ Split 1 (Pattern 1)			Dial 2/ Split 1 (Pattern 2)			Dial 3/ Split 1 (Pattern 3)			Dial 2/ Split 2 (Pattern 4)		
Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode
1	0	0=Actuated	2	75	1=Coordinated	3	0	0=Acutated	4	65	0=Acutated
5	15	0=Actuated	6	60	1=Coordinated	7	0	0=Acutated	8	65	0=Acutated
Dial 2/ Split 1 (Pattern 2)			Dial 3/ Split 1 (Pattern 3)			Dial 2/ Split 2 (Pattern 4)					
Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode
1	0	0=Actuated	2	56	1=Coordinated	3	0	0=Actuated	4	64	0=Acutated
5	10	0=Actuated	6	46	1=Coordinated	7	0	0=Actuated	8	64	0=Acutated
Dial 3/ Split 1 (Pattern 3)			Dial 2/ Split 2 (Pattern 4)								
Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode
1	0	0=Actuated	2	53	1=Coordinated	3	0	0=Actuated	4	37	0=Acutated
5	10	0=Actuated	6	43	1=Coordinated	7	0	0=Actuated	8	37	0=Acutated
Dial 2/ Split 2 (Pattern 4)											
Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode	Ph	Splits	Ph Mode
1	0	0=Actuated	2	43	1=Coordinated	3	0	0=Actuated	4	20	0=Acutated
5	10	0=Actuated	6	33	1=Coordinated	7	0	0=Actuated	8	20	0=Acutated

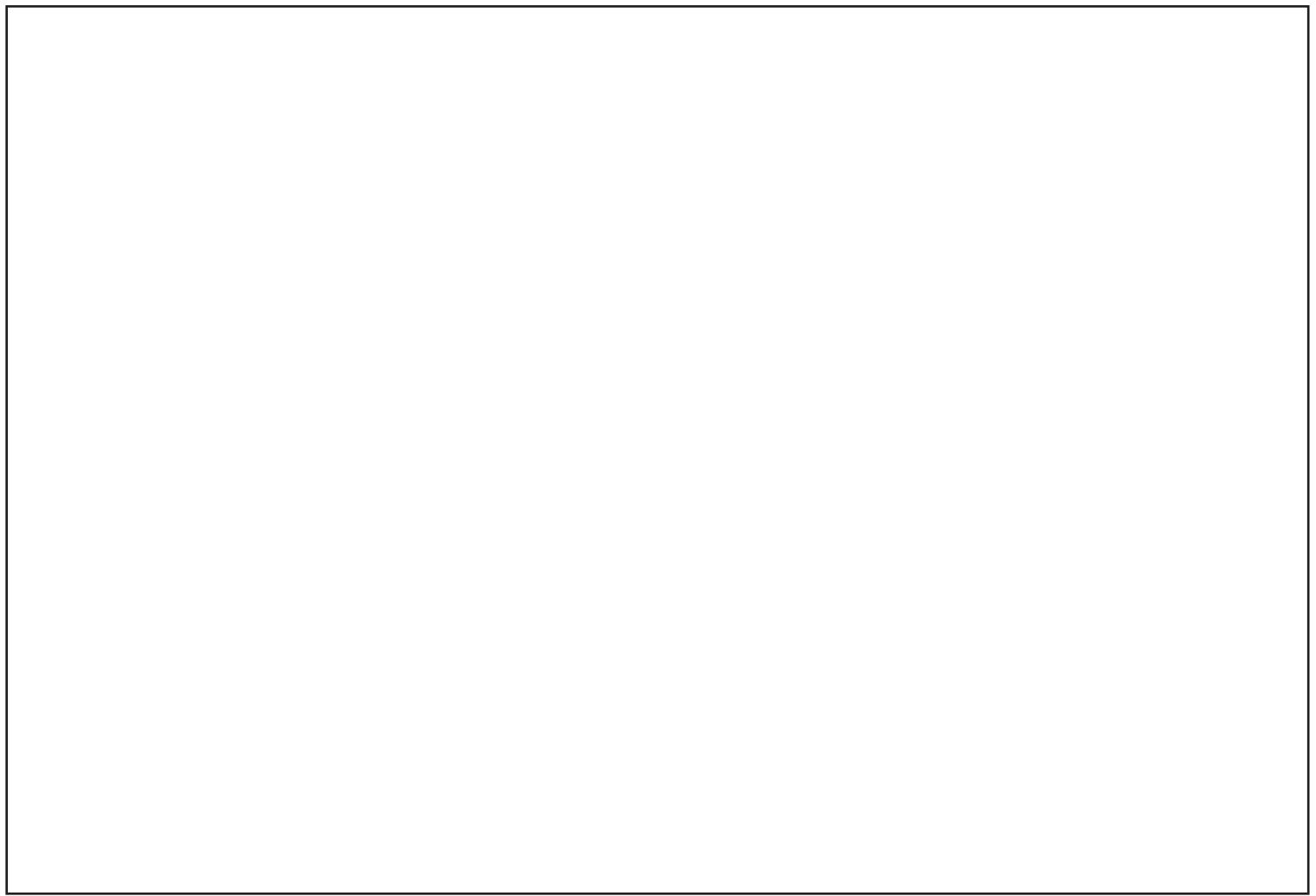
Traffic Plan Data

Plan: 1/1/1	Offset Time: 38 115	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0		Correction Mode: 0=No	

Plan: 2/1/1	Offset Time: 9 37	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0		Correction Mode: 0=No	

Plan: 2/2/1	Offset Time: 54 50	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0		Correction Mode: 0=No	

Plan: 3/1/1	Offset Time: 45 82	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0		Correction Mode: 0=No	



Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0
 End of Daylight Saving Month: 11 Week: 1

Source	Equate Days							
	Day	1	2	3	4	5	6	7
	2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	8:30	2/2/1		<input type="checkbox"/>														
2	1	20:30	0/0/4		<input type="checkbox"/>														
3	2	6:0	1/1/1		<input type="checkbox"/>														
4	2	9:0	2/1/1		<input type="checkbox"/>														
5	2	15:0	3/1/1		<input type="checkbox"/>														
6	2	19:0	2/1/1		<input type="checkbox"/>														
7	2	22:0	0/0/4		<input type="checkbox"/>														
8	7	7:30	2/2/1		<input type="checkbox"/>														
9	7	22:0	0/0/4		<input type="checkbox"/>														
10	10	7:30	2/2/1		<input type="checkbox"/>														
11	10	22:0	0/0/4		<input type="checkbox"/>														

AUX. Events

Event	Program	Day	Hour	Min.	Aux Outputs			Diag.	Rpt.	Mult100	Special Function Outputs							
					1	2	3				1	2	3	4	5	6	7	8
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>							

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								

Phase Omit

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Vehicle Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Veh Det Switch Omit	<input type="checkbox"/>															

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
	<input type="checkbox"/>															

Dimming Data

Default Data - No Dimming Programmed

Lane Definition

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Definition

program_day program_hour program_minute LanePhFun

Preemption Data

General Preemption Data			
Preempt > Flash	Preempt 2 > Preempt 3	Preempt 4 > Preempt 5	
Preempt 1 > Preempt 2	Preempt 3 > Preempt 4	Preempt 5 > Preempt 6	

Preempt	Preempt Timers																Return							
	Non-Locking	Link to Preempt	Delay	Ext end	Dura	Max Call	Lock Out	Min Green	Min Walk	Debo unce	Gate ext	Select Ped	Ped Clear	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Ped Clear	Ped Yel	Ped Red			
1	No	0	0	0	5	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	40	20
2	No	0	0	0	5	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	40	20
3	No	0	0	0	0	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20		
4	No	0	0	0	0	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20		
5	No	0	0	0	0	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20		
6	No	0	0	0	0	0	0	0	0	0	0	8	40	20	10	8	40	20	10	8	40	20		

Preempt 1			Preempt 2			Preempt 3			Preempt 4			Preempt 5			Preempt 6		
Phase	Exit Phase	Exit Calls															
1	No	Yes															
2	No	Yes															
3	No	Yes															
4	Yes	Yes	4	Yes	Yes	4	No	Yes									
5	No	Yes															
6	No	Yes															
7	No	Yes															
8	Yes	Yes	8	Yes	Yes	8	No	Yes									

Prio	Non-Locking	Del ay	Ext end	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Signal Type	Overlap Blankout
------	-------------	--------	---------	-----------	------------	-----------	-------------	------------	------------	-----------	-----------	--------	--------------------	---------------------	------------------

Priority Detector Channels

Priority Detector

Priority Fixed Phases

Priority

Legend:

CO-PHASE	0 FALSE	1 TRUE
QJ-PHASE		

Priority**Priority Bank :**

Level

Partial Priority

Alt Seq
Alt Seq Enabled
Min Walk

Full Priority

Freq. Override
Ped skip
Force full Priority
Frequency
Freq. Level

Recovery

Method
Return
PedWait
PedOverride

Codes: 0 X
 FALSE TRUE

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority :
Priority Bank : Queue Phase Detector Time
Default data

Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data	Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data
Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data	Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data
Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data	Priority : Bank Detector PE 1A 2A 3A 4A 5A 6A B Default Data

Preempt 1

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
6	Red	Green	No	Default Data			Default Data					

Preempt 2

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
6	Red	Green	No	Default Data			Default Data					

Preempt 3

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
				Default Data			Default Data					
				Default Data			Default Data					

Default Data**Preempt 4**

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
				Default Data			Default Data					
				Default Data			Default Data					

Default Data**Preempt 5**

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
				Default Data			Default Data					
				Default Data			Default Data					

Default Data**Preempt 6**

Vehical Phases			Pedestrian Phases			Overlaps						
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
				Default Data			Default Data					
				Default Data			Default Data					

Default Data**System/Detectors Data**

Local Critical Alarms	Revert to Backup: 15	1st Phone:
Local Free: No	Cycle Failure: No	Coord Failure: No
Local Fash: Yes	Cycle Fault: Yes	Coord Fault: Yes
Special Status 1: No	Special Status 2: No	Special Status 3: No
Special Status 4: No	Special Status 5: No	Special Status 6: No

Traffic Responsive

System Detector	Veh/ Channel	Average Name	Occupancy Hr	Min Time(mins)	Queue 1 Correction/10	System Volume %	Weight Detectors	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval:

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0 Level Enter Leave Dial / Split / Offset

Queue: 2 Input Selection: 0=Average / /

Detector Failed Level : 0 Default Data

Vehical Detector

Detector	Diagnostic Value 0			Detector	Diagnostic Value 1		
	Max Presence	No Activity	Erratic Count		Max Presence	No Activity	Erratic Count
1	45	0	0				
2	45	0	0				
3	45	0	0				
4	45	0	0				
5	45	0	0				
6	45	0	0				
7	45	0	0				
8	45	0	0				
9	45	0	0				
10	45	0	0				
11	45	0	0				
12	45	0	0				
13	45	0	0				
14	45	0	0				
15	45	0	0				
16	45	0	0				
17	45	0	0				
18	45	0	0				
19	45	0	0				
20	45	0	0				
21	45	0	0				
22	45	0	0				
23	45	0	0				
24	45	0	0				
25	45	0	0				
26	45	0	0				
27	45	0	0				
28	45	0	0				
29	45	0	0				
30	45	0	0				
31	45	0	0				
32	45	0	0				
33	45	0	0				
34	45	0	0				
35	45	0	0				
36	45	0	0				
37	45	0	0				
38	45	0	0				
39	45	0	0				
40	45	0	0				
41	45	0	0				
42	45	0	0				
43	45	0	0				
44	45	0	0				
45	45	0	0				
46	45	0	0				
47	45	0	0				
48	45	0	0				
49	45	0	0				
50	45	0	0				
51	45	0	0				
52	45	0	0				
53	45	0	0				
54	45	0	0				

Vehical Detector

Detector	Diagnostic Value 0			Detector	Diagnostic Value 1		
	Max Presence	No Activity	Erratic Count		Max Presence	No Activity	Erratic Count
1	45	0	0				

Default Data - No Diag 1 Values**Special Detector**

Detector	Diagnostic Value 0		
	Max Presence	No Activity	Erratic Count
1	45	0	0
2	45	0	0
3	45	0	0
4	45	0	0
5	45	0	0
6	45	0	0
7	45	0	0
8	45	0	0

Default Data - No Diag 0 Valu

55	45	0	0
56	45	0	0
57	45	0	0
58	45	0	0
59	45	0	0
60	45	0	0
61	45	0	0
62	45	0	0
63	45	0	0
64	45	0	0

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count
1	45	0	0
2	45	0	0
3	45	0	0
4	45	0	0
5	45	0	0
6	45	0	0
7	45	0	0
8	45	0	0

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset
//

Speed Trap
Low Treshold High Treshold

Default Data

Default Data

Volume Detector Data

Report Interval 15

Volume Controller

Detector Detector

Number Channel

Default Data

APPENDIX H

HCM LOS Reports – Existing Conditions

Lanes, Volumes, Timings
4: S. Dunkirk St & E. Jewell Ave

04/19/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↓		↑	↑↑↓		↑	↑↑↓		↑	↑↑↓	
Traffic Volume (vph)	78	219	5	6	299	337	18	284	42	117	37	103
Future Volume (vph)	78	219	5	6	299	337	18	284	42	117	37	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			180		0	132		0	198		0
Storage Lanes	1			0	1		0	1		0	1	
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t		0.997			0.921			0.981			0.890	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5070	0	1770	4684	0	1770	3472	0	1770	3150	0
Flt Permitted	0.350			0.595			0.621			0.345		
Satd. Flow (perm)	652	5070	0	1108	4684	0	1157	3472	0	643	3150	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			237			15			127	
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		505			643			381			700	
Travel Time (s)		9.8			12.5			8.7			13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.81	0.81	0.81
Adj. Flow (vph)	85	238	5	7	325	366	22	342	51	144	46	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	243	0	7	691	0	22	393	0	144	173	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	40	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	
Detector 1 Type	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	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.5	23.5		23.5	23.5		23.0	23.0		23.0	23.0	
Total Split (s)	15.0	75.0		60.0	60.0		65.0	65.0		65.0	65.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.7%	53.6%		42.9%	42.9%		46.4%	46.4%		46.4%	46.4%	
Maximum Green (s)	11.0	69.5		54.5	54.5		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.5		5.5	5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		Min	Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	
Act Effct Green (s)	102.7	101.2		89.6	89.6		28.3	28.3		28.3	28.3	
Actuated g/C Ratio	0.73	0.72		0.64	0.64		0.20	0.20		0.20	0.20	
v/c Ratio	0.16	0.07		0.01	0.22		0.09	0.55		1.11	0.23	
Control Delay	7.5	6.7		13.5	8.0		41.4	49.8		161.4	13.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.5	6.7		13.5	8.0		41.4	49.8		161.4	13.2	
LOS	A	A		B	A		D	D		F	B	
Approach Delay		6.9			8.0			49.3			80.5	
Approach LOS		A			A			D			F	
Queue Length 50th (ft)	19	20		2	56		16	164		-149	17	
Queue Length 95th (ft)	49	41		11	103		34	174		#194	35	
Internal Link Dist (ft)		425			563			301			620	
Turn Bay Length (ft)	235			180			132				198	
Base Capacity (vph)	566	3664		708	3082		495	1496		275	1422	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.15	0.07		0.01	0.22		0.04	0.26		0.52	0.12	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 30.6

Intersection LOS: C

Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

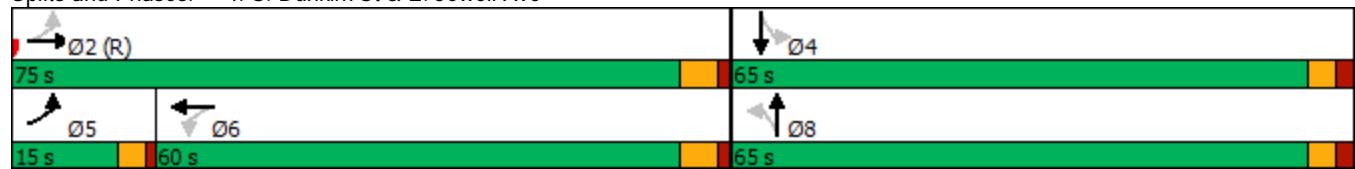
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

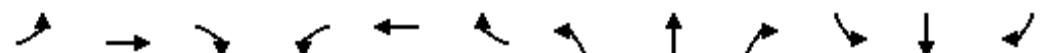
Splits and Phases: 4: S. Dunkirk St & E. Jewell Ave



HCM 6th Signalized Intersection Summary

4: S. Dunkirk St & E. Jewell Ave

04/19/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛	
Traffic Volume (veh/h)	78	219	5	6	299	337	18	284	42	117	37	103
Future Volume (veh/h)	78	219	5	6	299	337	18	284	42	117	37	103
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	238	5	7	325	366	22	342	51	144	46	127
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	3445	72	745	2075	966	283	794	117	213	454	405
Arrive On Green	0.03	0.67	0.67	0.61	0.61	0.61	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	5147	108	1137	3404	1585	1212	3106	459	991	1777	1585
Grp Volume(v), veh/h	85	157	86	7	325	366	22	194	199	144	46	127
Grp Sat Flow(s), veh/h/ln	1781	1702	1851	1137	1702	1585	1212	1777	1788	991	1777	1585
Q Serve(g_s), s	2.4	2.2	2.3	0.3	5.8	16.4	2.1	12.8	13.0	19.9	2.8	9.1
Cycle Q Clear(g_c), s	2.4	2.2	2.3	0.3	5.8	16.4	11.2	12.8	13.0	33.0	2.8	9.1
Prop In Lane	1.00			1.00			1.00	1.00		0.26	1.00	1.00
Lane Grp Cap(c), veh/h	477	2278	1239	745	2075	966	283	454	457	213	454	405
V/C Ratio(X)	0.18	0.07	0.07	0.01	0.16	0.38	0.08	0.43	0.43	0.68	0.10	0.31
Avail Cap(c_a), veh/h	562	2278	1239	745	2075	966	492	762	766	384	762	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	8.0	8.0	10.7	11.8	13.9	46.7	43.5	43.6	57.4	39.8	42.2
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.2	0.2	1.4	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.9	0.8	0.9	0.1	2.2	5.8	0.6	5.7	5.9	5.0	1.2	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	8.1	8.1	10.7	11.8	14.1	46.7	43.8	43.9	58.8	39.8	42.3
LnGrp LOS	B	A	A	B	B	B	D	D	D	E	D	D
Approach Vol, veh/h	328				698			415			317	
Approach Delay, s/veh	8.7				13.0			44.0			49.5	
Approach LOS	A				B			D			D	
Timer - Assigned Phs	2			4	5	6		8				
Phs Duration (G+Y+R _c), s	99.2			40.8	8.4	90.9		40.8				
Change Period (Y+R _c), s	5.5			5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	69.5			60.0	11.0	54.5		60.0				
Max Q Clear Time (g_c+l1), s	4.3			35.0	4.4	18.4		15.0				
Green Ext Time (p_c), s	0.9			0.8	0.1	3.1		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				26.1								
HCM 6th LOS				C								

Lanes, Volumes, Timings
4: S. Dunkirk St & E. Jewell Ave

04/19/2019

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↓		↑	↑↑↓		↑	↑↑↓		↑	↑↑↓	
Traffic Volume (vph)	113	442	19	36	425	166	19	87	37	336	282	89
Future Volume (vph)	113	442	19	36	425	166	19	87	37	336	282	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			180		0	132		0	198		0
Storage Lanes	1			0	1		0	1		0	1	
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t		0.994			0.958			0.955			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5055	0	1770	4872	0	1770	3380	0	1770	3412	0
Flt Permitted	0.336			0.458			0.409			0.657		
Satd. Flow (perm)	626	5055	0	853	4872	0	762	3380	0	1224	3412	0
Right Turn on Red		Yes			Yes		Yes		Yes		Yes	
Satd. Flow (RTOR)	7			82			45			38		
Link Speed (mph)	35			35			30			35		
Link Distance (ft)	505			643			381			700		
Travel Time (s)	9.8			12.5			8.7			13.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.81	0.81	0.81
Adj. Flow (vph)	123	480	21	39	462	180	23	105	45	415	348	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	501	0	39	642	0	23	150	0	415	458	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	40	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	
Detector 1 Type	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	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.5	23.5		23.5	23.5		23.0	23.0		23.0	23.0	
Total Split (s)	15.0	75.0		60.0	60.0		65.0	65.0		65.0	65.0	

Lanes, Volumes, Timings
4: S. Dunkirk St & E. Jewell Ave

04/19/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.7%	53.6%		42.9%	42.9%		46.4%	46.4%		46.4%	46.4%	
Maximum Green (s)	11.0	69.5		54.5	54.5		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.5		5.5	5.5		5.0	5.0		5.0	5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		Min	Min		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	78.4	76.9		62.6	62.6		52.6	52.6		52.6	52.6	
Actuated g/C Ratio	0.56	0.55		0.45	0.45		0.38	0.38		0.38	0.38	
v/c Ratio	0.28	0.18		0.10	0.29		0.08	0.12		0.90	0.35	
Control Delay	18.2	16.9		28.4	23.3		25.5	18.3		64.5	28.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.2	16.9		28.4	23.3		25.5	18.3		64.5	28.4	
LOS	B	B		C	C		C	B		E	C	
Approach Delay		17.1			23.6			19.2			45.6	
Approach LOS		B			C			B			D	
Queue Length 50th (ft)	52	81		21	117		13	31		349	141	
Queue Length 95th (ft)	99	118		54	174		28	45		385	146	
Internal Link Dist (ft)		425			563			301			620	
Turn Bay Length (ft)	235			180			132				198	
Base Capacity (vph)	447	2797		388	2260		329	1485		528	1495	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.28	0.18		0.10	0.28		0.07	0.10		0.79	0.31	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 29.7

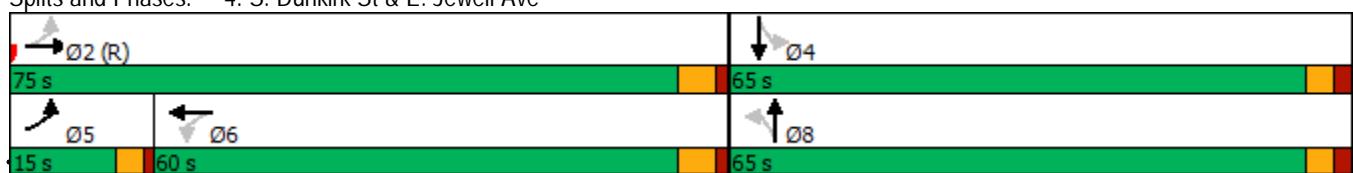
Intersection LOS: C

Intersection Capacity Utilization 56.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: S. Dunkirk St & E. Jewell Ave



Brookhaven Condominiums 4:00 pm 03/28/2019 Existing Conditions

JR Engineering

Synchro 10 Light Report

Page 2

HCM 6th Signalized Intersection Summary

4: S. Dunkirk St & E. Jewell Ave

04/19/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛		↑ ↗ ↘ ↖ ↙ ↛	↑ ↗ ↘ ↖ ↙ ↛	
Traffic Volume (veh/h)	113	442	19	36	425	166	19	87	37	336	282	89
Future Volume (veh/h)	113	442	19	36	425	166	19	87	37	336	282	89
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	480	21	39	462	180	23	105	45	415	348	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	443	2729	119	469	1704	638	319	938	382	487	1016	316
Arrive On Green	0.05	0.54	0.54	0.47	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	5017	218	897	3658	1370	934	2463	1003	1237	2667	831
Grp Volume(v), veh/h	123	325	176	39	429	213	23	74	76	415	230	228
Grp Sat Flow(s), veh/h/ln	1781	1702	1831	897	1702	1624	934	1777	1690	1237	1777	1721
Q Serve(g_s), s	4.9	6.7	6.8	3.4	10.8	11.3	2.5	3.8	4.1	45.8	12.9	13.2
Cycle Q Clear(g_c), s	4.9	6.7	6.8	3.4	10.8	11.3	15.8	3.8	4.1	49.9	12.9	13.2
Prop In Lane	1.00		0.12	1.00		0.84	1.00		0.59	1.00		0.48
Lane Grp Cap(c), veh/h	443	1852	996	469	1586	756	319	677	644	487	677	656
V/C Ratio(X)	0.28	0.18	0.18	0.08	0.27	0.28	0.07	0.11	0.12	0.85	0.34	0.35
Avail Cap(c_a), veh/h	495	1852	996	469	1586	756	363	762	724	546	762	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	16.1	16.1	20.9	22.8	23.0	36.5	28.0	28.1	44.2	30.8	30.9
Incr Delay (d2), s/veh	0.3	0.2	0.4	0.1	0.1	0.2	0.0	0.0	0.0	10.3	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.0	2.7	3.0	0.7	4.3	4.4	0.6	1.6	1.7	15.2	5.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.7	16.3	16.5	21.0	22.9	23.2	36.6	28.0	28.1	54.6	30.9	31.0
LnGrp LOS	B	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h					681			173			873	
Approach Delay, s/veh					22.9			29.2			42.2	
Approach LOS				B		C		C			D	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+R _c), s		81.7		58.3	10.9	70.7		58.3				
Change Period (Y+R _c), s		5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s		69.5		60.0	11.0	54.5		60.0				
Max Q Clear Time (g_c+l1), s		8.8		51.9	6.9	13.3		17.8				
Green Ext Time (p_c), s		2.0		1.5	0.1	3.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								