

Cranston, Rhode Island  
Knights Corner Development

*April 2023*

TRAFFIC IMPACT STUDY



**BETA**

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Proposed Mixed-Use Development  
Knights Corner  
Cranston, Rhode Island

## TRAFFIC IMPACT STUDY

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Prepared by: BETA GROUP, INC.

Prepared for: Mr. Jotham Coe  
333 Main Street, LLC  
201 Lippitt Avenue  
Cranston, Rhode Island 02921

April 2023



April 7, 2023

Mr. Jotham Coe  
333 Main Street, LLC  
201 Lippitt Avenue  
Cranston, Rhode Island 02921

Re: Proposed Mixed Use Development  
Knights Corner  
Cranston, Rhode Island

Dear Mr. Coe:

BETA Group, Inc., in accordance with our scope of services, has completed a traffic impact study for a proposed mixed-use development project in the City of Cranston, Rhode Island. The site is situated on a parcel of land on the southwest corner of the intersection of Cranston Street with Dyer Avenue, abutting the Cranston Fire Department Station 3 to the east. The parcel is defined by Assessor's Plat 8, Lots 203 and 2739, which together contain approximately 4.72 acres of partially developed land that contains an historic church building and associated parking lot.

Based upon our discussions with the site engineer and a review of the conceptual plans provided by *DiPrete Engineering* it is our understanding that the property will be developed to include construction of four new buildings containing residential apartments. In addition, the historical *Sprague Meeting House* church building will be renovated for a fine dining restaurant use. Access/egress to the site is proposed via three driveways, two of which to be located on Cranston Street and one located on Dyer Avenue.

The study included herein, was conducted to determine the adequacy of the existing servicing roadways to accommodate anticipated traffic to be generated by the mixed-use development project. An analysis of potential impacts to the roadway capacity and safety has been completed and is discussed in the following report.

Very truly yours,  
BETA Group, Inc.

A handwritten signature in black ink, appearing to read "Paul J. Bannon", is written over a large, faint, stylized leaf graphic that serves as a background for the signature area.

Paul J. Bannon  
Associate

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## 1.0 INTRODUCTION

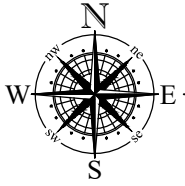
The objective of the following study is to assess the potential traffic impacts associated with a proposed mixed-use development project in the City of Cranston, Rhode Island. The property is located in the *Knightsville* section of the city with frontage on both Cranston Street and Dyer Avenue. Refer to Figure 1 on the following page for the project location within the city. The property is comprised of approximately five acres of partially developed land containing a single building and associated paved parking lot. The small historical building known as the *Sprague Meeting House* was constructed in the early 1800's and moved to its current location in 1864. It was used as an Episcopal church for the small village community that was built, along with housing and other amenities, around the *Print Works* textile mill that was owned by the Sprague family during the 1800's. The mill complex which is situated to the immediate north of the subject property, closed their manufacturing operation over two decades ago, but the corporate office remains on site, though there is a current proposal to redevelop the property.

Development of the 4.72 acre subject property will include renovation of the existing historic church building to accommodate a fine dining restaurant containing approximately 96 seats. The remainder of the property will be developed for residential apartment use in four new buildings containing 156 residential units. A total of 266 parking spaces will be provided in both surface lots and in structured garage parking on the first level of the apartment buildings. Access/egress to the parking areas are proposed from Cranston Street via two driveways approximately 260 feet to the west of the intersection with Dyer Avenue, and one proposed driveway along Dyer Avenue, approximately 460 feet south of the intersection with Cranston Street.

The study summarized herein focused on both traffic flow efficiency and safety along Cranston Street and Dyer Avenue within the immediate vicinity of the subject property, specifically including their junction and the new site driveways. The potential impacts associated with the site related traffic have been defined and evaluated in accordance with standard traffic engineering guidelines and procedures.

The traffic engineering study completed for this project included the following:

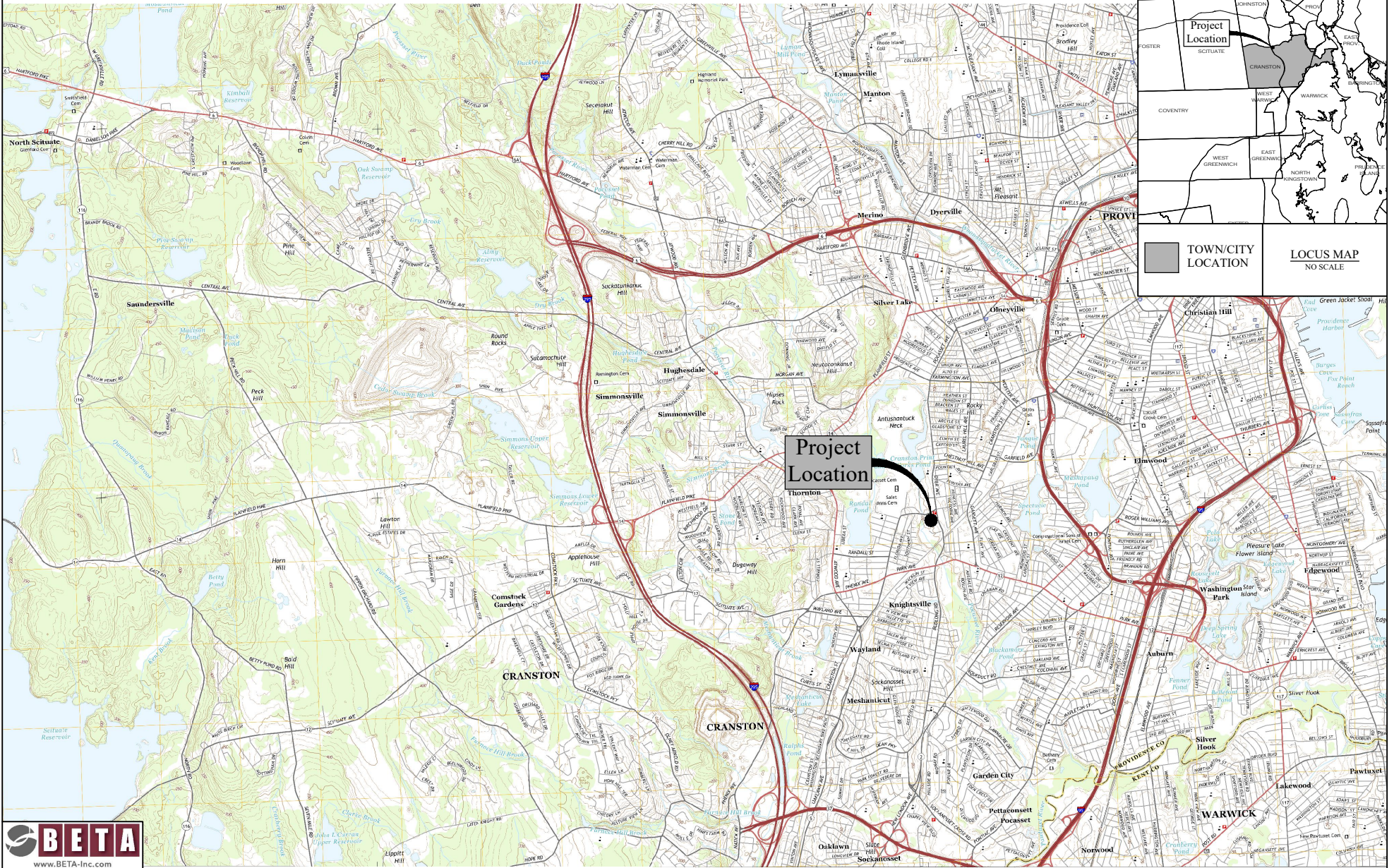
- A traffic counting program to define the existing traffic patterns and operational characteristics along the servicing roadways. The data collection included an Automatic Traffic Recorder (ATR) count on Dyer Avenue, a manual Turning Movement Counts (TMC) at the intersection of Cranston Street with Dyer Avenue, review of record volume data from the Rhode Island Department of Transportation and from a recent study completed in the project area.
- An inventory of the physical roadway characteristics of Cranston Street and Dyer Avenue to determine the adequacy of the existing roadway geometric features in reference to safety and operations.
- An analysis of crash records obtained from the Cranston Police Department to determine if there are any safety concerns relative to the frequency, severity, or pattern of crashes in the project area.



# Proposed Mixed-Use Development

CRANSTON, RHODE ISLAND

## Figure 1 - Project Vicinity Map



- An estimate of future traffic volumes for the proposed mixed-use development was calculated using data from the “Trip Generation” Manual, an informational report published by the Institute of Transportation Engineers (ITE).
- Evaluation and analysis of the traffic safety and operational issues for existing and future traffic conditions.
- Development of recommendations where necessary, that would be required to maintain safe and efficient traffic flow in the project area.

## 2.0 PROJECT AREA

As noted in the previous section, the proposed *Knights Corner* development is situated on a parcel of land along the southerly side of Cranston Street to the immediate west of Cranston Fire Department Station 3. The property also has approximately 55 feet of frontage on Dyer Avenue located 460 feet south of Cranston Street. The 4.72 acre site is primarily undeveloped and wooded in the southern and eastern portions of the lot, though as previously noted, is developed along the Cranston Street frontage with the historic church building and associated paved parking lot. Figure 2 on the following page depicts the general project area, and the boundary lines of the subject property.

Land use in the immediate area can be defined as a mixture of commercial and residential properties along Cranston Street and Dyer Avenue, with high density residential neighborhoods located off of intersecting side streets. Within the village area of Dyer Avenue to the north are multi-unit residential homes that were built for housing to support the large textile manufacturing operation at the *Cranston Print Works* mill site to the immediate north. The Sprague Mansion, an historical museum is situated on the northeast corner of the intersection. Commercial properties dominate the frontage of Dyer Avenue heading south to Park Avenue (Route 12). Further west heading into the village, is the Saint Ann catholic church and cemetery.

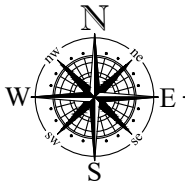
Both Cranston Street and Dyer Avenue will serve as the primary access routes to the proposed development. Based upon the good operating characteristics along the servicing roadways, and the minor estimated hourly volume and type of traffic associated with the proposal, a study impact area was defined for the project. The limits of our analysis focused on Dyer Avenue between Industrial Road and Governor Street and Cranston Street between Byron Street and Florida Avenue, and specifically the signalized junction of these two major roadways.

## 3.0 EXISTING CONDITIONS

### 3.1 ROADWAYS

#### Cranston Street

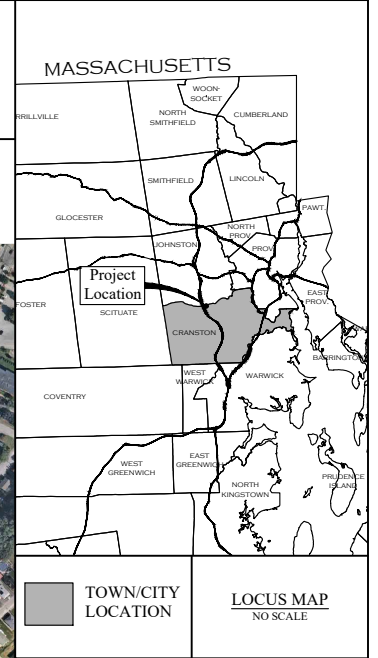
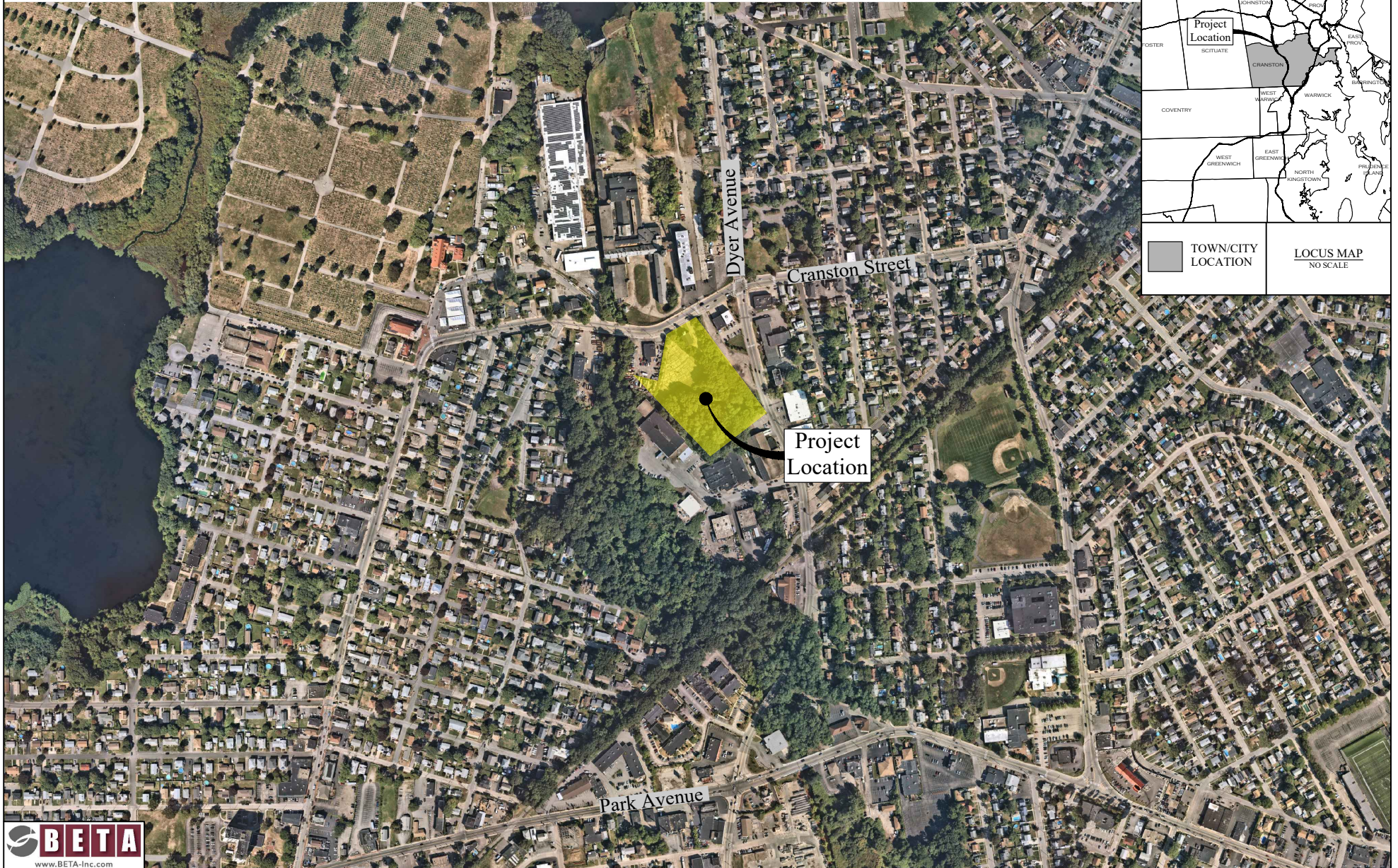
Cranston Street is classified as a major collector road throughout its entire length as it runs through the City of Cranston. Cranston Street continues northeast extending into Providence where it merges with Westminster Street. Within the project area it runs generally in an east/west direction. The roadway



# Proposed Mixed-Use Development

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## Figure 2 - Project Area Map





provides immediate local access to abutting properties but also links to higher order facilities including, Rhode Island State Highway Route 10 to the north.

In the project area, Cranston Street varies in typical section but adjacent to the subject property it is approximately 44-foot wide consisting of a 13-foot travel lane and a 9-foot shoulder in each direction. West of the intersection parking is restricted along the northerly side of the road and to the east parking is permitted along both sides beyond the signalized intersection. There is no posted speed limit in the immediate project area.



Cement concrete curbing and sidewalks are available on both sides of the road. It was noted that mid-block marked crosswalks are located within 150 feet to the east and west of the intersection even though there are controlled crossings at the signal. These crossing should be investigated for removal to require pedestrians to utilize the signal crossing for enhanced safety. The pavement condition can be classified as being in fair to poor condition with visible block cracking and minor rutting. Sporadic Cobra-head light fixtures on utility poles are located along the corridor for nighttime illumination of the roadway.

The Rhode Island Public Transportation Authority (RIPTA) operates a bus route along Cranston Street in the study area. Route 30 (Arlington/Oaklawn) runs seven days a week between Kennedy Plaza and CCRI in Warwick, with five major stop locations; Cranston/Webster, Cranston/Gansett, Oaklawn/Dean, Oaklawn/New London and Warwick Mall. The bus runs hourly with stops within 500 feet to the east and west of the site.

### Dyer Avenue

Dyer Avenue is classified as a minor arterial roadway running in a north/south direction through the project area. Along the property frontage, the roadway is generally 36-foot wide consisting of a 12-foot travel lane and a 6-foot shoulder in each direction, as depicted in the adjacent photograph looking north along Dyer Avenue with the subject property location on the left. The



posted speed limit for Dyer Avenue is 25 mph.

A combination of cement concrete sidewalk and asphalt sidewalk is present along both sides of the road. The pavement can be classified as being in fair condition with no visible major pavement distress, but minor cracking and crack sealing treatments as part of general roadway maintenance is visible. Sporadic cobra-head light fixtures on utility poles are located along the corridor for nighttime illumination of the roadway.

The Rhode Island Public Transportation Authority (RIPTA) operates a bus route along Dyer Avenue in the study area. Route 17 (Dyer/Pocasset) runs seven days a week between Kennedy Plaza and the Stop & Shop on Atwood Avenue in Cranston, with four major stop locations; Cranston/Westminster, Olneyville Square, Plainfield/Pocasset and Dyer/Chestnut Hill. The bus runs hourly with stops within 400 feet to the north and south of the site.

### 3.2 INTERSECTIONS

#### Cranston Street at Dyer Avenue

Dyer Avenue intersects Cranston Street to form a four-way, signalized junction. Cranston Street forms the eastern and western legs of the intersection, while Dyer Avenue makes up the northern and southern legs. Each approach to the intersection is comprised of one lane for all movements except for the southbound approach which has a separate right turn lane. The intersection was recently striped to define the approach lanes and shoulders to provide better lane control through the intersection along Cranston Street. The roadway width on the Cranston Street approaches allows for two lanes, where vehicles travelling through the junction often take advantage of the width to pass stopped, left turning traffic on the right. This condition leads to the potential increase in angle, head-on and side-swipe crashes due to the uncertainty of vehicle movements during the permitted phases.

The traffic signal system appears to be in good operating condition. The layout of the equipment consists of mast arm mounted signal heads with in-road vehicle loop detection. It was noted that the in-road loop detector on the northbound Dyer Avenue approach was broken due to a pot hole and was not functioning. Bracket mounted pedestrian signal heads are provided on the mast arm poles with pedestrian push buttons for enhanced pedestrian crossing control. High visibility (continental) marked crosswalk with curb ramps are provided across each approach to the intersection. It was also determined that the pushbuttons and curb ramps are not ADA compliant, missing audio



assistance for the push buttons and detectable warning panels at the curb ramps. The adjacent aerial depicts the typical characteristics of the intersection.

The intersection was determined to operate in a fully actuated mode consisting of two phases under a 70 second cycle length based upon current controller programming confirmed in the field. The first phase services all northbound and southbound movements on Dyer Avenue, while permitting concurrent pedestrian crossings along the east and west legs. As noted previously there is a broken loop detector on the northbound approach that calls Phase 1. In order to service this movement, the northbound phase is programmed to be called continuously to its maximum green time, even without a vehicle on the approach. This temporary operation caused by the lack of equipment maintenance, results in unnecessary delays on Cranston Street and less efficient operations of the overall intersection. The second phase services all eastbound and westbound movements with permitted left turns and concurrent pedestrian crossings along the north and south legs.

The fire station on Cranston Street has a mast arm with signal heads to control eastbound traffic at the driveway during pre-emption, with the main signalized junction at Dyer Avenue controlling other movements conflicting with the emergency vehicles. The stop line for the fire station is located approximately 180 feet west of the stop line for the Cranston Street eastbound approach at Dyer Avenue.

### 3.3 TRAFFIC DATA

Existing traffic flow characteristics for this area were developed from a traffic counting program completed by BETA Group Inc. and review of available record data from the Rhode Island Department of Transportation (RIDOT) and from a recent study completed within the project area for the adjacent *Print Works* development project located at 1381 Cranston Street. It should be noted that an advanced utility installation project on Park Avenue has been ongoing for the last several months in advance of resurfacing project to be completed by the city this summer. As part of that utility construction project, daily detours have disrupted traffic during the day creating traffic patterns along Dyer Street and Cranston Street that are not typical, or representative of average conditions. In order to be consistent with the *Print Works* development analysis, volume data from that project was compared and utilized in conjunction with the data obtained by BETA specifically for this project and record information from the RIDOT.

Specifically, BETA completed an Automated Traffic Recorder (ATR) count for a five-day period along Dyer Avenue in March 2023, while an ATR for Cranston Street was reviewed from the traffic study completed by Vanasse & Associates along with the Turning Movement Count (TMC) data for the intersection of Cranston Street with Dyer Avenue. The existing volumes obtained in January through the count program were seasonally adjusted based upon RIDOT factors for urban highways. The volumes were increased by eight percent to represent average daily traffic conditions. Complete count information can be found in the Appendix.

Based upon the seasonally adjusted turning movement count data at the intersection of Cranston Street at Dyer Avenue, Cranston Street was found to service an estimated 975 vehicles during the weekday morning peak hour between 7:30 and 8:30 AM with approximately 520 vehicles eastbound and 455 vehicles westbound. During this same period, Dyer Avenue, in the vicinity of the proposed site access

driveway, services approximately 875 vehicles with approximately 420 vehicles northbound and 455 vehicles southbound. During the weekday afternoon peak hour between 4:00 and 5:00 PM, Cranston Street was found to service 935 vehicles with approximately 430 vehicles eastbound and 505 vehicles westbound. During this same period, Dyer Avenue, in the vicinity of the proposed site access driveway, services approximately 870 vehicles with approximately 450 vehicles northbound and 420 vehicles southbound. Figure 3 on the following page depicts the daily peak hour turning movement volumes at the study intersection.

## 4.0 SAFETY ANALYSIS

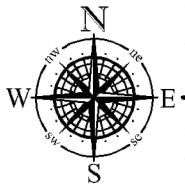
To determine if there are any limiting factors affecting safety relating to access to the proposed mixed-use project, the physical characteristics of Dyer Avenue and Cranston Street in the project area were investigated. These limiting factors would potentially include horizontal or vertical alignment changes or roadside obstructions that limit sight distances for vehicles traveling along the road or entering the road from a side street or driveway location. In this instance, the sight distance standard is necessary to permit turning vehicles to safely enter and exit the site driveways.

The vertical and horizontal alignment of Dyer Avenue in the project area can be described as generally level and straight with slight horizontal curvature to the south, and no geometric or physical obstructions to the north through the Cranston Street intersection. Based upon the existing roadway geometry as described, the available stopping sight distances at the proposed site driveway location on Dyer Avenue are greater than 500 feet to the north and south. These values are in excess of AASHTO's recommended minimum sight distance of 155 feet based upon the posted speed limit of 25 mph and for the 250 feet based on the 85<sup>th</sup> percentile speed of 35 mph for vehicles travelling along this section of road obtained by BETA as part of the ATR data collection program.

The horizontal and vertical alignment of Cranston Street in the project area can be described as generally straight and level to the east of Dyer Avenue and curvilinear and on a decline to the west. Based upon the existing roadway geometry as described, the available stopping sight distances at the proposed site driveway locations on Cranston Street are greater than 500 feet to the east and west. These values are in excess of AASHTO's recommended minimum sight distance of 210 feet based on the 85<sup>th</sup> percentile speed of 31 miles per hour obtained from the ATR referenced in the Vanasse and Associates study as there is no posted speed limit along this section of Cranston Street.

As a result of the preliminary evaluation of the existing roadway geometry and physical features, it does not appear that any significant physical roadway safety deficiencies exist within the defined study area. Also, as part of our analysis, a review of crash statistics was completed. Data was reviewed from the City of Cranston Police Department for the latest three-year period available from January 2018 to December 2019 and from January 2022 to December 2022 that was not impacted by COVID restrictions, to determine if any location in the project area experienced a high frequency or pattern of crashes.

A total of 47 crashes (averaging approximately 15 per year) occurred in the project area over the three-year study period, with none involving injuries. Summarizing the data, 37 of the crashes occurred at the



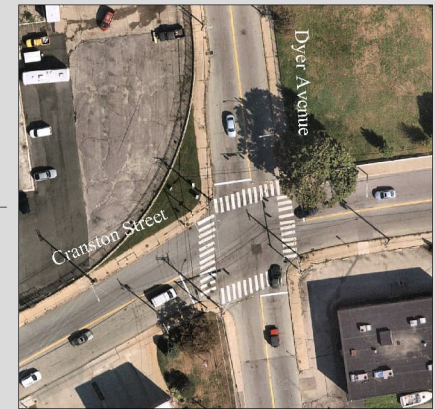
# Proposed Mixed-Use Development

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## Figure 3 - Existing Traffic Volumes



### 1 Cranston Street at Dyer Avenue



**LEGEND:**

- TURN LANE
- XXX AM PEAK VOLUMES (7:30 TO 8:30)
- (XXX) PM PEAK VOLUMES (4:00 TO 5:00)
- STUDY INTERSECTION
- TRAFFIC SIGNAL

signalized intersection of Cranston Street with Dyer Avenue, four of the crashes occurred along the segment of Cranston Street, and six of the crashes occurred along the short section of Dyer Avenue to the south of Cranston Street.

The predominant crash type at the signalized intersection of Cranston Street with Dyer Avenue was angled collisions (15), followed by rear end collisions (10), sideswipe collisions (7), head-on collisions (3), and finally single vehicle collisions (2). The majority of crashes at this location unlike most traffic signals where rear-end predominate, is the angle crash. In observing operations in the field and analyzing the crash data this type of crash can be attributed to the "permitted" control type of left turning traffic on Cranston Street, combined with the wide eastbound and westbound approaches to the intersection. The approaches, though recently striped to delineate a single lane, result in the higher crash total caused largely by drivers trying to pass on the right while a vehicle attempts to make a left turn. In these instances, left turning traffic can be blocked from seeing oncoming traffic bypassing a stopped vehicle, leading to the higher occurrence of angled collision, or misjudging the available room to pass resulting in sideswiping the vehicle queued at the stop line attempting to make a left turn.

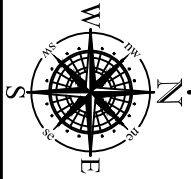
The higher occurrence of angled collisions, though not severe resulting in only property damage, could be mitigated by restriping the intersection to actually provide separate left turn lanes that would clearly define vehicle movements through the intersection and improve sight lines for turning vehicles. Long term options that could be implemented if these types of crashes are not reduced on a yearly basis with the restriping, could be adding a phase to allow protected/permitted left turn movements on Cranston Street that would reduce vehicle conflicts and provide improved efficiency for vehicles travelling through the intersection.

The four crashes that occurred along Cranston Street included one rear end collision, one angle collision, one sideswipe collision and one single vehicle collision resulting in a low frequency of crashes and without a consistent pattern of type requiring further review. The six crashes that occurred along Dyer Avenue included one rear-end collision, three angled collisions and two single vehicle collisions. The angle collisions can all be attributed to vehicles exiting one of the many commercial driveways without having the proper gap in traffic or right of way to enter the roadway. As was the case with Cranston Street, there is an overall low occurrence of crashes (approximately two per year) that would not require additional safety improvements along the roadway.

## 5.0 IMPACT ANALYSIS

### 5.1 TRIP GENERATION

To determine the traffic impact of a proposed development, estimates of anticipated traffic to be generated by a particular land use must be calculated. As previously discussed, the development proposal consists of the construction of four, multi-family residential buildings with a total of 156 apartment units and one quality dining restaurant expected to accommodate 96 seats. The quality restaurant will have limited days of operation and would also only be open during evening hours for dinner. Access to the site will be provided via two driveways on Cranston Street and one driveway on Dyer Avenue. Figure 4 on the following page depicts the site layout and access plan provided by *DiPrete Engineering*.



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## Figure 4 - Site Layout



Site Plan provided by DiPrete Engineering

For this development, estimated traffic volumes for the mixed-use project were based on use of trip generation factors. These factors are taken from the "Trip Generation" manual, an informational report published by the Institute of Transportation Engineers (ITE), a national professional organization for traffic and transportation engineers. The data provided in the ITE report are based on extensive traffic studies for various types of land uses (residential, commercial, industrial, etc.). This data has been found to be very reliable and provides a sound basis for estimating future trips to new development projects.

For the proposed residential apartment component of the project, Land Use Code (LUC) 220 Multifamily Housing (Low-Rise) was reviewed for applicability in developing an estimate of site related vehicles trips. For the proposed quality dining restaurant, LUC 931 Fine Dining Restaurant was considered. Table 1 summarizes the peak hour site trips that have been estimated utilizing the land use code data available from the ITE manual. The appropriate worksheets from the manual are included in the Appendix, along with the trip estimate calculations. As noted, and can be seen in the table, the quality restaurant will only be open during the evening, so the weekday morning peak hour trips for this use were not calculated.

TABLE 1 – Trip Generation Estimate

Description		Enter	Exit	Total
<i><u>Weekday AM Peak Hour</u></i>				
ITE Land Use Code 220	Multifamily Housing (Low-Rise)	17	54	71
ITE Land Use Code 931	Fine Dining Restaurant	<u>0</u>	<u>0</u>	<u>0</u>
	Total	17	54	71
<i><u>Weekday PM Peak Hour</u></i>				
ITE Land Use Code 220	Multifamily Housing (Low-Rise)	56	32	88
ITE Land Use Code 931	Fine Dining Restaurant	<u>17</u>	<u>8</u>	<u>25</u>
	Total	73	40	113

## 5.2 FUTURE TRAFFIC CONDITIONS

In order to properly assess the impacts of a development, future traffic conditions of area roadways should be estimated for the period when the development is constructed and fully occupied. Typically, the expansion of base traffic is calculated when a project is to be constructed over an extended period (+3 to 5 years). In all instances, area growth that may affect capacity results should be considered. It is anticipated that this project would be constructed and occupied within a five-year period. Therefore, for this project, though the city has seen an annual population growth rate of less than 0.31% for the past decade, a conservative annual growth rate of 1.0 percent was utilized for the future background traffic growth to account for the average annual growth and the potential for unknown developments or redevelopments in the area.

The one percent rate was applied to the existing volumes as part of the expansion of base 2023 traffic to establish a Future 2028 No-Build condition on the servicing roadways. In addition to this base growth, coordination with the city was completed to determine the potential for site specific developments that



have been approved or will be under construction in the near future in the general area that may impact base traffic conditions. We understand there is a mixed-use development proposed at 1381 Cranston Street that will contain 129 multifamily residential apartment units and 99,920 square feet of self-storage in the existing renovated mill buildings on the property, and a total of 57,000 square feet of commercial space being allocated to cold storage in a new building. This proposed *Print Works* mixed-use development was then added to the base growth rate to establish the Future 2028 No-Build condition.

Estimated residential traffic from the *Knights Corner* mixed-use development was added to the Future 2028 No-Build condition and assigned to the local roadway network based on existing traffic patterns derived from the TMC's to establish a Future 2028 Build Condition for analysis. Traffic related to the restaurant use were primarily allocated to the proposed driveways along Cranston Street as there is intended to be an area for valet drop off at the northwest corner of the lot, with parking closest to these driveways. Figure 5 on the following page depicts the future build condition traffic demands at the study intersections analyzed in this study. Future site volume distribution figures are provided in the Appendix in the trip generation section for reference.

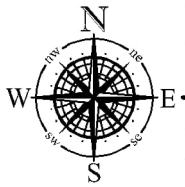
### 5.3 OPERATIONAL ANALYSIS

The key to any traffic impact analysis is the evaluation of roadway operations during peak traffic periods on the servicing roadway system. This situation would occur when the site-generated traffic, combined with the traffic volumes on the main roadway, result in the highest one-hour volume serviced along a roadway segment, or through an intersection. Review of record traffic data found that the weekday morning and afternoon peak hours would represent this worst-case combination of site-generated traffic with the servicing roadway peak traffic period.

The Highway Capacity Manual methodology provides the most accurate means of evaluating traffic capacity and delays for roadways and intersections. The results of these procedures are expressed in terms of Level of Service (LOS). Level of Service is a qualitative measure of traffic flow efficiency based on anticipated vehicle delays. For example, LOS "A" represents the best condition with little or no delay, while LOS "F" indicates that the roadway/intersection is beyond capacity resulting in extended vehicle delays and potential queuing. Table 2 outlines the Level of Service delay criteria presented in the Highway Capacity Manual for signalized and unsignalized intersections.

TABLE 2 – Highway Capacity Manual Criteria

Level of Service	Unsignalized Delay Per Vehicle (sec)	Signalized Delay Per Vehicle (sec)
A	<10	<10
B	>10 and <15	>10 and <20
C	>15 and <25	>20 and <35
D	>25 and <35	>35 and <55
E	>35 and <50	>55 and <80
F	>50	>80



# Proposed Mixed-Use Development CRANSTON, RHODE ISLAND

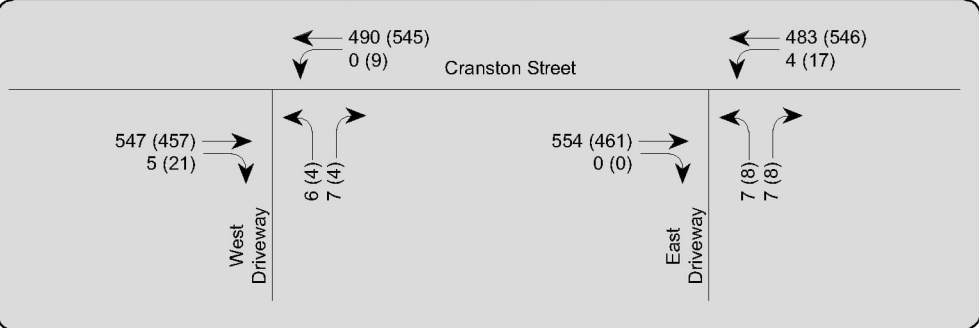
## Figure 5 - Future Traffic Volumes



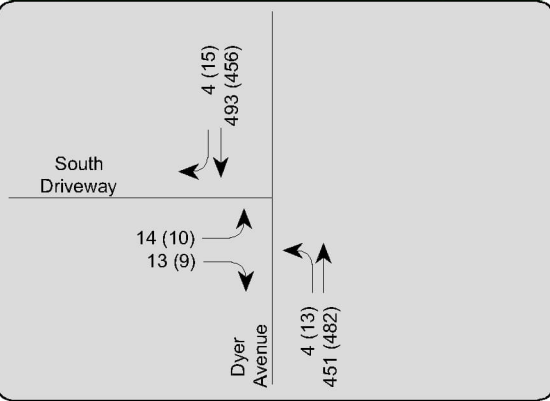
### 1 Cranston Street at Dyer Avenue



### 2 Cranston Street at East and West Site Driveways



### 3 Dyer Avenue at South Site Driveway



**LEGEND:**

- TURN LANE
- XXX AM PEAK VOLUMES (7:30 TO 8:30)
- (XXX) PM PEAK VOLUMES (4:00 TO 5:00)
- STUDY INTERSECTION
- TRAFFIC SIGNAL

The existing signalized intersection of Cranston Street at Dyer Avenue as well as the proposed unsignalized site driveway intersections along Cranston Street and Dyer Avenue were analyzed. The capacity analysis worksheets are included in the Appendix and Tables 3 through 5 summarizes the results of the analyses.

Table 3 depicts the operations of the traffic signal under existing traffic demand conditions analyzed utilizing existing timing data obtained from the controller. As noted previously there is a defective loop detector on the Dyer Avenue northbound approach that requires a *recall* setting in order to be serviced. This *recall* is set to its maximum available green time of 25 seconds which runs regardless of the approach demand, resulting in lost time and inefficient operations of the traffic signal to the detriment of the Cranston Street eastbound/westbound movements. These delays were documented in the *Print Works* study completed by Vanasse & Associates, Inc., but for this analysis, the intersection was assumed to be operating properly as designed with actuated loop detection once the detector is replaced. This will provide a better understanding of expected conditions at the junction.

TABLE 3 – Level of Service Summary (Existing Conditions)

Location / Movement	EXISTING CONDITIONS							
	AM Peak Hour				PM Peak Hour			
	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c
<i>Cranston Street at Dyer Avenue (S)</i>								
Cranston Street EB All	C	29.7	16	0.86	C	26.5	13	0.81
Cranston Street WB All	C	21.2	11	0.74	B	18.6	11	0.72
Dyer Avenue NB All	C	32.5	13	0.83	C	25.9	11	0.76
Dyer Avenue SB Left/Thru	C	24.8	9	0.68	C	23.5	9	0.66
Dyer Avenue SB Right	A	6.3	2	0.23	A	5.3	2	0.22
OVERALL	C	25.8	-	-	C	22.2	-	-

(S) – Signalized

As can be seen in the table, the signalized intersection was determined to operate overall at LOS C during both the AM and PM peak periods, which presently operate under the same cycle length and split times. There is no Time of Day (TOD) plan programmed into the controller to account for varying traffic demand conditions during these different peak periods. All critical movements operate in an acceptable manner during the morning and afternoon peak hours with the northbound and eastbound approaches experiencing the greatest delays operating with average delays of less than 35 seconds at LOS C.

Table 4 presents the future design period taking into consideration only base traffic growth, as well as known developments including the proposed *Print Works* project at 1381 Cranston Street recently approved by the city. The subject development is not included in this "No-Build" analysis scenario. The

analysis utilized existing timings as they represent optimized splits for the volumes serviced during the daily peak hours.

As can be seen in the table, the signalized intersection of Cranston Street at Dyer Avenue continues to operate overall at LOS C during the morning and afternoon peak hours, similar to existing conditions. The critical northbound and eastbound movements continue to operate in an acceptable manner at LOS D or better during the daily peak traffic conditions.

TABLE 4 – Level of Service Summary (Future No-Build Conditions)

Location / Movement	FUTURE 2028 NO BUILD CONDITIONS							
	AM Peak Hour				PM Peak Hour			
	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c
<i>Cranston Street at Dyer Avenue (S)</i>								
Cranston Street EB All	D	39.8	17	0.93	C	32.1	14	0.86
Cranston Street WB All	C	28.3	14	0.83	C	21.1	12	0.76
Dyer Avenue NB All	D	44.7	15	0.92	C	30.2	14	0.81
Dyer Avenue SB Left/Thru	C	26.6	11	0.71	C	27.5	10	0.73
Dyer Avenue SB Right	A	6.6	2	0.24	A	5.9	2	0.24
OVERALL	C	33.4	-	-	C	25.9	-	-

(S) – Signalized

Table 5 on the following page presents the future traffic demand conditions when the project is anticipated to be constructed and fully occupied. The analysis during this period includes the main study signalized intersection of Cranston Street at Dyer Avenue, as well as the proposed site driveway intersections. During the future build period, it is anticipated that the signalized intersection of Cranston Street at Dyer Avenue will operate at an acceptable LOS D during the morning peak hour and LOS C during the afternoon peak hour. The critical northbound and eastbound movements continue to operate in an acceptable manner at LOS D or better during the daily peak traffic conditions.

In addition to the main signalized junction the proposed unsignalized site driveway intersections were also evaluated to demonstrate they will operate in an acceptable manner without excessive delays or traffic congestion. As seen in the table both Cranston Street driveways will operate efficiently with all critical movements operating at LOS C or better, with typically only one car expected to be queued on the site driveway waiting to enter the Cranston Street traffic stream. Similarly, the Dyer Avenue driveway will operate with minor acceptable delays of under 20 seconds and typically only one vehicle waiting to turn out of the driveway to enter Dyer Avenue and negligible delays for left turn site entering traffic.

TABLE 5 – Level of Service Summary (Future Build Conditions)

Location / Movement	FUTURE 2028 BUILD CONDITIONS							
	AM Peak Hour				PM Peak Hour			
	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c	LOS	Delay	95 <sup>th</sup> % Queue Length (veh.)	v/c
<i>Cranston Street at Dyer Avenue (S)</i>								
Cranston Street EB All	D	44.4	18	0.95	D	35.4	15	0.88
Cranston Street WB All	C	30.7	14	0.86	C	22.4	14	0.78
Dyer Avenue NB All	D	51.8	16	0.95	C	32.2	14	0.83
Dyer Avenue SB Left/Thru	C	26.9	11	0.71	C	29.5	12	0.76
Dyer Avenue SB Right	A	6.5	2	0.24	A	6.1	2	0.25
OVERALL	D	37.0	-	-	C	27.9	-	-
<i>Cranston Street at Eastern Driveway (U)</i>								
Cranston Street WB Left	A	8.7	0	0.01	A	8.4	0	0.02
Site Driveway NB All	C	17.3	1	0.05	C	17.1	1	0.06
<i>Cranston Street at Western Driveway (U)</i>								
Cranston Street WB Left	A	0.0	0	0.00	A	8.5	0	0.01
Site Driveway NB All	C	16.8	1	0.04	C	16.5	1	0.03
<i>Dyer Avenue at Southern Driveway (U)</i>								
Site Driveway EB All	C	16.5	1	0.09	C	16.5	1	0.06
Dyer Avenue NB Left	A	8.5	1	0.01	A	8.5	0	0.01

(S) – Signalized

(U) – Unsignalized

Though as indicated in Table 5 that acceptable intersection operations will be maintained under the future build condition we also, as part of this study, completed an additional analysis to address the observed operations of the signalized intersection that result in unnecessary delays and increased potential for crashes. Specifically, as noted earlier in the report, the wide 44 foot Cranston Street approaches permit thru traffic to pass stopped left turning traffic at the intersection. This condition is random based upon driver behavior and aggressiveness resulting in unpredictable, last minute driver decisions when traversing the intersection. The single approach lane also results in a less efficient operation as thru traffic is regularly delayed for stopped left turning traffic on their approach.

An alternative to better control eastbound and westbound movements through the intersection would be to formalize separate left turn lanes on these approaches. In doing so, thru and left turning movements will be clearly defined for the drivers, providing a better understanding of conditions to make proper decisions of whether to yield or turn in the available gaps, theoretically improving intersection safety. This design would also improve intersection inefficiencies as discussed previously, by reducing the potential of left turning traffic hindering thru traffic flow, therefore reducing overall delays and queuing on the approaches.

The analysis has been provided in the Appendix for reference where it is demonstrated that delays are greatly reduced, improving operations during both the morning and afternoon peaks where overall they would operate at an LOS B. The critical northbound and eastbound movements would also operate at LOS C or better, improving operations over all periods analyzed as part of this study. Also, as previously noted, if angle crashes are not reduced as would be anticipated with the restriping for exclusive left turn lanes, an additional measure could be implemented long term to provide an advanced protected control of the left turning traffic on Cranston Street. This protected/permitted control of the left turn would greatly reduce left turning conflicts that occur with only the permitted control, and the intersection would also continue to operate in an acceptable manner with reduced delays and enhanced safety.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

In summary, the study has shown that the proposed mixed-use development project access and circulation plan has been designed to provide a level of traffic safety and efficiency on the servicing roadway system. The proposed site driveway intersections were determined to provide sufficient sight distances in accordance with AASHTO criteria for visibility and decision making of drivers attempting to enter/exit main street traffic from the proposed site driveways.

The results of the operational analysis determined that the estimated increase in traffic during the peak periods resulting from the proposed *Knights Corner* development project will have a minor impact on overall traffic operations along Cranston Street and Dyer Avenue and specifically at their signalized junction.

In reference to safety and operations it is recommended, as discussed earlier in the study, the following measures could be implemented at the signalized intersection of Cranston Street with Dyer Avenue as part of a general signal maintenance and optimization program:

1. Restripe the Cranston Street intersection approaches to provide exclusive left turn lanes.
2. Remove mid-block crosswalks on Cranston Street that are in close proximity to the controlled signalized pedestrian crossings at the Cranston Street/Dyer Avenue intersection.
3. Replace the existing malfunctioning loop detector on the northbound Dyer Avenue approach.

Therefore, based upon the data collected on the servicing roadways, the analysis completed as part of this study, along with the access design and other recommendations identified, the proposed mixed-use project was determined to have adequate and safe access to a public street, and will not have an adverse impact on public safety and welfare in the study area.

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<sup>i</sup>Aerial Images provided in this document were obtained from Nearmap.

# APPENDIX

- A. Traffic Volume Data
- B. Traffic Crash Data
- C. Trip Generation
- D. Operational Analysis

# APPENDIX A – Traffic Volume Data

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## **Automatic Traffic Recorder Count**

Cranston Street

Dyer Avenue

## **Intersection Turning Movement Count**

Cranston Street at Dyer Avenue



A

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**Automatic Traffic Recorder Count**

Cranston Street  
Dyer Avenue

Cranston Street

(Source; Vanasse and Associates, January 2023)

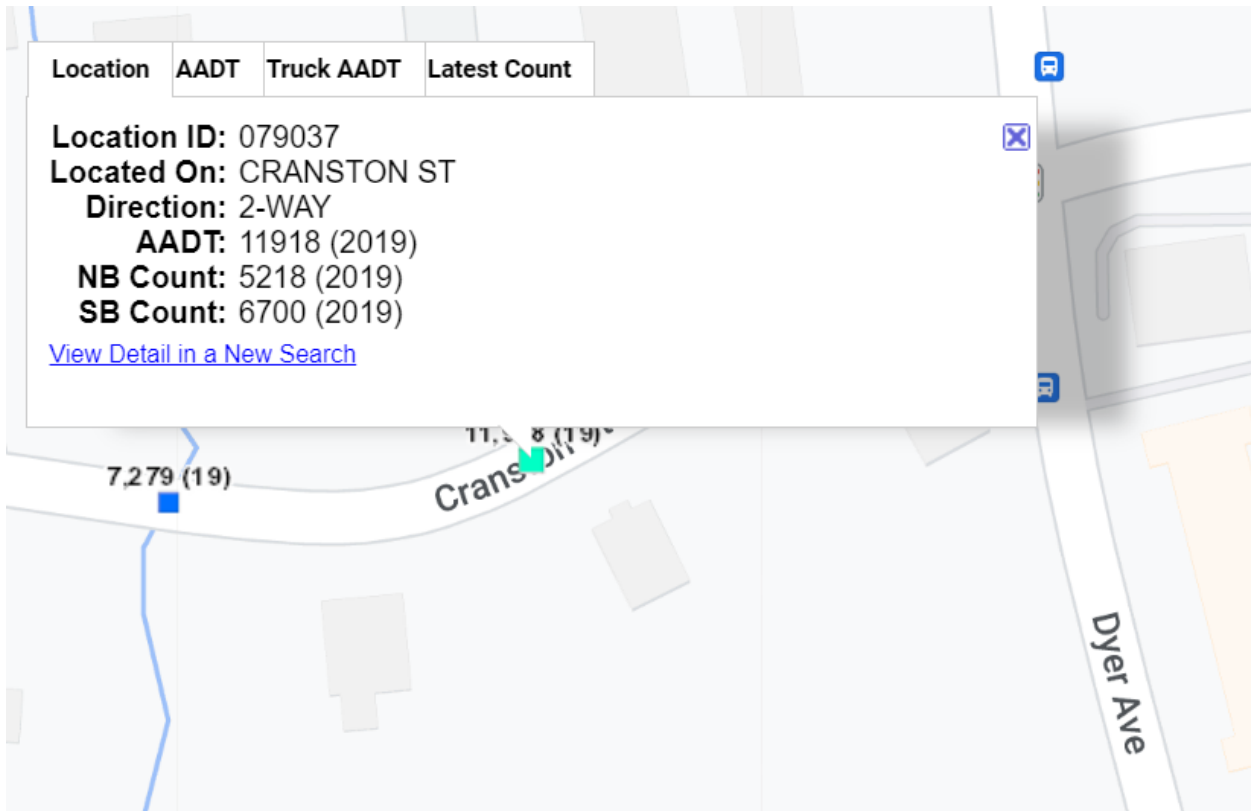
(Source; RIDOT 1994 – 2019)

*Traffic Volumes*

**CRANSTON ST. Cranston- STATION 079037**

AADT ?							
	Year	AADT	DHV-30	K %	D %	PA	BC
<input checked="" type="checkbox"/> <input type="checkbox"/>	2019	11,918				11,195 (94%)	722 (6%)

**LOCATION OF STATION 079037:**



**HISTORICAL DATA FROM STATION 070032 ( IN SAME AREA AS STATION 079037):**

OOPHIL									
Town	Roadway	Segment	StationNo	AADT	Date	Bridge	PeakHr	Funcnl	Loop
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	0700320170	15300	1994	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	0700320170	16500	1996	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	0700320170	13700	2000	099501	7 16		S

**OOPHIL**

Town	Roadway	Segment	StationNo	AADT	Date	Bridge	PeakHr	Func1	Loop
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	12300	2004	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	13200	2006	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	14700	2007	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	14100	2013	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	12600	1995	099501	7 16		S

**OOPHIL**

Town	Roadway	Segment	StationNo	AADT	Date	Bridge	PeakHr	Func1	Loop
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	13600	1999	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	14000	2012	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	11000	2008	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	11800	1988	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	13300	1991	099501	7 16		S
07	CRANSTON ST	BTW MATHEWSON & VALONE RD	070032	12700	1993	099501	7 16		S





*Speeds*



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Cranston Street  
west of Dyer Avenue  
City, State: Cranston, RI  
Client: VAI/D. Roach

05662Aspeed  
Site Code: 9575

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	Total	85th Percent	95th Percent
01/10/23	1	1	6	8	1	0	0	0	0	0	0	0	0	17	29	30
01:00	0	1	6	5	4	0	0	0	0	0	0	0	0	16	32	33
02:00	0	0	0	4	1	0	0	0	0	0	0	0	0	5	31	33
03:00	0	0	8	6	2	1	0	0	0	0	0	0	0	17	31	35
04:00	0	3	12	7	3	0	0	0	0	0	0	0	0	25	29	32
05:00	0	2	23	34	11	2	0	0	0	0	0	0	0	72	31	34
06:00	22	22	88	61	6	0	0	0	0	0	0	0	0	199	28	29
07:00	126	82	101	81	11	0	0	0	0	0	0	0	0	401	26	29
08:00	126	96	141	50	16	1	0	0	0	0	0	0	0	430	25	29
09:00	46	54	113	84	13	0	1	0	0	0	0	0	0	311	28	29
10:00	22	49	119	76	7	0	0	0	0	0	0	0	0	273	27	29
11:00	83	48	77	69	9	0	0	1	0	0	0	0	0	287	27	29
12 PM	79	60	136	80	11	0	0	0	0	0	0	0	0	366	27	29
13:00	56	53	131	79	8	0	0	0	0	0	0	0	0	327	27	29
14:00	100	65	123	87	8	2	0	0	0	0	0	0	0	385	27	29
15:00	109	72	139	85	12	0	0	0	0	0	0	0	0	417	27	29
16:00	99	85	136	55	2	0	0	0	0	0	0	0	0	377	25	28
17:00	48	62	116	64	5	0	0	0	0	0	0	0	0	295	26	29
18:00	27	40	113	55	5	0	0	0	0	0	1	0	0	241	27	29
19:00	2	15	96	43	5	0	0	0	0	0	0	0	0	161	27	29
20:00	4	12	47	42	5	0	0	0	0	0	0	0	0	110	28	29
21:00	0	9	53	25	6	0	0	0	0	0	0	0	0	93	28	31
22:00	0	12	33	26	5	2	0	0	0	0	0	0	0	78	29	33
23:00	0	2	21	14	2	0	0	0	0	0	0	0	0	39	28	30
Total	950	845	1838	1140	158	8	1	1	0	0	1	0	0	4942		
Percent	19.2%	17.1%	37.2%	23.1%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	09:00	08:00	05:00	09:00	11:00						08:00		
Vol.	126	96	141	84	16	2	1	1						430		
PM Peak	15:00	16:00	15:00	14:00	15:00	14:00					18:00			15:00		
Vol.	109	85	139	87	12	2					1			417		

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Client: VAI/D. Roach

05662Aspeed  
Site Code: 9575

Eastbound															85th	95th
Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	Total	Percent	Percent
01/11/23	0	0	6	5	1	0	0	0	0	0	0	0	0	12	29	31
01:00	0	2	0	7	4	0	0	0	0	0	0	0	0	13	32	34
02:00	0	0	1	4	0	0	0	0	0	0	0	0	0	5	29	29
03:00	0	0	4	2	3	0	0	0	0	0	0	0	0	9	32	34
04:00	0	3	9	13	4	0	0	0	0	0	0	0	0	29	29	33
05:00	0	2	37	27	9	3	0	0	0	0	0	0	0	78	30	34
06:00	16	33	75	56	11	1	0	0	0	0	0	0	0	192	28	31
07:00	158	85	123	67	5	0	0	0	0	0	0	0	0	438	25	28
08:00	135	82	105	66	10	1	0	1	0	0	0	0	0	400	26	29
09:00	41	55	133	86	14	1	0	0	0	0	0	0	0	330	27	29
10:00	38	51	134	69	13	0	0	0	0	0	1	0	0	306	27	29
11:00	60	53	110	88	13	1	0	0	0	0	0	0	0	325	28	29
12 PM	74	60	127	69	10	0	0	0	0	0	0	0	0	340	27	29
13:00	76	58	111	80	7	0	0	0	0	0	0	0	0	332	27	29
14:00	102	100	135	71	6	0	0	0	1	0	0	0	0	415	26	29
15:00	115	89	166	63	4	1	0	0	0	0	0	0	0	438	25	28
16:00	122	90	135	45	5	0	0	0	0	0	0	0	0	397	24	28
17:00	43	66	149	47	1	0	0	0	0	0	0	1	0	307	25	28
18:00	18	47	99	61	4	1	0	0	0	0	0	0	0	230	27	29
19:00	8	18	84	59	5	2	0	0	0	0	0	0	0	176	28	29
20:00	8	24	62	41	5	0	0	0	0	0	0	0	0	140	28	29
21:00	7	11	56	39	5	1	0	0	0	0	0	0	0	119	28	30
22:00	1	7	29	18	3	2	1	0	0	0	0	0	0	61	29	34
23:00	1	2	14	14	7	0	0	0	0	0	0	0	0	38	30	33
<b>Total</b>	<b>1023</b>	<b>938</b>	<b>1904</b>	<b>1097</b>	<b>149</b>	<b>14</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5130</b>		
<b>Percent</b>	<b>19.9%</b>	<b>18.3%</b>	<b>37.1%</b>	<b>21.4%</b>	<b>2.9%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			
<b>AM Peak</b>	<b>07:00</b>	<b>07:00</b>	<b>10:00</b>	<b>11:00</b>	<b>09:00</b>	<b>05:00</b>		<b>08:00</b>			<b>10:00</b>				<b>07:00</b>	
<b>Vol.</b>	<b>158</b>	<b>85</b>	<b>134</b>	<b>88</b>	<b>14</b>	<b>3</b>		<b>1</b>			<b>1</b>				<b>438</b>	
<b>PM Peak</b>	<b>16:00</b>	<b>14:00</b>	<b>15:00</b>	<b>13:00</b>	<b>12:00</b>	<b>19:00</b>	<b>22:00</b>		<b>14:00</b>			<b>17:00</b>			<b>15:00</b>	
<b>Vol.</b>	<b>122</b>	<b>100</b>	<b>166</b>	<b>80</b>	<b>10</b>	<b>2</b>	<b>1</b>		<b>1</b>			<b>1</b>			<b>438</b>	
<b>Grand Total</b>	<b>1973</b>	<b>1783</b>	<b>3742</b>	<b>2237</b>	<b>307</b>	<b>22</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>10072</b>		
<b>Percent</b>	<b>19.6%</b>	<b>17.7%</b>	<b>37.2%</b>	<b>22.2%</b>	<b>3.0%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			

15th Percentile : 11 MPH  
50th Percentile : 21 MPH  
85th Percentile : 27 MPH  
95th Percentile : 29 MPH

Stats 10 MPH Pace Speed : 21-30 MPH  
Number of Vehicles > 30 MPH : 337  
Percent of Vehicles > 30 MPH : 3.3%  
Mean Speed(Average) : 21 MPH

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Cranston Street  
west of Dyer Avenue  
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Client: VAI/D. Roach

05662Aspeed  
Site Code: 9575

Westbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	Total	85th Percent	95th Percent
01/10/23	0	0	3	12	6	0	0	0	0	0	0	0	0	21	32	34
01:00	1	0	3	6	5	1	0	0	0	0	0	0	0	16	33	35
02:00	0	1	2	7	4	2	0	0	0	0	0	0	0	16	34	37
03:00	0	0	6	5	1	0	0	0	0	0	0	0	0	12	29	31
04:00	0	0	0	4	5	0	0	0	0	0	0	0	0	9	33	34
05:00	1	0	8	27	8	1	0	0	0	0	0	0	0	45	31	34
06:00	4	3	32	81	30	1	1	0	0	0	0	0	0	152	31	34
07:00	12	2	78	183	72	9	1	0	0	0	0	0	0	357	31	34
08:00	17	7	79	201	70	4	0	0	0	0	0	0	0	378	31	33
09:00	16	3	84	167	60	5	1	0	0	0	0	0	0	336	31	34
10:00	8	12	79	217	61	2	0	0	0	0	0	0	0	379	30	33
11:00	44	26	109	203	70	4	1	0	0	0	0	0	0	457	30	33
12 PM	14	5	100	276	91	7	1	0	0	0	0	0	0	494	31	34
13:00	19	7	104	257	81	4	0	0	0	0	0	0	0	472	30	33
14:00	24	4	76	247	82	11	1	0	0	0	0	0	0	445	31	34
15:00	19	7	67	231	77	7	0	0	0	0	0	0	0	408	31	34
16:00	18	5	88	239	79	3	0	0	0	0	0	0	0	432	31	33
17:00	12	2	78	219	61	5	0	0	0	0	0	0	0	377	30	33
18:00	7	4	40	155	53	2	0	0	0	0	0	0	0	261	31	33
19:00	5	0	36	97	36	5	0	0	0	0	0	0	0	179	31	34
20:00	0	2	21	87	32	3	0	0	0	0	0	0	0	145	32	34
21:00	2	1	22	58	22	2	0	0	0	0	0	0	0	107	31	34
22:00	0	0	3	39	17	0	0	1	0	0	0	0	0	60	32	34
23:00	0	0	8	37	6	1	0	0	0	0	0	0	0	52	29	33
<b>Total</b>	<b>223</b>	<b>91</b>	<b>1126</b>	<b>3055</b>	<b>1029</b>	<b>79</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5610</b>		
<b>Percent</b>	<b>4.0%</b>	<b>1.6%</b>	<b>20.1%</b>	<b>54.5%</b>	<b>18.3%</b>	<b>1.4%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>			
AM Peak	11:00	11:00	11:00	10:00	07:00	07:00	06:00							11:00		
Vol.	44	26	109	217	72	9	1							457		
PM Peak	14:00	13:00	13:00	12:00	12:00	14:00	12:00	22:00						12:00		
Vol.	24	7	104	276	91	11	1	1						494		

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05662Aspeed  
Site Code: 9575

Westbound

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	Total	85th Percent	95th Percent
01/11/23	0	0	4	14	5	1	0	0	0	0	0	0	0	24	32	34
01:00	0	0	3	4	6	4	0	0	0	0	0	0	0	17	36	38
02:00	0	0	3	5	4	1	0	0	0	0	0	0	0	13	33	36
03:00	0	1	1	3	4	0	0	0	0	0	0	0	0	9	33	34
04:00	0	0	3	8	2	1	0	0	0	0	0	0	0	14	32	36
05:00	1	0	8	29	8	0	0	0	0	0	0	0	0	46	30	33
06:00	3	1	39	71	27	2	0	0	0	0	0	0	0	143	31	34
07:00	14	3	64	177	60	5	0	0	0	0	0	0	0	323	31	34
08:00	<b>23</b>	5	79	192	71	<b>11</b>	0	0	0	0	0	0	0	381	31	34
09:00	6	3	85	197	58	6	0	0	0	0	0	0	0	355	30	33
10:00	11	<b>7</b>	<b>90</b>	174	64	6	<b>1</b>	0	0	0	0	0	0	353	31	34
11:00	15	4	63	<b>260</b>	<b>94</b>	3	0	0	0	0	0	0	0	<b>439</b>	31	33
12 PM	14	3	102	<b>270</b>	<b>102</b>	5	<b>1</b>	0	0	0	0	0	0	<b>497</b>	31	34
13:00	15	7	<b>106</b>	253	91	6	0	0	0	0	0	0	0	478	31	34
14:00	<b>21</b>	2	106	232	74	8	1	0	0	0	0	0	0	444	31	34
15:00	14	5	66	227	101	<b>9</b>	0	0	0	0	0	0	0	422	32	34
16:00	16	<b>10</b>	93	238	74	8	0	0	0	0	0	0	0	439	31	34
17:00	11	2	78	205	66	3	0	0	<b>1</b>	0	0	0	0	366	31	33
18:00	7	1	38	147	53	5	0	0	0	0	0	0	0	251	31	34
19:00	5	2	38	130	37	3	0	0	0	0	0	0	0	215	31	33
20:00	1	1	41	93	36	0	1	0	0	0	0	0	0	173	31	33
21:00	2	4	24	68	17	2	0	0	0	0	0	0	0	117	30	33
22:00	0	0	12	45	19	2	0	0	0	0	0	0	0	78	32	34
23:00	0	0	3	23	17	1	1	1	0	0	0	0	0	46	33	38
<b>Total</b>	179	61	1149	3065	1090	92	5	1	1	0	0	0	0	5643		
Percent	3.2%	1.1%	20.4%	54.3%	19.3%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	10:00	10:00	11:00	11:00	08:00	10:00							11:00		
Vol.	23	7	90	260	94	11	1							439		
PM Peak	14:00	16:00	13:00	12:00	12:00	15:00	12:00	23:00	17:00					12:00		
Vol.	21	10	106	270	102	9	1	1	1					497		
<b>Grand Total</b>	402	152	2275	6120	2119	171	11	2	1	0	0	0	0	11253		
Percent	3.6%	1.4%	20.2%	54.4%	18.8%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile : 22 MPH  
50th Percentile : 27 MPH  
85th Percentile : 31 MPH  
95th Percentile : 34 MPH

Stats 10 MPH Pace Speed : 21-30 MPH


Number of Vehicles > 30 MPH : 2304  
Percent of Vehicles > 30 MPH : 20.5%  
Mean Speed(Average) : 27 MPH

Dyer Avenue

(Source; RIDOT 1998 – 2019)

*Traffic Volumes*

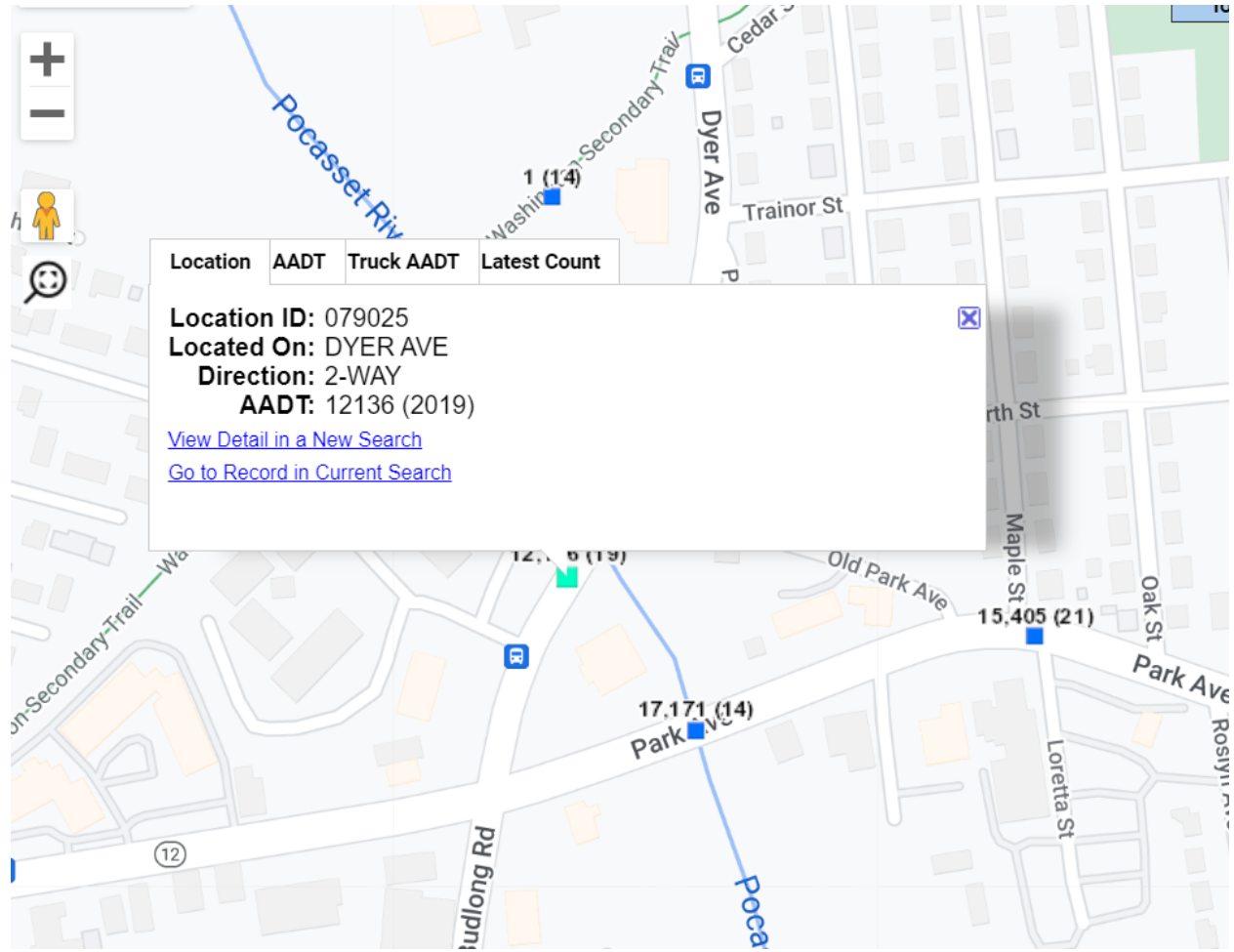
**Dyer Ave, Cranston-Station 079025:**

AADT 							
	Year	AADT	DHV-30	K %	D %	PA	BC
<input checked="" type="checkbox"/> <input type="checkbox"/>	2019	12,136				11,385 (94%)	750 (6%)

**HISTORICAL DATA FROM STATION 070100( IN SAME AREA AS STATION 079025):**

OOPHIL									
Town	Roadway	Segment	StationNo	AADT	Date	Bridge	PeakHr	Func1	Loop
07	DYER AVE	CRANSTON ST & STHW 12 PARK	070100	12200	1998		7 16		S
07	DYER AVE	CRANSTON ST & STHW 12 PARK	070100	8500	2008		7 16		S
07	DYER AVE	CRANSTON ST & STHW 12 PARK	070100	9300	2013		7 16		S

# LOCATION OF STATION 079025





Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Time	3/6/23 Mon	3/7/23 Tue	3/8/23 Wed	3/9/23 Thu	3/10/23 Fri	Weekday Average	3/11/23 Sat	3/12/23 Sun
12:00 AM	*	*	42	44	44	43	115	*
01:00	*	*	22	27	49	33	72	*
02:00	*	*	9	27	22	19	45	*
03:00	*	*	16	20	18	18	31	*
04:00	*	*	44	42	55	47	30	*
05:00	*	*	147	142	158	149	56	*
06:00	*	*	281	285	290	285	126	*
07:00	*	*	687	710	684	694	208	*
08:00	*	*	696	669	638	668	314	*
09:00	*	*	529	565	598	564	467	*
10:00	*	*	493	522	574	530	556	*
11:00	*	425	510	591	568	524	598	*
12:00 PM	*	558	626	664	654	626	596	*
01:00	*	588	577	590	619	594	603	*
02:00	*	704	715	764	762	736	581	*
03:00	*	811	781	794	814	800	611	*
04:00	*	817	832	896	915	865	568	*
05:00	*	734	765	733	770	750	486	*
06:00	*	553	581	550	574	564	503	*
07:00	*	385	462	440	495	446	411	*
08:00	*	309	314	330	397	338	333	*
09:00	*	272	259	276	320	282	158	*
10:00	*	172	166	186	276	200	*	*
11:00	*	102	96	104	183	121	*	*
Total	0	6430	9650	9971	10477	9896	7468	0
Percent	0.0%	65.0%	97.5%	100.8%	105.9%		75.5%	0.0%
AM Peak		11:00	08:00	07:00	07:00	07:00	11:00	
Volume		425	696	710	684	694	598	
PM Peak		04:00	04:00	04:00	04:00	04:00	03:00	
Volume		817	832	896	915	865	611	

*Speeds*

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 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: North, Lane 1

3/7/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	0
1:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
2:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
3:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
4:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
5:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
7:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
8:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
9:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	0	5	20	68	85	12	2	0	0	0	0	0	0	192
12:00 PM	5	3	24	124	111	9	0	0	0	0	0	0	0	276
1:00	0	1	30	135	115	18	0	0	0	0	0	0	0	299
2:00	19	7	27	166	125	9	0	0	0	0	0	0	0	353
3:00	6	8	70	194	133	14	0	0	0	0	0	0	0	425
4:00	0	2	39	215	166	25	1	0	1	0	0	0	0	449
5:00	0	3	39	190	148	17	0	0	0	0	0	0	0	397
6:00	0	1	18	153	110	15	0	0	0	0	0	0	0	297
7:00	0	0	23	104	88	9	1	0	0	0	0	0	0	225
8:00	0	0	17	81	82	13	1	0	0	0	0	0	0	194
9:00	0	1	6	71	56	9	3	0	0	0	0	0	0	146
10:00	1	0	7	37	41	9	2	1	1	0	0	0	0	99
11:00	0	1	1	26	26	9	1	0	0	0	0	0	0	64
<b>Total</b>	<b>31</b>	<b>32</b>	<b>321</b>	<b>1564</b>	<b>1286</b>	<b>168</b>	<b>11</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3416</b>

Project Name: Cranston Mixed Use  
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 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: North, Lane 1

3/8/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	7	13	2	1	0	0	0	0	0	0	23
1:00	0	0	1	2	4	4	1	0	0	0	0	0	0	12
2:00	0	0	0	2	3	1	0	0	0	0	0	0	0	6
3:00	0	0	1	4	2	3	0	0	0	0	0	0	0	10
4:00	0	1	0	9	7	5	0	0	0	0	0	0	0	22
5:00	0	0	6	14	26	18	1	0	0	0	0	0	0	65
6:00	1	1	9	43	60	23	1	0	0	0	0	0	0	138
7:00	5	5	18	147	107	18	4	0	0	0	0	0	0	304
8:00	4	3	28	123	130	21	6	0	0	0	0	0	0	315
9:00	0	1	19	110	83	12	1	0	0	0	0	0	0	226
10:00	0	1	18	92	91	20	2	1	0	0	0	0	0	225
11:00	0	2	17	104	85	21	2	0	0	0	0	0	0	231
12:00 PM	0	7	29	114	125	25	10	0	0	0	0	0	0	310
1:00	2	5	34	126	102	24	1	0	0	0	0	0	0	294
2:00	0	5	43	167	127	18	2	0	0	0	0	0	0	362
3:00	1	4	50	181	123	26	2	0	0	0	0	0	0	387
4:00	4	9	31	186	147	21	3	1	1	0	0	0	0	403
5:00	0	1	33	193	164	17	0	0	0	0	0	0	0	408
6:00	1	0	21	163	91	23	0	0	0	0	0	0	0	299
7:00	0	2	14	118	90	15	1	0	0	0	0	0	0	240
8:00	0	0	16	88	77	11	0	0	0	0	0	0	0	192
9:00	0	0	11	68	62	14	0	0	0	0	0	0	0	155
10:00	0	0	4	44	30	13	0	1	0	0	0	0	0	92
11:00	0	0	4	28	18	13	1	0	0	0	0	0	0	64
Total	18	47	407	2133	1767	368	39	3	1	0	0	0	0	4783

Project Name: Cranston Mixed Use  
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 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: North, Lane 1

3/9/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	2	12	9	4	0	0	0	0	0	0	2	29
1:00	0	0	1	3	4	1	3	0	0	0	0	0	0	12
2:00	0	0	0	5	7	1	0	0	0	0	0	0	0	13
3:00	0	0	1	6	3	2	1	0	0	0	0	0	0	13
4:00	0	0	0	5	11	1	1	0	1	0	0	0	0	19
5:00	0	0	7	15	29	12	1	0	0	0	0	0	0	64
6:00	6	3	6	39	54	26	2	0	2	0	0	0	0	138
7:00	0	7	40	90	156	36	3	0	0	0	0	0	0	332
8:00	5	7	22	123	144	32	4	1	0	0	0	0	0	338
9:00	2	2	14	130	103	19	0	0	0	0	0	0	0	270
10:00	8	3	27	118	92	34	2	1	0	0	0	0	0	285
11:00	13	12	47	112	96	22	1	1	0	0	0	0	0	304
12:00 PM	1	1	26	167	153	20	0	0	0	0	0	0	0	368
1:00	0	4	26	132	144	26	2	0	0	0	0	0	0	334
2:00	89	5	68	167	90	10	1	0	0	0	0	0	0	430
3:00	0	9	74	175	137	18	0	0	0	0	0	0	0	413
4:00	0	3	76	216	157	19	3	0	0	0	0	0	0	474
5:00	3	3	45	161	145	23	4	1	0	0	0	0	0	385
6:00	1	0	20	126	119	17	1	0	0	0	0	0	0	284
7:00	0	5	25	92	92	10	3	0	0	0	0	0	0	227
8:00	0	0	17	95	68	18	4	0	0	0	0	0	0	202
9:00	0	0	12	73	71	8	2	1	0	0	0	0	0	167
10:00	0	0	9	53	51	13	0	0	0	0	0	0	0	126
11:00	0	0	1	18	30	12	1	0	0	0	0	0	0	62
Total	128	64	566	2133	1965	384	39	5	3	0	0	0	2	5289

Project Name: Cranston Mixed Use  
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 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: North, Lane 1

3/10/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	3	6	11	3	1	0	0	0	0	0	0	24
1:00	0	0	0	11	10	3	0	0	0	0	0	0	0	24
2:00	0	0	0	2	3	2	0	1	0	0	0	0	0	8
3:00	0	0	0	5	4	0	0	0	0	0	0	0	0	9
4:00	0	0	0	2	13	8	1	0	0	0	0	0	0	24
5:00	0	0	6	17	22	13	5	0	0	0	0	0	0	63
6:00	3	3	2	36	61	30	1	4	0	0	0	0	0	140
7:00	6	7	34	119	107	31	0	0	0	0	0	0	0	304
8:00	4	4	40	100	114	30	4	0	0	0	0	0	0	296
9:00	0	1	12	101	106	28	2	0	0	0	0	0	0	250
10:00	17	18	25	111	94	34	1	0	0	0	0	0	0	300
11:00	0	3	22	95	106	36	4	0	0	0	0	0	0	266
12:00 PM	4	6	32	150	122	27	2	2	0	0	0	0	0	345
1:00	1	1	22	149	130	23	1	0	0	0	0	0	0	327
2:00	0	5	55	161	162	25	1	0	0	0	0	0	0	409
3:00	1	9	51	188	147	33	5	0	0	0	0	0	0	434
4:00	5	8	65	209	150	26	1	1	0	0	0	0	0	465
5:00	0	4	33	206	152	21	2	0	0	0	0	0	0	418
6:00	0	0	32	143	126	18	1	0	0	0	0	0	0	320
7:00	0	4	18	135	106	20	1	0	0	0	0	0	0	284
8:00	0	2	7	93	102	15	1	0	0	0	0	0	0	220
9:00	0	1	10	91	67	15	2	0	1	0	0	0	0	187
10:00	0	0	10	61	74	18	2	1	0	0	0	0	0	166
11:00	0	0	8	45	55	7	2	0	0	0	0	0	0	117
Total	41	76	487	2236	2044	466	40	9	1	0	0	0	0	5400

Project Name: Cranston Mixed Use  
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 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: North, Lane 1

3/11/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	3	21	29	4	2	0	0	0	0	0	0	59
1:00	0	0	3	13	18	2	1	0	0	0	0	0	0	37
2:00	0	0	0	6	9	0	0	1	0	0	0	0	0	16
3:00	0	0	1	3	5	2	1	1	0	0	0	0	0	13
4:00	0	1	0	3	10	3	1	0	0	0	0	0	0	18
5:00	1	0	1	9	12	4	1	0	0	0	0	0	0	28
6:00	0	1	3	17	26	13	2	0	0	0	0	0	0	62
7:00	0	3	3	18	40	10	1	0	0	0	0	0	0	75
8:00	0	0	7	40	62	14	3	0	0	0	0	0	0	126
9:00	0	4	22	77	91	21	6	0	0	0	0	0	0	221
10:00	0	17	17	88	125	18	3	0	0	0	0	0	0	268
11:00	0	0	16	84	142	30	1	0	0	0	0	0	0	273
12:00 PM	1	0	16	120	139	21	2	1	1	0	0	0	0	301
1:00	0	5	26	128	119	31	4	0	0	0	0	0	0	313
2:00	1	13	31	155	85	26	1	0	0	0	0	0	0	312
3:00	8	2	21	141	116	23	0	0	0	0	0	0	0	311
4:00	0	2	23	99	139	27	6	0	0	0	0	0	0	296
5:00	0	0	8	108	139	20	2	1	0	0	0	0	0	278
6:00	0	0	40	106	102	10	2	0	0	0	0	0	0	260
7:00	0	1	14	120	81	17	1	0	0	0	0	0	0	234
8:00	0	0	10	72	82	27	1	1	0	0	0	0	0	193
9:00	0	0	9	54	43	2	0	0	0	0	0	0	0	108
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
<b>Total</b>	<b>11</b>	<b>49</b>	<b>274</b>	<b>1482</b>	<b>1614</b>	<b>325</b>	<b>41</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3802</b>
<b>Grand Total</b>	<b>229</b>	<b>268</b>	<b>2055</b>	<b>9548</b>	<b>8676</b>	<b>1711</b>	<b>170</b>	<b>23</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>22690</b>

Stats  
 Percentile 15th  
 Speed 26  
 50th 30  
 85th 34  
 95th 36  
 Mean Speed (Average) 29.6  
 10 MPH Pace Speed 25-34  
 Number in Pace 18092  
 Percent in Pace 79.7%  
 Number > 25 MPH 20140  
 Percent > 25 MPH 88.8%

Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: South, Lane 2

3/7/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	0
1:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
2:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
3:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
4:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
5:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
6:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
7:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
8:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
9:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	1	6	19	80	99	23	4	0	0	1	0	0	0	233
12:00 PM	2	3	20	117	105	35	0	0	0	0	0	0	0	282
1:00	3	4	13	96	121	44	5	1	0	0	0	1	1	289
2:00	0	0	24	143	140	39	4	1	0	0	0	0	0	351
3:00	1	7	42	146	142	44	4	0	0	0	0	0	0	386
4:00	1	1	16	143	156	47	4	0	0	0	0	0	0	368
5:00	0	2	36	120	147	27	4	1	0	0	0	0	0	337
6:00	2	2	14	112	102	21	3	0	0	0	0	0	0	256
7:00	1	0	6	56	69	24	4	0	0	0	0	0	0	160
8:00	0	1	12	27	55	18	2	0	0	0	0	0	0	115
9:00	0	0	5	39	62	19	1	0	0	0	0	0	0	126
10:00	0	1	1	12	31	21	5	1	1	0	0	0	0	73
11:00	0	0	1	5	21	10	1	0	0	0	0	0	0	38
<b>Total</b>	<b>11</b>	<b>27</b>	<b>209</b>	<b>1096</b>	<b>1250</b>	<b>372</b>	<b>41</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3014</b>



Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: South, Lane 2

3/8/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	3	11	4	1	0	0	0	0	0	0	19
1:00	0	0	1	1	5	2	0	0	1	0	0	0	0	10
2:00	0	0	0	0	2	1	0	0	0	0	0	0	0	3
3:00	0	0	0	2	0	4	0	0	0	0	0	0	0	6
4:00	0	0	0	1	10	9	2	0	0	0	0	0	0	22
5:00	0	2	5	19	28	19	6	2	1	0	0	0	0	82
6:00	0	0	9	36	68	23	7	0	0	0	0	0	0	143
7:00	2	2	27	133	171	41	3	4	0	0	0	0	0	383
8:00	7	1	22	129	166	53	3	0	0	0	0	0	0	381
9:00	2	4	8	110	141	33	3	1	0	0	1	0	0	303
10:00	0	6	14	86	115	41	5	1	0	0	0	0	0	268
11:00	2	2	11	90	128	36	9	0	0	1	0	0	0	279
12:00 PM	1	1	18	90	157	46	3	0	0	0	0	0	0	316
1:00	3	5	21	94	119	33	8	0	0	0	0	0	0	283
2:00	1	2	13	129	143	61	3	0	0	0	0	1	0	353
3:00	0	1	39	124	163	59	8	0	0	0	0	0	0	394
4:00	2	6	26	155	183	51	5	0	0	0	0	1	0	429
5:00	0	6	27	144	138	34	7	1	0	0	0	0	0	357
6:00	0	5	10	100	131	30	4	2	0	0	0	0	0	282
7:00	0	1	7	69	99	38	6	0	1	0	0	0	1	222
8:00	0	0	11	40	51	19	1	0	0	0	0	0	0	122
9:00	0	0	9	32	35	27	0	0	0	0	1	0	0	104
10:00	0	0	7	26	29	9	2	0	1	0	0	0	0	74
11:00	0	0	1	5	13	12	1	0	0	0	0	0	0	32
<b>Total</b>	<b>20</b>	<b>44</b>	<b>286</b>	<b>1618</b>	<b>2106</b>	<b>685</b>	<b>87</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>4867</b>

Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: South, Lane 2

3/9/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	2	7	2	3	1	0	0	0	0	0	15
1:00	0	0	0	6	4	3	2	0	0	0	0	0	0	15
2:00	0	0	1	2	7	2	2	0	0	0	0	0	0	14
3:00	0	0	0	1	5	1	0	0	0	0	0	0	0	7
4:00	0	0	1	2	10	7	2	1	0	0	0	0	0	23
5:00	0	0	7	16	32	15	7	1	0	0	0	0	0	78
6:00	0	0	4	37	72	29	5	0	0	0	0	0	0	147
7:00	18	12	17	100	161	57	13	0	0	0	0	0	0	378
8:00	2	4	17	97	153	53	4	0	1	0	0	0	0	331
9:00	5	7	22	85	118	50	7	0	0	0	0	1	0	295
10:00	3	5	16	83	98	25	5	1	1	0	0	0	0	237
11:00	7	32	53	90	79	25	1	0	0	0	0	0	0	287
12:00 PM	0	5	23	119	110	36	2	0	0	1	0	0	0	296
1:00	0	3	11	98	111	31	1	0	0	0	1	0	0	256
2:00	1	13	34	105	139	34	6	1	0	1	0	0	0	334
3:00	3	1	31	157	125	56	7	0	1	0	0	0	0	381
4:00	0	4	30	136	197	49	5	0	0	0	0	1	0	422
5:00	3	4	14	132	147	43	4	0	0	0	0	0	1	348
6:00	0	1	18	117	112	16	2	0	0	0	0	0	0	266
7:00	0	0	2	58	123	26	4	0	0	0	0	0	0	213
8:00	0	0	6	35	70	13	4	0	0	0	0	0	0	128
9:00	0	0	4	40	44	15	4	0	0	0	2	0	0	109
10:00	0	0	2	20	21	13	2	1	0	1	0	0	0	60
11:00	0	0	0	9	21	11	1	0	0	0	0	0	0	42
<b>Total</b>	<b>42</b>	<b>91</b>	<b>313</b>	<b>1547</b>	<b>1966</b>	<b>612</b>	<b>93</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>4682</b>

Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: South, Lane 2

3/10/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	3	7	8	0	2	0	0	0	0	0	20
1:00	0	0	0	3	11	8	1	2	0	0	0	0	0	25
2:00	0	0	0	2	6	4	1	1	0	0	0	0	0	14
3:00	0	0	0	2	4	2	1	0	0	0	0	0	0	9
4:00	0	1	2	4	9	12	2	0	0	1	0	0	0	31
5:00	0	0	12	17	30	22	11	1	1	0	0	1	0	95
6:00	2	2	5	36	71	30	4	0	0	0	0	0	0	150
7:00	0	0	30	135	159	49	7	0	0	0	0	0	0	380
8:00	0	0	12	129	144	48	6	3	0	0	0	0	0	342
9:00	1	3	30	126	143	40	3	2	0	0	0	0	0	348
10:00	6	1	17	83	123	36	7	0	1	0	0	0	0	274
11:00	1	2	18	108	125	39	8	1	0	0	0	0	0	302
12:00 PM	2	1	5	96	158	43	4	0	0	0	0	0	0	309
1:00	0	6	17	87	125	49	5	2	0	0	0	0	1	292
2:00	0	1	32	118	150	42	5	2	2	0	0	0	1	353
3:00	1	2	18	152	158	44	3	2	0	0	0	0	0	380
4:00	0	1	31	178	188	44	6	1	0	1	0	0	0	450
5:00	0	1	17	120	154	56	3	1	0	0	0	0	0	352
6:00	0	1	17	92	124	18	2	0	0	0	0	0	0	254
7:00	0	0	7	63	107	33	1	0	0	0	0	0	0	211
8:00	0	0	4	59	85	26	1	2	0	0	0	0	0	177
9:00	0	1	8	34	57	29	4	0	0	0	0	0	0	133
10:00	0	0	1	38	43	21	4	1	1	1	0	0	0	110
11:00	0	0	2	20	29	12	3	0	0	0	0	0	0	66
<b>Total</b>	<b>13</b>	<b>23</b>	<b>285</b>	<b>1705</b>	<b>2210</b>	<b>715</b>	<b>92</b>	<b>23</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5077</b>

Project Name: Cranston Mixed Use  
 Town / City, State: Cranston, RI  
 Roadway: Dyer Avenue  
 Location: Approximately 650' south of Cranston Street

**BETA Group, Inc.**  
 701 George Washington Highway  
 Lincoln, Rhode Island 02865  
 401.333.2382

Start Date: 3/7/2023  
 End Date: 3/11/2023

Direction: South, Lane 2

3/11/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	2	11	19	18	4	1	1	0	0	0	0	56
1:00	0	0	0	4	17	10	2	1	1	0	0	0	0	35
2:00	0	0	1	6	7	9	5	1	0	0	0	0	0	29
3:00	0	0	0	2	10	3	1	0	0	2	0	0	0	18
4:00	0	0	1	5	3	3	0	0	0	0	0	0	0	12
5:00	0	0	1	11	9	7	0	0	0	0	0	0	0	28
6:00	0	0	2	15	26	17	4	0	0	0	0	0	0	64
7:00	0	0	3	27	72	25	5	1	0	0	0	0	0	133
8:00	0	0	5	59	70	43	11	0	0	0	0	0	0	188
9:00	0	0	13	89	107	28	8	1	0	0	0	0	0	246
10:00	1	4	21	82	113	57	10	0	0	0	0	0	0	288
11:00	0	1	16	103	154	48	3	0	0	0	0	0	0	325
12:00 PM	0	1	10	97	134	47	6	0	0	0	0	0	0	295
1:00	0	0	9	74	145	49	11	1	1	0	0	0	0	290
2:00	0	0	15	82	122	43	5	1	0	1	0	0	0	269
3:00	0	1	28	105	118	42	3	2	1	0	0	0	0	300
4:00	0	0	13	88	120	47	2	0	1	0	0	1	0	272
5:00	0	0	5	54	99	42	6	0	0	1	1	0	0	208
6:00	0	0	14	77	116	32	4	0	0	0	0	0	0	243
7:00	0	1	8	52	79	26	10	1	0	0	0	0	0	177
8:00	0	1	7	28	74	23	6	1	0	0	0	0	0	140
9:00	0	0	3	15	24	7	1	0	0	0	0	0	0	50
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	0
<b>Total</b>	<b>1</b>	<b>9</b>	<b>177</b>	<b>1086</b>	<b>1638</b>	<b>626</b>	<b>107</b>	<b>11</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3666</b>
<b>Grand Total</b>	<b>87</b>	<b>194</b>	<b>1270</b>	<b>7052</b>	<b>9170</b>	<b>3010</b>	<b>420</b>	<b>55</b>	<b>18</b>	<b>12</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>21306</b>
Stats			Percentile	15th	50th	85th	95th							
			Speed	27	31	35	38							
			Mean Speed (Average)	31.1										
			10 MPH Pace Speed	25-34										
			Number in Pace	16064										
			Percent in Pace	75.4%										
			Number > 25 MPH	19754										
			Percent > 25 MPH	92.7%										

A

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**Intersection Turning Movement Count**

Cranston Street at Dyer Avenue

Cranston Street at Dyer Avenue

(Source; Vanasse & Associates, January 2023)



**Transportation Data Corporation**  
 Mario Perone, mperone1@verizon.net  
 tel (781) 587-0086 cell (781) 439-4999

N/S: Dyer Avenue  
 E/W: Cranston Street  
 City, State: Cranston, RI  
 Client: VAI/D. Roach

File Name : 05662A  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	24	47	5	0	7	44	11	0	23	20	1	0	0	60	13	0	255
07:15 AM	20	60	8	0	7	59	13	0	18	32	3	0	4	76	21	0	321
07:30 AM	24	69	10	1	9	60	18	1	21	60	9	1	7	78	28	0	396
07:45 AM	49	102	5	0	8	80	31	0	30	49	9	0	5	81	36	0	485
Total	117	278	28	1	31	243	73	1	92	161	22	1	16	295	98	0	1457
08:00 AM	20	73	5	0	14	72	22	0	39	79	9	0	5	101	30	0	469
08:15 AM	18	58	9	0	7	60	20	0	19	50	5	1	3	79	23	0	352
08:30 AM	21	54	11	0	9	80	26	0	14	39	2	0	6	69	37	0	368
08:45 AM	26	65	13	1	15	67	19	0	28	47	3	0	5	66	16	0	371
Total	85	250	38	1	45	279	87	0	100	215	19	1	19	315	106	0	1560
Grand Total	202	528	66	2	76	522	160	1	192	376	41	2	35	610	204	0	3017
Apprch %	25.3	66.2	8.3	0.3	10	68.8	21.1	0.1	31.4	61.5	6.7	0.3	4.1	71.8	24	0	
Total %	6.7	17.5	2.2	0.1	2.5	17.3	5.3	0	6.4	12.5	1.4	0.1	1.2	20.2	6.8	0	

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	24	69	<b>10</b>	<b>1</b>	104	9	60	18	<b>1</b>	88	21	60	<b>9</b>	<b>1</b>	91	<b>7</b>	78	28	0	113	396
07:45 AM	<b>49</b>	<b>102</b>	5	0	<b>156</b>	8	<b>80</b>	<b>31</b>	0	<b>119</b>	30	49	9	0	88	5	81	<b>36</b>	0	122	<b>485</b>
08:00 AM	20	73	5	0	98	<b>14</b>	72	22	0	108	<b>39</b>	<b>79</b>	9	0	<b>127</b>	5	<b>101</b>	30	0	<b>136</b>	469
08:15 AM	18	58	9	0	85	7	60	20	0	87	19	50	5	1	75	3	79	23	0	105	352
Total Volume	111	302	29	1	443	38	272	91	1	402	109	238	32	2	381	20	339	117	0	476	1702
% App. Total	25.1	68.2	6.5	0.2		9.5	67.7	22.6	0.2		28.6	62.5	8.4	0.5		4.2	71.2	24.6	0		
PHF	.566	.740	.725	.250	.710	.679	.850	.734	.250	.845	.699	.753	.889	.500	.750	.714	.839	.813	.000	.875	.877



**Transportation Data Corporation**  
 Mario Perone, mperone1@verizon.net  
 tel (781) 587-0086 cell (781) 439-4999

N/S: Dyer Avenue  
 E/W: Cranston Street  
 City, State: Cranston, RI  
 Client: VAI/D. Roach

File Name : 05662A  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Trucks & Buses

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	4	0	0	1	1	0	0	0	3	0	0	0	2	0	0	11
07:15 AM	2	2	0	0	0	4	0	0	1	0	0	0	0	1	1	0	11
07:30 AM	1	0	0	0	0	1	1	0	0	1	0	0	0	2	0	0	6
07:45 AM	1	3	1	0	0	1	0	0	3	1	0	0	0	1	0	0	11
<b>Total</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>39</b>
08:00 AM	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	4
08:15 AM	0	1	0	0	0	2	3	0	0	2	0	0	0	0	0	0	8
08:30 AM	1	1	0	0	0	2	1	0	0	0	0	0	0	1	1	0	7
08:45 AM	1	1	0	0	0	2	1	0	1	2	0	0	0	0	1	0	9
<b>Total</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>28</b>
<b>Grand Total</b>	<b>7</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>13</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>67</b>
Apprch %	35	60	5	0	5	65	30	0	33.3	66.7	0	0	8.3	66.7	25	0	
Total %	10.4	17.9	1.5	0	1.5	19.4	9	0	7.5	14.9	0	0	1.5	11.9	4.5	0	

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	4	0	0	4	1	1	0	0	2	0	3	0	0	3	0	2	0	0	2	11
07:15 AM	2	2	0	0	4	0	4	0	0	4	1	0	0	0	1	0	1	1	0	2	11
07:30 AM	1	0	0	0	1	0	1	1	0	2	0	1	0	0	1	0	2	0	0	2	6
07:45 AM	1	3	1	0	5	0	1	0	0	1	3	1	0	0	4	0	1	0	0	1	11
Total Volume	4	9	1	0	14	1	7	1	0	9	4	5	0	0	9	0	6	1	0	7	39
% App. Total	28.6	64.3	7.1	0		11.1	77.8	11.1	0		44.4	55.6	0	0		0	85.7	14.3	0		
PHF	.500	.563	.250	.000	.700	.250	.438	.250	.000	.563	.333	.417	.000	.000	.563	.000	.750	.250	.000	.875	.886

# Transportation Data Corporation

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N/S: Dyer Avenue  
E/W: Cranston Street  
City, State: Cranston, RI  
Client: VAI/D. Roach

File Name : 05662A  
Site Code : 9575  
Start Date : 1/10/2023  
Page No : 1

### Groups Printed- Bikes by Direction

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %																	

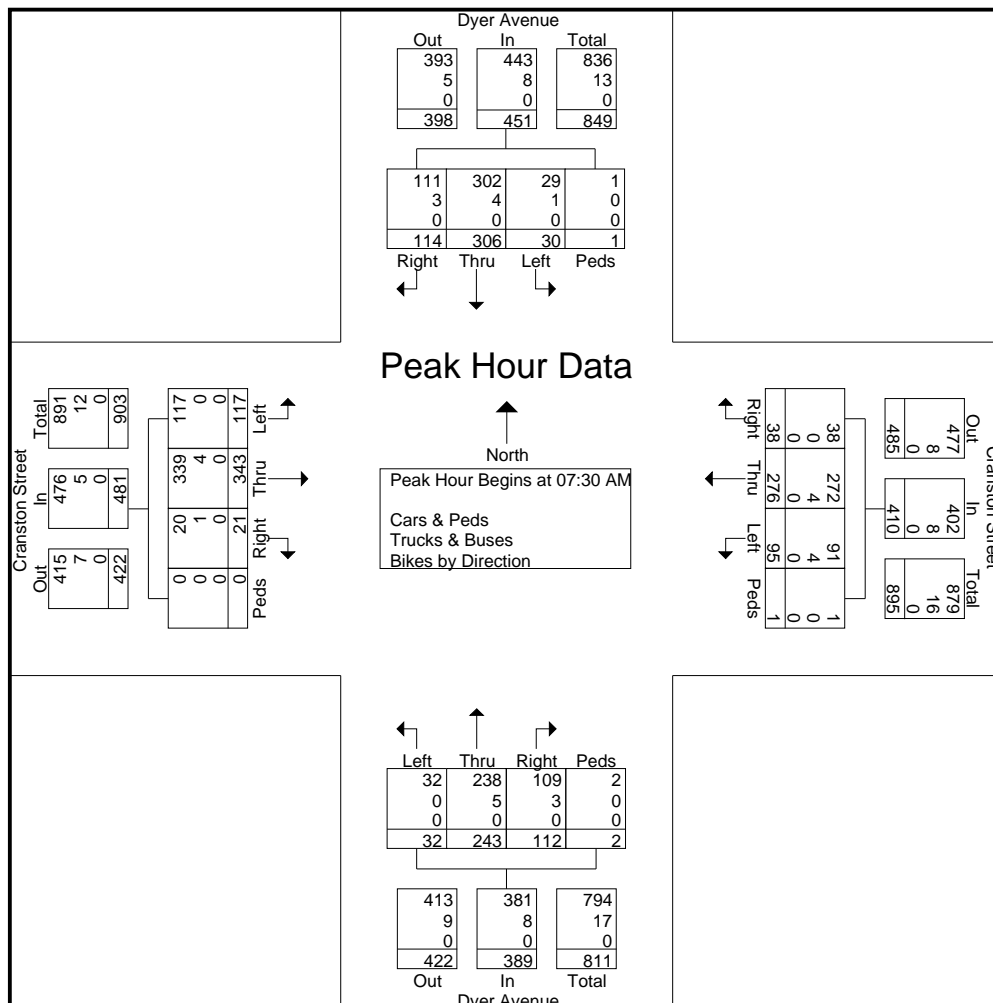
Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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N/S: Dyer Avenue  
 E/W: Cranston Street  
 City, State: Cranston, RI  
 Client: VAI/D. Roach

File Name : 05662A  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	25	69	10	1	105	9	61	19	1	90	21	61	9	1	92	7	80	28	0	115	402
07:45 AM	50	105	6	0	161	8	81	31	0	120	33	50	9	0	92	5	82	36	0	123	496
08:00 AM	21	73	5	0	99	14	72	22	0	108	39	80	9	0	128	6	102	30	0	138	473
08:15 AM	18	59	9	0	86	7	62	23	0	92	19	52	5	1	77	3	79	23	0	105	360
Total Volume	114	306	30	1	451	38	276	95	1	410	112	243	32	2	389	21	343	117	0	481	1731
% App. Total	25.3	67.8	6.7	0.2		9.3	67.3	23.2	0.2		28.8	62.5	8.2	0.5		4.4	71.3	24.3	0		
PHF	.570	.729	.750	.250	.700	.679	.852	.766	.250	.854	.718	.759	.889	.500	.760	.750	.841	.813	.000	.871	.872
Cars & Peds	111	302	29	1	443	38	272	91	1	402	109	238	32	2	381	20	339	117	0	476	1702
% Cars & Peds	97.4	98.7	96.7	100	98.2	100	98.6	95.8	100	98.0	97.3	97.9	100	100	97.9	95.2	98.8	100	0	99.0	98.3
Trucks & Buses	3	4	1	0	8	0	4	4	0	8	3	5	0	0	8	1	4	0	0	5	29
% Trucks & Buses	2.6	1.3	3.3	0	1.8	0	1.4	4.2	0	2.0	2.7	2.1	0	0	2.1	4.8	1.2	0	0	1.0	1.7
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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N/S: Dyer Avenue  
 E/W: Cranston Street  
 City, State: Cranston, RI  
 Client: VAI/D. Roach

File Name : 05662AA  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	34	67	11	1	12	85	18	0	24	74	1	0	7	61	30	0	425
03:15 PM	32	61	9	0	11	73	22	0	21	76	0	0	6	67	38	2	418
03:30 PM	32	69	12	0	11	73	16	0	19	77	2	1	4	62	39	0	417
03:45 PM	31	79	15	0	13	68	17	0	25	59	4	0	6	71	31	3	422
<b>Total</b>	<b>129</b>	<b>276</b>	<b>47</b>	<b>1</b>	<b>47</b>	<b>299</b>	<b>73</b>	<b>0</b>	<b>89</b>	<b>286</b>	<b>7</b>	<b>1</b>	<b>23</b>	<b>261</b>	<b>138</b>	<b>5</b>	<b>1682</b>
04:00 PM	39	63	11	0	12	85	27	0	21	89	4	2	5	64	35	0	457
04:15 PM	25	65	10	0	12	69	20	1	26	78	4	0	6	51	37	1	405
04:30 PM	27	71	16	0	11	96	23	0	20	75	8	0	0	55	39	0	441
04:45 PM	30	80	9	0	13	77	21	0	23	65	2	0	7	61	39	0	427
<b>Total</b>	<b>121</b>	<b>279</b>	<b>46</b>	<b>0</b>	<b>48</b>	<b>327</b>	<b>91</b>	<b>1</b>	<b>90</b>	<b>307</b>	<b>18</b>	<b>2</b>	<b>18</b>	<b>231</b>	<b>150</b>	<b>1</b>	<b>1730</b>
05:00 PM	26	52	12	1	12	72	18	0	26	71	3	0	5	50	30	0	378
05:15 PM	32	56	15	0	17	81	23	0	23	73	7	0	2	43	25	0	397
05:30 PM	30	50	13	0	6	54	26	0	10	55	7	1	2	51	22	0	327
05:45 PM	17	63	14	0	11	48	25	0	26	54	2	0	7	47	20	0	334
<b>Total</b>	<b>105</b>	<b>221</b>	<b>54</b>	<b>1</b>	<b>46</b>	<b>255</b>	<b>92</b>	<b>0</b>	<b>85</b>	<b>253</b>	<b>19</b>	<b>1</b>	<b>16</b>	<b>191</b>	<b>97</b>	<b>0</b>	<b>1436</b>
<b>Grand Total</b>	<b>355</b>	<b>776</b>	<b>147</b>	<b>2</b>	<b>141</b>	<b>881</b>	<b>256</b>	<b>1</b>	<b>264</b>	<b>846</b>	<b>44</b>	<b>4</b>	<b>57</b>	<b>683</b>	<b>385</b>	<b>6</b>	<b>4848</b>
Apprch %	27.7	60.6	11.5	0.2	11	68.9	20	0.1	22.8	73.1	3.8	0.3	5	60.4	34	0.5	
Total %	7.3	16	3	0	2.9	18.2	5.3	0	5.4	17.5	0.9	0.1	1.2	14.1	7.9	0.1	
Cars & Peds	354	761	143	2	140	871	251	1	263	837	44	4	56	669	383	6	4785
% Cars & Peds	99.7	98.1	97.3	100	99.3	98.9	98	100	99.6	98.9	100	100	98.2	98	99.5	100	98.7
Trucks & Buses	1	14	4	0	1	10	5	0	1	9	0	0	1	13	2	0	61
% Trucks & Buses	0.3	1.8	2.7	0	0.7	1.1	2	0	0.4	1.1	0	0	1.8	1.9	0.5	0	1.3
Bikes by Direction	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
% Bikes by Direction	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	39	63	11	0	113	12	85	27	0	124	21	89	4	2	116	5	64	35	0	104	457
04:15 PM	25	65	10	0	100	12	69	20	1	102	26	78	4	0	108	6	51	37	1	95	405
04:30 PM	27	71	16	0	114	11	96	23	0	130	20	75	8	0	103	0	55	39	0	94	441
04:45 PM	30	80	9	0	119	13	77	21	0	111	23	65	2	0	90	7	61	39	0	107	427
Total Volume	121	279	46	0	446	48	327	91	1	467	90	307	18	2	417	18	231	150	1	400	1730
% App. Total	27.1	62.6	10.3	0		10.3	70	19.5	0.2		21.6	73.6	4.3	0.5		4.5	57.8	37.5	0.2		
PHF	.776	.872	.719	.000	.937	.923	.852	.843	.250	.898	.865	.862	.563	.250	.899	.643	.902	.962	.250	.935	.946
Cars & Peds	121	277	44	0	442	47	323	90	1	461	90	304	18	2	414	18	227	148	1	394	1711
% Cars & Peds	100	99.3	95.7	0	99.1	97.9	98.8	98.9	100	98.7	100	99.0	100	100	99.3	100	98.3	98.7	100	98.5	98.9
Trucks & Buses	0	2	2	0	4	1	4	1	0	6	0	3	0	0	3	0	4	2	0	6	19
% Trucks & Buses	0	0.7	4.3	0	0.9	2.1	1.2	1.1	0	1.3	0	1.0	0	0	0.7	0	1.7	1.3	0	1.5	1.1
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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N/S: Dyer Avenue  
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 Client: VAI/D. Roach

File Name : 05662AA  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	34	66	11	1	12	84	18	0	24	73	1	0	6	60	30	0	420
03:15 PM	32	60	9	0	11	72	20	0	21	76	0	0	6	65	38	2	412
03:30 PM	32	67	11	0	11	73	15	0	19	75	2	1	4	62	39	0	411
03:45 PM	31	76	14	0	13	65	17	0	25	59	4	0	6	70	31	3	414
Total	129	269	45	1	47	294	70	0	89	283	7	1	22	257	138	5	1657
04:00 PM	39	63	9	0	12	85	27	0	21	89	4	2	5	61	34	0	451
04:15 PM	25	64	10	0	11	68	19	1	26	77	4	0	6	51	37	1	400
04:30 PM	27	70	16	0	11	94	23	0	20	75	8	0	0	54	38	0	436
04:45 PM	30	80	9	0	13	76	21	0	23	63	2	0	7	61	39	0	424
Total	121	277	44	0	47	323	90	1	90	304	18	2	18	227	148	1	1711
05:00 PM	25	51	12	1	12	72	18	0	26	71	3	0	5	47	30	0	373
05:15 PM	32	54	15	0	17	81	22	0	22	71	7	0	2	43	25	0	391
05:30 PM	30	48	13	0	6	53	26	0	10	55	7	1	2	50	22	0	323
05:45 PM	17	62	14	0	11	48	25	0	26	53	2	0	7	45	20	0	330
Total	104	215	54	1	46	254	91	0	84	250	19	1	16	185	97	0	1417
Grand Total	354	761	143	2	140	871	251	1	263	837	44	4	56	669	383	6	4785
Apprch %	28.1	60.4	11.3	0.2	11.1	69	19.9	0.1	22.9	72.9	3.8	0.3	5	60.1	34.4	0.5	
Total %	7.4	15.9	3	0	2.9	18.2	5.2	0	5.5	17.5	0.9	0.1	1.2	14	8	0.1	

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	<b>39</b>	63	9	0	111	12	85	<b>27</b>	0	124	21	<b>89</b>	4	<b>2</b>	<b>116</b>	5	<b>61</b>	34	0	100	<b>451</b>
04:15 PM	25	64	10	0	99	11	68	19	<b>1</b>	99	<b>26</b>	77	4	0	107	6	51	37	<b>1</b>	95	400
04:30 PM	27	70	<b>16</b>	0	113	11	<b>94</b>	23	0	<b>128</b>	20	75	<b>8</b>	0	103	0	54	38	0	92	436
04:45 PM	30	<b>80</b>	9	0	<b>119</b>	<b>13</b>	76	21	0	110	23	63	2	0	88	<b>7</b>	61	<b>39</b>	0	<b>107</b>	424
Total Volume	121	277	44	0	442	47	323	90	1	461	90	304	18	2	414	18	227	148	1	394	1711
% App. Total	27.4	62.7	10	0		10.2	70.1	19.5	0.2		21.7	73.4	4.3	0.5		4.6	57.6	37.6	0.3		
PHF	.776	.866	.688	.000	.929	.904	.859	.833	.250	.900	.865	.854	.563	.250	.892	.643	.930	.949	.250	.921	.948

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

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 Client: VAI/D. Roach

File Name : 05662AA  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Trucks & Buses

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	5
03:15 PM	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	4
03:30 PM	0	2	1	0	0	0	1	0	0	2	0	0	0	0	0	0	6
03:45 PM	0	3	1	0	0	3	0	0	0	0	0	0	0	1	0	0	8
<b>Total</b>	0	6	2	0	0	5	3	0	0	3	0	0	1	3	0	0	23
04:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	3	1	0	6
04:15 PM	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	5
04:30 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	1	1	0	5
04:45 PM	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3
<b>Total</b>	0	2	2	0	1	4	1	0	0	3	0	0	0	4	2	0	19
05:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	5
05:15 PM	0	2	0	0	0	0	1	0	1	2	0	0	0	0	0	0	6
05:30 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	4
05:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
<b>Total</b>	1	6	0	0	0	1	1	0	1	3	0	0	0	6	0	0	19
<b>Grand Total</b>	1	14	4	0	1	10	5	0	1	9	0	0	1	13	2	0	61
Apprch %	5.3	73.7	21.1	0	6.2	62.5	31.2	0	10	90	0	0	6.2	81.2	12.5	0	
Total %	1.6	23	6.6	0	1.6	16.4	8.2	0	1.6	14.8	0	0	1.6	21.3	3.3	0	

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
03:30 PM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	6
03:45 PM	0	3	1	0	4	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	8
04:00 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	6
04:15 PM	0	1	0	0	1	1	1	1	0	3	0	1	0	0	1	0	0	0	0	0	5
<b>Total Volume</b>	0	6	4	0	10	1	4	2	0	7	0	3	0	0	3	0	4	1	0	5	25
<b>% App. Total</b>	0	60	40	0		14.3	57.1	28.6	0		0	100	0	0		0	80	20	0		
<b>PHF</b>	.000	.500	.500	.000	.625	.250	.333	.500	.000	.583	.000	.375	.000	.000	.375	.000	.333	.250	.000	.313	.781

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 03:30 PM

**Transportation Data Corporation**  
 Mario Perone, mperone1@verizon.net  
 tel (781) 587-0086 cell (781) 439-4999

N/S: Dyer Avenue  
 E/W: Cranston Street  
 City, State: Cranston, RI  
 Client: VAI/D. Roach

File Name : 05662AA  
 Site Code : 9575  
 Start Date : 1/10/2023  
 Page No : 1

Groups Printed- Bikes by Direction

Start Time	Dyer Avenue From North				Cranston Street From East				Dyer Avenue From South				Cranston Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
Total %	0	50	0	0	0	0	0	0	0	0	0	0	0	50	0	0	

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 03:00 PM

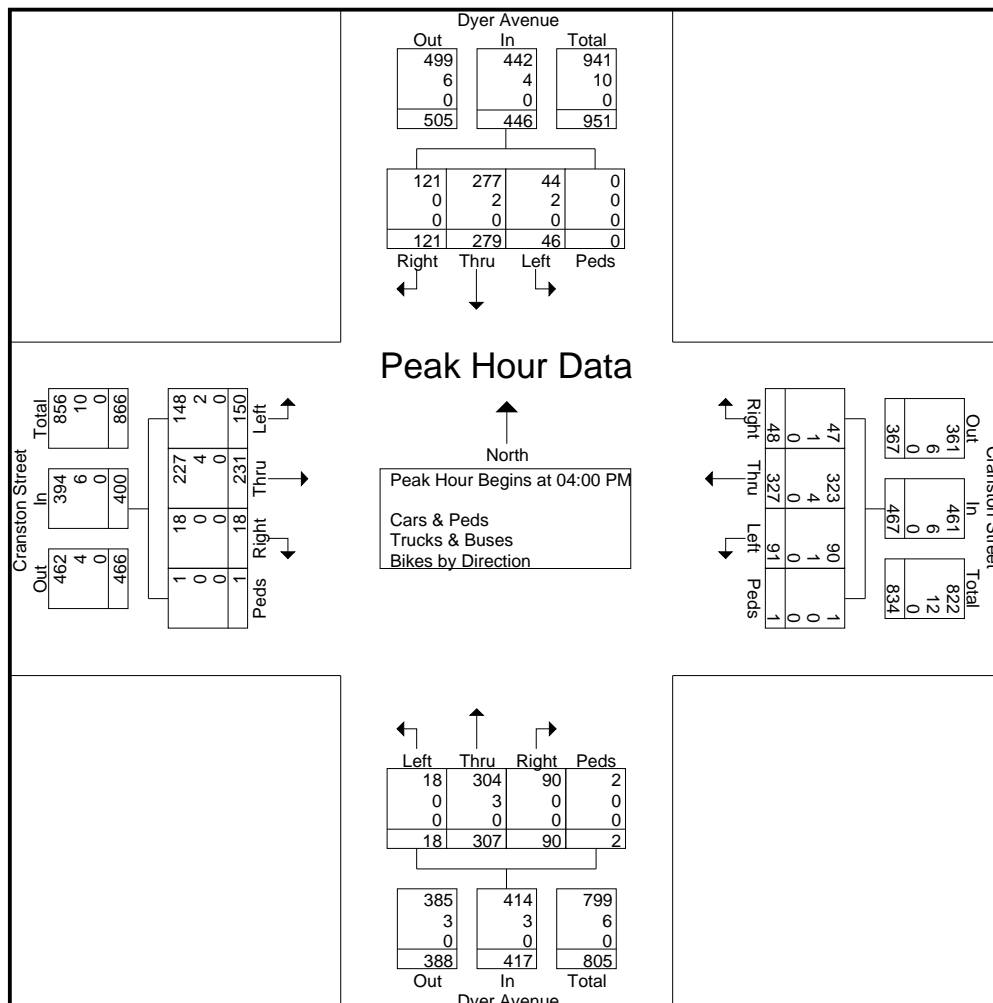
# Transportation Data Corporation

Mario Perone, [mperone1@verizon.net](mailto:mperone1@verizon.net)  
tel (781) 587-0086 cell (781) 439-4999

N/S: Dyer Avenue  
E/W: Cranston Street  
City, State: Cranston, RI  
Client: VAI/D. Roach

File Name : 05662AA  
Site Code : 9575  
Start Date : 1/10/2023  
Page No : 1

Start Time	Dyer Avenue From North					Cranston Street From East					Dyer Avenue From South					Cranston Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	39	63	11	0	113	12	85	27	0	124	21	89	4	2	116	5	64	35	0	104	457
04:15 PM	25	65	10	0	100	12	69	20	1	102	26	78	4	0	108	6	51	37	1	95	405
04:30 PM	27	71	16	0	114	11	96	23	0	130	20	75	8	0	103	0	55	39	0	94	441
04:45 PM	30	80	9	0	119	13	77	21	0	111	23	65	2	0	90	7	61	39	0	107	427
Total Volume	121	279	46	0	446	48	327	91	1	467	90	307	18	2	417	18	231	150	1	400	1730
% App. Total	27.1	62.6	10.3	0		10.3	70	19.5	0.2		21.6	73.6	4.3	0.5		4.5	57.8	37.5	0.2		
PHF	.776	.872	.719	.000	.937	.923	.852	.843	.250	.898	.865	.862	.563	.250	.899	.643	.902	.962	.250	.935	.946
Cars & Peds	121	277	44	0	442	47	323	90	1	461	90	304	18	2	414	18	227	148	1	394	1711
% Cars & Peds	100	99.3	95.7	0	99.1	97.9	98.8	98.9	100	98.7	100	99.0	100	100	99.3	100	98.3	98.7	100	98.5	98.9
Trucks & Buses	0	2	2	0	4	1	4	1	0	6	0	3	0	0	3	0	4	2	0	6	19
% Trucks & Buses	0	0.7	4.3	0	0.9	2.1	1.2	1.1	0	1.3	0	1.0	0	0	0.7	0	1.7	1.3	0	1.5	1.1
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





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## APPENDIX B – Traffic Crash Data

**January 2018 through December 2019 & January 2022 through December 2022**

Cranston Street at Dyer Avenue

Cranston Street

Dyer Avenue

**Crash Data Summary**

	Year			Total	Average per Year
	2018	2019	2022		
<b>Intersections</b>					
Cranston Street at Dyer Avenue	13	15	9	37	12
<b>Roadways</b>					
Cranston Street	3	0	1	4	1
Dyer Avenue	3	2	1	6	2
<b>Total</b>	<b>19</b>	<b>17</b>	<b>11</b>	<b>47</b>	<b>15</b>

**Cranston Street at Dyer Avenue**

	2018	2019	2022	Total	Percent
<b>Collision Type</b>					
Rear End	4	5	1	<b>10</b>	27%
Angle	5	4	6	<b>15</b>	41%
Head-On	2	1	0	<b>3</b>	8%
Pedestrian	0	0	0	<b>0</b>	0%
Sideswipe, Same Direction	2	4	2	<b>8</b>	22%
Sideswipe, Opposite Direction	0	0	0	<b>0</b>	0%
Rear-to-Side	0	0	0	<b>0</b>	0%
Rear-to-Rear	0	0	0	<b>0</b>	0%
Collision with Object	0	1	0	<b>1</b>	3%
Collision with Deer	0	0	0	<b>0</b>	0%
Other	0	0	0	<b>0</b>	0%
Unknown	0	0	0	<b>0</b>	0%
<b>Crash Severity</b>					
Property	0	0	0	<b>0</b>	0%
Injury	0	0	0	<b>0</b>	0%
Fatal	0	0	0	<b>0</b>	0%
<b>Light Condition</b>					
Daylight	12	10	6	<b>28</b>	76%
Dawn	0	0	1	<b>1</b>	3%
Dusk	0	0	0	<b>0</b>	0%
Dark - Lighted	1	5	2	<b>8</b>	22%
Dark - Not Lighted	0	0	0	<b>0</b>	0%
Dark - Unknown Lighting	0	0	0	<b>0</b>	0%
Other	0	0	0	<b>0</b>	0%
Unknown	0	0	0	<b>0</b>	0%
<b>Road Condition</b>					
Dry	12	13	8	<b>33</b>	89%
Wet	1	2	1	<b>4</b>	11%
Snow	0	0	0	<b>0</b>	0%
Slush	0	0	0	<b>0</b>	0%
Ice/Frost	0	0	0	<b>0</b>	0%
Water	0	0	0	<b>0</b>	0%
Sand	0	0	0	<b>0</b>	0%
Mud, Dirt, Gravel	0	0	0	<b>0</b>	0%
Oil	0	0	0	<b>0</b>	0%
Other	0	0	0	<b>0</b>	0%
Unknown	0	0	0	<b>0</b>	0%
<b>Hour of Day</b>					
6:00 AM - 9:00 AM	1	2	1	<b>4</b>	11%
9:00 AM - 3:00 PM	7	5	2	<b>14</b>	38%
3:00 PM - 6:00 PM	3	3	4	<b>10</b>	27%
6:00 PM - 6:00 AM	2	5	2	<b>9</b>	24%
Total Crashes:	<b>13</b>	<b>15</b>	<b>9</b>	<b>37</b>	

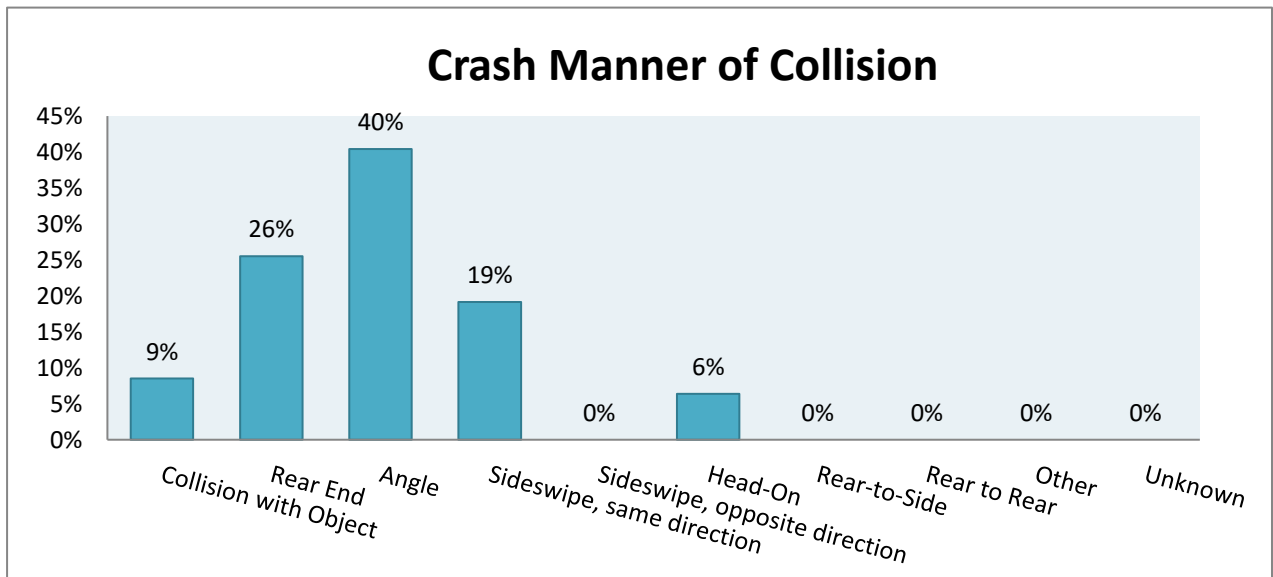
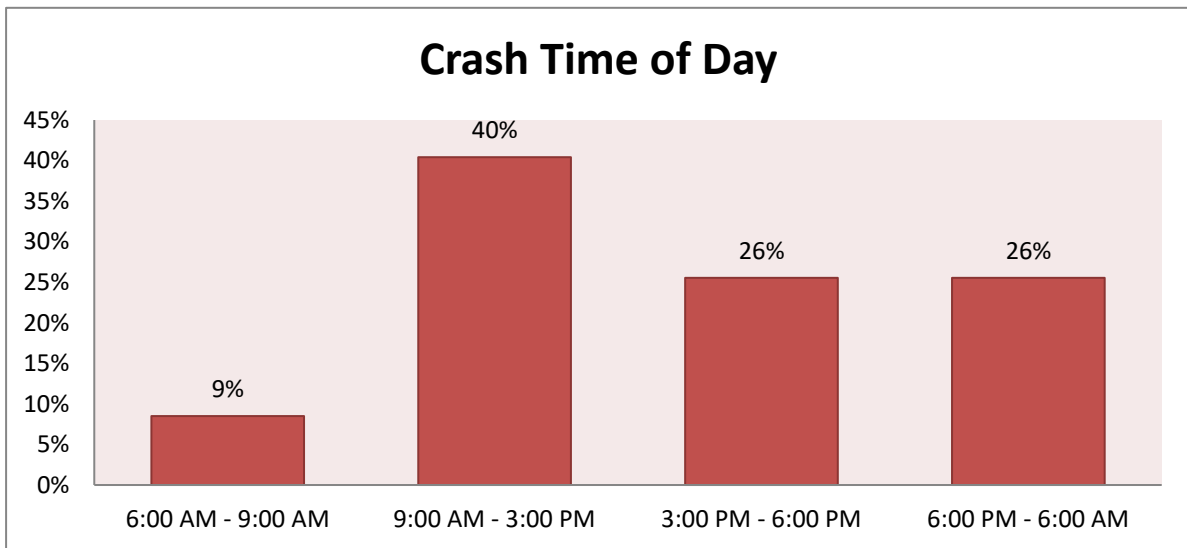
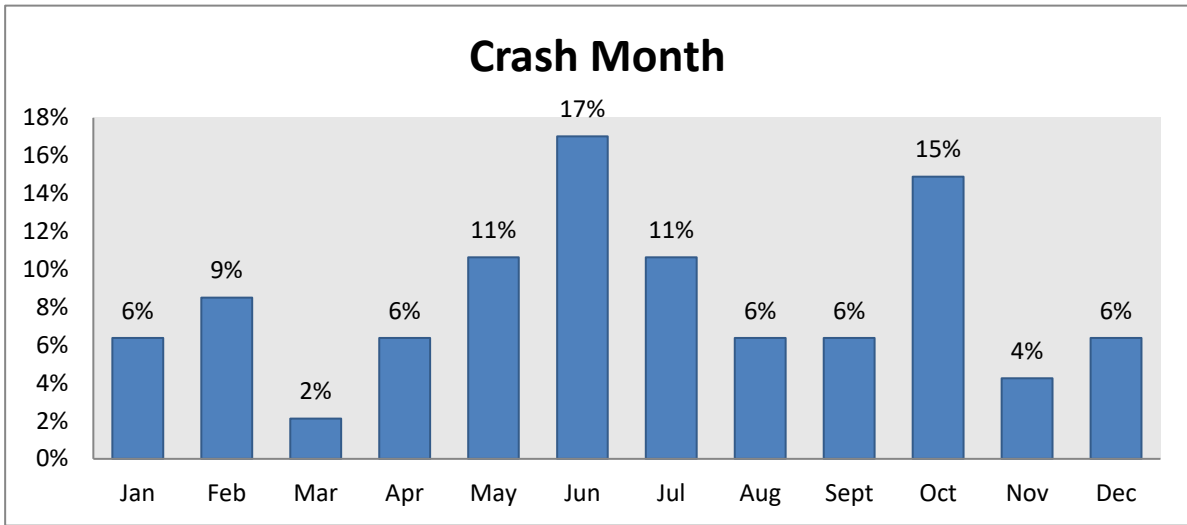
**Cranston Street**

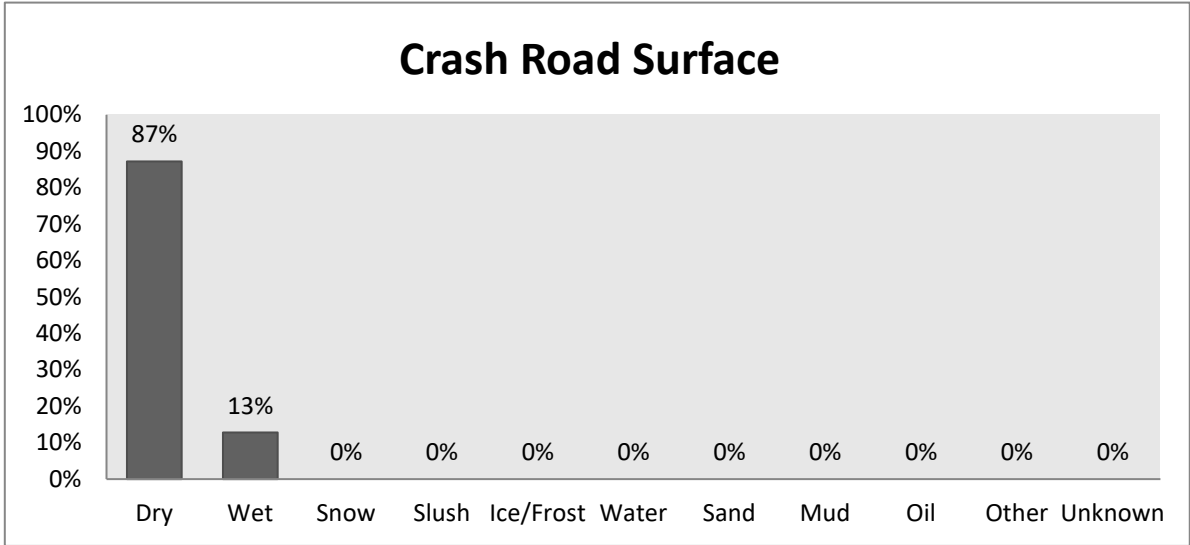
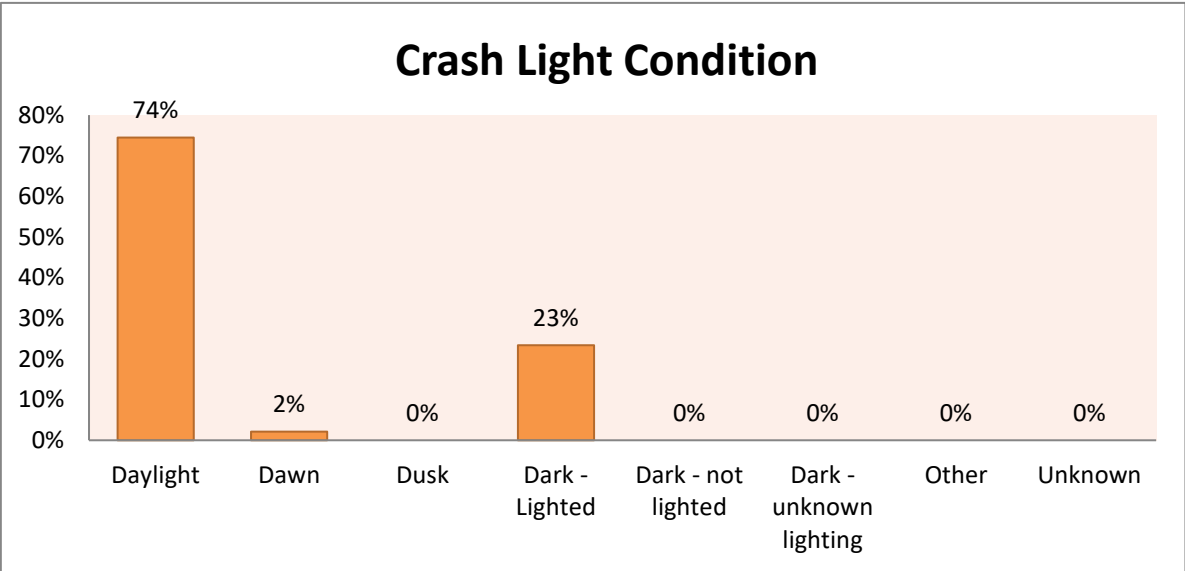
	2018	2019	2022	Total	Percent
<b>Collision Type</b>					
Rear End	1	0	0	1	25%
Angle	0	0	1	1	25%
Head-On	0	0	0	0	0%
Pedestrian	0	0	0	0	0%
Sideswipe, Same Direction	1	0	0	1	25%
Sideswipe, Opposite Direction	0	0	0	0	0%
Rear-to-Side	0	0	0	0	0%
Rear-to-Rear	0	0	0	0	0%
Collision with Object	1	0	0	1	25%
Collision with Deer	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Crash Severity</b>					
Property	0	0	0	0	0%
Injury	0	0	0	0	0%
Fatal	0	0	0	0	0%
<b>Light Condition</b>					
Daylight	3	0	1	4	100%
Dawn	0	0	0	0	0%
Dusk	0	0	0	0	0%
Dark - Lighted	0	0	0	0	0%
Dark - Not Lighted	0	0	0	0	0%
Dark - Unknown Lighting	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Road Condition</b>					
Dry	2	0	1	3	75%
Wet	1	0	0	1	25%
Snow	0	0	0	0	0%
Slush	0	0	0	0	0%
Ice/Frost	0	0	0	0	0%
Water	0	0	0	0	0%
Sand	0	0	0	0	0%
Mud, Dirt, Gravel	0	0	0	0	0%
Oil	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Hour of Day</b>					
6:00 AM - 9:00 AM	0	0	0	0	0%
9:00 AM - 3:00 PM	1	0	1	2	50%
3:00 PM - 6:00 PM	2	0	0	2	50%
6:00 PM - 6:00 AM	0	0	0	0	0%
<b>Total Crashes:</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>4</b>	

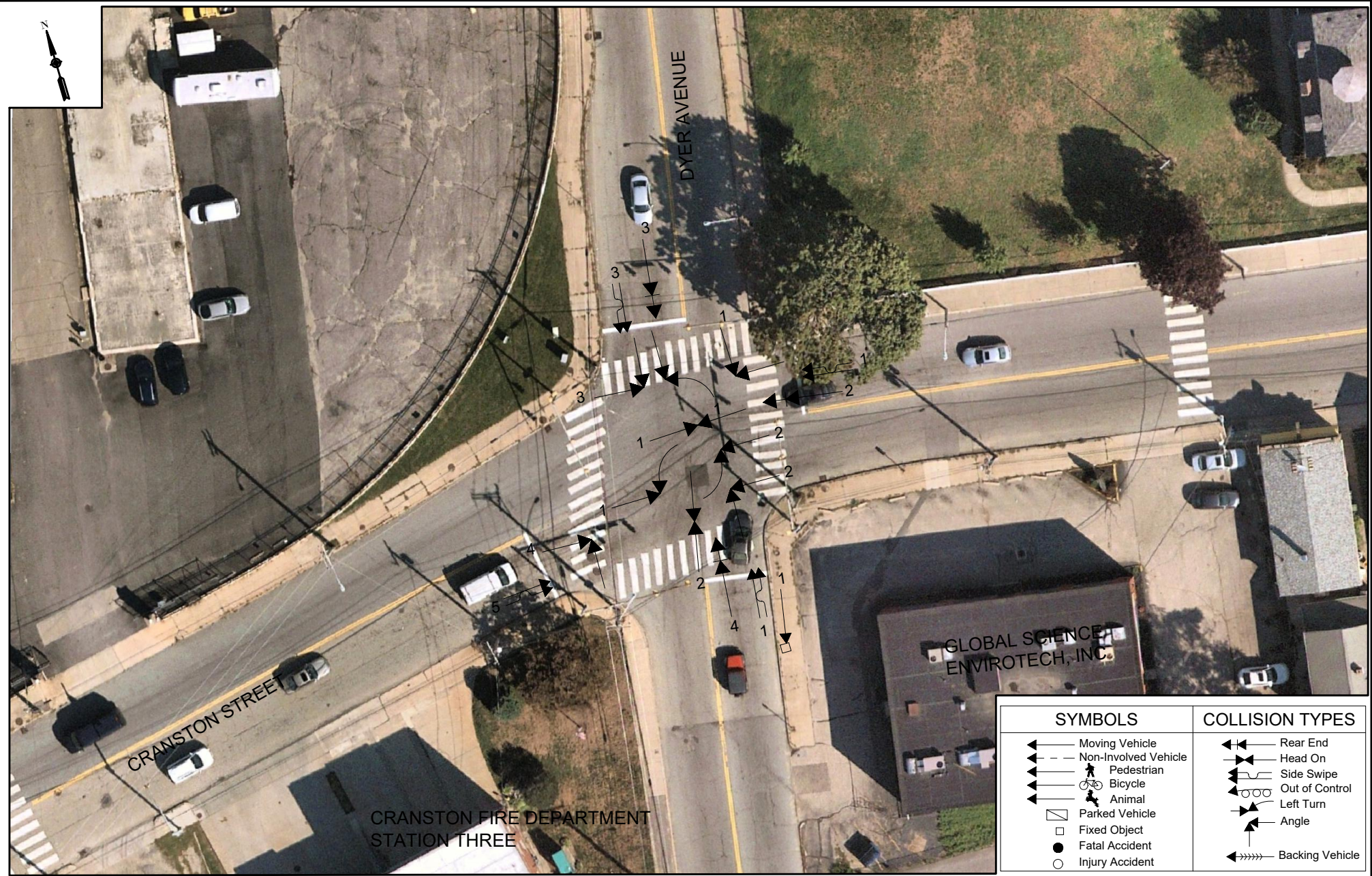
**Dyer Avenue**

	2018	2019	2022	Total	Percent
<b>Collision Type</b>					
Rear End	0	1	0	1	17%
Angle	3	0	0	3	50%
Head-On	0	0	0	0	0%
Pedestrian	0	0	0	0	0%
Sideswipe, Same Direction	0	0	0	0	0%
Sideswipe, Opposite Direction	0	0	0	0	0%
Rear-to-Side	0	0	0	0	0%
Rear-to-Rear	0	0	0	0	0%
Collision with Object	0	1	1	2	33%
Collision with Deer	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Crash Severity</b>					
Property	0	0	0	0	0%
Injury	0	0	0	0	0%
Fatal	0	0	0	0	0%
<b>Light Condition</b>					
Daylight	2	1	0	3	50%
Dawn	0	0	0	0	0%
Dusk	0	0	0	0	0%
Dark - Lighted	1	1	1	3	50%
Dark - Not Lighted	0	0	0	0	0%
Dark - Unknown Lighting	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Road Condition</b>					
Dry	3	2	0	5	83%
Wet	0	0	1	1	17%
Snow	0	0	0	0	0%
Slush	0	0	0	0	0%
Ice/Frost	0	0	0	0	0%
Water	0	0	0	0	0%
Sand	0	0	0	0	0%
Mud, Dirt, Gravel	0	0	0	0	0%
Oil	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
<b>Hour of Day</b>					
6:00 AM - 9:00 AM	0	0	0	0	0%
9:00 AM - 3:00 PM	2	1	0	3	50%
3:00 PM - 6:00 PM	0	0	0	0	0%
6:00 PM - 6:00 AM	1	1	1	3	50%
<b>Total Crashes:</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	

### Crash Data Summary Charts







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**Cranston Street Mixed-Use  
Cranston Street at Dyer Avenue**

Cranston, RI

**Collision Map  
Sheet 1 of 1  
(Scale: 1" = 40')**



# APPENDIX C – Trip Generation

---

## **ITE Trip Generation Summary**

### **Site Trip Distribution**

#### **ITE Land Use Code**

ITE Land Use Code 220 – Multifamily Housing (Low-Rise)

ITE Land Use Code 931 – Fine Dining Restaurant

C

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**ITE Trip Generation Summary**

## Trip Generation Summary

### Summary;

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
<i><u>Weekday AM Peak Hour</u></i>				
ITE Land Use Code 220	Residential - Multifamily Housing	17	54	71
ITE Land Use Code 931	Services - Fine Dining Restaurant	<u>0</u>	<u>0</u>	<u>0</u>
	TOTAL	17	54	71
<i><u>Weekday PM Peak Hour</u></i>				
ITE Land Use Code 220	Residential - Multifamily Housing	56	32	88
ITE Land Use Code 931	Services - Fine Dining Restaurant	<u>19</u>	<u>8</u>	<u>27</u>
	TOTAL	75	40	115

## Calculations;

ITE Land Use Code 220 Residential - Multifamily Housing (Low Rise) (156 Units)

Independent Variable (X) = Dwelling Units  $X = 156$

AM Peak Directional Distribution: 24% Entering 76% Exiting

$$\begin{array}{rcl}
 T & = & 0.31 \times (X) \quad + \quad 22.85 \quad \text{Enter:} \quad 17 \\
 T & = & 0.31 \times 156 \quad + \quad 22.85 \quad \text{Exit:} \quad 54 \\
 T & = & 71 \quad \text{Total:} \quad 71
 \end{array}$$

PM Peak Directional Distribution: 63% Entering 37% Exiting

$$\begin{array}{rcl}
 T & = & 0.43 \times (X) \quad + \quad 20.55 \quad \text{Enter:} \quad 56 \\
 T & = & 0.43 \times 156 \quad + \quad 20.55 \quad \text{Exit:} \quad 32 \\
 T & = & 88 \quad \text{Total:} \quad 88
 \end{array}$$

ITE Land Use Code 931 Services - Fine Dining Restaurant 931 96 Seats

Independent Variable (X) = Seats  $X = 96$

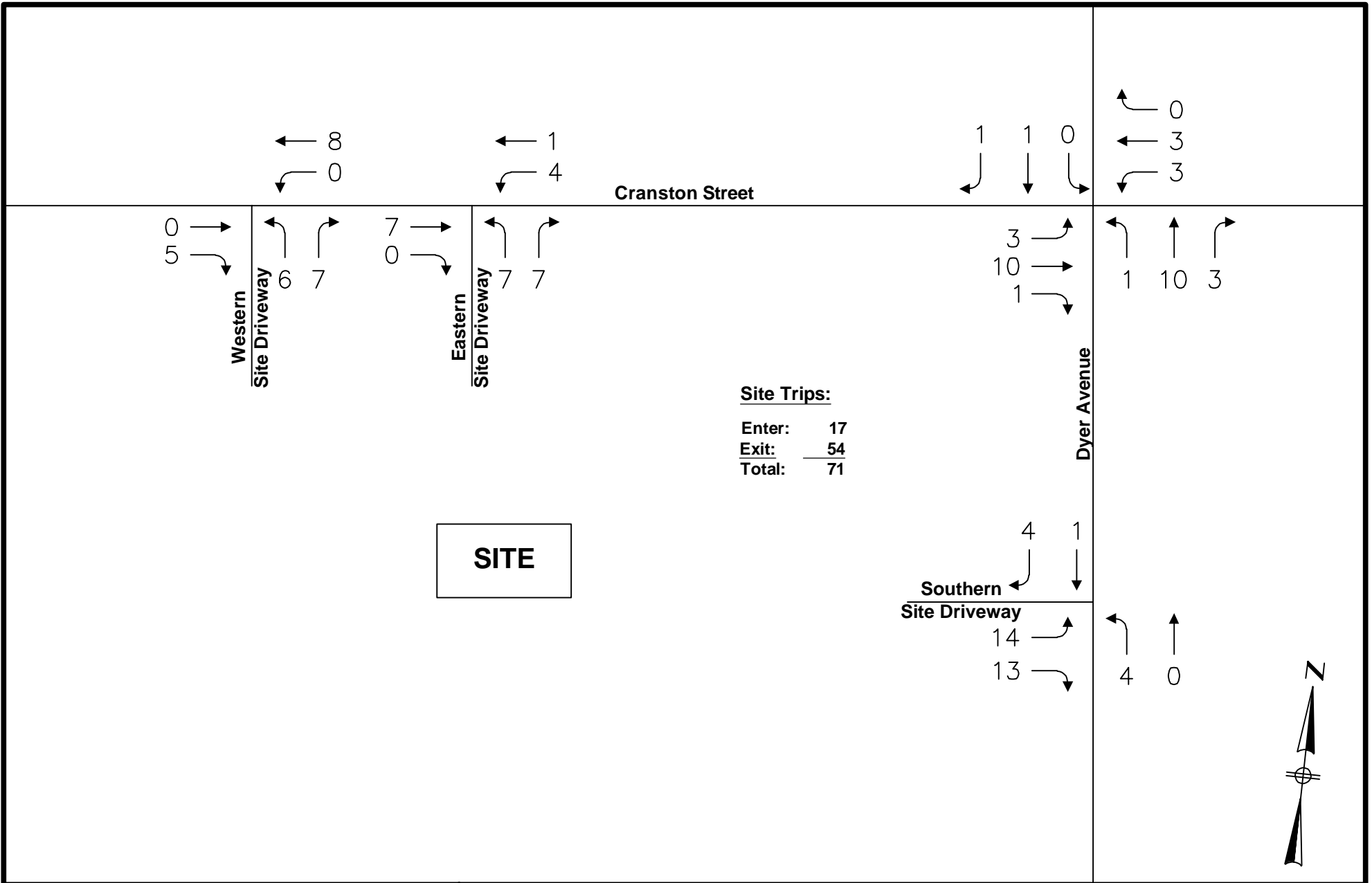
PM Peak Directional Distribution: 67% Entering 33% Exiting

$$\begin{array}{rcl}
 T & = & 0.28 \times (X) \quad \text{Enter:} \quad 19 \\
 T & = & 0.28 \times 96 \quad \text{Exit:} \quad 8 \\
 T & = & 27 \quad \text{Total:} \quad 27
 \end{array}$$

C

---

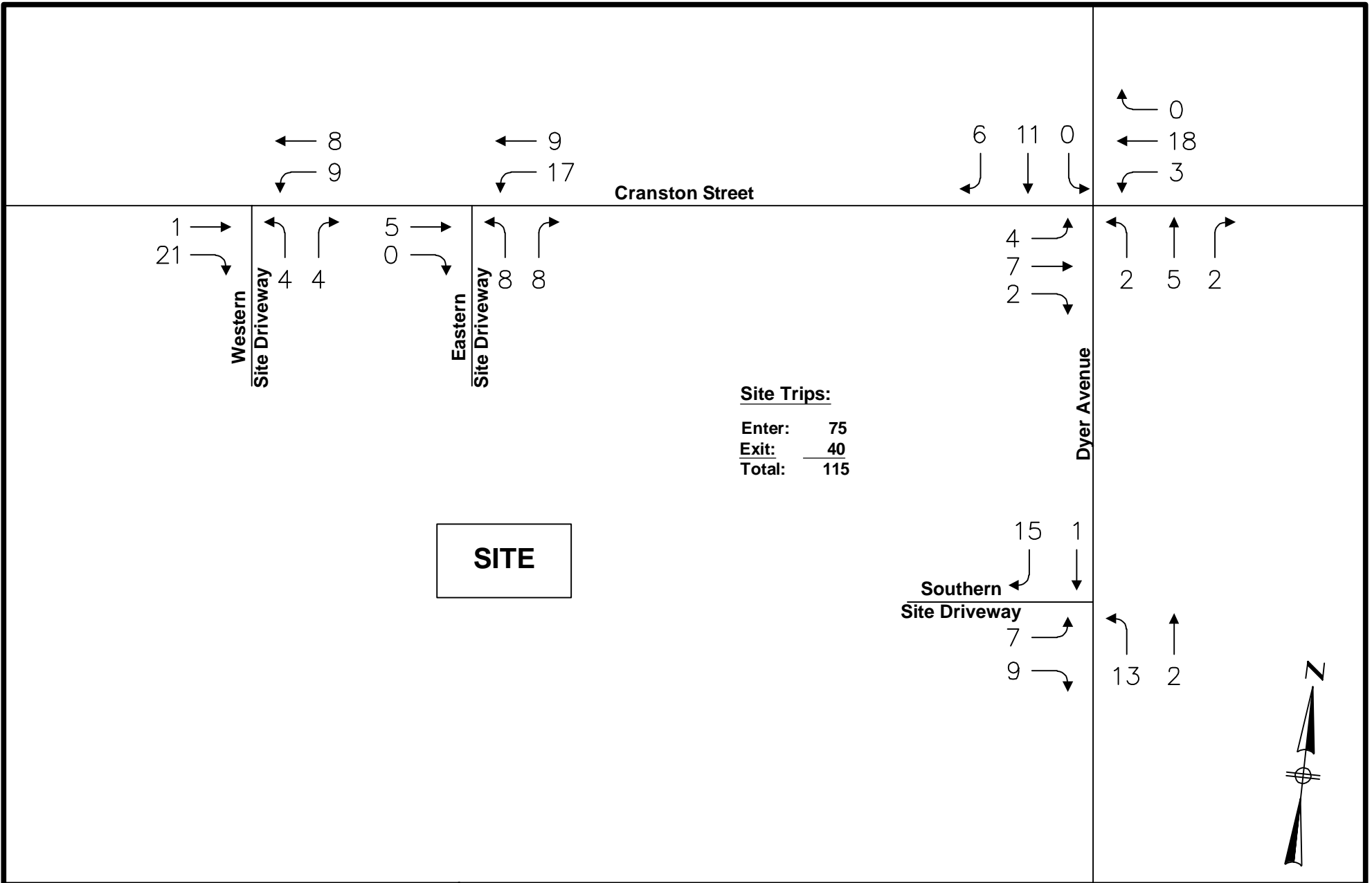
**Site Trip Distribution**



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SITE TRIP DISTRIBUTION  
WEEKDAY AM PEAK HOUR

PROPOSED MIXED-USE DEVELOPMENT  
CRANSTON, RHODE ISLAND



www.BETA-inc.com

**SITE TRIP DISTRIBUTION  
WEEKDAY PM PEAK HOUR**

**PROPOSED MIXED-USE DEVELOPMENT  
CRANSTON, RHODE ISLAND**

**C**

**ITE Land Use Code**

ITE Land Use Code 220 – Multifamily Housing (Low-Rise)

ITE Land Use Code 931 – Fine Dining Restaurant



ITE Land Use Code 220 – Multifamily Housing (Low-Rise)

# Land Use: 220

## Multifamily Housing (Low-Rise)

---

### Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

### Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is  $\frac{1}{2}$  mile or less.

### Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

***It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).***

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

### **Source Numbers**

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

# Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

## Vehicle Trip Ends vs: Dwelling Units

On a: **Weekday,**

**Peak Hour of Adjacent Street Traffic,**

**One Hour Between 7 and 9 a.m.**

**Setting/Location: General Urban/Suburban**

Number of Studies: 49

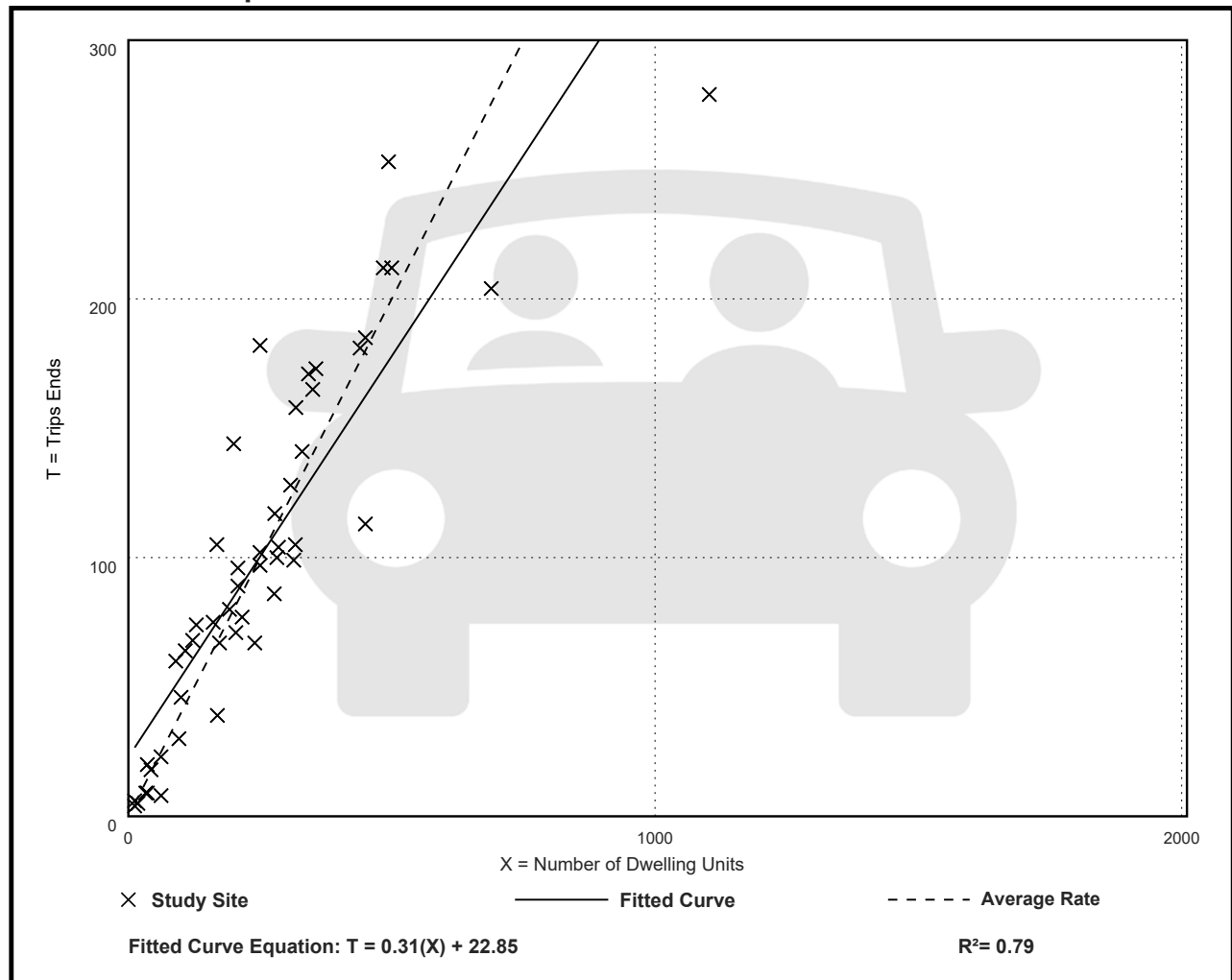
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

## Data Plot and Equation



# Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

## Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

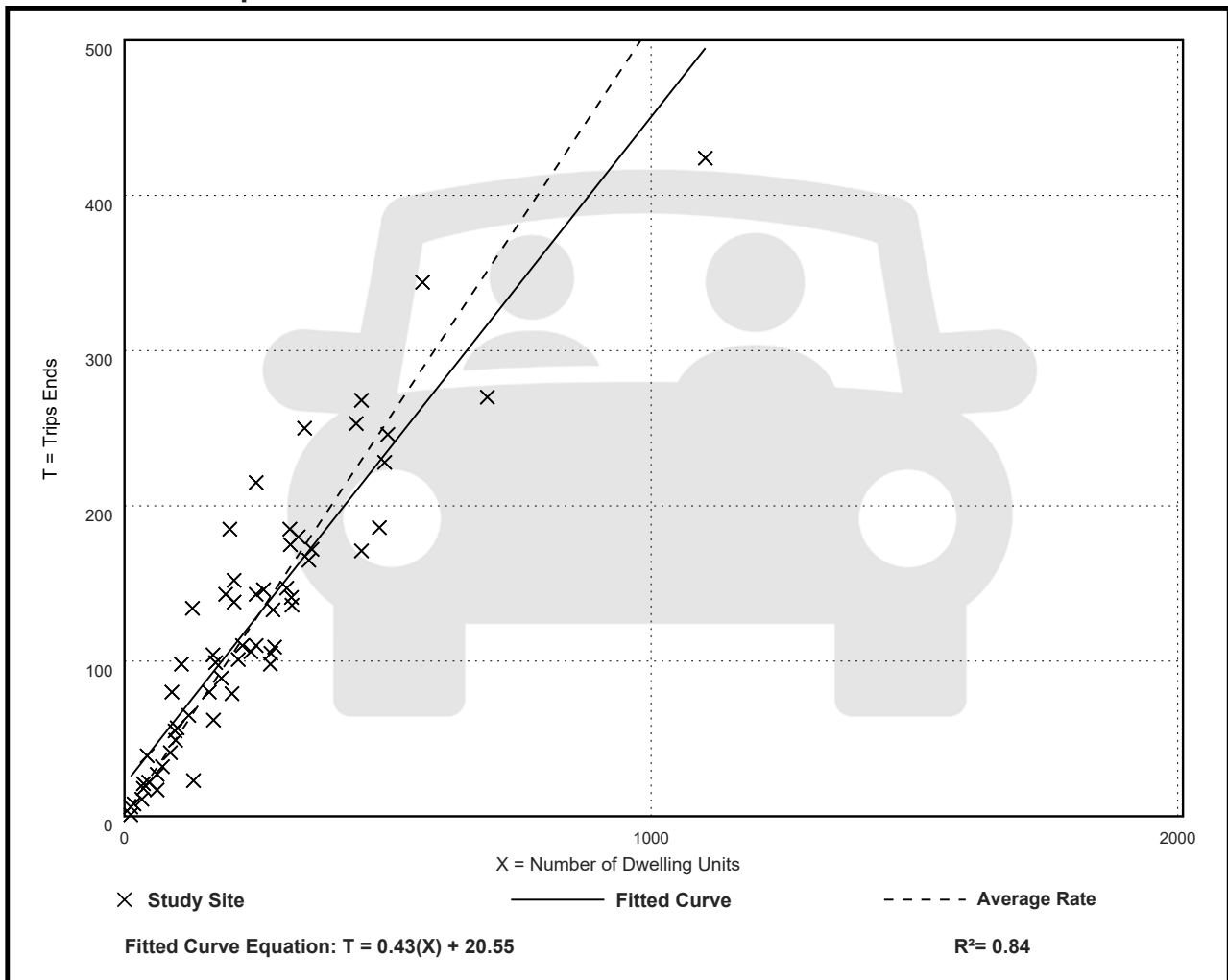
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

## Data Plot and Equation



ITE Land Use Code 931 – Fine Dining Restaurant

# Land Use: 931

## Fine Dining Restaurant

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### Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

### Additional Data

If the fine dining restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

### Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976, 1053

# Fine Dining Restaurant (931)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**

**On a: Weekday,**

**Peak Hour of Adjacent Street Traffic,**

**One Hour Between 4 and 6 p.m.**

**Setting/Location: General Urban/Suburban**

Number of Studies: 19

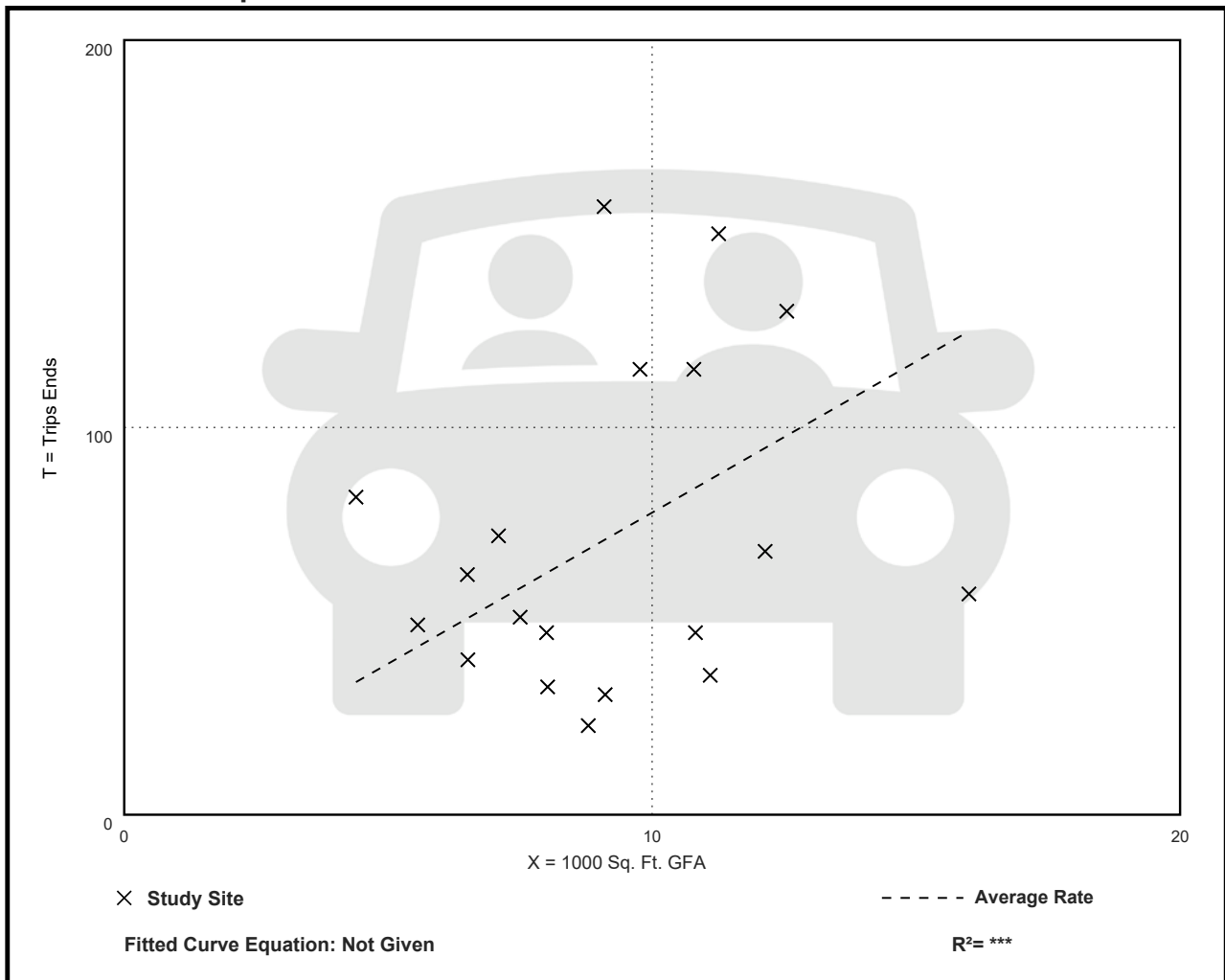
Avg. 1000 Sq. Ft. GFA: 9

Directional Distribution: 67% entering, 33% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.80	2.62 - 18.68	4.49

## Data Plot and Equation





# APPENDIX D – Operational Analysis

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## **Existing Conditions**

Cranston Street at Dyer Avenue

## **Future No Build Conditions**

Cranston Street at Dyer Avenue

## **Future Build Conditions**

Cranston Street at Dyer Avenue

Cranston Street at Eastern Driveway

Cranston Street at Western Driveway

Dyer Avenue at Southern Driveway

D

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**Existing Weekday AM / PM Peak Hour**

Cranston Street at Dyer Avenue

Cranston Street at Dyer Avenue

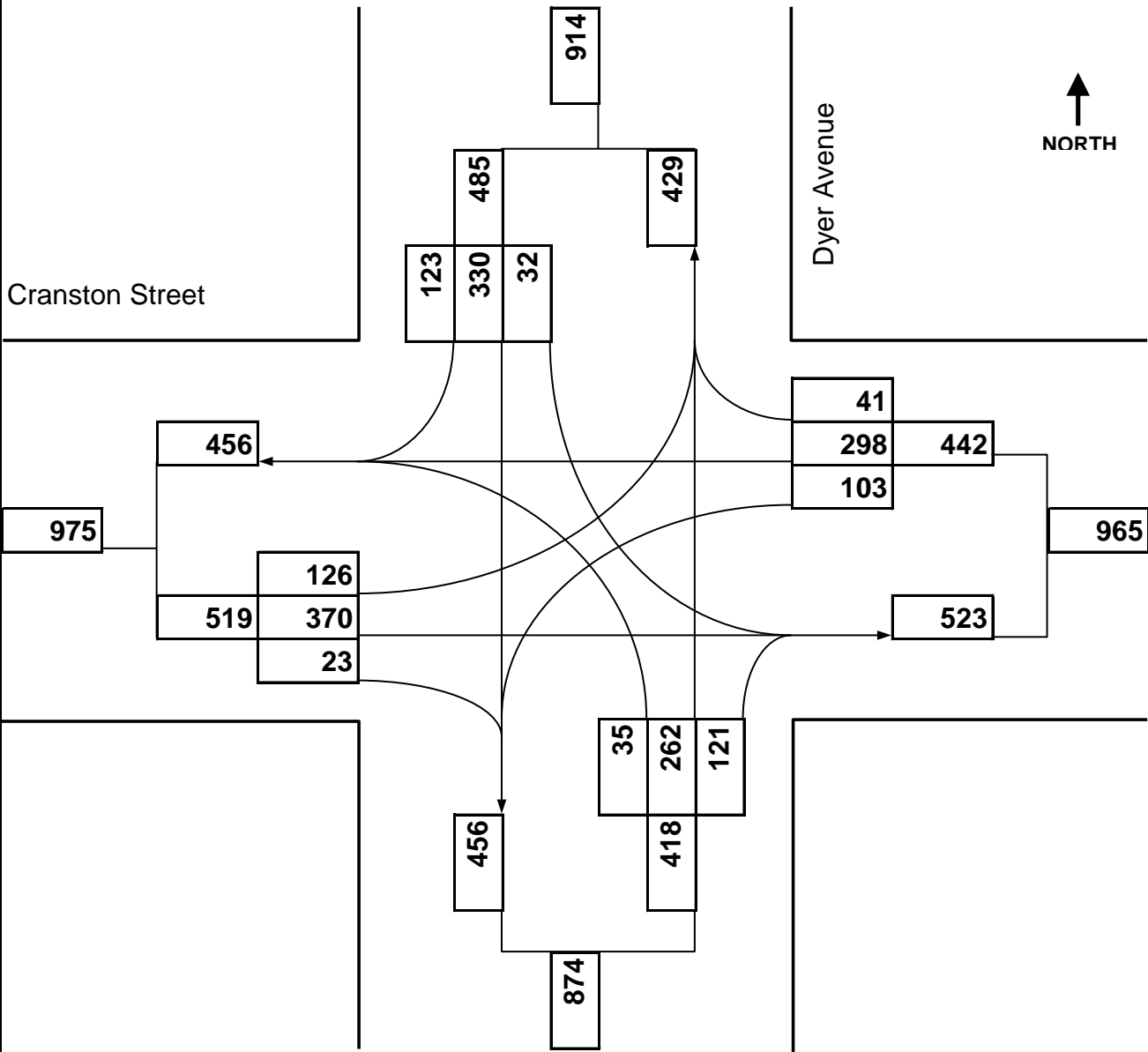


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### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** AM Peak Hour

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 7:30 AM - 8:30 AM  
**Future:** n/a



Cranston Street Mixed Use  
3: Dyer Avenue & Cranston Street

Cranston, RI  
Existing AM Peak

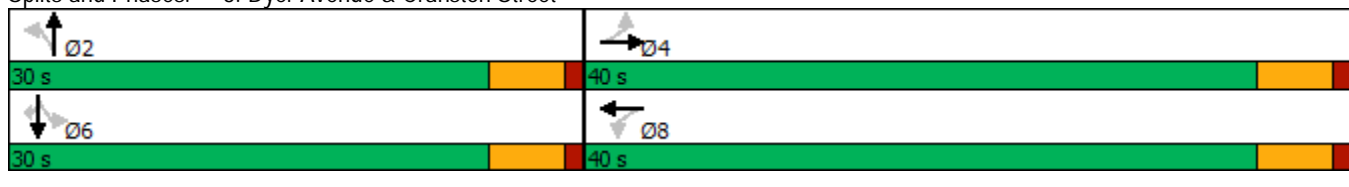


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	126	370	23	103	298	41	35	262	121	32	330	123
Future Volume (vph)	126	370	23	103	298	41	35	262	121	32	330	123
Satd. Flow (prot)	0	1847	0	0	1823	0	0	1770	0	0	1870	1568
Flt Permitted		0.767			0.765			0.900			0.933	
Satd. Flow (perm)	0	1434	0	0	1410	0	0	1599	0	0	1752	1568
Satd. Flow (RTOR)		5			10			33				114
Lane Group Flow (vph)	0	596	0	0	508	0	0	480	0	0	416	141
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)		5.0			5.0			5.0			5.0	5.0
Act Effct Green (s)		29.5			29.5			21.5			21.5	21.5
Actuated g/C Ratio		0.48			0.48			0.35			0.35	0.35
v/c Ratio		0.86			0.74			0.83			0.68	0.23
Control Delay		29.7			21.2			32.5			24.8	6.3
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		29.7			21.2			32.5			24.8	6.3
LOS		C			C			C			C	A
Approach Delay		29.7			21.2			32.5			20.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		204			157			171			148	7
Queue Length 95th (ft)		#376			255			#308			230	38
Internal Link Dist (ft)		393			584			319			458	
Turn Bay Length (ft)												80
Base Capacity (vph)		857			845			700			746	733
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.70			0.60			0.69			0.56	0.19

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 61.5  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 25.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 92.5%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



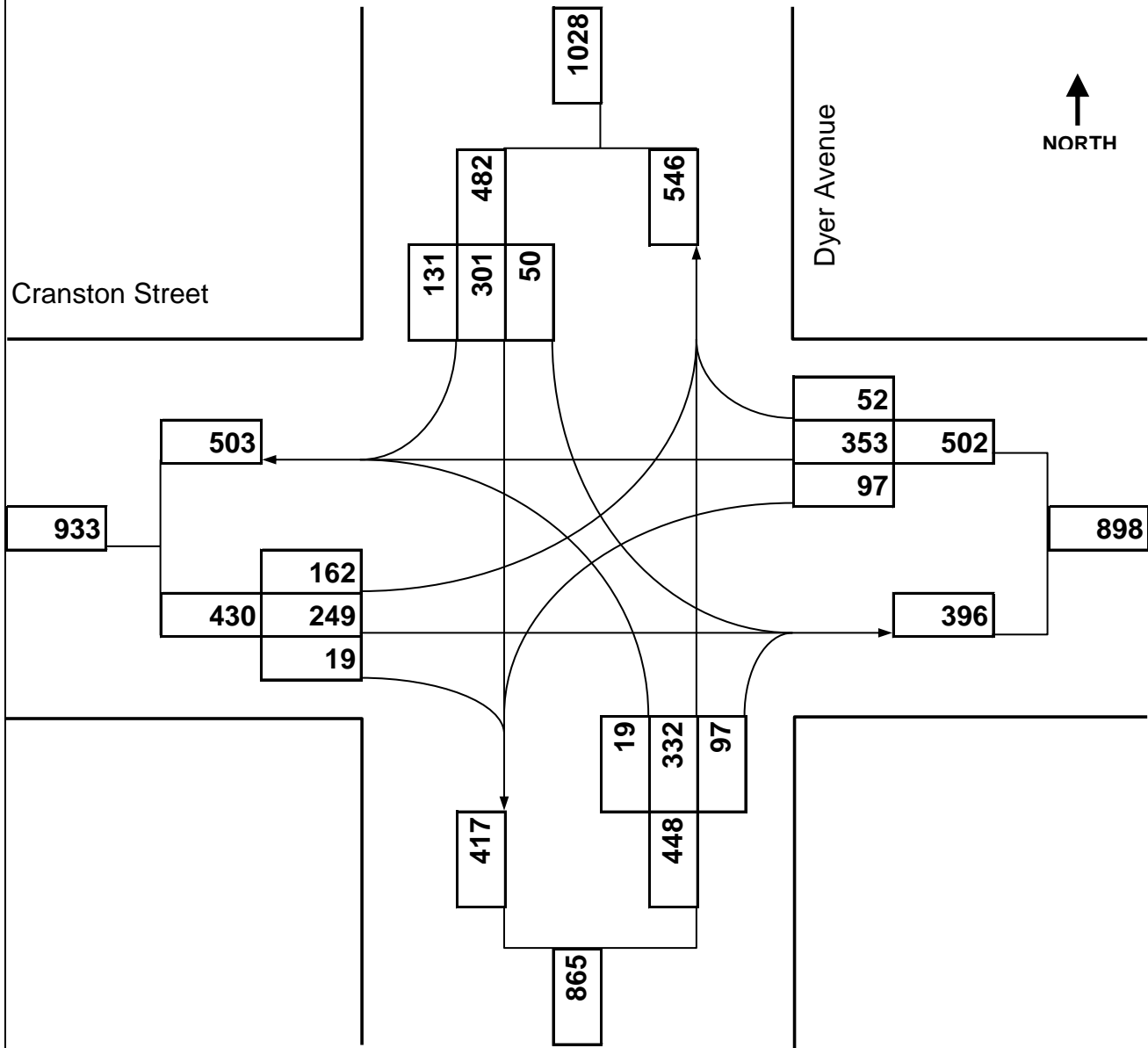


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### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** PM Peak Hour

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** n/a



Cranston Street Mixed Use  
3: Dyer Avenue & Cranston Street

Cranston, RI  
Existing PM Peak

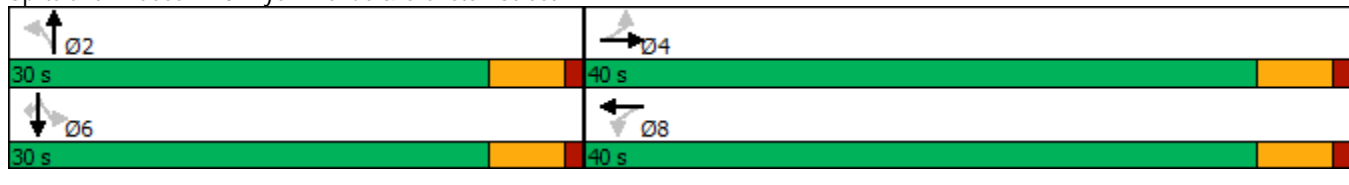


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	162	249	19	97	353	52	19	332	97	50	301	131
Future Volume (vph)	162	249	19	97	353	52	19	332	97	50	301	131
Satd. Flow (prot)	0	1823	0	0	1834	0	0	1819	0	0	1860	1615
Flt Permitted		0.649			0.851			0.975			0.875	
Satd. Flow (perm)	0	1206	0	0	1576	0	0	1777	0	0	1639	1579
Satd. Flow (RTOR)		5			12			22				125
Lane Group Flow (vph)	0	453	0	0	529	0	0	471	0	0	370	138
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)		5.0			5.0			5.0			5.0	5.0
Act Effct Green (s)		25.8			25.8			19.1			19.1	19.1
Actuated g/C Ratio		0.46			0.46			0.34			0.34	0.34
v/c Ratio		0.81			0.72			0.76			0.66	0.22
Control Delay		26.5			18.6			25.9			23.5	5.3
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		26.5			18.6			25.9			23.5	5.3
LOS		C			B			C			C	A
Approach Delay		26.5			18.6			25.9			18.5	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)		125			135			135			107	3
Queue Length 95th (ft)		#303			262			#274			216	37
Internal Link Dist (ft)		393			584			319			458	
Turn Bay Length (ft)												80
Base Capacity (vph)		812			1063			872			794	829
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.56			0.50			0.54			0.47	0.17

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 55.7  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 22.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 89.9%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



D

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**Future 2028 No-Build Weekday AM / PM Peak Hour**

Cranston Street at Dyer Avenue



Cranston Street at Dyer Avenue

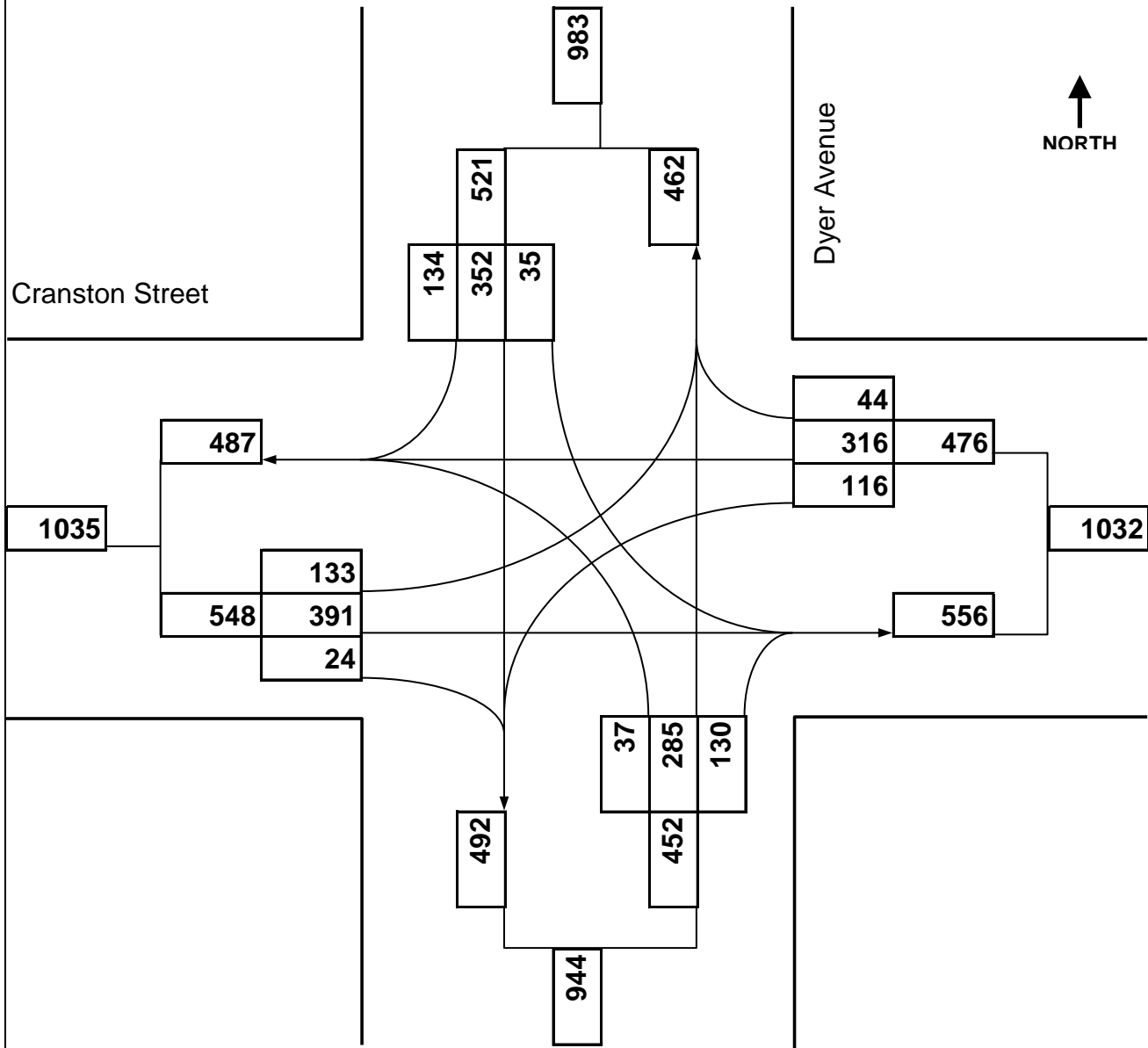


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### Turning Movement Diagram

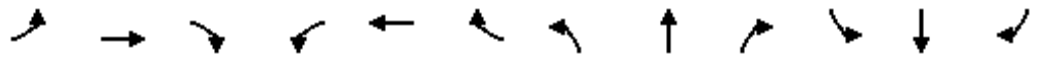
**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** N/A

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 7:30 AM - 8:30 AM  
**Future:** 2028 No Build



Cranston Street Mixed Use  
3: Dyer Avenue & Cranston Street

Cranston, RI  
No Build AM Peak

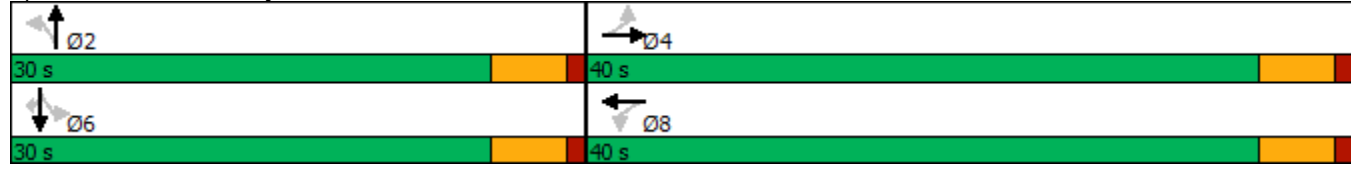


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	133	391	24	116	316	44	37	285	130	35	352	134
Future Volume (vph)	133	391	24	116	316	44	37	285	130	35	352	134
Satd. Flow (prot)	0	1847	0	0	1819	0	0	1770	0	0	1870	1568
Flt Permitted		0.742			0.727			0.845			0.921	
Satd. Flow (perm)	0	1387	0	0	1338	0	0	1502	0	0	1729	1568
Satd. Flow (RTOR)		5			11			32				116
Lane Group Flow (vph)	0	630	0	0	547	0	0	520	0	0	445	154
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)		5.0			5.0			5.0			5.0	5.0
Act Effct Green (s)		32.8			32.8			24.6			24.6	24.6
Actuated g/C Ratio		0.49			0.49			0.36			0.36	0.36
v/c Ratio		0.93			0.83			0.92			0.71	0.24
Control Delay		39.8			28.3			44.7			26.6	6.6
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		39.8			28.3			44.7			26.6	6.6
LOS		D			C			D			C	A
Approach Delay		39.8			28.3			44.7			21.5	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)		230			182			200			162	11
Queue Length 95th (ft)		#422			#346			#367			252	43
Internal Link Dist (ft)		393			584			319			458	
Turn Bay Length (ft)												80
Base Capacity (vph)		727			704			580			645	657
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.87			0.78			0.90			0.69	0.23

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 67.4  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 33.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 97.1%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



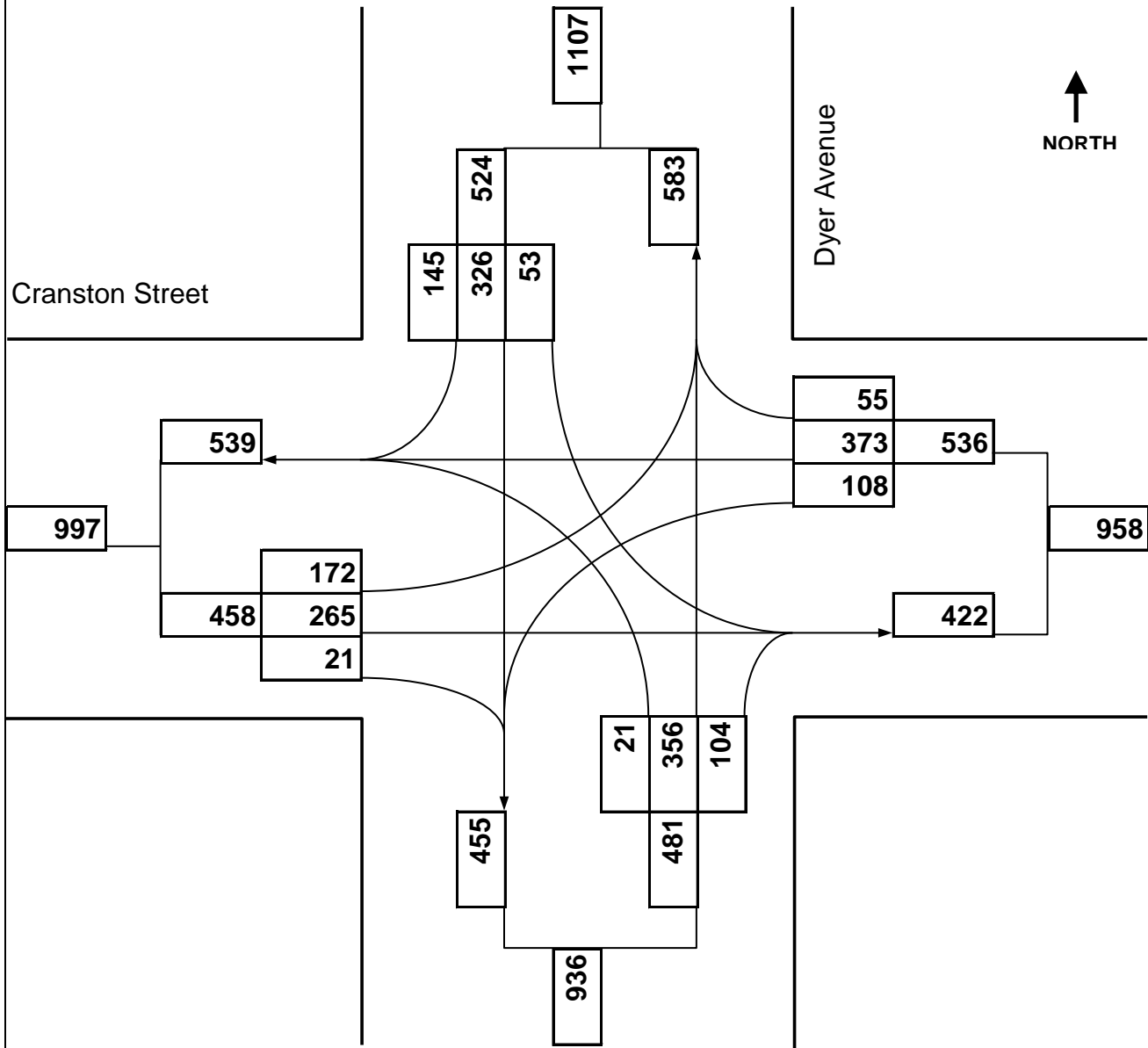


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### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** N/A

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** 2028 No Build



Cranston Street Mixed Use  
3: Dyer Avenue & Cranston Street

Cranston, RI  
No Build PM Peak

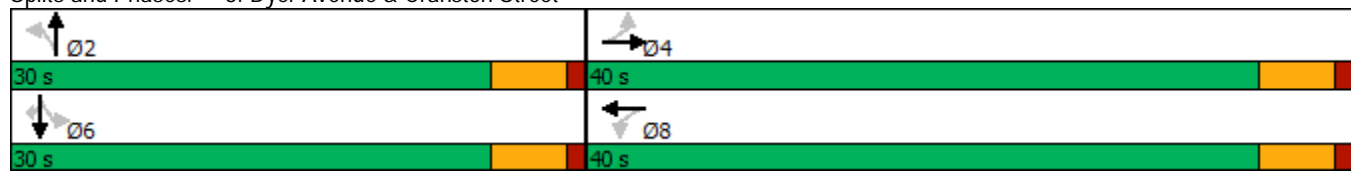


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	172	265	21	109	373	55	21	356	104	53	326	145
Future Volume (vph)	172	265	21	109	373	55	21	356	104	53	326	145
Satd. Flow (prot)	0	1825	0	0	1834	0	0	1819	0	0	1860	1615
Flt Permitted		0.627			0.830			0.973			0.850	
Satd. Flow (perm)	0	1165	0	0	1537	0	0	1774	0	0	1592	1579
Satd. Flow (RTOR)		5			12			22				129
Lane Group Flow (vph)	0	482	0	0	566	0	0	506	0	0	399	153
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)		5.0			5.0			5.0			5.0	5.0
Act Effct Green (s)		29.0			29.0			20.9			20.9	20.9
Actuated g/C Ratio		0.48			0.48			0.35			0.35	0.35
v/c Ratio		0.86			0.76			0.81			0.73	0.24
Control Delay		32.1			21.1			30.2			27.5	5.9
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		32.1			21.1			30.2			27.5	5.9
LOS		C			C			C			C	A
Approach Delay		32.1			21.1			30.2			21.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		164			176			182			144	7
Queue Length 95th (ft)		#345			299			#334			#244	42
Internal Link Dist (ft)		393			584			319			458	
Turn Bay Length (ft)												80
Base Capacity (vph)		713			943			785			694	761
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.68			0.60			0.64			0.57	0.20

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 60.5  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 25.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 94.8%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



**D**

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**Future 2028 Build Weekday AM / PM Peak Hour**

Cranston Street at Dyer Avenue  
Cranston Street at Eastern Driveway  
Cranston Street at Western Driveway  
Dyer Avenue at Southern Driveway

Cranston Street at Dyer Avenue

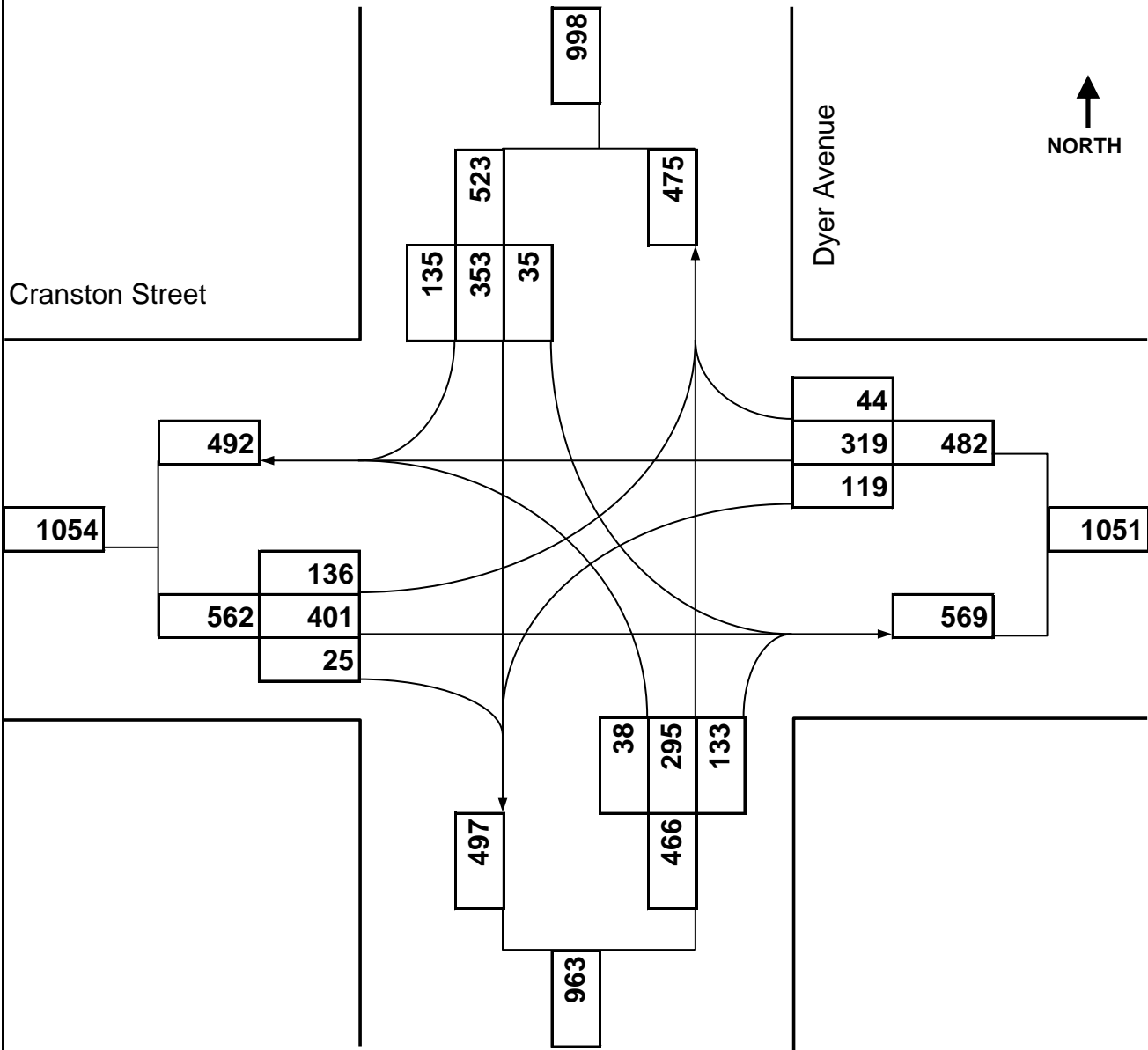


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### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** N/A

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 7:30 AM - 8:30 AM  
**Future:** 2028 Build







Cranston Street Mixed-Use

Cranston, RI



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Volume (vph)	136	401	25	119	319	44	38	295	133	35	353	135
Future Volume (vph)	136	401	25	119	319	44	38	295	133	35	353	135
Satd. Flow (prot)	1805	1858	0	1736	1844	0	0	1770	0	0	1870	1568
Flt Permitted	0.380			0.297				0.939			0.926	
Satd. Flow (perm)	721	1858	0	542	1844	0	0	1669	0	0	1739	1568
Satd. Flow (RTOR)		7			15			26				94
Lane Group Flow (vph)	156	490	0	137	418	0	0	536	0	0	446	155
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	51.0	51.0		51.0	51.0		29.0	29.0		29.0	29.0	29.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Act Effect Green (s)	20.2	20.2		20.2	20.2			24.3			24.3	24.3
Actuated g/C Ratio	0.37	0.37		0.37	0.37			0.45			0.45	0.45
v/c Ratio	0.59	0.71		0.69	0.61			0.71			0.58	0.21
Control Delay	23.2	20.3		32.9	17.0			20.9			16.8	6.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	23.2	20.3		32.9	17.0			20.9			16.8	6.4
LOS	C	C		C	B			C			B	A
Approach Delay		21.0			20.9			20.9			14.1	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	39	128		36	101			125			101	11
Queue Length 95th (ft)	84	198		87	161			#325			226	47
Internal Link Dist (ft)		197			584			491			458	
Turn Bay Length (ft)	125			150								80
Base Capacity (vph)	615	1586		462	1575			757			774	750
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.25	0.31		0.30	0.27			0.71			0.58	0.21

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 54.6  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 19.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 92.2%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



Future Build with Left Lanes  
 Timing Plan: AM Peak

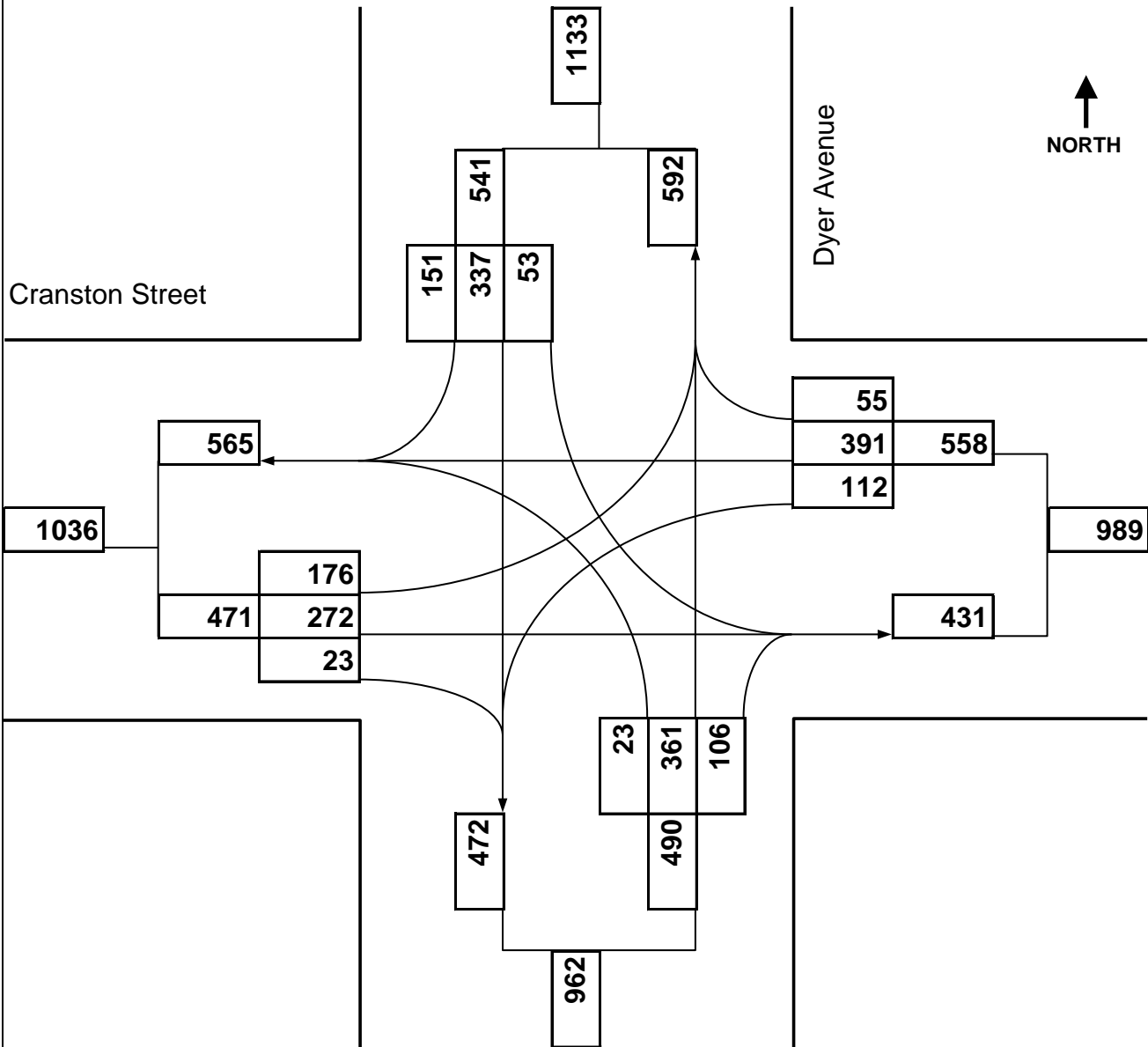


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### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** Dyer Avenue  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** 2028 Build



Cranston Street Mixed Use  
3: Dyer Avenue & Cranston Street

Cranston, RI  
Build PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	176	272	23	112	391	55	23	361	106	53	337	151
Future Volume (vph)	176	272	23	112	391	55	23	361	106	53	337	151
Satd. Flow (prot)	0	1823	0	0	1836	0	0	1819	0	0	1860	1615
Flt Permitted		0.616			0.826			0.970			0.844	
Satd. Flow (perm)	0	1143	0	0	1532	0	0	1768	0	0	1581	1579
Satd. Flow (RTOR)		5			11			22				130
Lane Group Flow (vph)	0	495	0	0	588	0	0	516	0	0	411	159
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)		5.0			5.0			5.0			5.0	5.0
Act Effct Green (s)		30.3			30.3			21.4			21.4	21.4
Actuated g/C Ratio		0.49			0.49			0.34			0.34	0.34
v/c Ratio		0.88			0.78			0.83			0.76	0.25
Control Delay		35.4			22.4			32.2			29.5	6.1
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		35.4			22.4			32.2			29.5	6.1
LOS		D			C			C			C	A
Approach Delay		35.4			22.4			32.2			23.0	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)		174			188			188			151	8
Queue Length 95th (ft)		#363			#337			#346			#278	44
Internal Link Dist (ft)		128			584			490			458	
Turn Bay Length (ft)												80
Base Capacity (vph)		672			902			752			661	736
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.74			0.65			0.69			0.62	0.22

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 62.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 27.9

Intersection LOS: C

Intersection Capacity Utilization 98.3%

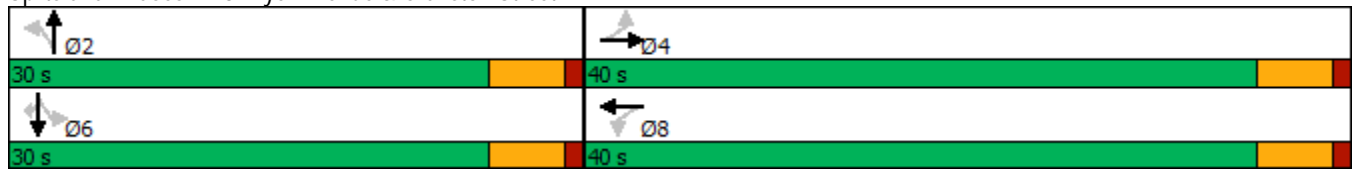
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



Cranston Street Mixed-Use

Cranston, RI

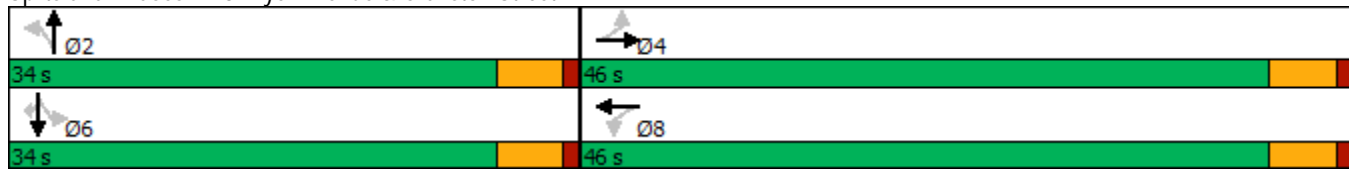


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	272	23	112	391	55	23	361	106	53	337	151
Future Volume (vph)	176	272	23	112	391	55	23	361	106	53	337	151
Satd. Flow (prot)	1787	1840	0	1787	1843	0	0	1819	0	0	1860	1615
Flt Permitted	0.359			0.536				0.971			0.891	
Satd. Flow (perm)	675	1840	0	1005	1843	0	0	1770	0	0	1669	1578
Satd. Flow (RTOR)		8			13			20				115
Lane Group Flow (vph)	185	310	0	118	470	0	0	516	0	0	411	159
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		6
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	34.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Act Effect Green (s)	21.1	21.1		21.1	21.1			20.4			20.4	20.4
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.39			0.39	0.39
v/c Ratio	0.68	0.42		0.29	0.63			0.74			0.63	0.23
Control Delay	28.3	13.2		13.6	16.8			22.1			19.6	6.1
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	28.3	13.2		13.6	16.8			22.1			19.6	6.1
LOS	C	B		B	B			C			B	A
Approach Delay		18.9			16.1			22.1			15.8	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	43	61		23	104			117			92	8
Queue Length 95th (ft)	128	137		64	222			#317			248	49
Internal Link Dist (ft)		197			584			491			458	
Turn Bay Length (ft)	125			150								80
Base Capacity (vph)	539	1473		803	1476			1078			1009	1000
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.34	0.21		0.15	0.32			0.48			0.41	0.16

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 52.4  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 90.9%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Dyer Avenue & Cranston Street



Future Build - with Left Lanes  
 Timing Plan: PM Peak

Cranston Street at Eastern Driveway



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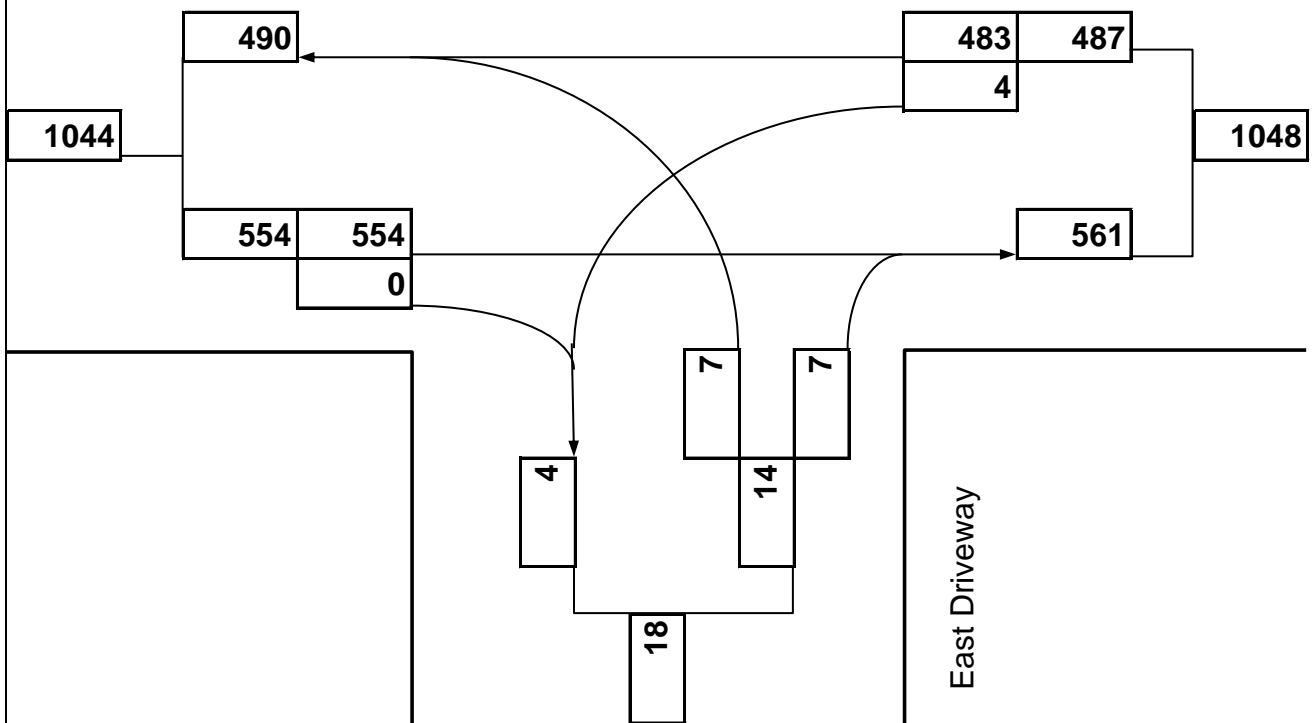
### Turning Movement Diagram

<b>Major Street:</b>	Cranston Street
<b>City/Town:</b>	Cranston, RI
<b>Reference No.:</b>	10813
<b>Existing:</b>	n/a

<b>Minor Street:</b>	East Driveway
<b>Day of Week:</b>	Weekday
<b>Peak Period:</b>	7:30 AM - 8:30 AM
<b>Future:</b>	2028 Build



Cranston Street



Cranston Street Mixed Use  
8: East Driveway & Cranston Street

Cranston, RI  
Build AM Peak

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	554	0	4	483	7	7
Future Vol, veh/h	554	0	4	483	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	602	0	4	525	8	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	602	0	1135
Stage 1	-	-	-	-	602
Stage 2	-	-	-	-	533
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	975	-	224
Stage 1	-	-	-	-	547
Stage 2	-	-	-	-	588
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	975	-	223
Mov Cap-2 Maneuver	-	-	-	-	223
Stage 1	-	-	-	-	547
Stage 2	-	-	-	-	584

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	308	-	-	975	-
HCM Lane V/C Ratio	0.049	-	-	0.004	-
HCM Control Delay (s)	17.3	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-





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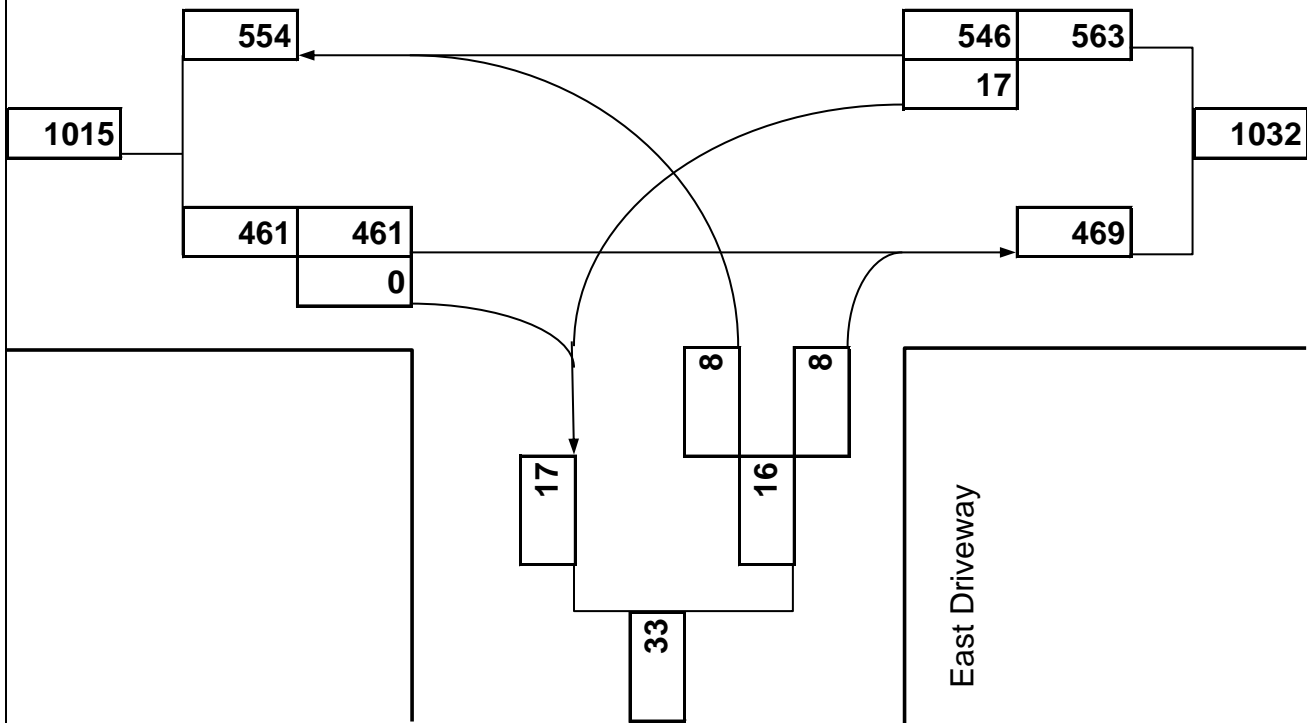
### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** East Driveway  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** 2028 Build



Cranston Street



Cranston Street Mixed Use  
8: East Driveway & Cranston Street

Cranston, RI  
Build PM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	461	0	17	546	8	8
Future Vol, veh/h	461	0	17	546	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	501	0	18	593	9	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	501	0	1130
Stage 1	-	-	-	-	501
Stage 2	-	-	-	-	629
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1063	-	225
Stage 1	-	-	-	-	609
Stage 2	-	-	-	-	531
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1063	-	219
Mov Cap-2 Maneuver	-	-	-	-	219
Stage 1	-	-	-	-	609
Stage 2	-	-	-	-	518

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	316	-	-	1063	-
HCM Lane V/C Ratio	0.055	-	-	0.017	-
HCM Control Delay (s)	17.1	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Cranston Street at Western Driveway



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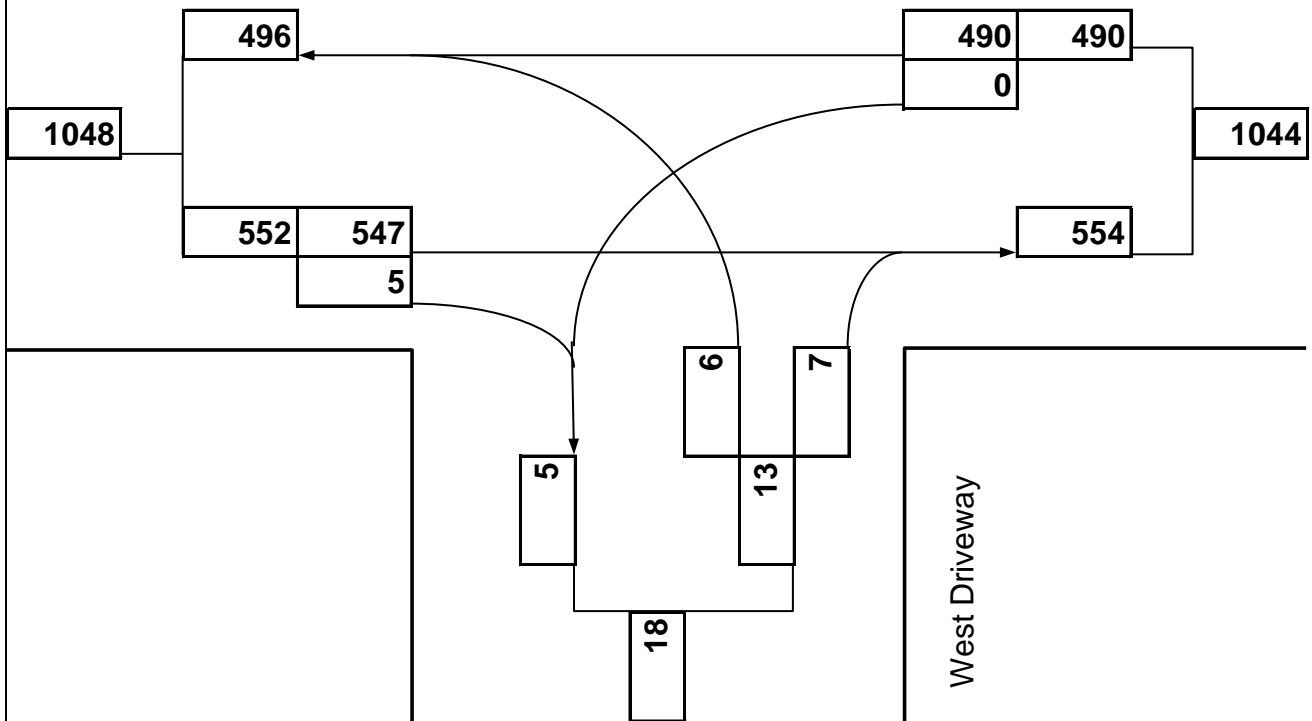
### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** West Driveway  
**Day of Week:** Weekday  
**Peak Period:** 7:30 AM - 8:30 AM  
**Future:** 2028 Build



Cranston Street



Cranston Street Mixed Use  
6: West Driveway & Cranston Street

Cranston, RI  
Build AM Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	547	5	0	490	6	7
Future Vol, veh/h	547	5	0	490	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	595	5	0	533	7	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	600	0	1131
Stage 1	-	-	-	-	598
Stage 2	-	-	-	-	533
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	977	-	225
Stage 1	-	-	-	-	549
Stage 2	-	-	-	-	588
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	977	-	225
Mov Cap-2 Maneuver	-	-	-	-	225
Stage 1	-	-	-	-	549
Stage 2	-	-	-	-	588

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	320	-	-	977	-
HCM Lane V/C Ratio	0.044	-	-	-	-
HCM Control Delay (s)	16.8	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



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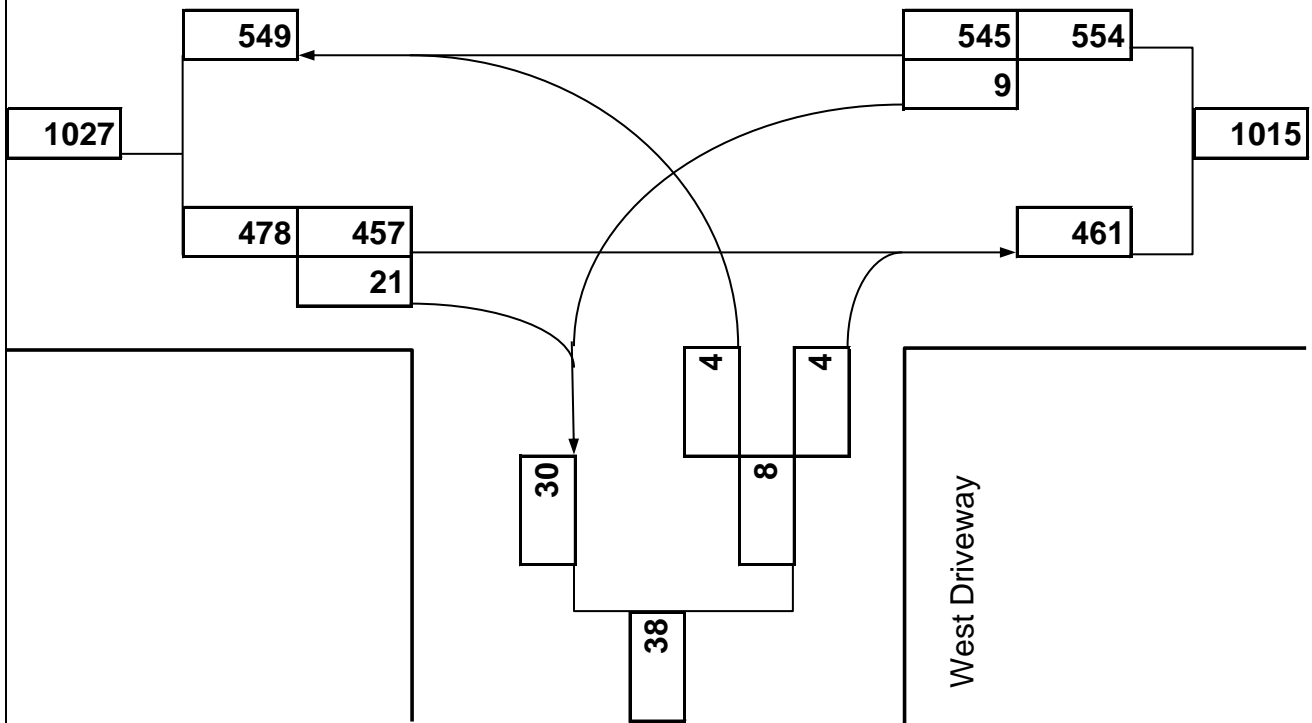
### Turning Movement Diagram

**Major Street:** Cranston Street  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** West Driveway  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** 2028 Build



Cranston Street



Cranston Street Mixed Use  
6: West Driveway & Cranston Street

Cranston, RI  
Build PM Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	457	21	9	545	4	4
Future Vol, veh/h	457	21	9	545	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	497	23	10	592	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	520	0	1121
Stage 1	-	-	-	-	509
Stage 2	-	-	-	-	612
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1046	-	228
Stage 1	-	-	-	-	604
Stage 2	-	-	-	-	541
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1046	-	225
Mov Cap-2 Maneuver	-	-	-	-	225
Stage 1	-	-	-	-	604
Stage 2	-	-	-	-	533

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	322	-	-	1046	-
HCM Lane V/C Ratio	0.027	-	-	0.009	-
HCM Control Delay (s)	16.5	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Dyer Avenue at Southern Driveway



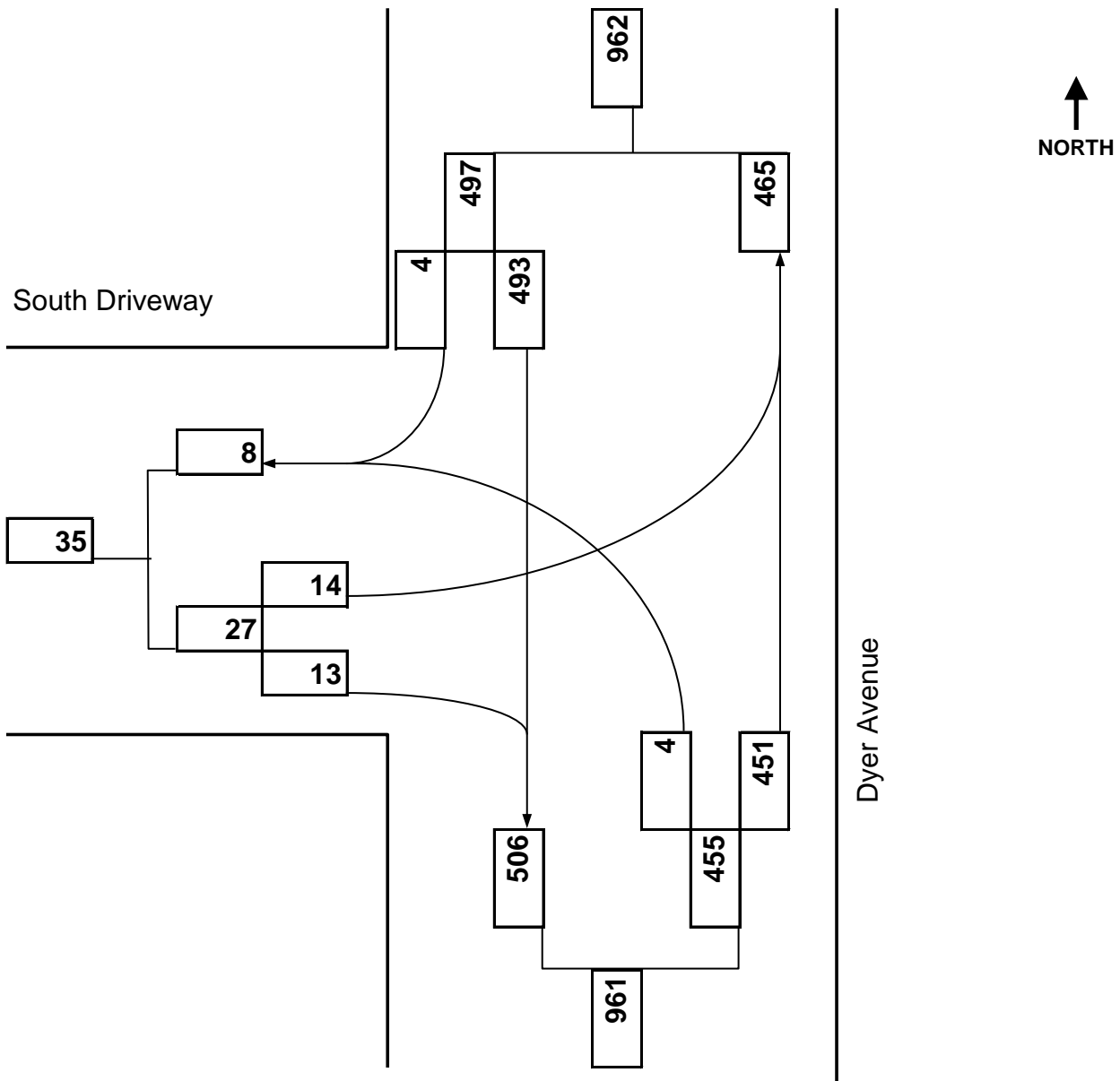


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### Turning Movement Diagram

**Major Street:** Dyer Avenue  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** South Driveway  
**Day of Week:** Weekday  
**Peak Period:** 7:30 AM - 8:30 AM  
**Future:** 2028 Build



Cranston Street Mixed Use  
10: Dyer Avenue & South Driveway

Cranston, RI  
Build AM Peak

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	14	13	4	451	493	4
Future Vol, veh/h	14	13	4	451	493	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	14	4	490	536	4

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1036	538	540	0	-	0
Stage 1	538	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	256	543	1028	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	255	543	1028	-	-	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1028	-	342	-	-
HCM Lane V/C Ratio	0.004	-	0.086	-	-
HCM Control Delay (s)	8.5	0	16.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

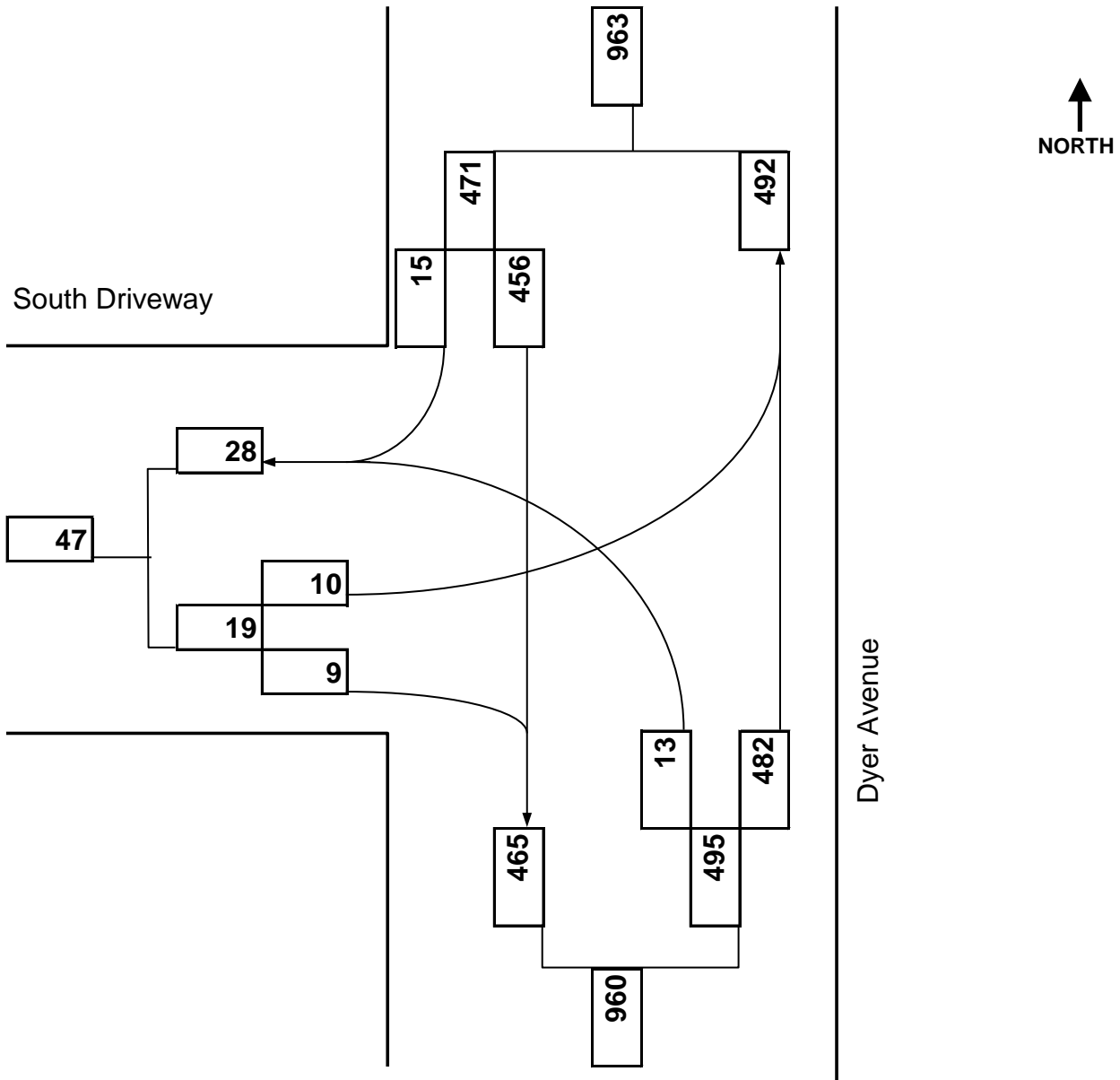


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### Turning Movement Diagram

**Major Street:** Dyer Avenue  
**City/Town:** Cranston, RI  
**Reference No.:** 10813  
**Existing:** n/a

**Minor Street:** South Driveway  
**Day of Week:** Weekday  
**Peak Period:** 4:00 PM - 5:00 PM  
**Future:** 2028 Build



Cranston Street Mixed Use  
10: Dyer Avenue & South Driveway

Cranston, RI  
Build PM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	10	9	13	482	456	15
Future Vol, veh/h	10	9	13	482	456	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	10	14	524	496	16

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1056	504	512	0	-	0
Stage 1	504	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	250	568	1053	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	245	568	1053	-	-	-
Mov Cap-2 Maneuver	245	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1053	-	335	-	-
HCM Lane V/C Ratio	0.013	-	0.062	-	-
HCM Control Delay (s)	8.5	0	16.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-