DRAFT

TRANSPORTATION IMPACT STUDY FOR THE CITADEL AND 10-ACRE PROJECT

COMMERCE, CALIFORNIA

JANUARY 2019

PREPARED FOR

CITY OF COMMERCE

PREPARED BY

Gibson transportation consulting, inc.

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Prepared by:

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Chapter 1
Introduction

This study presents the transportation impact analysis conducted for the proposed expansion of The Citadel Outlets shopping center (The Citadel) and nearby 10-acre parcel (together, the Project) in Commerce, California. The methodology and base assumptions used in the analysis were established in conjunction with the City of Commerce (City).

PROJECT DESCRIPTION

The Project consists of an additional 520,466 square feet (sf) of retail gross leasable area (GLA[1]), 770 hotel rooms within four hotel buildings, and an entertainment center, which could potentially host a 102-bay Topgolf center, on the existing The Citadel site. In addition, the Project includes the construction of approximately 55,015 sf of light industrial use, 13,400 sf of restaurant space, and 70,000 sf of office GLA on the empty 10-acre parcel. The Project is anticipated to be complete by Year 2022, but for the purposes of a conservative analysis, Opening Year and full operation of the Project was assumed to be Year 2025.

The Citadel, which currently contains approximately 492,883 sf of retail GLA, 201 hotel rooms, and 179,518 sf of office GLA, is bounded by Hoefner Avenue to the north, Smithway Street to the east, Gaspar Avenue to the south, and Telegraph Road to the west. It provides approximately 4,181 parking spaces in the form of a large surface parking lot and two parking garages (a 1,000-space, nine-level parking garage located in the northwest corner of the Project site and a 509-space, four-level garage at the northeast corner of Citadel Drive & Telegraph Road). The current operating hours of The Citadel are 9:00 AM to 10:00 PM daily, which is expected to remain the same after the expansion.

[1] GLA definition per *Parking Requirements for Shopping Centers, 2nd Edition,* Urban Land Institute and the International Council of Shopping Centers, 1999.

With the Project, a total of 6,178 parking spaces will be provided for The Citadel's existing and additional uses. Vehicular access to The Citadel would be provided via two signalized and two unsignalized driveways along Telegraph Road, two unsignalized driveways along Hoefner Avenue, and four unsignalized driveways along Smithway Street.

The 10-acre parcel is bounded by Commerce Casino surface parking to the northwest, rail lines to the northeast, Washington Boulevard to the southeast, and Telegraph Road to the southwest. With the Project, a total of 348 parking spaces will be provided, with vehicular access from one full-access driveway along Washington Boulevard and one right-turn in/out driveway along Telegraph Road.

Figure 1 shows the location of the Project in relation to the local street network, Figure 2A presents The Citadel site plan, and Figure 2B presents the 10-acre parcel site plan.

STUDY SCOPE AND METHODOLOGY

Traffic impacts were evaluated on a typical weekday during the morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak periods and on a typical Saturday during the midday peak hour (12:00 PM to 2:00 PM). The base assumptions, technical methodologies, and study area were identified as part of the jointly developed study approach. The following traffic scenarios were developed and analyzed as part of this study:

- Existing Conditions (Year 2018) – The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The Existing Conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.

- Existing with Project Conditions (Year 2018) – The California Environmental Quality Act (CEQA) requires an evaluation of Project traffic impacts on the existing environment as part of traffic impact analyses. This analysis evaluates the potential Project-related traffic impacts as compared to existing conditions.

- Future without Project Conditions (Year 2025) – Future traffic conditions were projected for Year 2025 without the Project. The objective of this analysis is to forecast the future traffic growth and intersection operating conditions expected to result from general regional growth and specific related projects developed in the vicinity of the Project site by the Year 2025. This scenario is used as the baseline against which potential Project traffic impacts are evaluated.

- Future with Project Conditions (Year 2025) – This analysis measures future traffic conditions with traffic expected to be generated by the Project added to Year 2025 without the Project traffic conditions. The incremental impacts of the Project on future traffic operating conditions were then identified.

- Future with Truck Traffic without Project Conditions (Year 2025) – Future traffic conditions were projected for Year 2025 without the Project. The objective of this analysis is to forecast the future traffic growth and intersection operating conditions expected to result from general regional growth and specific related projects developed in the vicinity of the Project site by the Year 2025. This scenario is used as the baseline against which potential Project traffic impacts are evaluated. To provide a conservative analysis, this scenario assumes that the major streets and intersections in the Study Area will accommodate between 5-10% truck traffic while the minor streets and minor turning movements will accommodate between 2-5% trucks on both weekdays and weekends. These truck trips were factored up to reflect Passenger Car Equivalents (PCE) using the street system.

- Future with Truck Traffic with Project Conditions (Year 2025) – This analysis measures future traffic conditions with traffic expected to be generated by the Project added to Year 2025 without the Project traffic conditions. This scenario includes a higher percentage of truck traffic than the previous scenarios to provide for a worst-case analysis. The incremental impacts of the Project on future traffic operating conditions (with truck PCEs considered) were then identified.

In consultation with the City, 29 study intersections, including 23 signalized and six unsignalized, were selected for detailed analysis, including the five primary access points to The Citadel. The study intersections are illustrated in Figure 1 and listed in Table 1.

Level of Service (LOS) Methodology

A detailed intersection capacity analysis was conducted for the weekday morning and afternoon peak hours and Saturday midday peak hour for each of these intersections under the four scenarios identified above. Peak period turning movement counts were conducted at the 29 study intersections in May 2016 during the weekday morning and afternoon peak periods and Saturday midday peak period.

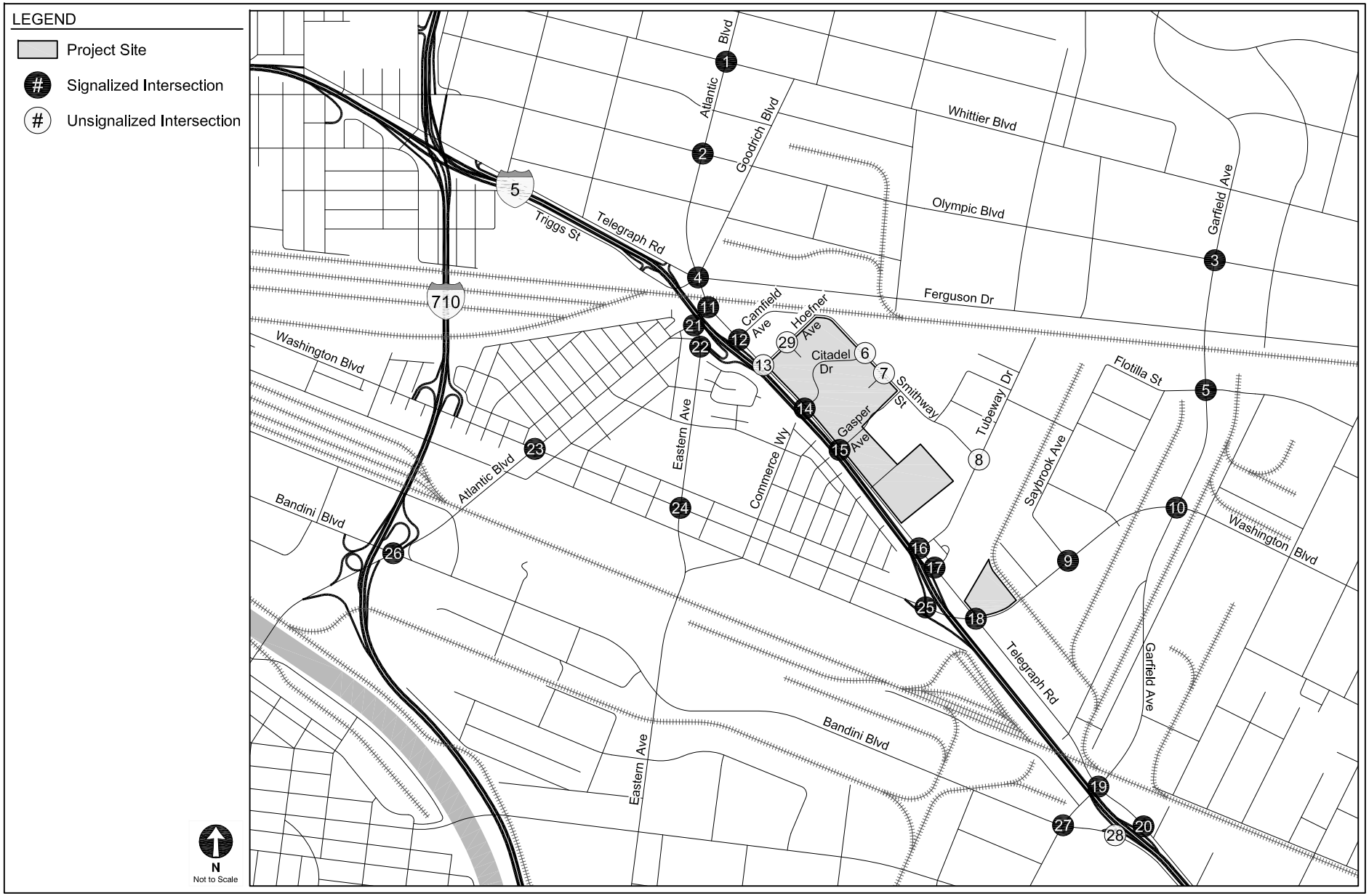
LOS is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable LOS in urban areas. LOS definitions are provided in Table 2 for signalized and unsignalized intersections.

Intersection capacity calculations were conducted to measure the LOS of the intersections using an overall intersection capacity of 1,600 vehicles per hour per lane and adding a factor of 0.10 to account for the yellow interval clearance. The existing or projected volumes through a signalized intersection are compared to the capacity of the intersection to calculate a volume-to-capacity (V/C) ratio and that ratio is used to determine the LOS at the intersection. For unsignalized intersections, the vehicle delay for the approach with the highest delay in seconds is calculated and used to determine LOS.

In accordance with City guidelines, the LOS analyses were conducted using the Intersection Capacity Utilization (ICU) methodology from *Highway Capacity Manual, Special Report 209* (Transportation Research Board, 2000) to obtain the corresponding ICU value for signalized intersections. *Highway Capacity Manual, 6th Edition, A Guide for Multimodal Mobility Analysis* (Transportation Research Board, 2016) (HCM) methodology was used to obtain delay for unsignalized intersections.

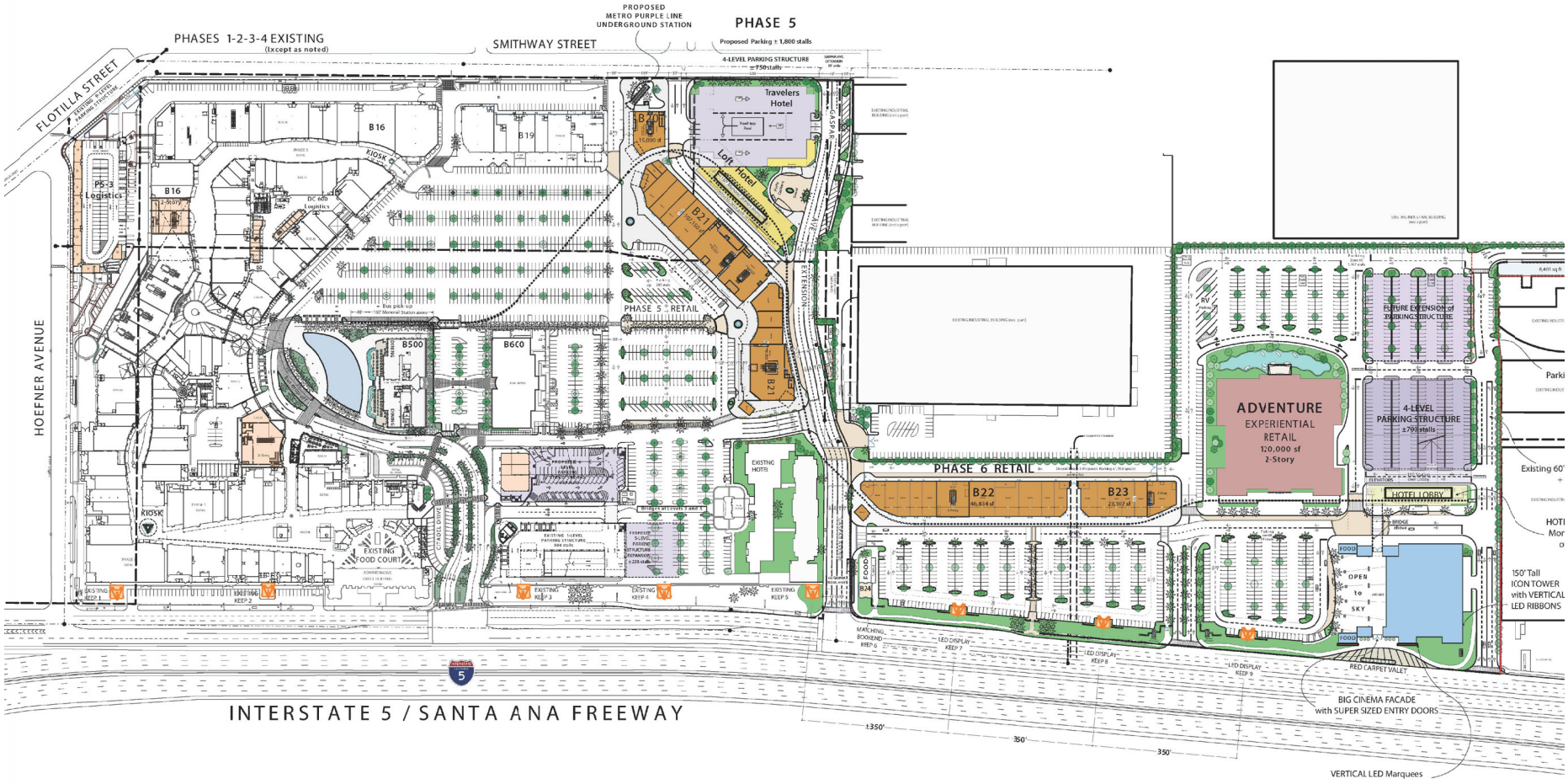
ORGANIZATION OF REPORT

This report is divided into nine chapters, including this introduction. Chapter 2 presents an analysis of the existing street system and traffic conditions for each of the intersections in the study area. Traffic projections are presented in Chapter 3. Potential impacts of the Project on the study intersections and neighborhood intrusion are discussed in Chapter 4. The identification of measures required to mitigate the Project's potential impacts is discussed in Chapter 5. Chapter 6 includes a discussion of the Congestion Management Program based on potential Project impacts in 2025. Chapter 7 contains a summary of the California Department of Transportation (Caltrans) analysis and Chapter 8 summarizes the access and circulation analyses. A summary of the analyses and study conclusions is provided in Chapter 9. Appendices include technical analysis and supporting documentation.



STUDY AREA AND ANALYZED INTERSECTIONS

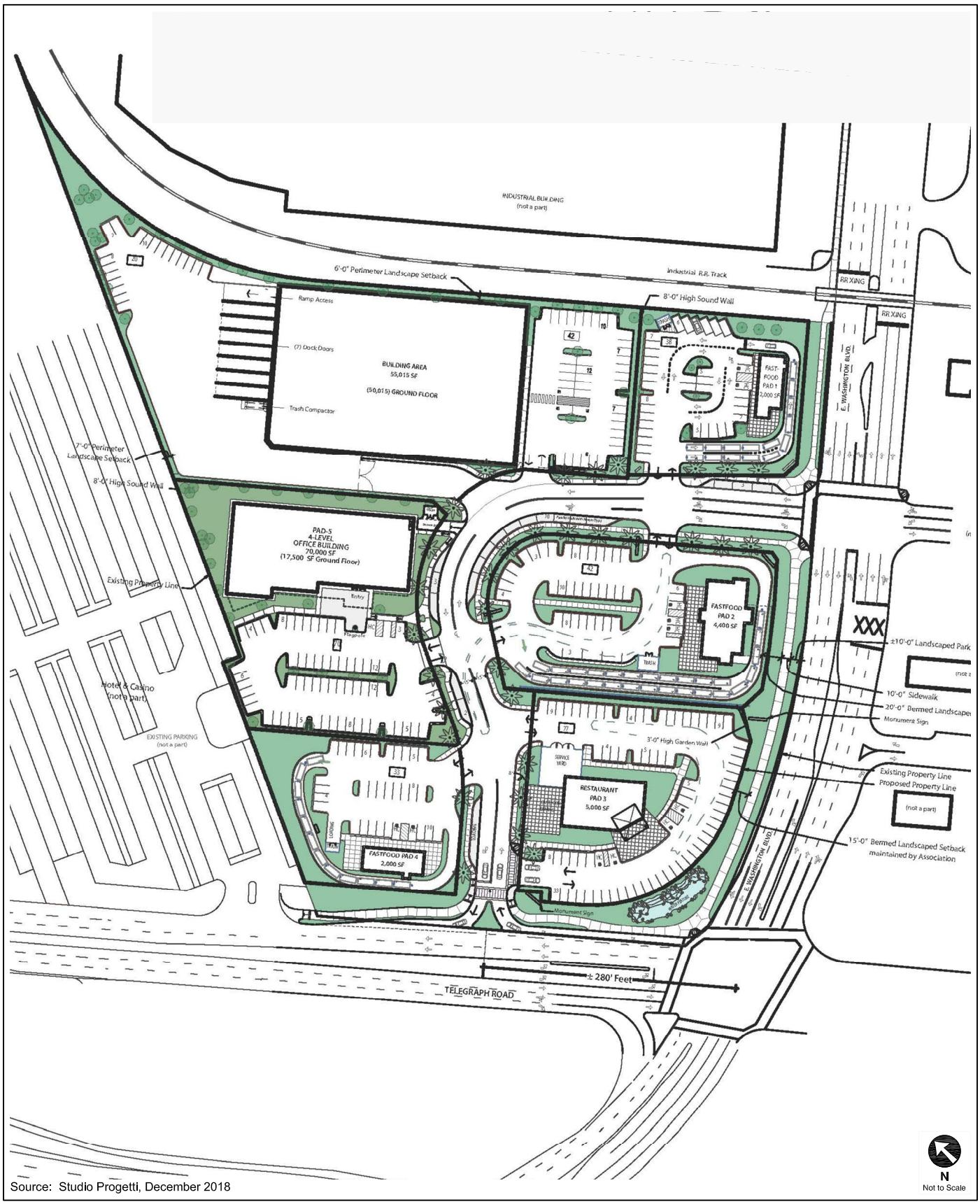
FIGURE 1



Source: Studio Progetti, December 2018

SITE PLAN
CITADEL SITE

FIGURE
2A



Source: Studio Progetti, December 2018

SITE PLAN 10-ACRE PARCEL	FIGURE 2B

TABLE 1
STUDY INTERSECTIONS

No	Intersection	Jurisdiction
1.	Atlantic Boulevard & Whittier Boulevard	City of Commerce
2.	Atlantic Boulevard & Olympic Boulevard	City of Commerce
3.	Garfield Avenue & Olympic Boulevard	City of Commerce
4.	Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive	City of Commerce
5.	Garfield Avenue & Flotilla Street	City of Commerce
6. [a]	W Citadel Dwy & Smithway Street	City of Commerce
7. [a]	E Citadel Dwy & Smithway Street	City of Commerce
8. [a]	Tubeway Avenue & Smithway Street	City of Commerce
9.	Washington Boulevard & Saybrook Avenue	City of Commerce
10.	Garfield Avenue & Washington Boulevard	City of Commerce
11.	Atlantic Boulevard & Telegraph Road	City of Commerce
12.	I-5 Northbound Ramps/Camfield Avenue & Telegraph Road	City of Commerce/Caltrans
13. [a]	Hoefner Avenue & Telegraph Road	City of Commerce
14.	Citadel Drive & Telegraph Road	City of Commerce
15.	Gaspar Avenue & Telegraph Road	City of Commerce
16.	Tubeway Avenue & Telegraph Road	City of Commerce
17.	I-5 Ramps/Commerce Casino & Telegraph Road	City of Commerce/Caltrans
18.	Washington Boulevard & Telegraph Road	City of Commerce
19.	Garfield Avenue & Telegraph Road	City of Commerce
20.	I-5 Northbound Ramps & Telegraph Road	City of Commerce/Caltrans
21.	Eastern Avenue & Atlantic Boulevard	City of Commerce
22.	Eastern Avenue & I-5 Ramps/Stevens Pl	City of Commerce/Caltrans
23.	Atlantic Boulevard & Washington Boulevard	City of Commerce
24.	Eastern Avenue & Washington Boulevard	City of Commerce
25.	I-5 Southbound Ramps & Washington Boulevard	City of Commerce/Caltrans
26.	Atlantic Boulevard/I-710 Northbound Ramps & Bandini Boulevard	City of Commerce/Caltrans
27.	Garfield Avenue & Bandini Boulevard	City of Commerce
28. [a]	I-5 Southbound Ramps & Bandini Boulevard	City of Commerce/Caltrans
29. [a]	Hoefner Avenue & Citadel Valet Driveway	City of Commerce

Notes
[a] Intersection is unsignalized.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR
SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

Level of Service	Signalized Intersection Capacity Utilization	Unsignalized Intersection Delay (seconds/vehicle)	Definition
A	≤ 0.600	≤ 10.0	**EXCELLENT.** No Vehicle waits longer than one red light and no approach phase is fully used.
B	> 0.600 and ≤ 0.700	> 10.0 and ≤ 15.0	**VERY GOOD.** An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	> 0.700 and ≤ 0.800	> 15.0 and ≤ 25.0	**GOOD.** Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	> 0.800 and ≤ 0.900	> 25.0 and ≤ 35.0	**FAIR.** Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	> 0.900 and ≤ 1.000	> 35.0 and ≤ 50.0	**POOR.** Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	> 50.0	**FAILURE.** Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 2000.

Chapter 2
Existing Conditions

A comprehensive data collection effort was undertaken to develop a detailed description of existing (Year 2018) conditions in the study area. The assessment of conditions relevant to this study includes land use, an inventory of the street and highway systems, traffic volumes on these facilities, and operating conditions at key intersections.

EXISTING STREET SYSTEM

Primary regional access to the study area is provided by Interstate 5 (I-5), which is directly south of the Project site, and Interstate 710 (I-710), which is west of the Project site. I-5 is an eight-lane freeway that runs north-south the entire length of the western United States from San Diego to Canada. Immediately adjacent to the site, I-5 runs in a northwest/southeast direction. I-710 is an eight-lane freeway that runs north-south from Long Beach to Alhambra. Ramp access to I-5 is provided via Telegraph Road and Washington Boulevard and ramp access to I-710 is provided via Washington Boulevard, Atlantic Boulevard and Bandini Boulevard.

Primary local access to the Project site is provided via Telegraph Road, Washington Boulevard, Eastern Avenue, Atlantic Boulevard and Garfield Avenue. Descriptions of key roadways serving the study area are provided below:

- Telegraph Road – Telegraph Road is geographically a northwest-southeast roadway and is analyzed as an east-west roadway in this study. Telegraph Road is located along the southern boundary of the Project Site and provides direct access to both The Citadel and the 10-acre parcel. It provides two to three lanes in each direction adjacent to the site, left-turn pockets at signalized intersections and a two-way left-turn median. Three freeway interchanges are located along this road. Parking is not allowed on either side of the street. The speed limit on Telegraph Road is 45 miles per hour (mph).

- Hoefner Avenue – Hoefner Avenue is geographically a northeast-southwest roadway and is analyzed as a north-south roadway in this study. Hoefner Avenue is located along the western boundary of the Project Site and provides direct access to The Citadel. It provides

one lane in each direction and parking is allowed on both sides of the street. The speed limit on Hoefner Avenue is 25 mph.

- Gaspar Avenue – Gaspar Avenue is geographically a northeast-southwest roadway and is analyzed as a north-south roadway in this study. As part of the Project, Gaspar Avenue would be extended as a through street and connect Telegraph Road and Smithway Street. It would continue to provide direct access to The Citadel. It currently provides one lane in each direction and will provide two lanes in each direction as part of the Project. Parking is currently allowed on the east side of the street and would be removed as part of the Project. The speed limit on Gaspar Avenue is 25 mph.

- Camfield Avenue – Camfield Avenue is geographically a northeast-southwest roadway and is analyzed as a north-south roadway in this study. Camfield Avenue is located west of the Project Site and turns into Flotilla Street and Smithway Street. It provides one lane in each direction. Parking is allowed on both sides of the street. Camfield Avenue also provides direct access to and from the I-5 northbound ramps. The speed limit on Camfield Avenue is 25 mph.

- Washington Boulevard – Washington Boulevard is geographically a northwest-southeast roadway west of Telegraph Road and becomes a northeast-southwest roadway east of Telegraph Road. In this study, it is analyzed as an east-west roadway west of the I-5 ramps and as a north-south roadway east of the I-5 ramps. It is located south of The Citadel and along the eastern boundary of the 10-acre parcel, providing direct access to the 10-acre parcel. Washington Boulevard provides two to three lanes in each direction and left-turn pockets at signalized intersections. It also provides direct access to I-5 southbound ramps. Parking is generally allowed on both sides of the street. The speed limit on Washington Boulevard is 40 mph.

- Bandini Boulevard – Bandini Boulevard is geographically a northwest-southeast roadway and is analyzed as an east-west roadway in this study. It is located south of the Project site, with two lanes in each direction, left-turn pockets at signalized intersections and a two-way left-turn median. Parking is not allowed on either side of the street west of Eastern Avenue. The speed limit on Bandini Boulevard is 40 mph.

- Flotilla Street– Flotilla Street is geographically a northwest-southeast roadway and is analyzed as an east-west roadway in this study. It is located along the northern boundary of The Citadel and provides direct access to The Citadel. Flotilla Street provides one lane in each direction and turns into Camfield Avenue to the west and Smithway Street to the east. Parking is allowed on both sides of the street. The speed limit on Flotilla Street is 25 mph.

- Ferguson Drive – Ferguson Drive is an east-west roadway located north of the Project site, with two lanes in each direction and left-turn pockets at signalized intersections. Parking is generally allowed on the north side of the street. The speed limit on Ferguson Drive is 25 mph.

- Olympic Boulevard – Olympic Boulevard is an east-west roadway located north of the Project site, with two lanes in each direction and left-turn pockets at signalized intersections. Parking is allowed on both sides of the street. The speed limit on Olympic Boulevard is 35 mph.

- Whittier Boulevard – Whittier Boulevard is an east-west roadway located north of the Project site, with two lanes in each direction and left-turn pockets at signalized intersections. Parking is allowed on both sides of the street. The speed limit on Whittier Boulevard is 30 mph.

- Smithway Street– Smithway Street is geographically a northwest-southeast roadway and is analyzed as an east-west roadway in this study. It is located along the northern boundary of The Citadel and provides direct access to The Citadel. It provides one lane in each direction and a center turn lane and turns into Flotilla Street and Camfield Avenue. Parking is allowed on both sides of the street. The speed limit on Smithway Street is 25 mph.

- Saybrook Avenue – Saybrook Avenue is geographically a northwest-southeast roadway at Washington Boulevard and becomes a north-south roadway west of Washington Boulevard. It is analyzed as an east-west roadway in this study. It is located north of the Project site, with one lane in each direction. Parking is allowed on both sides of the street. The speed limit on Saybrook Avenue is 25 mph.

- Garfield Avenue – Garfield Avenue is a north-south roadway located east of the Project site, with two lanes in each direction, left-turn pockets at signalized intersections, and a two-way left-turn median. Parking is not allowed on either side of the street. The speed limit on Garfield Avenue is 35 mph.

- Tubeway Avenue – Tubeway Avenue is a north-south roadway located east of The Citadel and west of the 10-acre parcel. It provides one lane in each direction. Parking is not allowed on either side of the street. The speed limit on Tubeway Avenue is 25 mph.

- Atlantic Boulevard – Atlantic Boulevard is geographically a northeast-southwest roadway and is analyzed as a north-south roadway in this study. It is located west of the Project site, with two lanes in each direction, left-turn pockets at signalized intersections, and a two-way left-turn median. Parking is generally allowed on both sides of the street. The speed limit on Atlantic Boulevard is 35 mph.

- Triggs Street – Triggs Street is geographically a northwest-southeast roadway and is analyzed as an east-west roadway in this study. It is located east of the Project site. It is a two-lane street and provides direct access to I-5 southbound ramps. Parking is not allowed on either side of the street. The speed limit on Triggs Street is 30 mph.

- Eastern Avenue – Eastern Avenue is a north-south roadway located west of the Project site with two lanes in each direction, left-turn pockets at signalized intersections, and a raised median. It provides direct access to I-5 southbound ramps. Parking is allowed on both sides of the street. The speed limit on Eastern Avenue is 40 mph.

EXISTING PUBLIC TRANSIT

The Project area is served by Los Angeles County Metropolitan Transportation Authority (Metro) bus lines, City of Commerce Municipal Bus lines, and Montebello Bus lines. The transit routes

serving the Project area are shown in Figures 3A and 3B. Table 3 summarizes the transit routes operating in the vicinity of the Project site. It shows the routes organized by service providers, the type of service (peak vs. off-peak, rapid vs. local), and frequency of service, as described above. The average headways during the peak hour were estimated using detailed October 2017 trip and ridership data provided by Metro.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the existing (Year 2018) weekday morning and afternoon and Saturday midday peak hour turning movement traffic volumes for the intersections analyzed in the study. The study describes the methodology used to assess the traffic conditions at each intersection and analyzes the resulting operating conditions at each intersection indicating (V/C ratios and levels of service.

Existing Traffic Volumes

As described in Chapter 1, weekday morning and afternoon peak hour and Saturday midday peak hour traffic counts were conducted at the 29 study intersections in May 2016. Intersection lane configurations are shown in Figure 4. Intersection turning movement count data sheets are provided in Appendix A.

Five study intersections were recounted in 2018 to compare to the Year 2016 intersection count results. The 2018 results were similar to the 2016 results and showed very little growth during the peak hours. Nevertheless, for conservative purposes, the 2016 counts were expanded by 1% per year to reflect Existing (Year 2018) Conditions.

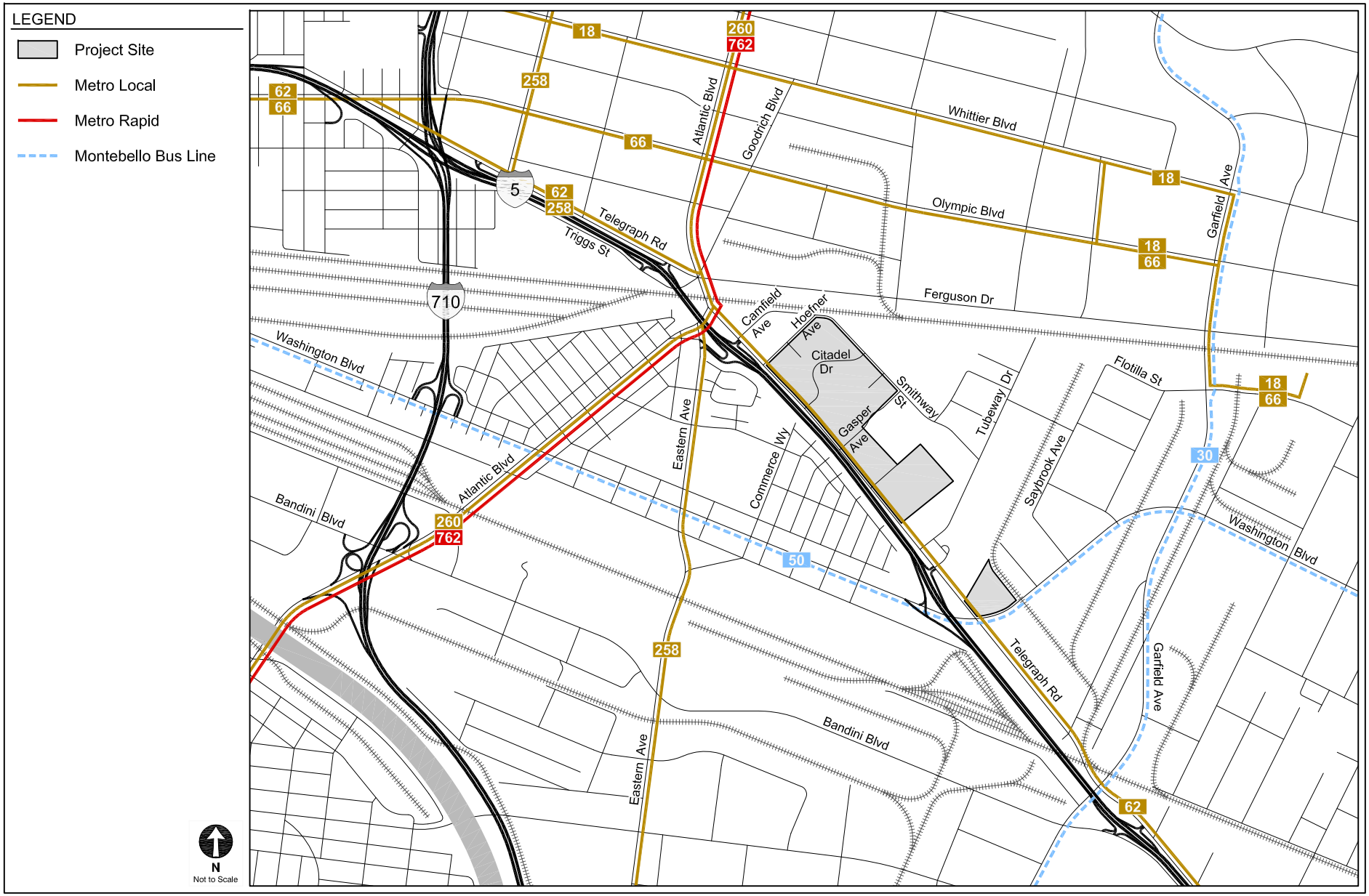
Existing Conditions Peak Hour LOS

The existing (Year 2018) weekday morning and afternoon peak hours and Saturday midday peak hour turning movements presented in Figures 5 and 6, respectively, were used in conjunction with

the LOS methodology described above to determine existing (Year 2018) operating conditions at each of the study intersections.

Tables 4 and 5 summarize the weekday morning and afternoon peak hours and Saturday midday peak hour V/C ratio or delay and corresponding LOS at each study intersection under Existing Conditions for signalized and unsignalized intersections, respectively. As shown in Table 4, 19 of the 23 signalized intersections currently operate at LOS D or better during the analyzed peak hours under Existing Conditions. The remaining four signalized intersections currently operate at LOS E during the afternoon peak hour. As shown in Table 5, four unsignalized intersections currently operate at LOS C or better during the analyzed peak hours. The remaining two unsignalized intersections currently operate at LOS E or F during at least one of the analyzed peak hours.

LOS calculation worksheets are provided in Appendix B.



EXISTING TRANSIT SERVICE

FIGURE 3A

Source: City of Commerce, 2016

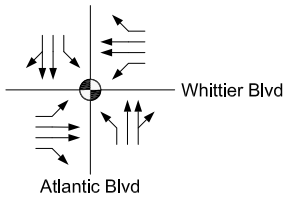
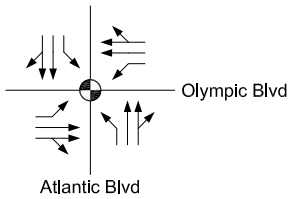
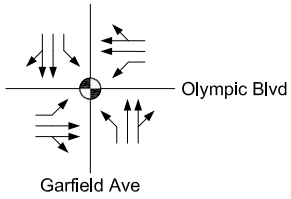
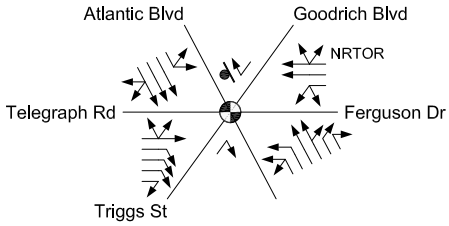
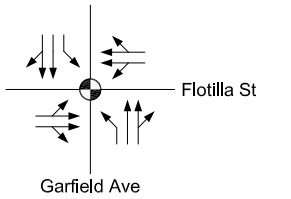
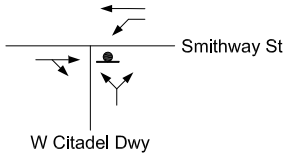
EXISTING TRANSIT SERVICE
CITY OF COMMERCE MUNICIPAL BUS LINES

FIGURE 3B

LEGEND

Traffic Signal

Stop Sign

	EXISTING CONDITIONS (YEAR 2018)	FUTURE WITH PROJECT WITH MITIGATION (YEAR 2025)
1. Atlantic Boulevard & Whittier Boulevard		Same as Existing Conditions
2. Atlantic Boulevard & Olympic Boulevard		Same as Existing Conditions
3. Garfield Avenue & Olympic Boulevard		Same as Existing Conditions
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive		Same as Existing Conditions
5. Garfield Avenue & Flotilla Street		Same as Existing Conditions
6. W Citadel Driveway & Smithway Street		Same as Existing Conditions

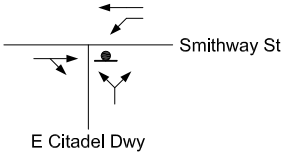
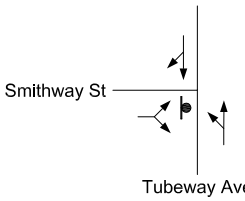
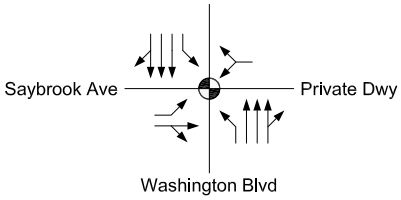
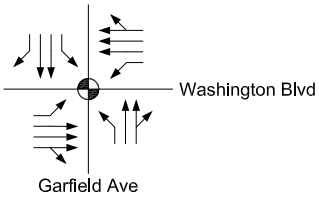
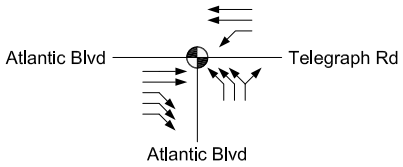
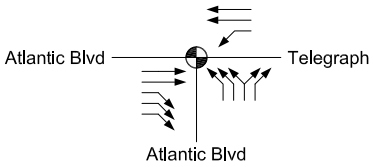
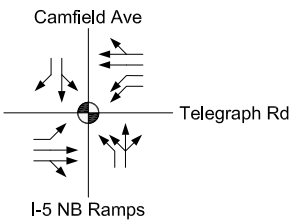
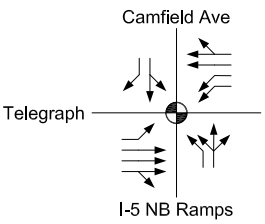
INTERSECTION LANE CONFIGURATIONS

FIGURE 4

LEGEND

Traffic Signal

Stop Sign

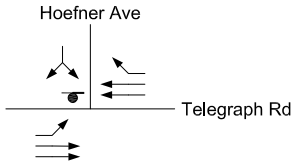
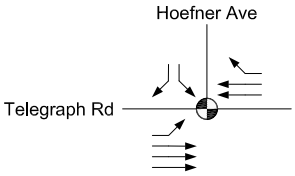
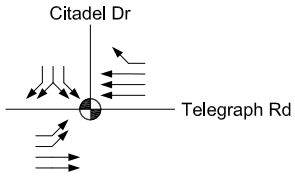
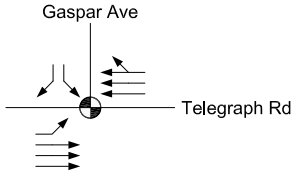
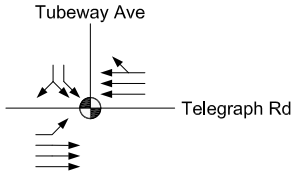
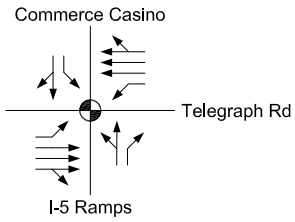
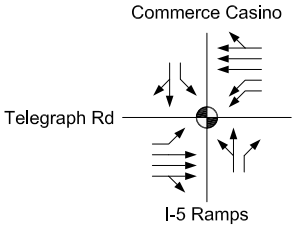
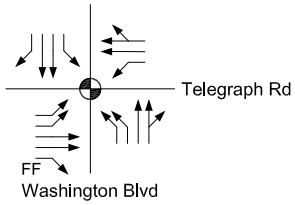
	EXISTING CONDITIONS (YEAR 2018)	FUTURE WITH PROJECT WITH MITIGATION (YEAR 2025)
7. E Citadel Driveway & Smithway Street		Same as Existing Conditions
8. Tubeway Avenue & Smithway Street		Same as Existing Conditions
9. Washington Boulevard & Saybrook Avenue		Same as Existing Conditions
10. Garfield Avenue & Washington Boulevard		Same as Existing Conditions
11. Atlantic Boulevard & Telegraph Road		
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road		

INTERSECTION LANE CONFIGURATIONS

FIGURE 4 (CONT.)

LEGEND

- Traffic Signal
- Stop Sign
- FF Free Flow

	EXISTING CONDITIONS (YEAR 2018)	FUTURE WITH PROJECT WITH MITIGATION (YEAR 2025)
13. Hoefner Avenue & Telegraph Road		
14. Citadel Drive & Telegraph Road		Same as Existing Conditions
15. Gaspar Avenue & Telegraph Road		Same as Existing Conditions
16. Tubeway Avenue & Telegraph Road		Same as Existing Conditions
17. I-5 Ramps/Commerce Casino & Telegraph Road		
18. Washington Boulevard & Telegraph Road		Same as Existing Conditions

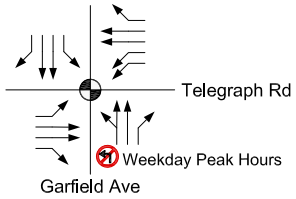
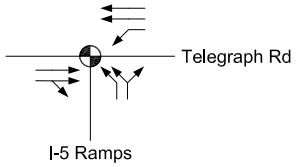
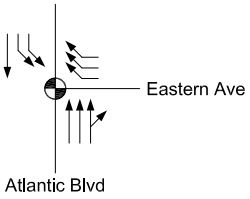
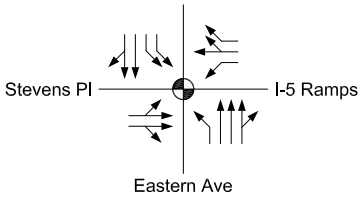
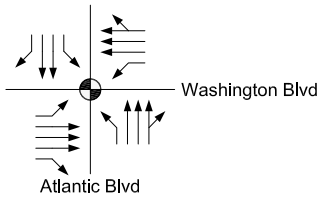
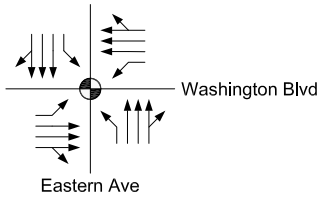
INTERSECTION LANE CONFIGURATIONS

FIGURE 4 (CONT.)

LEGEND

Traffic Signal

FF Free Flow

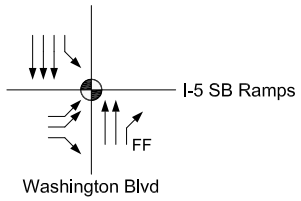
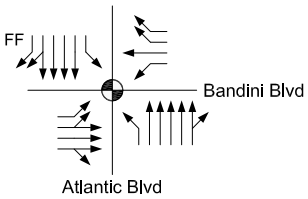
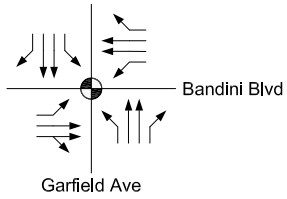
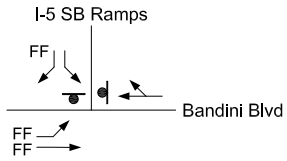
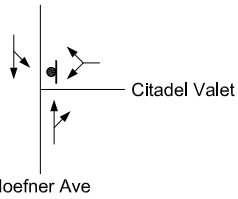
	EXISTING CONDITIONS (YEAR 2018)	FUTURE WITH PROJECT WITH MITIGATION (YEAR 2025)
19. Garfield Avenue & Telegraph Road		Same as Existing Conditions
20. I-5 Ramps & Telegraph Road		Same as Existing Conditions
21. Atlantic Boulevard & Eastern Avenue		Same as Existing Conditions
22. Eastern Avenue & I-5 Ramps/Stevens Place		Same as Existing Conditions
23. Atlantic Boulevard & Washington Boulevard		Same as Existing Conditions
24. Eastern Avenue & Washington Boulevard		Same as Existing Conditions

INTERSECTION LANE CONFIGURATIONS

FIGURE 4 (CONT.)

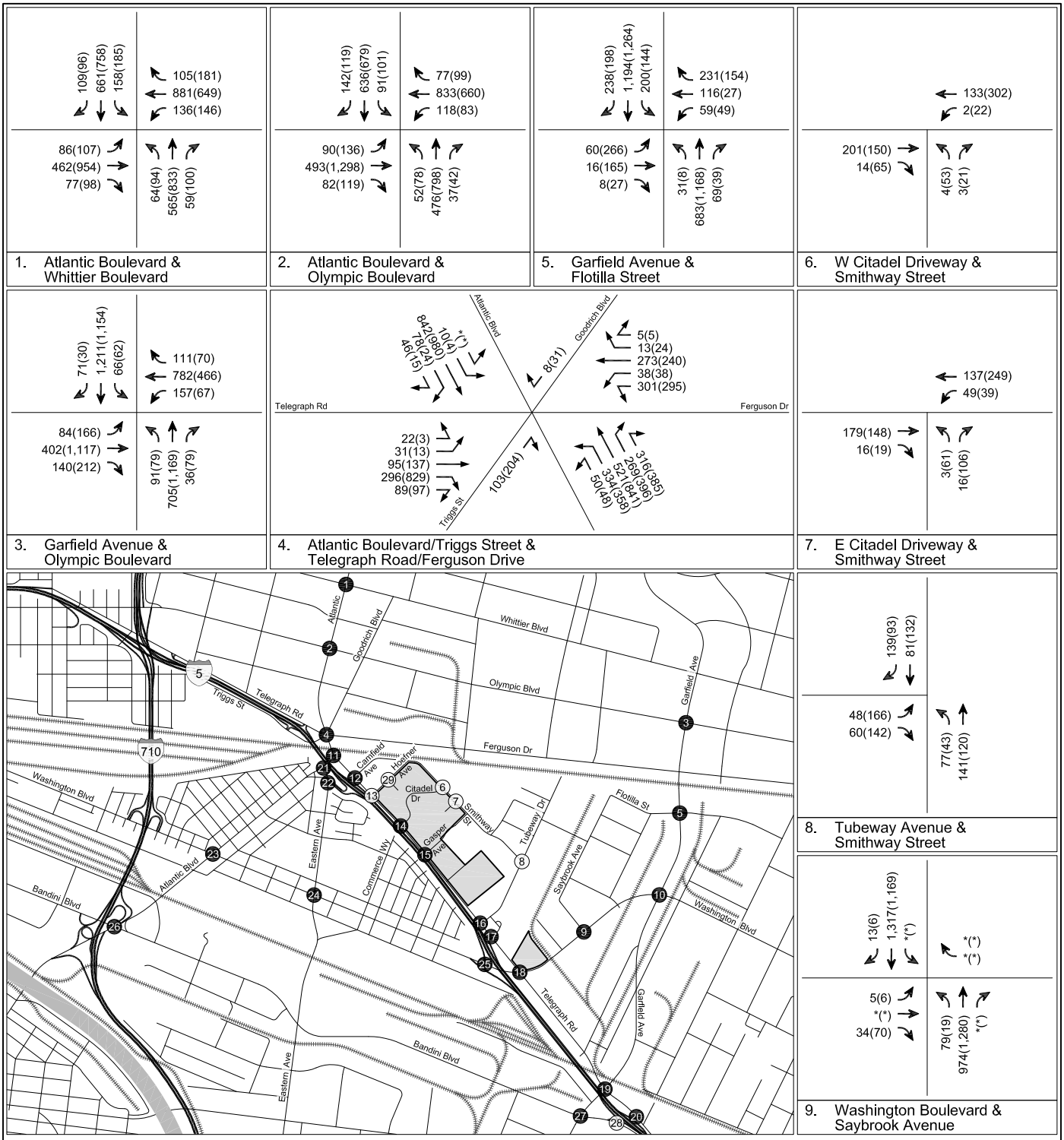
LEGEND

- Traffic Signal
- Stop Sign
- FF Free Flow

	EXISTING CONDITIONS (YEAR 2018)	FUTURE WITH PROJECT WITH MITIGATION (YEAR 2025)
25. Washington Boulevard & I-5 SB Ramps		Same as Existing Conditions
26. Atlantic Boulevard / I-710 Ramps & Bandini Boulevard		Same as Existing Conditions
27. Garfield Avenue & Bandini Boulevard		Same as Existing Conditions
28. I-5 SB Ramps & Bandini Boulevard		Same as Existing Conditions
29. Hoefner Avenue & Citadel Valet Driveway		Same as Existing Conditions

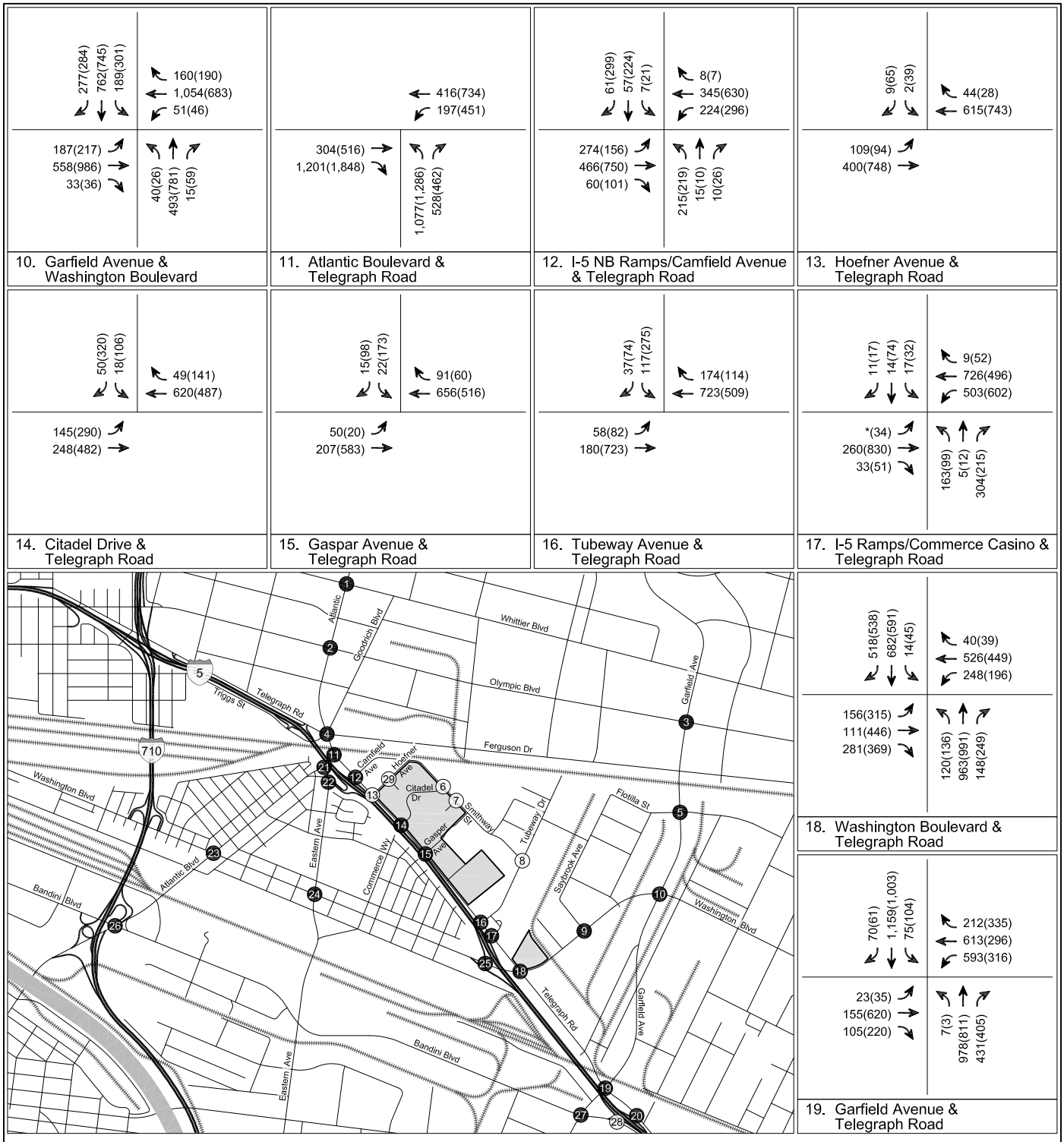
INTERSECTION LANE CONFIGURATIONS

FIGURE 4 (CONT.)



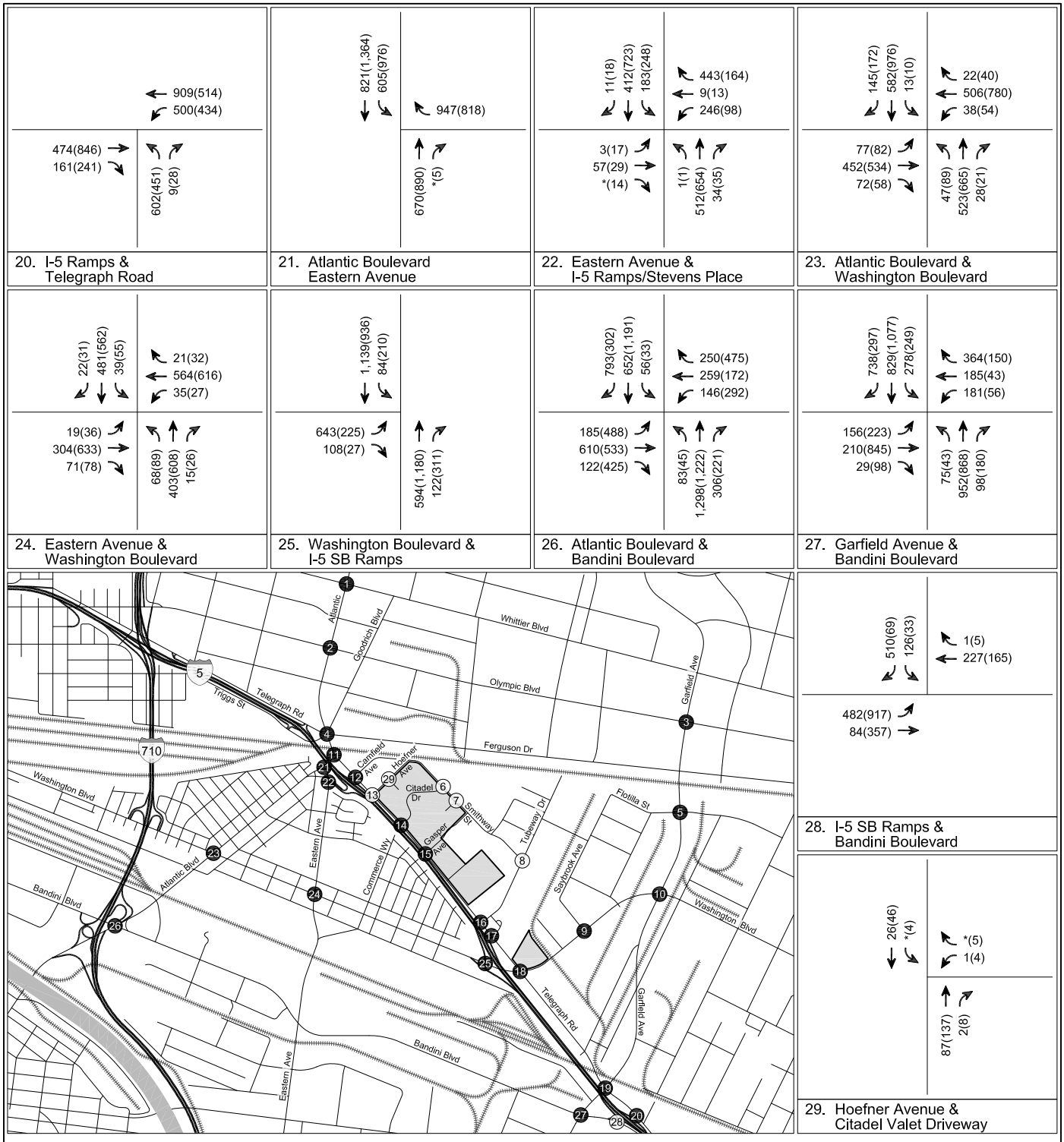
EXISTING CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 5



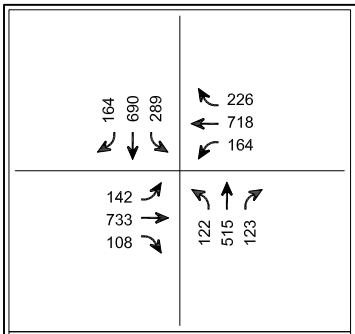
EXISTING CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
5 (CONT.)

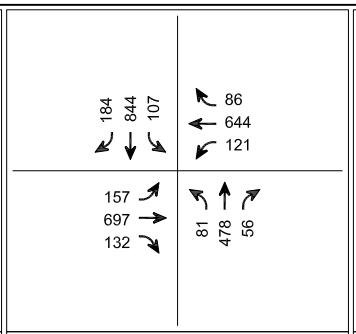


EXISTING CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

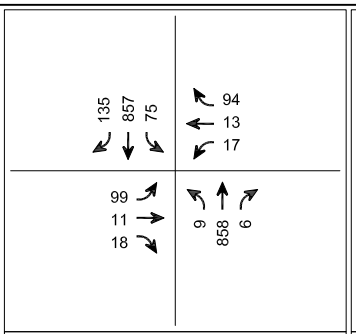
FIGURE
5 (CONT.)



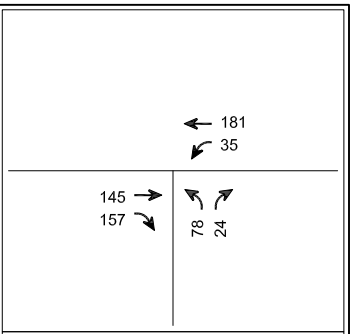
1. Atlantic Boulevard & Whittier Boulevard



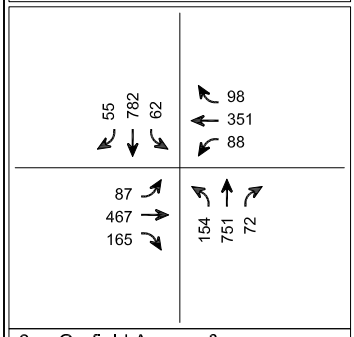
2. Atlantic Boulevard & Olympic Boulevard



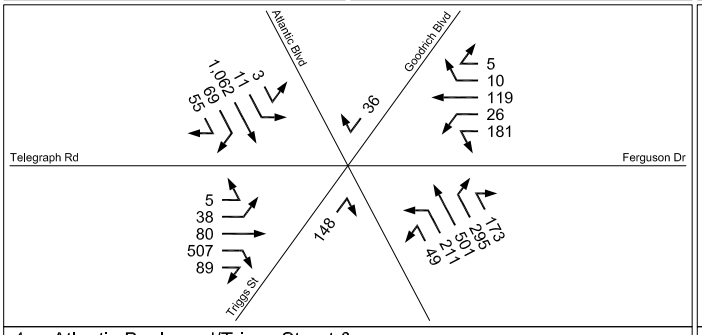
5. Garfield Avenue & Flotilla Street



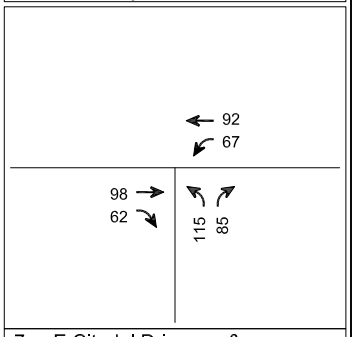
6. W Citadel Driveway & Smithway Street



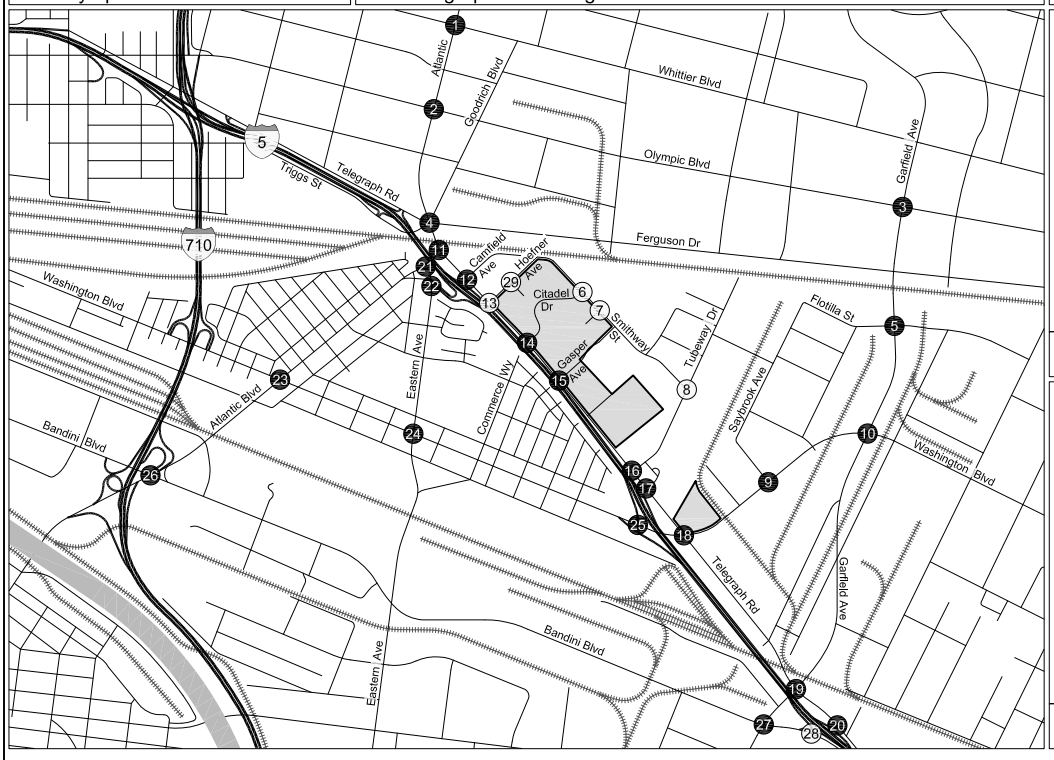
3. Garfield Avenue & Olympic Boulevard

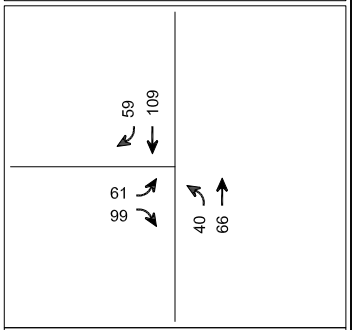


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

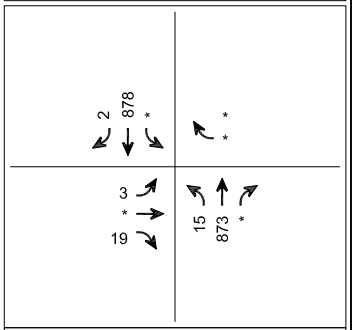


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

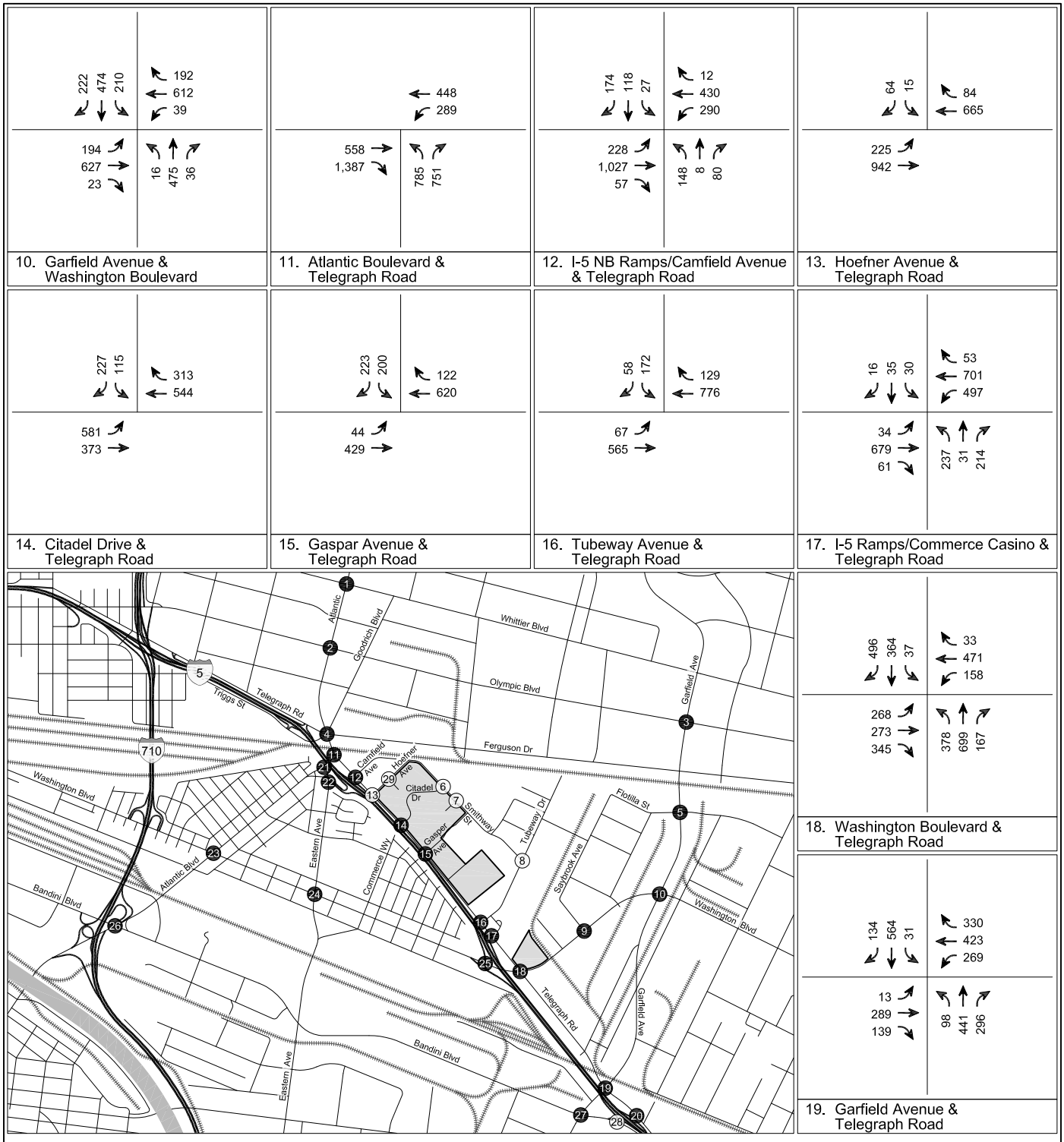
LEGEND

- Project Site
- (#) Signalized Intersection
- (#) Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

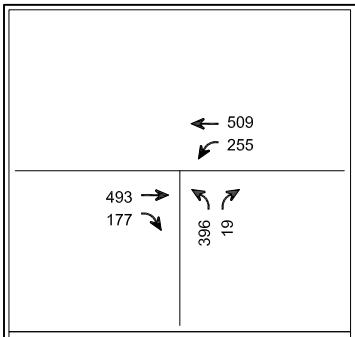
EXISTING CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 6

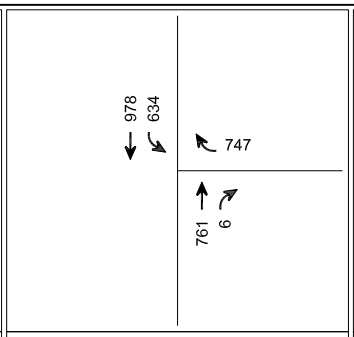


EXISTING CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

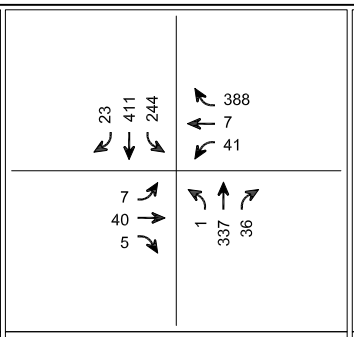
FIGURE
6 (CONT.)



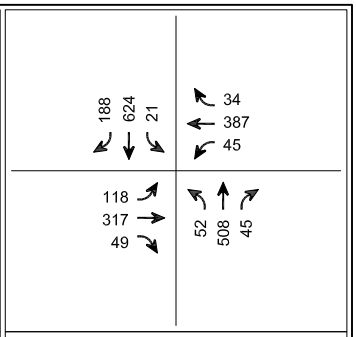
20. I-5 Ramps & Telegraph Road



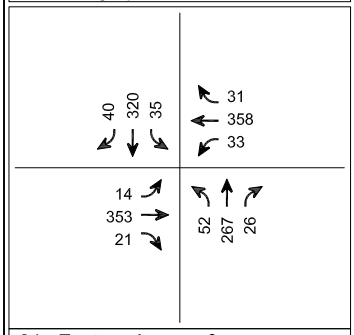
21. Atlantic Boulevard Eastern Avenue



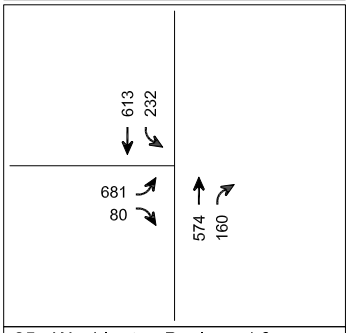
22. Eastern Avenue & I-5 Ramps/Stevens Place



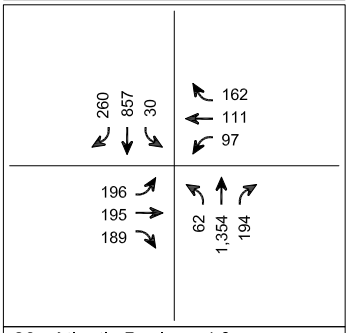
23. Atlantic Boulevard & Washington Boulevard



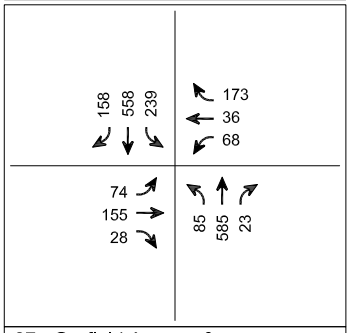
24. Eastern Avenue & Washington Boulevard



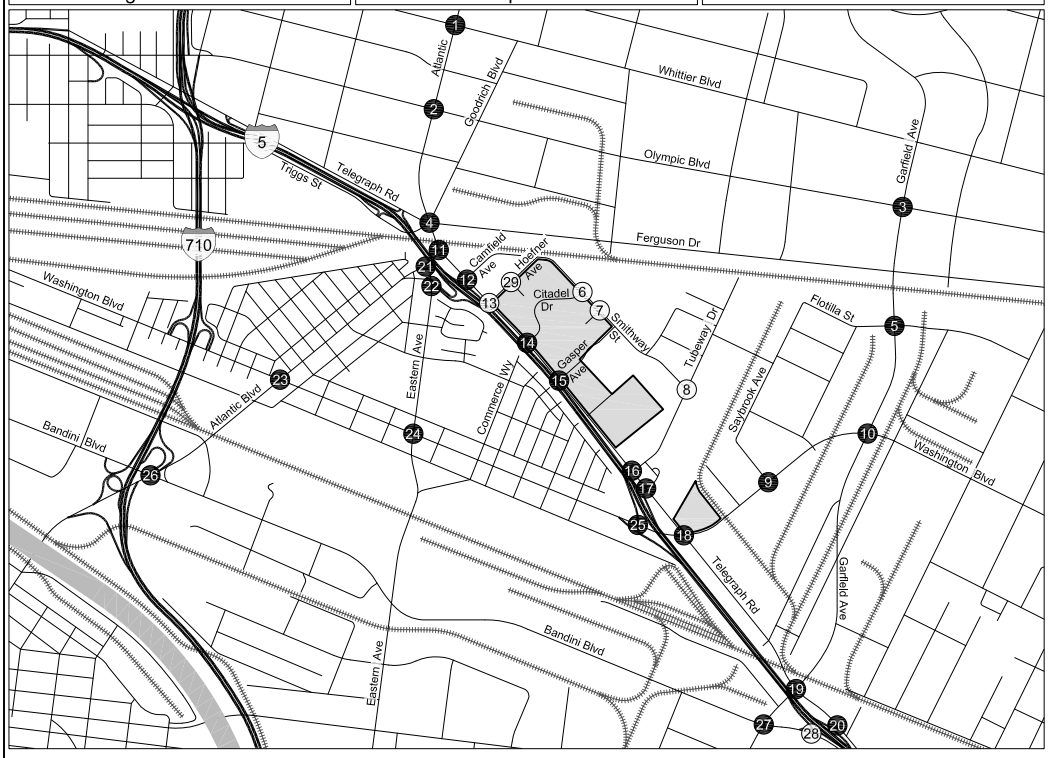
25. Washington Boulevard & I-5 SB Ramps

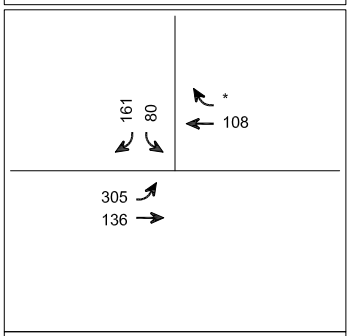


26. Atlantic Boulevard & Bandini Boulevard

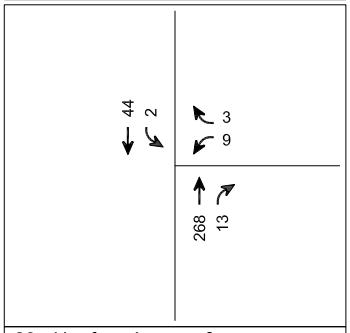


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

LEGEND

	Project Site	X(X)	MIdday Peak Hour Traffic Volumes
#	Signalized Intersection	*	Negligible Volume
#	Unsignalized Intersection		

N
Not to Scale

EXISTING CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
6 (CONT.)

TABLE 3
EXISTING TRANSIT SERVICE

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes)			
				AM Peak Hour		PM Peak Hour	
Metro Bus Service [a]				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
18	Downtown Los Angeles - Montebello/Wilshire/Western Station via 6th Street & Whittier Bl	Local	2:30 A.M. - 1:30 A.M.	11	11	9	8
62	Downtown Los Angeles - Hawaiian Gardens via Telegraph Rd	Local	5:00 A.M. - 12:00 A.M.	24	22	27	22
66	Downtown Los Angeles - Montebello/Wilshire Center via 8th Street & Olympic Bl	Local	4:00 A.M. - 12:30 A.M.	18	22	22	22
258	Alhambra - Paramount via Fremont Av & Eastern Av	Local	5:30 A.M. - 8:00 P.M.	40	48	40	48
260	Pasadena - Artesia Blue Line Station	Local	5:00 A.M. - 11:00 P.M.	16	16	15	15
762	Altadena - Artesia Blue Station via Fair Oaks Av & Atlantic Blvd	Rapid	5:30 A.M. - 8:30 P.M.	21	23	30	27
City of Commerce Municipal Bus				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Red	Red Line	Local	6:30 A.M. - 7:45 P.M.	60	N/A	60	N/A
Green	Green Line	Local	7:00 A.M. - 7:00 P.M.	60	N/A	60	N/A
Orange	Orange Line	Local	7:00 A.M. - 7:00 P.M.	80	N/A	80	N/A
Yellow	Yellow Line	Local	11:30 A.M. - 2:30 P.M.	60	N/A	60	N/A
Montebello Bus Line				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
30	San Marino - South Gate via Garfield Avenue	Local	4:45 A.M. - 10:30 P.M.	40	48	48	48
50	Downtown Los Angeles - La Mirada via Washington Boulevard	Local	4:30 A.M. - 11:15 P.M.	34	30	34	34

Notes
Metro: Los Angeles County Metropolitan Transportation Authority
[a] Headway information based on operating and ridership data from Metro for October 2017.

TABLE 4
EXISTING CONDITIONS (YEAR 2018)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions	
			V/C Ratio	LOS
1.	Atlantic Blvd & Whittier Blvd	AM	0.723	C
		PM	0.897	D
		MD	0.812	D
2.	Atlantic Blvd & Olympic Blvd	AM	0.716	C
		PM	0.921	E
		MD	0.807	D
3.	Garfield Ave & Olympic Blvd	AM	0.890	D
		PM	0.986	E
		MD	0.711	C
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.728	C
		PM	0.891	D
		MD	0.668	B
5.	Garfield Ave & Flotilla St	AM	0.749	C
		PM	0.884	D
		MD	0.538	A
9.	Washington Blvd & Saybrook Ave	AM	0.447	A
		PM	0.411	A
		MD	0.304	A
10.	Garfield Ave & Washington Blvd	AM	0.747	C
		PM	0.869	D
		MD	0.680	B
11.	Atlantic Blvd & Telegraph Rd	AM	0.697	B
		PM	0.948	E
		MD	0.834	D
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.504	A
		PM	0.711	C
		MD	0.713	C
14.	Citadel Dr & Telegraph Rd	AM	0.290	A
		PM	0.368	A
		MD	0.497	A
15.	Gaspar Ave & Telegraph Rd	AM	0.301	A
		PM	0.341	A
		MD	0.409	A
16.	Tubeway Ave & Telegraph Rd	AM	0.377	A
		PM	0.402	A
		MD	0.411	A

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 4 (CONTINUED)
EXISTING CONDITIONS (YEAR 2018)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions	
			V/C Ratio	LOS
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.596	A
		PM	0.786	C
		MD	0.765	C
18.	Washington Blvd & Telegraph Rd	AM	0.687	B
		PM	0.778	C
		MD	0.699	B
19.	Garfield Ave & Telegraph Rd	AM	0.738	C
		PM	0.723	C
		MD	0.551	A
20.	I-5 NB Ramps & Telegraph Rd	AM	0.823	D
		PM	0.877	D
		MD	0.612	B
21.	Eastern Ave & Atlantic Blvd	AM	0.705	C
		PM	0.954	E
		MD	0.757	C
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.451	A
		PM	0.413	A
		MD	0.402	A
23.	Atlantic Blvd & Washington Blvd	AM	0.469	A
		PM	0.683	B
		MD	0.490	A
24.	Eastern Ave & Washington Blvd	AM	0.382	A
		PM	0.445	A
		MD	0.307	A
25.	I-5 SB Ramps & Washington Blvd	AM	0.562	A
		PM	0.678	B
		MD	0.660	B
26.	Atlantic Blvd & Bandini Blvd	AM	0.651	B
		PM	0.764	C
		MD	0.500	A
27.	Garfield Avenue & Bandini Blvd	AM	0.811	D
		PM	0.857	D
		MD	0.532	A

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 5
EXISTING CONDITIONS (YEAR 2018)
UNSIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Unsignalized Intersection	Peak Hour	Existing Conditions	
			Delay[1]	LOS
6.	W Citadel Dwy & Smithway St	AM	10.6	B
		PM	13.1	B
		MD	13.1	B
7.	E Citadel Dwy & Smithway St	AM	11.5	B
		PM	13.4	B
		MD	12.8	B
8.	Tubeway Ave & Smithway St	AM	12.7	B
		PM	15.1	C
		MD	11.4	B
13.	Hoefner Ave & Telegraph Rd	AM	23.1	C
		PM	40.3	E
		MD	60.3	F
28.	I-5 SB Ramps & Bandini Blvd	AM	Overflow	F
		PM	Overflow	F
		MD	45.2	E
29.	Hoefner Ave & Citadel Valet Dwy	AM	9.1	A
		PM	9.6	A
		MD	10.5	B

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

Overflow = represents output which exceeds delay thresholds

[1] Highest Delay of All Approaches of the intersection

Chapter 3
Traffic Projections

This chapter describes the methodology for the intersection operating conditions associated with the Project when compared to Existing Conditions. Existing Conditions with the addition of Project traffic were developed, as were estimates of future traffic conditions in the area both with and without the Project in Year 2025, which corresponds to the anticipated Project Opening Year.

FUTURE WITHOUT PROJECT (YEAR 2025) TRAFFIC PROJECTIONS

The Future without Project traffic projections reflect anticipated future traffic increases that can be expected from two sources. The first is ambient growth in traffic, which reflects general increases in traffic due to regional growth and development. The second source is traffic generated by specific future projects located within or in the vicinity of the study area. The methods and assumptions used to develop the Future without Project traffic projections are described below.

Area-wide Traffic Growth

Existing traffic is expected to increase between Year 2018 and Year 2025 as a result of general area-wide and regional growth and development. The *2010 Congestion Management Program for Los Angeles County* (Metro, 2010) (CMP) provides general growth factors based on regional modeling. As shown in Exhibit D-1 of the CMP, the Project Site is located in Regional Statistical Area #21, which is estimated to experience a total regional growth in traffic of 8.5% between 2015 and 2025, which equates to an ambient traffic growth factor of 0.85% per year. However, to provide a conservative analysis, an ambient growth factor of 1% per year was applied to adjust the existing traffic volumes to reflect the effects of the regional growth and development by year 2025. The total growth adjustment applied over the seven-year period was 7%.

Related Projects

Information regarding potential future projects either under construction, planned, or proposed for development within or near the study area was obtained from several sources. These sources include City staff as well as recent studies conducted in the area. No planned or proposed developments beyond City boundaries are expected to have a noticeable impact on traffic levels in the Project vicinity. These related projects are described in Table 6 and their locations are illustrated in Figure 7.

As shown in Table 6, 18 projects are currently under consideration that could add traffic to the study intersections. As detailed, weekday morning and afternoon peak hour and Saturday midday peak hour trip generation estimates for the related projects were calculated based on published trip generation rates or data taken directly from the traffic study for a particular project. In total, the related projects would add approximately 13,208 weekday daily trips, including 702 morning and 1,341 afternoon peak hour trips, and 15,552 Saturday daily trips, including 1,543 Saturday midday peak hour trips, to the local roadway network.

The geographic distribution of traffic generated by developments such as those included in this analysis depend on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of the population from which employees and/or patrons of the proposed developments may be drawn, the geographic distribution of activity centers (employment, commercial, and other) to which residents of proposed residential projects may be drawn, and the location of the Project in relation to the surrounding street system. The trip generation estimates were assigned to the local street system using the trip distribution developed according to the factors described above for each individual project. The resulting related project traffic volumes for the weekday morning and afternoon peak hours and Saturday midday peak hour are illustrated in Figures 8 and 9, respectively.

Traffic Volumes

Forecasts of Future without Project traffic volumes were developed by adding the traffic expected to be generated by the list of related development projects to the background existing (Year 2018) volumes adjusted by areawide traffic growth. The resulting traffic volumes at the 29 study intersections for the weekday morning and afternoon and Saturday midday peak hour, as

illustrated in Figures 10 and 11, respectively, represent the Future with Project Conditions (Year 2025).

To provide a conservative analysis, a set of future traffic volumes were developed to include a higher percentage of truck traffic than the existing analysis. Based on existing observations and general characteristics of the Study Area, between 5-10% of the total traffic along major streets and intersections within the Study Area were assumed to be attributed to truck traffic. Minor streets and minor turning movements were assumed to be made up of 2-5% truck traffic. Each truck trip was then factored up by 2.5% to represent PCE using the street system. The adjusted intersection volumes resulting from the truck PCE factors for weekday morning and afternoon and Saturday midday peak hours are shown in Figures 12 and 13, respectively, for Future with Truck Traffic without Project Conditions (Year 2025).

Future Roadway Improvements

While there are some major projects proposed for the street system surrounding the Project, including improvements to I-5 corridor adjacent to the Project Site, none of the planned improvements will be completed by the opening year of the Project (Year 2025), and, therefore, no background roadway improvements were assumed to be in place in the future scenarios.

PROJECT TRAFFIC VOLUMES

Development of future traffic forecasts for the Project uses a three-step process similar to the process described for the related projects. The process estimates the Project's trip generation, trip distribution, and traffic assignment.

Project Trip Generation

The trip generation rates used for estimating future trips for the Project were developed using the trip generation rates contained within *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017).

As mentioned, the Project site currently contains 492,883 sf of retail GLA and 179,518 sf of office GLA. The Project plans to construct an additional 520,466 sf of retail GLA, 770 hotel rooms within four hotel buildings, and an entertainment center, which could host a 102-bay Topgolf center or similar entertainment destination type use, on The Citadel site. In addition, the Project includes construction of 55,015 sf of light industrial use, 13,400 sf of restaurant space, and 70,000 sf of office GLA on the empty 10-acre parcel southeast of The Citadel.

A mixed-use internal capture credit was applied to account for person trips made between distinct land uses within a mixed-use development (e.g., office employees, hotel guests, and other patrons of the Project visiting the retail/commercial uses). The internal capture credit is detailed in Tables 7A and 7B. A 10%, 50%, and 10% pass-by trip credit was applied to the shopping center space, fast-food restaurant and quality restaurant, respectively. This trip credit is consistent with trip credits taken for other shopping center and restaurant projects in the vicinity of the Project, and is more conservative (i.e., lower) than the pass-by rates for shopping centers and restaurants found in *Trip Generation, 10th Edition*. Pass-by trip credits were not taken at the following intersections that are adjacent to the Project site and, therefore, do not qualify for pass-by credit:

6. W. Citadel Driveway & Smithway Street
7. E. Citadel Driveway & Smithway Street
13. Hoefner Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
15. Gasper Avenue & Telegraph Road
18. Washington Boulevard & Telegraph Road
29. Hoefner Avenue & Citadel Valet Driveway

Table 7A presents the trip generation estimates for the portion of the Project on The Citadel site and Table 7B presents the trip generation estimates for the portion of the Project on the 10-acre parcel.

The trip generation projections for the Project include an estimate of the amount of internal capture among the various land uses within the Project. The internal capture of trips within a mixed-use project recognizes that some trips are “captured” within the boundaries of the project, and, therefore, these internal trips do not travel on the external roadway system. The base trip

generation estimates in Tables 7A and 7B assume that each land use is located in a free-standing, independent parcel, which is not the case at The Citadel or the 10-acre parcel site. For example, a portion of the inbound trips to restaurants within the Project will be made by retail patrons already within the site. The trip will leave the retail shop and move to the restaurant use. That outbound retail trip and inbound restaurant trip are "captured' within the site, and, therefore, these trips do not use the external street system. Tables 7A and 7B reflect the level of internal trip capture that is expected among the various land uses on the site. These internal trip connections are depicted graphically in Appendix C.

As shown in Table 7A, the portion of the Project on The Citadel site is expected to generate a net increase of 12,070 weekday daily trips, including a net increase of 342 weekday morning peak hour trips (221 inbound, 121 outbound), 1,294 weekday afternoon peak hour trips (634 inbound, 660 outbound), and 16,403 Saturday daily trips, including 1,932 Saturday midday peak hour trips (1,012 inbound, 920 outbound).

As indicated in Table 7B, the portion of the Project on the 10-acre parcel is expected to generate a net increase of 3,226 weekday daily trips, including a net increase of 284 weekday morning peak hour trips (189 inbound, 95 outbound), 270 weekday afternoon peak hour trips (105 inbound, 165 outbound), and a net increase of 3,216 Saturday daily trips, including 329 Saturday midday peak hour trips (172 inbound, 157 outbound).

Project Trip Distribution

The geographic distribution of traffic generated by the Project was derived using the methods described previously for related project trip distribution. The general geographic trip distribution pattern used in the assignment of Project-generated traffic is illustrated in Figures 14A and 14B.

Project Trip Assignment

The Project trip generation estimates summarized in Tables 7A and 7B and the distribution patterns illustrated in Figures 14A and 14B were used to assign the Project-generated traffic to the local and regional street system and through the 29 study intersections. As mentioned

previously, no credit was taken for pass-by traffic at the seven study intersections that border or are internal to the Project sites.

Figures 15 and 16 illustrate the assignment of Project-generated peak hour traffic volumes at each of the 29 study intersections during a typical weekday and Saturday midday, respectively.

EXISTING WITH PROJECT (YEAR 2018) TRAFFIC PROJECTIONS

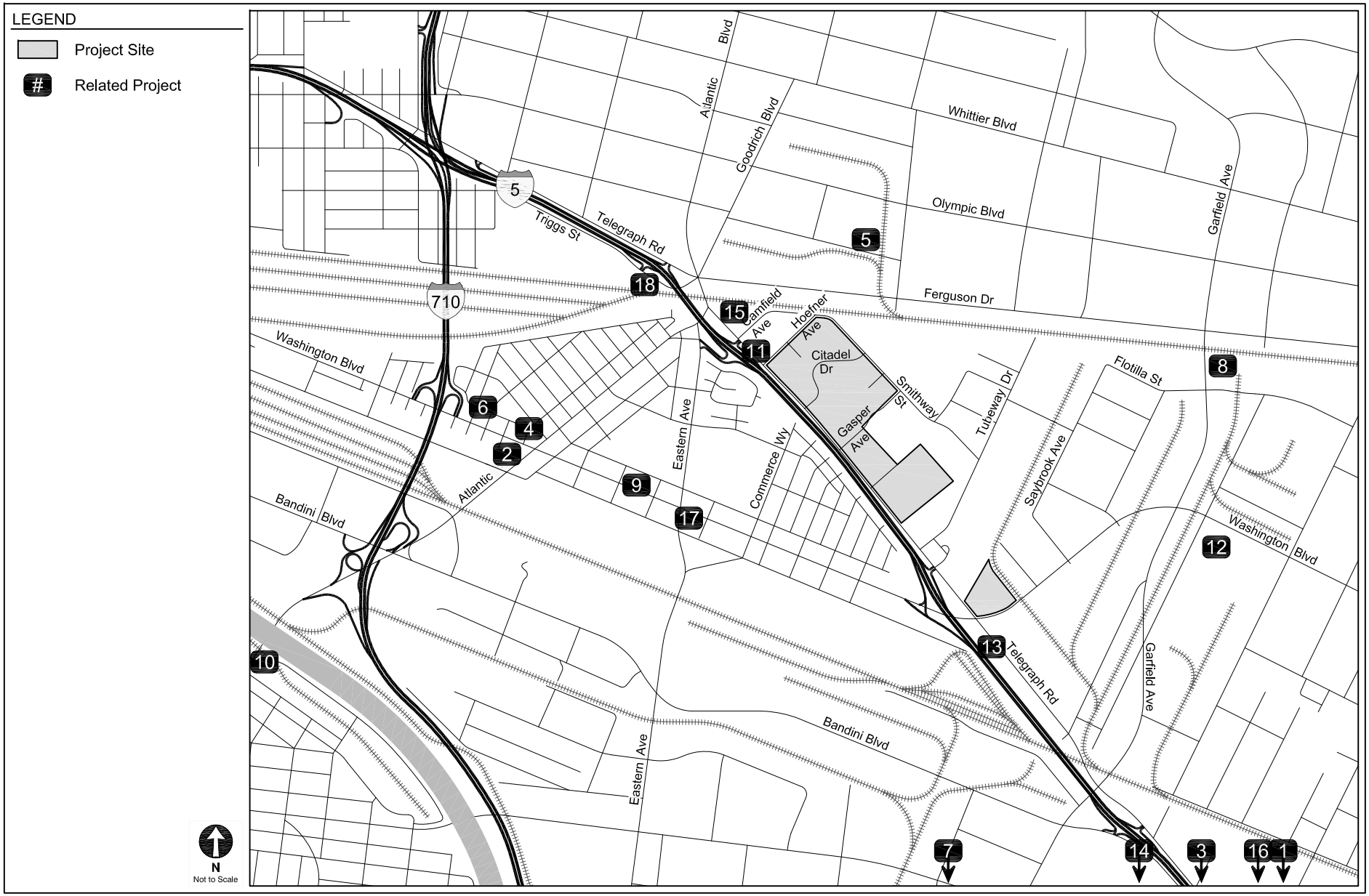
The Project-generated traffic volumes in Figures 15 and 16 were then added to the Existing traffic volumes. Figures 17 and 18, respectively, illustrate the resulting projected Existing with Project weekday morning and afternoon peak hour and Saturday midday peak hour traffic volumes.

FUTURE WITH PROJECT (YEAR 2025) TRAFFIC PROJECTIONS

The Project-generated traffic volumes in Figures 15 and 16 were then added to the Future without Project traffic volumes. Figures 19 and 20 illustrate the resulting projected Future with Project weekday morning and afternoon peak hour and Saturday midday peak hour traffic volumes. These volumes represent projected future peak hour traffic conditions upon completion of the Project.

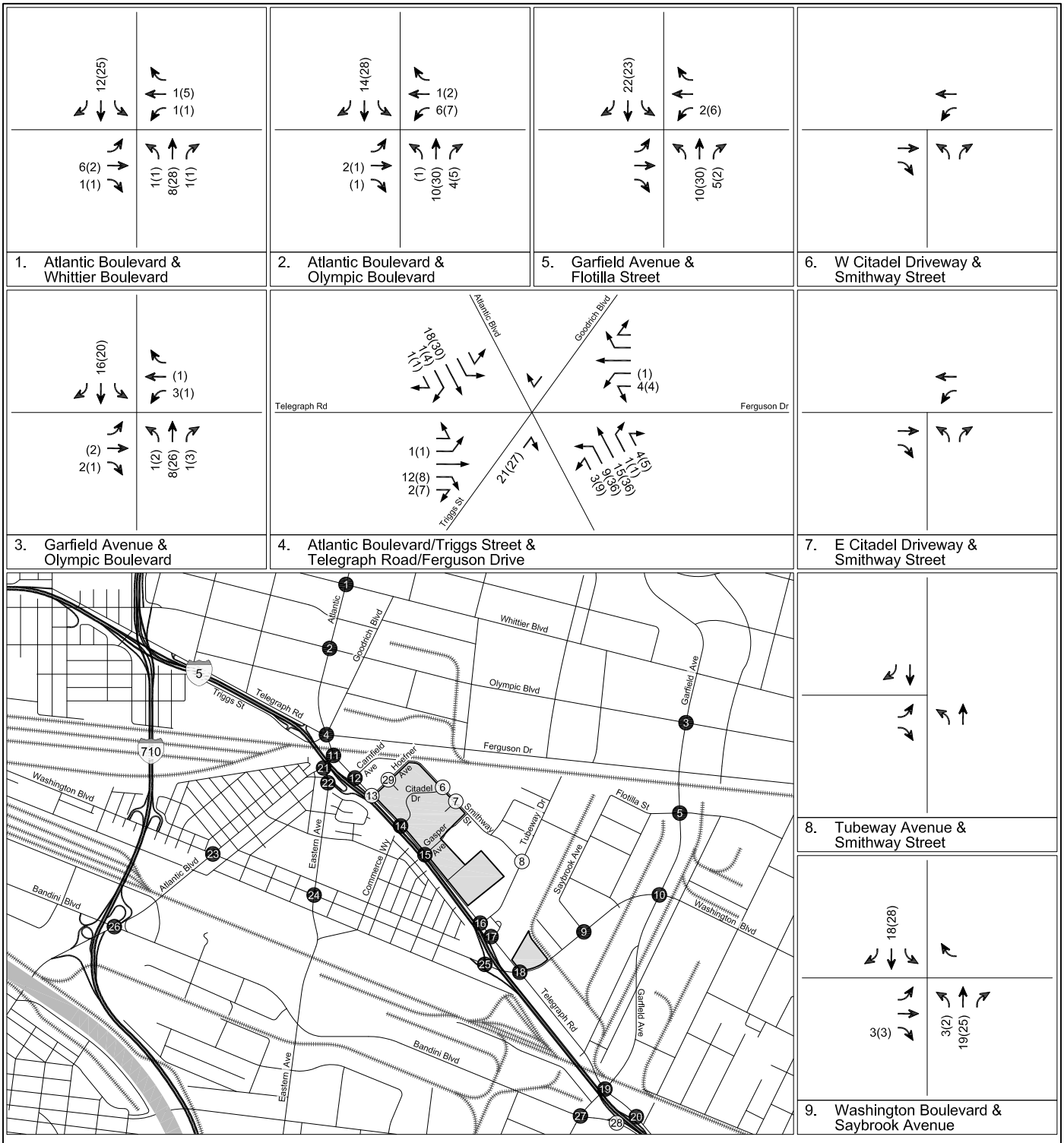
FUTURE WITH TRUCK TRAFFIC WITH PROJECT (YEAR 2025) TRAFFIC PROJECTIONS

The Project-generated traffic volumes in Figures 15 and 16 were then added to the Future with Truck Traffic without Project volumes. Figures 21 and 22 illustrate the resulting projected Future with Project weekday morning and afternoon peak hour and Saturday midday peak hour traffic volumes. These volumes represent projected future peak hour traffic with truck traffic conditions upon completion of the Project.



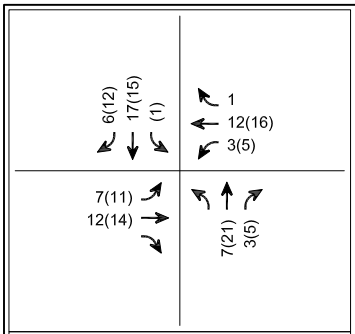
LOCATIONS OF RELATED PROJECTS

FIGURE 7

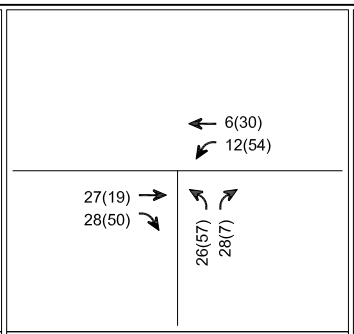


RELATED PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

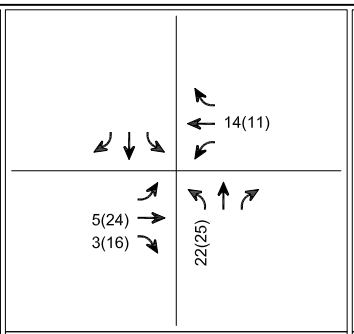
FIGURE
8



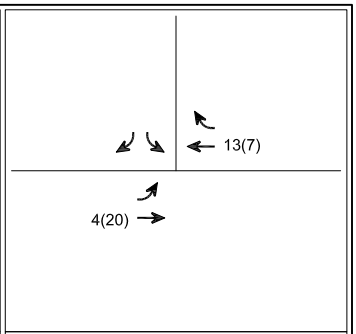
10. Garfield Avenue & Washington Boulevard



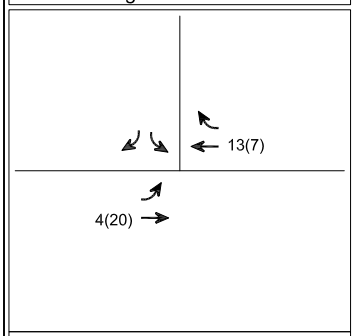
11. Atlantic Boulevard & Telegraph Road



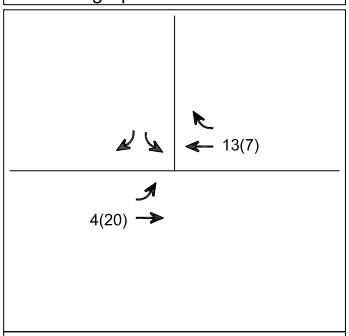
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road



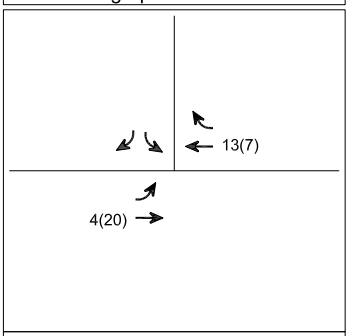
13. Hoefner Avenue & Telegraph Road



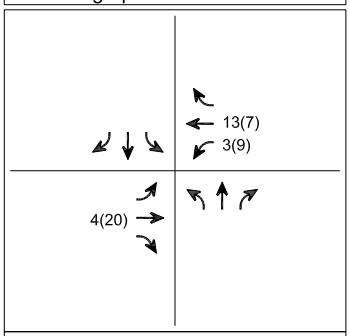
14. Citadel Drive & Telegraph Road



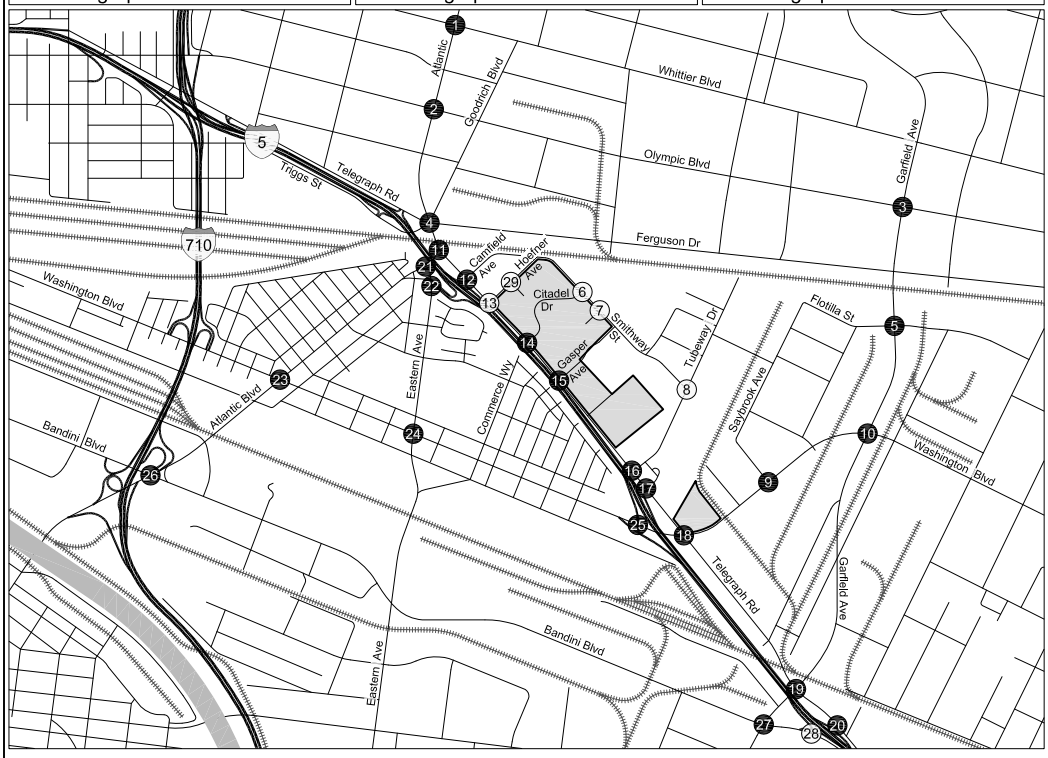
15. Gaspar Avenue & Telegraph Road

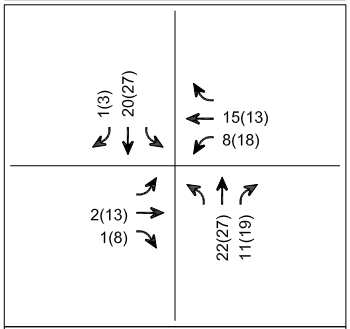


16. Tubeway Avenue & Telegraph Road

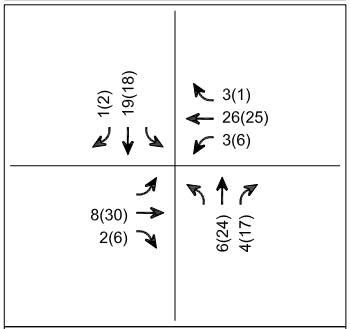


17. I-5 Ramps/Commerce Casino & Telegraph Road





18. Washington Boulevard & Telegraph Road



19. Garfield Avenue & Telegraph Road

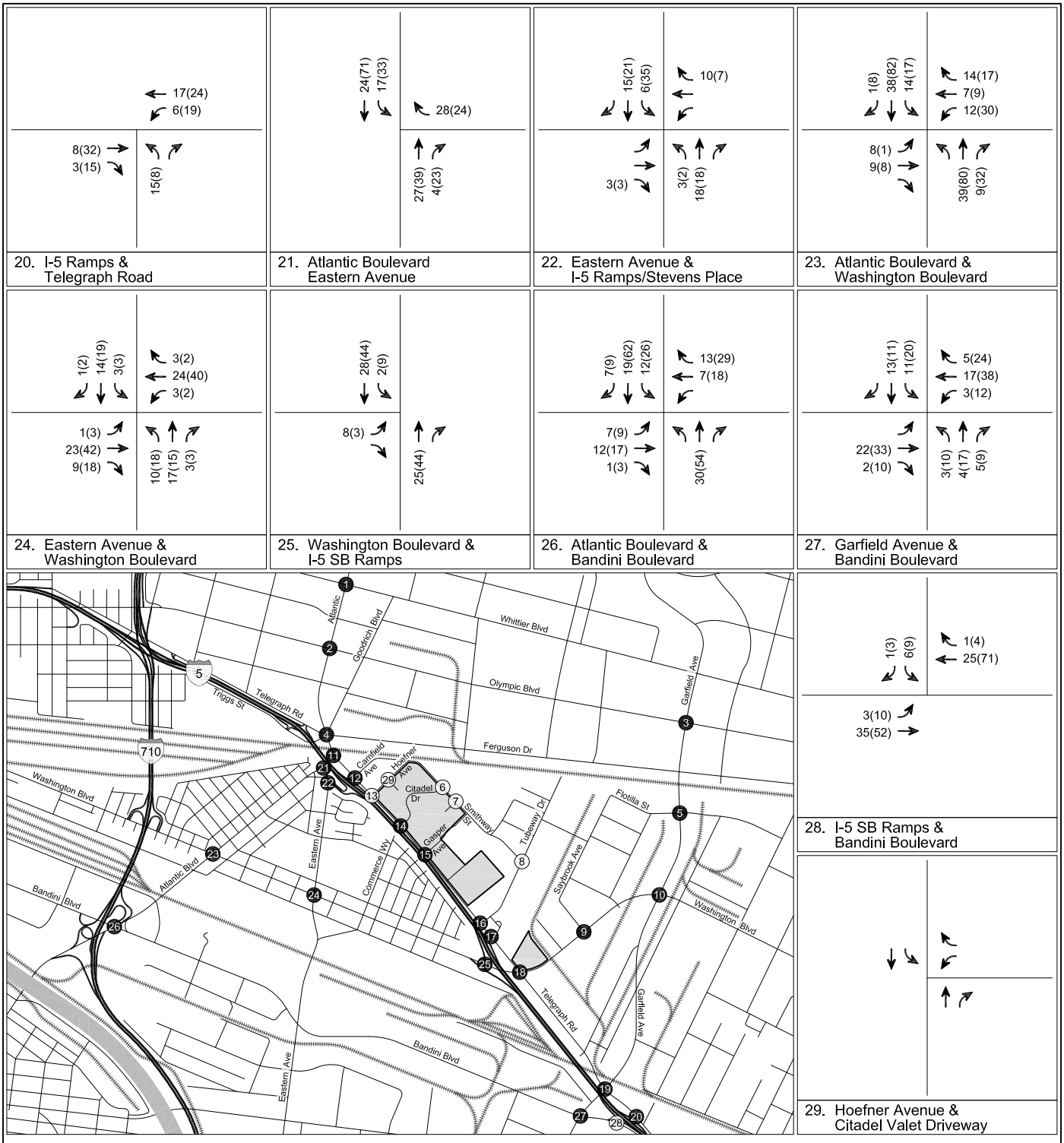
LEGEND

- Project Site
- X(X) AM(PM) Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

N
Not to Scale

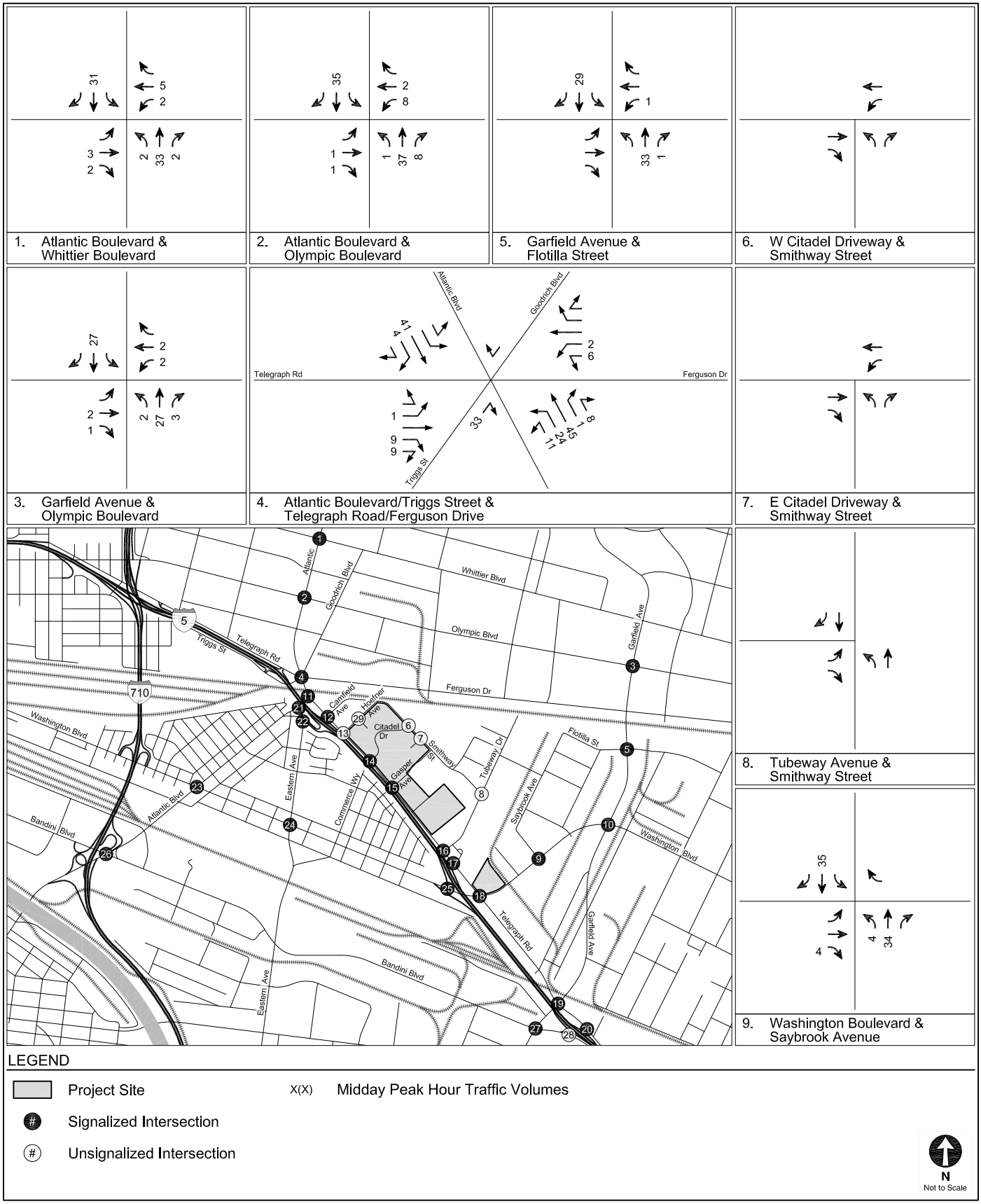
RELATED PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
8 (CONT.)



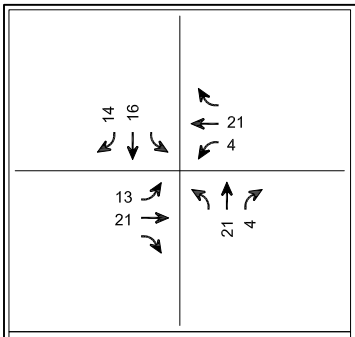
RELATED PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
8 (CONT.)

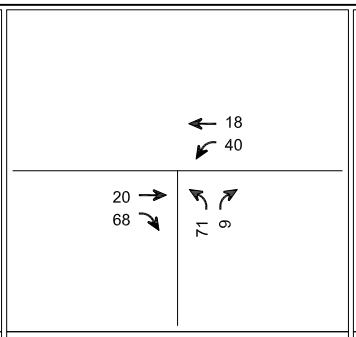


RELATED PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

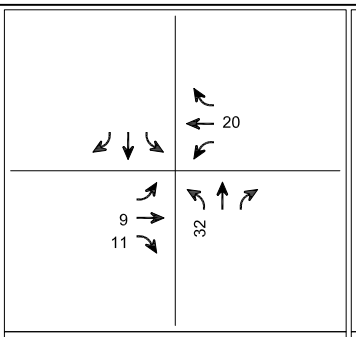
FIGURE
9



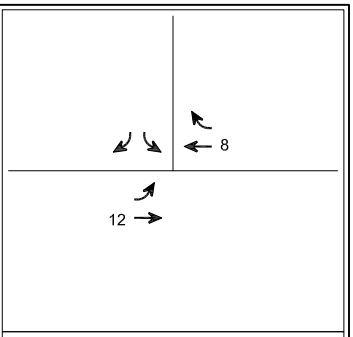
10. Garfield Avenue & Washington Boulevard



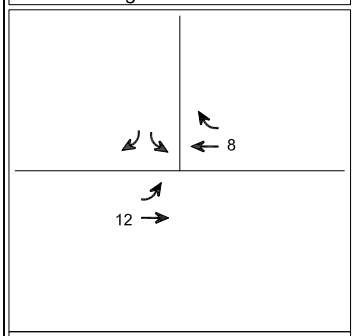
11. Atlantic Boulevard & Telegraph Road



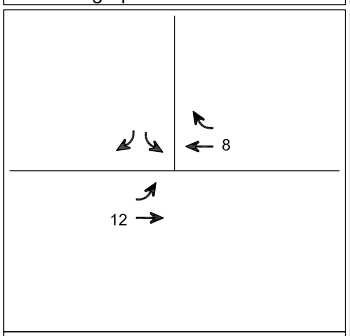
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road



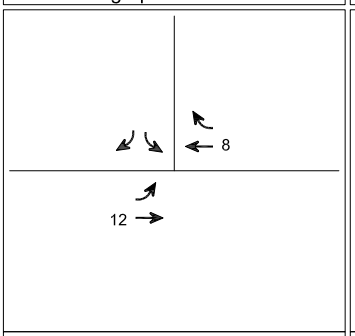
13. Hoefner Avenue & Telegraph Road



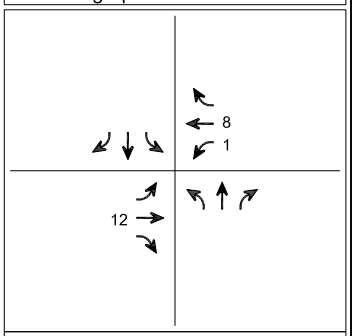
14. Citadel Drive & Telegraph Road



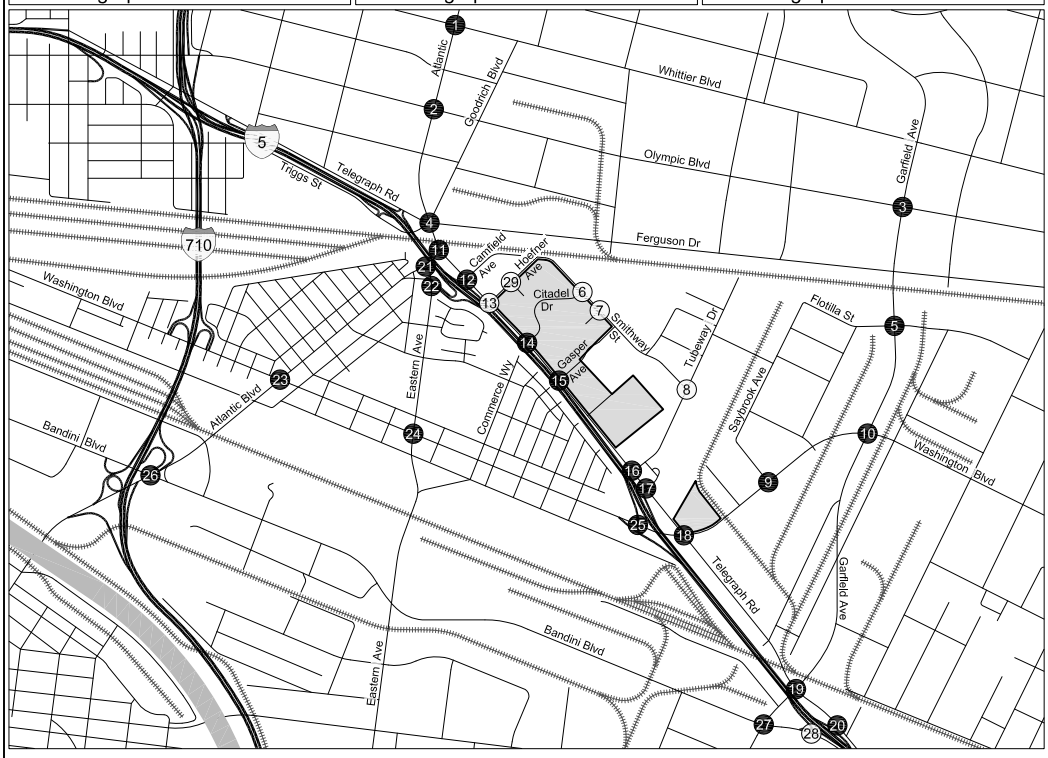
15. Gaspar Avenue & Telegraph Road

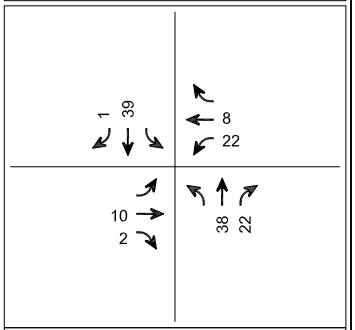


16. Tubeway Avenue & Telegraph Road

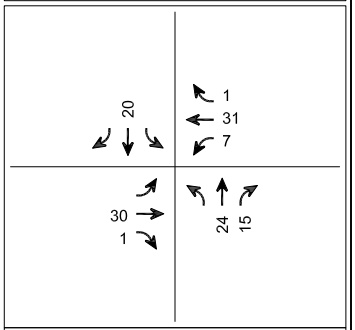


17. I-5 Ramps/Commerce Casino & Telegraph Road





18. Washington Boulevard & Telegraph Road



19. Garfield Avenue & Telegraph Road

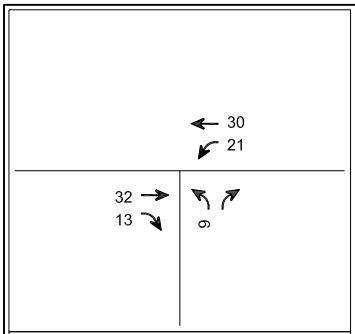
LEGEND

- Project Site
- X(X) Midday Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

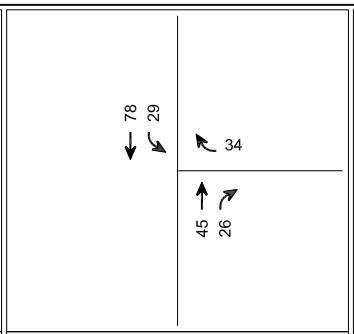
N
Not to Scale

RELATED PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

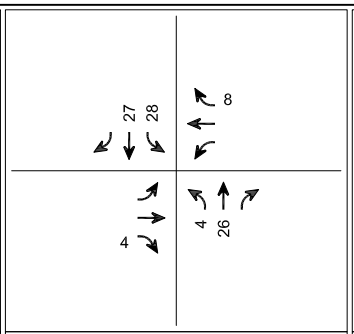
FIGURE
9 (CONT.)



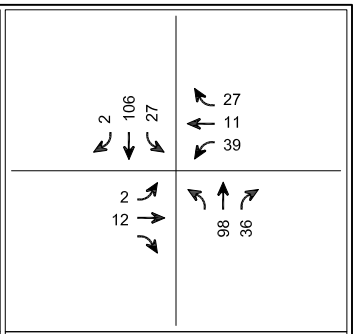
20. I-5 Ramps & Telegraph Road



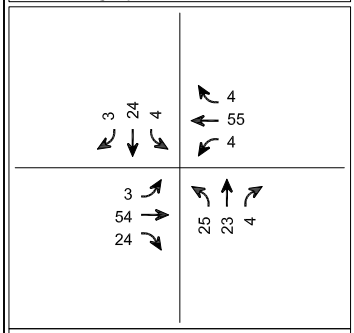
21. Atlantic Boulevard Eastern Avenue



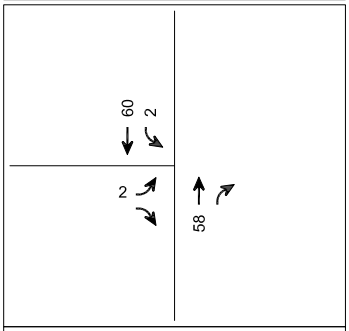
22. Eastern Avenue & I-5 Ramps/Stevens Place



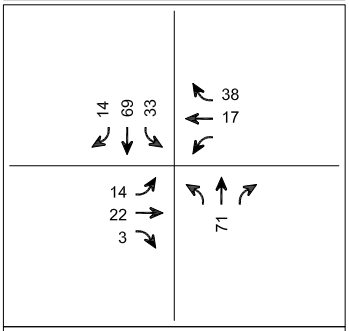
23. Atlantic Boulevard & Washington Boulevard



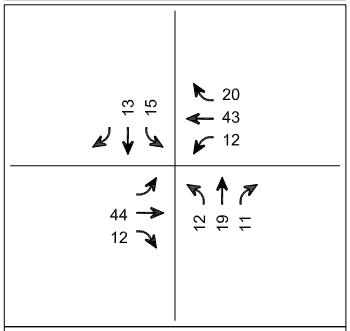
24. Eastern Avenue & Washington Boulevard



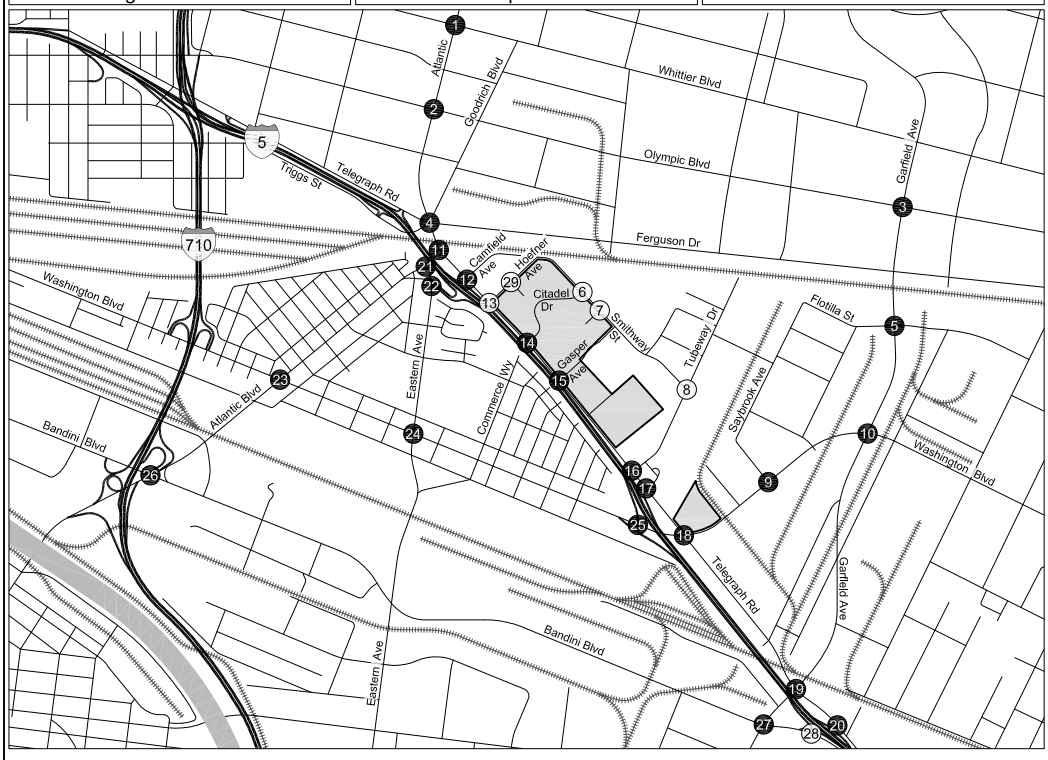
25. Washington Boulevard & I-5 SB Ramps

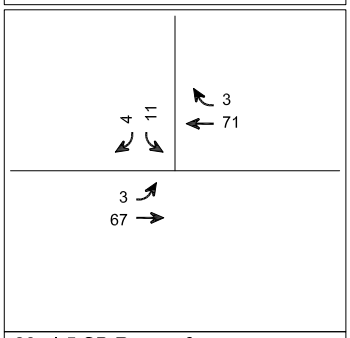


26. Atlantic Boulevard & Bandini Boulevard

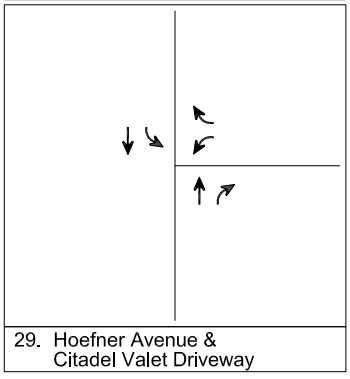


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

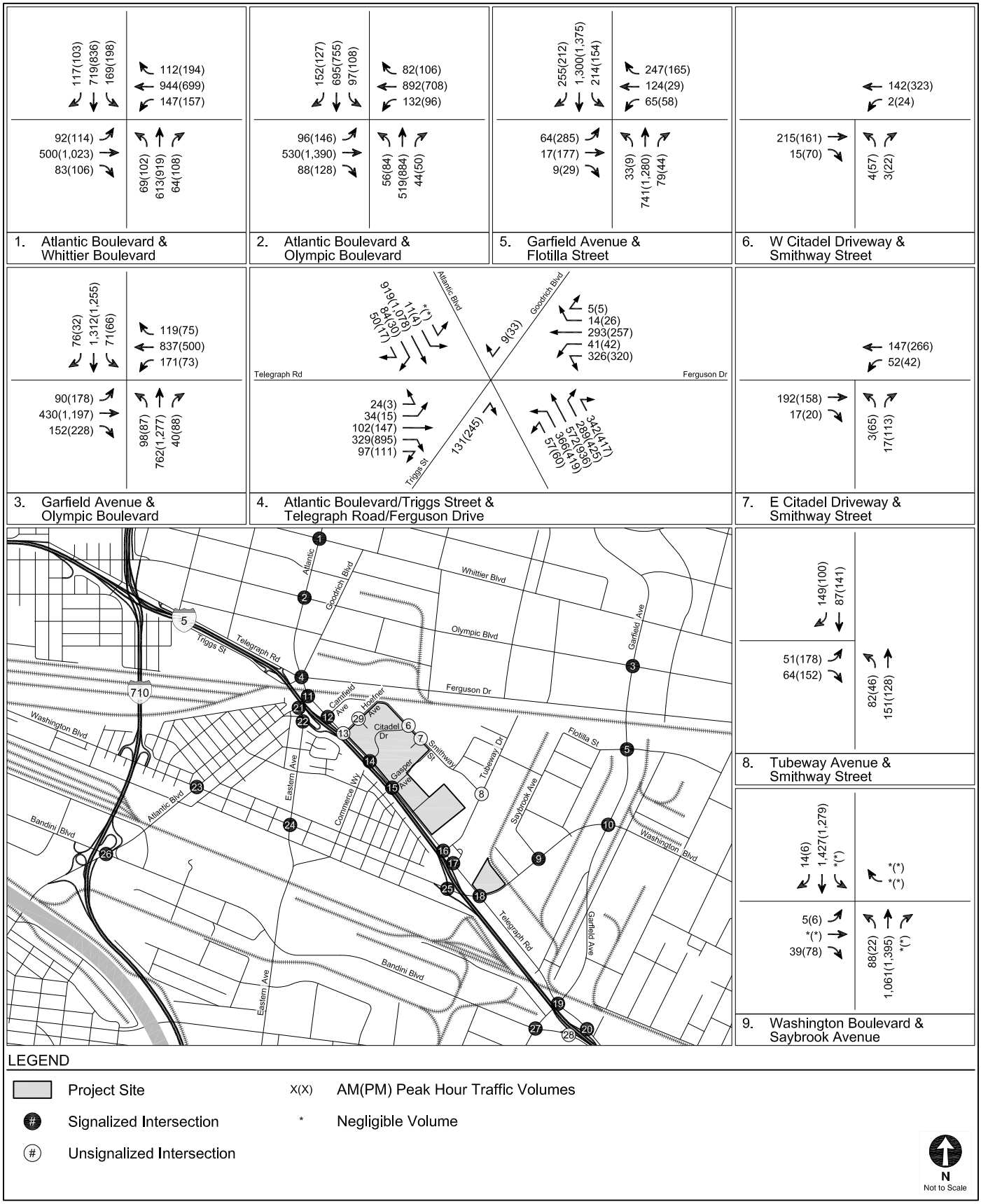
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) Midday Peak Hour Traffic Volumes

N
Not to Scale

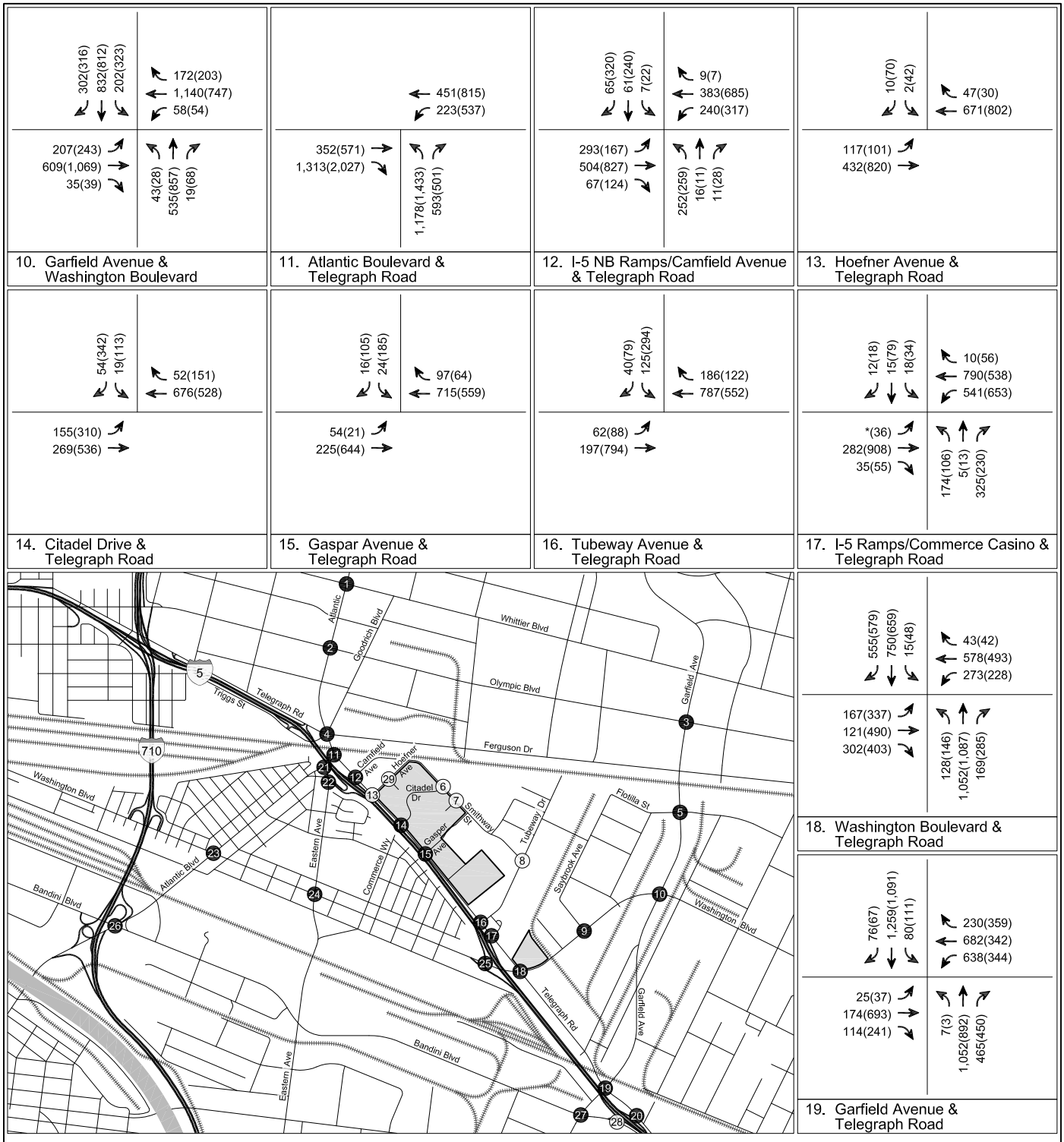
RELATED PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
9 (CONT.)



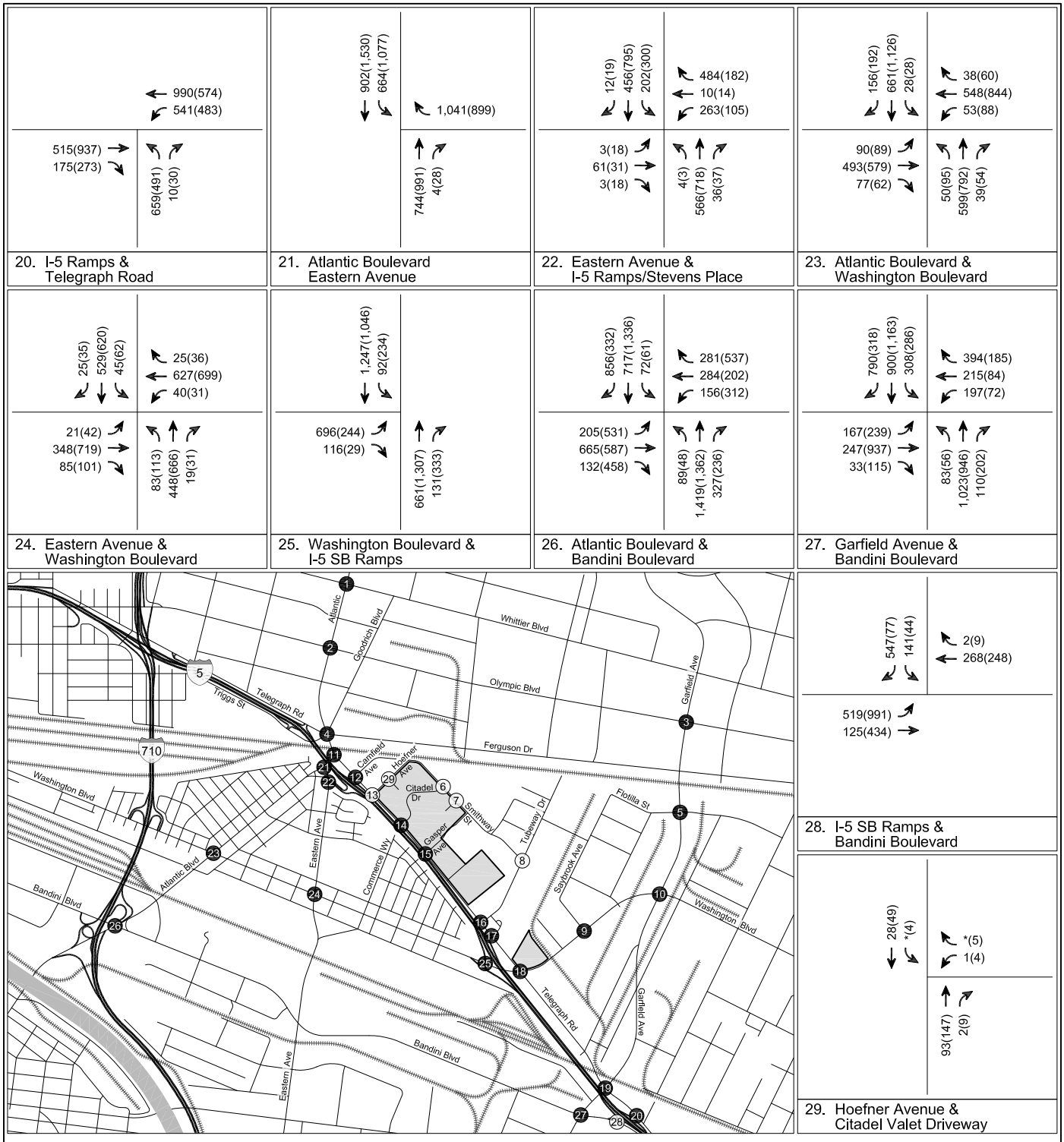
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
10 (CONT.)



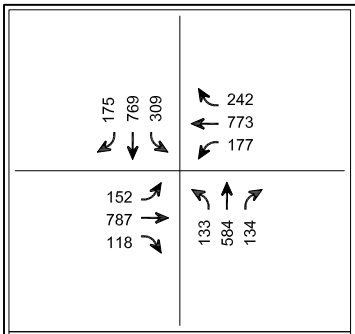
LEGEND

	Project Site	X(X)	AM(PM) Peak Hour Traffic Volumes
#	Signalized Intersection	*	Negligible Volume
(#)	Unsignalized Intersection		

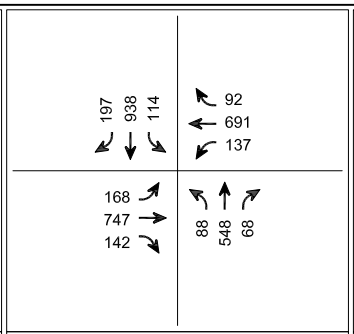
N
Not to Scale

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

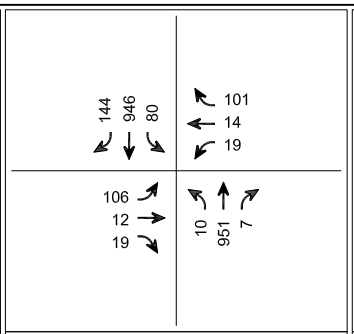
FIGURE
10 (CONT.)



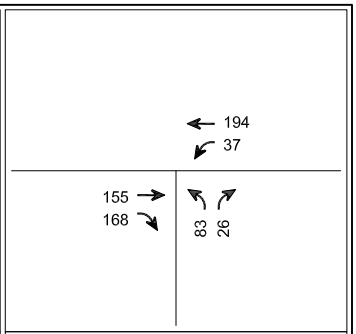
1. Atlantic Boulevard & Whittier Boulevard



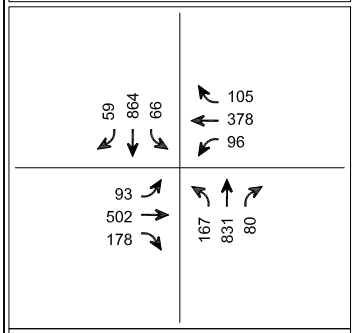
2. Atlantic Boulevard & Olympic Boulevard



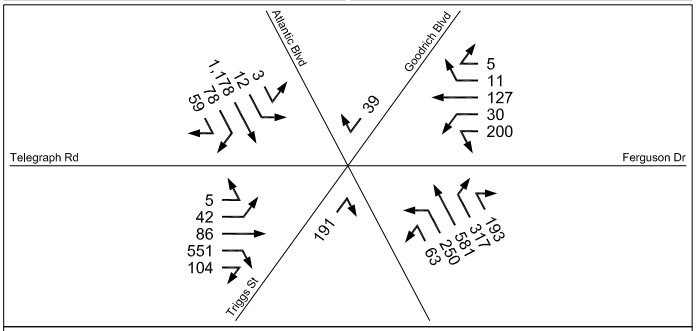
5. Garfield Avenue & Flotilla Street



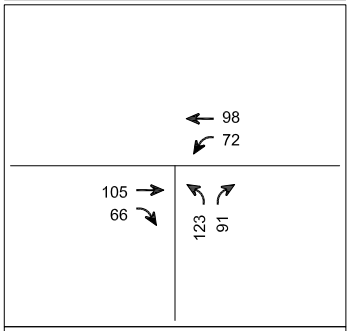
6. W Citadel Driveway & Smithway Street



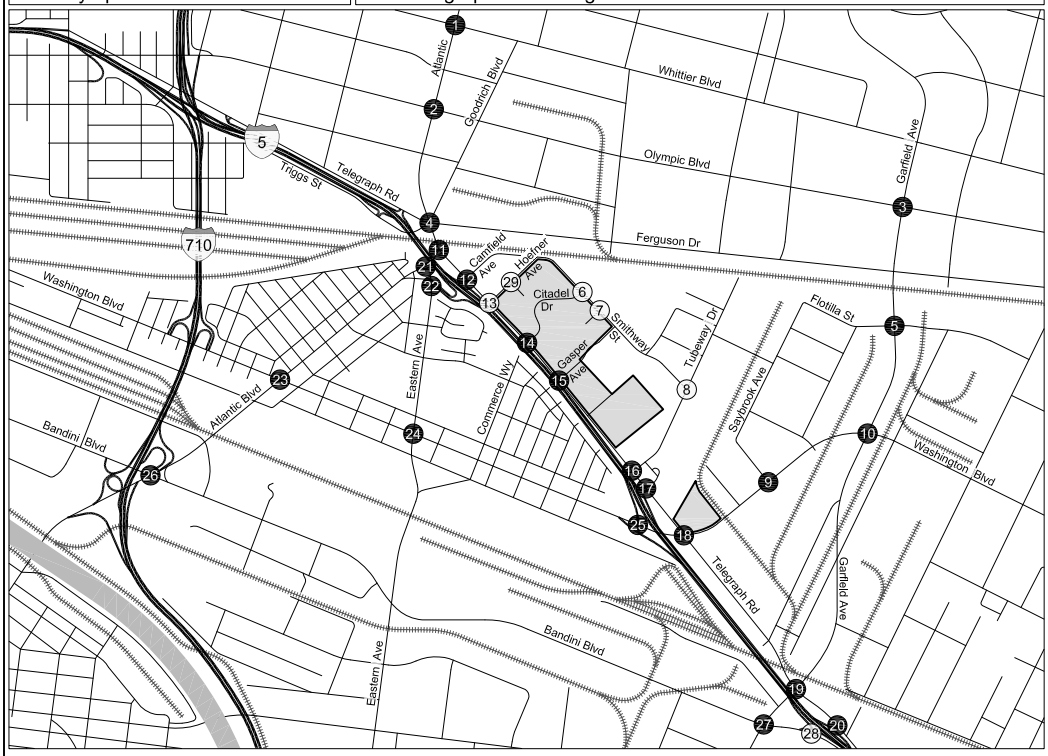
3. Garfield Avenue & Olympic Boulevard

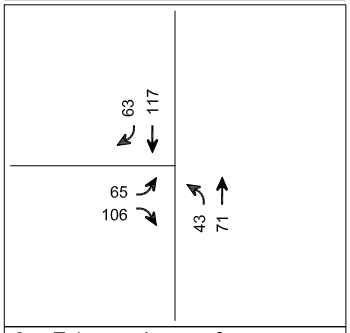


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

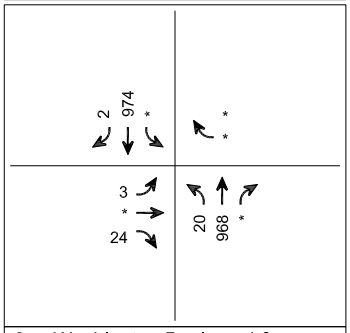


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

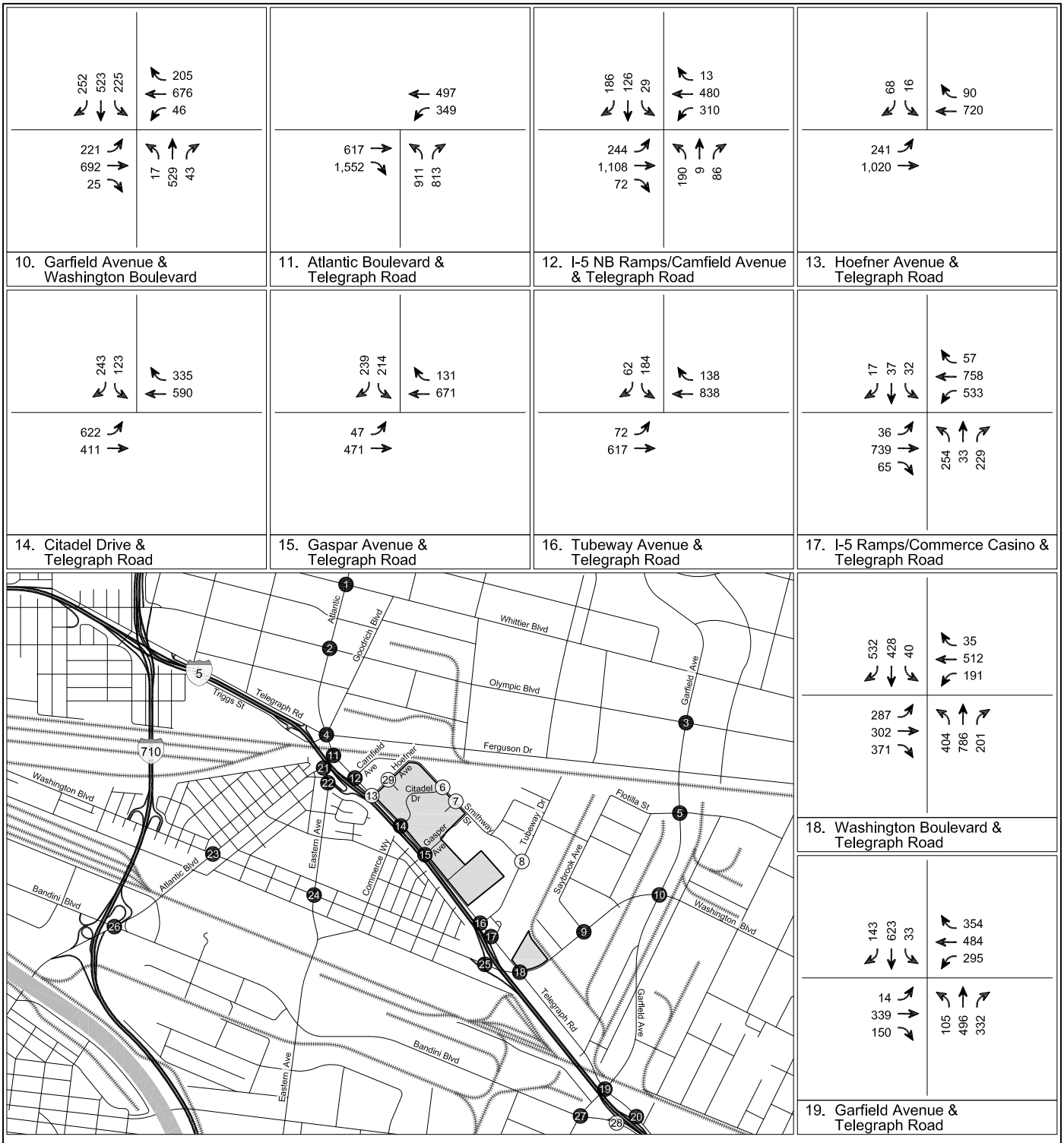
LEGEND

- Project Site
- (#) Signalized Intersection
- (#) Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

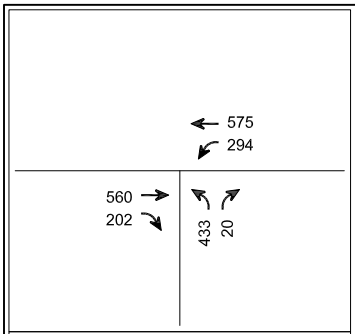
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 11

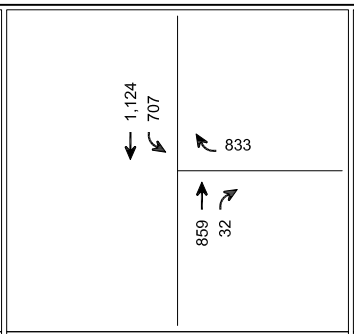


FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

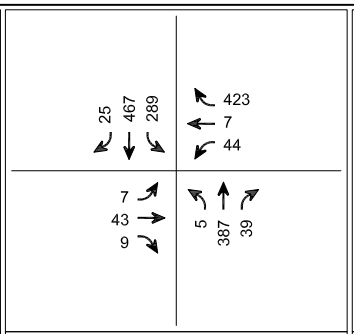
FIGURE
11 (CONT.)



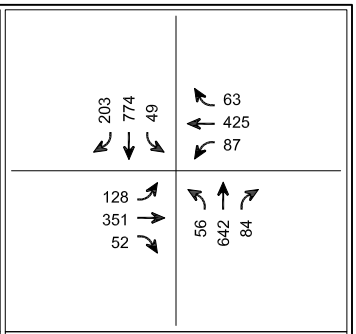
20. I-5 Ramps & Telegraph Road



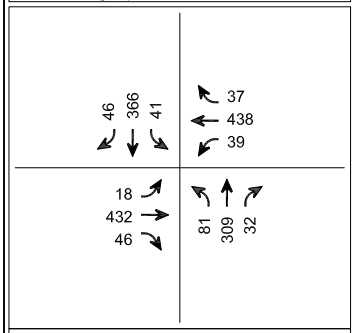
21. Atlantic Boulevard Eastern Avenue



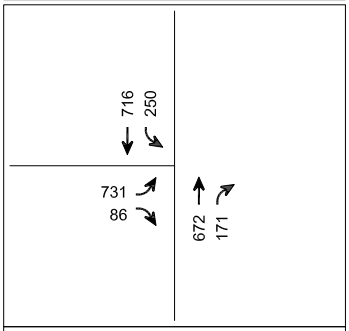
22. Eastern Avenue & I-5 Ramps/Stevens Place



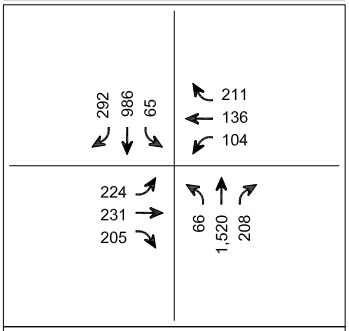
23. Atlantic Boulevard & Washington Boulevard



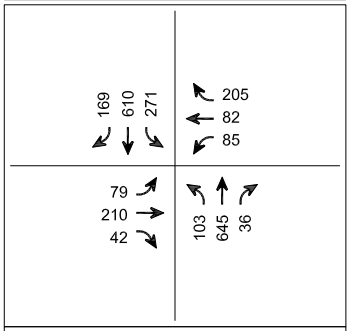
24. Eastern Avenue & Washington Boulevard



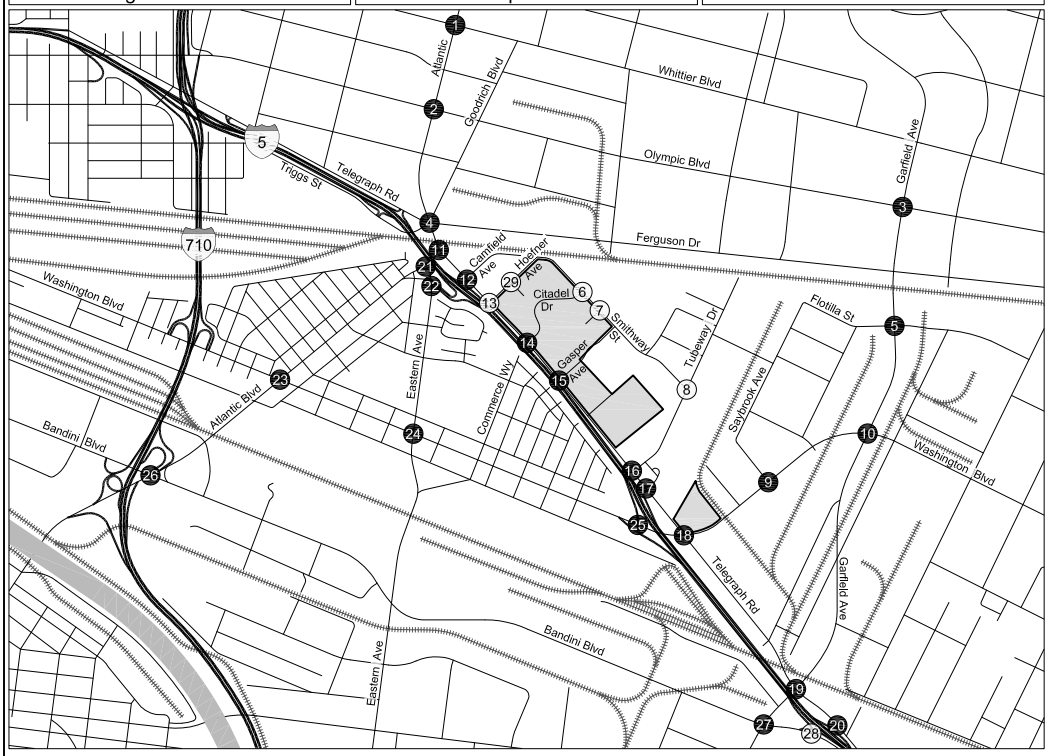
25. Washington Boulevard & I-5 SB Ramps

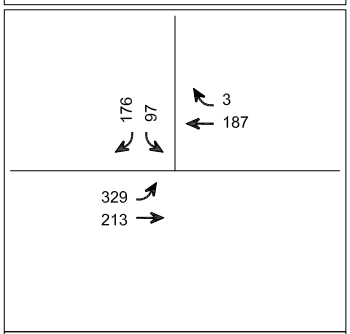


26. Atlantic Boulevard & Bandini Boulevard

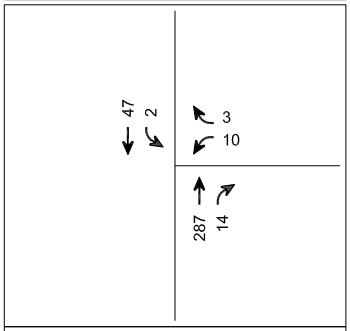


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

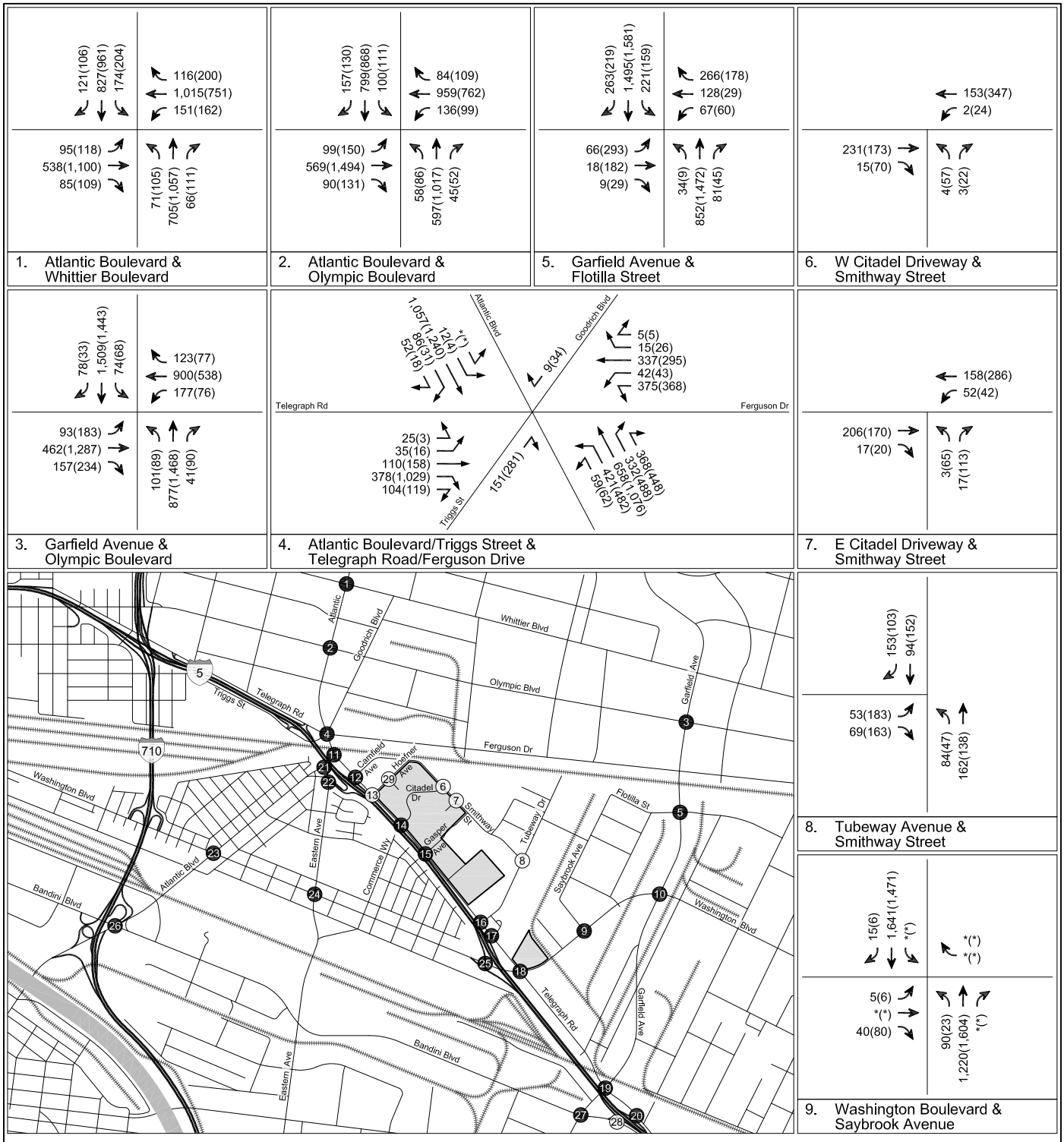
LEGEND

Project Site		X(X)	MIdday Peak Hour Traffic Volumes
Signalized Intersection	#	*	Negligible Volume
Unsignalized Intersection	(#)		

N
Not to Scale

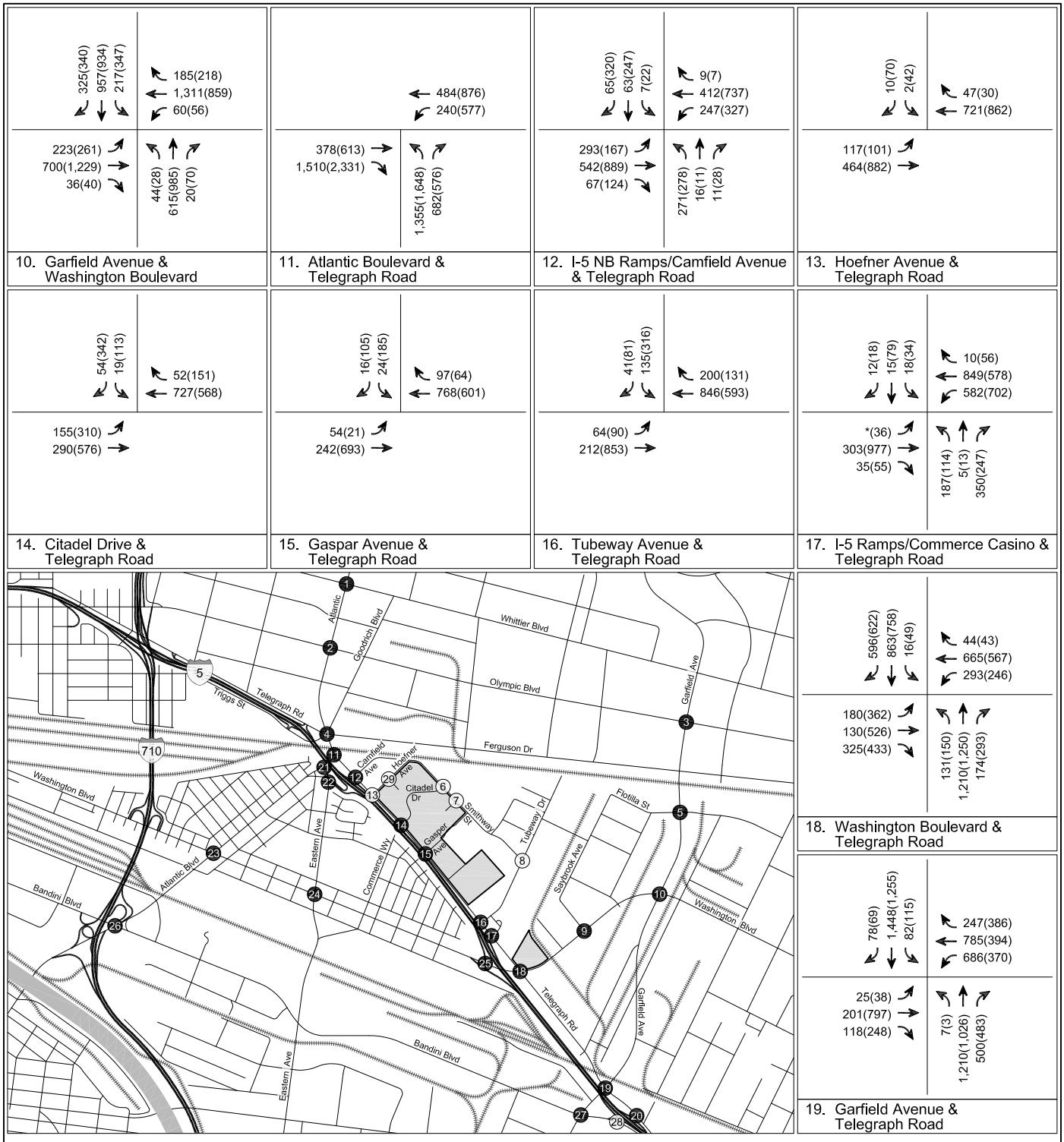
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
11 (CONT.)



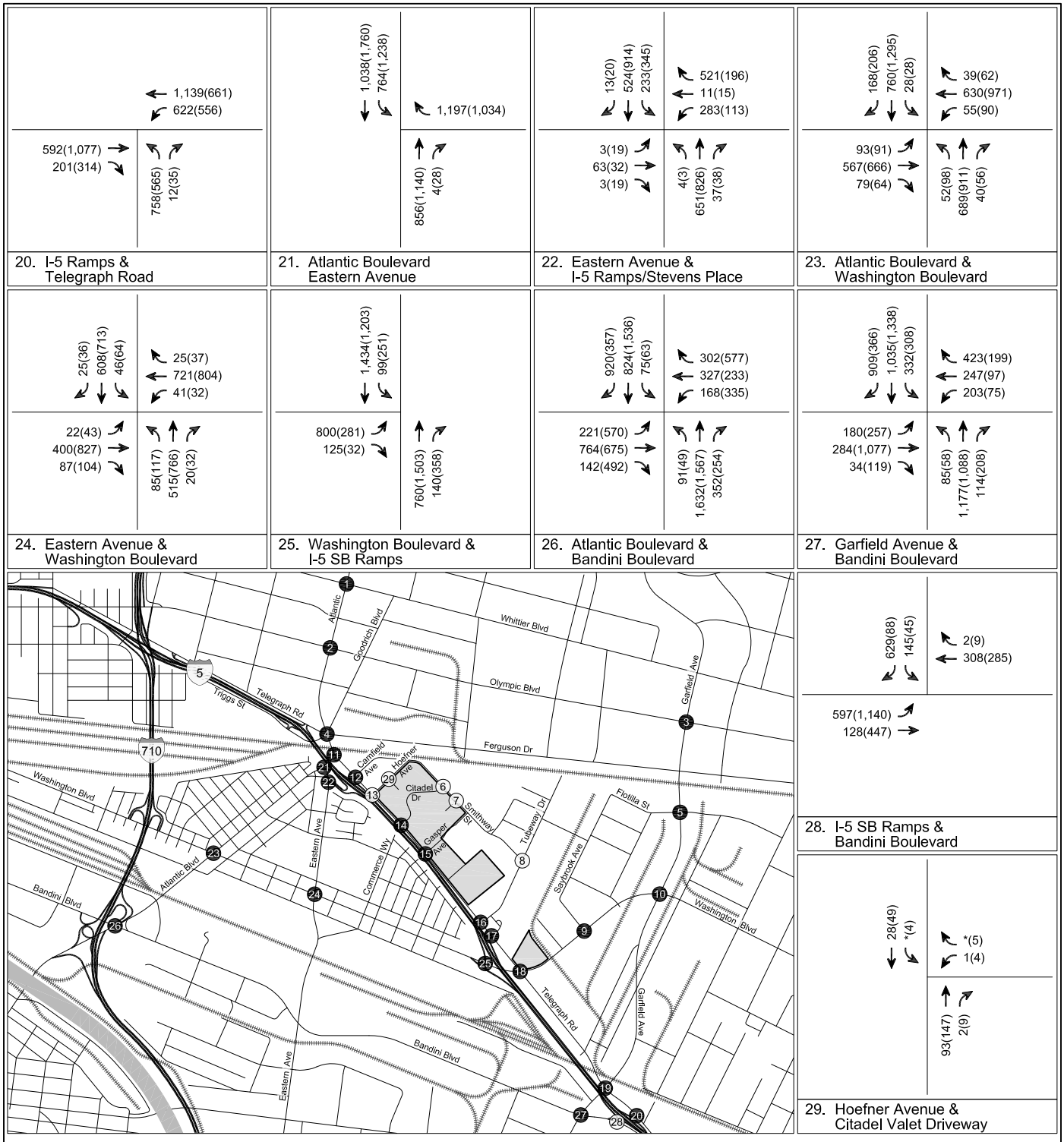
FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 12



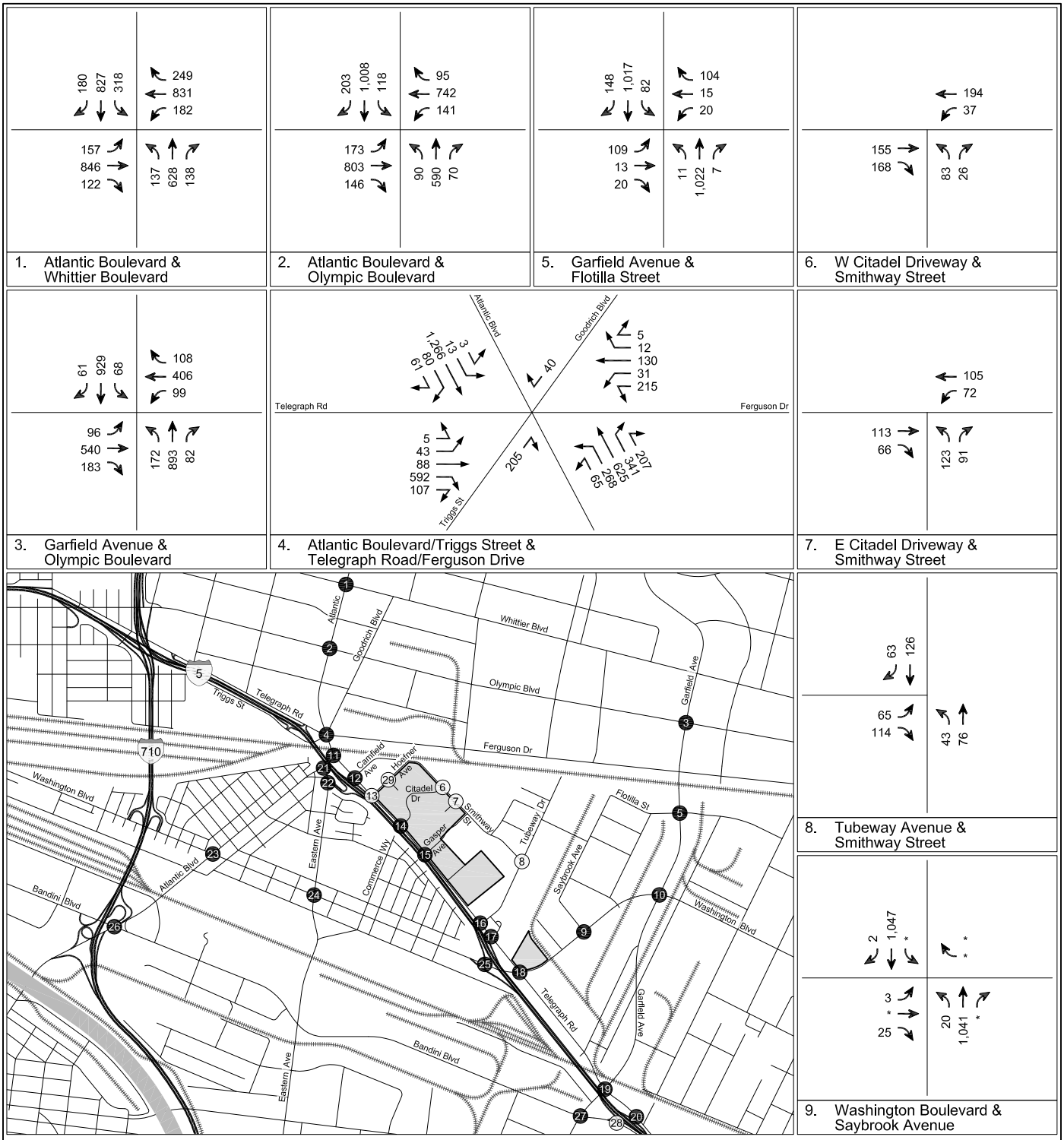
FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
12 (CONT.)



FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
12 (CONT.)



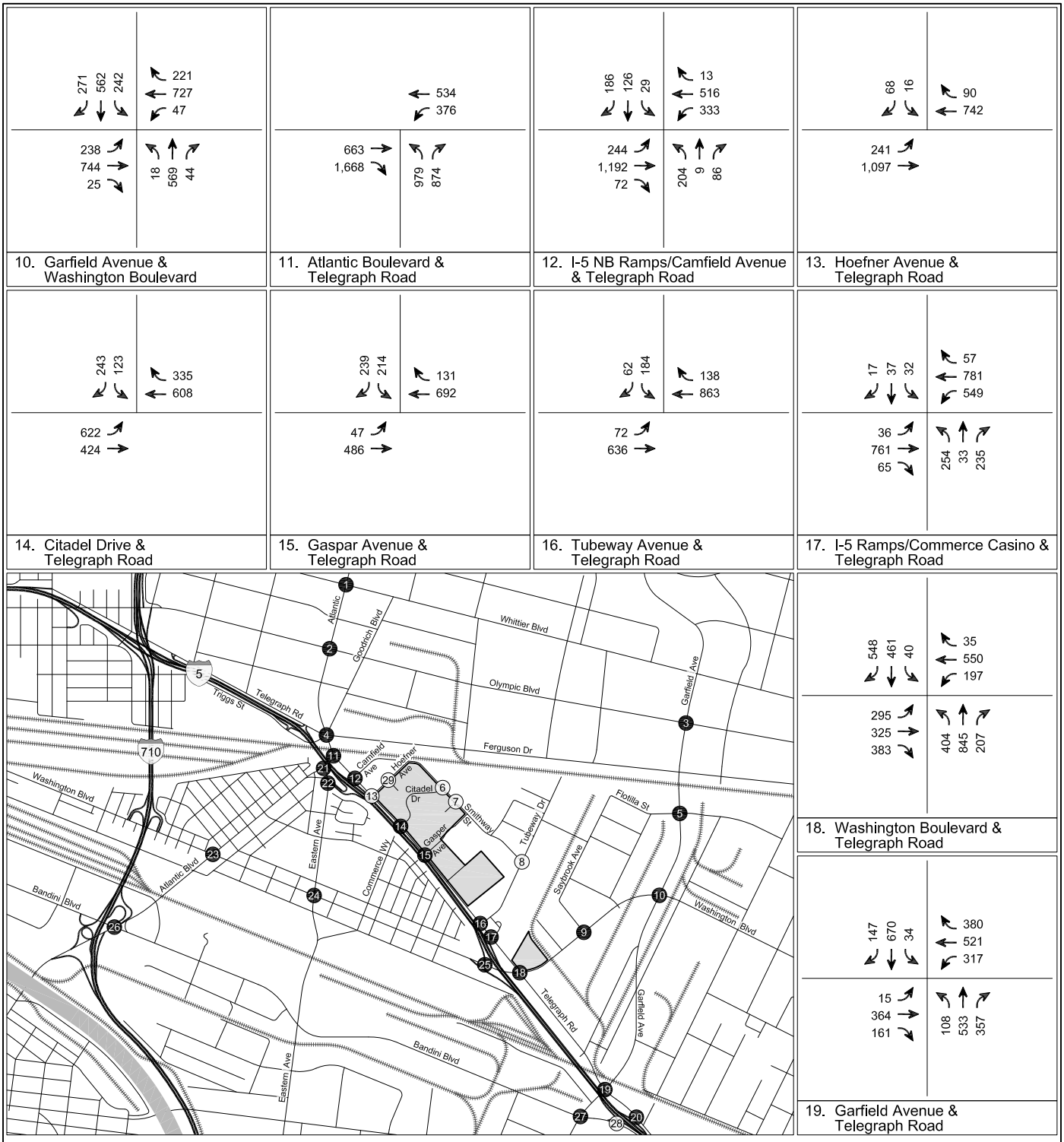
LEGEND

	Project Site	X(X)	MIdday Peak Hour Traffic Volumes
#	Signalized Intersection	*	Negligible Volume
(#)	Unsignalized Intersection		

N
Not to Scale

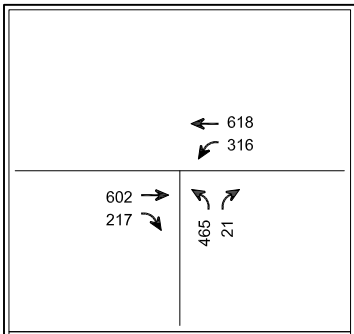
FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 13

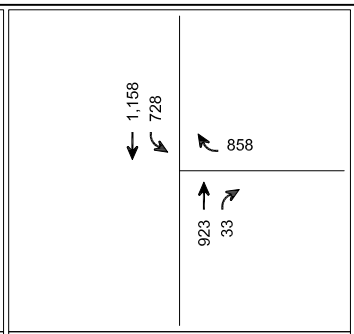


FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

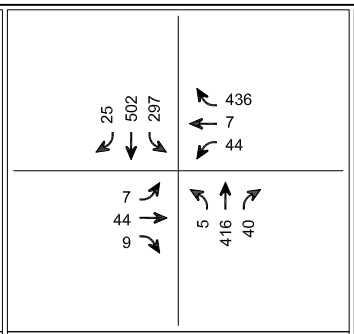
FIGURE
13 (CONT.)



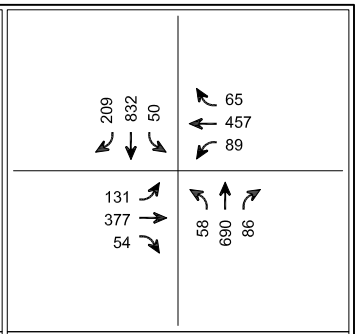
20. I-5 Ramps & Telegraph Road



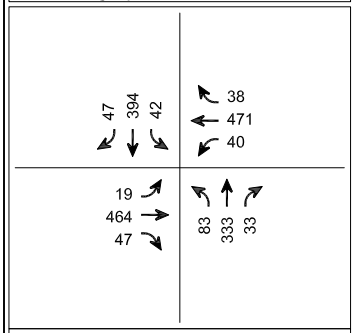
21. Atlantic Boulevard Eastern Avenue



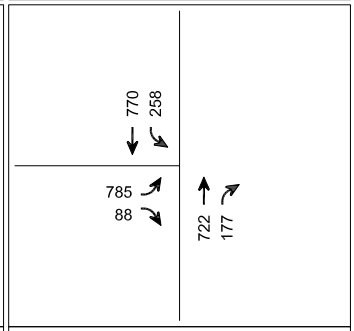
22. Eastern Avenue & I-5 Ramps/Stevens Place



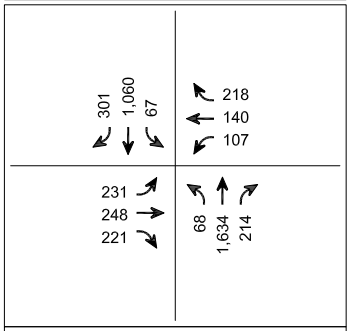
23. Atlantic Boulevard & Washington Boulevard



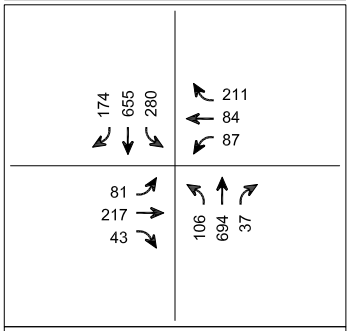
24. Eastern Avenue & Washington Boulevard



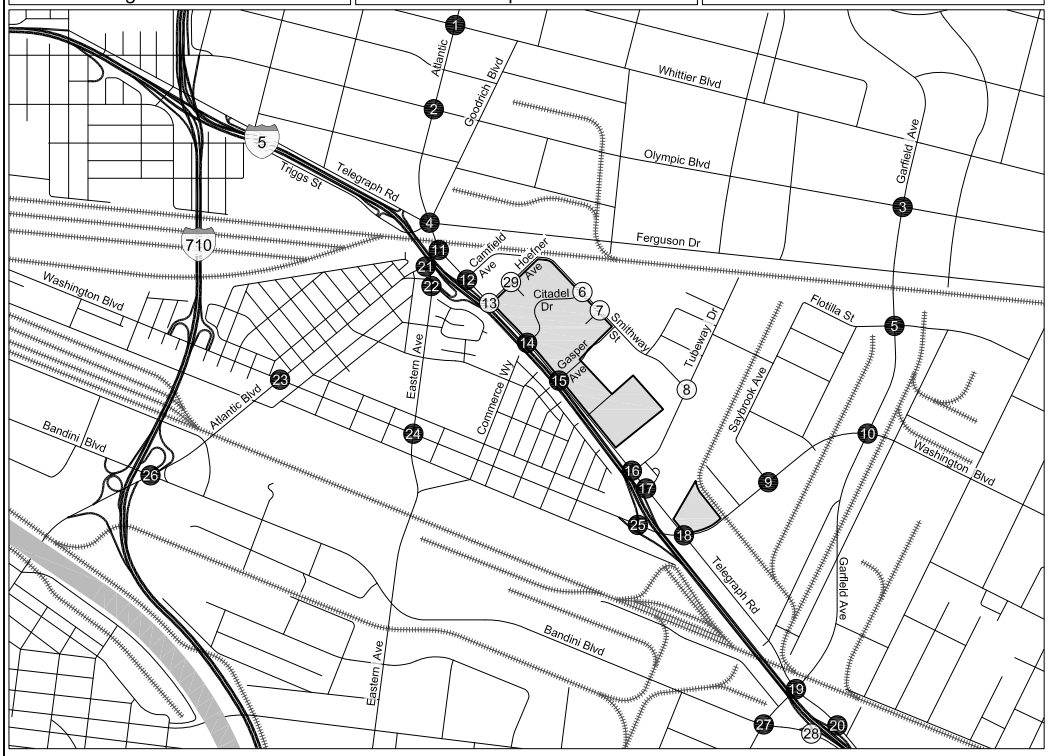
25. Washington Boulevard & I-5 SB Ramps

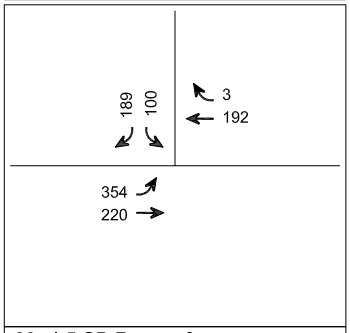


26. Atlantic Boulevard & Bandini Boulevard

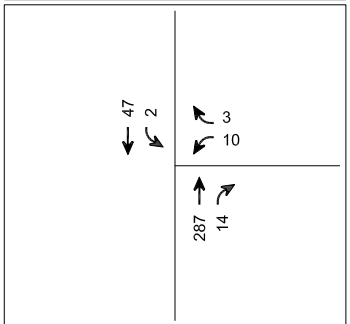


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

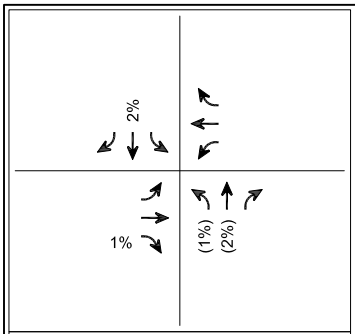
LEGEND

	Project Site	X(X)	MIdday Peak Hour Traffic Volumes
#	Signalized Intersection	*	Negligible Volume
(#)	Unsignalized Intersection		

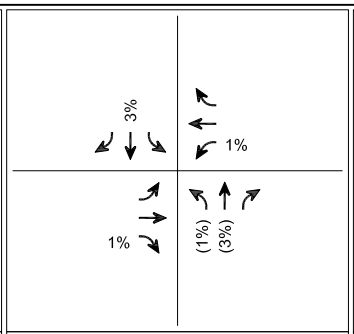
N
Not to Scale

FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

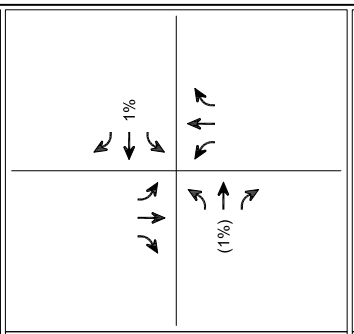
FIGURE
13 (CONT.)



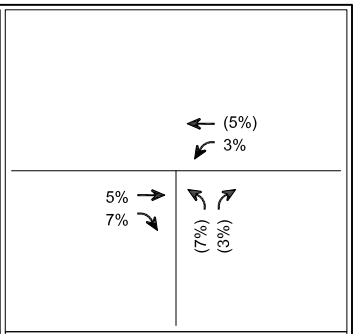
1. Atlantic Boulevard & Whittier Boulevard



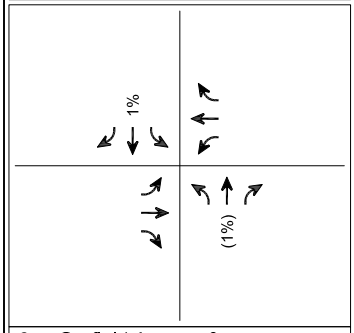
2. Atlantic Boulevard & Olympic Boulevard



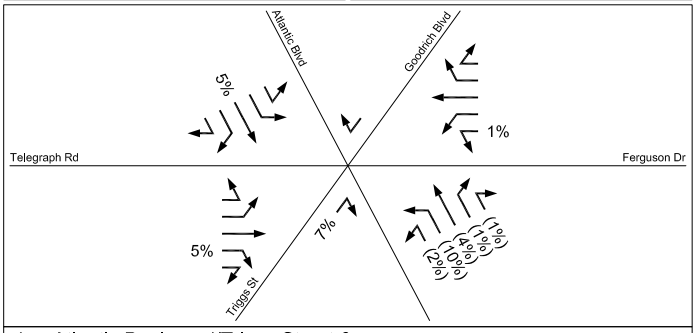
5. Garfield Avenue & Flotilla Street



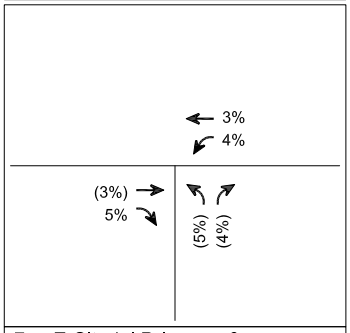
6. W Citadel Driveway & Smithway Street



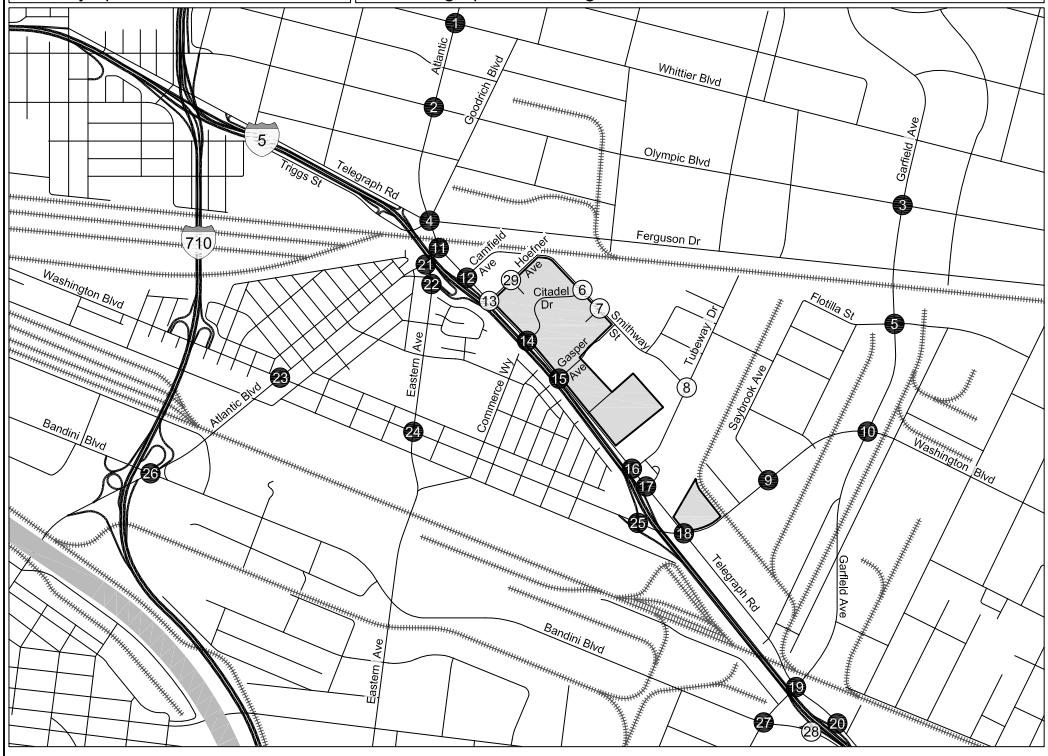
3. Garfield Avenue & Olympic Boulevard

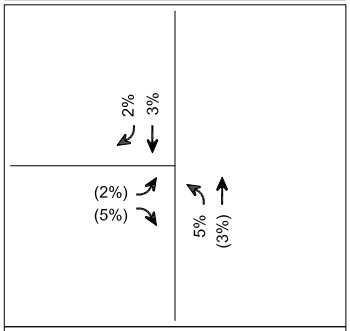


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

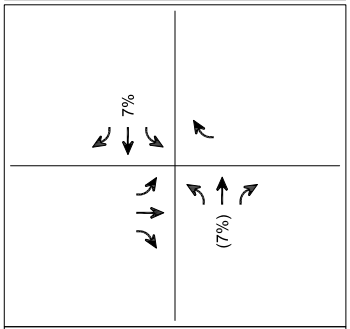


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

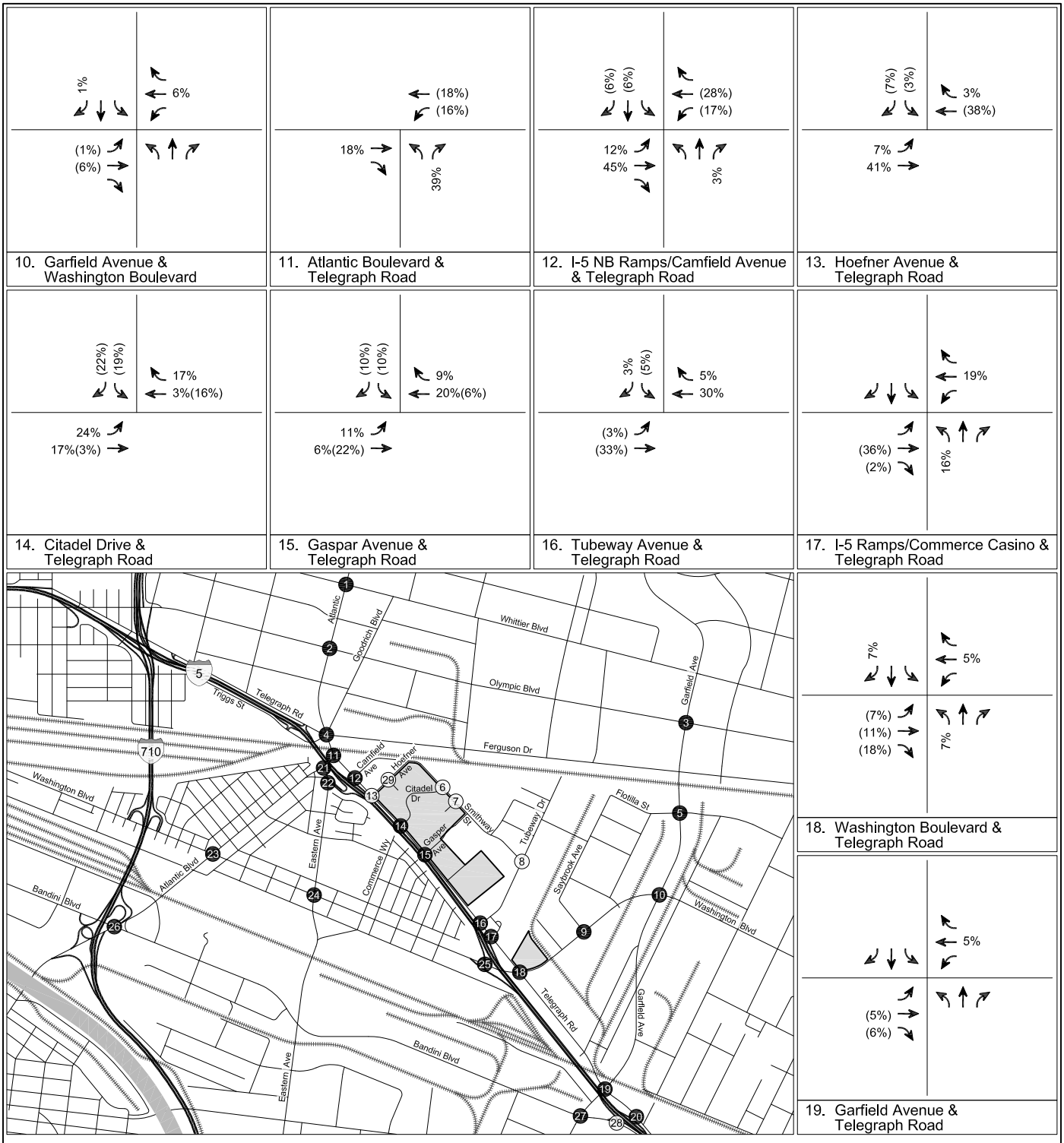
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

N
Not to Scale

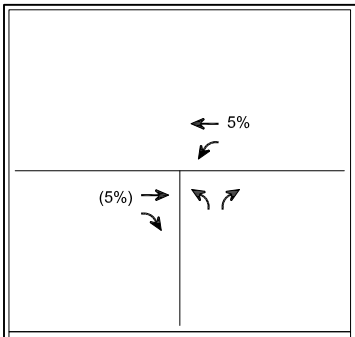
TRIP DISTRIBUTION
CITADEL PROJECT

FIGURE
14A

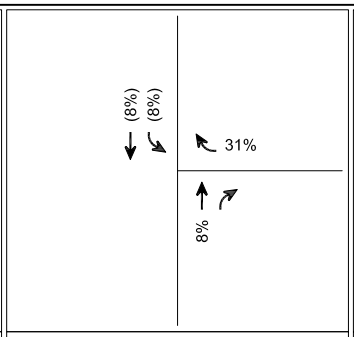


TRIP DISTRIBUTION
CITADEL PROJECT

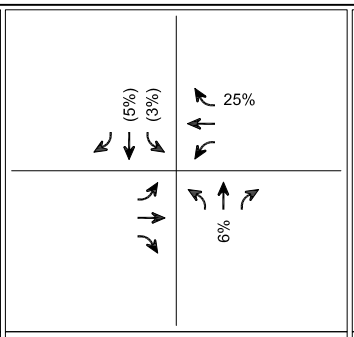
FIGURE
14A (CONT.)



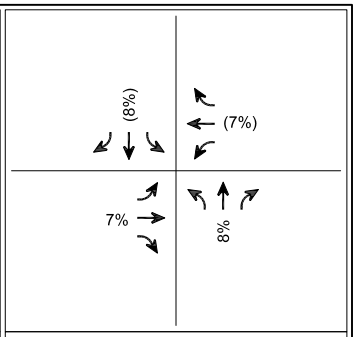
20. I-5 Ramps & Telegraph Road



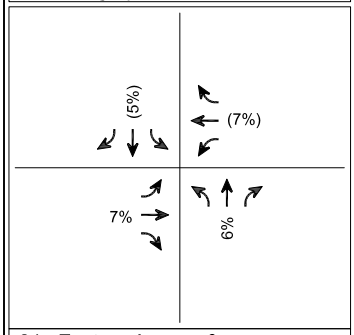
21. Atlantic Boulevard Eastern Avenue



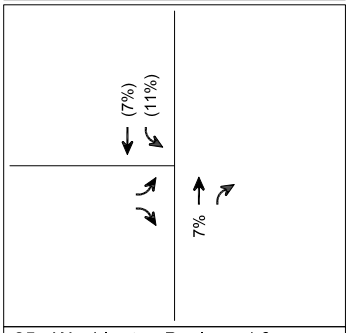
22. Eastern Avenue & I-5 Ramps/Stevens Place



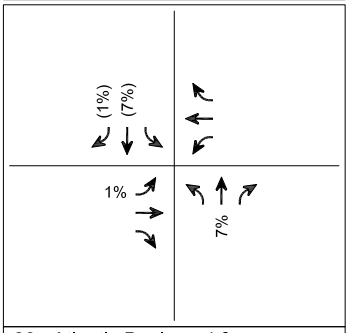
23. Atlantic Boulevard & Washington Boulevard



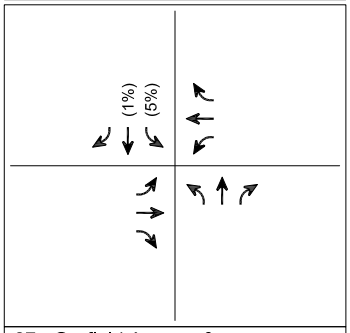
24. Eastern Avenue & Washington Boulevard



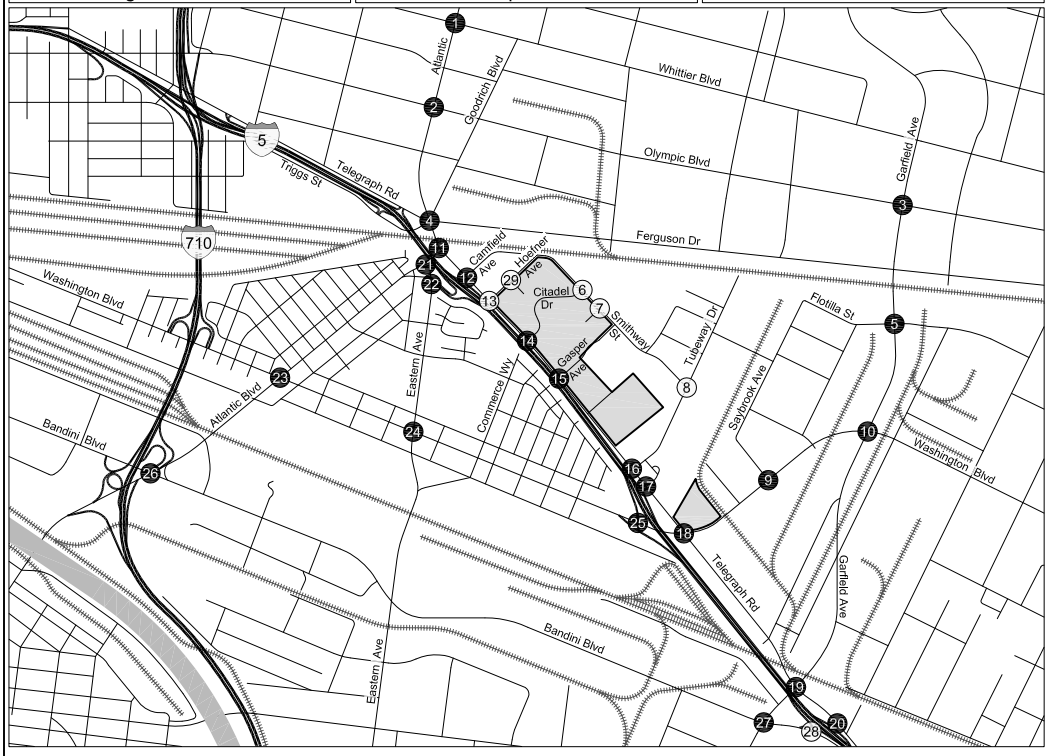
25. Washington Boulevard & I-5 SB Ramps

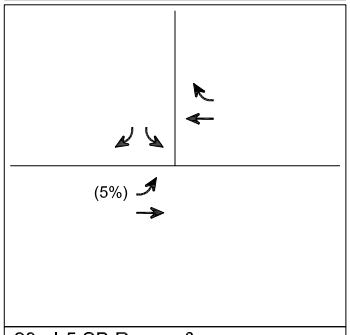


26. Atlantic Boulevard & Bandini Boulevard

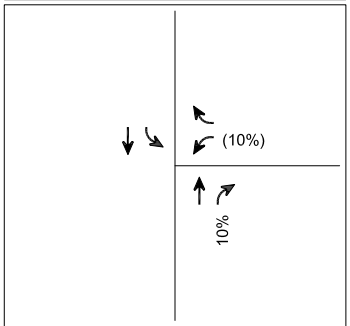


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

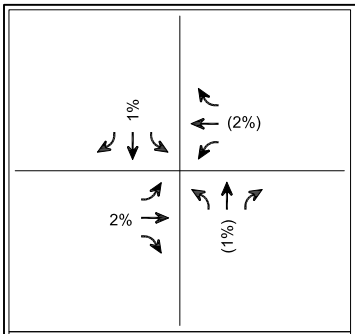
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

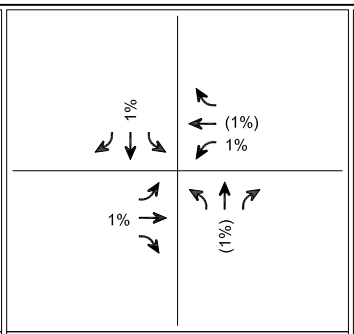
N
Not to Scale

TRIP DISTRIBUTION
CITADEL PROJECT

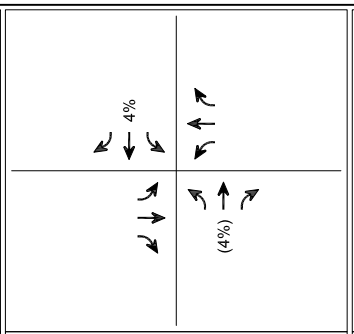
FIGURE
14A (CONT.)



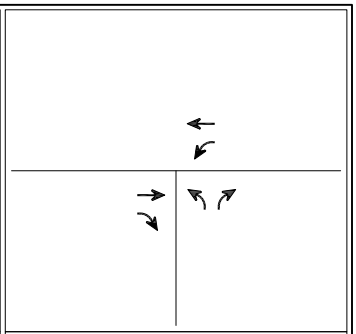
1. Atlantic Boulevard & Whittier Boulevard



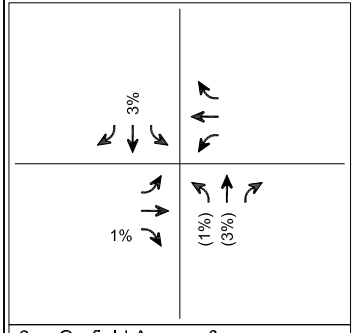
2. Atlantic Boulevard & Olympic Boulevard



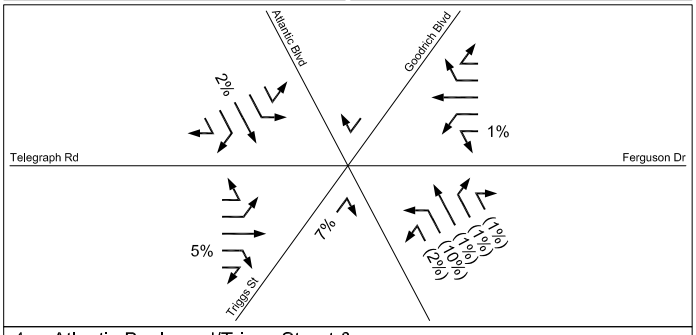
5. Garfield Avenue & Flotilla Street



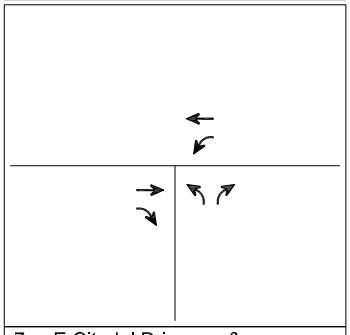
6. W Citadel Driveway & Smithway Street



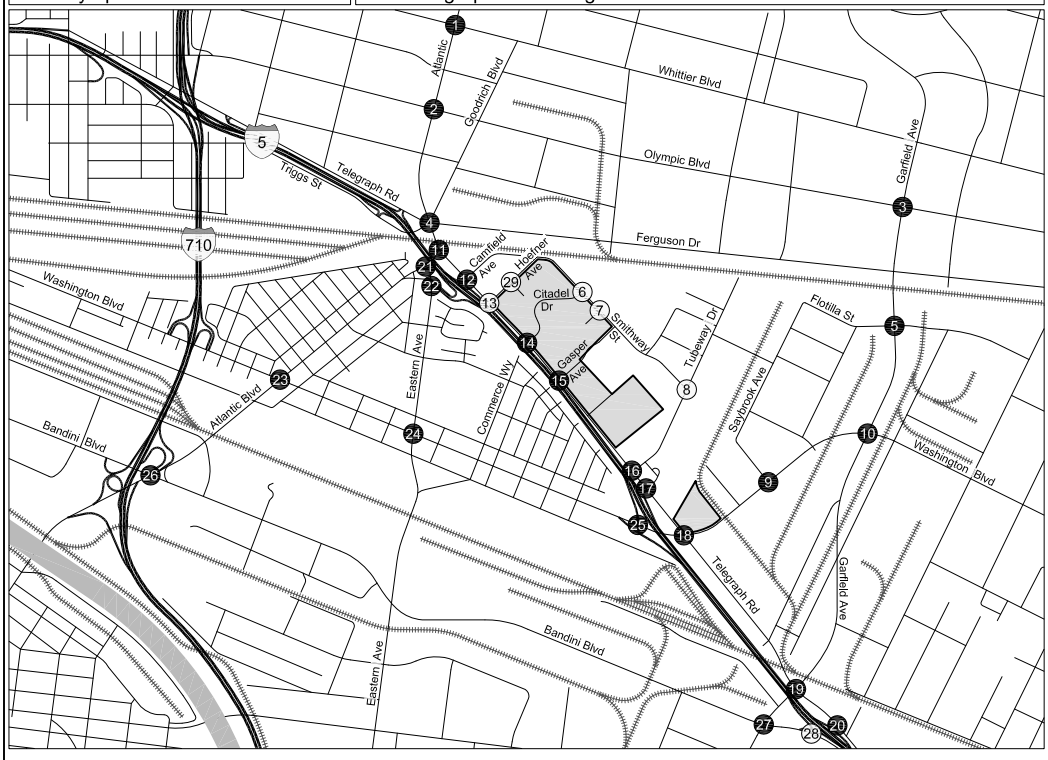
3. Garfield Avenue & Olympic Boulevard

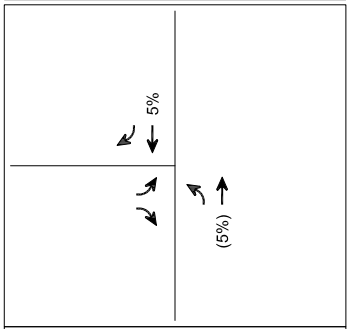


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

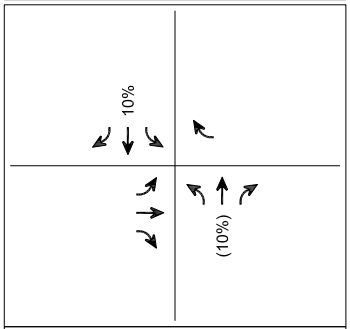


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



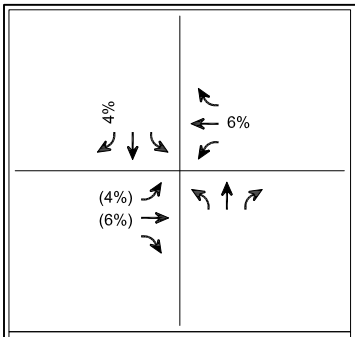
9. Washington Boulevard & Saybrook Avenue

LEGEND

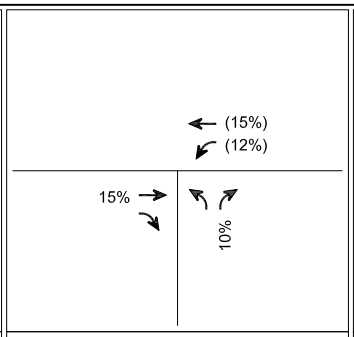
- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

N
Not to Scale

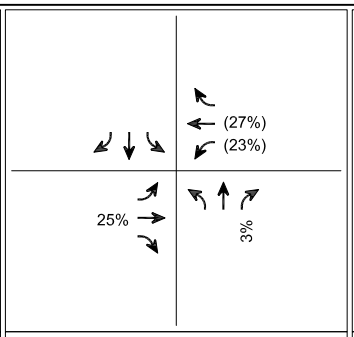
TRIP DISTRIBUTION 10-ACRE PARCEL	FIGURE 14B



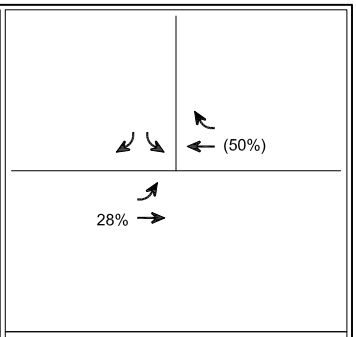
10. Garfield Avenue & Washington Boulevard



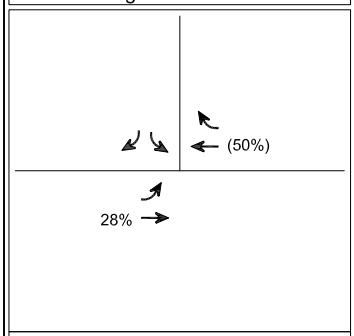
11. Atlantic Boulevard & Telegraph Road



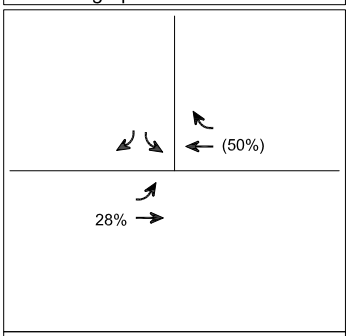
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road



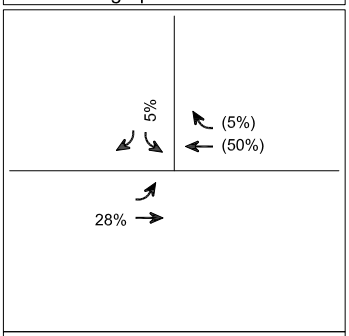
13. Hoefner Avenue & Telegraph Road



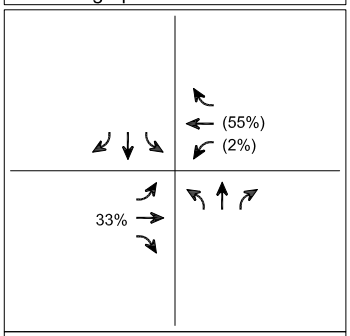
14. Citadel Drive & Telegraph Road



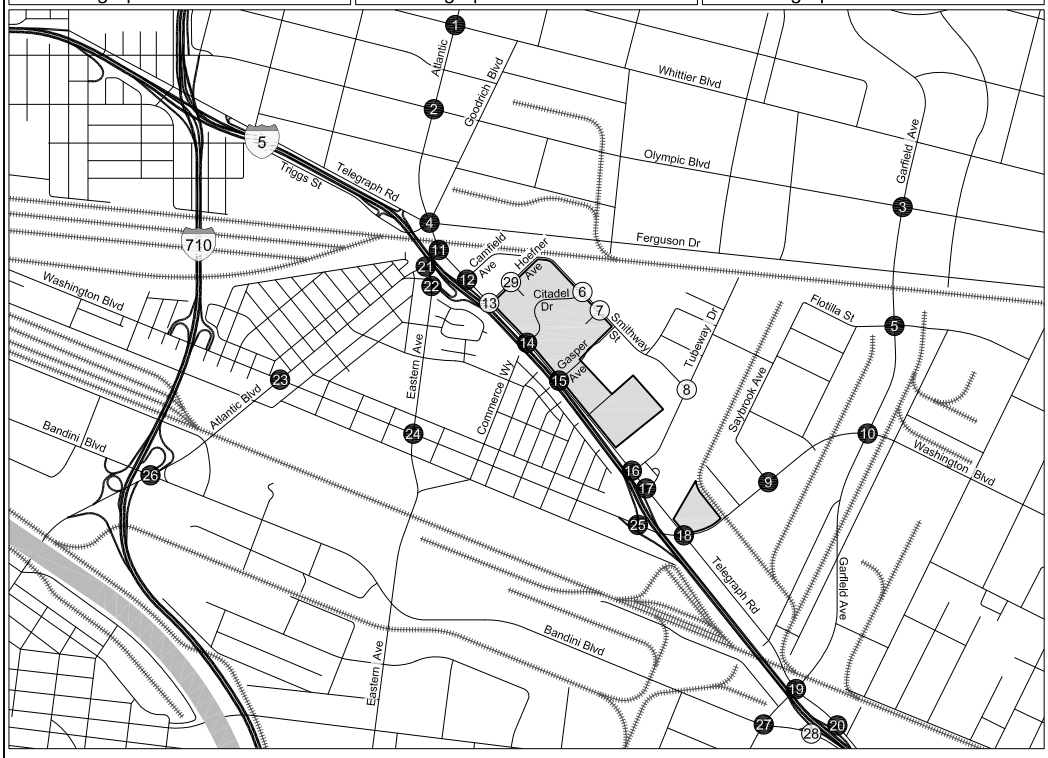
15. Gaspar Avenue & Telegraph Road

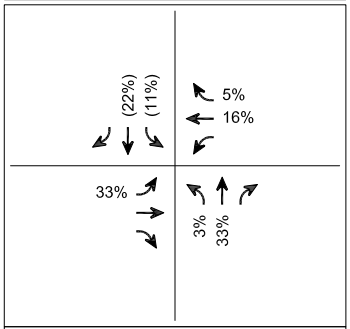


16. Tubeway Avenue & Telegraph Road

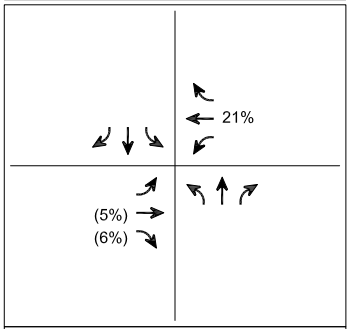


17. I-5 Ramps/Commerce Casino & Telegraph Road





18. Washington Boulevard & Telegraph Road



19. Garfield Avenue & Telegraph Road

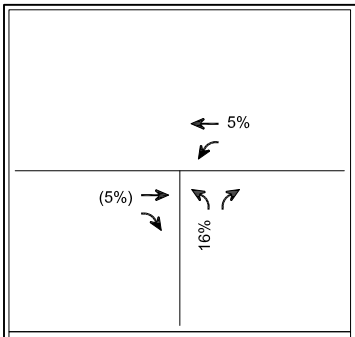
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

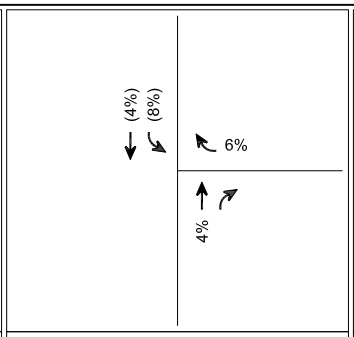
N
Not to Scale

TRIP DISTRIBUTION
10-ACRE PARCEL

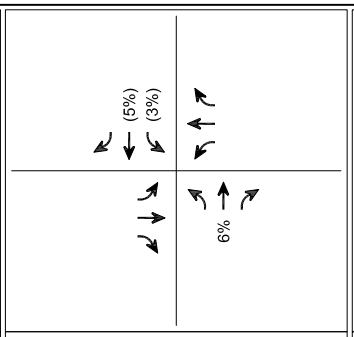
FIGURE
14B (CONT.)



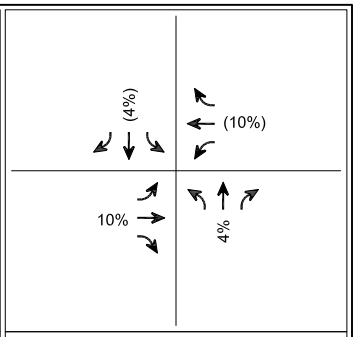
20. I-5 Ramps & Telegraph Road



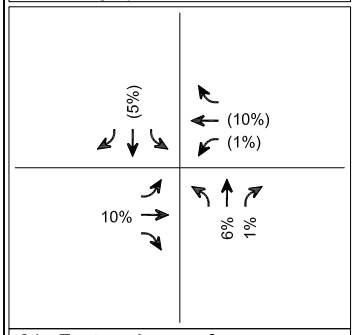
21. Atlantic Boulevard Eastern Avenue



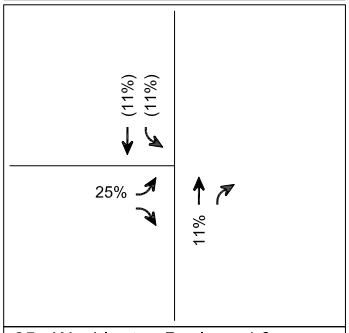
22. Eastern Avenue & I-5 Ramps/Stevens Place



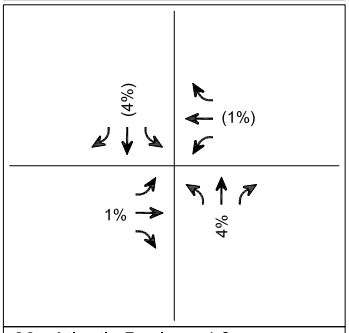
23. Atlantic Boulevard & Washington Boulevard



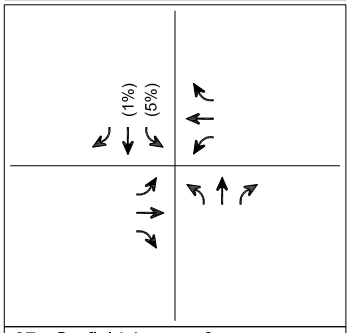
24. Eastern Avenue & Washington Boulevard



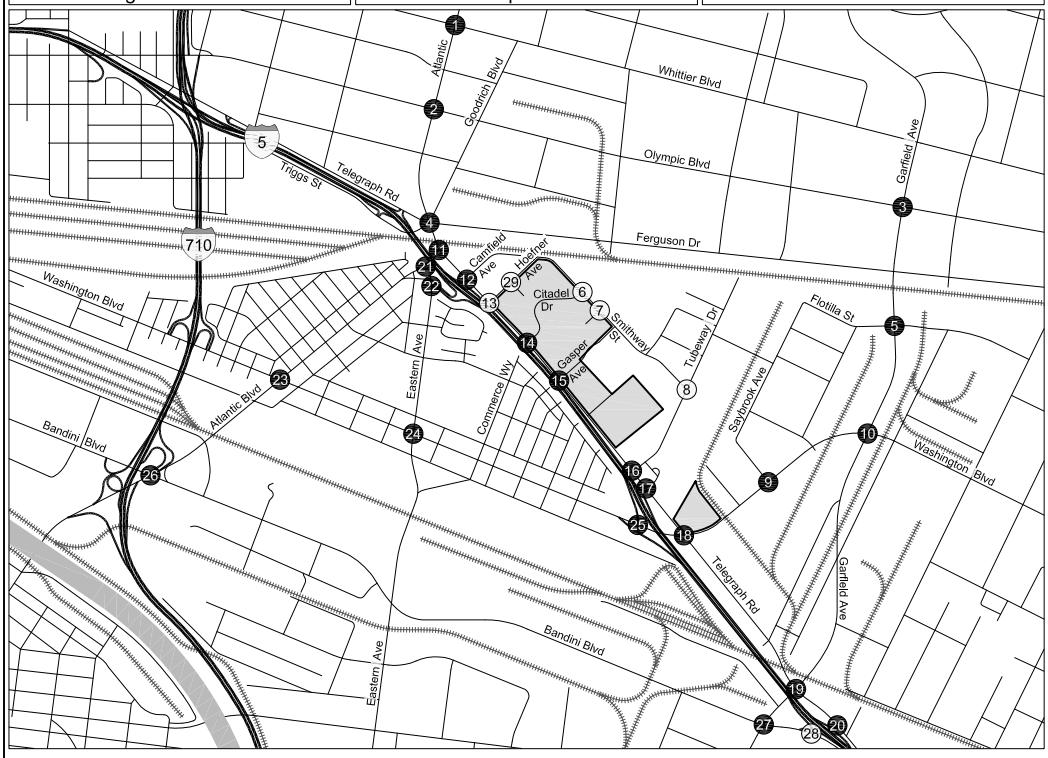
25. Washington Boulevard & I-5 SB Ramps

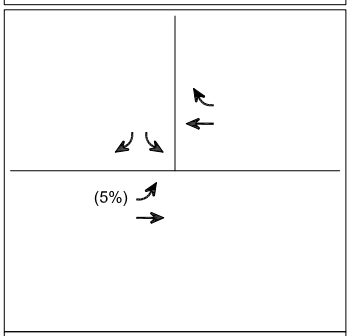


26. Atlantic Boulevard & Bandini Boulevard

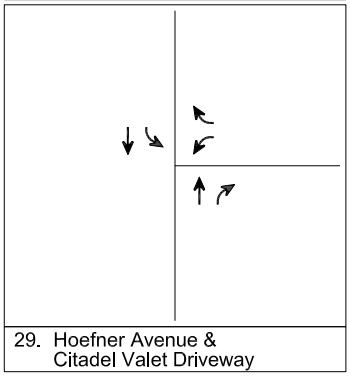


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

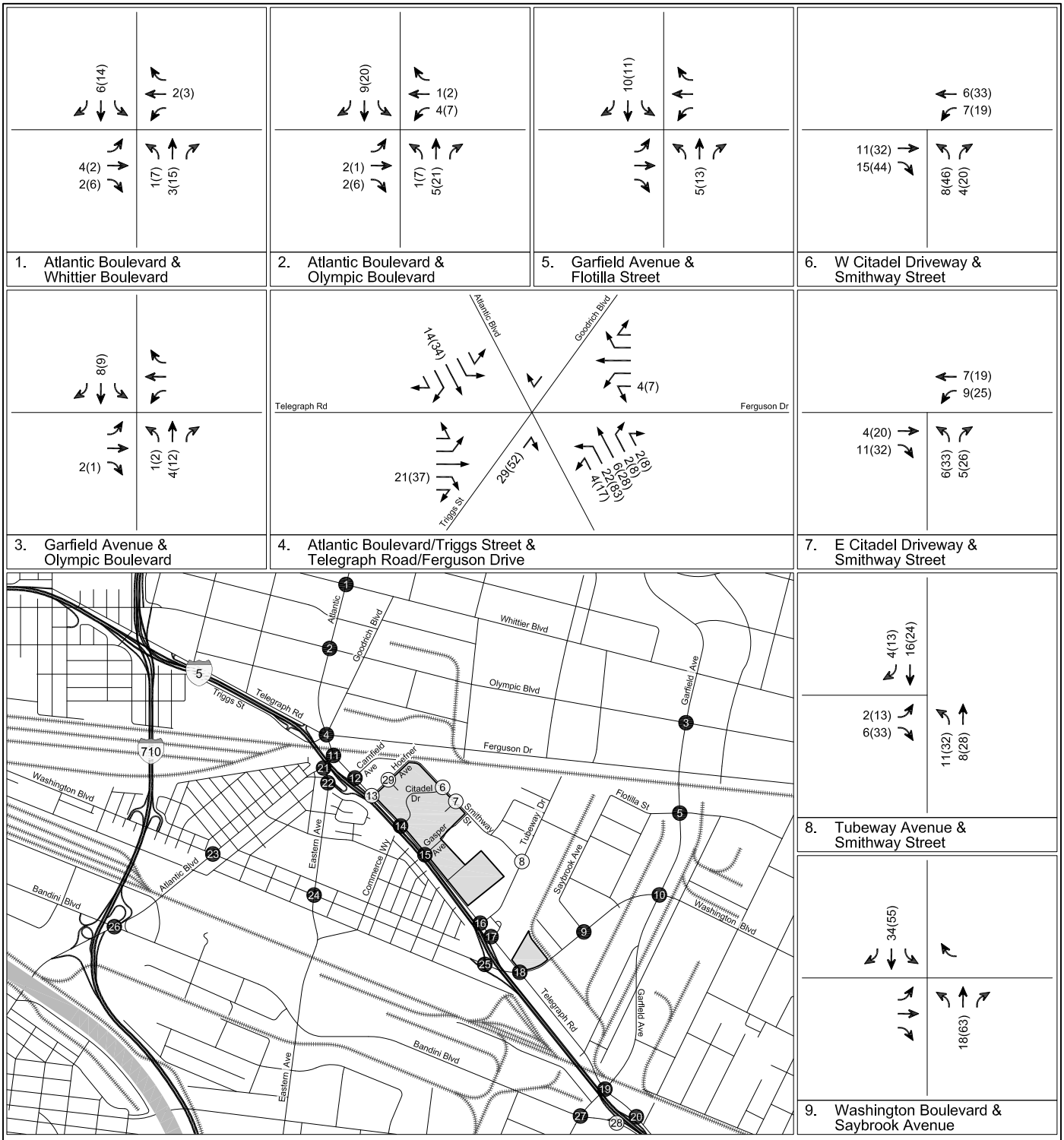
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

N
Not to Scale

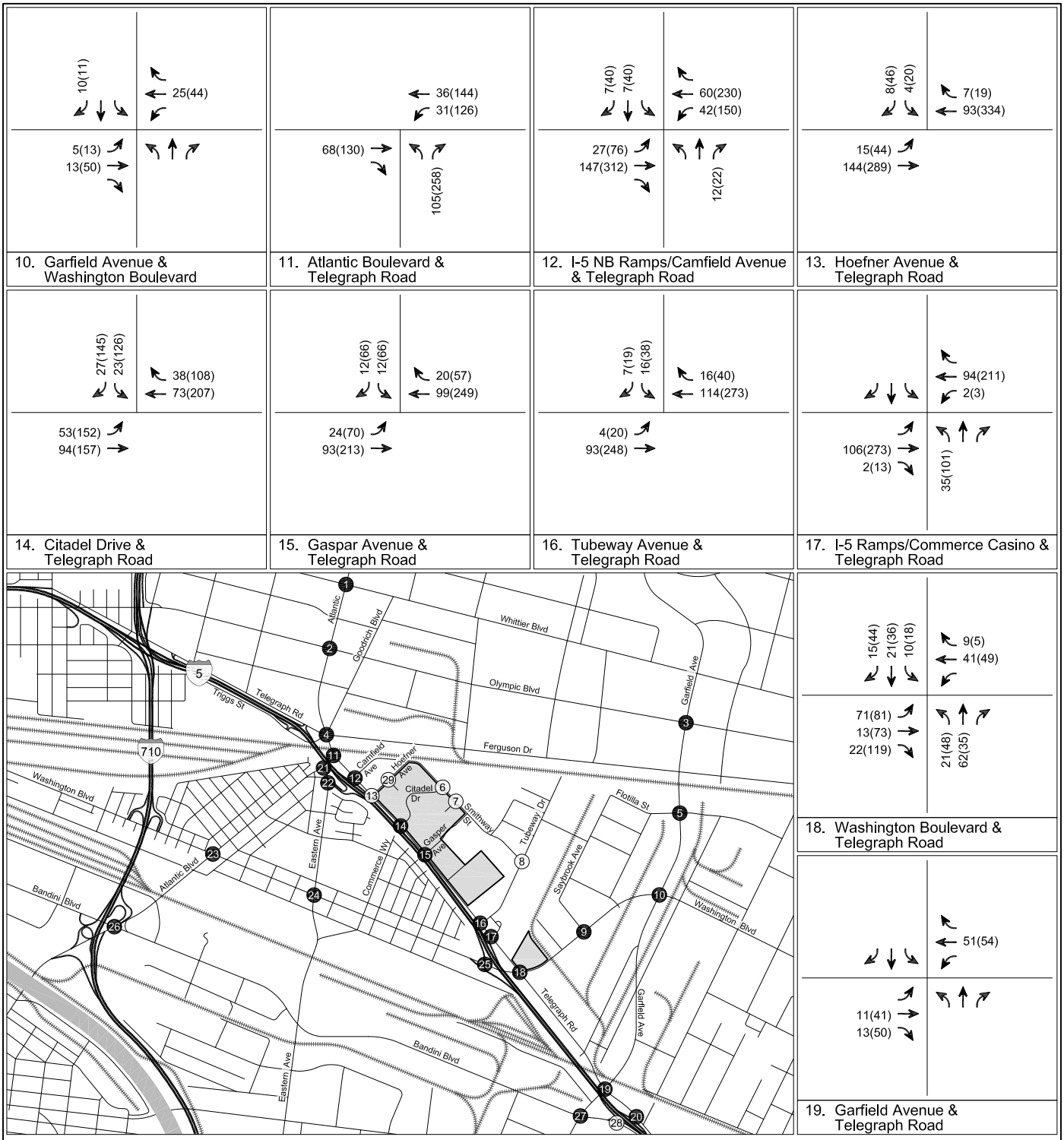
TRIP DISTRIBUTION
10-ACRE PARCEL

FIGURE
14B (CONT.)



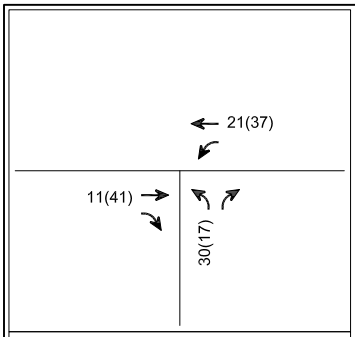
PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
15

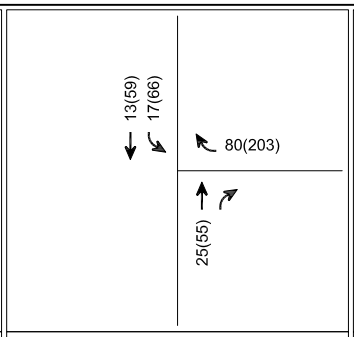


PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

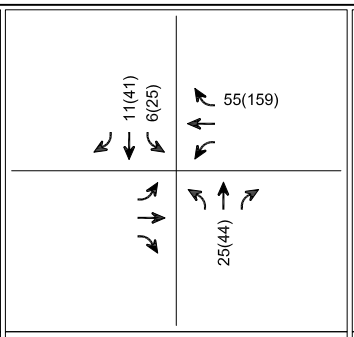
FIGURE
15 (CONT.)



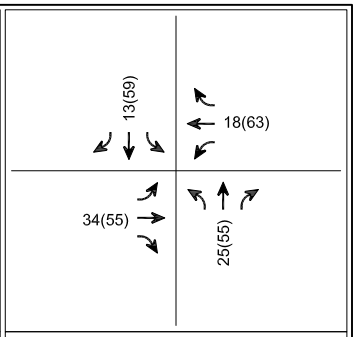
20. I-5 Ramps & Telegraph Road



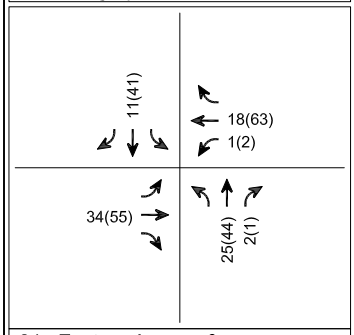
21. Atlantic Boulevard Eastern Avenue



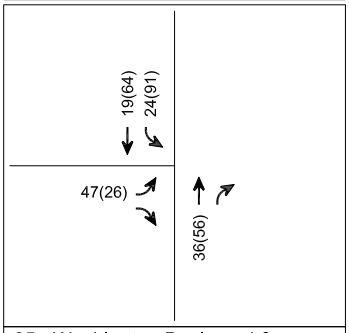
22. Eastern Avenue & I-5 Ramps/Stevens Place



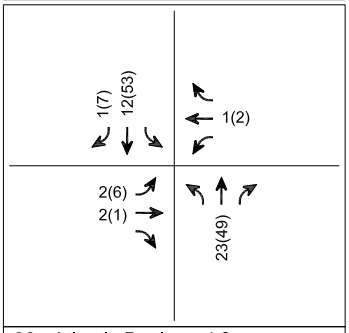
23. Atlantic Boulevard & Washington Boulevard



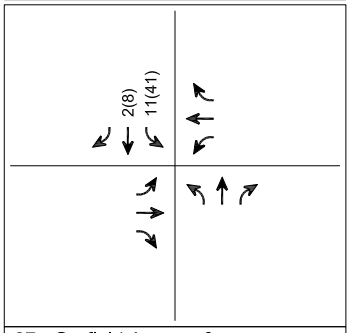
24. Eastern Avenue & Washington Boulevard



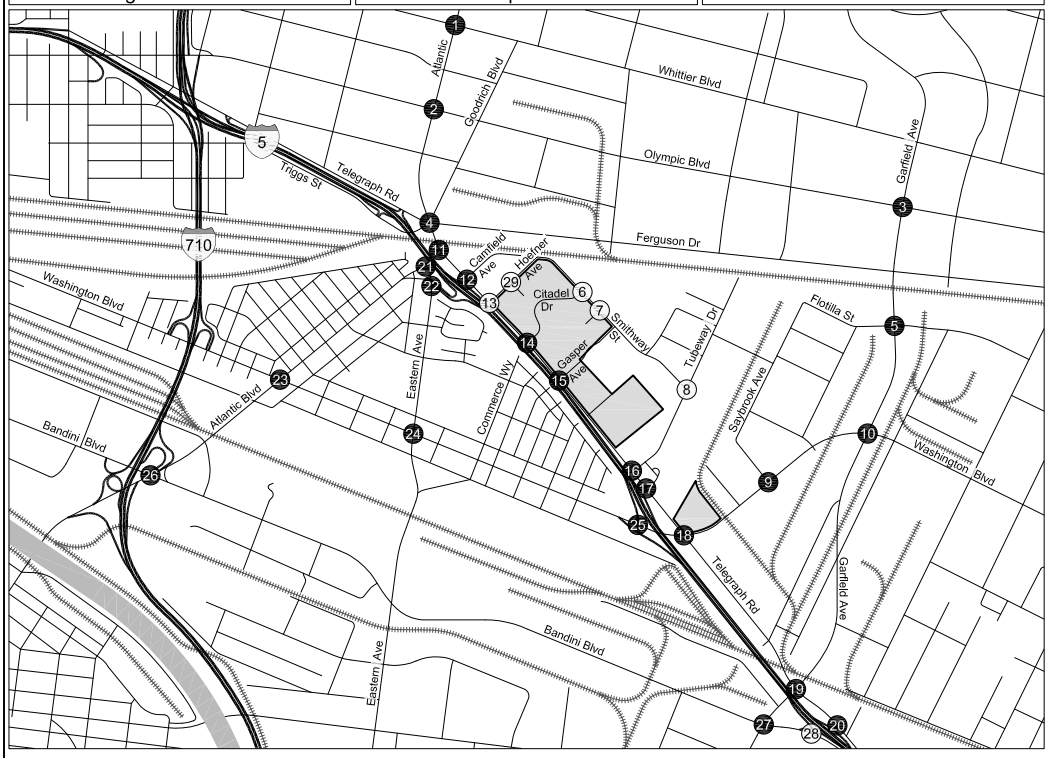
25. Washington Boulevard & I-5 SB Ramps

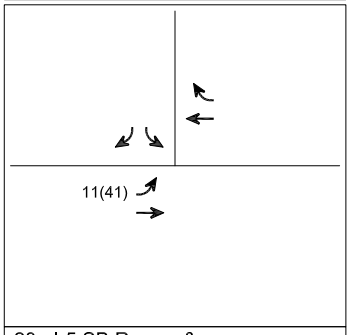


26. Atlantic Boulevard & Bandini Boulevard

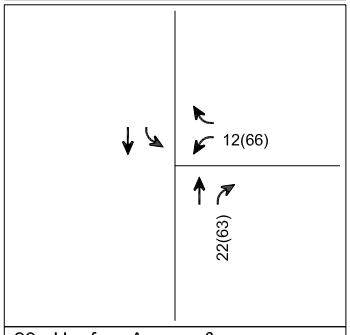


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

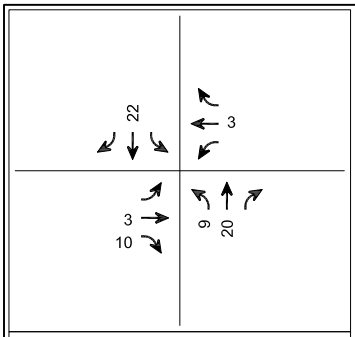
LEGEND

- Project Site
- X(X) AM(PM) Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

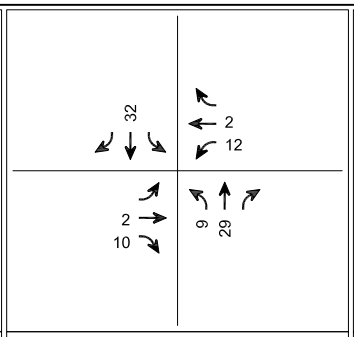
N
Not to Scale

PROJECT-ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

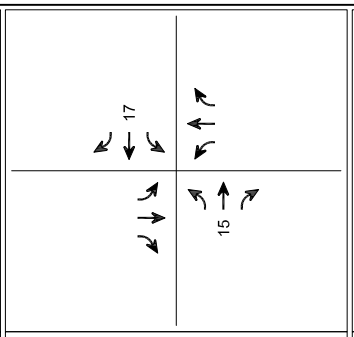
FIGURE
15 (CONT.)



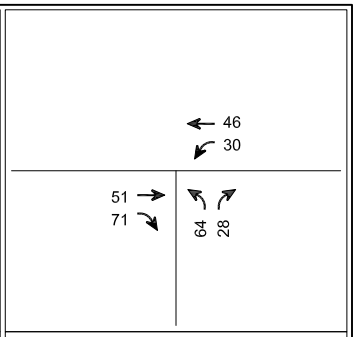
1. Atlantic Boulevard & Whittier Boulevard



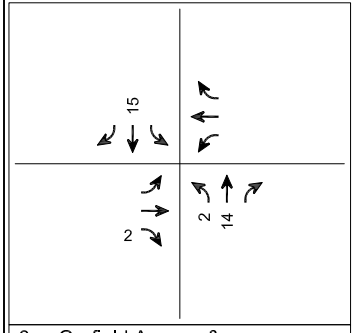
2. Atlantic Boulevard & Olympic Boulevard



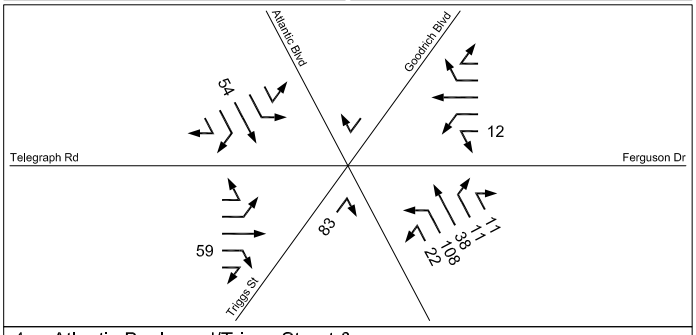
5. Garfield Avenue & Flotilla Street



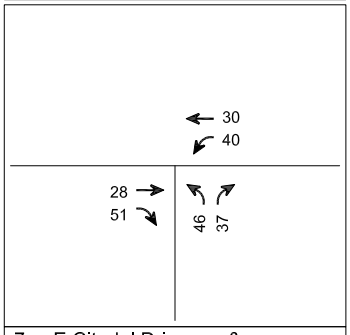
6. W Citadel Driveway & Smithway Street



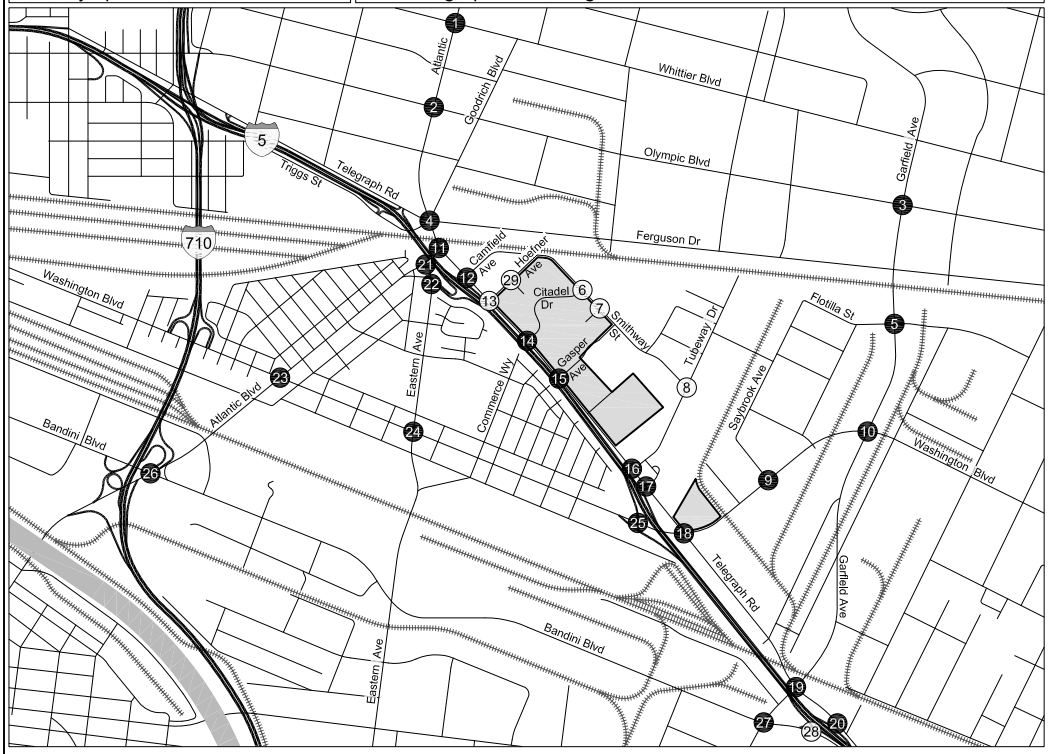
3. Garfield Avenue & Olympic Boulevard

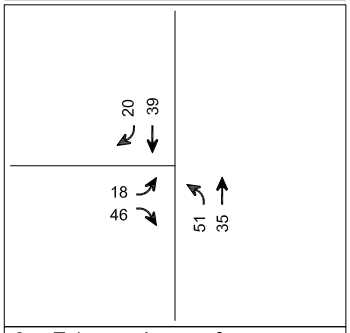


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

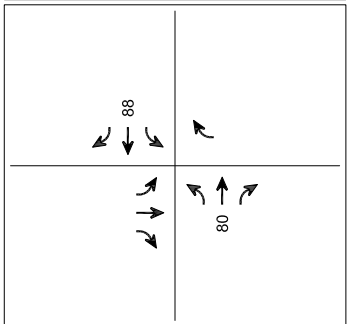


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

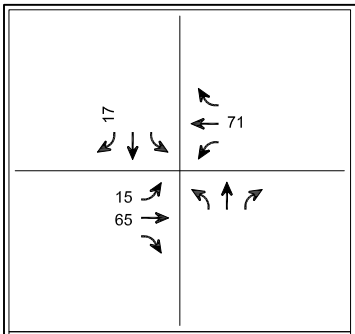
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) Midday Peak Hour Traffic Volumes

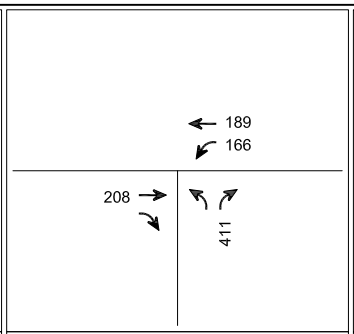
N
Not to Scale

PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

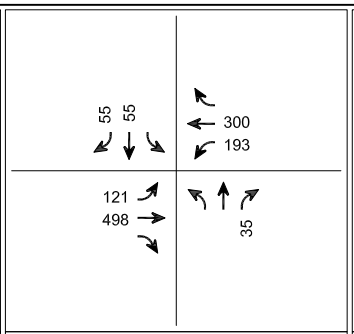
FIGURE
16



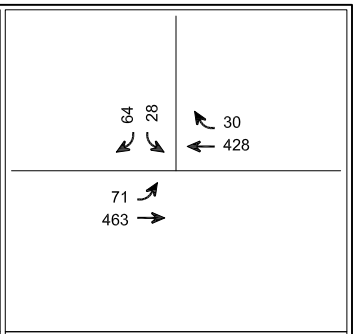
10. Garfield Avenue & Washington Boulevard



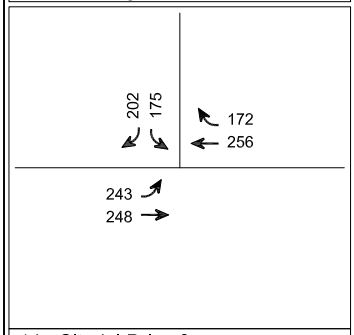
11. Atlantic Boulevard & Telegraph Road



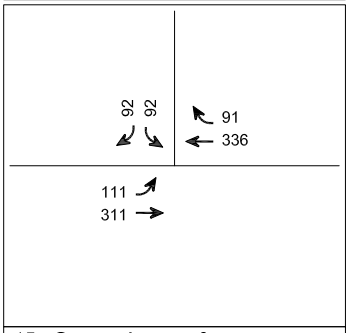
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road



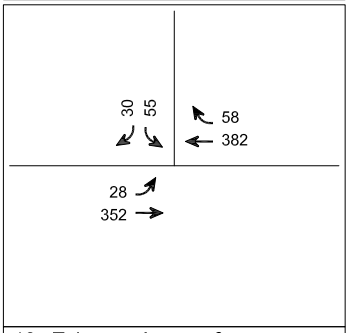
13. Hoefner Avenue & Telegraph Road



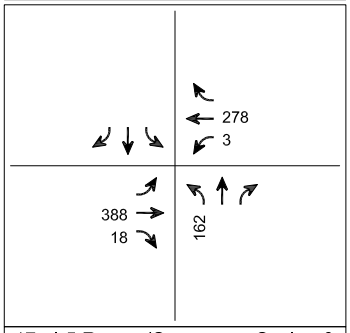
14. Citadel Drive & Telegraph Road



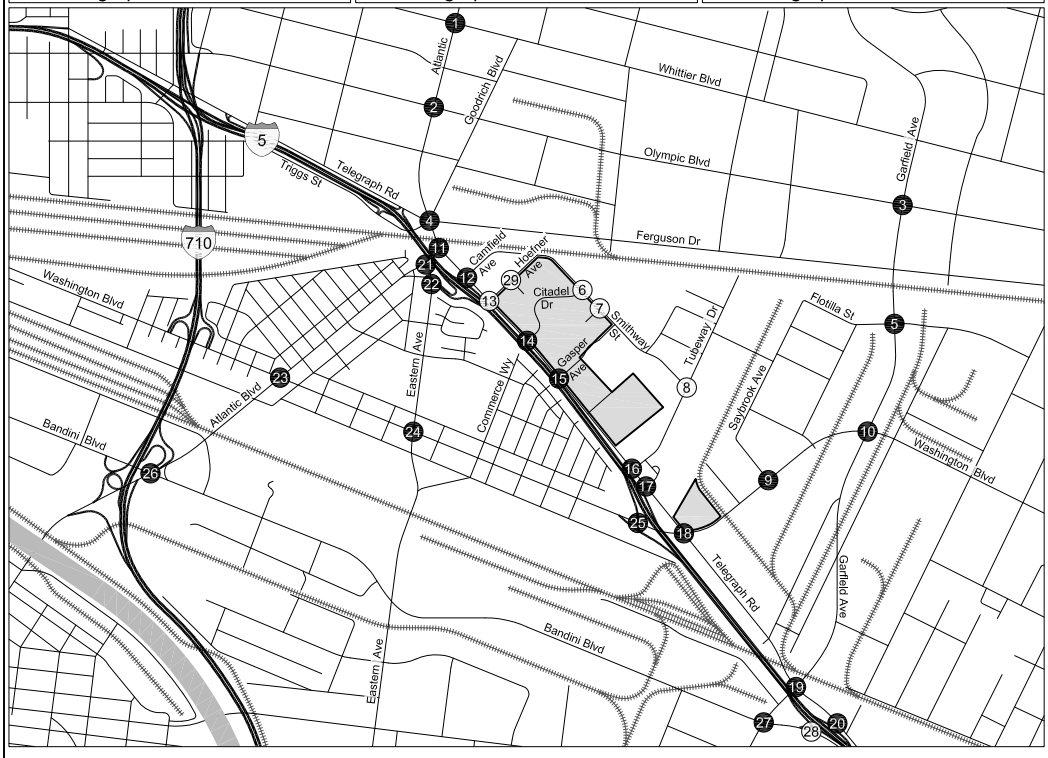
15. Gaspar Avenue & Telegraph Road

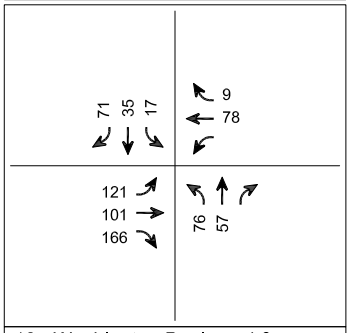


16. Tubeway Avenue & Telegraph Road

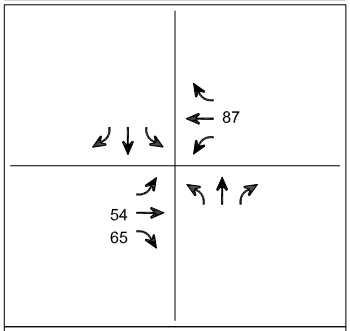


17. I-5 Ramps/Commerce Casino & Telegraph Road





18. Washington Boulevard & Telegraph Road



19. Garfield Avenue & Telegraph Road

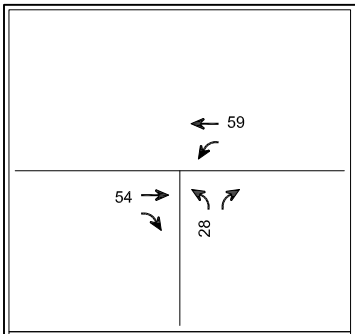
LEGEND

- Project Site
- X(X) Midday Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

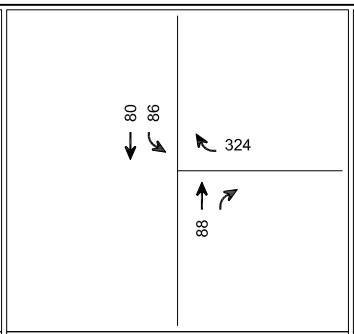
N
Not to Scale

PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

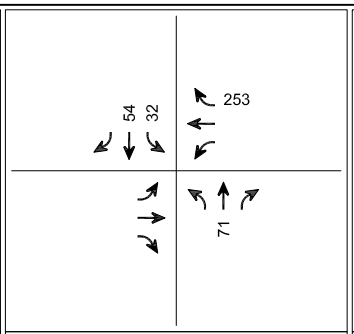
FIGURE
16 (CONT.)



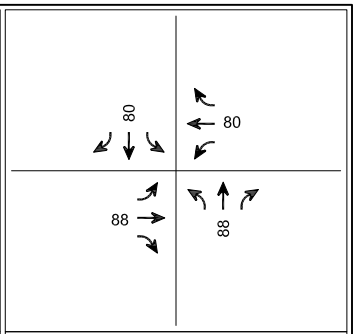
20. I-5 Ramps & Telegraph Road



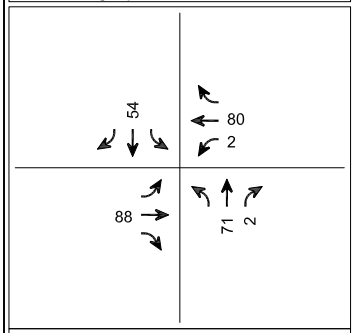
21. Atlantic Boulevard Eastern Avenue



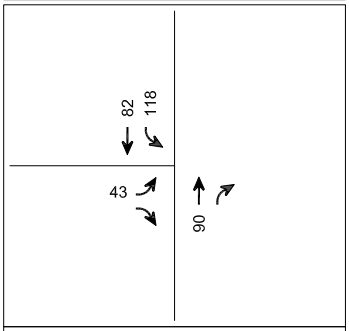
22. Eastern Avenue & I-5 Ramps/Stevens Place



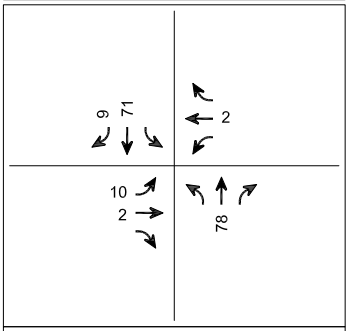
23. Atlantic Boulevard & Washington Boulevard



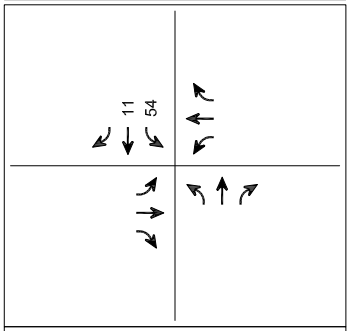
24. Eastern Avenue & Washington Boulevard



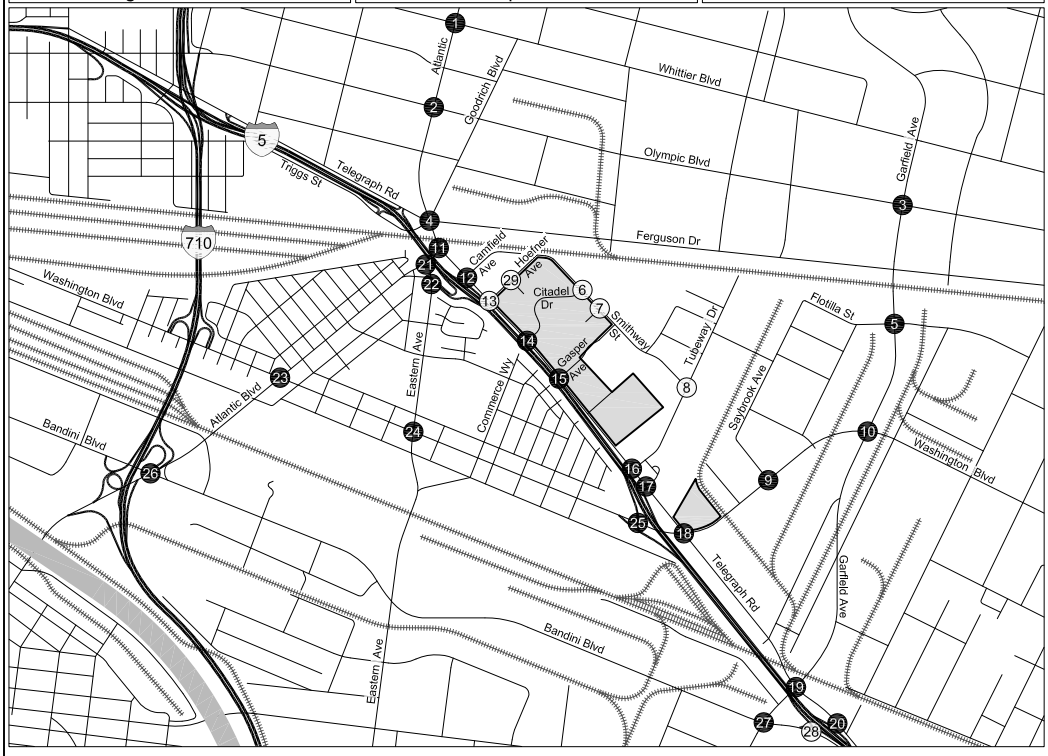
25. Washington Boulevard & I-5 SB Ramps

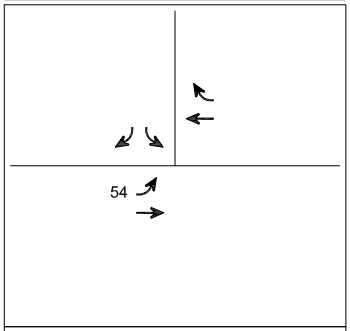


26. Atlantic Boulevard & Bandini Boulevard

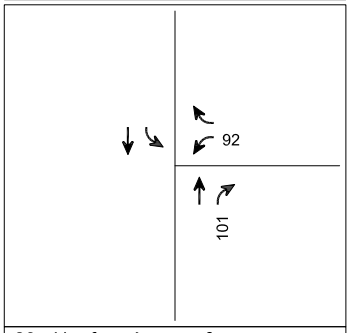


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

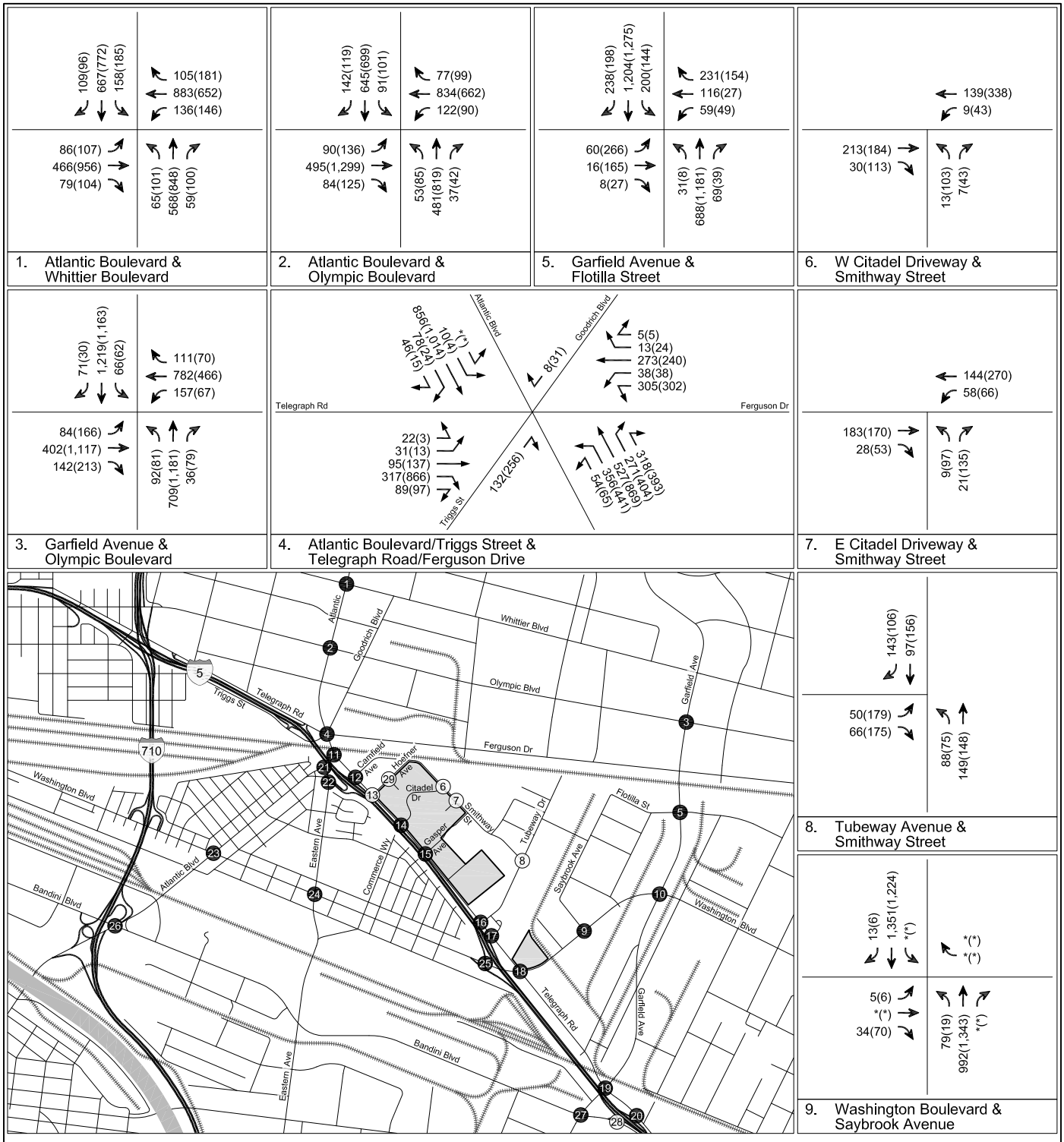
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) Midday Peak Hour Traffic Volumes

N
Not to Scale

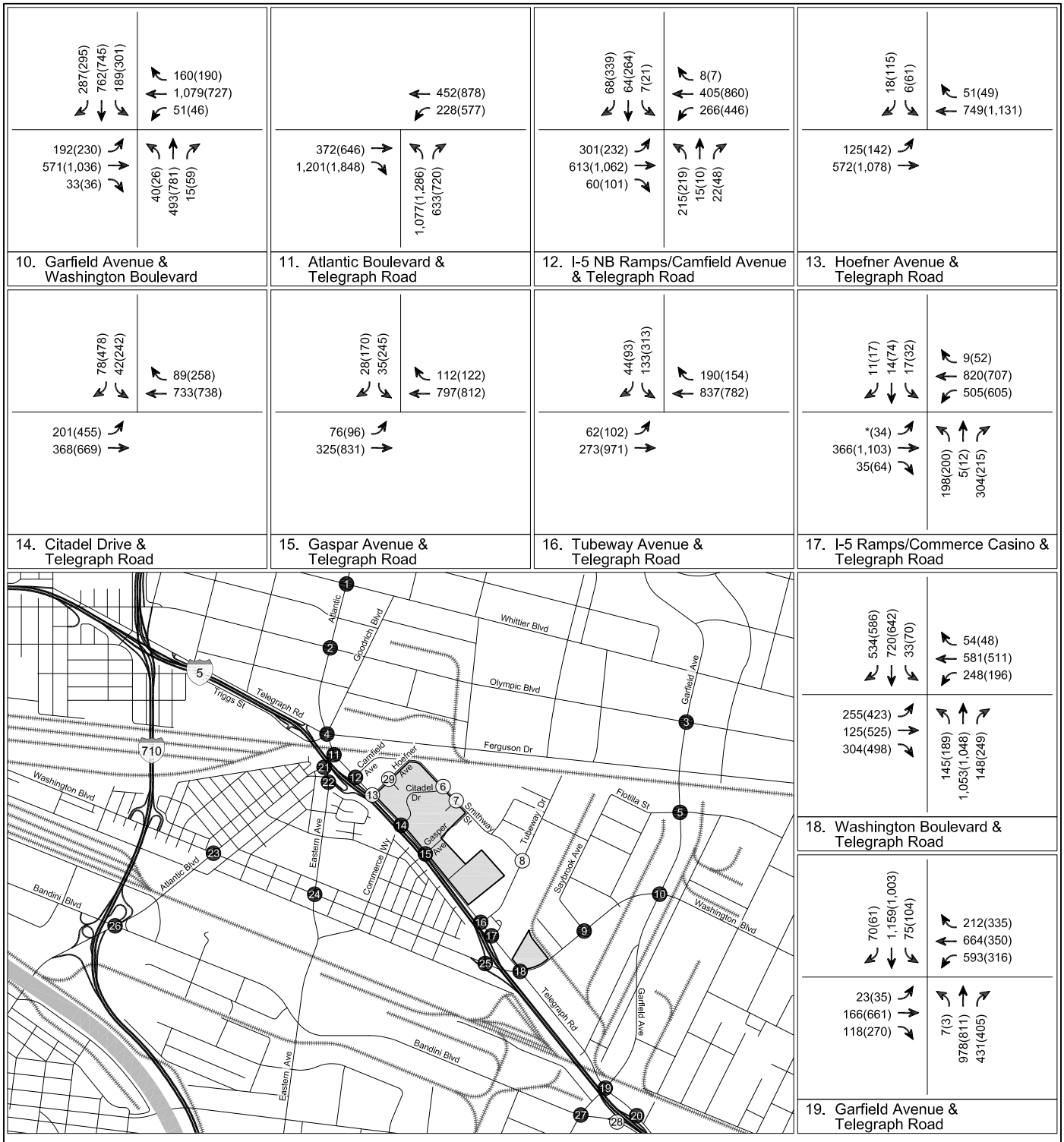
PROJECT-ONLY
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
16 (CONT.)



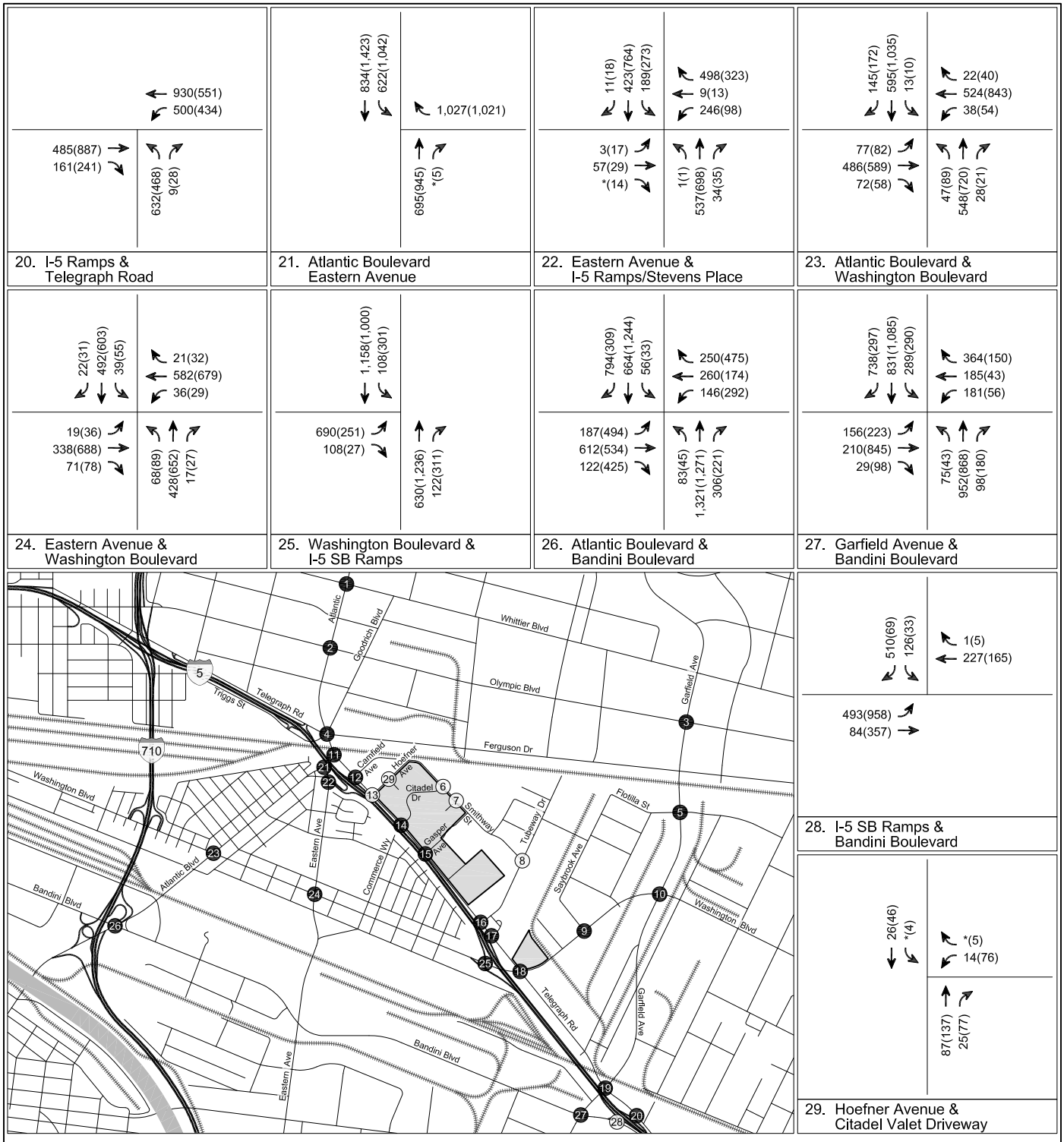
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 17



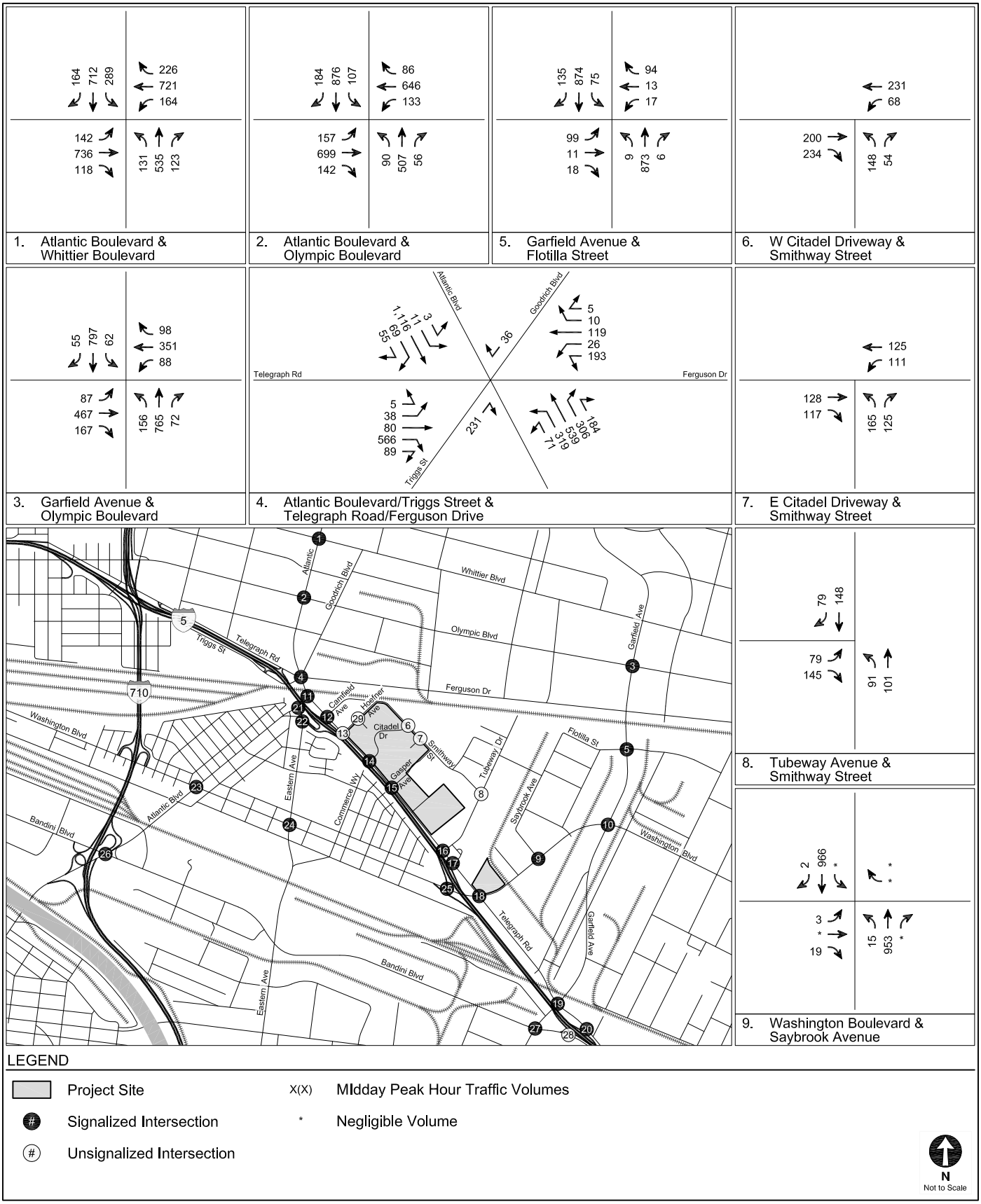
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 17 (CONT.)



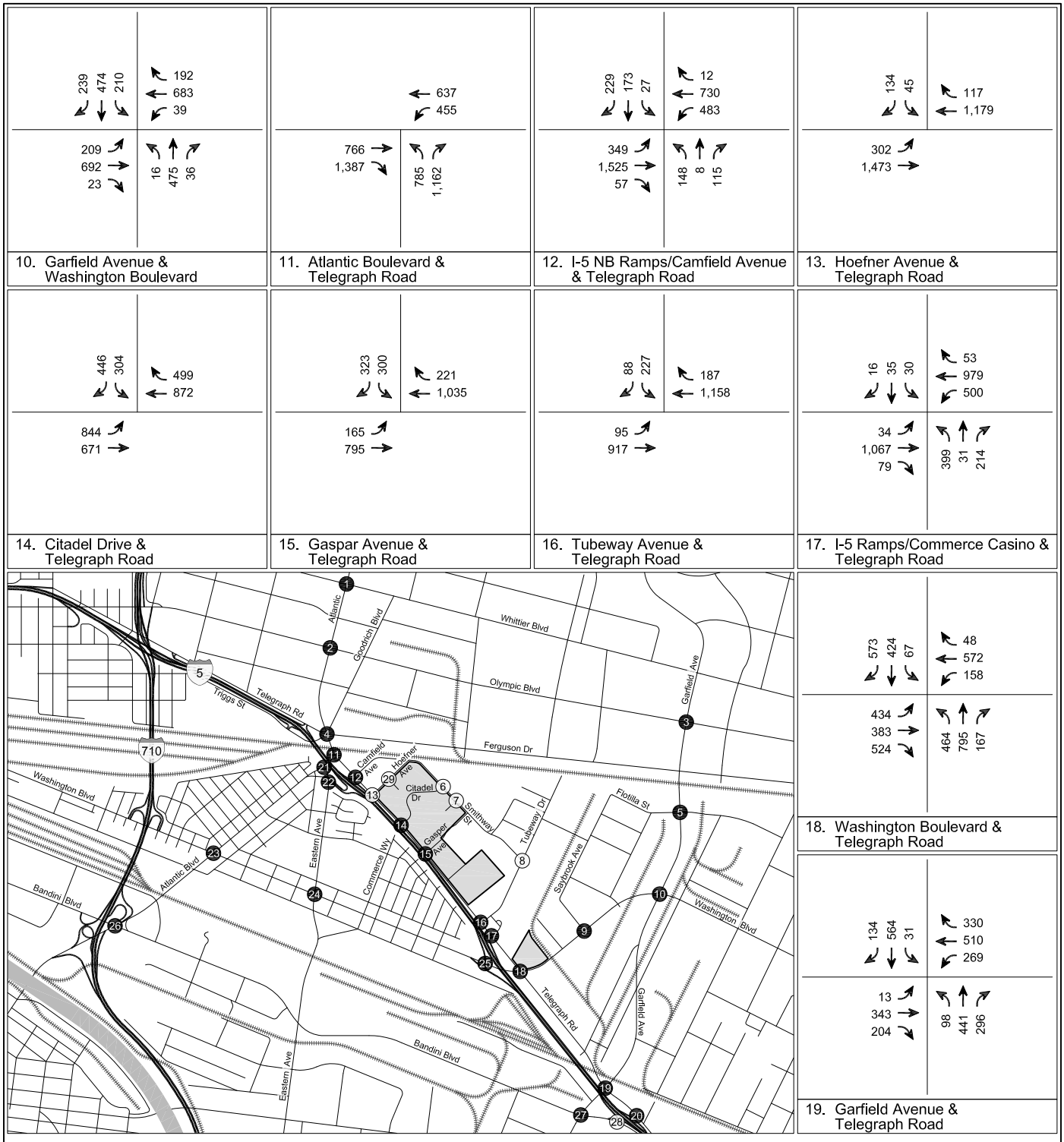
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
17 (CONT.)



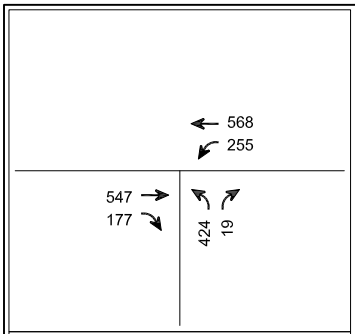
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 18

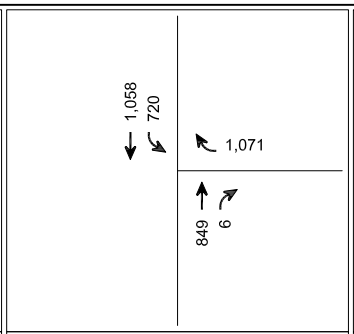


EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

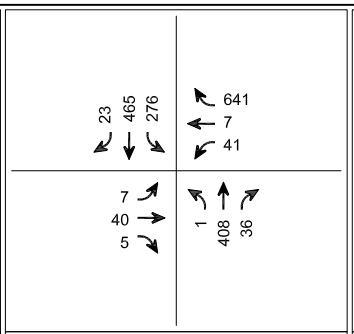
FIGURE
18 (CONT.)



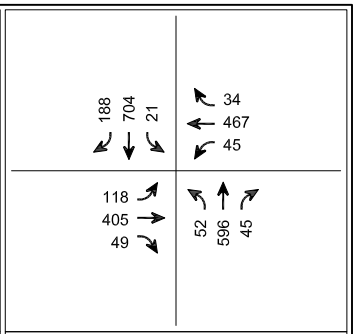
20. I-5 Ramps & Telegraph Road



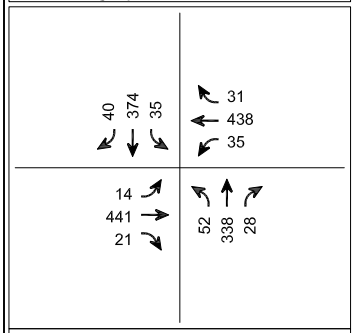
21. Atlantic Boulevard Eastern Avenue



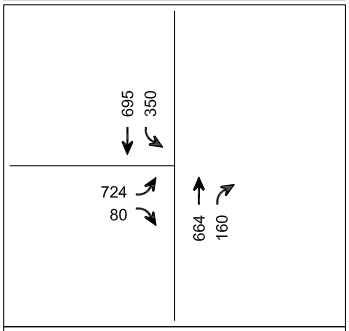
22. Eastern Avenue & I-5 Ramps/Stevens Place



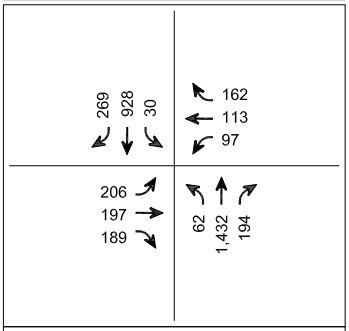
23. Atlantic Boulevard & Washington Boulevard



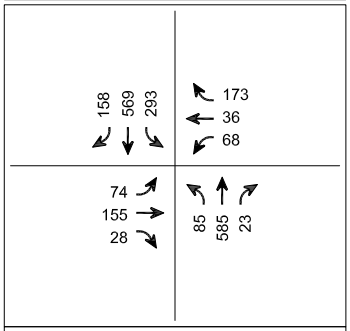
24. Eastern Avenue & Washington Boulevard



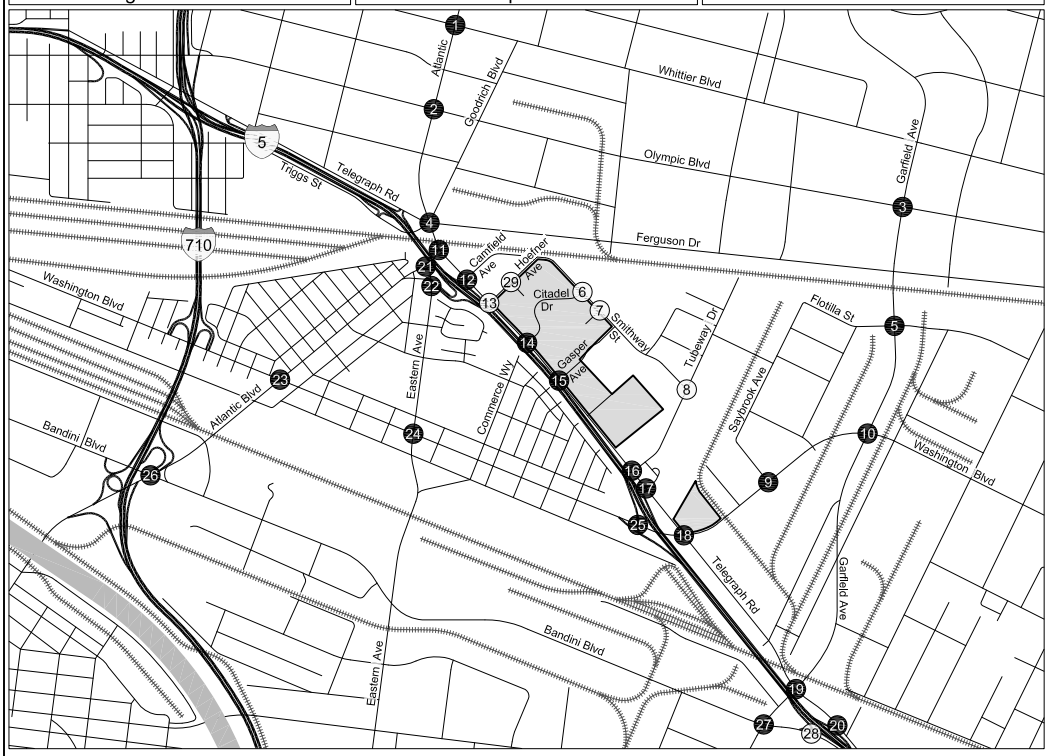
25. Washington Boulevard & I-5 SB Ramps

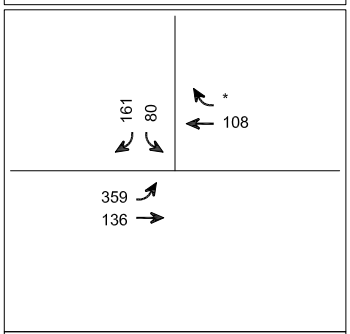


26. Atlantic Boulevard & Bandini Boulevard

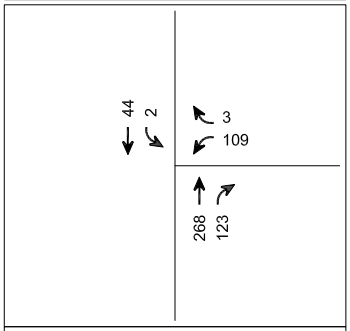


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

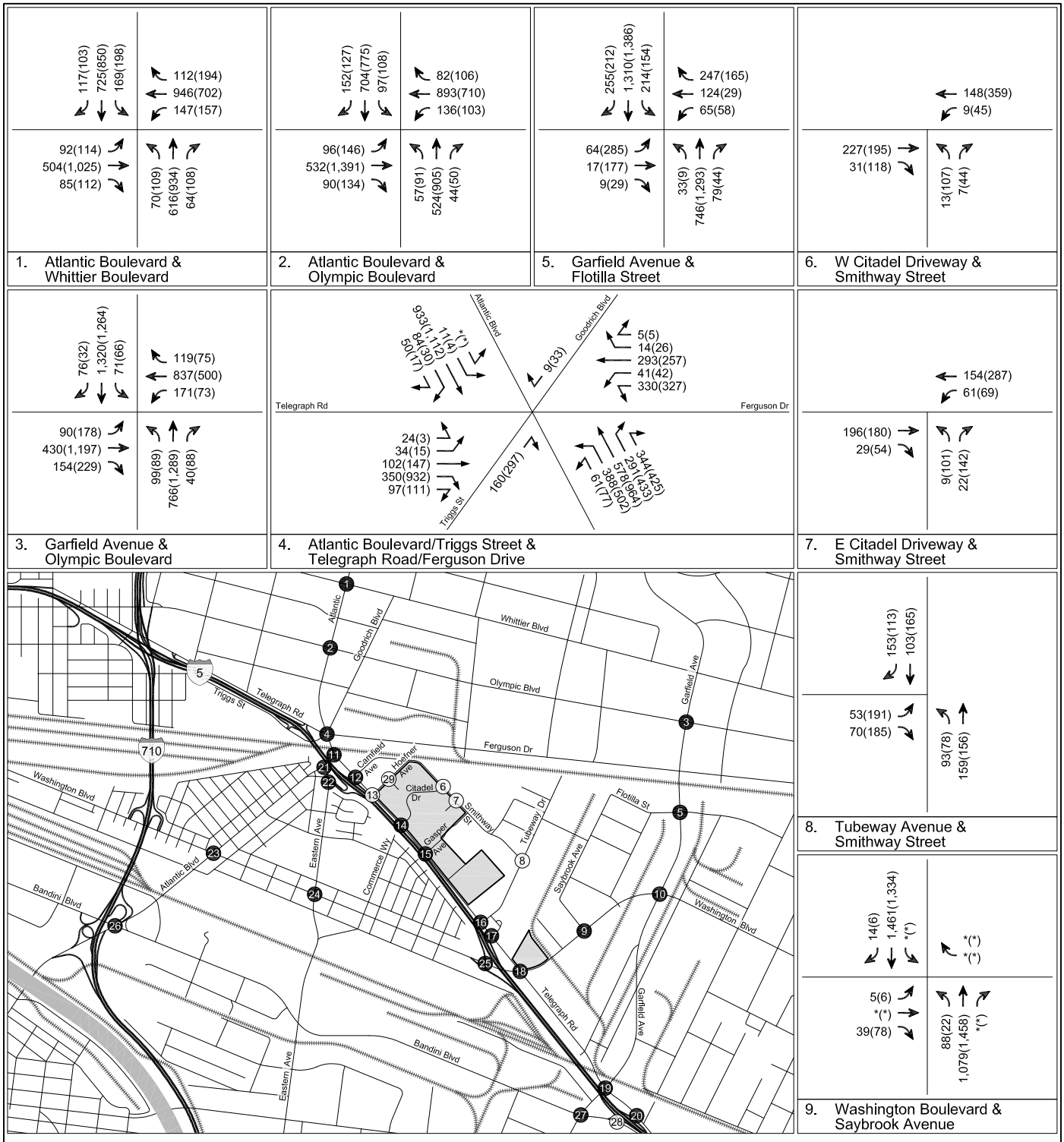
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

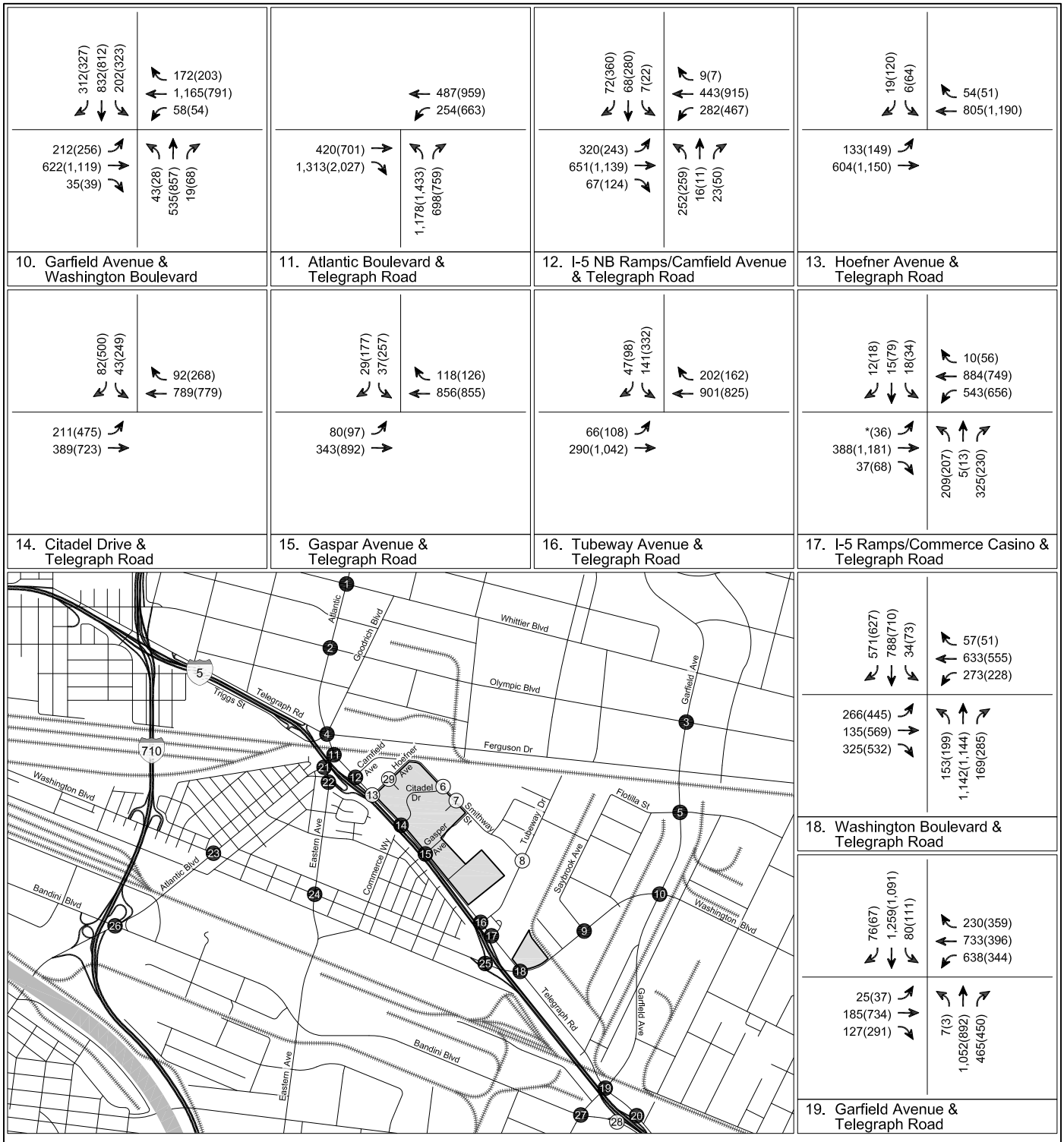
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
18 (CONT.)



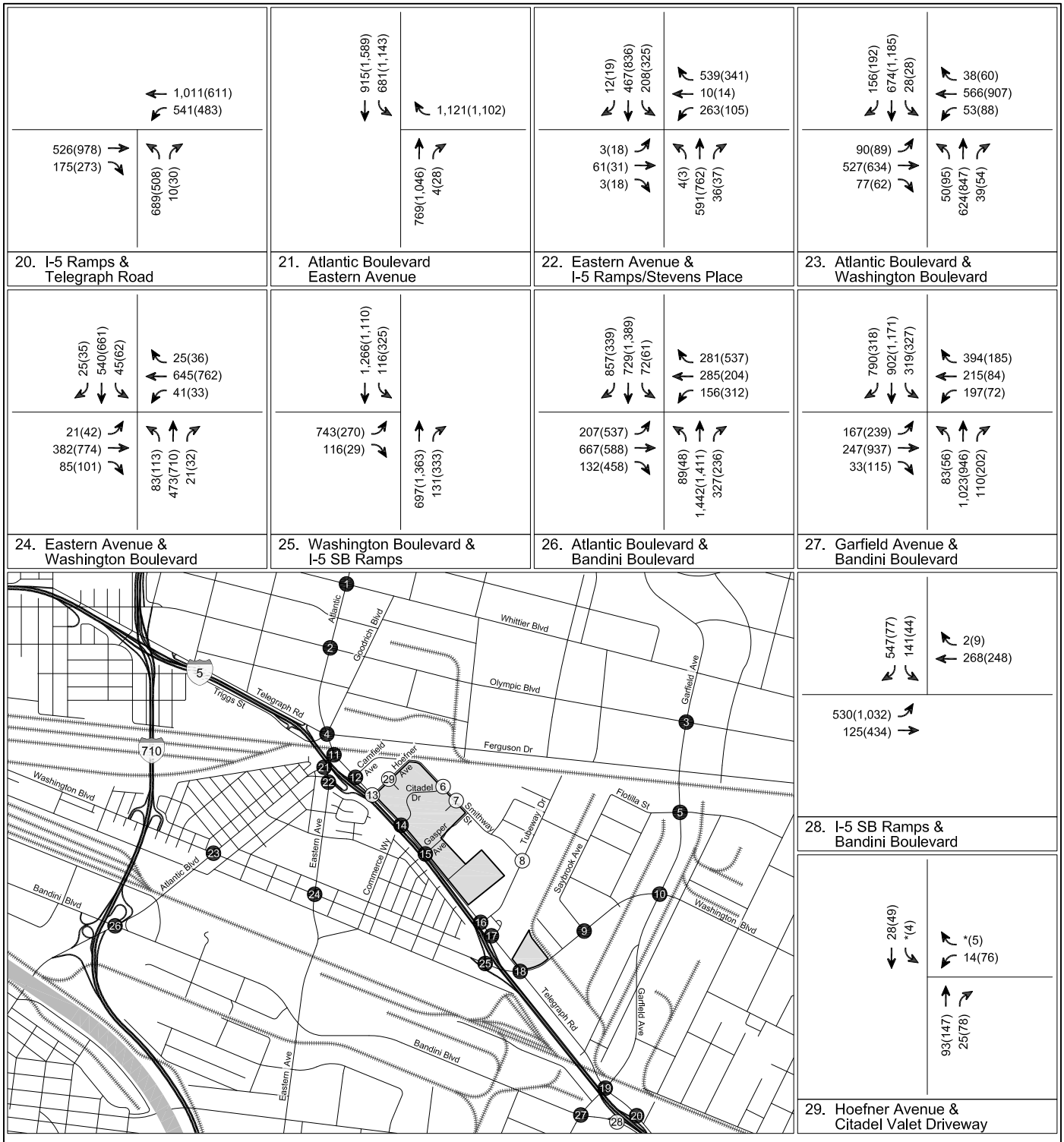
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 19



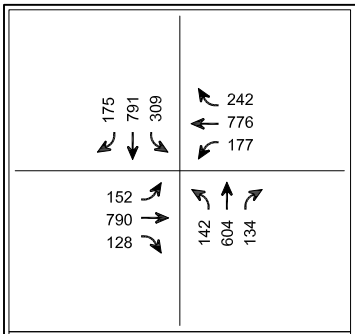
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 19 (CONT.)

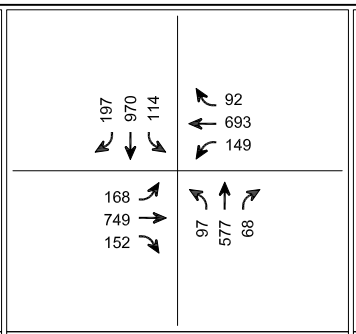


FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

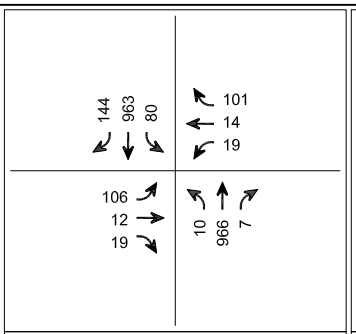
FIGURE 19 (CONT.)



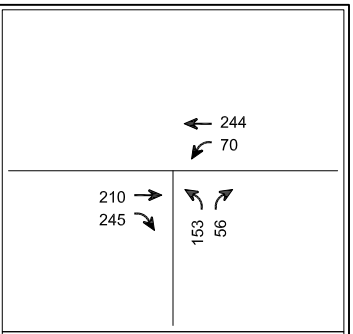
1. Atlantic Boulevard & Whittier Boulevard



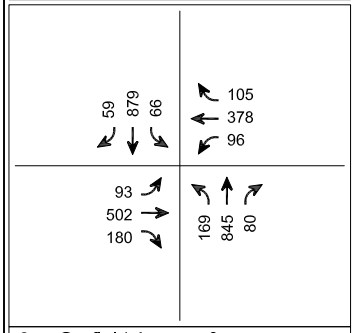
2. Atlantic Boulevard & Olympic Boulevard



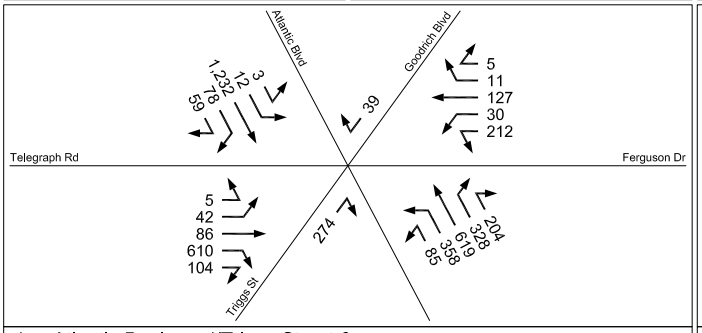
5. Garfield Avenue & Flotilla Street



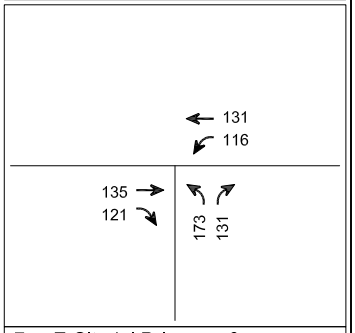
6. W Citadel Driveway & Smithway Street



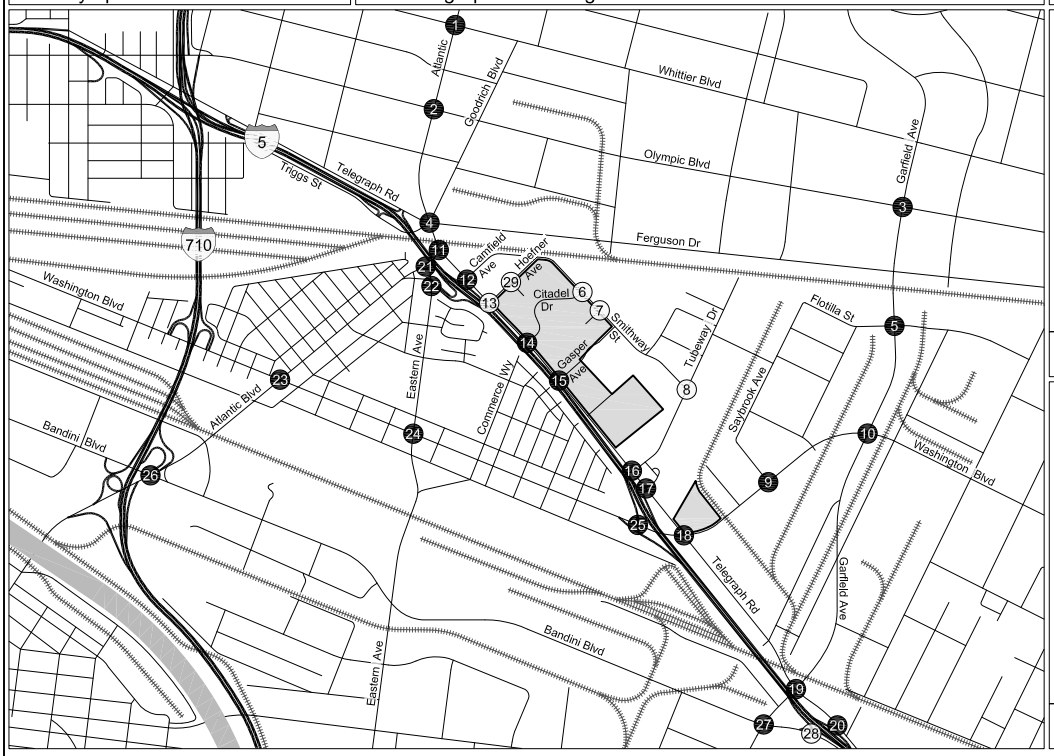
3. Garfield Avenue & Olympic Boulevard

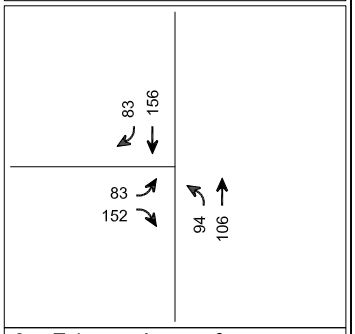


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

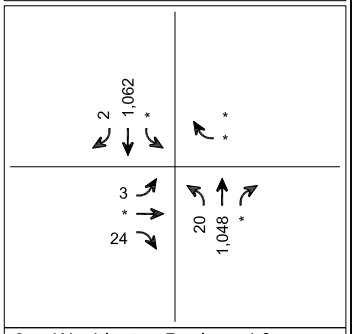


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

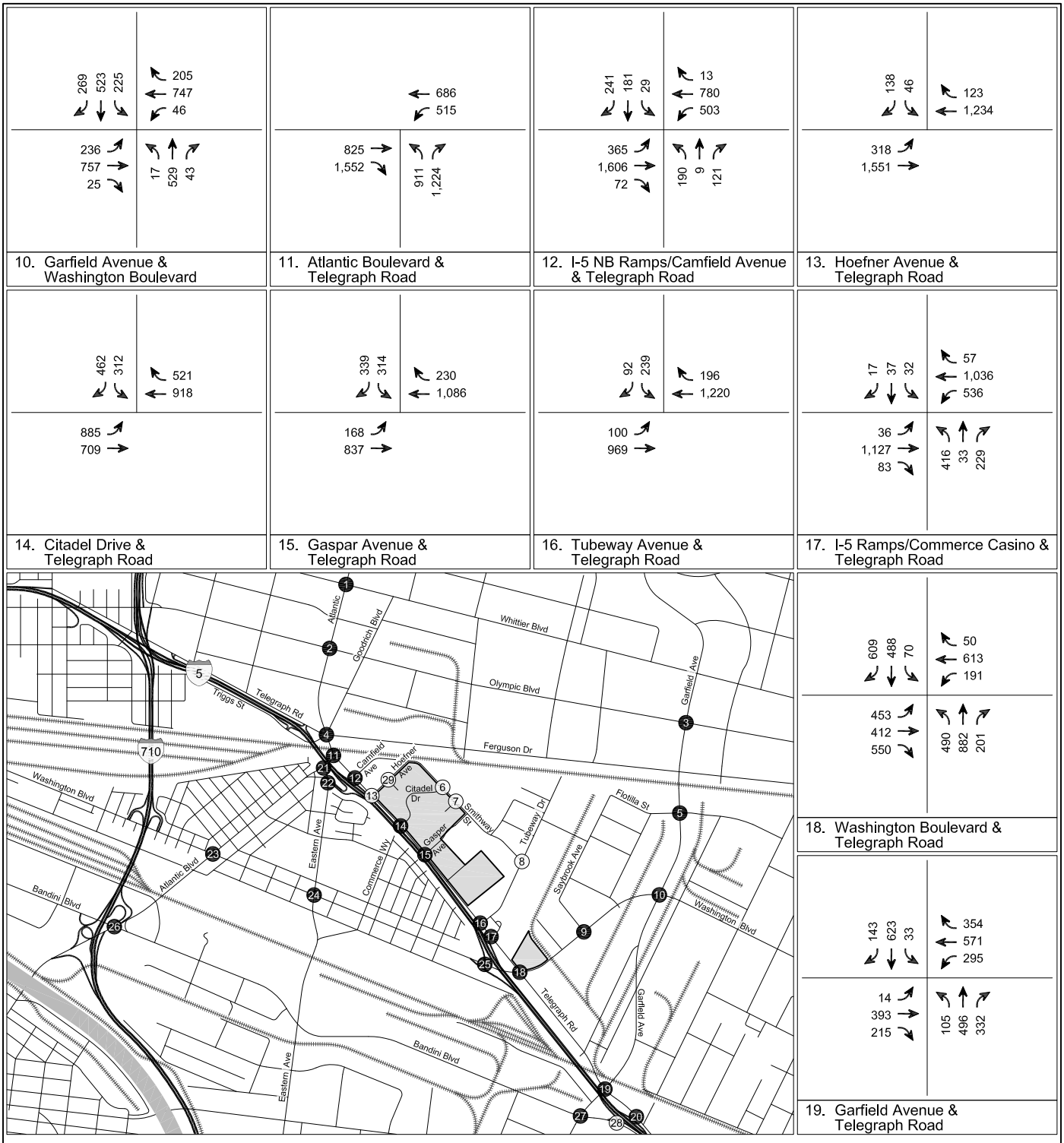
LEGEND

- Project Site
- (#) Signalized Intersection
- (#) Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

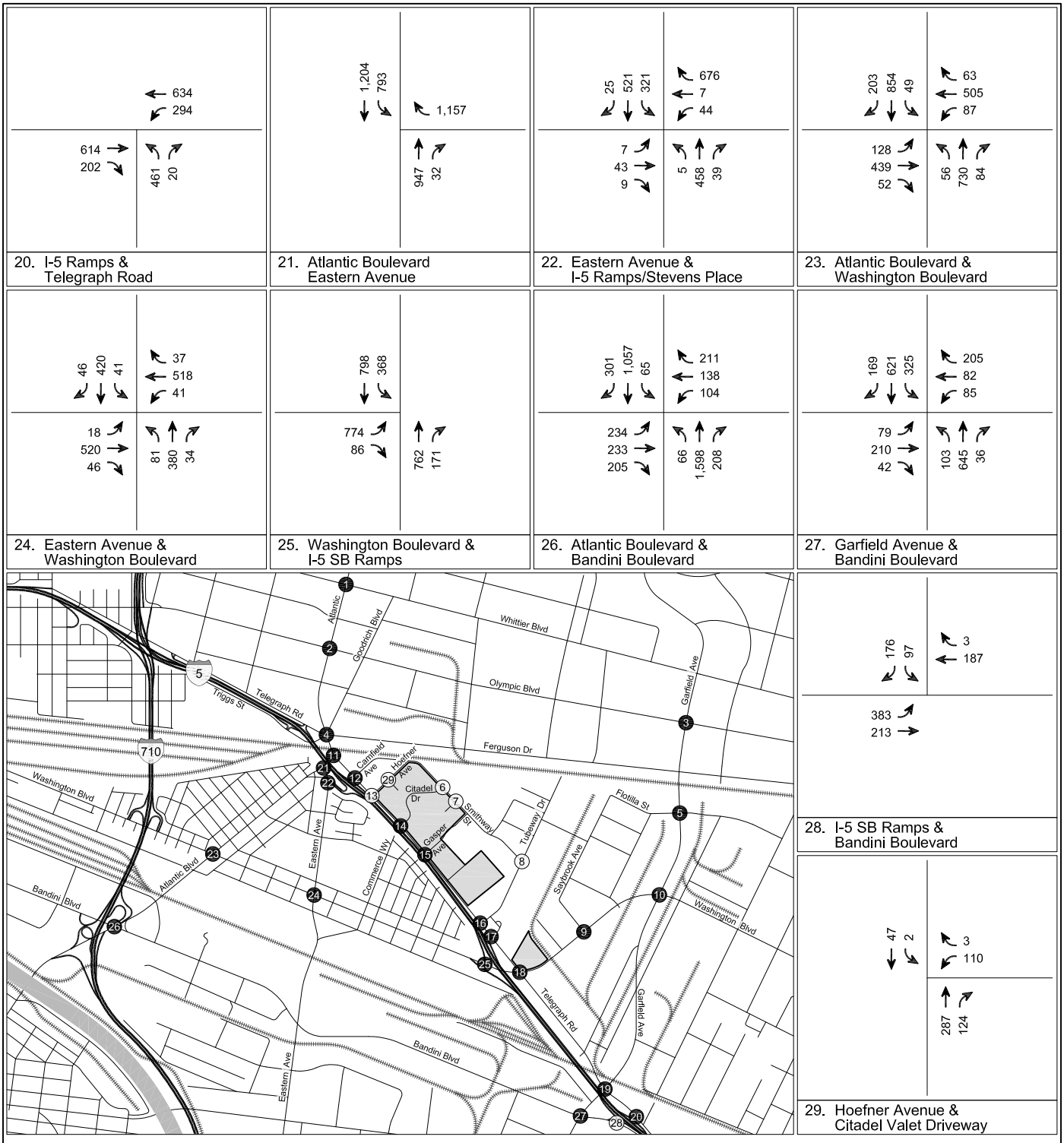
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 20



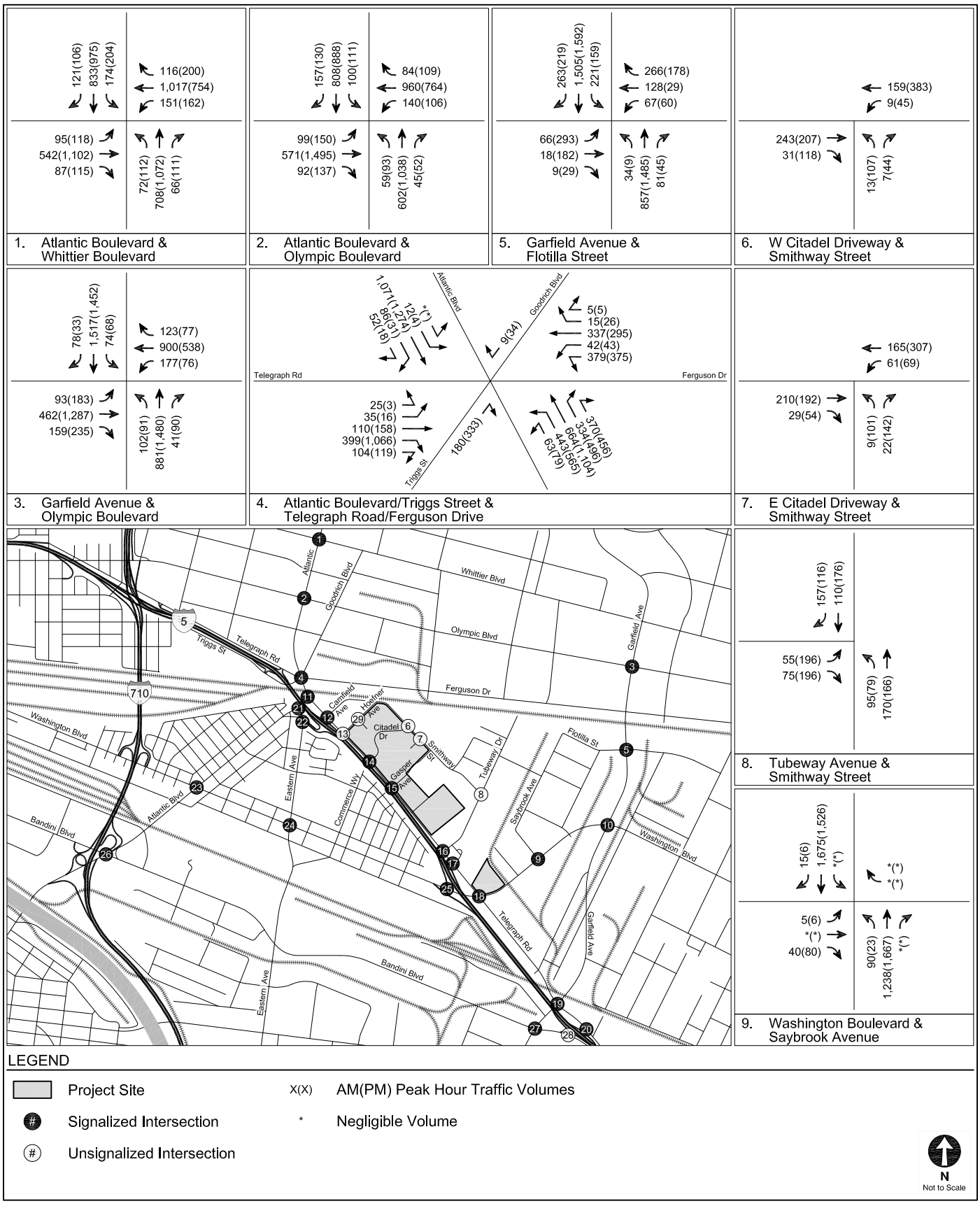
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
20 (CONT.)



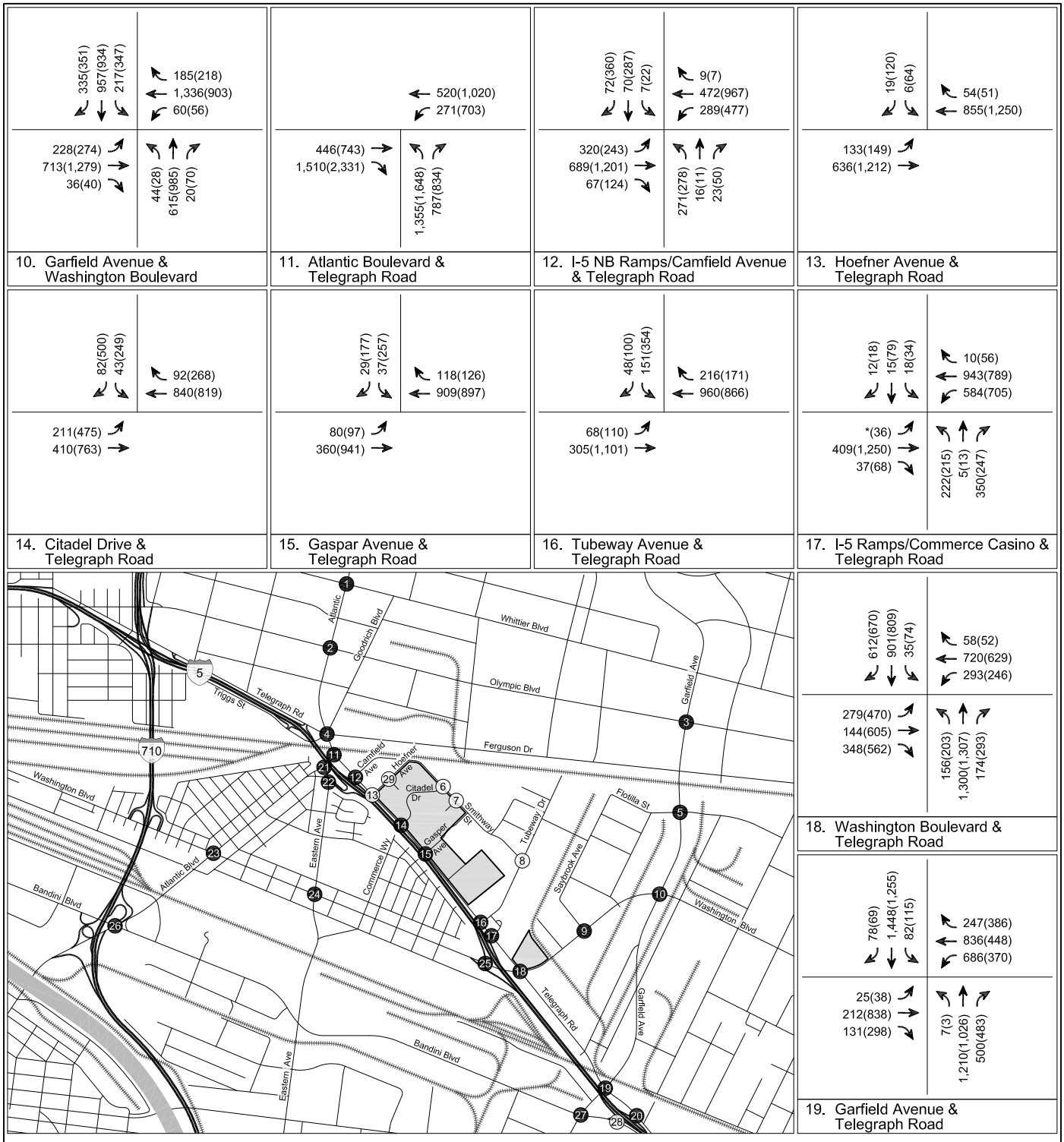
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
20 (CONT.)



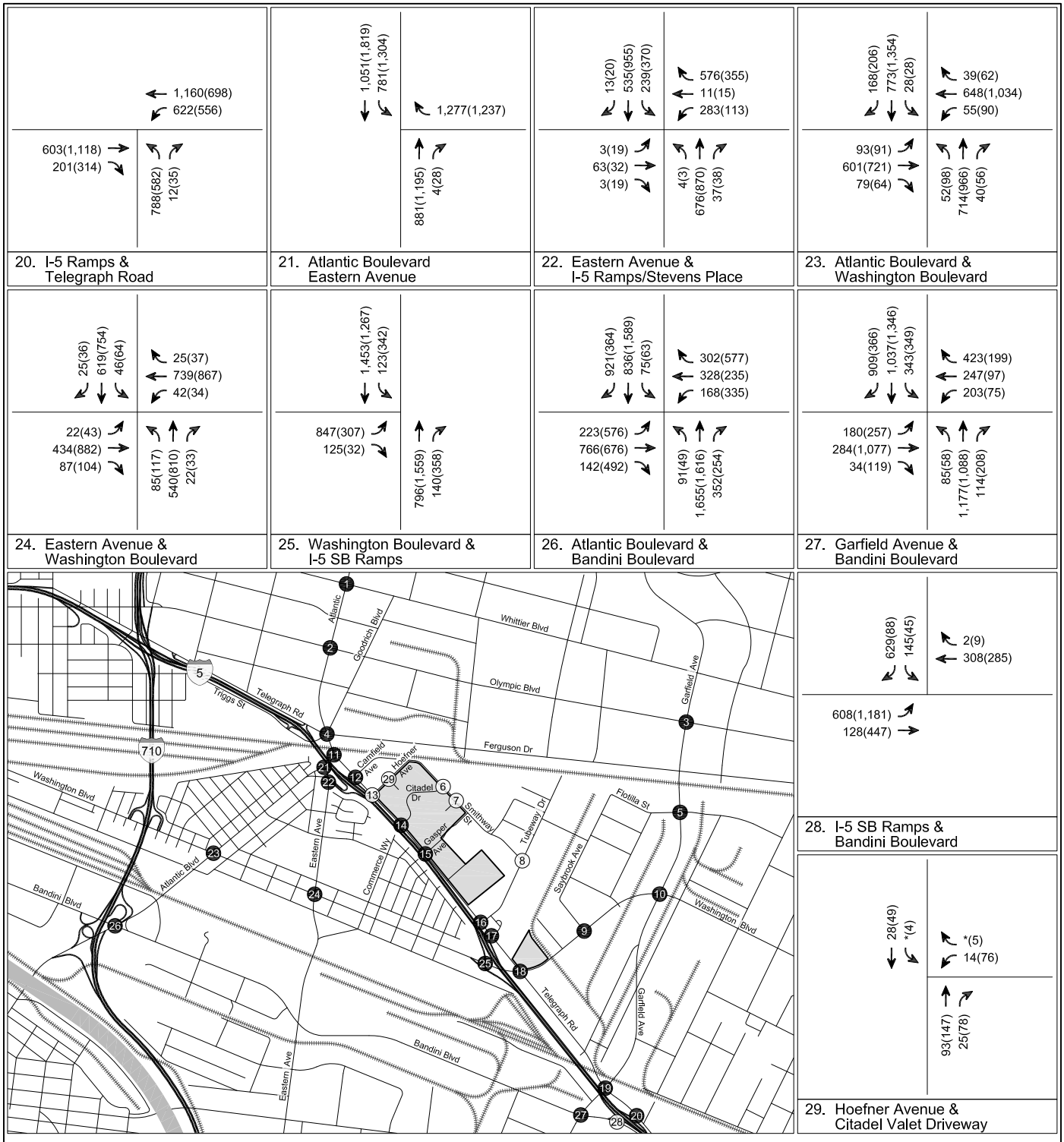
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 21



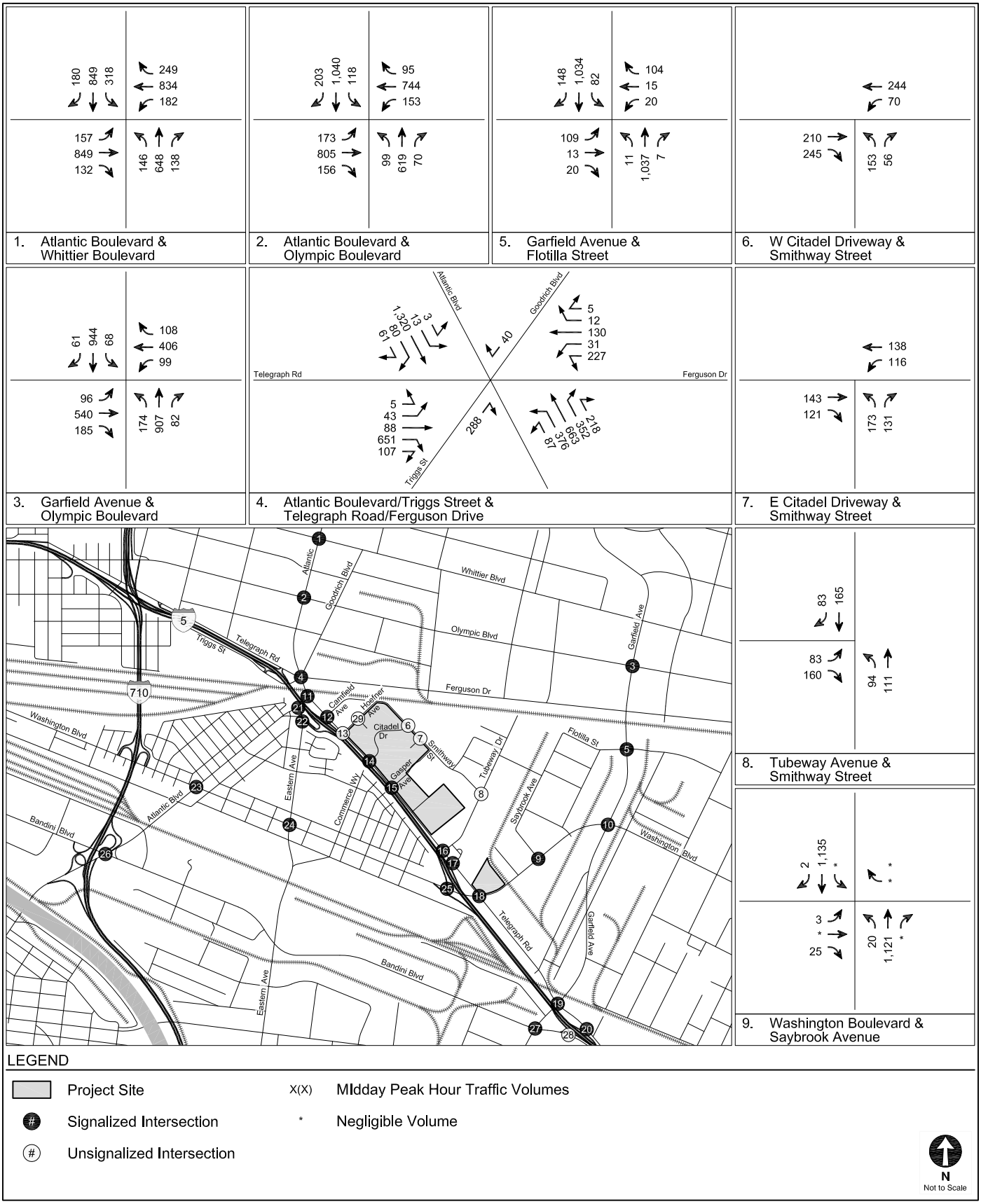
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 21 (CONT.)



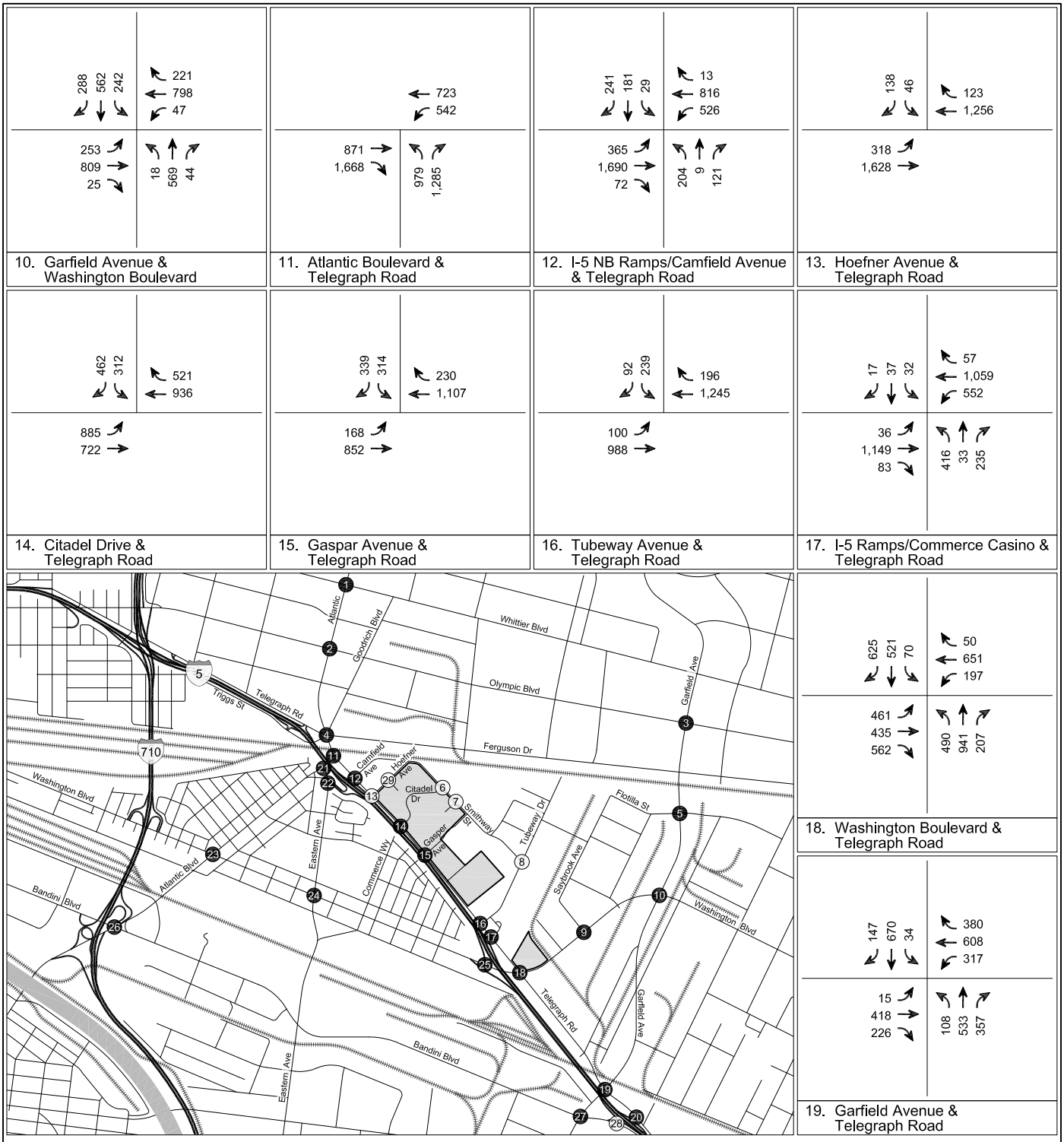
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 21 (CONT.)



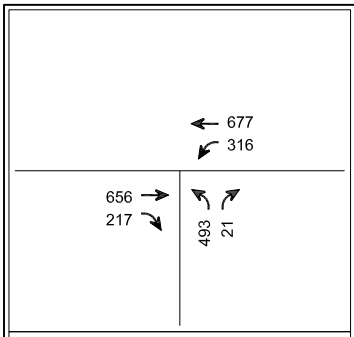
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 22

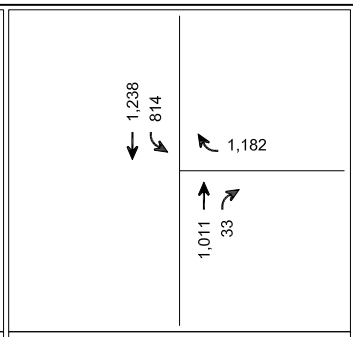


FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

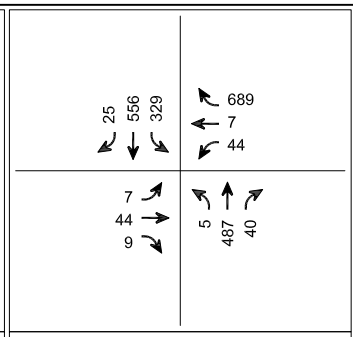
FIGURE
22 (CONT.)



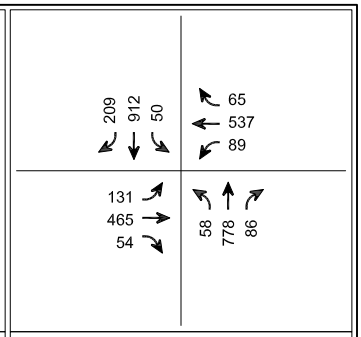
20. I-5 Ramps & Telegraph Road



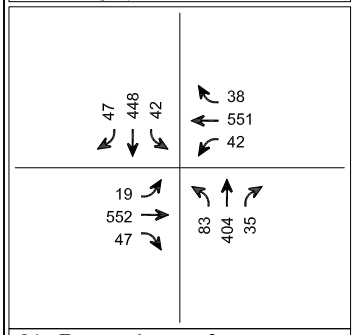
21. Atlantic Boulevard Eastern Avenue



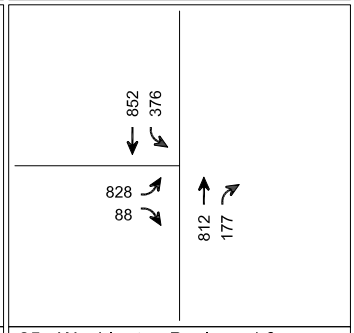
22. Eastern Avenue & I-5 Ramps/Stevens Place



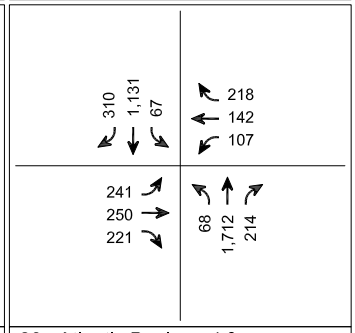
23. Atlantic Boulevard & Washington Boulevard



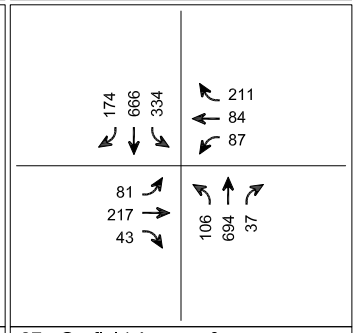
24. Eastern Avenue & Washington Boulevard



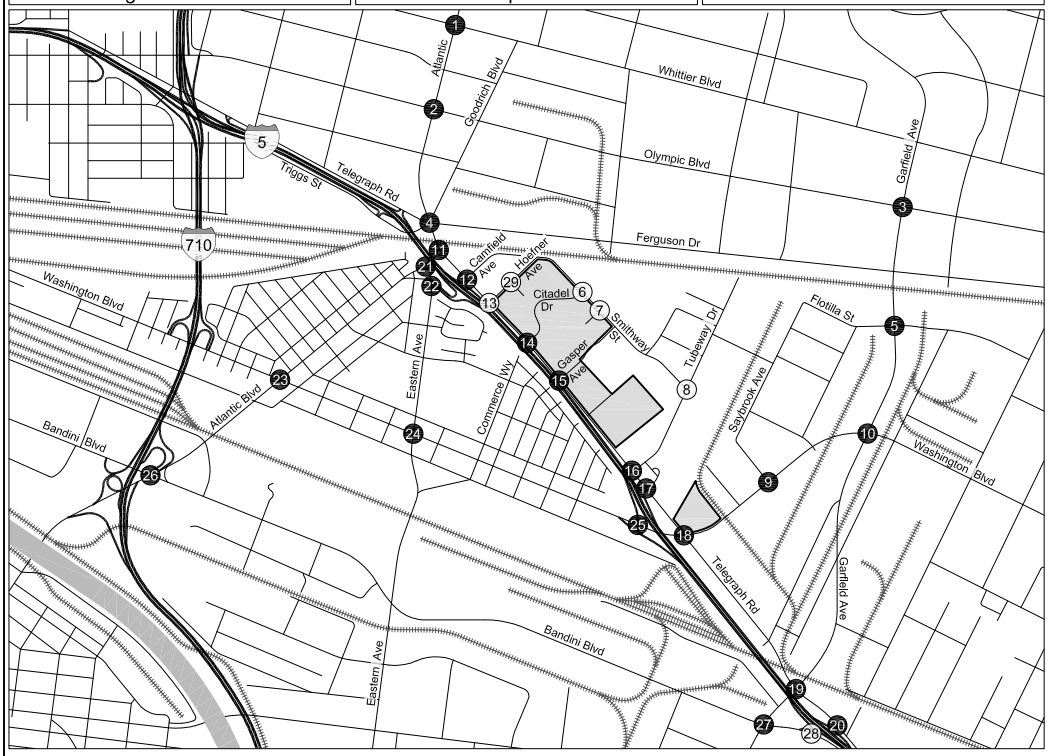
25. Washington Boulevard & I-5 SB Ramps

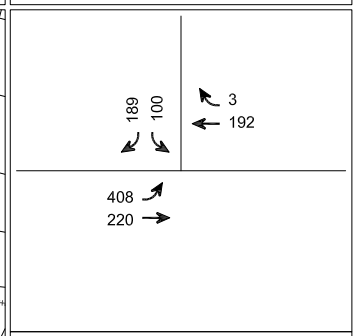


26. Atlantic Boulevard & Bandini Boulevard

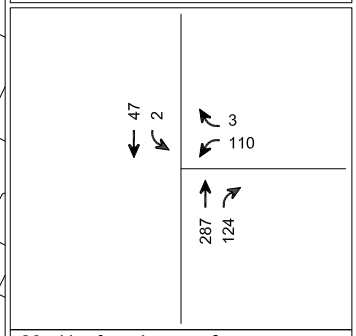


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

LEGEND

Project Site		X(X)	MIdday Peak Hour Traffic Volumes
Signalized Intersection	#	*	Negligible Volume
Unsignalized Intersection	#		

N
Not to Scale

FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
22 (CONT.)

TABLE 6
RELATED PROJECTS LIST

No.	Project	Land Use	Size	Units	WEEKDAY							SATURDAY			
					Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
					Trips	In	Out	Total	In	Out	Total	Trips	In	Out	Total
1	General Plan Amendment 7316 Gage Avenue	Manufacturing General Office	156,650 16,130	SF SF	776	111	28	139	45	93	138	1,042	51	105	156
2	Retail Center SW Corner of Atlantic Blvd and Washington Blvd	Retail	148,200	SF	5,595	86	53	139	271	294	565	6,835	347	320	667
3	Retail Use 7344 Bandini Road	Retail	25,250	SF	953	15	9	24	46	50	96	1,165	59	55	114
4	Gas Station and Convenience Store 2425 South Atlantic Boulevard	Convenience Store Gas Station	2,306	SF	1,481	47	47	94	57	57	114	2,500	91	91	182
5	Warehouse Building 5701 Union Pacific	Warehousing	15,000	SF	26	2	1	3	1	2	3	2	1	0	1
6	Residential 4906 Nobel Street	Single-Family Housing	1	DU	9	0	1	1	1	0	1	10	1	0	1
7	Paris Baguette 6100 Malt Avenue	Bakery	16,300	SF	615	9	6	15	30	32	62	752	38	35	73
8	Warehouse Building 6605 Flotilla Street	Warehousing	42,131	SF	73	5	2	7	2	6	8	6	1	1	2
9	Commercial Entertainment 5427 E Washington Boulevard	Entertainment	4,860	SF	183	3	2	5	9	10	19	224	11	11	22
10	Escape Room 5121 S Atlantic Boulevard	Entertainment	4,682	SF	177	2	2	4	9	9	18	216	11	10	21
11	Retail Use 5521 Telegraph Road	Retail	4,206	SF	159	2	2	4	8	8	16	194	2	17	19
12	Warehouse Building 6800 E Washington Boulevard	Warehousing	40,835	SF	71	5	2	7	2	6	8	6	1	1	2
13	Warehouse Building 6300 Telegraph Road	Warehousing	83,000	SF	144	11	3	14	4	12	16	12	3	1	4
14	Warehouse Building 7140 Bandini Boulevard	Warehousing	185,000	SF	322	24	7	31	9	26	35	28	6	3	9
15	AltaMed Office Conversion 2035 Camfield Avenue	Office	78,316	SF	763	78	13	91	14	76	90	173	23	19	42
16	Vehicle Repair 7500 Wellman Street	Auto Care Center	2,000	SF	33	3	2	5	3	3	6	47	6	7	13
17	Fast Food Restaurant 5556 East Washington Blvd	Fast Food	2,600	SF	1,224	53	51	104	44	41	85	1,602	73	70	143
18	Retail 5200 Triggs Street	Shopping Center	16,000	SF	604	9	6	15	29	32	61	738	37	35	72
Total Related Project Trips					**13,208**	**465**	**237**	**702**	**584**	**757**	**1,341**	**15,552**	**762**	**781**	**1,543**

Note
SF - square feet; DU - dwelling unit
Trip generation estimates based on *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017).

TABLE 7A
PROJECT TRIP GENERATION ESTIMATES
THE CITADEL SITE

TRIP GENERATION RATES [a]

Land Use	ITE Land Use Code	Rate	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Shopping Center	820	per 1,000 sf	[b]	62%	38%	[b]	49%	51%	[b]	[b]	52%	48%	[b]
General Office	710	per 1,000 sf	[c]	86%	14%	[c]	16%	84%	[c]	2.21	54%	46%	0.53
Hotel	310	per room	8.36	59%	41%	0.47	51%	49%	0.60	8.19	56%	44%	0.72
Business Hotel	312	per room	4.02	42%	58%	0.39	55%	45%	0.32	5.79	48%	52%	0.46
Resort Hotel	330	per room	5.43	72%	28%	0.32	43%	57%	0.41	6.47	56%	44%	0.54
Topgolf [d]	[d]	per bay	17.90	87%	13%	0.31	50%	50%	1.79	30.60	52%	48%	3.06

TRIP GENERATION ESTIMATES

Land Use	ITE Land Use Code	Size	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Existing Project													
Shopping Center [e]	820	492,883 sf	17,786	247	151	398	867	902	1,769	26,357	1,248	1,152	2,400
Office	710	179,518 sf	1,872	168	27	195	32	166	198	397	51	44	95
Hotel	310	201 rooms	1,680	55	39	94	62	59	121	1,646	81	64	145
Subtotal - Project Trips Prior to Reductions			**21,338**	**470**	**217**	**687**	**961**	**1,127**	**2,088**	**28,400**	**1,380**	**1,260**	**2,640**
Less Mixed-Use Internal Capture Office - 10%			*(187)*	*(17)*	*(3)*	*(20)*	*(3)*	*(17)*	*(20)*	*(40)*	*(5)*	*(4)*	*(9)*
Less Mixed-Use Internal Capture Hotel - 25%			*(420)*	*(14)*	*(10)*	*(24)*	*(16)*	*(15)*	*(31)*	*(412)*	*(20)*	*(16)*	*(36)*
Less Mixed-Use Internal Capture Shopping Center - (Based on Other Uses)			*(607)*	*(13)*	*(31)*	(44)	*(32)*	*(19)*	*(51)*	*(452)*	*(20)*	*(25)*	*(45)*
Subtotal - Less Mixed-Use Internal Capture Credit			**(1,214)**	**(44)**	**(44)**	**(88)**	**(51)**	**(51)**	**(102)**	**(904)**	**(45)**	**(45)**	**(90)**
Less Passby Reduction Shopping Center - 10%			**(1,718)**	**(23)**	**(12)**	**(35)**	**(84)**	**(88)**	**(172)**	**(2,591)**	**(123)**	**(113)**	**(236)**
TOTAL - EXISTING PROJECT			**18,406**	**403**	**161**	**564**	**826**	**988**	**1,814**	**24,905**	**1,212**	**1,102**	**2,314**
Project Upon Completion													
Shopping Center [e]	820	1,013,349 sf	29,036	408	250	658	1,478	1,538	3,016	41,206	2,206	2,037	4,243
Office	710	179,518 sf	1,872	168	27	195	32	166	198	397	51	44	95
Hotel	310	201 rooms	1,680	55	39	94	62	59	121	1,646	81	64	145
Business Hotel	312	424 rooms	1,704	69	96	165	75	61	136	2,455	94	101	195
Resort Hotel	330	346 rooms	1,879	80	31	111	61	81	142	2,239	105	82	187
Topgolf [d]	[d]	102 bays	1,826	28	4	32	92	91	183	3,121	162	150	312
Subtotal - Project Trips Prior to Reductions			**37,997**	**808**	**447**	**1,255**	**1,800**	**1,996**	**3,796**	**51,064**	**2,699**	**2,478**	**5,177**
Less Mixed-Use Internal Capture Office - 10%			*(187)*	*(17)*	*(3)*	*(20)*	*(3)*	*(17)*	*(20)*	*(40)*	*(5)*	*(4)*	*(9)*
Less Mixed-Use Internal Capture Hotel - 25%			*(420)*	*(14)*	*(10)*	*(24)*	*(16)*	*(15)*	*(31)*	*(412)*	*(20)*	*(16)*	*(36)*
Less Mixed-Use Internal Capture Business Hotel - 25%			*(426)*	*(17)*	*(24)*	*(41)*	*(19)*	*(15)*	*(34)*	*(614)*	*(24)*	*(25)*	*(49)*
Less Mixed-Use Internal Capture Resort Hotel - 50%			*(940)*	*(40)*	*(16)*	*(56)*	*(31)*	*(41)*	*(72)*	*(1,120)*	*(53)*	*(41)*	*(94)*
Less Mixed-Use Internal Capture Topgolf - 25%			*(457)*	*(7)*	*(1)*	*(8)*	*(23)*	*(23)*	*(46)*	*(780)*	*(41)*	*(38)*	*(79)*
Less Mixed-Use Internal Capture Shopping Center - (Based on Other Uses)			*(2,430)*	*(54)*	*(95)*	*(149)*	*(111)*	*(92)*	*(203)*	*(2,966)*	*(124)*	*(143)*	*(267)*
Subtotal - Less Mixed-Use Internal Capture Credit			**(4,860)**	**(149)**	**(149)**	**(298)**	**(203)**	**(203)**	**(406)**	**(5,932)**	**(267)**	**(267)**	**(534)**
Less Pass-By Reduction Shopping Center - 10%			**(2,661)**	**(35)**	**(16)**	**(51)**	**(137)**	**(145)**	**(282)**	**(3,824)**	**(208)**	**(189)**	**(397)**
TOTAL - PROJECT UPON COMPLETION			**30,476**	**624**	**282**	**906**	**1,460**	**1,648**	**3,108**	**41,308**	**2,224**	**2,022**	**4,246**
NET NEW TOTAL PROJECT TRIPS			**12,070**	**221**	**121**	**342**	**634**	**660**	**1,294**	**16,403**	**1,012**	**920**	**1,932**

Notes:
sf - square feet
[a] Unless otherwise noted, Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.
[b] Trip generation rate based on the best-fit curve formula listed in the ITE for the identified land use.
Weekday Daily - Ln(T) = 0.68 Ln(X) + 5.57 T = Average Vehicle Trips X = Gross Leasable Area (1,000 sf)
Weekday A.M. Peak Hour - T = 0.50(X) + 151.78
Weekday P.M. Peak Hour - Ln(T) = 0.74 Ln(X) + 2.89
Saturday Daily - Ln(T) = 0.62 Ln(X) + 6.24
Saturday Peak Hour - Ln(T) = 0.79 Ln(X) + 2.79
[c] Trip generation rate based on the best-fit curve formula listed in the ITE for the identified land use.
Weekday Daily - Ln(T) = 0.97 Ln(X) + 2.50 T = Average Vehicle Trips X = Gross Leasable Area (1,000 sf)
Weekday A.M. Peak Hour - T = 0.94(X) + 26.49
Weekday P.M. Peak Hour - LN(T) = 0.95 Ln(X) + 0.36
[d] Source: *Transportation Impact Study Report for North Central Roseville Specific Plan – Parcel 49*, October 27, 2014. Daily weekday trip rate was calculated based on the assumption that it is 110% of PM peak hour rate. Daily Saturday trip rate was calculated based on the assumption that it is 110% of MD peak hour rate.
[e] Shopping center was adjusted by a 10% increase to the Saturday trip generation estimates to reflect existing conditions.

TABLE 7B
PROJECT TRIP GENERATION ESTIMATES
10-ACRE PARCEL

TRIP GENERATION RATES [a]

Land Use	ITE Land Use Code	Rate	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
General Light Industrial	110	per 1,000 sf	4.96	88%	12%	0.70	13%	87%	0.63	1.99	47%	53%	0.41
Fast-Food Resturant with Drive-Thru Window	934	per 1,000 sf	470.95	51%	49%	40.19	52%	48%	32.67	616.12	51%	49%	54.86
General Office	710	per 1,000 sf	[b]	86%	14%	[b]	16%	84%	[b]	2.21	54%	46%	0.53
Quality Restaurant	931	per 1,000 sf	83.84	55%	45%	0.73	67%	33%	7.80	90.04	59%	41%	10.68

TRIP GENERATION ESTIMATES

Land Use	ITE Land Use Code	Size	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Proposed Conditions													
General Light Industrial	110	55,015 sf	273	34	5	39	5	30	35	109	11	12	23
Fast-Food Restaurant with Drive-Thru Window	934	8,400 sf	3,956	172	166	338	142	132	274	5,175	235	226	461
General Office	710	70,000 sf	751	79	13	92	13	68	81	155	20	17	37
Quality Restaurant	931	5,000 sf	419	2	2	4	26	13	39	450	31	22	53
Subtotal - Project Trips Prior to Reductions			**5,399**	**287**	**186**	**473**	**186**	**243**	**429**	**5,889**	**297**	**277**	**574**
Less Mixed-Use Internal Capture Light Industrial - 10%			(27)	(3)	(1)	(4)	(1)	(3)	(4)	(11)	(1)	(1)	(2)
Less Mixed-Use Internal Capture Office - 10%			(75)	(8)	(1)	(9)	(1)	(7)	(8)	(16)	(2)	(2)	(4)
Less Mixed-Use Internal Capture Fast-Food Restaurant - (Based on Other Uses)			*(102)*	*(2)*	*(11)*	(13)	*(10)*	*(2)*	*(12)*	*(27)*	*(3)*	*(3)*	*(6)*
Subtotal - Less Mixed-Use Internal Capture Credit			**(204)**	**(13)**	**(13)**	**(26)**	**(12)**	**(12)**	**(24)**	**(54)**	**(6)**	**(6)**	**(12)**
Less Pass-By Reduction Fast-Food Restaurant - 50%			(1,927)	(85)	(78)	(163)	(66)	(65)	(131)	(2,574)	(116)	(112)	(228)
Less Pass-By Reduction Quality Restaurant - 10%			(42)	0	0	0	(3)	(1)	(4)	(45)	(3)	(2)	(5)
Subtotal - Less Pass-By Reduction Credit			**(1,969)**	**(85)**	**(78)**	**(163)**	**(69)**	**(66)**	**(135)**	**(2,619)**	**(119)**	**(114)**	**(233)**
TOTAL			**3,226**	**189**	**95**	**284**	**105**	**165**	**270**	**3,216**	**172**	**157**	**329**

Notes:
sf - square feet
[a] Unless otherwise noted, Source: *Trip Generation, 10th Edition* , Institute of Transportation Engineers, 2017.
[b] Trip generation rate based on the best-fit curve formula listed in the ITE for the identified land use.

Weekday Daily - Ln(T) = 0.97 Ln(X) + 2.50 T = Average Vehicle Trips X = Gross Leasable Area (1,000 sf)
Weekday A.M. Peak Hour - T = 0.94(X) + 26.49
Weekday P.M. Peak Hour - LN(T) = 0.95 Ln(X) + 0.36

Chapter 4
Traffic Impact Analysis

This section compares the existing Year 2018 and future Year 2025 LOS at each study intersection both with and without Project traffic to determine potential traffic impacts. For signalized intersections, the Project's incremental impacts were identified using significance criteria established by the City. Project impacts are considered significant at signalized intersections when the thresholds contained in the table below are exceeded. For unsignalized intersections that have an approach that operates at LOS E or worse, an analysis is needed to determine if the intersection meets the warrants for installation of a traffic signal.

CITY OF COMMERCE **SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA**		
Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.700 – 0.800	C	Equal to or greater than 0.04
> 0.800 – 0.900	D	Equal to or greater than 0.02
> 0.900 – 1.000	E	Equal to or greater than 0.01
> 1.000	F	Equal to or greater than 0.01

EXISTING WITH PROJECT CONDITIONS (YEAR 2018)

The Existing with Project peak hour traffic volumes illustrated in Figures 17 and 18 were analyzed to determine the Year 2018 operating conditions upon completion of the Project.

The results of the intersection analysis under the Existing with Project traffic conditions are summarized in Tables 8 and 9 for signalized and unsignalized intersections, respectively. As shown in Table 8, 15 of the 23 signalized intersections is anticipated to operate at LOS D or better during the analyzed peak hours under Existing with Project Conditions. The remaining eight signalized intersections is anticipated to operate at LOS E or F during at least one of the analyzed

peak hours. Of the 23 signalized intersections, the following 10 signalized intersections are anticipated to result in a significant impact during at least one of the analyzed peak hours:

2. Atlantic Boulevard & Olympic Boulevard
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive
11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
17. I-5 Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road
21. Eastern Avenue & Atlantic Boulevard
25. I-5 Southbound Ramps & Washington Boulevard
27. Garfield Avenue & Bandini Boulevard

As shown in Table 9, four of the six unsignalized intersections operate at LOS C or better under Existing with Project Conditions. Hoefner Avenue & Telegraph Road (Intersection #13) and I-5 Southbound Ramps & Bandini Boulevard (Intersection #28) are anticipated to operate at LOS E or F during at least one of the analyzed peak hours under Existing with Project Conditions and were, therefore, subject to a signal warrant analysis to determine whether the projected volumes at the intersection warrant the installation of a traffic signal control. The intersections were analyzed according to Warrant 3 (peak hour) and the signal warrant analysis was conducted for the highest peak hour volume respective to each intersection.

As shown in Table 9, the intersection of Hoefner Avenue & Telegraph Road (Intersection #13) meets the minimum peak hour traffic volume threshold of Warrant 3 and the intersection of I-5 Southbound Ramps & Bandini Boulevard (Intersection #28) does not satisfy the signal warrant under Existing with Project Conditions.

LOS calculation worksheets are provided in Appendix B and signal warrant analysis worksheets are provided in Appendix D.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)

The Future without Project volumes were analyzed assuming the same roadway conditions as Existing Conditions.

Future without Project Traffic Conditions

Tables 10 and 11 summarize the results of the analysis of the 29 intersections under the Future without Project traffic conditions for signalized and unsignalized intersections, respectively. Background traffic growth and traffic generated by related projects is expected to cause deterioration in operating conditions from the Existing Conditions even without consideration of potential traffic associated with the Project.

As shown in Table 10, 13 of the 23 signalized intersections is anticipated to operate at LOS D or better during the analyzed peak hours under Future without Project Conditions. The remaining 10 signalized intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours. As shown in Table 11, four unsignalized intersections are anticipated to operate at LOS C or better during the analyzed peak hours. The remaining two unsignalized intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Future with Truck Traffic without Project Conditions

Table 12 summarizes the results of the analysis of the signalized study intersections under the Future with Truck Traffic without Project conditions. Background traffic growth and traffic generated by related projects is expected to cause deterioration in operating conditions from the Existing Conditions even without consideration of potential traffic associated with the Project.

As shown in Table 12, 12 of the 23 signalized intersections are anticipated to operate at LOS D or better during the analyzed peak hours under Future with Truck Traffic without Project Conditions. The remaining 11 signalized intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

FUTURE WITH PROJECT CONDITIONS (YEAR 2025)

The Future with Project peak hour traffic volumes illustrated in Figures 19 and 20 were analyzed to determine the projected Year 2025 future operating conditions upon completion of Project.

The results of the intersection analysis under the Future with Project traffic conditions are summarized in Tables 13 and 14 for signalized and unsignalized intersections, respectively. As shown in Table 13, 10 of the 23 signalized intersections are anticipated to operate at LOS D or better during the analyzed peak hours under Future with Project Conditions. The remaining 13 signalized intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours. Of the 23 signalized intersections, the following 12 signalized intersections are anticipated to result in a significant impact during at least one of the analyzed peak hours:

2. Atlantic Boulevard & Olympic Boulevard
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive
10. Garfield Avenue & Washington Boulevard
11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
17. I-5 Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road
20. I-5 Northbound Ramps & Telegraph Road
21. Eastern Avenue & Atlantic Boulevard
25. I-5 Southbound Ramps & Washington Boulevard
27. Garfield Avenue & Bandini Boulevard

As shown in Table 14, four unsignalized intersections are anticipated to operate at LOS C or better during the analyzed peak hours. Hoefner Avenue & Telegraph Road (Intersection #13) and I-5 Southbound Ramps & Bandini Boulevard (Intersection #28) are anticipated to operate at LOS E or F during at least one of the analyzed peak hours under Future with Project Conditions and were, therefore, subject to a signal warrant analysis to determine whether the projected volumes at the intersection warrant the installation of a traffic signal control. The intersections were analyzed according to Warrant 3 (peak hour) and signal warrant analysis was conducted for the

highest peak hour volume respective to each intersection.

As shown in Table 14, the intersection of Hoefner Avenue & Telegraph Road (Intersection #13) meets the minimum peak hour traffic volume threshold of Warrant 3 and the intersection of I-5 Southbound Ramps & Bandini Boulevard (Intersection #28) does not satisfy the signal warrant under Future with Project Conditions.

LOS calculation worksheets are provided in Appendix B and signal warrant analysis worksheets are provided in Appendix D.

FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)

The Future with Truck Traffic with Project peak hour traffic volumes illustrated in Figures 21 and 22 were analyzed to determine the projected Year 2025 future operating conditions upon completion of Project.

The results of the signalized intersection analysis under the Future with Project with Truck Traffic Conditions are summarized in Table 15. As shown in Table 15, nine of the 23 signalized intersections are anticipated to operate at LOS D or better during the analyzed peak hours under Future with Truck Traffic with Project Conditions. The remaining 14 signalized intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours. Of the 23 signalized intersections, the following 13 signalized intersections are anticipated to result in a significant impact during at least one of the analyzed peak hours:

2. Atlantic Boulevard & Olympic Boulevard
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive
10. Garfield Avenue & Washington Boulevard
11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
17. I-5 Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road
20. I-5 Northbound Ramps & Telegraph Road

21. Eastern Avenue & Atlantic Boulevard
25. I-5 Southbound Ramps & Washington Boulevard
23. Atlantic Boulevard & Washington Boulevard
27. Garfield Avenue & Bandini Boulevard

LOS calculation worksheets are provided in Appendix B.

NEIGHBORHOOD IMPACTS

Traffic diversion occurs when traffic leaves the arterial and collector street system and instead uses local residential streets to complete trips. Most often, this diversion occurs because motorists believe that they can reduce their travel times by taking a “short-cut” through the neighborhood.

Neighborhood diversion is usually a result of one of two conditions. First, the access for a new or existing development may line up directly opposite a residential street, thus encouraging the use of the residential street for access to/from the development. Second, a development may add enough traffic to the arterial street system that some of the key intersections along that arterial street become congested and traffic diverts to parallel residential streets to avoid the new congestion points.

In the case of the Project, neither of these conditions is projected to occur and, therefore, diversion to residential streets is not anticipated. The Citadel does not currently cause its own traffic or through traffic to divert to residential streets and this is not expected to change despite the increase in traffic generated by the Project.

I-5 forms a barrier between the Project and residential streets, with access limited to the arterial and collector streets of Telegraph Road and Smithway Street. On the other sides of the Project, there are non-residential uses across from access points.

In terms of the potential for diversion due to increased congestion, the addition of traffic from the Project does create significant impacts on key intersections along the arterial routes serving the Project. However, these arterial streets are generally not paralleled by a residential street that

would be used as a parallel short-cut route and, therefore, the likelihood of neighborhood cut-through is reduced. Thus, no traffic increase on residential streets is expected upon completion of the Project.

TABLE 8
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.723	C	0.725	C	0.002	NO
		PM	0.897	D	0.902	E	0.005	NO
		MD	0.812	D	0.820	D	0.008	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.716	C	0.720	C	0.004	NO
		PM	0.921	E	0.933	E	0.012	YES
		MD	0.807	D	0.833	D	0.026	YES
3.	Garfield Ave & Olympic Blvd	AM	0.890	D	0.893	D	0.003	NO
		PM	0.986	E	0.991	E	0.005	NO
		MD	0.711	C	0.717	C	0.006	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.728	C	0.744	C	0.016	NO
		PM	0.891	D	0.952	E	0.061	YES
		MD	0.668	B	0.765	C	0.097	YES
5.	Garfield Ave & Flotilla St	AM	0.749	C	0.752	C	0.003	NO
		PM	0.884	D	0.888	D	0.004	NO
		MD	0.538	A	0.543	A	0.005	NO
9.	Washington Blvd & Saybrook Ave	AM	0.447	A	0.454	A	0.007	NO
		PM	0.411	A	0.424	A	0.013	NO
		MD	0.304	A	0.323	A	0.019	NO
10.	Garfield Ave & Washington Blvd	AM	0.747	C	0.755	C	0.008	NO
		PM	0.869	D	0.886	D	0.017	NO
		MD	0.680	B	0.704	C	0.024	NO
11.	Atlantic Blvd & Telegraph Rd	AM	0.697	B	0.733	C	0.036	NO
		PM	0.948	E	1.110	F	0.162	YES
		MD	0.834	D	1.207	F	0.373	YES
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.504	A	0.549	A	0.045	NO
		PM	0.711	C	0.892	D	0.181	YES
		MD	0.713	C	0.981	E	0.268	YES
14.	Citadel Dr & Telegraph Rd	AM	0.290	A	0.351	A	0.061	NO
		PM	0.368	A	0.579	A	0.211	NO
		MD	0.497	A	0.749	C	0.252	YES
15.	Gaspar Ave & Telegraph Rd	AM	0.301	A	0.359	A	0.058	NO
		PM	0.341	A	0.508	A	0.167	NO
		MD	0.409	A	0.653	B	0.244	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.377	A	0.415	A	0.038	NO
		PM	0.402	A	0.500	A	0.098	NO
		MD	0.411	A	0.548	A	0.137	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 8 (CONT'D.)
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.596	A	0.643	B	0.047	NO
		PM	0.786	C	0.911	E	0.125	YES
		MD	0.765	C	0.953	E	0.188	YES
18.	Washington Blvd & Telegraph Rd	AM	0.687	B	0.783	C	0.096	YES
		PM	0.778	C	0.871	D	0.093	YES
		MD	0.699	B	0.813	D	0.114	YES
19.	Garfield Ave & Telegraph Rd	AM	0.738	C	0.746	C	0.008	NO
		PM	0.723	C	0.736	C	0.013	NO
		MD	0.551	A	0.558	A	0.007	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	0.823	D	0.838	D	0.015	NO
		PM	0.877	D	0.896	D	0.019	NO
		MD	0.612	B	0.639	B	0.027	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.705	C	0.727	C	0.022	NO
		PM	0.954	E	1.021	F	0.067	YES
		MD	0.757	C	0.859	D	0.102	YES
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.451	A	0.462	A	0.011	NO
		PM	0.413	A	0.472	A	0.059	NO
		MD	0.402	A	0.507	A	0.105	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.469	A	0.477	A	0.008	NO
		PM	0.683	B	0.714	C	0.031	NO
		MD	0.490	A	0.531	A	0.041	NO
24.	Eastern Ave & Washington Blvd	AM	0.382	A	0.388	A	0.006	NO
		PM	0.445	A	0.466	A	0.021	NO
		MD	0.307	A	0.337	A	0.030	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.562	A	0.605	B	0.043	NO
		PM	0.678	B	0.761	C	0.083	YES
		MD	0.660	B	0.778	C	0.118	YES
26.	Atlantic Blvd & Bandini Blvd	AM	0.651	B	0.654	B	0.003	NO
		PM	0.764	C	0.771	C	0.007	NO
		MD	0.500	A	0.511	A	0.011	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.811	D	0.814	D	0.003	NO
		PM	0.857	D	0.882	D	0.025	YES
		MD	0.532	A	0.566	A	0.034	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 9
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
UNSIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Unsignalized Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			Delay[1]	LOS	Delay[1]	LOS	Change in Delay	Meets Signal Warrant?
6.	W Citadel Dwy & Smithway St	AM	10.6	B	11.0	B	0.40	-
		PM	13.1	B	17.0	C	3.90	
		MD	13.1	B	20.8	C	7.70	
7.	E Citadel Dwy & Smithway St	AM	11.5	B	11.9	B	0.40	-
		PM	13.4	B	16.7	C	3.30	
		MD	12.8	B	18.8	C	6.00	
8.	Tubeway Ave & Smithway St	AM	12.7	B	13.4	B	0.70	-
		PM	15.1	C	19.9	C	4.80	
		MD	11.4	B	14.5	B	3.10	
13.	Hoefner Ave & Telegraph Rd	AM	23.1	C	33.1	D	10.00	YES
		PM	40.3	E	Overflow	F	N/A	
		MD	60.3	F	Overflow	F	N/A	
28.	I-5 SB Ramps & Bandini Blvd	AM	Overflow	F	Overflow	F	N/A	NO
		PM	Overflow	F	Overflow	F	N/A	
		MD	45.2	E	75.3	F	30.10	
29.	Hoefner Ave & Citadel Valet Dwy	AM	9.1	A	9.2	A	0.10	-
		PM	9.6	A	10.3	B	0.70	
		MD	10.5	B	12.0	B	1.50	

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour
Overflow = represents output which exceeds delay thresholds
[1] Highest Delay of All Approaches of the intersection

TABLE 10
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions	
			V/C Ratio	LOS
1.	Atlantic Blvd & Whittier Blvd	AM	0.771	C
		PM	0.963	E
		MD	0.874	D
2.	Atlantic Blvd & Olympic Blvd	AM	0.764	C
		PM	0.994	E
		MD	0.874	D
3.	Garfield Ave & Olympic Blvd	AM	0.950	E
		PM	1.059	F
		MD	0.765	C
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.792	C
		PM	0.988	E
		MD	0.758	C
5.	Garfield Ave & Flotilla St	AM	0.801	D
		PM	0.953	E
		MD	0.578	A
9.	Washington Blvd & Saybrook Ave	AM	0.479	A
		PM	0.440	A
		MD	0.331	A
10.	Garfield Ave & Washington Blvd	AM	0.801	D
		PM	0.941	E
		MD	0.742	C
11.	Atlantic Blvd & Telegraph Rd	AM	0.760	C
		PM	1.062	F
		MD	0.910	E
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.546	A
		PM	0.774	C
		MD	0.773	C
14.	Citadel Dr & Telegraph Rd	AM	0.307	A
		PM	0.389	A
		MD	0.526	A
15.	Gaspar Ave & Telegraph Rd	AM	0.318	A
		PM	0.359	A
		MD	0.431	A
16.	Tubeway Ave & Telegraph Rd	AM	0.399	A
		PM	0.425	A
		MD	0.434	A

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 10 (CONTINUED)
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions	
			V/C Ratio	LOS
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.633	B
		PM	0.844	D
		MD	0.814	D
18.	Washington Blvd & Telegraph Rd	AM	0.743	C
		PM	0.855	D
		MD	0.744	C
19.	Garfield Ave & Telegraph Rd	AM	0.790	C
		PM	0.785	C
		MD	0.591	A
20.	I-5 NB Ramps & Telegraph Rd	AM	0.886	D
		PM	0.961	E
		MD	0.679	B
21.	Eastern Ave & Atlantic Blvd	AM	0.766	C
		PM	1.056	F
		MD	0.854	D
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.480	A
		PM	0.448	A
		MD	0.441	A
23.	Atlantic Blvd & Washington Blvd	AM	0.516	A
		PM	0.755	C
		MD	0.559	A
24.	Eastern Ave & Washington Blvd	AM	0.416	A
		PM	0.497	A
		MD	0.361	A
25.	I-5 SB Ramps & Washington Blvd	AM	0.607	B
		PM	0.739	C
		MD	0.720	C
26.	Atlantic Blvd & Bandini Blvd	AM	0.707	C
		PM	0.820	D
		MD	0.570	A
27.	Garfield Avenue & Bandini Blvd	AM	0.867	D
		PM	0.949	E
		MD	0.603	B

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 11
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
UNSIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Unsignalized Intersection	Peak Hour	Future without Project Conditions	
			Delay[1]	LOS
6.	W Citadel Dwy & Smithway St	AM	10.8	B
		PM	13.7	B
		MD	13.6	B
7.	E Citadel Dwy & Smithway St	AM	11.7	B
		PM	14.0	B
		MD	13.4	B
8.	Tubeway Ave & Smithway St	AM	13.2	B
		PM	16.2	C
		MD	11.7	B
13.	Hoefner Ave & Telegraph Rd	AM	23.1	C
		PM	40.3	E
		MD	60.3	F
28.	I-5 SB Ramps & Bandini Blvd	AM	Overflow	F
		PM	Overflow	F
		MD	Overflow	F
29.	Hoefner Ave & Citadel Valet Dwy	AM	9.1	A
		PM	9.7	A
		MD	10.6	B

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

Overflow = represents output which exceeds delay thresholds

[1] Highest Delay of All Approaches of the intersection

TABLE 12
FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future with Truck Traffic without Project Conditions	
			V/C Ratio	LOS
1.	Atlantic Blvd & Whittier Blvd	AM	0.826	D
		PM	1.038	F
		MD	0.916	E
2.	Atlantic Blvd & Olympic Blvd	AM	0.823	D
		PM	1.073	F
		MD	0.919	E
3.	Garfield Ave & Olympic Blvd	AM	1.037	F
		PM	1.153	F
		MD	0.805	D
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.891	D
		PM	1.132	F
		MD	0.813	D
5.	Garfield Ave & Flotilla St	AM	0.877	D
		PM	1.026	F
		MD	0.606	B
9.	Washington Blvd & Saybrook Ave	AM	0.526	A
		PM	0.484	A
		MD	0.348	A
10.	Garfield Ave & Washington Blvd	AM	0.885	D
		PM	1.034	F
		MD	0.790	C
11.	Atlantic Blvd & Telegraph Rd	AM	0.839	D
		PM	1.168	F
		MD	0.971	E
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.562	A
		PM	0.809	D
		MD	0.812	D
14.	Citadel Dr & Telegraph Rd	AM	0.317	A
		PM	0.397	A
		MD	0.528	A
15.	Gaspar Ave & Telegraph Rd	AM	0.329	A
		PM	0.368	A
		MD	0.435	A
16.	Tubeway Ave & Telegraph Rd	AM	0.420	A
		PM	0.445	A
		MD	0.439	A

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 12 (CONTINUED)
FUTURE WITH TRUCK TRAFFIC WITHOUT PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions	
			V/C Ratio	LOS
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.671	B
		PM	0.894	D
		MD	0.828	D
18.	Washington Blvd & Telegraph Rd	AM	0.828	D
		PM	0.931	E
		MD	0.765	C
19.	Garfield Ave & Telegraph Rd	AM	0.869	D
		PM	0.871	D
		MD	0.624	B
20.	I-5 NB Ramps & Telegraph Rd	AM	1.004	F
		PM	1.091	F
		MD	0.723	C
21.	Eastern Ave & Atlantic Blvd	AM	0.866	D
		PM	1.200	F
		MD	0.876	D
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.523	A
		PM	0.493	A
		MD	0.455	A
23.	Atlantic Blvd & Washington Blvd	AM	0.568	A
		PM	0.838	D
		MD	0.587	A
24.	Eastern Ave & Washington Blvd	AM	0.454	A
		PM	0.543	A
		MD	0.375	A
25.	I-5 SB Ramps & Washington Blvd	AM	0.678	B
		PM	0.825	D
		MD	0.760	C
26.	Atlantic Blvd & Bandini Blvd	AM	0.788	C
		PM	0.888	D
		MD	0.599	A
27.	Garfield Avenue & Bandini Blvd	AM	0.950	E
		PM	1.054	F
		MD	0.627	B

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

TABLE 13
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.771	C	0.773	C	0.002	NO
		PM	0.963	E	0.968	E	0.005	NO
		MD	0.874	D	0.882	D	0.008	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.764	C	0.769	C	0.005	NO
		PM	0.994	E	1.007	F	0.013	YES
		MD	0.874	D	0.901	E	0.027	YES
3.	Garfield Ave & Olympic Blvd	AM	0.950	E	0.953	E	0.003	NO
		PM	1.059	F	1.063	F	0.004	NO
		MD	0.765	C	0.772	C	0.007	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.792	C	0.808	D	0.016	NO
		PM	0.988	E	1.049	F	0.061	YES
		MD	0.758	C	0.855	D	0.097	YES
5.	Garfield Ave & Flotilla St	AM	0.801	D	0.804	D	0.003	NO
		PM	0.953	E	0.957	E	0.004	NO
		MD	0.578	A	0.583	A	0.005	NO
9.	Washington Blvd & Saybrook Ave	AM	0.479	A	0.486	A	0.007	NO
		PM	0.440	A	0.453	A	0.013	NO
		MD	0.331	A	0.350	A	0.019	NO
10.	Garfield Ave & Washington Blvd	AM	0.801	D	0.811	D	0.010	NO
		PM	0.941	E	0.958	E	0.017	YES
		MD	0.742	C	0.766	C	0.024	NO
11.	Atlantic Blvd & Telegraph Rd	AM	0.760	C	0.799	C	0.039	NO
		PM	1.062	F	1.231	F	0.169	YES
		MD	0.910	E	1.284	F	0.374	YES
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.546	A	0.589	A	0.043	NO
		PM	0.774	C	0.957	E	0.183	YES
		MD	0.773	C	1.041	F	0.268	YES
14.	Citadel Dr & Telegraph Rd	AM	0.307	A	0.366	A	0.059	NO
		PM	0.389	A	0.583	A	0.194	NO
		MD	0.526	A	0.777	C	0.251	YES
15.	Gaspar Ave & Telegraph Rd	AM	0.318	A	0.376	A	0.058	NO
		PM	0.359	A	0.526	A	0.167	NO
		MD	0.431	A	0.675	B	0.244	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.399	A	0.436	A	0.037	NO
		PM	0.425	A	0.523	A	0.098	NO
		MD	0.434	A	0.573	A	0.139	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 13 (CONT'D.)
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.633	B	0.679	B	0.046	NO
		PM	0.844	D	0.969	E	0.125	YES
		MD	0.814	D	1.002	F	0.188	YES
18.	Washington Blvd & Telegraph Rd	AM	0.743	C	0.839	D	0.096	YES
		PM	0.855	D	0.937	E	0.082	YES
		MD	0.744	C	0.857	D	0.113	YES
19.	Garfield Ave & Telegraph Rd	AM	0.790	C	0.798	C	0.008	NO
		PM	0.785	C	0.797	C	0.012	NO
		MD	0.591	A	0.597	A	0.006	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	0.886	D	0.900	D	0.014	NO
		PM	0.961	E	0.980	E	0.019	YES
		MD	0.679	B	0.706	C	0.027	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.766	C	0.787	C	0.021	NO
		PM	1.056	F	1.124	F	0.068	YES
		MD	0.854	D	0.956	E	0.102	YES
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.480	A	0.496	A	0.016	NO
		PM	0.448	A	0.511	A	0.063	NO
		MD	0.441	A	0.546	A	0.105	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.516	A	0.524	A	0.008	NO
		PM	0.755	C	0.786	C	0.031	NO
		MD	0.559	A	0.600	A	0.041	NO
24.	Eastern Ave & Washington Blvd	AM	0.416	A	0.423	A	0.007	NO
		PM	0.497	A	0.519	A	0.022	NO
		MD	0.361	A	0.392	A	0.031	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.607	B	0.649	B	0.042	NO
		PM	0.739	C	0.823	D	0.084	YES
		MD	0.720	C	0.837	D	0.117	YES
26.	Atlantic Blvd & Bandini Blvd	AM	0.707	C	0.710	C	0.003	NO
		PM	0.820	D	0.828	D	0.008	NO
		MD	0.570	A	0.581	A	0.011	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.867	D	0.870	D	0.003	NO
		PM	0.949	E	0.974	E	0.025	YES
		MD	0.603	B	0.637	B	0.034	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 14
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
UNSIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Unsignalized Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			Delay[1]	LOS	Delay[1]	LOS	Change in Delay	Meets Signal Warrant?
6.	W Citadel Dwy & Smithway St	AM	10.8	B	11.2	B	0.40	-
		PM	13.7	B	18.1	C	4.40	
		MD	13.6	B	22.6	C	9.00	
7.	E Citadel Dwy & Smithway St	AM	11.7	B	12.2	B	0.50	-
		PM	14.0	B	17.7	C	3.70	
		MD	13.4	B	20.4	C	7.00	
8.	Tubeway Ave & Smithway St	AM	13.2	B	14.0	B	0.80	-
		PM	16.2	C	22.3	C	6.10	
		MD	11.7	B	15.1	C	3.40	
13.	Hoefner Ave & Telegraph Rd	AM	26.0	D	37.9	E	11.90	YES
		PM	51.4	F	Overflow	F	N/A	
		MD	77.9	F	Overflow	F	N/A	
28.	I-5 SB Ramps & Bandini Blvd	AM	Overflow	F	Overflow	F	N/A	NO
		PM	Overflow	F	Overflow	F	N/A	
		MD	Overflow	F	Overflow	F	N/A	
29.	Hoefner Ave & Citadel Valet Dwy	AM	9.1	A	9.3	A	0.20	-
		PM	9.7	A	10.4	B	0.70	
		MD	10.6	B	12.3	B	1.70	

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour
Overflow = represents output which exceeds delay thresholds
[1] Highest Delay of All Approaches of the intersection

TABLE 15
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future with Truck Traffic without Project Conditions		Future with Truck Traffic with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.826	D	0.828	D	0.002	NO
		PM	1.038	F	1.043	F	0.005	NO
		MD	0.916	E	0.924	E	0.008	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.823	D	0.827	D	0.004	NO
		PM	1.073	F	1.086	F	0.013	YES
		MD	0.919	E	0.946	E	0.027	YES
3.	Garfield Ave & Olympic Blvd	AM	1.037	F	1.040	F	0.003	NO
		PM	1.153	F	1.158	F	0.005	NO
		MD	0.805	D	0.812	D	0.007	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.891	D	0.907	E	0.016	YES
		PM	1.132	F	1.192	F	0.060	YES
		MD	0.813	D	0.909	E	0.096	YES
5.	Garfield Ave & Flotilla St	AM	0.877	D	0.881	D	0.004	NO
		PM	1.026	F	1.030	F	0.004	NO
		MD	0.606	B	0.610	B	0.004	NO
9.	Washington Blvd & Saybrook Ave	AM	0.526	A	0.533	A	0.007	NO
		PM	0.484	A	0.497	A	0.013	NO
		MD	0.348	A	0.366	A	0.018	NO
10.	Garfield Ave & Washington Blvd	AM	0.885	D	0.894	D	0.009	NO
		PM	1.034	F	1.052	F	0.018	YES
		MD	0.790	C	0.813	D	0.023	YES
11.	Atlantic Blvd & Telegraph Rd	AM	0.839	D	0.878	D	0.039	YES
		PM	1.168	F	1.343	F	0.175	YES
		MD	0.971	E	1.345	F	0.374	YES
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.562	A	0.606	B	0.044	NO
		PM	0.809	D	0.991	E	0.182	YES
		MD	0.812	D	1.081	F	0.269	YES
14.	Citadel Dr & Telegraph Rd	AM	0.317	A	0.377	A	0.060	NO
		PM	0.397	A	0.592	A	0.195	NO
		MD	0.528	A	0.781	C	0.253	YES
15.	Gaspar Ave & Telegraph Rd	AM	0.329	A	0.387	A	0.058	NO
		PM	0.368	A	0.535	A	0.167	NO
		MD	0.435	A	0.680	B	0.245	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.420	A	0.458	A	0.038	NO
		PM	0.445	A	0.543	A	0.098	NO
		MD	0.439	A	0.578	A	0.139	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 15 (CONT'D.)
FUTURE WITH TRUCK TRAFFIC WITH PROJECT CONDITIONS (YEAR 2025)
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future with Truck Traffic without Project Conditions		Future with Truck Traffic with Project Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.671	B	0.717	C	0.046	YES
		PM	0.894	D	1.020	F	0.126	YES
		MD	0.828	D	1.017	F	0.189	YES
18.	Washington Blvd & Telegraph Rd	AM	0.828	D	0.923	E	0.095	YES
		PM	0.931	E	1.022	F	0.091	YES
		MD	0.765	C	0.882	D	0.117	YES
19.	Garfield Ave & Telegraph Rd	AM	0.869	D	0.877	D	0.008	NO
		PM	0.871	D	0.884	D	0.013	NO
		MD	0.624	B	0.628	B	0.004	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	1.004	F	1.018	F	0.014	YES
		PM	1.091	F	1.110	F	0.019	YES
		MD	0.723	C	0.749	C	0.026	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.866	D	0.887	D	0.021	YES
		PM	1.200	F	1.268	F	0.068	YES
		MD	0.876	D	0.979	E	0.103	YES
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.523	A	0.537	A	0.014	NO
		PM	0.493	A	0.555	A	0.062	NO
		MD	0.455	A	0.560	A	0.105	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.568	A	0.576	A	0.008	NO
		PM	0.838	D	0.869	D	0.031	YES
		MD	0.587	A	0.628	B	0.041	NO
24.	Eastern Ave & Washington Blvd	AM	0.454	A	0.460	A	0.006	NO
		PM	0.543	A	0.564	A	0.021	NO
		MD	0.375	A	0.406	A	0.031	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.678	B	0.720	C	0.042	YES
		PM	0.825	D	0.908	E	0.083	YES
		MD	0.760	C	0.877	D	0.117	YES
26.	Atlantic Blvd & Bandini Blvd	AM	0.788	C	0.792	C	0.004	NO
		PM	0.888	D	0.896	D	0.008	NO
		MD	0.599	A	0.610	B	0.011	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.950	E	0.952	E	0.002	NO
		PM	1.054	F	1.079	F	0.025	YES
		MD	0.627	B	0.661	B	0.034	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

Chapter 5
Traffic Mitigation Program

This chapter describes the traffic mitigation measures considered in order to mitigate the significant traffic impacts at study intersections associated with construction of the Project and to improve traffic operations in the Project vicinity. The various guidelines, methods, and assumptions mandated by the City, wherever applicable, were used in the preparation of this analysis.

The mitigation measures described in this chapter relate to the significant traffic impacts previously described with respect to the Existing with Project Conditions (Year 2018), Future with Project Conditions (Year 2025), and Future with Truck Traffic with Project Conditions (Year 2025) analyses.

As described, under Existing with Project Conditions, before mitigation, the Project is expected to result in significant traffic impacts at the following 10 signalized intersections:

2. Atlantic Boulevard & Olympic Boulevard
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive
11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
17. I-5 Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road
21. Eastern Avenue & Atlantic Boulevard
25. I-5 Southbound Ramps & Washington Boulevard
27. Garfield Avenue & Bandini Boulevard

The Project is expected to result in significant traffic impacts in the Future with Project Conditions, before mitigation, at the following 12 signalized intersections:

2. Atlantic Boulevard & Olympic Boulevard
4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive
10. Garfield Avenue & Washington Boulevard
11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
14. Citadel Drive & Telegraph Road
17. I-5 Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road
20. I-5 Northbound Ramps & Telegraph Road
21. Eastern Avenue & Atlantic Boulevard
25. I-5 Southbound Ramps & Washington Boulevard
27. Garfield Avenue & Bandini Boulevard

With the addition of truck traffic volumes, the Project is expected to result in significant traffic impacts at one additional intersection at Atlantic Boulevard & Washington Boulevard (Intersection #23) under Future with Truck Traffic with Project Conditions.

MITIGATION MEASURES

The mitigation program for the Project includes the following major components:

1. Implementation of a Transportation Demand Management (TDM) program for the Project site to promote peak period trip reduction
2. Transportation Systems Management (TSM) improvements, including signal system coordination, signal controller updates and installation of closed circuit television (CCTV) at key intersections within the study area
3. Specific intersection improvements, including physical mitigations and signal phasing enhancements

These mitigation measures are consistent with the City's policies and procedures that support improvements that reduce greenhouse gas emissions by reducing the use of single-occupant vehicle trips, encourage developers to construct transit and pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel.

TDM Program

The TDM program outlined below details a set of strategies proposed for the Project designed to reduce peak hour vehicular traffic to and from the Project site. It is a comprehensive program of design features, transportation services, education programs, and incentive programs intended to reduce the impact of traffic from employees and visitors to the Project site during the most congested time periods of the day. The Citadel already manages a TDM program that is aimed at bringing customers to the site via buses that serve downtown Los Angeles and area hotels to carry customers to shopping and meals on the site. The Project should expand this TDM program to further promote non-automobile travel and reduce the use of single-occupant vehicle trips.

TDM Program Strategies. The strategies in the TDM program, subject to review and approval by the City, could include, but are not necessarily limited to, the following:

- Transportation Information Center: A Transportation Information Center is a centrally-located commuter information center where project employees, tenants, and patrons can obtain information regarding commute programs and individuals can obtain real-time information for planning travel without using an automobile. A Transportation Information Center would support orientation for new employees and provide information about transit schedules, commute planning, rideshare, telecommuting, and bicycle and pedestrian plans.

- Educational Programs: A key component of a successful TDM program is to make employers and employees at the Project site aware of the various programs offered. To this end, a transportation management coordinator (TMC) on the building management staff could reach out both to employers and employees directly to promote the benefits of TDM. In addition to the various TDM programs described below, the TMC could reach out to employers to promote flexible or alternative work schedules and telecommuting options with statistics and examples of businesses that have successfully implemented such programs. These programs have the ability to reduce peak hour trip generation by allowing employees to arrive for and leave from work outside of the typical morning and afternoon peak commuting hours.

- Project Design Features to Promote Bicycling and Walking: A significant and growing number of people in the City prefer to ride bicycles or walk to their employment given sufficient facilities to make the commute feel safe and convenient. The Project could incorporate features for bicyclists and pedestrians, such as exclusive access points, secured bicycle parking facilities or a bicycle valet system, or a bicycle sharing or rental program. Additionally, the Project site could be designed to be a friendly and convenient environment for pedestrians. As part of an overall Public Benefits Program, the Project could contribute a one-time fixed fee to be deposited into the City's Bicycle Plan Trust Fund to implement bicycle improvements in the area.

- Online Ridematching and Carpool/Vanpool Program: The TMC could provide a ride-matching service to match interested employees with carpools and vanpools. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of vehicle trips to and from the Project site.

- Guaranteed Ride Home (GRH): A GRH program assures transportation service to individuals who commute without their personal automobiles. This program overcomes one of the primary concerns regarding alternative modes of transportation, which is how to get home or to a child's school in the case of an emergency. A GRH program would cover all employees participating in the carpool/vanpool program or using transit to and from the Project site in the event of personal or family emergencies. The individual would be reimbursed for a taxi ride, shared car service, or short-term car rental. Typically, this GRH benefit is limited to two-three times per year per employee to avoid abuses of the benefit. A support service such as GRH is an important part of TDM implementation that assures an individual he or she will not be dependent on a ridesharing or transit schedule in the event of an emergency.

- Short-Term Car Rentals: The Project could partner with short-term car rental services such as Zip-Car or Car-to-Go, which would provide vehicles available to users for hourly rentals at strategic locations within the City area. Similar to the GRH program, this service offers assurance to users of alternative modes of transit that they have options should the need arise to leave at an unscheduled time. Short-term car rentals could be

used to travel to business meetings, lunch, or in emergencies, and could provide the source of emergency transportation for those using the GRH program.

- Incentives for Using Alternative Travel Modes: The Project TMC could incorporate various incentives for use of its programs. For example, eligible employees could be provided with discounted monthly transit passes for Metro rail and bus service. Carpool and vanpool users could be offered preferential load/unload areas or convenient designated parking spaces. Those who choose not to drive their own cars and park them at the Project site could receive a "parking cash-out" subsidy.

  Should any elements of the Project decide to charge for parking in the future, unbundled parking could be considered. Unbundled parking is a program wherein parking spaces are rented or sold separately from the building space, which allows for a separate charge for parking and the flexibility to vary the number of spaces rented. Unbundling parking is an essential first step toward getting people to understand the economic cost of parking. Without unbundled parking, people do not think about the development and operational costs of providing parking.

- Mobility Hub Support: The Project could support efforts to provide first-mile and last-mile service for transit users through the mobility hub program. Mobility hubs, typically located at or near public transit centers, provide amenities such as bicycle parking and rentals, shared vehicle rentals (e.g., Zip-Car), and transit information. The Project could provide space for similar amenities at the Project site to complement future mobility hubs in the Study Area.

Project Trip Reduction from the TDM Program. The combined effect of the various strategies implemented as part of the TDM program would result in a reduction in peak hour trip generation by offering services, actions, specific facilities, etc., aimed at encouraging use of alternative transportation modes (e.g., transit, bus, walking, bicycling, carpool, etc.) *Trip Generation Handbook, 3rd Edition* (ITE, 2017) provides a summary of research of TDM programs at different employers. At places that had the most comprehensive programs, including both economic incentives (e.g., transit passes) and support services, the programs resulted in an average 24% reduction in commuter vehicles. Thus, as an achievable but

conservative estimate, an overall TDM trip reduction credit of 10% was assumed on the retail portion of the Project.

Table 16 summarizes the estimated trip reduction during the peak hours in the portion of the Project on The Citadel site. As shown, the TDM program is expected to result in a reduction of 2,395 weekday daily trips, including 46 trips during the morning peak hour and 253 trips during the afternoon peak hour, and 3,442 Saturday daily trips, including 358 trips during the midday peak hour.

The portion of the Project on The Citadel site, when fully built and occupied and with implementation of the TDM program, would generate a total of 9,675 weekday daily trips, including 296 trips during the morning peak hour (189 inbound, 107 outbound) and 1,041 trips during the afternoon peak hour (511 inbound, 530 outbound) and 12,961 Saturday daily trips, including 1,574 trips during the midday peak hour (825 inbound, 749 outbound).

The trip generation estimates for the portion of the Project on the 10-acre parcel would remain the same.

The total trip generation estimates with peak hour trip reductions from the TDM program on The Citadel site and the trip generation estimates on the 10-acre parcel were assigned through the study intersections using the trip distribution patterns illustrated in Figures 14A and 14B. The Project-only morning and afternoon peak hours and Saturday midday peak hour traffic volumes, after implementation of the TDM program as part of the Project's mitigation, are shown in Figures 23 and 24, respectively.

TSM Improvements

Modern, coordinated, and integrated traffic signal systems in other Southern California cities have been shown to increase the efficiency of traffic signals and result in capacity increases of 7-20% along coordinated corridors. To be conservative, the City has determined that TSM improvements could improve traffic operations and increase intersection capacity by approximately 7% along a corridor. While the ultimate goal of an integrated traffic signal system would be a citywide signal synchronization system, this set of recommendations focuses on the traffic signals in the study

area boundaries and along the key corridors serving the study area. Potential TSM improvements include the following:

- Signal Controller Upgrades: Many study intersections within the City currently operate with the Type 170 signal controller while newer controllers (Type 2070) provide for enhanced and real-time operation of traffic signal timing. The City recommends traffic signal controller upgrades to a Type 2070 Controller, as well as 322 cabinets to replace the existing aging cabinets. These improvements would provide system-wide benefits.

- CCTV Cameras: The potential TSM improvements include funding for the installation of CCTV cameras and the necessary infrastructure (including fiber optic and interconnect tubes). An integral part of the real-time operation of the traffic signal timings, the strategic placement of CCTV cameras at key intersections provides the City with the ability to monitor traffic operations and respond instantly to incidents that delay vehicles and transit service.

- System Loops: The potential TSM improvements include funding the installation of system loops at signalized intersections within the identified corridors. A system loop is an advance detector loop that is embedded in the street pavement. These loops identify traffic volume and lane occupancy and are used to determine the appropriate signal timing parameters. These loops give the City the ability to extend the green time for an approach so that groups of vehicles generally do not have to stop when travelling along synchronized-signal corridors. They are located at an appropriate distance from the intersection so that a vehicle just upstream of the loop can comfortably decelerate to a stop when the yellow signal is displayed.

TSM Costs. The cost of implementing a new traffic signal system varies with the amount and type of equipment and software used. A rough order of magnitude estimate would be $75,000 per intersection to implement the type of system described above. There are approximately 70 traffic signals in the study area and along the major corridors impacted by the Project. This would result in a cost estimate of $5.25 million to integrate all these traffic signals into a coordinated signal system.

Specific Intersection Improvement Measures

Intersection improvements designed to alleviate the significant impacts of the Project consist of physical improvements (such as minor widening) and signal phasing enhancements. Widening and/or other improvements to the intersections would be designed to meet the requirements of the City and/or Caltrans, based on the jurisdiction responsible for the intersection.

The intersection improvements discussed below were considered at study intersections where the Project would result in a significant traffic impact that would not be mitigated to a level of insignificance with the implementation of the TDM and TSM improvements.

Potential Physical Improvement Measures. The following is a description of the feasible proposed intersection mitigation measures:

- Intersection 11. Atlantic Boulevard & Telegraph Road: Although implementation of the TDM program and TSM improvements would reduce the traffic impact identified at this intersection, the impact would remain significant without additional physical improvement measures. The significant traffic impact at this intersection could be mitigated and reduced to less than significant levels by widening and restriping Atlantic Boulevard to provide an exclusive northbound right-turn lane. The resulting northbound approach would consist of two left-turn lanes, one shared left/right-turn lane and one right-turn lane. This improvement could be accommodated within the existing right-of-way since the City owns the land on the east side of Atlantic Boulevard north of the freeway overpass. The improvement would require widening and reconstruction along the east side of the northbound leg from the north end of the bridge over I-5 to Telegraph Road. Due to the geometric limitations and the financial infeasibility of widening the bridge over I-5, the resulting northbound right-turn lane would be approximately 100 feet long, but it would provide some relief to intersection operations. Should this improvement be determined infeasible during the design process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix E.

- Intersection 12. I-5 Northbound Ramps / Camfield Avenue & Telegraph Road: Although implementation of the TDM program and TSM improvements would reduce the traffic

impact identified at this intersection, the impact would remain significant without additional physical improvement measures. The significant traffic impact at this intersection could be mitigated and reduced to less than significant levels by widening and restriping Telegraph Road to provide an additional eastbound through lane. This improvement cannot be completed under the existing right-of-way and would require additional widening. The resulting eastbound approach would consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. Should this improvement be determined infeasible during the review process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix E.

- Intersection 17. I-5 Ramps / Commerce Casino & Telegraph Road: Although implementation of the TDM program and TSM improvements would reduce the traffic impact identified at this intersection, the impact would remain significant without additional physical improvement measures. The significant traffic impact at this intersection could be mitigated and reduced to less than significant levels by widening and restriping Telegraph Road to provide an additional westbound left-turn lane to the I-5 Northbound On-Ramp. This improvement cannot be completed under the existing right-of-way and would require additional widening along the north side of Telegraph Road. The resulting westbound approach would consist of two left-turn lanes, two through lanes and one through/right-turn lane. In order to accept the dual left-turn lanes, the freeway on-ramp would also have to be widened and ramp meters would have to be installed to meter the traffic onto the freeway. This intersection improvement would have to be approved by both the City and by Caltrans. Should this improvement be determined infeasible during the review process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix E.

Under Future with Truck Traffic with Project Conditions (Year 2025), additional physical improvement measures are required at the following intersection:

- Intersection 18. Washington Boulevard & Telegraph Road: Although implementation of the TDM program and TSM improvements would reduce the traffic impact identified at this intersection, the impact would remain significant without additional physical

improvement measures. The significant traffic impact at this intersection could be mitigated and reduced to less than significant levels by widening and restriping Washington Boulevard to provide an exclusive northbound right-turn lane onto Telegraph Road. This improvement cannot be completed under the existing right-of-way and would require additional widening along the east side of Washington Boulevard, south of Telegraph Road. The resulting northbound approach would consist of two left-turn lanes, two through lanes and one right-turn lane. Should this improvement be determined to be infeasible during the design process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix E.

MITIGATION EFFECTIVENESS

The components of the Project's mitigation program described above would result in peak hour trip reductions from the implementation of the TDM program, as well as operational improvements as a result of the TSM improvements and specific intersection improvements. The effectiveness of the proposed traffic mitigation program was analyzed by applying the appropriate trip generation reductions and capacity enhancements from the implementation of the mitigation measures, resulting in the Existing with Project with Mitigation Conditions and Future with Project with Mitigation Conditions. The intersections were analyzed using the methodology described in Chapter 1.

The Project-only with Mitigation traffic volumes illustrated in Figures 23 and 24 were added to the Existing morning and afternoon and Saturday midday peak hour traffic volumes shown in Figures 5 and 6, resulting in the Existing with Project with Mitigation (Year 2018) traffic volumes, illustrated in Figures 25 and 26. The Project-only with Mitigation traffic volumes illustrated in Figures 23 and 24 were added to the Future without Project weekday morning and afternoon and Saturday midday peak hour traffic volumes shown in Figures 10 and 11, resulting in the Future with Project with Mitigation (Year 2025) traffic volumes, illustrated in Figures 27 and 28. The Project-only with Mitigation traffic volumes illustrated in Figures 23 and 24 were added to the Future with Truck Traffic without Project weekday morning and afternoon and Saturday midday peak hour traffic volumes shown in Figures 12 and 13, resulting in the Future with Truck Traffic with Project with Mitigation (Year 2025) traffic volumes, illustrated in Figures 29 and 30.

Existing with Project with Mitigation Conditions (Year 2018)

Table 17 summarizes the results of the Existing with Project with Mitigation Conditions during the weekday morning and afternoon peak hours and Saturday midday peak hours for the study intersections. As shown in Table 17, all study intersections would operate at less than significant Project traffic impact levels. As discussed previously, if the specific physical intersection improvements are determined to be infeasible during the design process, the following three study intersections would remain significantly impacted after mitigation:

11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
17. I-5 Northbound Ramps/Commerce Casino & Telegraph Road

Future with Project with Mitigation Conditions (Year 2025)

Table 18 summarizes the results of the Future with Project with Mitigation Conditions during the weekday morning and afternoon and Saturday midday peak hours for the study intersections. As shown in Table 18, all study intersections would operate at less than significant Project traffic impact levels.

As discussed previously, if the specific intersection improvements are determined to be infeasible during the design process, the following three study intersections would remain significantly impacted after mitigation:

11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
17. I-5 Northbound Ramps/Commerce Casino & Telegraph Road

Future with Truck Traffic with Project with Mitigation Conditions (Year 2025)

Table 19 summarizes the results of the Future with Truck Traffic with Project with Mitigation Conditions during the weekday morning and afternoon and Saturday midday peak hours for the

study intersections. As shown in Table 19, all study intersections would operate at less than significant Project traffic impact levels.

As discussed previously, if the specific intersection improvements are determined to be infeasible during the design process, the following four study intersections would remain significantly impacted after mitigation:

11. Atlantic Boulevard & Telegraph Road
12. I-5 Northbound Ramps/Camfield Avenue & Telegraph Road
17. I-5 Northbound Ramps/Commerce Casino & Telegraph Road
18. Washington Boulevard & Telegraph Road

MITIGATION COST SHARING

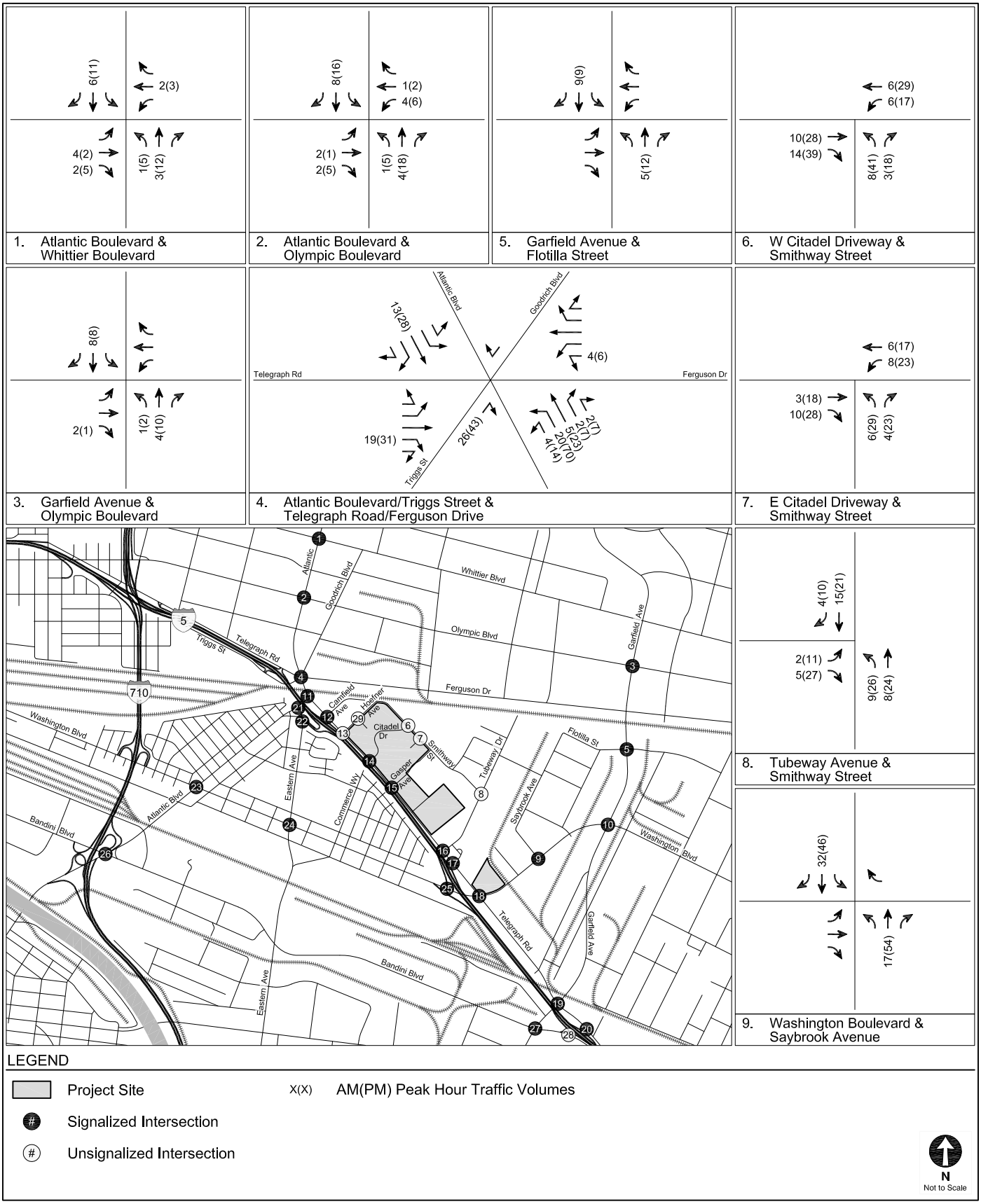
The mitigation costs of a direct impact caused by a specific project should be borne by that project. However, in this case, there are three sets of projects that would contribute trips to the intersections in question and, therefore, all three projects should share in the cost of implementing operational and physical mitigation measures. The three developments are:

Development	Afternoon Peak Hour Trips
Citadel Phases V and VI	1,041
10-Acre Parcel	270
Citywide Related Projects	1,341
TOTAL	2,652

A common way to allocate improvement costs is to proportion the costs based on the number of afternoon peak hour trips generated by a project. For example, all three developments would benefit from the development of the traffic signal system improvements. At a total cost of $5.25 million, each new development would contribute $1,980 per afternoon peak hour trip toward the implementation of the traffic signal system.

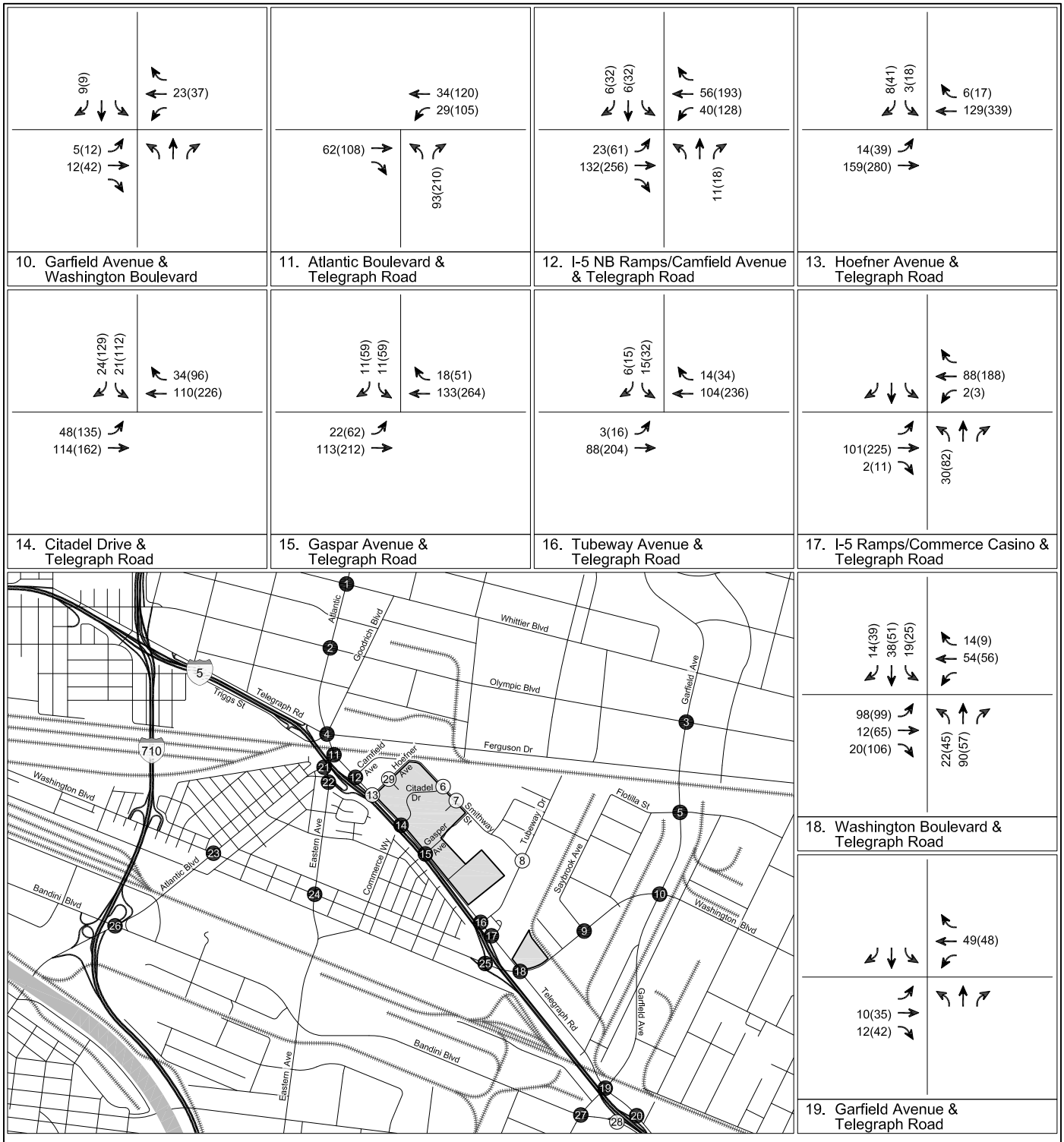
The three physical improvements described above would benefit all three developments above, so the cost of those improvements should be divided based on each development's number of afternoon peak hour trips.

The City should consider adopting a Traffic Impact Fee based on the above parameters in order to finance the needed study area improvements.



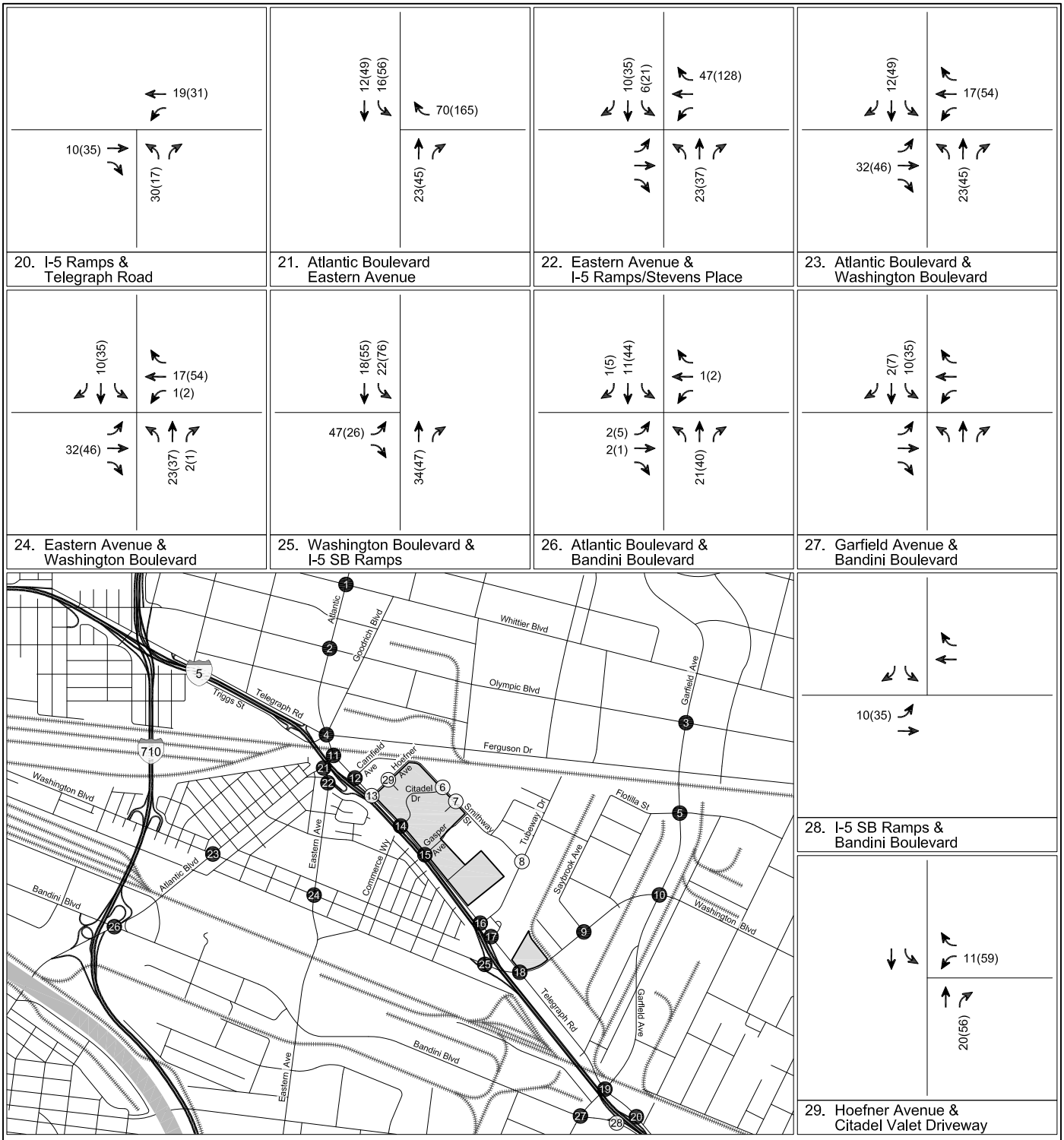
PROJECT-ONLY WITH MITIGATION
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 23



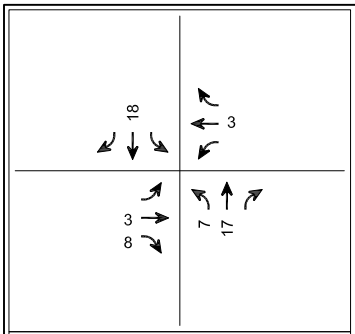
PROJECT-ONLY WITH MITIGATION
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
23 (CONT.)

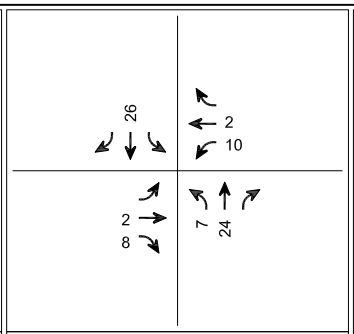


PROJECT-ONLY WITH MITIGATION
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

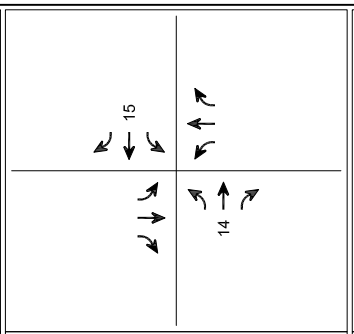
FIGURE
23 (CONT.)



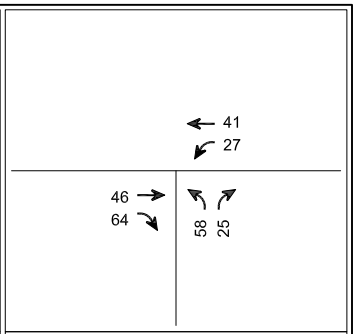
1. Atlantic Boulevard & Whittier Boulevard



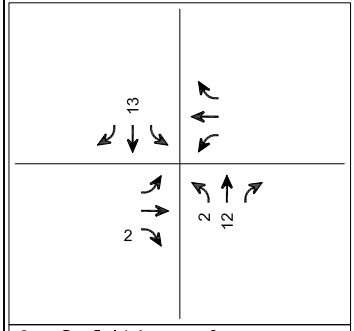
2. Atlantic Boulevard & Olympic Boulevard



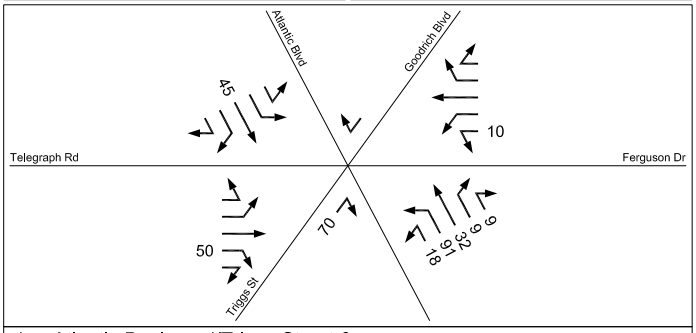
5. Garfield Avenue & Flotilla Street



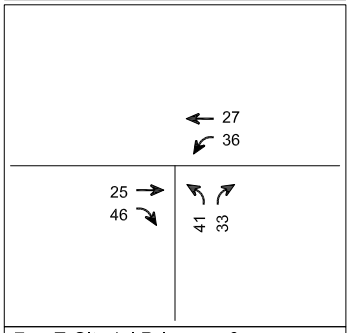
6. W Citadel Driveway & Smithway Street



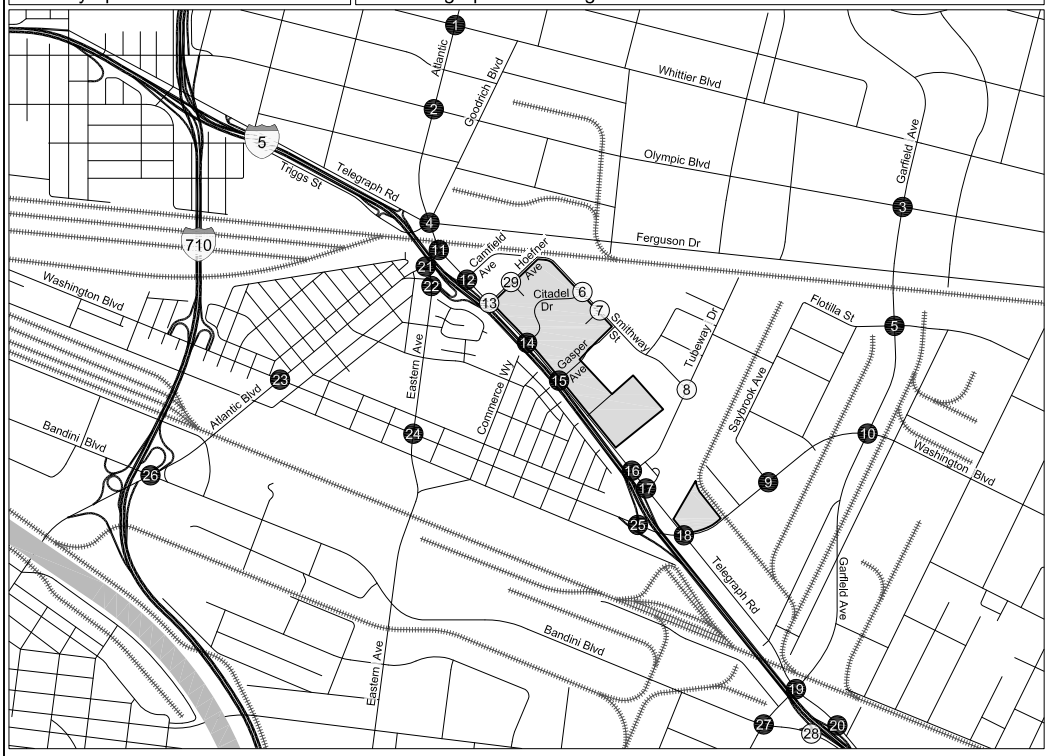
3. Garfield Avenue & Olympic Boulevard

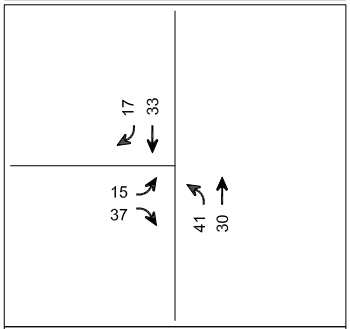


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

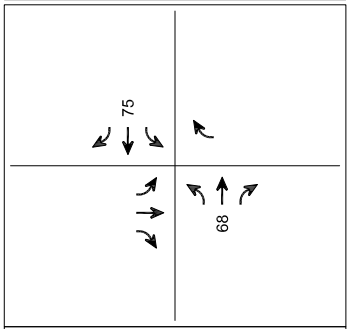


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

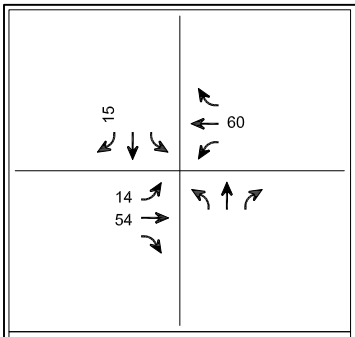
LEGEND

- Project Site
- X(X) Midday Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

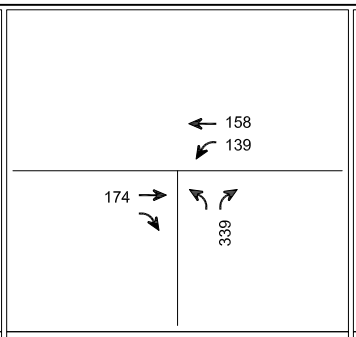
N
Not to Scale

PROJECT-ONLY WITH MITIGATION
SATURDAY PEAK HOUR TRAFFIC VOLUMES

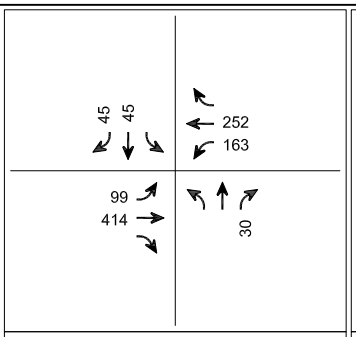
FIGURE 24



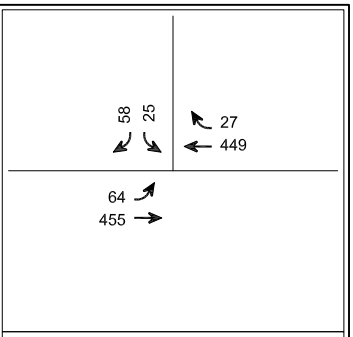
10. Garfield Avenue & Washington Boulevard



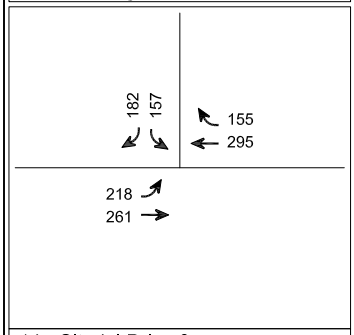
11. Atlantic Boulevard & Telegraph Road



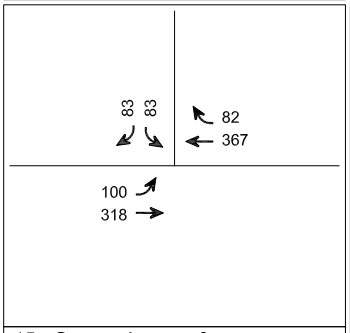
12. I-5 NB Ramps/Camfield Avenue & Telegraph Road



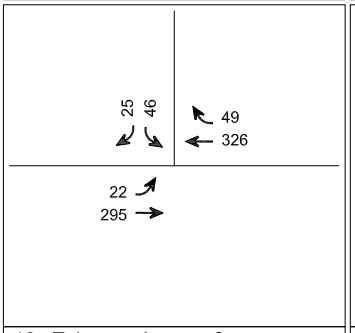
13. Hoefner Avenue & Telegraph Road



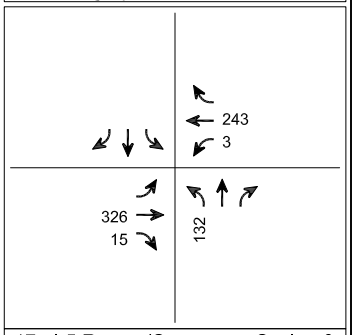
14. Citadel Drive & Telegraph Road



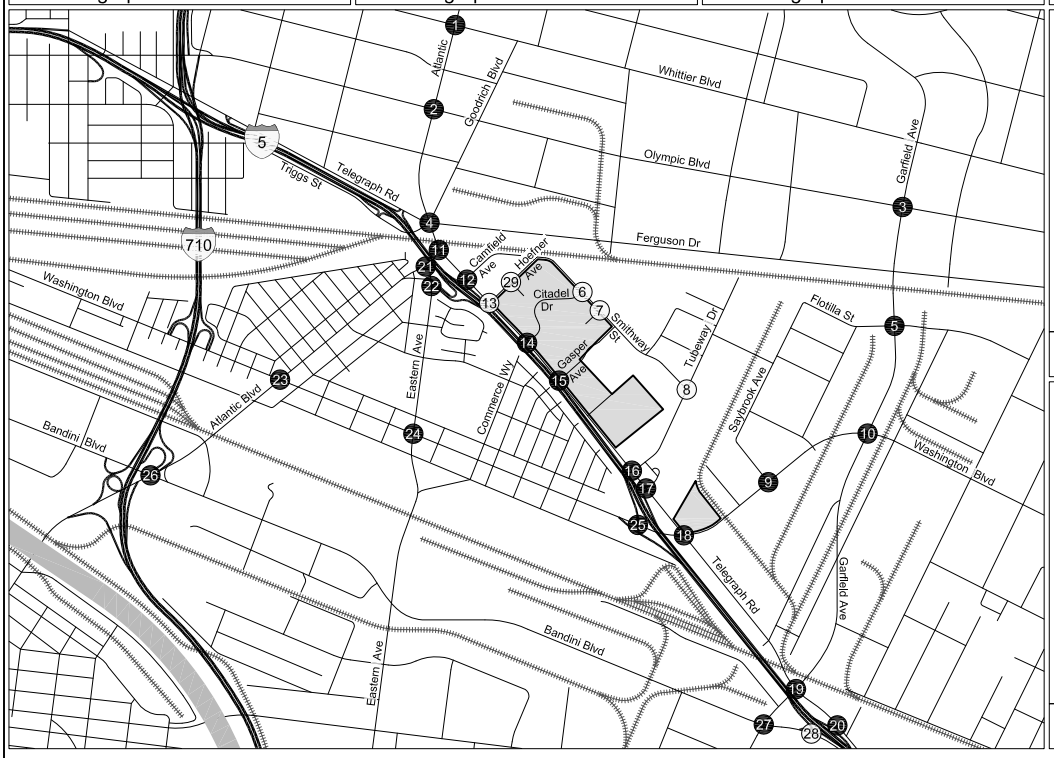
15. Gaspar Avenue & Telegraph Road

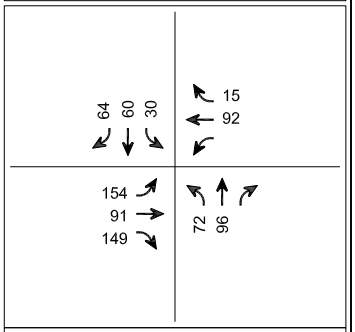


16. Tubeway Avenue & Telegraph Road

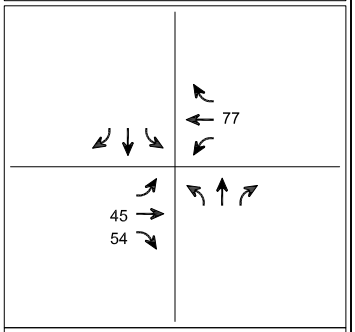


17. I-5 Ramps/Commerce Casino & Telegraph Road





18. Washington Boulevard & Telegraph Road



19. Garfield Avenue & Telegraph Road

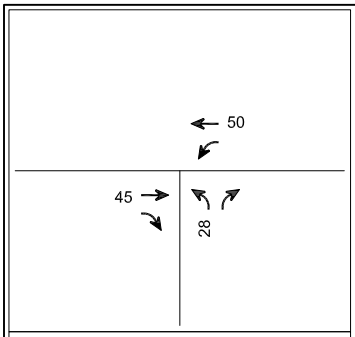
LEGEND

- Project Site
- X(X) Midday Peak Hour Traffic Volumes
- (#) Signalized Intersection
- (#) Unsignalized Intersection

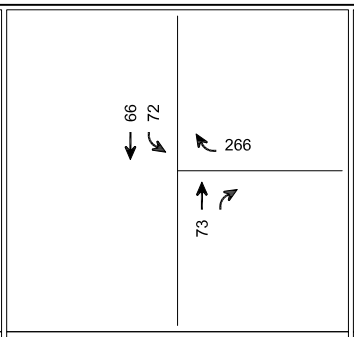
N
Not to Scale

PROJECT-ONLY WITH MITIGATION
SATURDAY PEAK HOUR TRAFFIC VOLUMES

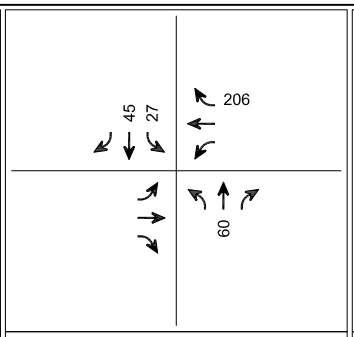
FIGURE
24 (CONT.)



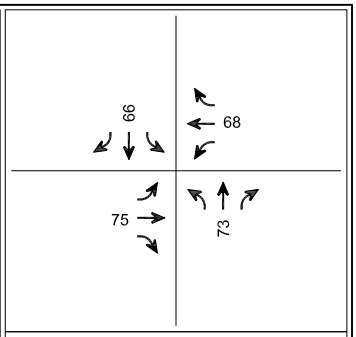
20. I-5 Ramps & Telegraph Road



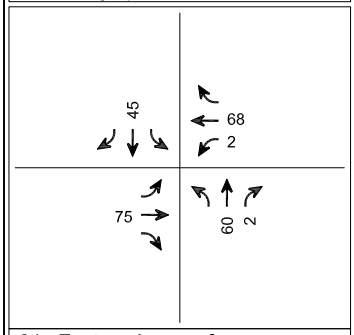
21. Atlantic Boulevard Eastern Avenue



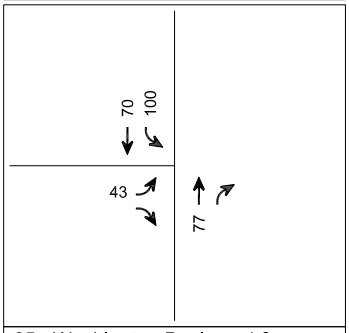
22. Eastern Avenue & I-5 Ramps/Stevens Place



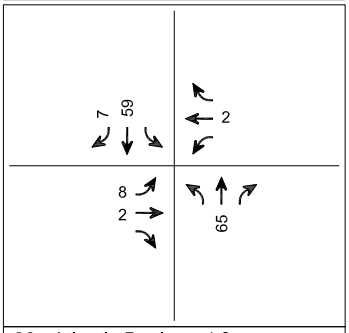
23. Atlantic Boulevard & Washington Boulevard



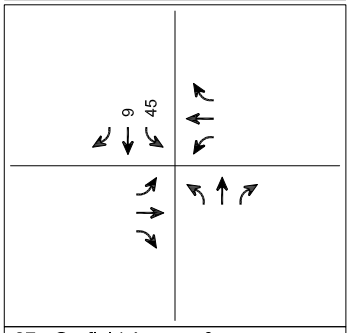
24. Eastern Avenue & Washington Boulevard



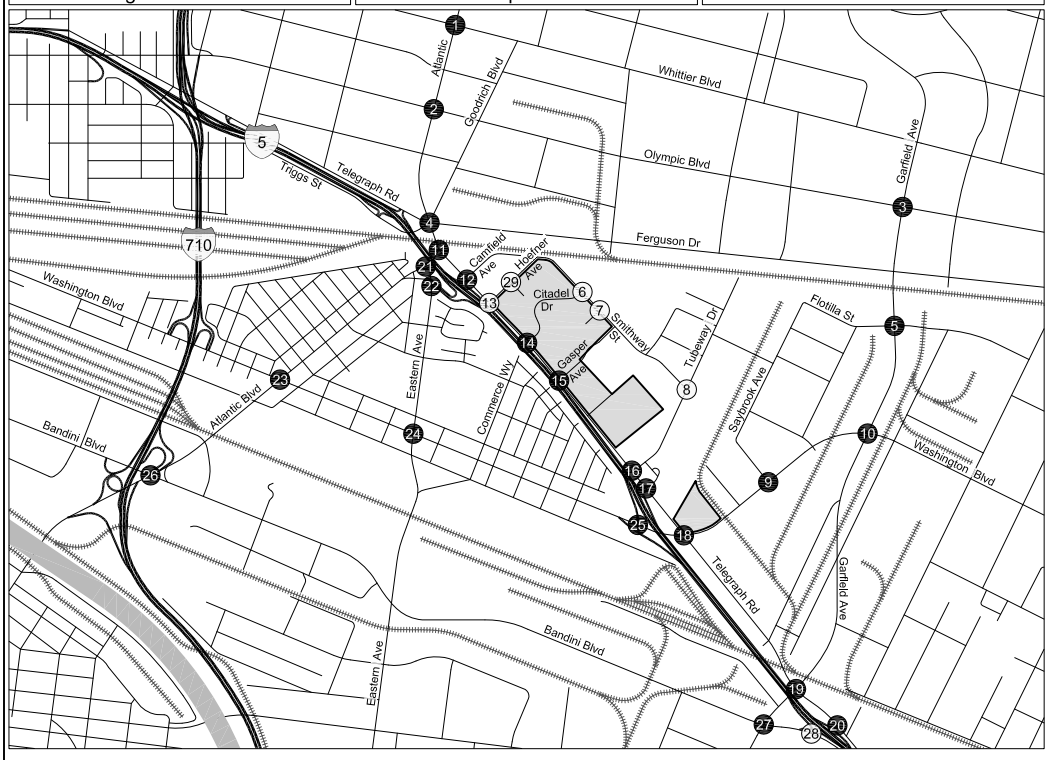
25. Washington Boulevard & I-5 SB Ramps

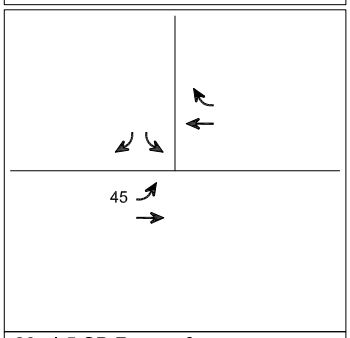


26. Atlantic Boulevard & Bandini Boulevard

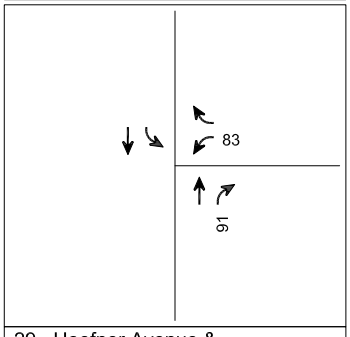


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

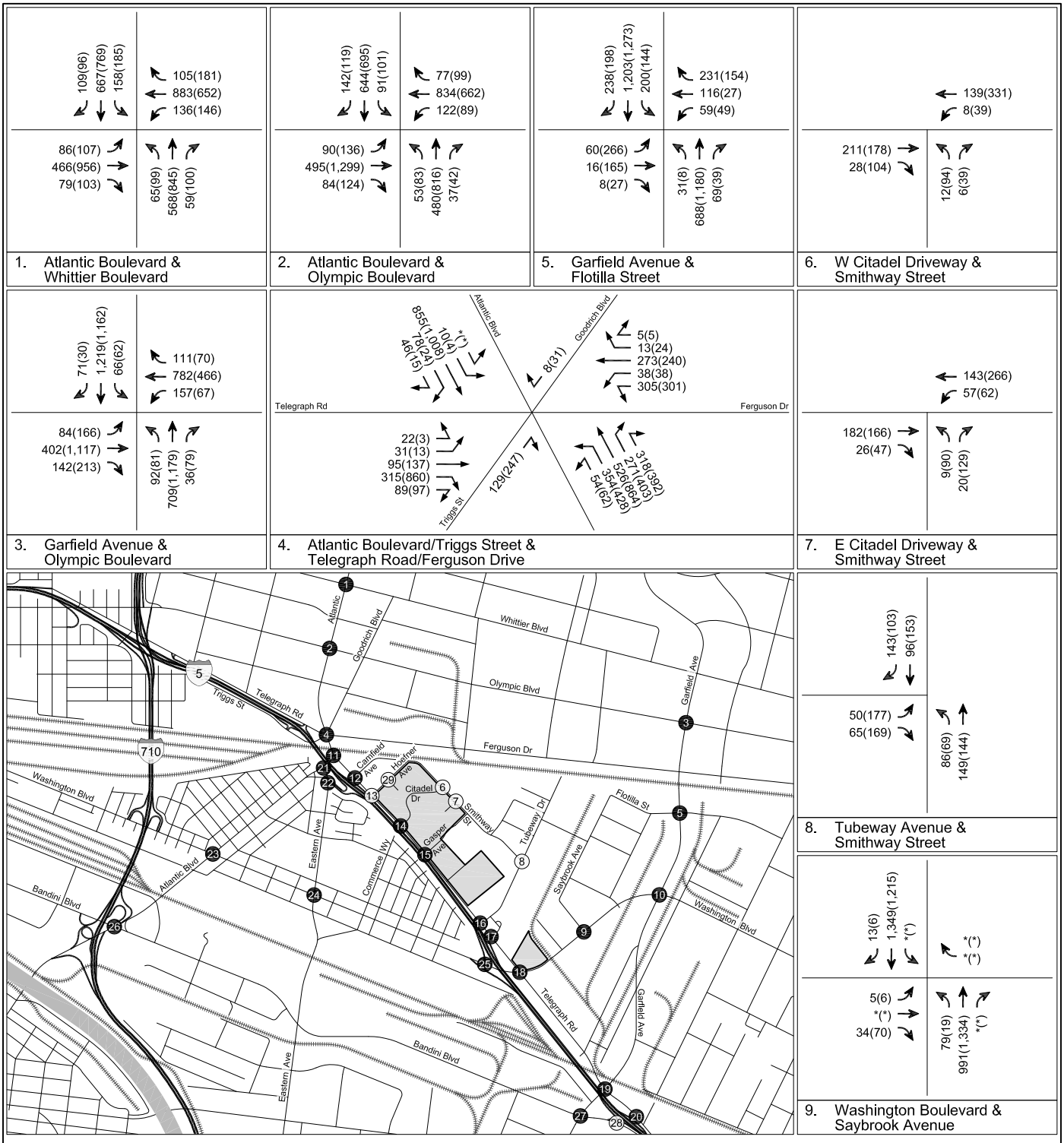
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) Midday Peak Hour Traffic Volumes

N
Not to Scale

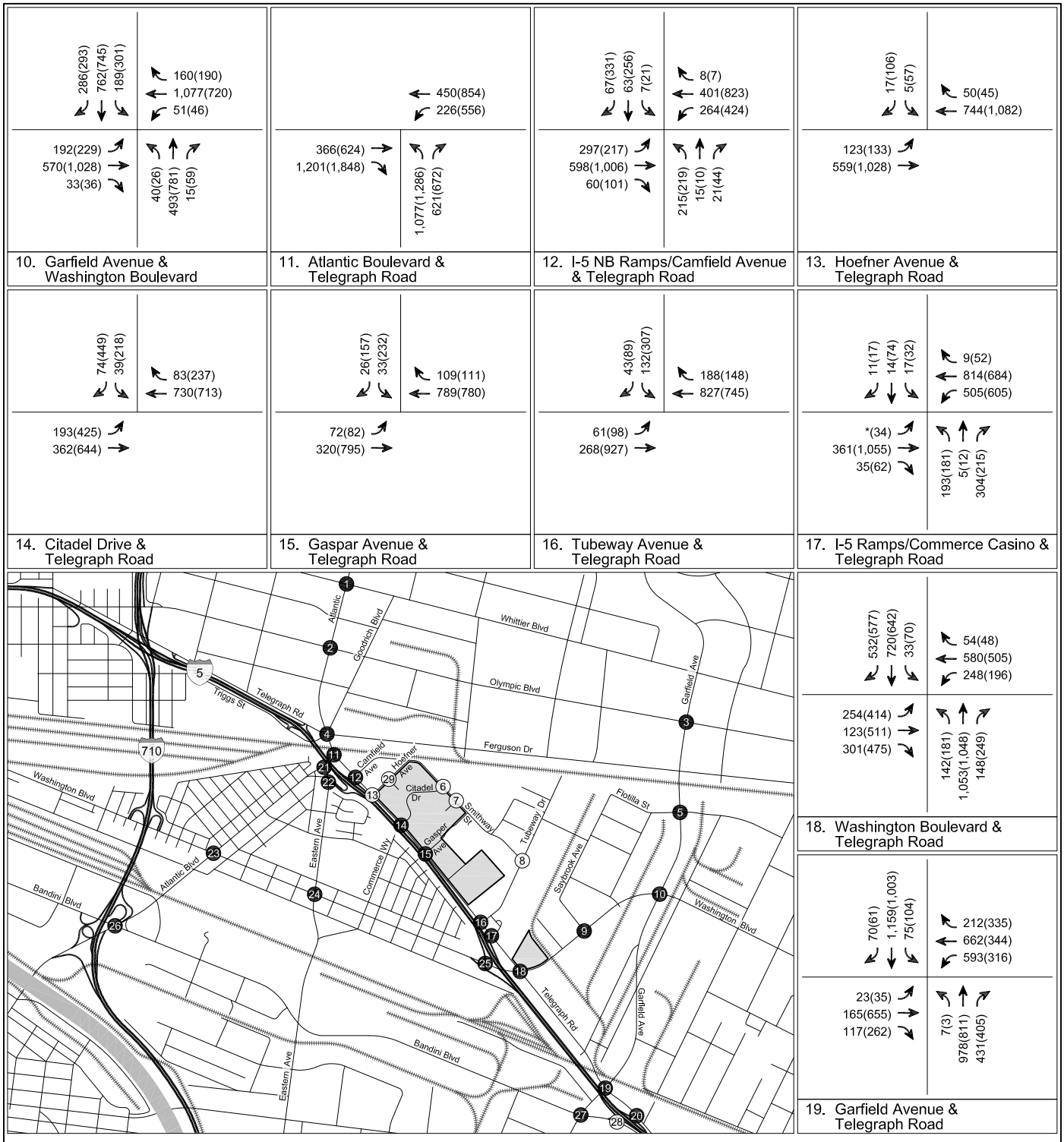
PROJECT-ONLY WITH MITIGATION
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
24 (CONT.)



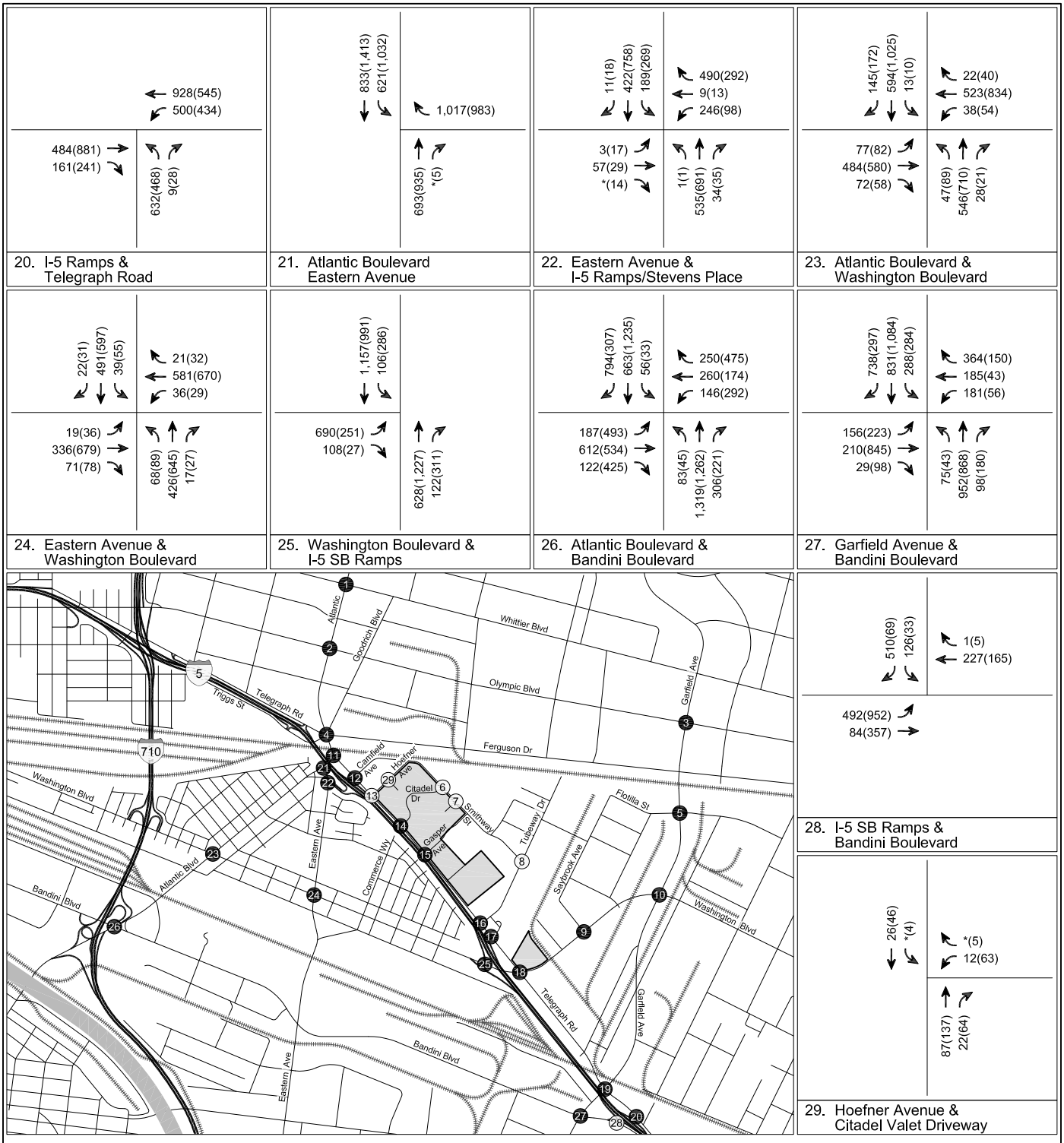
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 25



EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 25 (CONT.)



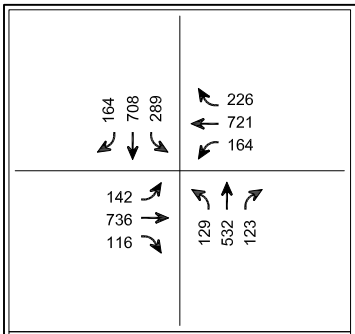
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

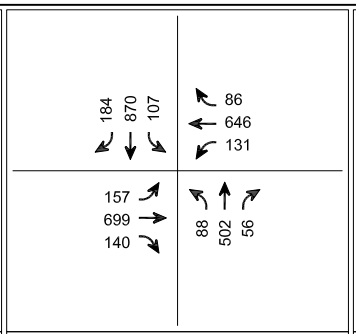
N
Not to Scale

EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

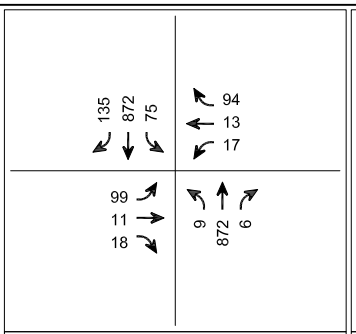
FIGURE 25 (CONT.)



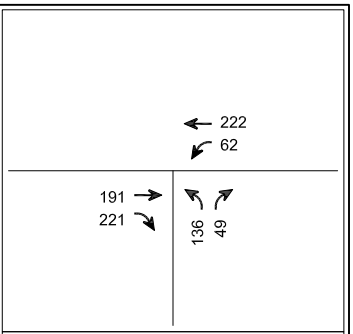
1. Atlantic Boulevard & Whittier Boulevard



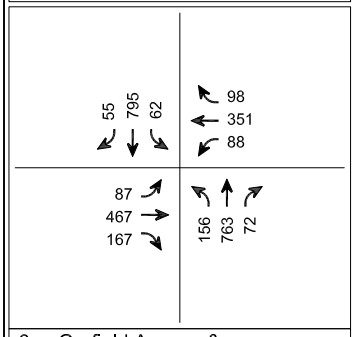
2. Atlantic Boulevard & Olympic Boulevard



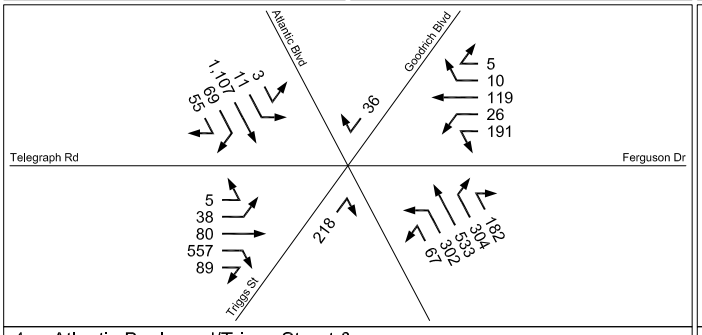
5. Garfield Avenue & Flotilla Street



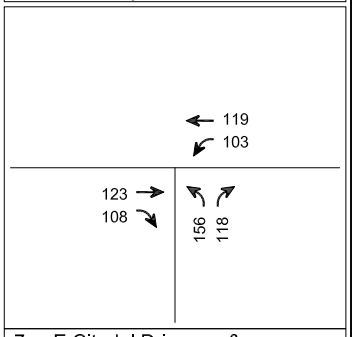
6. W Citadel Driveway & Smithway Street



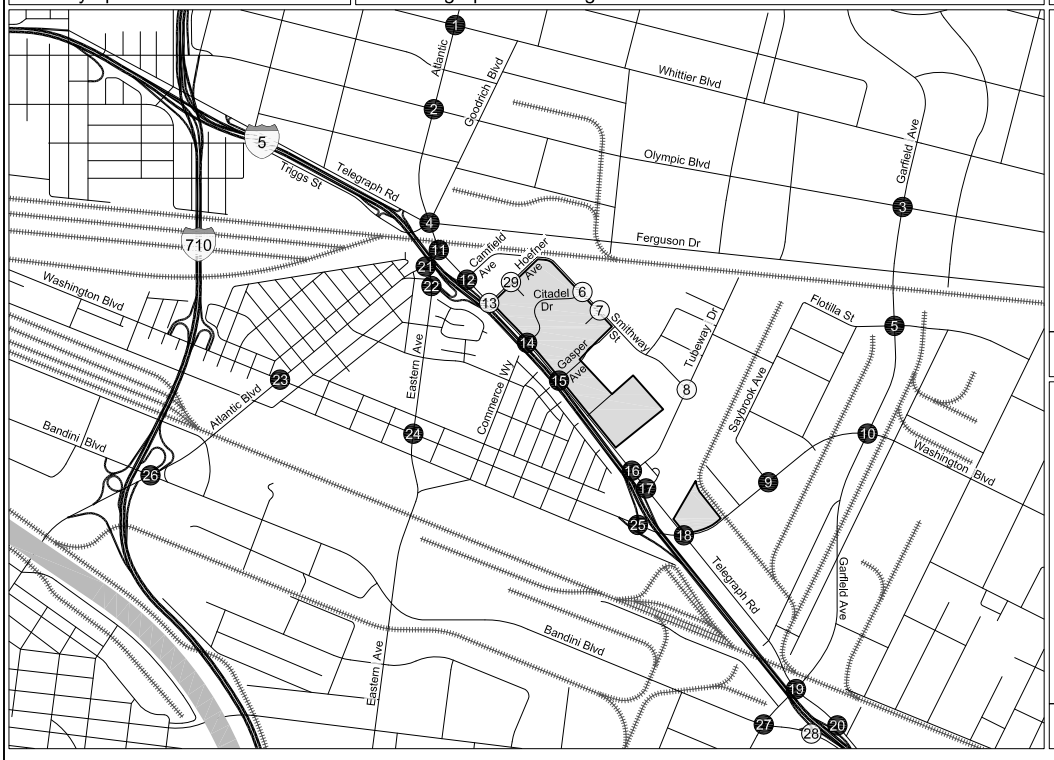
3. Garfield Avenue & Olympic Boulevard

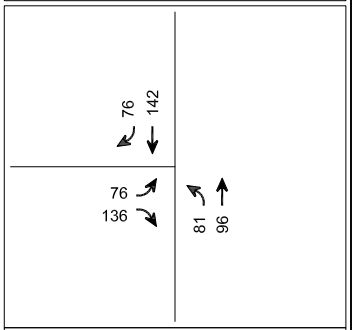


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

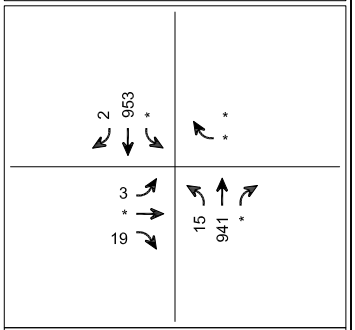


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

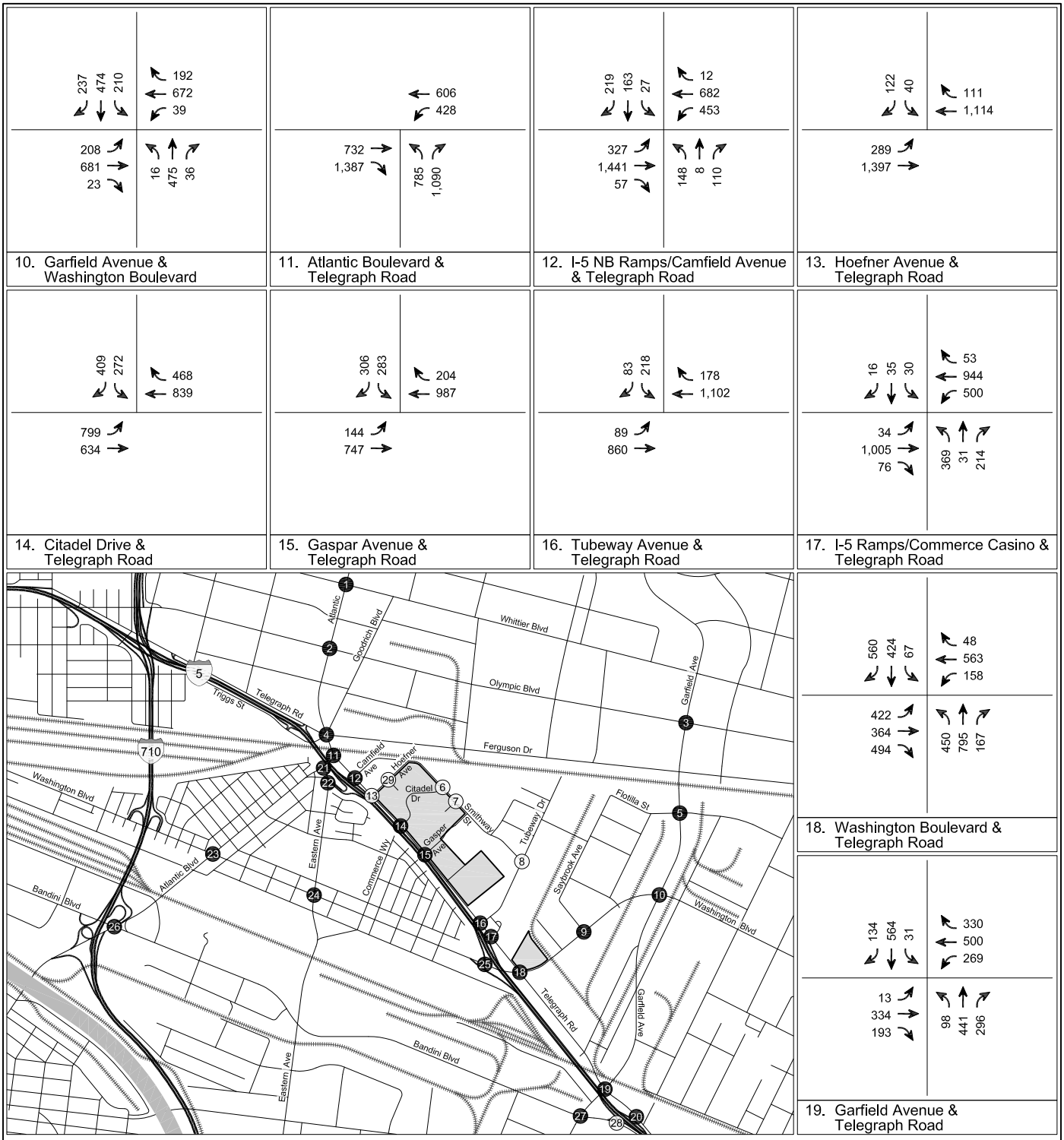
LEGEND

- Project Site
- (#) Signalized Intersection
- (#) Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

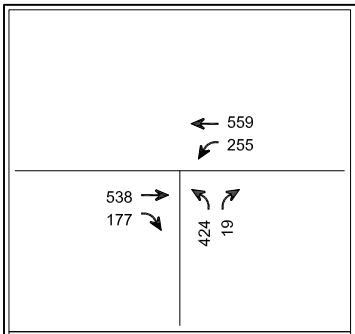
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 26

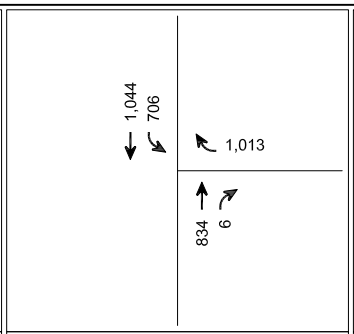


EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

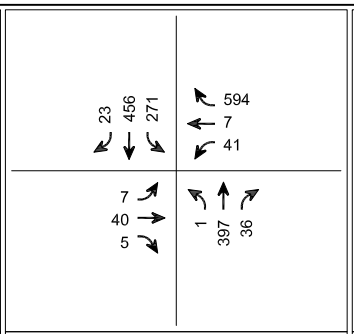
FIGURE
26 (CONT.)



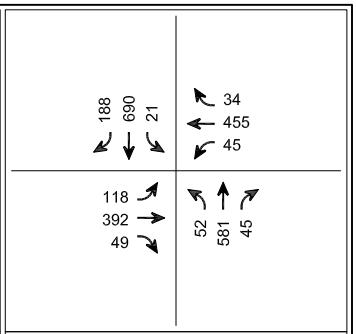
20. I-5 Ramps & Telegraph Road



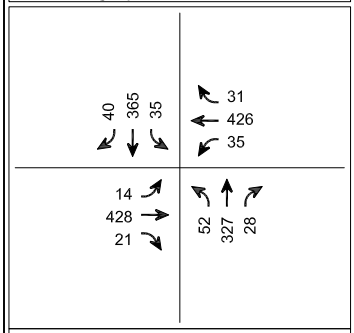
21. Atlantic Boulevard Eastern Avenue



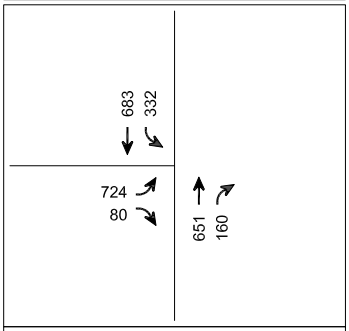
22. Eastern Avenue & I-5 Ramps/Stevens Place



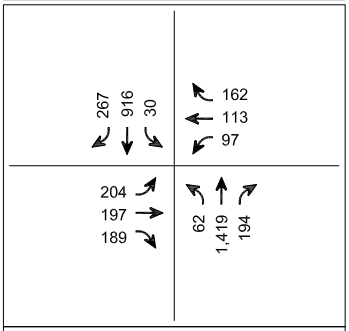
23. Atlantic Boulevard & Washington Boulevard



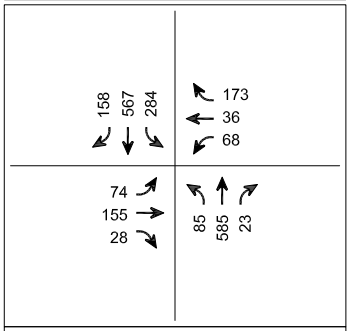
24. Eastern Avenue & Washington Boulevard



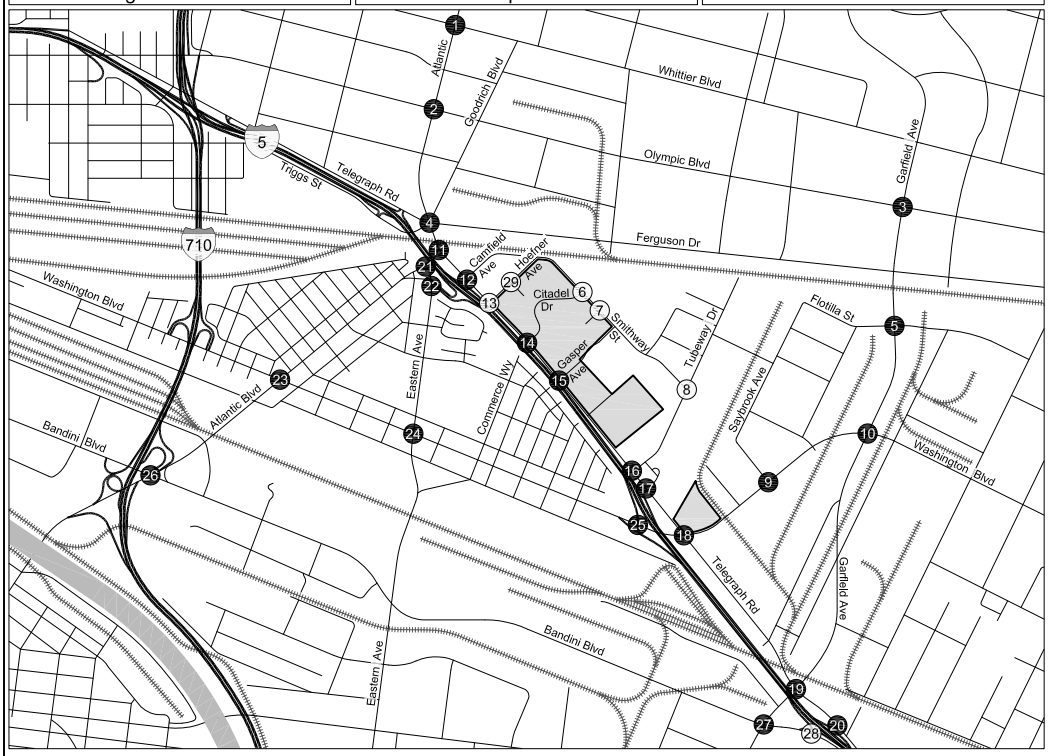
25. Washington Boulevard & I-5 SB Ramps

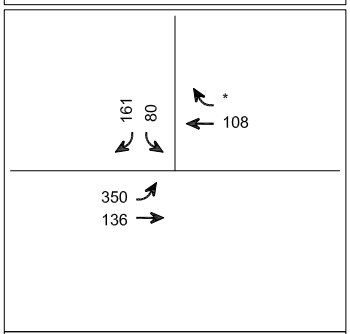


26. Atlantic Boulevard & Bandini Boulevard

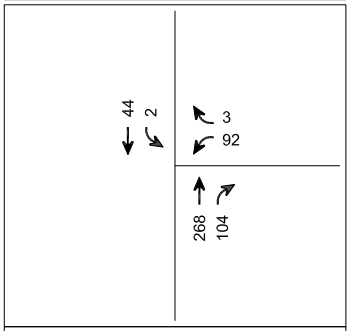


27. Garfield Avenue & Bandini Boulevard





28. I-5 SB Ramps & Bandini Boulevard



29. Hoefner Avenue & Citadel Valet Driveway

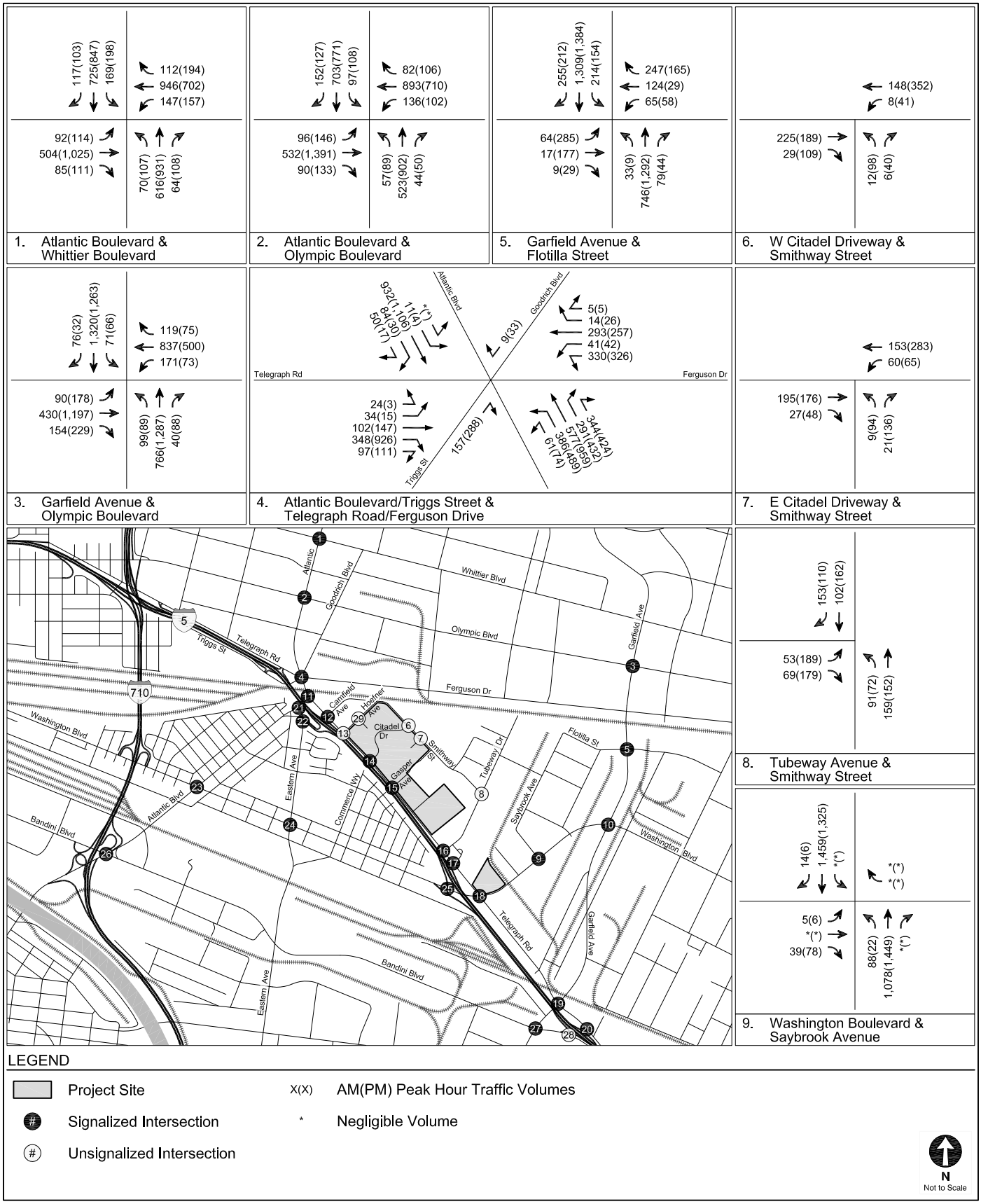
LEGEND

Project Site		X(X)	MIdday Peak Hour Traffic Volumes
Signalized Intersection	#	*	Negligible Volume
Unsignalized Intersection	(#)		

N
Not to Scale

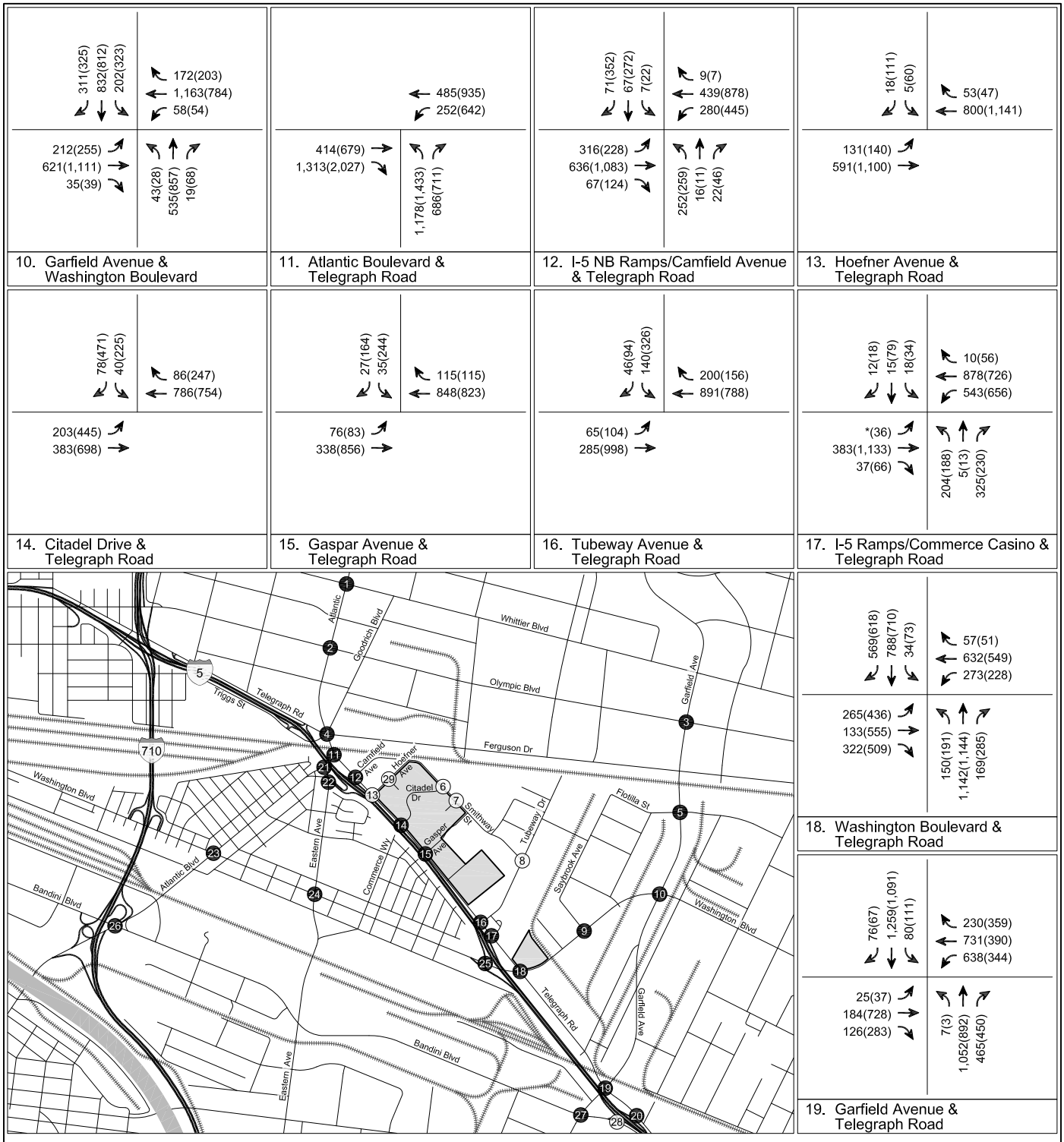
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
26 (CONT.)



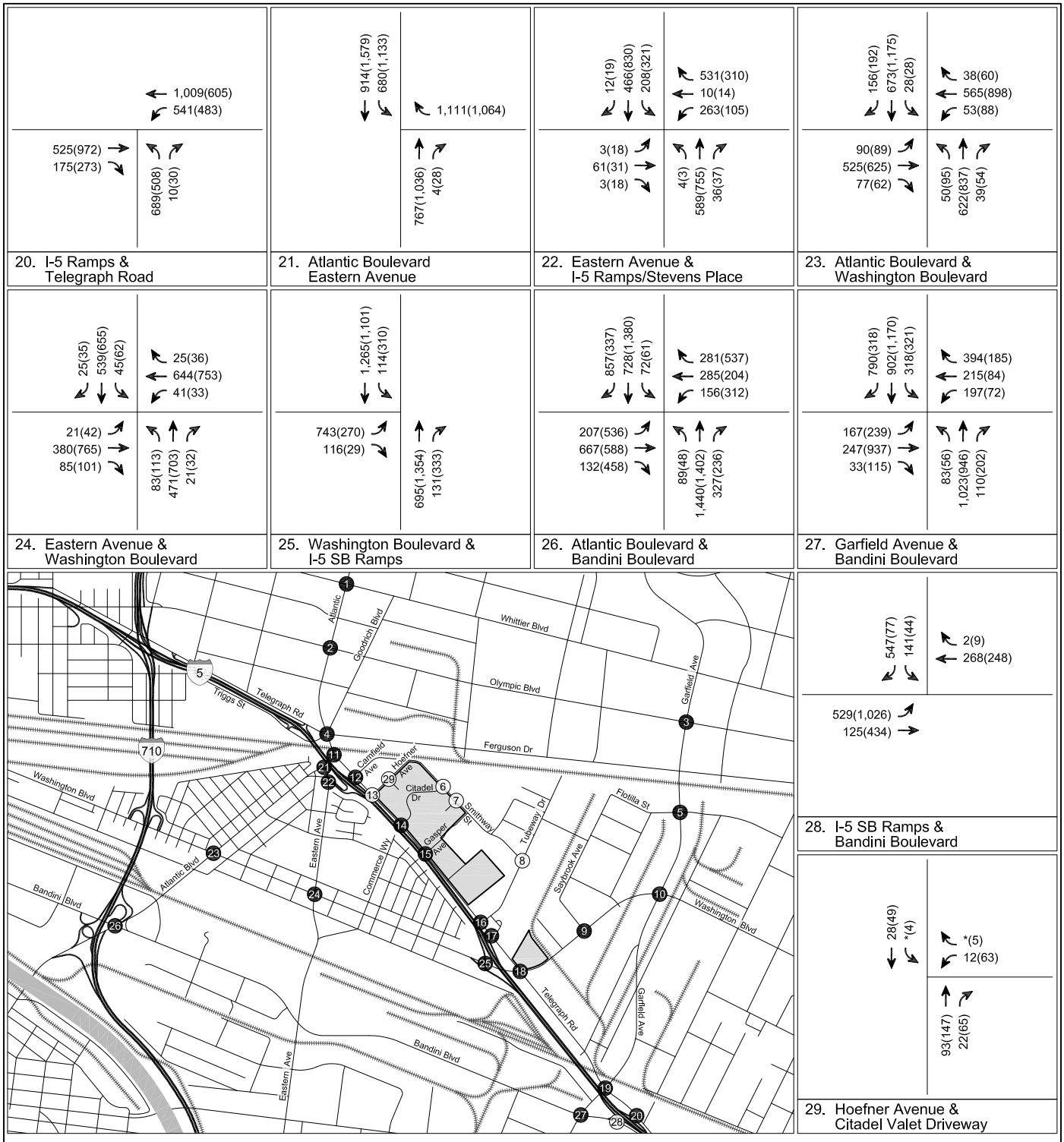
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 27



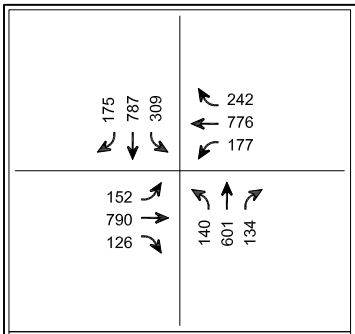
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 27 (CONT.)

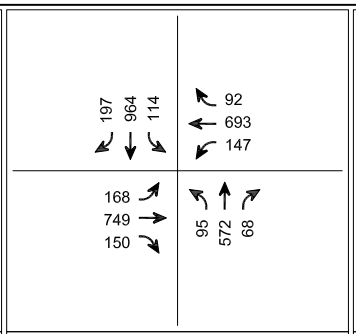


FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

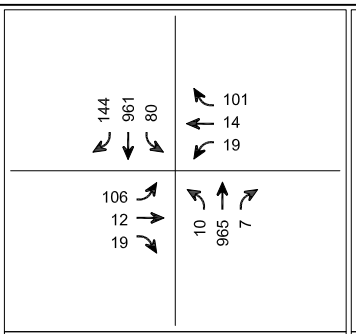
FIGURE 27 (CONT.)



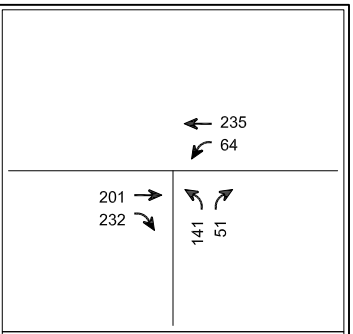
1. Atlantic Boulevard & Whittier Boulevard



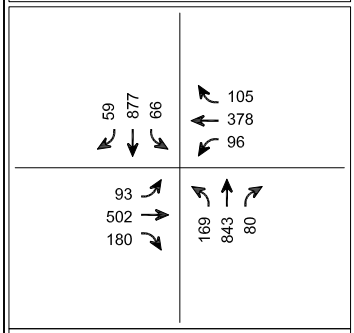
2. Atlantic Boulevard & Olympic Boulevard



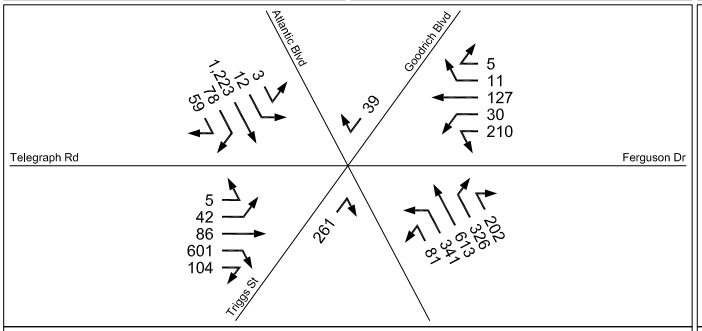
5. Garfield Avenue & Flotilla Street



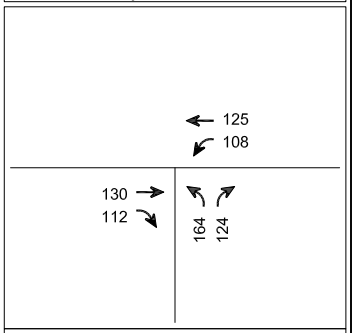
6. W Citadel Driveway & Smithway Street



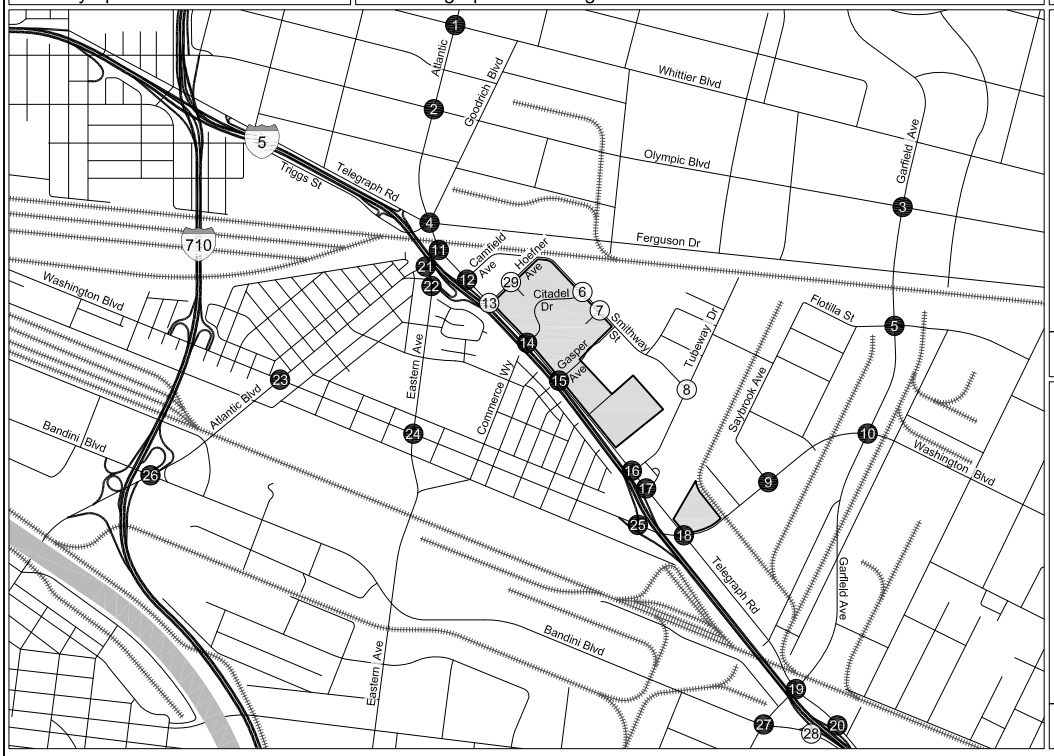
3. Garfield Avenue & Olympic Boulevard

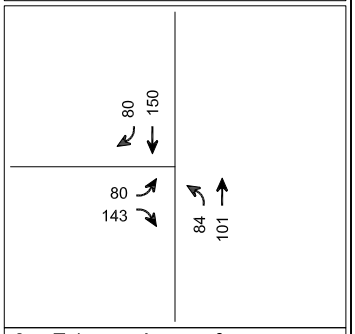


4. Atlantic Boulevard/Triggs Street & Telegraph Road/Ferguson Drive

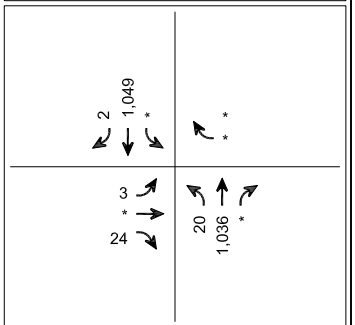


7. E Citadel Driveway & Smithway Street





8. Tubeway Avenue & Smithway Street



9. Washington Boulevard & Saybrook Avenue

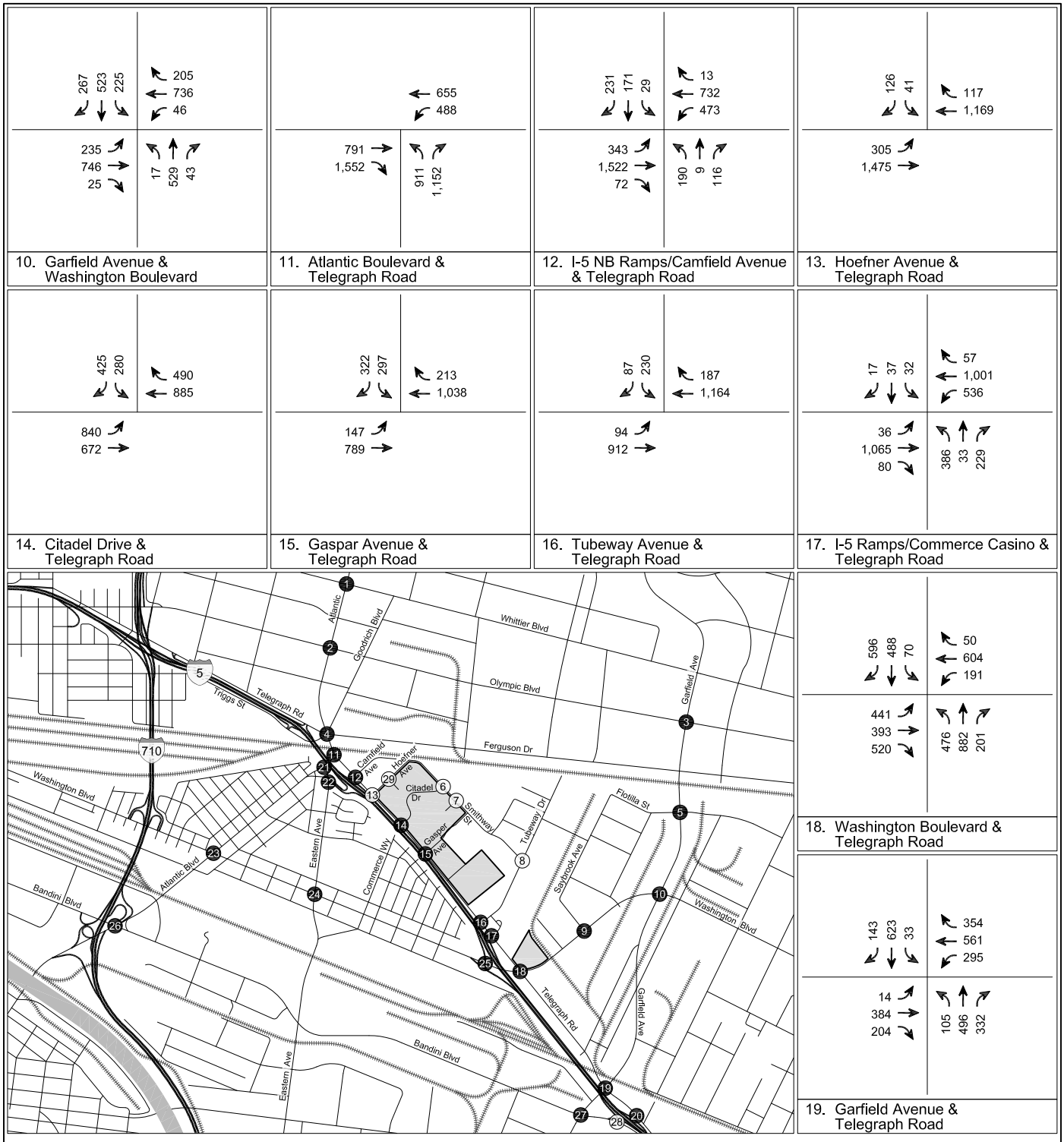
LEGEND

- Project Site
- Signalized Intersection
- Unsignalized Intersection
- X(X) MIdday Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

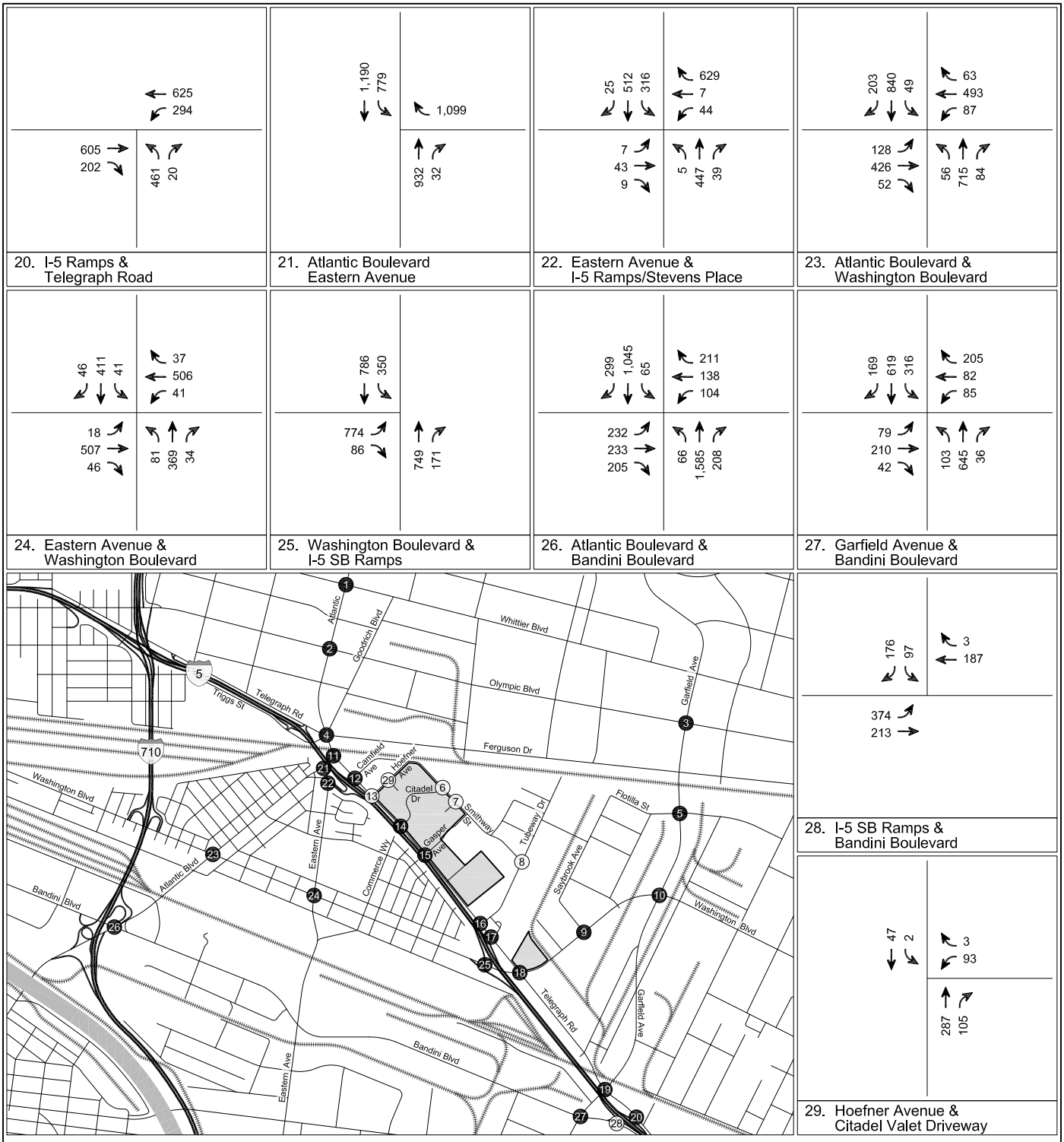
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 28



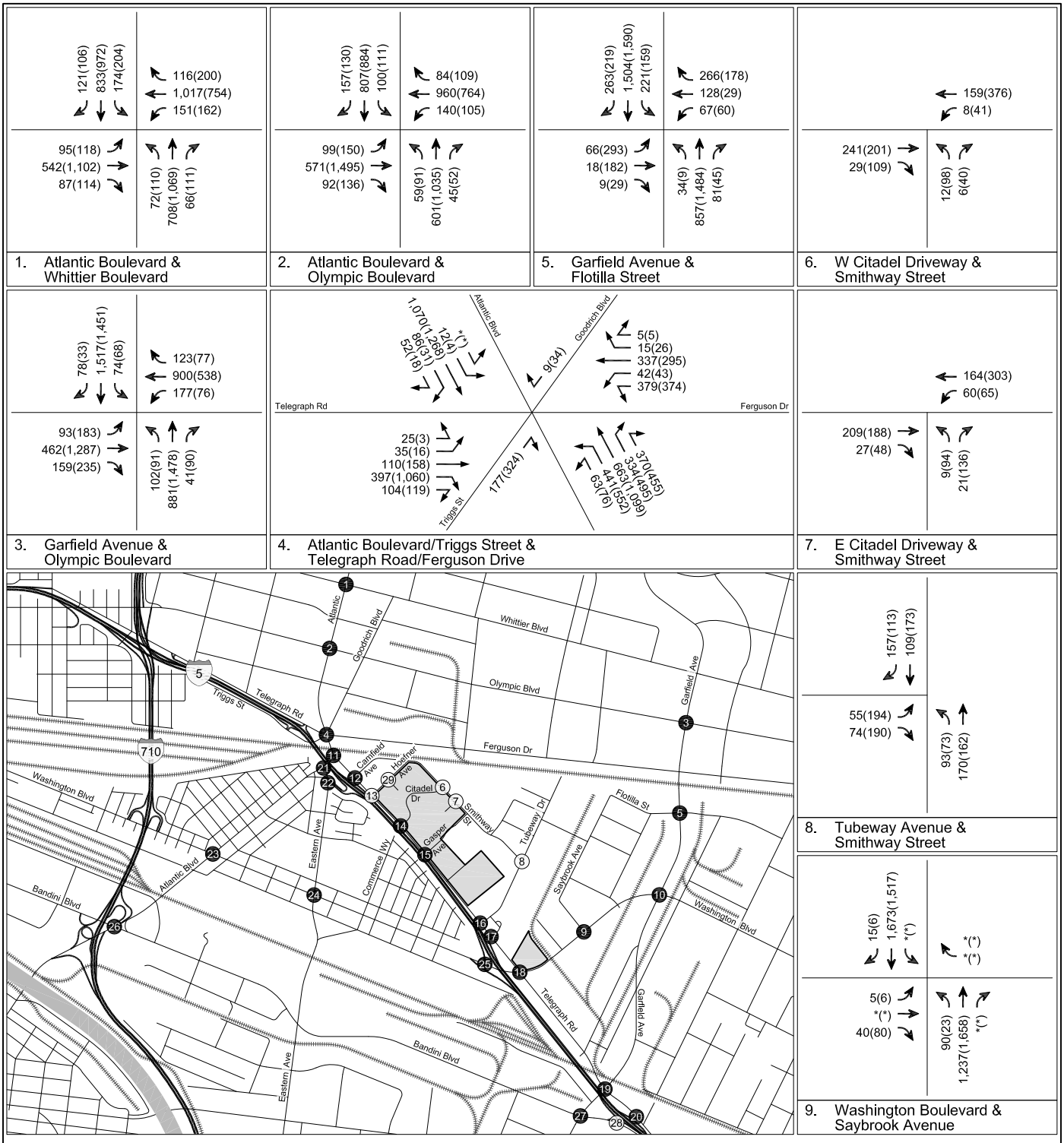
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
28 (CONT.)



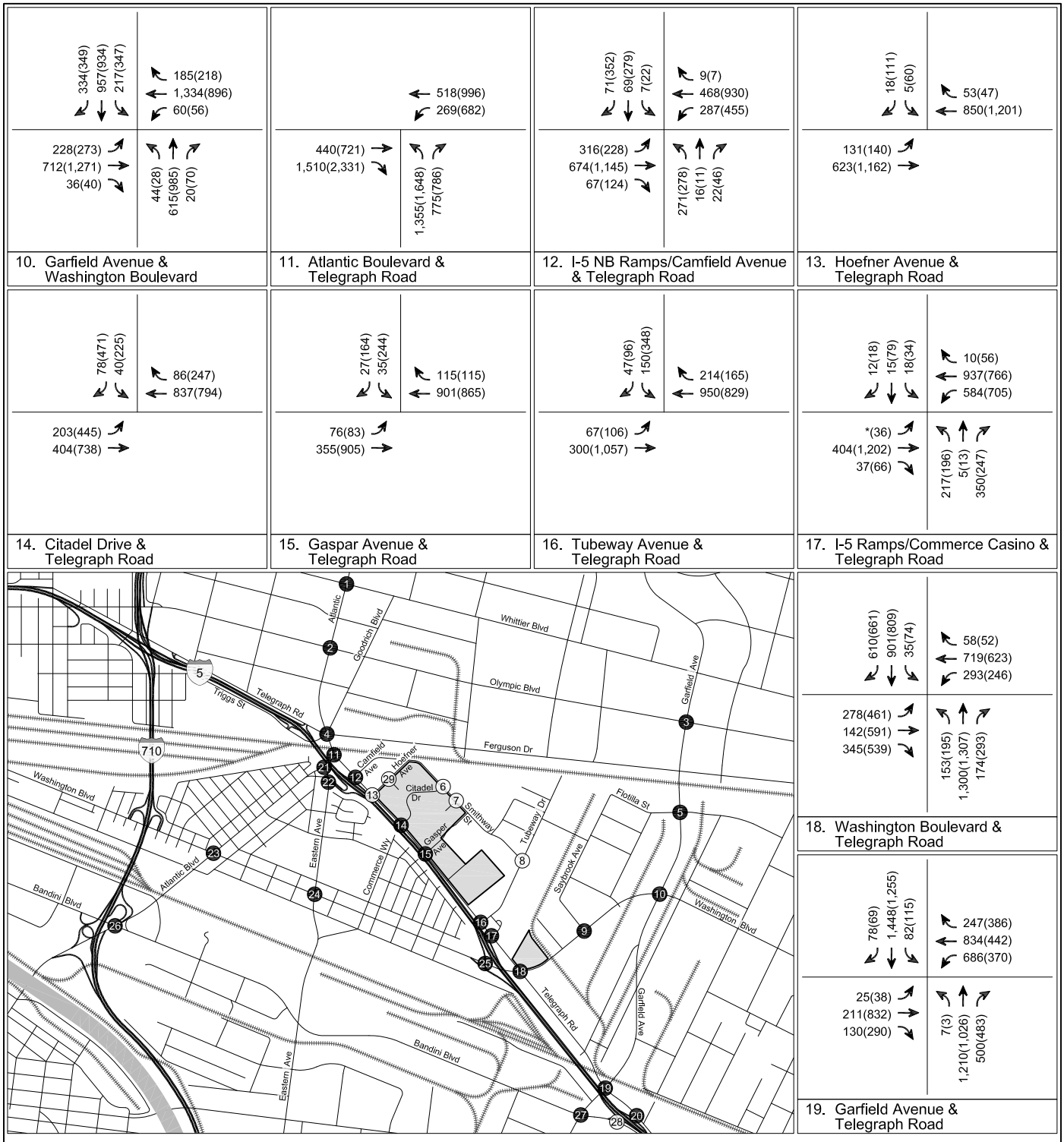
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
28 (CONT.)



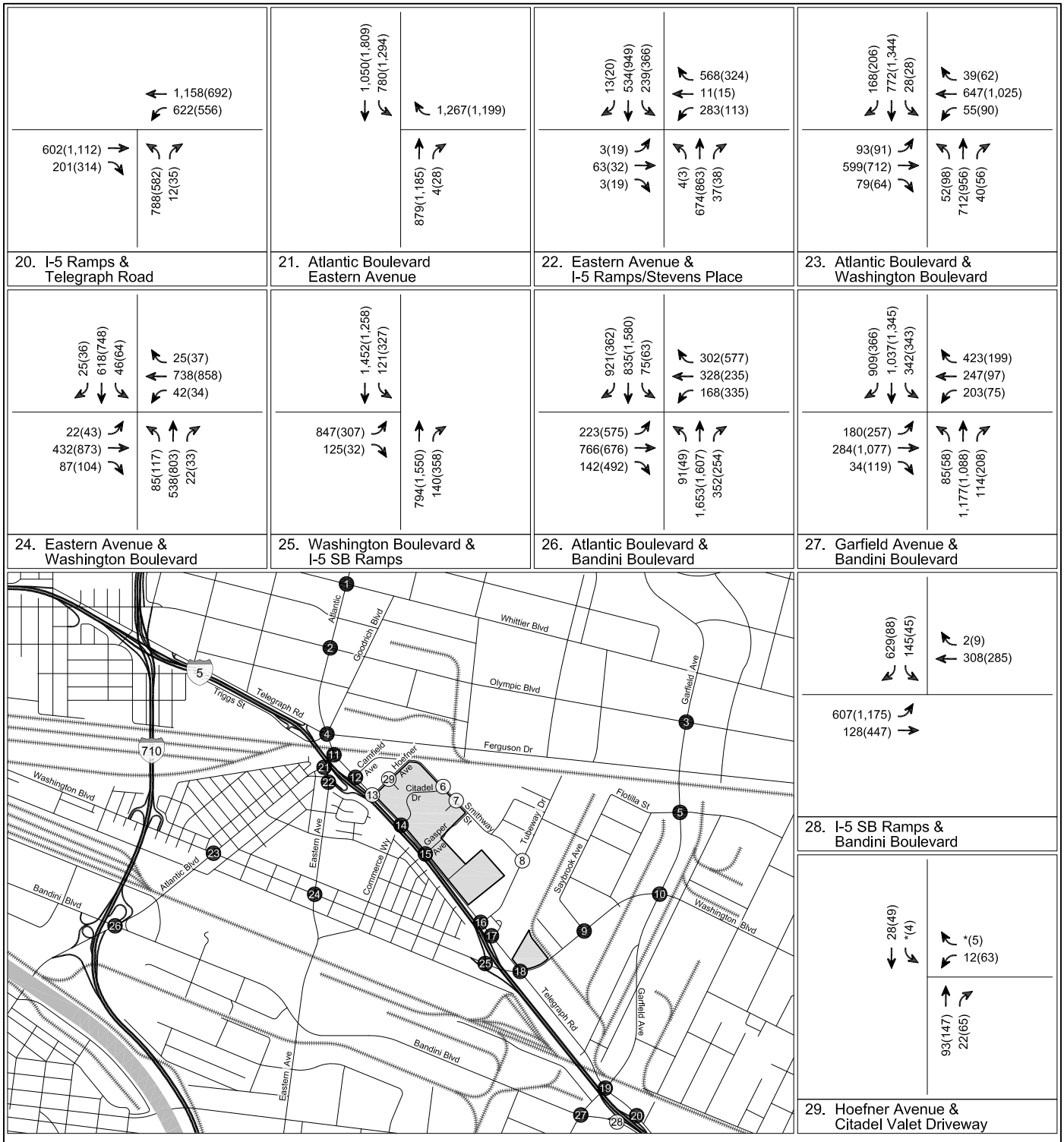
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 29



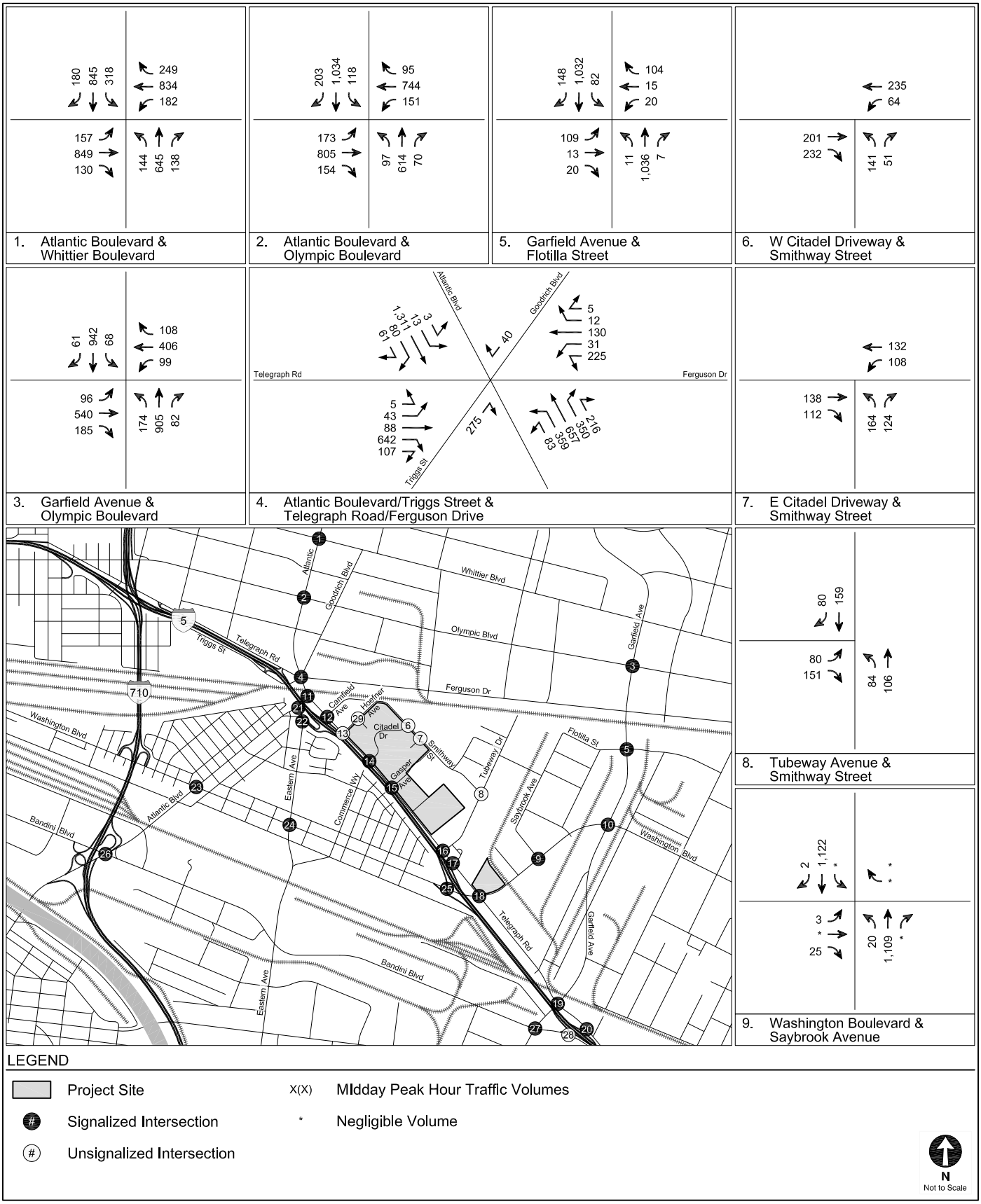
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 29 (CONT.)



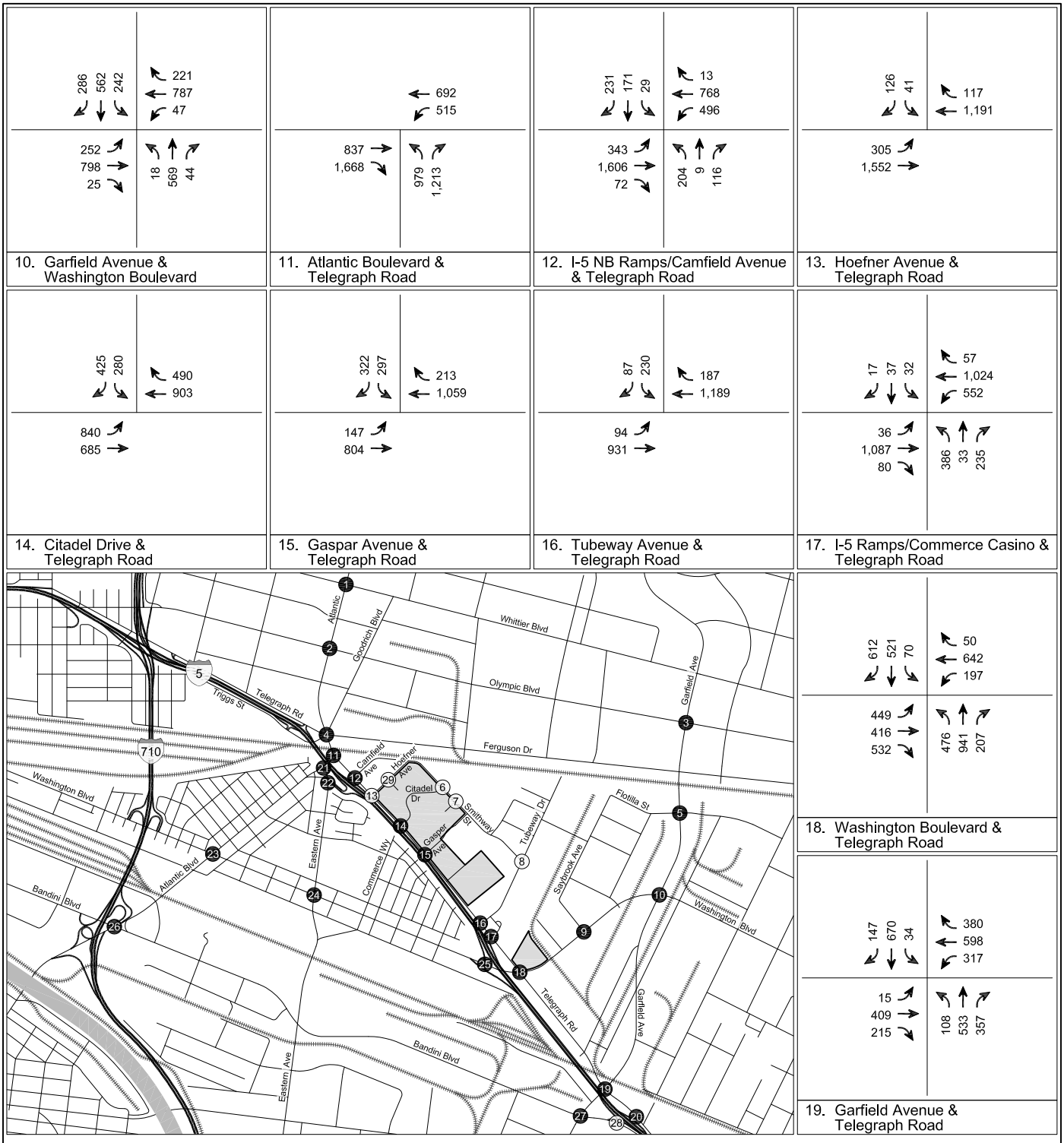
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 29 (CONT.)



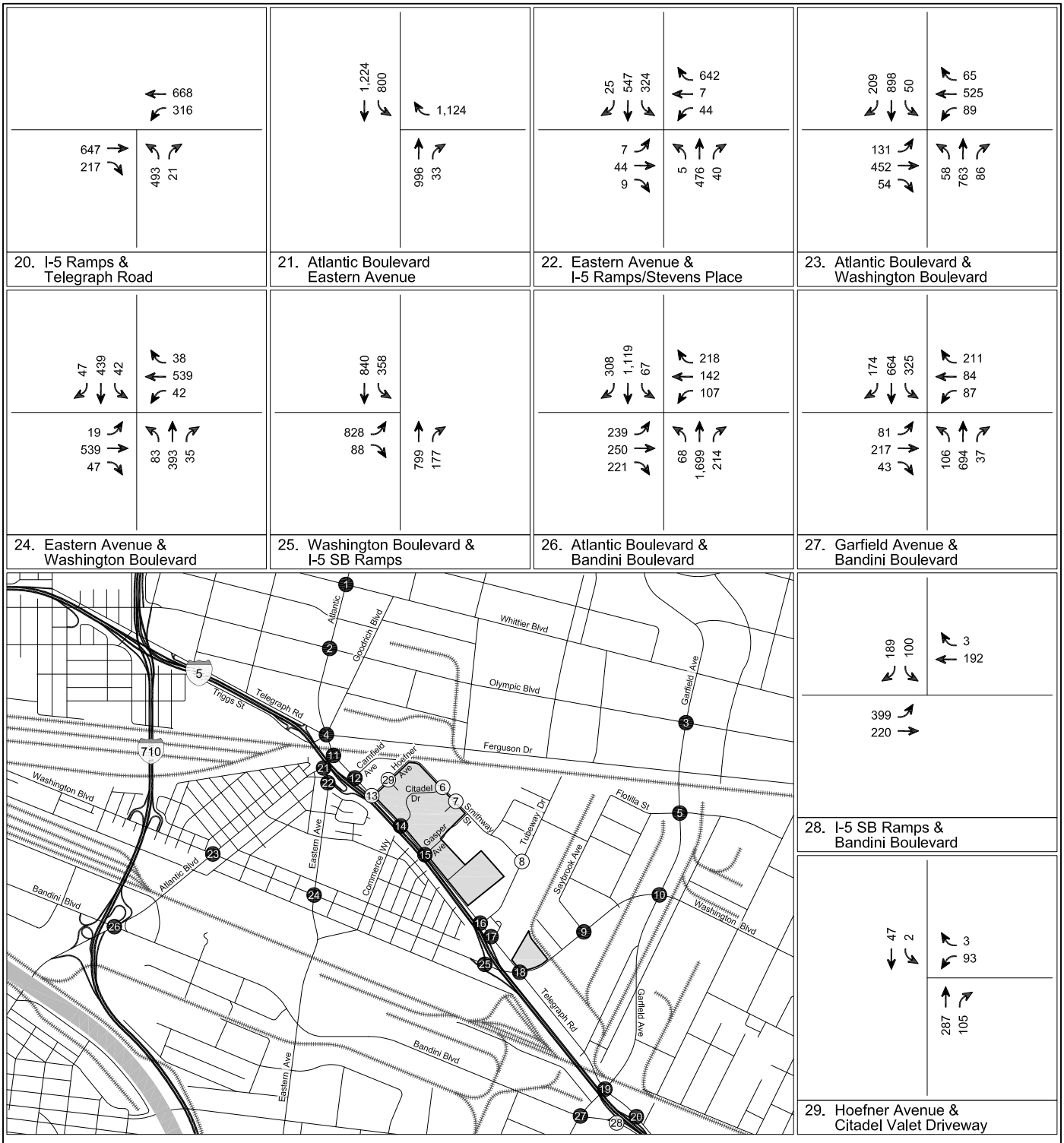
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 30



FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
30 (CONT.)



FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
SATURDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE
30 (CONT.)

TABLE 16
PROJECT TRIP GENERATION ESTIMATES WITH TDM REDUCTION PROGRAM
THE CITADEL SITE

TRIP GENERATION RATES [a]

Land Use	ITE Land Use Code	Rate	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Shopping Center	820	per 1,000 sf	[b]	62%	38%	[b]	49%	51%	[b]	[b]	52%	48%	[b]
General Office	710	per 1,000 sf	[c]	86%	14%	[c]	16%	84%	[c]	2.21	54%	46%	0.53
Hotel	310	per room	8.36	59%	41%	0.47	51%	49%	0.60	8.19	56%	44%	0.72
Business Hotel	312	per room	4.02	42%	58%	0.39	55%	45%	0.32	5.79	48%	52%	0.46
Resort Hotel	330	per room	5.43	72%	28%	0.32	43%	57%	0.41	6.47	56%	44%	0.54
Topgolf [d]	[d]	per bay	17.90	87%	13%	0.31	50%	50%	1.79	30.60	52%	48%	3.06

TRIP GENERATION ESTIMATES

Land Use	ITE Land Use Code	Size	Weekday							Saturday			
			Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
				In	Out	Total	In	Out	Total		In	Out	Total
Existing Project													
Shopping Center [e]	820	492,883 sf	17,786	247	151	398	867	902	1,769	26,357	1,248	1,152	2,400
Office	710	179,518 sf	1,872	168	27	195	32	166	198	397	51	44	95
Hotel	310	201 rooms	1,680	55	39	94	62	59	121	1,646	81	64	145
Subtotal - Project Trips Prior to Reductions			**21,338**	**470**	**217**	**687**	**961**	**1,127**	**2,088**	**28,400**	**1,380**	**1,260**	**2,640**
Less Mixed-Use Internal Capture Office - 10%			*(187)*	*(17)*	*(3)*	*(20)*	*(3)*	*(17)*	*(20)*	*(40)*	*(5)*	*(4)*	*(9)*
Less Mixed-Use Internal Capture Hotel - 25%			*(420)*	*(14)*	*(10)*	*(24)*	*(16)*	*(15)*	*(31)*	*(412)*	*(20)*	*(16)*	*(36)*
Less Mixed-Use Internal Capture Shopping Center - (Based on Other Uses)			*(607)*	*(13)*	*(31)*	(44)	*(32)*	*(19)*	*(51)*	*(452)*	*(20)*	*(25)*	*(45)*
Subtotal - Less Mixed-Use Internal Capture Credit			**(1,214)**	**(44)**	**(44)**	**(88)**	**(51)**	**(51)**	**(102)**	**(904)**	**(45)**	**(45)**	**(90)**
Less Passby Reduction Shopping Center - 10%			**(1,718)**	**(23)**	**(12)**	**(35)**	**(84)**	**(88)**	**(172)**	**(2,591)**	**(123)**	**(113)**	**(236)**
TOTAL - EXISTING PROJECT			**18,406**	**403**	**161**	**564**	**826**	**988**	**1,814**	**24,905**	**1,212**	**1,102**	**2,314**
Project Upon Completion													
Shopping Center [e]	820	1,013,349 sf	29,036	408	250	658	1,478	1,538	3,016	41,206	2,206	2,037	4,243
Office	710	179,518 sf	1,872	168	27	195	32	166	198	397	51	44	95
Hotel	310	201 rooms	1,680	55	39	94	62	59	121	1,646	81	64	145
Business Hotel	312	424 rooms	1,704	69	96	165	75	61	136	2,455	94	101	195
Resort Hotel	330	346 rooms	1,879	80	31	111	61	81	142	2,239	105	82	187
Topgolf [d]	[d]	102 bays	1,826	28	4	32	92	91	183	3,121	162	150	312
Subtotal - Project Trips Prior to Reductions			**37,997**	**808**	**447**	**1,255**	**1,800**	**1,996**	**3,796**	**51,064**	**2,699**	**2,478**	**5,177**
Less Mixed-Use Internal Capture Office - 10%			*(187)*	*(17)*	*(3)*	*(20)*	*(3)*	*(17)*	*(20)*	*(40)*	*(5)*	*(4)*	*(9)*
Less Mixed-Use Internal Capture Hotel - 25%			*(420)*	*(14)*	*(10)*	*(24)*	*(16)*	*(15)*	*(31)*	*(412)*	*(20)*	*(16)*	*(36)*
Less Mixed-Use Internal Capture Business Hotel - 25%			*(426)*	*(17)*	*(24)*	*(41)*	*(19)*	*(15)*	*(34)*	*(614)*	*(24)*	*(25)*	*(49)*
Less Mixed-Use Internal Capture Resort Hotel - 50%			*(940)*	*(40)*	*(16)*	*(56)*	*(31)*	*(41)*	*(72)*	*(1,120)*	*(53)*	*(41)*	*(94)*
Less Mixed-Use Internal Capture Topgolf - 25%			*(457)*	*(7)*	*(1)*	*(8)*	*(23)*	*(23)*	*(46)*	*(780)*	*(41)*	*(38)*	*(79)*
Less Mixed-Use Internal Capture Shopping Center - (Based on Other Uses)			*(2,430)*	*(54)*	*(95)*	*(149)*	*(111)*	*(92)*	*(203)*	*(2,966)*	*(124)*	*(143)*	*(267)*
Subtotal - Less Mixed-Use Internal Capture Credit			**(4,860)**	**(149)**	**(149)**	**(298)**	**(203)**	**(203)**	**(406)**	**(5,932)**	**(267)**	**(267)**	**(534)**
Less Pass-By Reduction Shopping Center - 10%			**(2,661)**	**(35)**	**(16)**	**(51)**	**(137)**	**(145)**	**(282)**	**(3,824)**	**(208)**	**(189)**	**(397)**
Less TDM Program Reduction Shopping Center - 10%			**(2,395)**	**(32)**	**(14)**	**(46)**	**(123)**	**(130)**	**(253)**	**(3,442)**	**(187)**	**(171)**	**(358)**
TOTAL - PROJECT UPON COMPLETION			**30,476**	**624**	**282**	**906**	**1,460**	**1,648**	**3,108**	**41,308**	**2,224**	**2,022**	**4,246**
NET NEW TOTAL PROJECT TRIPS			**12,070**	**221**	**121**	**342**	**634**	**660**	**1,294**	**16,403**	**1,012**	**920**	**1,932**
TOTAL - PROJECT UPON COMPLETION AFTER TDM PROGRAM			**28,081**	**592**	**268**	**860**	**1,337**	**1,518**	**2,855**	**37,866**	**2,037**	**1,851**	**3,888**
NET NEW TOTAL PROJECT TRIPS AFTER TDM PROGRAM			**9,675**	**189**	**107**	**296**	**511**	**530**	**1,041**	**12,961**	**825**	**749**	**1,574**

Notes:
sf - square feet
[a] Unless otherwise noted, Source: *Trip Generation, 10th Edition* , Institute of Transportation Engineers, 2017.
[b] Trip generation rate based on the best-fit curve formula listed in the ITE for the identified land use.
Weekday Daily - Ln(T) = 0.68 Ln(X) + 5.57 T = Average Vehicle Trips X = Gross Leasable Area (1,000 sf)
Weekday A.M. Peak Hour - T = 0.50(X) + 151.78
Weekday P.M. Peak Hour - Ln(T) = 0.74 Ln(X) + 2.89
Saturday Daily - Ln(T) = 0.62 Ln(X) + 6.24
Saturday Peak Hour - Ln(T) = 0.79 Ln(X) + 2.79
[c] Trip generation rate based on the best-fit curve formula listed in the ITE for the identified land use.
Weekday Daily - Ln(T) = 0.97 Ln(X) + 2.50 T = Average Vehicle Trips X = Gross Leasable Area (1,000 sf)
Weekday A.M. Peak Hour - T = 0.94(X) + 26.49
Weekday P.M. Peak Hour - LN(T) = 0.95 Ln(X) + 0.36
[d] Source: *Transportation Impact Study Report for North Central Roseville Specific Plan – Parcel 49* , October 27, 2014. Daily weekday trip rate was calculated based on the assumption that it is 110% of PM peak hour rate. Daily Saturday trip rate was calculated based on the assumption that it is 110% of MD peak hour rate.
[e] Shopping center was adjusted by a 10% increase to the Saturday trip generation estimates to reflect existing conditions.

TABLE 17
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.723	C	0.725	C	0.002	NO	0.655	B	-0.068	NO
		PM	0.897	D	0.902	E	0.005	NO	0.831	D	-0.066	NO
		MD	0.812	D	0.820	D	0.008	NO	0.749	C	-0.063	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.716	C	0.720	C	0.004	NO	0.650	B	-0.066	NO
		PM	0.921	E	0.933	E	0.012	YES	0.862	D	-0.059	NO
		MD	0.807	D	0.833	D	0.026	YES	0.758	C	-0.049	NO
3.	Garfield Ave & Olympic Blvd	AM	0.890	D	0.893	D	0.003	NO	0.823	D	-0.067	NO
		PM	0.986	E	0.991	E	0.005	NO	0.920	E	-0.066	NO
		MD	0.711	C	0.717	C	0.006	NO	0.647	B	-0.064	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.728	C	0.744	C	0.016	NO	0.673	B	-0.055	NO
		PM	0.891	D	0.952	E	0.061	YES	0.872	D	-0.019	NO
		MD	0.668	B	0.765	C	0.097	YES	0.680	B	0.012	NO
5.	Garfield Ave & Flotilla St	AM	0.749	C	0.752	C	0.003	NO	0.681	B	-0.068	NO
		PM	0.884	D	0.888	D	0.004	NO	0.818	D	-0.066	NO
		MD	0.538	A	0.543	A	0.005	NO	0.472	A	-0.066	NO
9.	Washington Blvd & Saybrook Ave	AM	0.447	A	0.454	A	0.007	NO	0.384	A	-0.063	NO
		PM	0.411	A	0.424	A	0.013	NO	0.352	A	-0.059	NO
		MD	0.304	A	0.323	A	0.019	NO	0.250	A	-0.054	NO
10.	Garfield Ave & Washington Blvd	AM	0.747	C	0.755	C	0.008	NO	0.685	B	-0.062	NO
		PM	0.869	D	0.886	D	0.017	NO	0.814	D	-0.055	NO
		MD	0.680	B	0.704	C	0.024	NO	0.631	B	-0.049	NO
11.	Atlantic Blvd & Telegraph Rd	AM	0.697	B	0.733	C	0.036	NO	0.580	A	-0.117	NO
		PM	0.948	E	1.110	F	0.162	YES	0.913	E	-0.035	NO
		MD	0.834	D	1.207	F	0.373	YES	0.800	C	-0.034	NO
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.504	A	0.549	A	0.045	NO	0.475	A	-0.029	NO
		PM	0.711	C	0.892	D	0.181	YES	0.693	B	-0.018	NO
		MD	0.713	C	0.981	E	0.268	YES	0.710	C	-0.003	NO
14.	Citadel Dr & Telegraph Rd	AM	0.290	A	0.351	A	0.061	NO	0.275	A	-0.015	NO
		PM	0.368	A	0.579	A	0.211	NO	0.463	A	0.095	NO
		MD	0.497	A	0.749	C	0.252	YES	0.640	B	0.143	NO
15.	Gaspar Ave & Telegraph Rd	AM	0.301	A	0.359	A	0.058	NO	0.283	A	-0.018	NO
		PM	0.341	A	0.508	A	0.167	NO	0.412	A	0.071	NO
		MD	0.409	A	0.653	B	0.244	NO	0.545	A	0.136	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.377	A	0.415	A	0.038	NO	0.341	A	-0.036	NO
		PM	0.402	A	0.500	A	0.098	NO	0.415	A	0.013	NO
		MD	0.411	A	0.548	A	0.137	NO	0.458	A	0.047	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 17 (CONT'D.)
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2018)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.596	A	0.643	B	0.047	NO	0.428	A	-0.168	NO
		PM	0.786	C	0.911	E	0.125	YES	0.651	B	-0.135	NO
		MD	0.765	C	0.953	E	0.188	YES	0.711	C	-0.054	NO
18.	Washington Blvd & Telegraph Rd	AM	0.687	B	0.783	C	0.096	YES	0.712	C	0.025	NO
		PM	0.778	C	0.871	D	0.093	YES	0.796	C	0.018	NO
		MD	0.699	B	0.813	D	0.114	YES	0.727	C	0.028	NO
19.	Garfield Ave & Telegraph Rd	AM	0.738	C	0.746	C	0.008	NO	0.675	B	-0.063	NO
		PM	0.723	C	0.736	C	0.013	NO	0.664	B	-0.059	NO
		MD	0.551	A	0.558	A	0.007	NO	0.481	A	-0.070	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	0.823	D	0.838	D	0.015	NO	0.768	C	-0.055	NO
		PM	0.877	D	0.896	D	0.019	NO	0.824	D	-0.053	NO
		MD	0.612	B	0.639	B	0.027	NO	0.566	A	-0.046	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.705	C	0.727	C	0.022	NO	0.655	B	-0.050	NO
		PM	0.954	E	1.021	F	0.067	YES	0.939	E	-0.015	NO
		MD	0.757	C	0.859	D	0.102	YES	0.771	C	0.014	NO
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.451	A	0.462	A	0.011	NO	0.390	A	-0.061	NO
		PM	0.413	A	0.472	A	0.059	NO	0.388	A	-0.025	NO
		MD	0.402	A	0.507	A	0.105	NO	0.418	A	0.016	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.469	A	0.477	A	0.008	NO	0.407	A	-0.062	NO
		PM	0.683	B	0.714	C	0.031	NO	0.639	B	-0.044	NO
		MD	0.490	A	0.531	A	0.041	NO	0.455	A	-0.035	NO
24.	Eastern Ave & Washington Blvd	AM	0.382	A	0.388	A	0.006	NO	0.317	A	-0.065	NO
		PM	0.445	A	0.466	A	0.021	NO	0.393	A	-0.052	NO
		MD	0.307	A	0.337	A	0.030	NO	0.263	A	-0.044	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.562	A	0.605	B	0.043	NO	0.532	A	-0.030	NO
		PM	0.678	B	0.761	C	0.083	YES	0.679	B	0.001	NO
		MD	0.660	B	0.778	C	0.118	YES	0.692	B	0.032	NO
26.	Atlantic Blvd & Bandini Blvd	AM	0.651	B	0.654	B	0.003	NO	0.584	A	-0.067	NO
		PM	0.764	C	0.771	C	0.007	NO	0.700	B	-0.064	NO
		MD	0.500	A	0.511	A	0.011	NO	0.440	A	-0.060	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.811	D	0.814	D	0.003	NO	0.744	C	-0.067	NO
		PM	0.857	D	0.882	D	0.025	YES	0.809	D	-0.048	NO
		MD	0.532	A	0.566	A	0.034	NO	0.491	A	-0.041	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 18
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.771	C	0.773	C	0.002	NO	0.703	C	-0.068	NO
		PM	0.963	E	0.968	E	0.005	NO	0.897	D	-0.066	NO
		MD	0.874	D	0.882	D	0.008	NO	0.811	D	-0.063	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.764	C	0.769	C	0.005	NO	0.698	B	-0.066	NO
		PM	0.994	E	1.007	F	0.013	YES	0.936	E	-0.058	NO
		MD	0.874	D	0.901	E	0.027	YES	0.825	D	-0.049	NO
3.	Garfield Ave & Olympic Blvd	AM	0.950	E	0.953	E	0.003	NO	0.883	D	-0.067	NO
		PM	1.059	F	1.063	F	0.004	NO	0.993	E	-0.066	NO
		MD	0.765	C	0.772	C	0.007	NO	0.702	C	-0.063	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.792	C	0.808	D	0.016	NO	0.737	C	-0.055	NO
		PM	0.988	E	1.049	F	0.061	YES	0.969	E	-0.019	NO
		MD	0.758	C	0.855	D	0.097	YES	0.770	C	0.012	NO
5.	Garfield Ave & Flotilla St	AM	0.801	D	0.804	D	0.003	NO	0.734	C	-0.067	NO
		PM	0.953	E	0.957	E	0.004	NO	0.887	D	-0.066	NO
		MD	0.578	A	0.583	A	0.005	NO	0.513	A	-0.065	NO
9.	Washington Blvd & Saybrook Ave	AM	0.479	A	0.486	A	0.007	NO	0.416	A	-0.063	NO
		PM	0.440	A	0.453	A	0.013	NO	0.381	A	-0.059	NO
		MD	0.331	A	0.350	A	0.019	NO	0.277	A	-0.054	NO
10.	Garfield Ave & Washington Blvd	AM	0.801	D	0.811	D	0.010	NO	0.740	C	-0.061	NO
		PM	0.941	E	0.958	E	0.017	YES	0.886	D	-0.055	NO
		MD	0.742	C	0.766	C	0.024	NO	0.693	B	-0.049	NO
11.	Atlantic Blvd & Telegraph Rd	AM	0.760	C	0.799	C	0.039	NO	0.641	B	-0.119	NO
		PM	1.062	F	1.231	F	0.169	YES	1.015	F	-0.047	NO
		MD	0.910	E	1.284	F	0.374	YES	0.898	D	-0.012	NO
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.546	A	0.589	A	0.043	NO	0.515	A	-0.031	NO
		PM	0.774	C	0.957	E	0.183	YES	0.744	C	-0.030	NO
		MD	0.773	C	1.041	F	0.268	YES	0.760	C	-0.013	NO
14.	Citadel Dr & Telegraph Rd	AM	0.307	A	0.366	A	0.059	NO	0.291	A	-0.016	NO
		PM	0.389	A	0.583	A	0.194	NO	0.483	A	0.094	NO
		MD	0.526	A	0.777	C	0.251	YES	0.669	B	0.143	NO
15.	Gaspar Ave & Telegraph Rd	AM	0.318	A	0.376	A	0.058	NO	0.301	A	-0.017	NO
		PM	0.359	A	0.526	A	0.167	NO	0.430	A	0.071	NO
		MD	0.431	A	0.675	B	0.244	NO	0.569	A	0.138	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.399	A	0.436	A	0.037	NO	0.364	A	-0.035	NO
		PM	0.425	A	0.523	A	0.098	NO	0.438	A	0.013	NO
		MD	0.434	A	0.573	A	0.139	NO	0.481	A	0.047	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 18 (CONT'D.)
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.633	B	0.679	B	0.046	NO	0.455	A	-0.178	NO
		PM	0.844	D	0.969	E	0.125	YES	0.695	B	-0.149	NO
		MD	0.814	D	1.002	F	0.188	YES	0.751	C	-0.063	NO
18.	Washington Blvd & Telegraph Rd	AM	0.743	C	0.839	D	0.096	YES	0.768	C	0.025	NO
		PM	0.855	D	0.937	E	0.082	YES	0.862	D	0.007	NO
		MD	0.744	C	0.857	D	0.113	YES	0.771	C	0.027	NO
19.	Garfield Ave & Telegraph Rd	AM	0.790	C	0.798	C	0.008	NO	0.728	C	-0.062	NO
		PM	0.785	C	0.797	C	0.012	NO	0.726	C	-0.059	NO
		MD	0.591	A	0.597	A	0.006	NO	0.521	A	-0.070	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	0.886	D	0.900	D	0.014	NO	0.830	D	-0.056	NO
		PM	0.961	E	0.980	E	0.019	YES	0.908	E	-0.053	NO
		MD	0.679	B	0.706	C	0.027	NO	0.633	B	-0.046	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.766	C	0.787	C	0.021	NO	0.714	C	-0.052	NO
		PM	1.056	F	1.124	F	0.068	YES	1.042	F	-0.014	NO
		MD	0.854	D	0.956	E	0.102	YES	0.868	D	0.014	NO
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.480	A	0.496	A	0.016	NO	0.422	A	-0.058	NO
		PM	0.448	A	0.511	A	0.063	NO	0.428	A	-0.020	NO
		MD	0.441	A	0.546	A	0.105	NO	0.458	A	0.017	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.516	A	0.524	A	0.008	NO	0.453	A	-0.063	NO
		PM	0.755	C	0.786	C	0.031	NO	0.712	C	-0.043	NO
		MD	0.559	A	0.600	A	0.041	NO	0.524	A	-0.035	NO
24.	Eastern Ave & Washington Blvd	AM	0.416	A	0.423	A	0.007	NO	0.352	A	-0.064	NO
		PM	0.497	A	0.519	A	0.022	NO	0.446	A	-0.051	NO
		MD	0.361	A	0.392	A	0.031	NO	0.317	A	-0.044	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.607	B	0.649	B	0.042	NO	0.576	A	-0.031	NO
		PM	0.739	C	0.823	D	0.084	YES	0.741	C	0.002	NO
		MD	0.720	C	0.837	D	0.117	YES	0.752	C	0.032	NO
26.	Atlantic Blvd & Bandini Blvd	AM	0.707	C	0.710	C	0.003	NO	0.640	B	-0.067	NO
		PM	0.820	D	0.828	D	0.008	NO	0.757	C	-0.063	NO
		MD	0.570	A	0.581	A	0.011	NO	0.509	A	-0.061	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.867	D	0.870	D	0.003	NO	0.800	C	-0.067	NO
		PM	0.949	E	0.974	E	0.025	YES	0.901	E	-0.048	NO
		MD	0.603	B	0.637	B	0.034	NO	0.562	A	-0.041	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 19
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future with Truck Traffic without Project Conditions		Future with Truck Traffic with Project Conditions				Future with Truck Traffic with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
1.	Atlantic Blvd & Whittier Blvd	AM	0.826	D	0.828	D	0.002	NO	0.758	C	-0.068	NO
		PM	1.038	F	1.043	F	0.005	NO	0.972	E	-0.066	NO
		MD	0.916	E	0.924	E	0.008	NO	0.853	D	-0.063	NO
2.	Atlantic Blvd & Olympic Blvd	AM	0.823	D	0.827	D	0.004	NO	0.756	C	-0.067	NO
		PM	1.073	F	1.086	F	0.013	YES	1.015	F	-0.058	NO
		MD	0.919	E	0.946	E	0.027	YES	0.872	D	-0.047	NO
3.	Garfield Ave & Olympic Blvd	AM	1.037	F	1.040	F	0.003	NO	0.970	E	-0.067	NO
		PM	1.153	F	1.158	F	0.005	NO	1.087	F	-0.066	NO
		MD	0.805	D	0.812	D	0.007	NO	0.741	C	-0.064	NO
4.	Atlantic Blvd/Triggs St & Telegraph Rd/Ferguson Dr	AM	0.891	D	0.907	E	0.016	YES	0.836	D	-0.055	NO
		PM	1.132	F	1.192	F	0.060	YES	1.112	F	-0.020	NO
		MD	0.813	D	0.909	E	0.096	YES	0.824	D	0.011	NO
5.	Garfield Ave & Flotilla St	AM	0.877	D	0.881	D	0.004	NO	0.810	D	-0.067	NO
		PM	1.026	F	1.030	F	0.004	NO	0.960	E	-0.066	NO
		MD	0.606	B	0.610	B	0.004	NO	0.540	A	-0.066	NO
9.	Washington Blvd & Saybrook Ave	AM	0.526	A	0.533	A	0.007	NO	0.463	A	-0.063	NO
		PM	0.484	A	0.497	A	0.013	NO	0.425	A	-0.059	NO
		MD	0.348	A	0.366	A	0.018	NO	0.293	A	-0.055	NO
10.	Garfield Ave & Washington Blvd	AM	0.885	D	0.894	D	0.009	NO	0.823	D	-0.062	NO
		PM	1.034	F	1.052	F	0.018	YES	0.980	E	-0.054	NO
		MD	0.790	C	0.813	D	0.023	YES	0.741	C	-0.049	NO
11.	Atlantic Blvd & Telegraph Rd	AM	0.839	D	0.878	D	0.039	YES	0.706	C	-0.133	NO
		PM	1.168	F	1.343	F	0.175	YES	1.104	F	-0.064	NO
		MD	0.971	E	1.345	F	0.374	YES	0.954	E	-0.017	NO
12.	I-5 NB Ramps/Camfield Ave & Telegraph Rd	AM	0.562	A	0.606	B	0.044	NO	0.532	A	-0.030	NO
		PM	0.809	D	0.991	E	0.182	YES	0.770	C	-0.039	NO
		MD	0.812	D	1.081	F	0.269	YES	0.791	C	-0.021	NO
14.	Citadel Dr & Telegraph Rd	AM	0.317	A	0.377	A	0.060	NO	0.301	A	-0.016	NO
		PM	0.397	A	0.592	A	0.195	NO	0.491	A	0.094	NO
		MD	0.528	A	0.781	C	0.253	YES	0.673	B	0.145	NO
15.	Gaspar Ave & Telegraph Rd	AM	0.329	A	0.387	A	0.058	NO	0.312	A	-0.017	NO
		PM	0.368	A	0.535	A	0.167	NO	0.439	A	0.071	NO
		MD	0.435	A	0.680	B	0.245	NO	0.573	A	0.138	NO
16.	Tubeway Ave & Telegraph Rd	AM	0.420	A	0.458	A	0.038	NO	0.383	A	-0.037	NO
		PM	0.445	A	0.543	A	0.098	NO	0.457	A	0.012	NO
		MD	0.439	A	0.578	A	0.139	NO	0.486	A	0.047	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

TABLE 19 (CONT'D.)
FUTURE WITH TRUCK TRAFFIC WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2025)
WITH 10% TDM PROGRAM REDUCTION AND CITYWIDE SIGNAL SYNCHRONIZATION
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Signalized Intersection	Peak Hour	Future with Truck Traffic without Project Conditions		Future with Truck Traffic with Project Conditions				Future with Project with Full Mitigation Conditions			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact?[1]
17.	I-5 Ramps/Commerce Casino & Telegraph Rd	AM	0.671	B	0.717	C	0.046	YES	0.481	A	-0.190	NO
		PM	0.894	D	1.020	F	0.126	YES	0.731	C	-0.163	NO
		MD	0.828	D	1.017	F	0.189	YES	0.761	C	-0.067	NO
18.	Washington Blvd & Telegraph Rd	AM	0.828	D	0.923	E	0.095	YES	0.798	C	-0.030	NO
		PM	0.931	E	1.022	F	0.091	YES	0.855	D	-0.076	NO
		MD	0.765	C	0.882	D	0.117	YES	0.794	C	0.029	NO
19.	Garfield Ave & Telegraph Rd	AM	0.869	D	0.877	D	0.008	NO	0.806	D	-0.063	NO
		PM	0.871	D	0.884	D	0.013	NO	0.812	D	-0.059	NO
		MD	0.624	B	0.628	B	0.004	NO	0.554	A	-0.070	NO
20.	I-5 NB Ramps & Telegraph Rd	AM	1.004	F	1.018	F	0.014	YES	0.948	E	-0.056	NO
		PM	1.091	F	1.110	F	0.019	YES	1.038	F	-0.053	NO
		MD	0.723	C	0.749	C	0.026	NO	0.676	B	-0.047	NO
21.	Eastern Ave & Atlantic Blvd	AM	0.866	D	0.887	D	0.021	YES	0.815	D	-0.051	NO
		PM	1.200	F	1.268	F	0.068	YES	1.186	F	-0.014	NO
		MD	0.876	D	0.979	E	0.103	YES	0.890	D	0.014	NO
22.	Eastern Ave & I-5 Ramps/Stevens Pl	AM	0.523	A	0.537	A	0.014	NO	0.464	A	-0.059	NO
		PM	0.493	A	0.555	A	0.062	NO	0.473	A	-0.020	NO
		MD	0.455	A	0.560	A	0.105	NO	0.473	A	0.018	NO
23.	Atlantic Blvd & Washington Blvd	AM	0.568	A	0.576	A	0.008	NO	0.505	A	-0.063	NO
		PM	0.838	D	0.869	D	0.031	YES	0.794	C	-0.044	NO
		MD	0.587	A	0.628	B	0.041	NO	0.552	A	-0.035	NO
24.	Eastern Ave & Washington Blvd	AM	0.454	A	0.460	A	0.006	NO	0.390	A	-0.064	NO
		PM	0.543	A	0.564	A	0.021	NO	0.491	A	-0.052	NO
		MD	0.375	A	0.406	A	0.031	NO	0.331	A	-0.044	NO
25.	I-5 SB Ramps & Washington Blvd	AM	0.678	B	0.720	C	0.042	YES	0.648	B	-0.030	NO
		PM	0.825	D	0.908	E	0.083	YES	0.825	D	0.000	NO
		MD	0.760	C	0.877	D	0.117	YES	0.792	C	0.032	NO
26.	Atlantic Blvd & Bandini Blvd	AM	0.788	C	0.792	C	0.004	NO	0.722	C	-0.066	NO
		PM	0.888	D	0.896	D	0.008	NO	0.825	D	-0.063	NO
		MD	0.599	A	0.610	B	0.011	NO	0.538	A	-0.061	NO
27.	Garfield Avenue & Bandini Blvd	AM	0.950	E	0.952	E	0.002	NO	0.883	D	-0.067	NO
		PM	1.054	F	1.079	F	0.025	YES	1.005	F	-0.049	NO
		MD	0.627	B	0.661	B	0.034	NO	0.585	A	-0.042	NO

AM - Weekday AM Peak Hour, PM - Weekday PM Peak Hour, MD - Saturday Midday Peak Hour

[1] Significance based on County of Los Angeles Standards

Chapter 6
Congestion Management Program Analysis

This chapter presents an analysis of the regional transportation facilities in the vicinity of the Project Site, in accordance with the procedures outlined in the CMP.

TRAFFIC IMPACT ANALYSIS (TIA) GUIDELINES

The CMP requires that TIAs be performed on three types of facilities:

- Arterial Intersections
- Mainline Freeway Segments
- The Public Transit System

The CMP identifies specific arterial and freeway mainline locations for analysis.

Arterial Monitoring Intersection TIA Guidelines

The CMP requires that a TIA be performed for all CMP arterial monitoring intersections where a project would add 50 or more trips during either the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 50 trips to an arterial monitoring intersection. The CMP analysis uses the same ICU methodology referenced in earlier chapters for City intersections to determine intersection V/C ratio and LOS. A significant impact requiring mitigation occurs if project traffic causes an incremental increase in intersection V/C ratio of 0.02 or greater to a facility projected to operate at LOS F (V/C > 1.00) after the addition of project traffic.

Mainline Freeway Monitoring Location TIA Guidelines

The CMP requires that a TIA be performed for all CMP mainline freeway monitoring locations where a project would add 150 or more trips (in either direction) during the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 150 trips to a mainline freeway monitoring location (in either direction) during either the weekday morning or afternoon peak hour. The CMP analysis uses a demand-to-capacity (D/C) ratio to determine facility LOS based on capacity identified in Appendix A of the CMP. Similar to arterial monitoring intersections, a significant impact requiring mitigation occurs if project traffic causes an incremental increase in freeway segment D/C ratio of 0.02 or greater to a facility projected to operate at LOS F (D/C > 1.00) after the addition of project traffic.

Transit Impact Review Guidelines

The CMP requires that a transit system analysis be performed to determine whether a project would increase transit ridership beyond the current capacity of the transit system.

ARTERIAL MONITORING STATION ANALYSIS

The CMP identifies two CMP arterial monitoring intersections within the Study Area:

- Atlantic Boulevard & Whittier Boulevard (1.0 miles northwest of the Project site)
- Garfield Boulevard & Whittier Boulevard (1.50 miles northeast of the Project site)

The number of Project trips expected at each arterial monitoring intersection is:

Intersection	Peak Hour Trips		Requires CMP Analysis?
	AM	PM	
Atlantic Boulevard & Whittier Boulevard	18	47	No
Garfield Boulevard & Whittier Boulevard	12	21	No

Based on the incremental Project trip generation and distribution described in Chapter 3, the Project will not add 50 or more new trips to any of the arterial monitoring intersections during any analyzed peak hours. According to the CMP traffic impact criteria, the Project traffic would not cause a significant impact at these intersections and no further analysis is required.

FREEWAY SEGMENT ANALYSIS

The nearest mainline freeway monitoring location to the Project site is I-5 at Ferris Avenue, approximately 1.0 miles northwest of the Project Site. As shown in Table 17, based on the incremental Project trip generation estimates, the Project will add 65 northbound trips and 123 southbound trips in the morning peak hour and 248 northbound trips and 222 southbound trips in the afternoon peak hour. The Project is anticipated to add more than 150 new trips per hour to this location in at least one direction during at least one analyzed peak hours. Therefore, further analysis of the CMP freeway monitoring station is required.

As shown in Tables 20 and 21, the addition of Project traffic would not cause the D/C ratio to increase by 0.02 and worsen the operating conditions at the freeway mainline segment to LOS F during any of the analyzed peak hours. Therefore, the Project would not result in a significant impact on I-5 at Ferris Avenue based on CMP criteria.

Additional mainline freeway analyses is provided in Chapter 7 and Appendix F, which summarize the Caltrans analyses of Project impacts.

REGIONAL TRANSIT IMPACT ANALYSIS

Section B.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle occupancy (AVO) factor of 1.4 in order to estimate the number of person trips to and from the Project. The CMP guidelines estimate that approximately 3.5% of total Project person trips may use public transit to travel to and from the Project site.

As shown in Tables 7A and 7B, the Project is anticipated to generate a total of 626 net new morning peak hour vehicle trips, including 342 vehicle trips to/from The Citadel and 284 vehicle trips to/from the 10-acre parcel, and 1,564 net new afternoon peak hour vehicle trips, including 1,294 vehicle trips to/from The Citadel and 270 vehicle trips to/from the 10-acre parcel. Assuming an AVO of 1.4, the Project's vehicle trips result in an estimated increase of 876 person trips during the morning peak hour and 2,190 person trips during the afternoon peak hour. Using the 3.5% mode split suggested in the CMP, the Project would generate approximately 31 net new transit person trips during the morning peak hour and 77 net new transit person trips during the afternoon peak hour. As detailed in Chapter 2, the study area is served by numerous established transit routes. As shown in Tables 22A and 22B, the total residual capacity of the analyzed transit lines within the Study Area during the morning and afternoon peak hours is approximately 1,518 and 1,602 trips, respectively. The Project's morning and afternoon peak hour person transit trips are projected at 31 and 77 trips, respectively, or approximately 5% of the available capacity during the morning or afternoon peak.

As detailed in Table 3, the Project site is served by numerous bus lines. Although the Project (and other related projects) will cumulatively add transit ridership, the Project site, City, and the study area are served by a vast amount of transit service. Overall, the total transit capacity along those routes can accommodate the Project's transit trips during both the morning and afternoon peak hours. Therefore, the Project is not anticipated to result in material regional transit impacts.

Furthermore, Los Angeles County voters approved Measure R, a half-cent sales tax increase for transportation, which has allowed Metro to develop projects to improve the existing transportation system. *2009 Long Range Transportation Plan* (Metro, Adopted 2009) (2009 LRTP), which outlined a range of transit and highway projects throughout Los Angeles County that were aimed to improve mobility and address future growth, is currently in the process of an update to address transportation issues and projects identified by local jurisdictions, Councils of Governments, and transportation agencies. *2014 Short Range Transportation Plan* (Metro, Adopted 2014) identifies projects and programs that will be implemented in accordance with the Project priorities and funding schedules of the 2009 LRTP. It is recognized that with these plans in place, Metro will continue to maintain and expand regional transit service in order to accommodate cumulative demand in the region. Although the Project (and other related

projects) will cumulatively add transit ridership, Metro will continue to maintain and expand regional transit service to accommodate cumulative demand in the region; therefore, cumulative impacts on public transit are considered to be less than significant.

TABLE 20
EXISTING WITH PROJECT CONDITIONS (YEAR 2018)
CMP FREEWAY SEGMENT ANALYSIS

Freeway Segment	Direction	Number of Lanes [a]	Capacity [b]	Existing Volume [c]	Existing D/C Ratio	Level of Service	Project Traffic	Existing with Project Volume [d]	Existing with Project D/C Ratio	Level of Service	Change in D/C [e]	Significant Impact? [f]
Weekday AM Peak Hour												
I-5 at	NB	4	8,000	5,317	0.66	B	65	5,382	0.67	B	0.008	NO
Ferris Avenue	SB	4	8,000	5,615	0.70	C	123	5,738	0.72	C	0.015	NO
Weekday PM Peak Hour												
I-5 at	NB	4	8,000	6,649	0.83	D	248	6,897	0.86	D	0.031	NO
Ferris Avenue	SB	4	8,000	3,952	0.49	A	222	4,174	0.52	A	0.028	NO

Notes

[a] Auxiliary lanes and high-occupancy vehicle (carpool) lanes are not counted toward number of lanes.

[b] Capacity reflects a lane capacity is 2,000 vehicles per hour per lane.

[c] Traffic volumes based on average September 2018 weekday traffic data from Caltrans' *Performance Measurement System.*

[d] Existing with Project traffic volumes reflect Existing traffic volumes plus the Project traffic volume.

[e] Change in demand to capacity (D/C) ratio based on Existing plus Project D/C ratio - Existing D/C ratio.

[f] Significant impact based on freeway segment analysis as outlined in Appendix D, subsection D.8.3 and corresponding significance thresholds outlined in subsection D.9.1 of *2010 Congestion Management Program* , (Metro, 2010). As described therein, an impact is deemed significant if the change in D/C ratio >= 0.02, causing or worsening LOS F (D/C >= 1.0). The Project would not result in a signfiicant impact at the CMP freeway monitoring station.

TABLE 21
CMP FREEWAY SEGMENT ANALYSIS
FUTURE WITH PROJECT CONDITIONS (YEAR 2025)

Freeway Segment	Direction	Number of Lanes [a]	Capacity [b]	Existing Volume [c]	Related Projects Traffic	Future without Project Volume [d]	Future without Project D/C Ratio	Level of Service	Project Traffic	Future with Project Volume [e]	Future with Project D/C Ratio	Level of Service	Change in D/C [f]	Significant Impact? [g]
Weekday AM Peak Hour														
I-5 at	NB	4	8,000	5,317	18	5,526	0.69	B	65	5,591	0.70	B	0.008	NO
Ferris Avenue	SB	4	8,000	5,615	58	5,875	0.73	C	123	5,998	0.75	C	0.015	NO
Weekday PM Peak Hour														
I-5 at	NB	4	8,000	6,649	80	6,968	0.87	D	248	7,216	0.90	E	0.031	NO
Ferris Avenue	SB	4	8,000	3,952	38	4,132	0.52	A	222	4,354	0.54	A	0.028	NO

Notes
[a] Auxiliary lanes and high-occupancy vehicle (carpool) lanes are not counted toward number of lanes.
[b] Capacity reflects a lane capacity is 2,000 vehicles per hour per lane.
[c] Traffic volumes based on average September 2018 weekday traffic data from Caltrans' *Performance Measurement System.*
[d] Future without Project traffic volumes reflect the Existing traffic volumes (Table 17) added to ambient traffic growth and Related Projects traffic growth.
[e] Future with Project traffic volumes reflect Future without Project traffic volumes plus the Project traffic volume.
[f] Change in demand to capacity (D/C) ratio based on Future with Project D/C ratio - Future without Project D/C ratio.
[g] Significant impact based on freeway segment analysis as outlined in Appendix D, subsection D.8.3 and corresponding significance thresholds outlined in subsection D.9.1 of *2010 Congestion Management Program* (Metro, 2010). As described therein, an impact is deemed significant if the change in D/C ratio >= 0.02, causing or worsening LOS F (D/C >= 1.0). The Project would not result in a signfiicant impact at the CMP freeway monitoring station.

TABLE 22A
TRANSIT SYSTEM CAPACITY WITHIN PROJECT VICINITY - MORNING PEAK HOUR

Provider, Route, and Stop Location		Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load					
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Metro Bus Service										
18	Garfield Avenue at Flotilla Street	50	8	5	5	3	45	47	225	282
62	Telegraph Avenue at Citadel Drive	50	34	23	27	19	23	31	69	93
66	Garfield Avenue at Flotilla Street	50	7	8	3	3	47	47	141	141
258	Telegraph Avenue at Atlantic Boulevard	50	30	32	24	17	26	33	52	33
260	Atlantic Boulevard at Goodrich Blvd	50	42	24	29	16	21	34	84	136
762	Atlantic Boulevard at Goodrich Blvd	75	39	22	29	13	46	62	138	124
City of Commerce Municipal Bus										
Red, Green, Orange, Yellow		50	*Ridership data currently not available*							
Montebello Bus Line										
30, 50		50	*Ridership data currently not available*							
								Total Bus Service Remaining Capacity		**1,518**

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

[a] Capacity assumptions:

Metro Regular Bus - 40 seated / 50 standing.

Metro Articulated Bus (for Rapid routes) - 66 seated / 75 standing.

City of Commerce Municipal Bus - 50 seated/standing.

Montebello Bus - 50 seated/standing.

[b] Ridership information based on data from Metro for October 2017, unless otherwise noted.

TABLE 22B
TRANSIT SYSTEM CAPACITY WITHIN PROJECT VICINITY - AFTERNOON PEAK HOUR

Provider, Route, and Stop Location		Capacity per Trip [a]	Peak Hour Ridership [b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load					
			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Metro Bus Service										
18	Garfield Avenue at Flotilla Street	50	3	14	2	6	48	44	336	352
62	Telegraph Avenue at Citadel Drive	50	30	39	22	29	28	21	56	63
66	Garfield Avenue at Flotilla Street	50	7	8	3	4	47	46	141	138
258	Telegraph Avenue at Atlantic Boulevard	50	31	35	18	24	32	26	64	26
260	Atlantic Boulevard at Goodrich Blvd	50	31	33	20	26	30	24	120	96
762	Atlantic Boulevard at Goodrich Blvd	75	24	36	19	26	56	49	112	98
City of Commerce Municipal Bus										
Red, Green, Orange, Yellow		50	*Ridership data currently not available*							
Montebello Bus Line										
30, 50		50	*Ridership data currently not available*							
								Total Bus Service Remaining Capacity		**1,602**

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

[a] Capacity assumptions:

Metro Regular Bus - 40 seated / 50 standing.

Metro Articulated Bus (for Rapid routes) - 66 seated / 75 standing.

City of Commerce Municipal Bus - 50 seated/standing.

Montebello Bus - 50 seated/standing.

[b] Ridership information based on data from Metro for October 2017, unless otherwise noted.

Chapter 7
Caltrans Analysis

This chapter presents an analysis of Caltrans facilities, including freeway mainline segments, Caltrans intersections, and off-ramp queuing.

VEHICLE MILES TRAVELED

State of California Senate Bill No. 743

State of California Senate Bill 743 (Steinberg, 2013) (SB 743), made effective in January 2014, requires the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis will shift from driver delay to vehicle miles traveled (VMT) reduction of greenhouse gas emissions (GHG) and creation of multimodal networks and promotion mixed-use developments. Although originally scheduled to be fully implemented in guidelines by January 1, 2016, an extension has allowed cities more time to establish an analysis methodology. To better align with the State's multimodal transportation and environmental action goals, Caltrans is also pursuing VMT as a metric of Project impacts, which is outlined in *Local Development – Intergovernmental Review Program Interim Guide* (Caltrans, Approved September 2016) (Caltrans Interim Guide).

The Project characteristics (e.g., its complementary mixture of land uses, location, access to other nearby destinations, TDM Plan requirements, etc.) would encourage non-auto modes of transportation such as bicycling, carpool, vanpool, transit, etc. and would, therefore, reduce VMT to the Project site and associated transportation-related GHG emissions. Further, the Project would be located within an area that offers access to other nearby retail and entertainment destinations. The combined effects of these factors would reduce the Project's anticipated vehicle trips and VMT and encourage walking and non-auto forms of transportation and transit ridership, which results in corresponding reductions in transportation-related emissions.

CALTRANS

The Caltrans Interim Guide suggests the approach with which Caltrans can recommend improvements to enhance pedestrian safety and increase pedestrian accessibility to help meet the goals and targets of the *Caltrans Strategic Management Plan 2015-2020* (Caltrans, March 2015) and *California Transportation Plan 2040* (Caltrans, June 2016). The Caltrans Interim Guide directs lead agencies to consider "multi-modal solutions from existing regional transportation plans, regional plans, transit plans, bicycle plans, and pedestrian plans." A supplemental analysis was conducted using HCM methodology and is summarized below, with supporting data in Appendix F.

Analyzed Facilities

The analyses conducted on Caltrans facilities included freeway mainline segments, signalized and unsignalized ramp intersections, and off-ramp queuing.

Four freeway mainline segments on I-5 and two freeway mainline segments on I-710 were analyzed using HCM methodology to determine density, speed, and LOS. Six signalized intersections and one unsignalized intersection located at freeway ramps and under partial Caltrans jurisdiction were analyzed using HCM methodology to identify average vehicle delay and LOS. Six freeway off-ramps were analyzed for ramp queue lengths using Vistro software to estimate queues.

The technical analyses of Caltrans facilities, along with LOS worksheets for each type of analysis, are provided in Appendix F.

Chapter 8
Site Access and Circulation

This chapter presents an analysis of the Project site access and circulation.

THE CITADEL SITE ACCESS AND CIRCULATION

Vehicular access to The Citadel would be provided via two existing signalized driveways along Telegraph Road at Citadel Drive and Gaspar Avenue. As part of the Project, Gaspar Avenue would provide continuous north-south access between Telegraph Road and Smithway Street and operate as an internal street through the Project Site. Additional access to The Citadel is also provided at two unsignalized driveways along Telegraph Road, east of Gaspar Avenue, two unsignalized driveways along Hoefner Avenue, and two unsignalized driveways along Smithway Street, west of Gaspar Avenue.

Five primary access points to The Citadel were analyzed as study intersections. The analysis detailed in Chapter 4 showed that all five primary access points to The Citadel are anticipated to operate at LOS C or better under Future with Project Conditions. The access system is adequate to serve the anticipated Project traffic levels.

While congestion is experienced during the peak holiday shopping period between Thanksgiving and Christmas, The Citadel employs traffic control officers to assist drivers entering and leaving the site. This additional traffic management is expected to continue with the Project elements in place.

10-ACRE SITE ACCESS AND CIRCULATION

Vehicular access to the 10-acre parcel would be provided via one new full-access driveway along Washington Boulevard, directly aligning the existing driveway to the Costco. Additionally, one new right-turn in/out driveway would be provided along Telegraph Road.

Signalized Driveway Operational Analysis

The full access driveway on Washington Boulevard currently provides full access to the existing Costco development on the east side of Washington Boulevard. The Project will construct its full access driveway directly across from this existing driveway. As both driveways will operate as full access driveways, left-turning volumes in and out of each driveway may warrant the installation of a traffic signal at this location. As such, a signal warrant analysis for peak hour traffic volumes was conducted at this intersection. The results of the signal warrant analysis show that installation of a traffic signal at this location will be warranted based on traffic volumes when the Project is completed and occupied. Therefore, it is recommended that the Project install a traffic signal at this location to ensure adequate access is provided for both the Project and the existing Costco development. Signal warrant analysis worksheets are provided in Appendix D.

To analyze the driveway operations at the proposed signal along Washington Boulevard, the northbound left-turn pocket into the driveway was assessed for adequacy. Currently, a center median of approximately 115 feet is striped along Washington Boulevard and is followed by a landscaped median to the intersection at Telegraph Road. The length of the striped center median is assumed to provide the minimum storage length for the proposed northbound left-turn pocket into the 10-acre parcel. The projected queue length was estimated using Sim Traffic, which reports the 95th percentile queue length, in feet, for each approach lane at an intersection. The queue length report for the Future with Project Conditions during Saturday midday peak hour, the highest peak hour of the three analyzed peak hours, is provided in Appendix G.

Under Future with Project Conditions, the average and 95th percentile northbound left-turn queue lengths were calculated at 104 feet and 136 feet, respectively, over the course of the Saturday midday peak hour. Thus, a left-turn storage length of at least 136 feet would be

necessary to meet the 95th percentile queue. This can be satisfied be removing the landscaped median and restriping the center lane along Washington Boulevard. With this improvement, Project traffic is not anticipated to result in any queue backup onto the adjacent street.

Internal Site Circulation

The internal circulation roadway within the 10-acre parcel should be constructed with a minimum three travel lanes – one through lane in each direction and a center left-turn lane along its entire length. This will allow vehicles to turn into the parking lots serving the various building pads within the development. The portion of the internal roadway from Washington Boulevard northwesterly to the first internal driveway into the fast food building sites should be built with four lanes, two inbound and two outbound lanes. Between the first internal driveway and the proposed signalized intersection at Washington Boulevard, the inbound lanes should be striped for one right-turn lane and one optional left and through lane. In addition, the first internal driveway should be located at a minimum of 150 feet west of the proposed signalized intersection. The outbound lanes at Washington Boulevard should be striped for a right-turn-only lane and a shared left-turn/through lane.

Chapter 9
Summary and Conclusions

This report documents the assumptions, methodologies, and findings of a study conducted to evaluate the potential traffic and parking impacts of The Citadel and nearby 10-acre parcel (together, the Project). The following summarizes the findings of the study:

- The Project proposes construction of an additional 520,466 sf of retail GLA, 770 hotel rooms within four hotel buildings, and an entertainment center, which could potentially host a 102-bay Topgolf center, on the existing The Citadel site. In addition, the Project proposes construction of approximately 55,015 sf of light industrial use, 13,400 sf of restaurant space, and 70,000 sf of office GLA an empty 10-acre parcel. The Project will provide a total of 6,178 parking spaces for the existing and proposed uses on The Citadel site and a total of 348 parking spaces for the proposed uses on the 10-acre parcel. The Project is anticipated to open in 2022 and be fully operational by Year 2025.

- A total of 29 study intersections, including 23 signalized and six unsignalized, were analyzed under weekday morning and afternoon peak hours, as well as the Saturday midday peak hour.

- Under Existing Conditions (Year 2018), 23 of the 29 study intersections, including 19 signalized and four unsignalized, operate at LOS D or better during the analyzed peak hours.

- Under Future without Project Conditions (Year 2025), 17 of the 29 study intersections, including 13 signalized and four unsignalized, are anticipated to operate at LOS D or better during the analyzed peak hours.

- Under Future with Truck Traffic without Project Conditions (Year 2025), 12 of the 23 signalized study intersections are anticipated to operate at LOS D or better during the analyzed peak hours.

- Under Existing with Project Conditions (Year 2018), using the City criteria for determining the significance of a traffic impact, the Project would result in a significant impact at 10 of the 23 signalized study intersections during at least one of the analyzed peak hours prior to the application of any mitigation measures.

- Under Future with Project Conditions (Year 2025), using the City criteria for determining the significance of a traffic impact, the Project would result in a significant impact at 12 of the 23 signalized study intersections during at least one of the analyzed peak hours prior to the application of any mitigation measures.

- Under Future with Truck Traffic with Project Conditions (Year 2025), using the City criteria for determining the significance of a traffic impact, the Project would result in a significant impact at 13 of the 23 signalized study intersections during at least one of the analyzed peak hours prior to the application of any mitigation measures.

- The Citadel already participates in a TDM program that involves running its own buses to pick up customers from downtown Los Angeles and area hotels. The Project would commit to continuing this program and to developing additional TDM measures that target the overall reduction of trips to/from The Citadel by 10%. A formal TDM Program would be submitted for the approval of the City Director of Public Works prior to issuance of the Certificate of Occupancy for the retail portion of the Project.

- TSM contributions by the Project would help pay for traffic signal system enhancements in the study area. The City should consider a program that allows a Traffic Impact Fee to be paid by new development to pay for TSM improvements in the short-term and new access routes to/from the study area in the long-term.

- A Project contribution to assist the City in the implementation of the Bicycle Master Plan could be considered part of a Public Benefits Program for the City.

- The significant impact at Atlantic Boulevard & Telegraph Road would be fully mitigated by reconstructing the east side of the Atlantic Boulevard northbound approach to provide four northbound lanes, including two left-turn lanes, one shared left/right-turn lane and one exclusive right-turn lane. Should this improvement be determined to be infeasible during the review process, the impact at the intersection would remain and be considered significant and unavoidable.

- The impact at I-5 Northbound Ramps/Camfield Avenue & Telegraph Road would be fully mitigated by widening the south side of the Telegraph Road eastbound approach to provide four eastbound lanes, including one left-turn lane, two through lanes, and one through/right-turn lane. Should this improvement be determined to be infeasible during the review process, the impact at the intersection would remain and be considered significant and unavoidable.

- The impact at I-5 Northbound Ramps/Commerce Casino & Telegraph Road would be fully mitigated by widening the north side of the Telegraph Road westbound approach to provide five westbound lanes, including two left-turn lanes, two through lanes, and one through/right-turn lane. In addition, I-5 Northbound On-Ramp would require widening and restriping to provide two receiving lanes and operate with a controlled metered on-ramp. Should this improvement be determined to be infeasible during the review process, the impact at the intersection would remain and be considered significant and unavoidable.

- Under Future with Truck Traffic with Project Conditions (Year 2025), additional physical improvement measures are required at the intersection of Washington Boulevard & Telegraph Road. The impact at Washington Boulevard & Telegraph Road would be fully mitigated by widening the east side of the Washington Boulevard northbound approach to provide five northbound lanes, including two left-turn lanes, two through lanes, and one right-turn lane. Should this improvement be determined to be infeasible during the review process, the impact at the intersection would remain and be

considered significant and unavoidable under Future with Truck Traffic with Project Conditions (Year 2025).

- With implementation of the full mitigation program, including TDM program, TSM program, and physical improvements at the three study intersections, the Project is not anticipated to result in significant impacts at any of the 23 signalized study intersections. In addition, the Project is not anticipated to result in any neighborhood intrusion impacts.

- A signal warrant analysis was conducted for the intersections of Hoefner Avenue & Telegraph Road (Intersection #13) and I-5 Southbound Off-Ramps & Bandini Boulevard (Intersection #28). Results showed that Hoefner Avenue & Telegraph Road meets the minimum peak hour traffic volume threshold of Warrant 3 and I-5 Southbound Ramps & Bandini Boulevard does not satisfy the signal warrant under Future with Project Conditions.

- Analysis of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the Project would not have a significant impact on the regional arterial, freeway, or transit systems.

- Caltrans may request a fair share payment for I-5 improvements based on the Project's addition of traffic to long-range cumulative freeway conditions.

- To provide adequate access for both the 10-acre parcel and the existing Costco development across Washington Boulevard, it is recommended that the Project install a traffic signal at the full access driveway on Washington Boulevard. Signal warrant analysis shows that future traffic volumes will warrant the installation of a traffic signal at this location.

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