APPENDIX H
TECHNICAL ANALYSES FOR MAINTENANCE FACILITY SITE

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TECHNICAL ADDENDUM

Date: November 23, 2010

To: Mike Sullivan, Terry A. Hayes Associates

cc: Dennis Henderson, Parsons Brinckerhoff

From: John Stutsman and Anjum Bawa

Subject: ***Traffic Impact Assessment of Additional Candidate Sites Crenshaw/LAX Transit Corridor LRT Maintenance Facility***

SM10-2179.03

This technical addendum summarizes the results of a trip generation assessment and level of service (LOS) analysis conducted by Fehr & Peers for two additional sites selected by Los Angeles County Metropolitan Transportation Authority (Metro) as potential candidate sites for a light rail transit (LRT) maintenance facility a to serve the Crenshaw/LAX Transit Corridor. These two sites are in addition to the four candidate sites which analyzed in our July 1, 2010 technical memorandum.

PROJECT DESCRIPTION

As described in the July 1, 2010 technical memorandum, the project will involve the construction of a maintenance facility along the proposed Crenshaw/LAX LRT Line at one of the two candidate sites. Both candidate maintenance facility sites currently contain property that would need to be acquired and/or facilities that may need to be relocated should that site be chosen. The proposed maintenance facility would be used to store, maintain, make minor repairs, and clean light rail vehicles. The site would include an administrative office building; maintenance building for daily servicing, preventive maintenance, repairs, and parts storage; a paint and body shop; and cleaning facilities.

The site will be designed to handle a 60-vehicle fleet. Per information provided by Metro, approximately 75 to 80 employees would be present on-site during a typical shift with approximately 40% overlap of staff on shift changes. This overlap of shifts would occur only for approximately 30 to 45 minutes during shift changes when employees starting their shift arrive at the site and employees ending their shift leave the site. Some visitor traffic in the form of contract employees and vendors including approximately one delivery truck a day and a garbage removal truck two or three times during a typical week are expected. The proposed maintenance facility is expected to be built and operational by Year 2018.

PROPOSED CANDIDATE SITES

Both candidate sites are located near the I-405 Freeway between Rosecrans Avenue and Manhattan Beach Boulevard. Following is a brief description of the two candidate sites with respect to their specific location and existing operations:

- **Site #17 – Marine/Redondo Beach Alternative** – This site is located at 4000 Redondo Beach Avenue along the east side of Redondo Beach Avenue between Marine Avenue and Manhattan Beach Boulevard. The site is currently used by DHL Global Forwarding Center (courier facility).

- **Division 22 Northern Expansion Alternative –** This site is located at 14680 Aviation Boulevard, east of 33rd Street and just south of Rosecrans Avenue. The site is currently used by US Storage Hawthorne as a mini storage/warehouse facility.

Figure 1 shows the locations of the two candidate sites and the surrounding roadway network.

Fehr & Peers conducted a review of major intersections in close proximity to the two candidate sites. The following intersections were analyzed for each of the two candidate sites:

Site #17 – Marine/Redondo Beach Alternative
1. Aviation Boulevard and Marine Avenue
2. Redondo Beach Avenue and Marine Avenue
3. Inglewood Avenue and Marine Avenue
4. Inglewood Avenue and I-405 Northbound Ramps
5. Inglewood Avenue and I-405 Southbound Ramps
6. Redondo Beach Avenue and Manhattan Beach Boulevard
7. Aviation Boulevard and Manhattan Beach Boulevard

Division 22 Northern Expansion Alternative
1. Aviation Boulevard and Marine Avenue
2. Redondo Beach Avenue and Marine Avenue
3. Rosecrans Avenue and Aviation Boulevard
4. Rosecrans Avenue and I-405 Northbound Ramps

EXISTING TRAFFIC CONDITIONS

Intersection vehicular turning movement count data for weekday morning and evening peak periods was obtained from previous traffic studies prepared for projects in the vicinity of the proposed sites and collected in years 2007 and 2008. A comparative analysis of historic traffic count data at key intersections indicated negligible to negative growth in traffic within the sub-region. Therefore, no growth adjustment was applied to traffic counts from Year 2007/2008 to estimate Year 2010 traffic volumes.

A summary of traffic volumes at the aforementioned intersections is provided in Attachment A. Table 1 provides a summary of existing levels of service (LOS) for these above study intersections. As shown in Table 1, out of the seven intersection analyzed for Site #17 – Marine/Redondo Beach Alternative, five intersections currently operate at a level of service (LOS) D or better during both peak hours while the two intersections of Redondo Beach Avenue and Aviation Boulevard along Manhattan Beach Boulevard currently operate at a LOS E or F during one of the two analyzed peak hours.

Out of the four intersections analyzed under Division 22 Northern Expansion Alternative site, only the intersection of Rosecrans Avenue and Aviation Boulevard currently operates at a LOS F during the evening peak hour. All other intersection currently operate at a LOS D or better during both analyzed peak hours.

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FUTURE TRAFFIC CONDITIONS

To evaluate the potential impacts of the proposed project on the surrounding street system, it was necessary to develop estimates of future traffic conditions in the area both without and with the proposed project's traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project. These forecasts included traffic increases due to general regional ambient traffic growth. These projected traffic volumes, identified herein as the cumulative base conditions, represent the future study year conditions without the proposed project. The traffic generated by the proposed project was then estimated and assigned to the surrounding street system. The project traffic was added to the cumulative base to form the cumulative plus project traffic conditions, which were analyzed to determine the incremental traffic impacts attributable to the project itself.

Future (Year 2018) Base without Project Traffic Projections

The traffic volume growth reflected in the development of the future base without project conditions takes into account the expected growth in traffic over existing conditions due to the effect of overall growth and development outside the study area. Based on historic trends and projected growth in the region over the next eight years, it was established that an ambient growth rate factor of 1% per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by the Year 2018. An adjustment of 8% was applied to existing weekday peak hour traffic counts to reflect the effect of ambient growth by the Year 2018. The resulting future (Year 2018) base traffic volumes are provided in Attachment A.

Future (Year 2018) plus Project Traffic Projections

The traffic projections for the proposed project were developed using three steps: estimating the trip generation of the project, determining trip distribution, and assigning the project traffic to the roadway system.

Project Trip Generation

As described in our July 1, 2010 technical memorandum, trip generation estimates for the project were prepared using empirical data collected at an existing LRT maintenance facility, MTA Division 22 serving the Metro Green Line at 14724 Aviation Boulevard in Hawthorne. Classified driveway traffic data was collected at this maintenance facility using a video camera for a 24-hour period. Data related to number of passenger cars and trucks going in and out of the site was collected on a typical weekday. This empirical data can be found in Attachment C. A passenger car equivalent (PCE) factor of 2.0 was used to convert truck trips in the PCEs for the purpose of trip generation estimates. The truck PCE trips were combined with the passenger car vehicles trips to arrive at total inbound/outbound daily trips. Figure 2 shows trips generated by MTA Division 22 by each hour of the day.

Using the above empirical data, weekday morning and evening peak hour trip generation of the survey facility was determined. As shown in Table 2, Division 22 currently generates a total of 13 trips in the morning peak hour (7 inbound/6 outbound) and 11 trips during the evening peak hours (6 inbound/5 outbound).

MTA Division 22 serves a total of 39 Light Rail Vehicles (LRVs). The proposed project is expected to serve a total of 60 LRVs. Trip generation for the proposed facility was estimated by applying to the MTA Division 22 trips a factor proportional to the size of the facility in terms of number of LRVs served. Thus, a

factor of 1.54 was applied to Division 22 traffic count data including both passenger cars and trucks to calculate trip generation for the proposed Crenshaw/LAX Transit Corridor LRT maintenance facility.

After applying a PCE factor of 2.0 to convert truck trips into PCEs, as shown in Table 3, the proposed project is estimated to generate a total of 18 trips during the morning peak hour (8 inbound/10 outbound) and 20 trips during the evening peak hours (11 inbound/9 outbound) Figure 3 shows a chart of the proposed project trip projections.

Consistent with the approach in our July 1, 2010 technical memorandum, it is assumed that the existing uses on the analyzed sites will most likely relocate within the same sub-region. Therefore, to be conservative, no trip credit was taken for existing uses as part of project trip generation estimates.

Project Traffic Distribution

The geographic distribution of trips generated by the project was dependant on location of residential areas from which the project will draw home-work trips; location of each of the four candidate sites with respect to access to regional freeway and roadway network; and level of accessibility of routes to and from the proposed candidate sites. On a sub-regional level, approximately 70% of the trips were estimated to use the freeways and 30% on the major roadways adjacent to the four analyzed sites.

Project Traffic Assignment

The traffic to be generated by the proposed project at each of the analyzed sites was assigned to the street network using the distribution described above. The proposed project traffic volumes were added to future (Year 2018) base traffic projections, resulting in a future (Year 2018) plus project morning and evening peak hour traffic volumes. Project Only and Future plus Project traffic volumes are presented in Attachment A.

INTERSECTION TRAFFIC IMPACT ANALYSIS

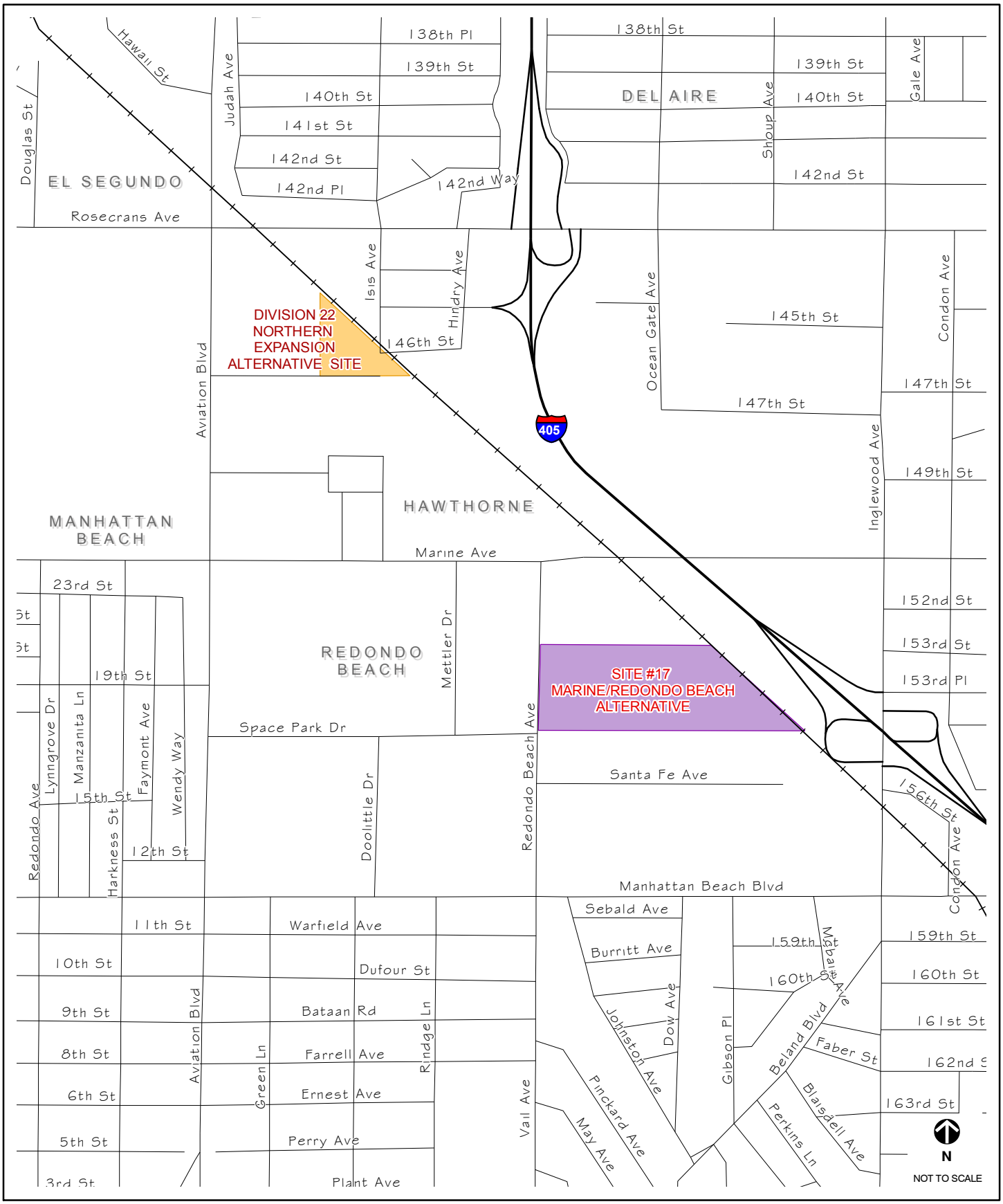
The traffic impact analysis compares the projected LOS at each study intersection under the cumulative base and cumulative plus project conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significant criteria established by LADOT.

Criteria for Determination of Significant Traffic Impact

Table 4 presents a summary of established threshold criteria used to determine whether the proposed project would have a significant traffic impact at a study intersection. The application of the criteria was dependant on the city with jurisdiction over the study intersection. Some study intersections had shared jurisdiction of more than one city.

PROJECT IMPACTS AND CONCLUSION

Table 5 shows, using the criteria for determination of significant impacts, the proposed project would not create significant traffic impacts at any of the study intersections during the morning or the evening peak hours under the two additional site alternatives studied. Therefore, no mitigation measures would be required.



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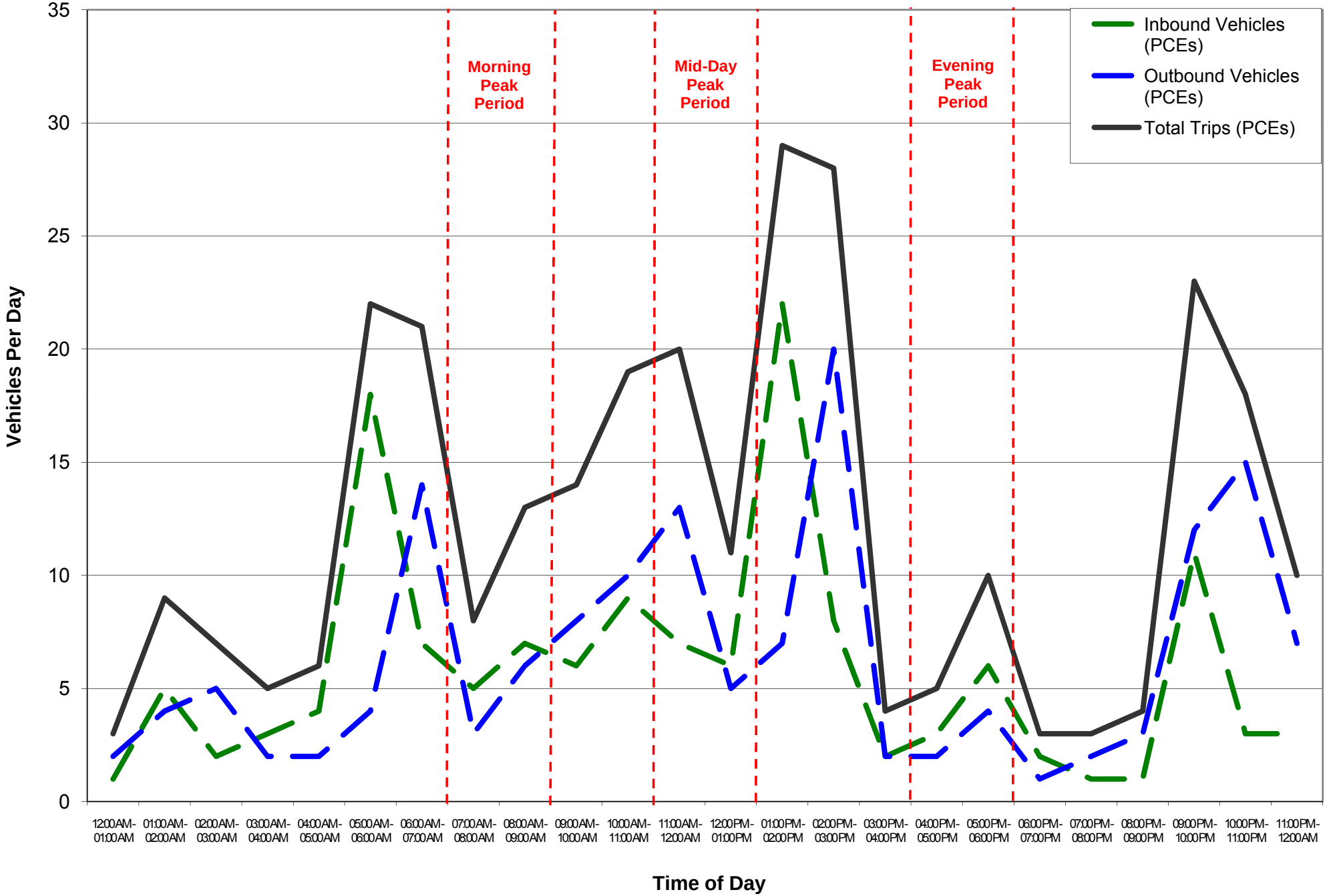
LOCATION OF ANALYZED SITES

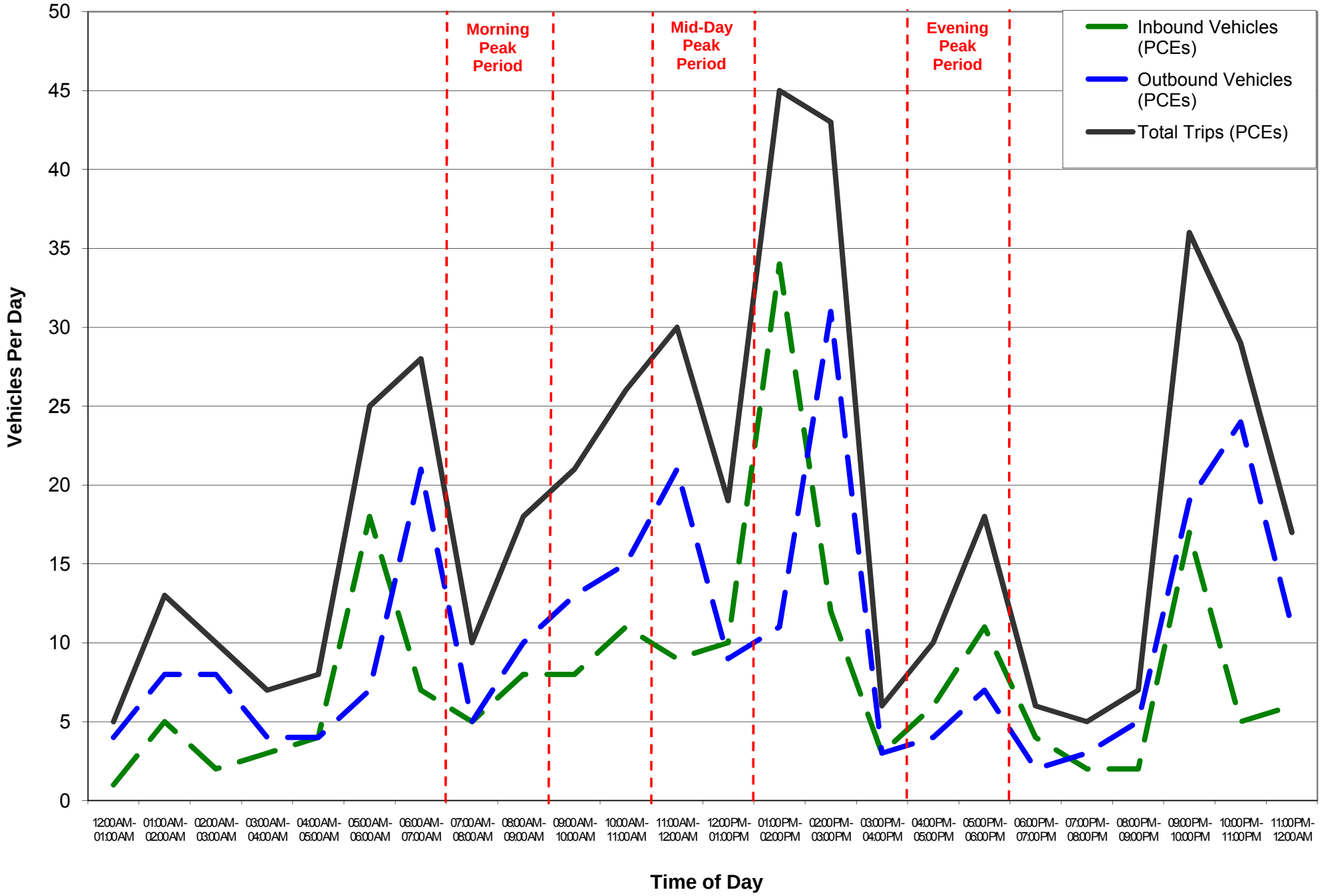
FIGURE 1

FIGURE 2
MTA DIVISION 22 TRAFFIC COUNT DATA



Traffic count conducted on Thursday June 10 2010 at MTA Division 22 Metro Green Line O & M Facility located at 14724 Aviation Blvd Hawthorne, CA
PCEs - Passenger Car Equivalent

FIGURE 3
CRENSHAW/LAX TRANSIT CORRIDOR LRT MAINTAINANCE FACILITY TRIP GENERATION PROJECTION



Traffic projections based on Traffic counts collected at MTA Division 22 Metro Green Line O & M Facility located at 14724 Aviation Blvd, Hawthorne, CA
PCEs - Passenger Car Equivalent

TABLE 1

EXISTING CONDITIONS			
Intersection	Peak	V/C	LOS
Site #17 – Marine/Redondo Beach Alternative			
1. Aviation Blvd/Marine Ave [1][3][4]	AM	0.879	D
	PM	0.890	D
2. Redondo Beach Ave/Marine Ave [3]	AM	0.532	A
	PM	0.820	D
3. Inglewood Ave/Marine Ave [2][3]	AM	0.872	D
	PM	0.867	D
4. Inglewood Ave/I-405 NB Ramps [2][3]	AM	0.722	C
	PM	0.748	C
5. Inglewood Ave/I-405 SB Ramps [3]	AM	0.748	C
	PM	0.850	D
6. Redondo Beach Ave/Manhattan Beach Blvd [3]	AM	0.914	E
	PM	0.836	D
7. Aviation Blvd/Manhattan Beach Blvd [3][4]	AM	0.866	D
	PM	1.073	F
Division 22 Northern Expansion Alternative			
1. Aviation Blvd/Marine Ave [1][3][4]	AM	0.879	D
	PM	0.890	D
2. Redondo Beach Ave/Marine Ave [3]	AM	0.532	A
	PM	0.820	D
3. Rosecrans Ave/Aviation Blvd [1][4][5]	AM	0.750	C
	PM	1.011	F
4. Rosecrans Ave/I-405 NB Ramps [1]	AM	0.774	C
	PM	0.848	D

Note: Intersection Capacity Utilization (ICU) methodology was used to calculate level of service for the above intersection.

[1] - Intersection is under City of Hawthorne jurisdiction

[2]- Intersection is under City of Lawndale jurisdiction

[3]- Intersection is under City of Redondo Beach jurisdiction

[4]- Intersection is under City of Manhattan Beach jurisdiction

[5]- Intersection is under City of El Segundo jurisdiction

Please note that some of the above intersection may have shared jurisdiction

TABLE 2
TRAFFIC DATA FROM MTA DIVISION 22 SURVEY

Traffic counts data by Each Hour of the Day

Time Period	Inbound (PCEs) [1]	Outbound (PCEs) [1]	Total (PCEs) [1]
12:00 AM - 01:00 AM	1	2	3
01:00 AM - 02:00 AM	5	4	9
02:00 AM - 03:00 AM	2	5	7
03:00 AM - 04:00 AM	3	2	5
04:00 AM - 05:00 AM	4	2	6
05:00 AM - 06:00 AM	18	4	22
06:00 AM - 07:00 AM	7	14	21
07:00 AM - 08:00 AM	5	3	8
08:00 AM - 09:00 AM	7	6	13
09:00 AM - 10:00 AM	6	8	14
10:00 AM - 11:00 AM	9	10	19
11:00 AM - 12:00 AM	7	13	20
12:00 PM - 01:00 PM	6	5	11
01:00 PM - 02:00 PM	22	7	29
02:00 PM - 03:00 PM	8	20	28
03:00 PM - 04:00 PM	2	2	4
04:00 PM - 05:00 PM	3	2	5
05:00 PM - 06:00 PM	6	4	10
06:00 PM - 07:00 PM	2	1	3
07:00 PM - 08:00 PM	1	2	3
08:00 PM - 09:00 PM	1	3	4
09:00 PM - 10:00 PM	11	12	23
10:00 PM - 11:00 PM	3	15	18
11:00 PM - 12:00 AM	3	7	10
TOTAL	**142**	**153**	**295**

Morning Peak Period	7:00 - 8:00	7:15 - 8:15	7:30 - 8:30	7:45-8:45	**8:00 - 9:00**
Trips (PCEs) [1]	8	9	8	11	**13**

Evening Peak Period	4:00 - 5:00	4:15 - 5:15	4:30 - 5:30	**4:45 - 5:45**	5:00 - 6:00
Trips (PCEs) [1]	5	6	10	**11**	10

	Inbound	**Outbound**	**Total**
Morning Peak Hour Trips (PCEs)	7	6	13
Evening Peak Hour Trips (PCEs)	6	5	11

Note:
Source: 24-hour classified video counts were conducted on Thursday June 10, 2010 at Metro Division 22 Green Line LRT Maintenance Facility located at 14724 Aviation Boulevard, Hawthorne, California.
[1] - A Passenger Car Equivalent (PCE) factor of 2.0 was applied to truck count

TABLE 3
PROPOSED CRENSHAW O & M FACILITY TRIP GENERATION PROJECTIONS

Traffic Projection by Each Hour of the Day [2]

Time Period	Inbound (PCEs) [1]	Outbound (PCEs) [1]	Total (PCEs) [1]
12:00 AM - 01:00 AM	1	4	5
01:00 AM - 02:00 AM	5	8	13
02:00 AM - 03:00 AM	2	8	10
03:00 AM - 04:00 AM	3	4	7
04:00 AM - 05:00 AM	4	4	8
05:00 AM - 06:00 AM	18	7	25
06:00 AM - 07:00 AM	7	21	28
07:00 AM - 08:00 AM	5	5	10
08:00 AM - 09:00 AM	8	10	18
09:00 AM - 10:00 AM	8	13	21
10:00 AM - 11:00 AM	11	15	26
11:00 AM - 12:00 AM	9	21	30
12:00 PM - 01:00 PM	10	9	19
01:00 PM - 02:00 PM	34	11	45
02:00 PM - 03:00 PM	12	31	43
03:00 PM - 04:00 PM	3	3	6
04:00 PM - 05:00 PM	6	4	10
05:00 PM - 06:00 PM	11	7	18
06:00 PM - 07:00 PM	4	2	6
07:00 PM - 08:00 PM	2	3	5
08:00 PM - 09:00 PM	2	5	7
09:00 PM - 10:00 PM	17	19	36
10:00 PM - 11:00 PM	5	24	29
11:00 PM - 12:00 AM	6	11	17
Total	**193**	**249**	**442**

Morning Peak Period	7:00 - 8:00	7:15 - 8:15	7:30 - 8:30	7:45-8:45	**8:00 - 9:00**
Trips (PCEs) [1]	10	12	11	15	**18**

Evening Peak Period	4:00 - 5:00	4:15 - 5:15	4:30 - 5:30	**4:45 - 5:45**	5:00 - 6:00
Trips (PCEs) [1]	10	11	18	**20**	18

	Inbound	**Outbound**	**Total**
Morning Peak Hour Trips (PCEs)	8	10	18
Evening Peak Hour Trips (PCEs)	11	9	20

Note:
[1] - A Passenger Car Equivalent (PCE) factor of 2.0 was applied to truck count

[2] - Metro Division 22 LRT Maintenance Facility currently serves 39-LRV fleet. AM and PM peak hour traffic was adjusted with a factor of 1.54 (60/39) to adjust for the 60 LRV service capacity that are proposed at the Crenshaw/LAX Transit Corridor LRT Maintenance Facility.

TABLE 4
Criteria for Determination of Significant Traffic Impact

LOS	V/C Ratio	Project Related Increase in V/C Ratio
City of Hawthone		
C	>0.7000 < 0.800	Equal to or greater than 0.040
D	>0.8000 < 0.900	Equal to or greater than 0.020
E	>0.900 < 1.000	Equal to or greater than 0.010
F	>1.000	Equal to or greater than 0.010
City of Lawndale [1]		
C	>0.7000 < 0.800	Equal to or greater than 0.040
D	>0.8000 < 0.900	Equal to or greater than 0.020
E	>0.900 < 1.000	Equal to or greater than 0.010
F	>1.000	Equal to or greater than 0.010
City Of Redondo Beach		
C	>0.7000 < 0.800	Equal to or greater than 0.040
D	>0.8000 < 0.900	Equal to or greater than 0.020
E	>0.900 < 1.000	Equal to or greater than 0.010
F	>1.000	Equal to or greater than 0.010
City Of Manhattan Beach		
D	>0.8000 < 0.900	Equal to or greater than 0.020
E	>0.900 < 1.000	Equal to or greater than 0.010
F	>1.000	Equal to or greater than 0.010
City Of El Segundo		
E	>0.900 < 1.000	Equal to or greater than 0.020
F	>1.000	Equal to or greater than 0.020

[1] - For the purpose of this traffic impact analysis, Los Angeles County significant impact criteria was used

TABLE 5

FUTURE LEVEL OF SERVICE AND SIGNIFICANT IMPACT ANALYSIS

CUMULATIVE LEVEL OF SERVICE							
		Without Project		With Project			
Intersection	Peak Hour	V/C or Delay	LOS	V/C or Delay	LOS	Change in V/C	Significant Impact? [1]
Site #17 – Marine/Redondo Beach Alternative							
1. Aviation Blvd/Marine Ave [1][3][4]	AM	0.942	E	0.943	E	0.001	No
	PM	0.953	E	0.953	E	0.000	
2. Redondo Beach Ave/Marine Ave [3]	AM	0.567	A	0.569	A	0.002	No
	PM	0.879	D	0.883	D	0.004	
3. Inglewood Ave/Marine Ave [2][3]	AM	0.935	E	0.935	E	0.000	No
	PM	0.929	E	0.929	E	0.000	
4. Inglewood Ave/I-405 NB Ramps [2][3]	AM	0.772	C	0.773	C	0.001	No
	PM	0.800	C	0.801	D	0.001	
5. Inglewood Ave/I-405 SB Ramps [3]	AM	0.801	D	0.801	D	0.000	No
	PM	0.911	E	0.911	E	0.000	
6. Redondo Beach Ave/Manhattan Beach Blvd [3]	AM	0.980	E	0.983	E	0.003	No
	PM	0.895	D	0.896	D	0.001	
7. Aviation Blvd/Manhattan Beach Blvd [3][4]	AM	0.928	E	0.928	E	0.000	No
	PM	1.151	F	1.151	F	0.000	
Division 22 Northern Expansion Alternative							
1. Aviation Blvd/Marine Ave [1][3][4]	AM	0.942	E	0.943	E	0.001	No
	PM	0.953	E	0.953	E	0.000	
2. Redondo Beach Ave/Marine Ave [3]	AM	0.567	A	0.567	A	0.000	No
	PM	0.879	D	0.879	D	0.000	
3. Rosecrans Ave/Aviation Blvd [1][4][5]	AM	0.801	D	0.805	D	0.004	No
	PM	1.085	F	1.088	F	0.003	
4. Rosecrans Ave/I-405 NB Ramps [1]	AM	0.828	D	0.831	D	0.003	No
	PM	0.907	E	0.910	E	0.003	

Note: Intersection Capacity Utilization (ICU) methodology was used to calculate level of service for the above intersection.

[1] - Intersection is under City of Hawthorne jurisdiction

[2]- Intersection is under City of Lawndale jurisdiction

[3]- Intersection is under City of Redondo Beach jurisdiction

[4]- Intersection is under City of Manhattan Beach jurisdiction

[5]- Intersection is under City of El Segundo jurisdiction

Please note that some of the above intersection may have shared jurisdiction

ATTACHMENT A

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ATTACHMENT A-1
EXISTING TRAFFIC VOLUMES

	Intersection	AM												PM											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	156	1,667	187	110	848	134	159	348	53	122	485	235	155	940	147	208	1,729	223	138	643	184	120	406	170
2	Redondo Beach Ave/Marine Ave	170	18	236	11	14	11	19	498	67	290	913	11	77	13	438	39	37	11	28	944	183	226	550	9
3	Inglewood Ave/Marine Ave	357	648	80	116	568	218	159	241	331	248	780	135	273	756	127	202	887	157	248	665	548	173	403	152
4	Inglewood Ave/I-405 NB Ramps	0	765	600	0	778	543	0	0	0	453	0	368	0	745	806	0	1,314	329	0	0	0	489	0	421
5	Inglewood Ave/I-405 SB Ramps	0	1,221	437	0	836	404	145	0	970	0	0	0	0	1,470	324	0	1,258	457	155	0	1,143	0	0	0
6	Redondo Beach Ave/Manhattan Beach Blvd	102	248	144	64	38	64	130	939	24	70	1,455	412	24	51	84	490	173	148	32	1,398	45	121	1,254	85
7	Aviation Blvd/Manhattan Beach Blvd	63	1,538	186	107	683	134	208	715	112	294	752	330	145	699	195	343	1,484	217	161	711	211	502	770	213
8	Aviation Blvd/Rosecrans Ave	202	1,240	428	83	567	441	168	557	64	617	1,287	435	207	630	492	346	1,656	723	346	1,678	196	471	1,008	168
9	Rosecrans Ave/I-405 NB Ramps	661	0	92	0	0	0	0	588	666	0	857	607	529	0	240	0	0	0	0	1,469	865	0	786	465

Source: Fehr & Peers, 2010

ATTACHMENT A-2
CUMULATIVE BASE (2018) TRAFFIC VOLUMES

	Intersection	AM												PM											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	168	1,800	202	119	916	145	172	376	57	132	524	254	167	1,015	159	225	1,867	241	149	694	199	130	438	184
2	Redondo Beach Ave/Marine Ave	184	19	255	12	15	12	21	538	72	313	986	12	83	14	473	42	40	12	30	1,020	198	244	594	10
3	Inglewood Ave/Marine Ave	386	700	86	125	613	235	172	260	357	268	842	146	295	816	137	218	958	170	268	718	592	187	435	164
4	Inglewood Ave/I-405 NB Ramps	0	826	648	0	840	586	0	0	0	489	0	397	0	805	870	0	1,419	355	0	0	0	528	0	455
5	Inglewood Ave/I-405 SB Ramps	0	1,319	472	0	903	436	157	0	1,048	0	0	0	0	1,588	350	0	1,359	494	167	0	1,234	0	0	0
6	Redondo Beach Ave/Manhattan Beach Blvd	110	268	156	69	41	69	140	1,014	26	76	1,571	445	26	55	91	529	187	160	35	1,510	49	131	1,354	92
7	Aviation Blvd/Manhattan Beach Blvd	68	1,661	201	116	738	145	225	772	121	318	812	356	157	755	211	370	1,603	234	174	768	228	542	832	230
8	Rosecrans/Aviation	218	1,339	462	90	612	476	181	602	69	666	1,390	470	224	680	531	374	1,788	781	374	1,812	212	509	1,089	181
9	Rosecrans/I-405 NB Ramps	714	0	99	0	0	0	0	635	719	0	926	656	571	0	259	0	0	0	0	1,587	934	0	849	502

Source: Fehr & Peers, 2010

ATTACHMENT A-3

ASSIGNED PROJECT TRIPS - SITE 17

	Intersection	AM												PM											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	*	*	*	1	*	*	*	*	*	*	*	1	*	*	*	1	*	*	*	*	*	*	*	1
2	Redondo Beach Ave/Marine Ave	1	*	5	*	*	*	*	*	1	4	*	*	1	*	4	*	*	*	*	*	1	5	*	*
3	Inglewood Ave/Marine Ave	*	*	*	*	*	*	1	1	*	*	1	*	*	*	*	*	*	1	*	1	*	*	1	*
4	Inglewood Ave/I-405 NB Ramps	*	*	2	*	*	1	*	*	*	1	*	2	*	*	2	*	*	1	*	*	*	1	*	2
5	Inglewood Ave/I-405 SB Ramps	*	*	1	*	*	2	1	*	2	*	*	*	*	*	1	*	*	2	1	*	2	*	*	*
6	Redondo Beach Ave/Manhattan Beach Blvd	*	*	*	4	*	1	*	*	*	*	*	3	*	*	*	4	*	*	1	*	*	*	*	4
7	Aviation Blvd/Manhattan Beach Blvd	*	*	*	*	*	*	*	*	*	*	1	*	*	*	*	*	*	*	*	1	*	*	*	*

Note: Asterisk (*) identifies turning movements with negligible amounts of project traffic

Source: Fehr & Peers, 2010

ATTACHMENT A-4

ASSIGNED PROJECT TRIPS - DIV 22

	Intersection	AM												PM											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	*	*	*	1	1	1	*	*	*	*	*	*	*	1	*	*	*	*	1	*	*	*	*	1
2	Redondo Beach Ave/Marine Ave	*	*	*	*	*	*	*	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1	*
3	Rosecrans/Aviation	1	1	7	*	*	*	*	*	1	6	*	*	1	*	6	*	1	*	*	*	1	8	*	*
4	Rosecrans/I-405 NB Ramps	2	*	*	*	*	*	*	1	3	*	1	*	3	*	*	*	*	*	*	1	3	*	1	*

Note: Asterisk (*) identifies turning movements with negligible amounts of project traffic

Source: Fehr & Peers, 2010

ATTACHMENT A-5

CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (SITE 17)

		AM												PM											
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	168	1,800	202	120	916	145	172	376	57	132	524	255	167	1,015	159	226	1,867	241	149	694	199	130	438	185
2	Redondo Beach Ave/Marine Ave	185	19	260	12	15	12	21	538	73	317	986	12	84	14	477	42	40	12	30	1,020	199	249	594	10
3	Inglewood Ave/Marine Ave	386	700	86	125	613	235	173	261	357	268	843	146	295	816	137	218	958	171	268	719	592	187	436	164
4	Inglewood Ave/I-405 NB Ramps	0	826	650	0	840	587	0	0	0	490	0	399	0	805	872	0	1,419	356	0	0	0	529	0	457
5	Inglewood Ave/I-405 SB Ramps	0	1,319	473	0	903	438	158	0	1,050	0	0	0	0	1,588	351	0	1,359	496	168	0	1,236	0	0	0
6	Redondo Beach Ave/Manhattan Beach Blvd	110	268	156	73	41	70	140	1,014	26	76	1,571	448	26	55	91	533	187	160	36	1,510	49	131	1,354	96
7	Aviation Blvd/Manhattan Beach Blvd	68	1,661	201	116	738	145	225	772	121	318	813	356	157	755	211	370	1,603	234	174	769	228	542	832	230

Source: Fehr & Peers, 2010

ATTACHMENT A-6
CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (DIV 22)

	Intersection	AM												PM											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Aviation Blvd/Marine Ave	168	1,800	202	120	917	146	172	376	57	132	524	254	167	1,016	159	225	1,867	241	150	694	199	130	438	185
2	Redondo Beach Ave/Marine Ave	184	19	255	12	15	12	21	539	72	313	986	12	83	14	473	42	40	12	30	1,020	198	244	595	10
3	Rosecrans/Aviation	387	701	93	125	613	235	172	260	358	274	842	146	296	816	143	218	959	170	268	718	593	195	435	164
4	Rosecrans/I-405 NB Ramps	2	826	648	0	840	586	0	1	3	489	1	397	3	805	870	0	1,419	355	0	1	3	528	1	455

Source: Fehr & Peers, 2010

Figure 1 shows locations of the four candidate sites. Following is a brief description of these sites:

- Site 5: Manchester/Portal – Manchester/Portal is a 28.4-acre site in the City of Los Angeles containing primarily industrial uses that include Merle Norman Cosmetics, an Enterprise Rent-A-Car facility, an LAX professional office building, and the Gateway Shopping Center along Manchester Avenue. Rail access to the site is proposed via an at-grade connection at the southern end. Vehicular access to the site is proposed to be provided from three driveways along northbound Bellanca Avenue. Figure 2 shows the proposed site plan for Site 5. As shown in Figure 2, a total of 126 parking spaces are proposed on this site.

- Site 11: Imperial/Aviation – Imperial/Aviation is a 29.8-acre vacant site in the City of Los Angeles owned by the Los Angeles World Airports. A large portion of the site is below ground level. Rail access to the site is proposed via an underground connection across Aviation Boulevard and under 111th Street into the site. Vehicular access to the site is provided via driveways along 111th Street. Figure 3 shows the proposed site plan for Site 11. As shown in Figure 3, a total of 126 parking spaces are proposed on this site.

- Site 14: Arbor Vitae/Bellanca – Arbor Vitae/Bellanca is a 30.5-acre site in the City of Los Angeles containing primarily industrial uses, which include Neutrogena Corporation and Dollar Rent-A-Car facility. Rail access to the site would be an at-grade connection on the southeast portion along an existing Harbor Subdivision spur. Vehicular access to the site is proposed from driveways along eastbound Arbor Vitae Street. Figure 4 shows the proposed site plan for Site 14. As shown in Figure 4, a total of 123 parking spaces are proposed on this site.

- Site 15: Manchester/Aviation – Manchester/Aviation is a 24.7-acre site in the City of Inglewood containing primarily industrial uses, which include a National/Alamo Rent-A-Car facility and Crimson Technical College. Rail access is proposed at the southern end along Portal Avenue and would require an aerial crossing at Manchester Avenue over the existing Harbor Subdivision tracks. Vehicular access is proposed from a driveway along southbound Aviation Boulevard. Figure 113 shows the proposed site plan for Site 15.

STUDY SCOPE

This study evaluates the potential for project-generated traffic impacts on the street system surrounding the project site. The site access plan was evaluated to ensure it is adequate to accommodate anticipated flows. Peak hour traffic impacts for the project were evaluated for the peak hours during typical weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak periods. The following traffic scenarios were analyzed in the study:

- Existing Conditions – The analysis of existing AM and PM weekday peak hour traffic conditions provides a basis for the assessment of future traffic conditions. The existing conditions analysis includes a description of key area streets and highways, traffic volumes, and current intersection and roadway operating conditions.

- Cumulative Base (Year 2018) Conditions – This scenario projects the future traffic growth and intersection operating conditions that could be expected from regional growth and known related projects in the vicinity of the project site. These analyses provide the baseline conditions against which project impacts are evaluated.

- Cumulative plus Project (Year 2018) Conditions – This analysis identifies the incremental impacts of the proposed project on future traffic operating conditions by adding the traffic expected to be generated by the proposed project to the cumulative base traffic forecasts.

Following is a list of study intersections identified in the vicinity of each of the four candidate project site alternatives under each of the three traffic scenarios described above:

Site 5: Manchester/Portal (Figure 6)

1. Manchester Avenue & Airport Boulevard
2. Arbor Vitae Street & Airport Boulevard
3. Manchester Avenue & Aviation Boulevard
4. Arbor Vitae Street & Aviation Boulevard

Site 11: Imperial/Aviation (Figure 7)

1. 111th Street & Aviation Boulevard
2. Imperial Highway & Aviation Boulevard
3. 111th Street & La Cienega Boulevard
4. Imperial Highway & La Cienega Boulevard
5. I-405 Southbound Ramps & La Cienega Boulevard
6. Imperial Highway & I-105 Eastbound On-/Westbound Off-Ramps

Site 14: Arbor Vitae/Bellanca (Figure 8)

1. Arbor Vitae Street & Airport Avenue
2. Century Boulevard & Airport Boulevard
3. Arbor Vitae Street & Aviation Boulevard
4. Century Boulevard & Aviation Boulevard

Site 15: Manchester/Aviation (Figure 9)

1. Manchester Avenue & Airport Boulevard
2. Arbor Vitae Street & Airport Boulevard
3. Manchester Avenue & Aviation Boulevard
4. Arbor Vitae Street & Aviation Boulevard

EXISTING TRAFFIC CONDITIONS

This section describes the peak hour traffic volumes, the methodology used to analyze the intersection operating conditions, and the resulting levels of service (LOS) for the selected study intersections under existing conditions.

Existing Traffic Volumes

Intersection vehicular turning movement count data for weekday morning and evening peak periods was obtained from previous traffic studies prepared for projects in the vicinity of the proposed sites and collected in Year 2008. A comparative analysis of historic traffic count data at key intersections indicated negligible to negative growth in traffic within the sub-region. Therefore, no growth adjustment was applied to traffic counts from Year 2008 to estimate Year 2010 traffic volumes. Attachment A contains the original traffic

count data. Figures 10 through 13 show existing weekday morning and evening peak hour traffic volumes at the study intersections for each of the four project site alternatives.

Level of Service Methodology

All of the study intersections under each of the four candidate sites analyses are controlled by traffic signals. In accordance with *Traffic Study Policies and Procedures* (LADOT, March 2002), this study is required to use the Critical Movement Analysis (CMA) method of intersection capacity calculation (*Transportation Research Circular No. 212,* Transportation Research Board, 1980) to analyze signalized intersections. The CMA operational method determines an intersections volume-to-capacity (V/C) ratio at intersections based on the amount of traffic traveling through the intersection, the travel lane geometries, and other factors affecting capacity such as on-street parking, bus operations near the intersection, and pedestrian volumes at the street crosswalks. These characteristics are used to evaluate the operation of each intersection, which is described generally in terms of LOS.

LOS categories range from excellent, nearly free-flow traffic at LOS A to overloaded, stop-and-go conditions at LOS F. The LOS definitions and the relationship between LOS and V/C ratio using CMA methodology are provided in Table 1. The LOS definitions and the ranges of control delay shown in Table 1 represent average conditions for all vehicles at an intersection across an entire hour. Delays longer than the average condition are experienced by motorists on certain movements and/or during peak times within the peak hour. LADOT has designated LOS D as the minimum acceptable LOS at arterial and collector street intersections.

A credit of 10% or 0.10 in the V/C ratio was applied to all the analyzed intersections since all study intersections are currently installed with LADOT's Automated Traffic Surveillance and Control (ATSAC) and the ATCS technology.

Existing Levels of Service

The results of the analysis of existing weekday morning and afternoon peak hour conditions at the study intersections are summarized in Table 2. Detailed LOS calculations are provided in Attachment B. As shown in the table, all but one study intersection currently operates at LOS D or better during analyzed time periods under the four candidate site analyses. Only one intersection is currently operating at LOS E or F during at least one of the analyzed peak hours:

- Manchester Avenue & Airport Boulevard analyzed under Sites 5 and 15 alternatives (LOS E in the in the PM peak hour)

FUTURE TRAFFIC CONDITIONS

To evaluate the potential impacts of the proposed project on the surrounding street system, it was necessary to develop estimates of future traffic conditions in the area both without and with the proposed project's traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project. These forecasts included traffic increases due to general regional ambient traffic growth. These projected traffic volumes, identified herein as the cumulative base conditions, represent the future study year conditions without the proposed project. The traffic generated by the proposed project was then estimated and assigned to the surrounding street system. The project traffic was added to the cumulative base to form the cumulative plus project traffic conditions, which were analyzed to determine the incremental traffic impacts attributable to the project itself.

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Future (Year 2018) Base without Project Traffic Projections

The traffic volume growth reflected in the development of the future base without conditions takes into account the expected growth in traffic over existing conditions due to the effect of overall growth and development outside the study area. Based on historic trends and projected growth in the region over the next eight years, it was established that an ambient growth rate factor of 1% per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by the Year 2018. An adjustment of 8% was applied to existing weekday peak hour traffic counts to reflect the effect of ambient growth by the Year 2012. The resulting future (Year 2018) base traffic volumes are shown in Figures 14 through 17 for each of the four project site alternatives.

Future (Year 2018) plus Project Traffic Projections

The traffic projections for the proposed project were developed using three steps: estimating the trip generation of the project, determining trip distribution, and assigning the project traffic to the roadway system.

Project Trip Generation

The trip generation estimates for the project were prepared using empirical data collected at an existing LRT maintenance facility, MTA Division 22 serving the Metro Green Line at 14724 Aviation Boulevard in Lawndale. Classified driveway traffic data were collected at this maintenance facility using a video camera for a 24-hour period. Data related to number of passenger cars and trucks going in and out of the site were collected on a typical weekday. This empirical data can be found in Attachment C. A passenger car equivalent (PCE) factor of 2.0 was used to convert truck trips in the PCEs for the purpose of trip generation estimates. The truck PCE trips were combined with the passenger car vehicles trips to arrive at total inbound/outbound daily trips. Figure 18 shows trips generated by MTA Division 22 by each hour of the day.

Using the above empirical data, weekday morning and evening peak hour trip generation of the survey facility were determined. As shown in Table 3, Division 22 currently generates a total of 13 trips in the morning peak hour (7 inbound/6 outbound) and 11 trips during the evening peak hours (6 inbound/5 outbound).

MTA Division 22 serves a total of 39 Light Rail Vehicles (LRVs). The proposed project is expected to serve a total of 60 LRVs. Trip generation for the proposed facility was estimated by applying to the MTA Division 22 trips a factor proportional to the size of the facility in terms of number of LRVs served. Thus, a factor of 1.54 was applied to Division 22 traffic count data including both passenger cars and trucks to calculate trip generation for the proposed Crenshaw/LAX Transit Corridor LRT maintenance facility.

After applying a PCE factor of 2.0 to convert truck trips into PCEs, as shown in Table 4, the proposed project is estimated to generate a total of 18 trips during the morning peak hour (8 inbound/10 outbound) and 20 trips during the evening peak hours (11 inbound/9 outbound) Figure 19 shows a chart of the proposed project trip projections.

Each of the four candidate sites, except for Site 11 (Imperial/Aviation) involve removal or relocation of existing properties currently operating at the sites. It is assumed these uses will most likely relocate within the same sub-region. Therefore, to be conservative, no trip credit was taken for existing uses as part of project trip generation estimates.

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Project Traffic Distribution

The geographic distribution of trips generated by the project were dependant on location of residential areas from which the project will draw home-work trips; location of each of the four candidate sites with respect to access to regional freeway and roadway network; and level of accessibility of routes to and from the proposed candidate sites. On a sub-regional level, approximately 70% of the trips were estimated to use the freeways and 30% on the major roadways adjacent to the four analyzed sites.

Project Traffic Assignment

The traffic to be generated by the proposed project at each of the analyzed sites was assigned to the street network using the distribution described above. Figures 20 through 23 illustrate the assignment of proposed project-generated peak hour traffic volumes at the analyzed intersections under each of the four site alternatives.

The proposed project traffic volumes were added to future (Year 2018) base traffic projections, resulting in a future (Year 2018) plus project morning and evening peak hour traffic volumes. Figures 24 through 27 show the future plus project volumes at each of the study intersections under the four analyzed site alternatives.

Future Base and Future plus Project Levels of Service

Future (Year 2018) Base Levels of Service

The results of the analysis of future (Year 2018) base weekday morning and afternoon peak hour conditions at the study intersections are summarized in Table 5. Detailed LOS calculations are provided in Attachment B. As shown in the table, all but one study intersection are projected to operate at LOS D or better during analyzed time periods under the four candidate site analyses. Only one intersection is projected to operate at LOS E or F during at least one of the analyzed peak hours:

- Manchester Avenue & Airport Boulevard analyzed under Sites 5 and 15 alternatives (LOS F in the in the PM peak hour)

Future (Year 2018) plus Project Levels of Service

The results of the analysis of future (Year 2018) base plus project weekday morning and afternoon peak hour conditions at the study intersections are summarized in Table 5. Detailed LOS calculations are provided in Attachment B. As shown in the table, similar to the future base traffic conditions, all but one study intersection is projected to operate at LOS D or better during analyzed time periods under the four candidate site analyses. Only one intersection is expected to operate at LOS E or F during at least one of the analyzed peak hours:

- Manchester Avenue & Airport Boulevard analyzed under Sites 5 and 15 alternatives (LOS F in the in the PM peak hour)

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INTERSECTION TRAFFIC IMPACT ANALYSIS

The traffic impact analysis compares the projected LOS at each study intersection under the cumulative base and cumulative plus project conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significant criteria established by LADOT.

Criteria for Determination of Significant Traffic Impact

The City of Los Angeles' established threshold criteria were used to determine whether the proposed project would have a significant traffic impact at the study intersections. Under the City's guidelines, a project impact would be considered significant if the following conditions are met:

Intersection Conditions with Project Traffic		**Project-related Increase in V/C Ratio**
LOS	***V/C Ratio***	
C	> 0.700 – 0.800	Equal to or greater than 0.040
D	> 0.800 – 0.900	Equal to or greater than 0.020
E, F	> 0.900	Equal to or greater than 0.010

Project Impacts

Table 5 shows, using the criteria for determination of significant impacts, the proposed project would not create significant traffic impacts at any of the study intersections during the morning or the evening peak hours under any of the four analyzed site alternatives. Therefore, no mitigation measures would be required.

REGIONAL TRANSPORTATION SYSTEM ANALYSIS

This section presents the regional transportation system impact analysis for the proposed project. This analysis was conducted in accordance with the transportation impact analysis procedures outlined in *2004 Congestion Management Program for Los Angeles County* (CMP) (Metro, July 2004).

CMP Traffic Impact Analysis Criteria

The CMP guidelines require that the first issue addressed is the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The two CMP arterial monitoring intersections nearest to the project site are:

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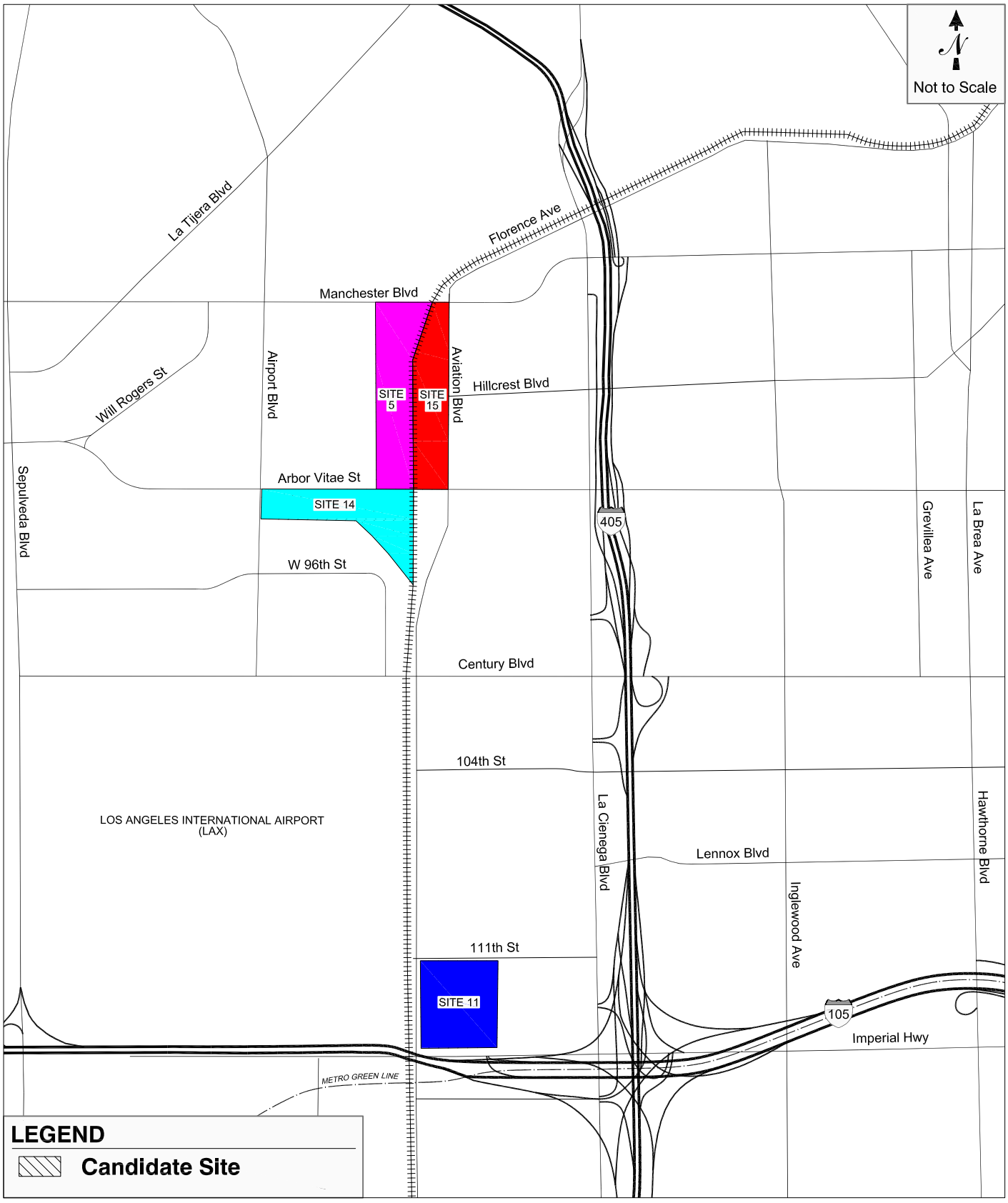
- Manchester Avenue & Sepulveda Boulevard (City of Los Angeles)
- Manchester Avenue & La Brea Boulevard (City of Inglewood)

Based on the project trip generation estimates previously presented and a review of the project traffic volumes shown in Figures 24 - 27, the proposed project is not expected to add more than 50 net vehicles per hour (vph) at either of the two intersection during the AM or PM peak hours. As a result, no further CMP arterial monitoring analysis is required. Therefore, project impact on CMP arterial system is determined to be less than significant.

The mainline freeway monitoring locations nearest to the project site are:

- I-105 Freeway east of Sepulveda Boulevard
- I-405 Freeway north of La Tijera Boulevard

Based on the incremental project trip generation estimates and the project trip assignment, the proposed project would not add sufficient new traffic to exceed the freeway analysis criteria at these locations. Because incremental project-related traffic in any direction during either weekday peak hour is projected to be below the minimum criterion of 150 vph, no further CMP freeway analysis is required. Therefore, project impact on CMP freeway system is determined to be less than significant.



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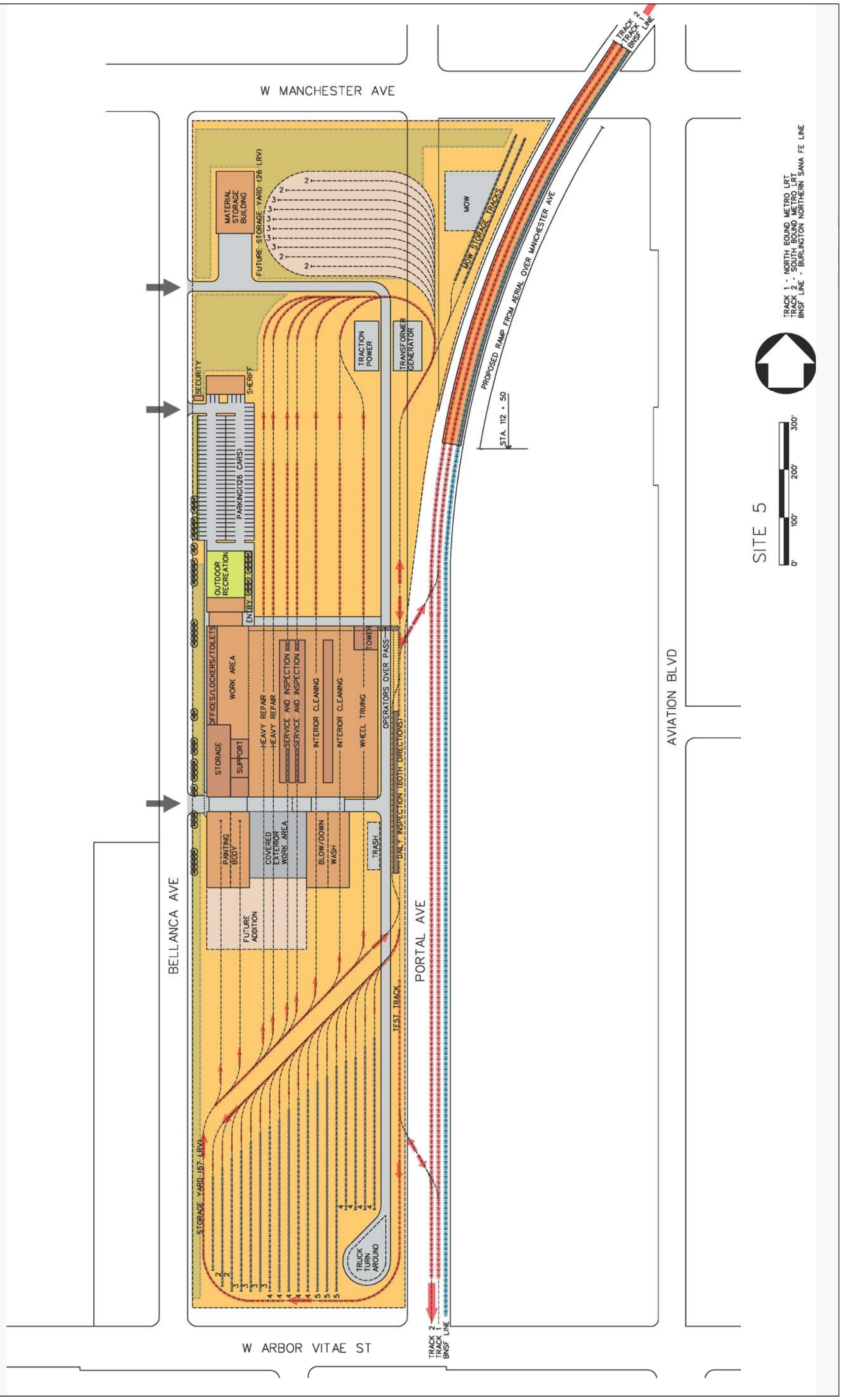
LOCATION OF CANDIDATE SITES

FIGURE 1



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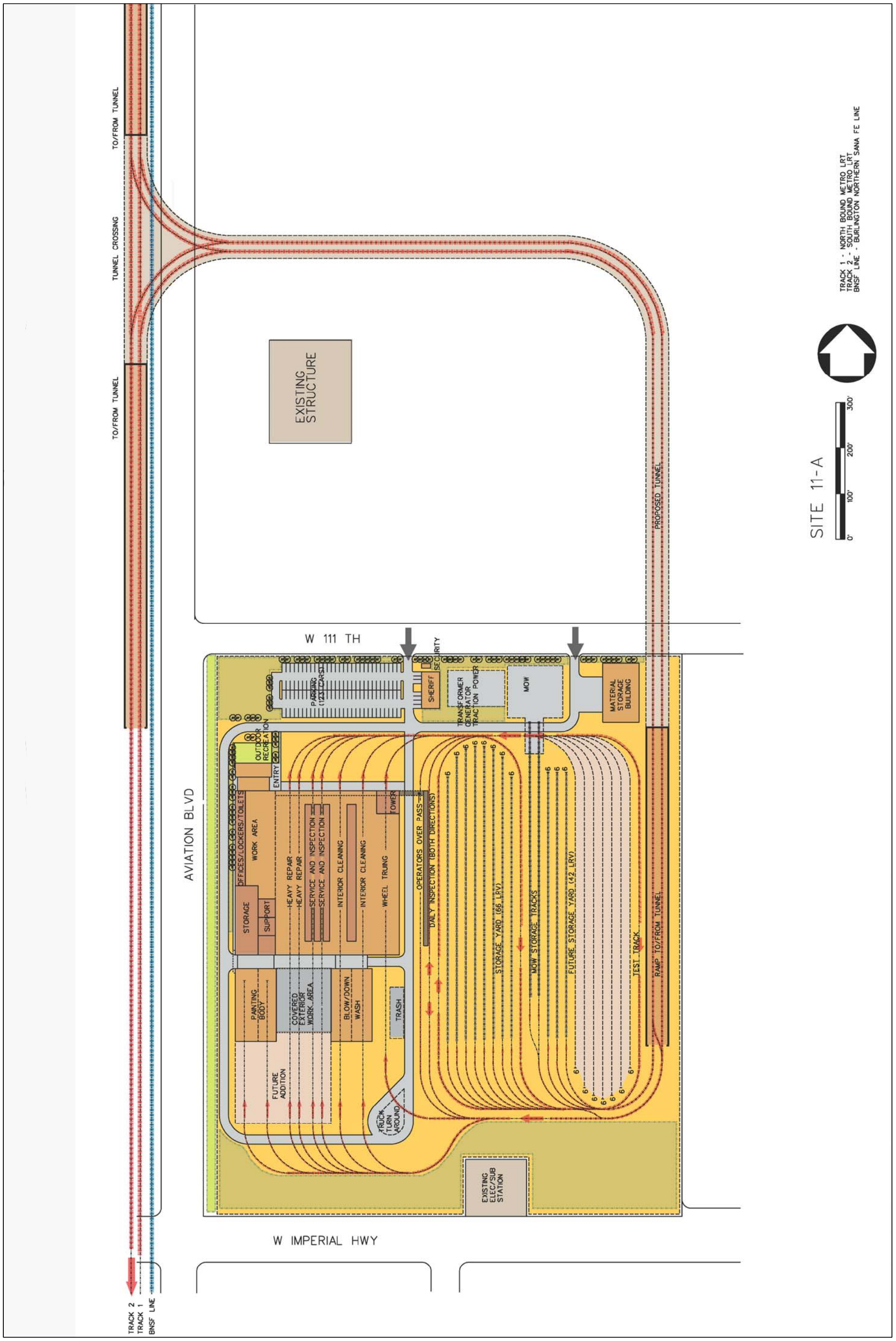
SITE PLAN FOR ALTERNATIVE SITE 5: MANCHESTER/PORTAL

FIGURE 2



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SITE PLAN FOR ALTERNATIVE SITE 11: IMPERIAL/AVIATION

FIGURE 3

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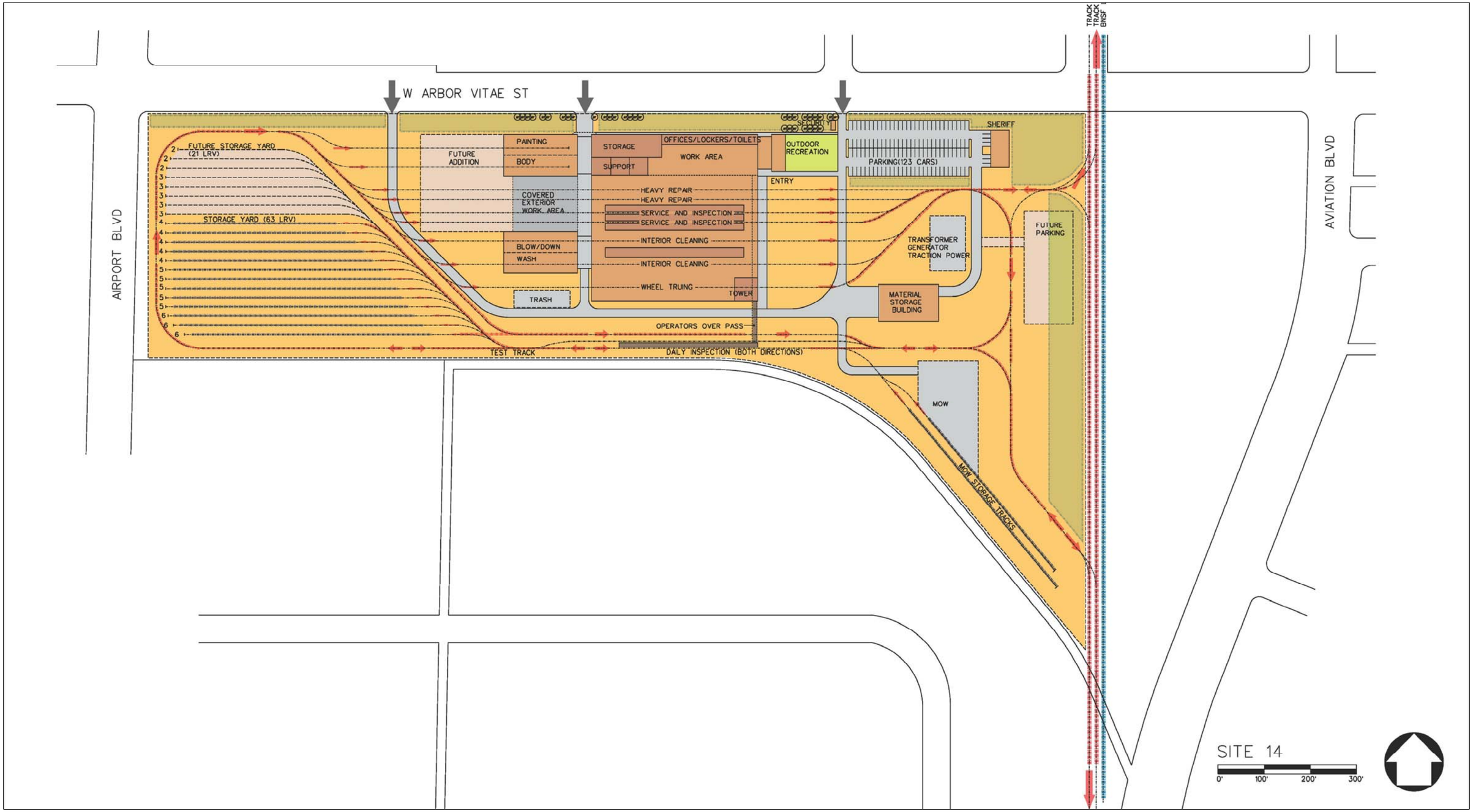

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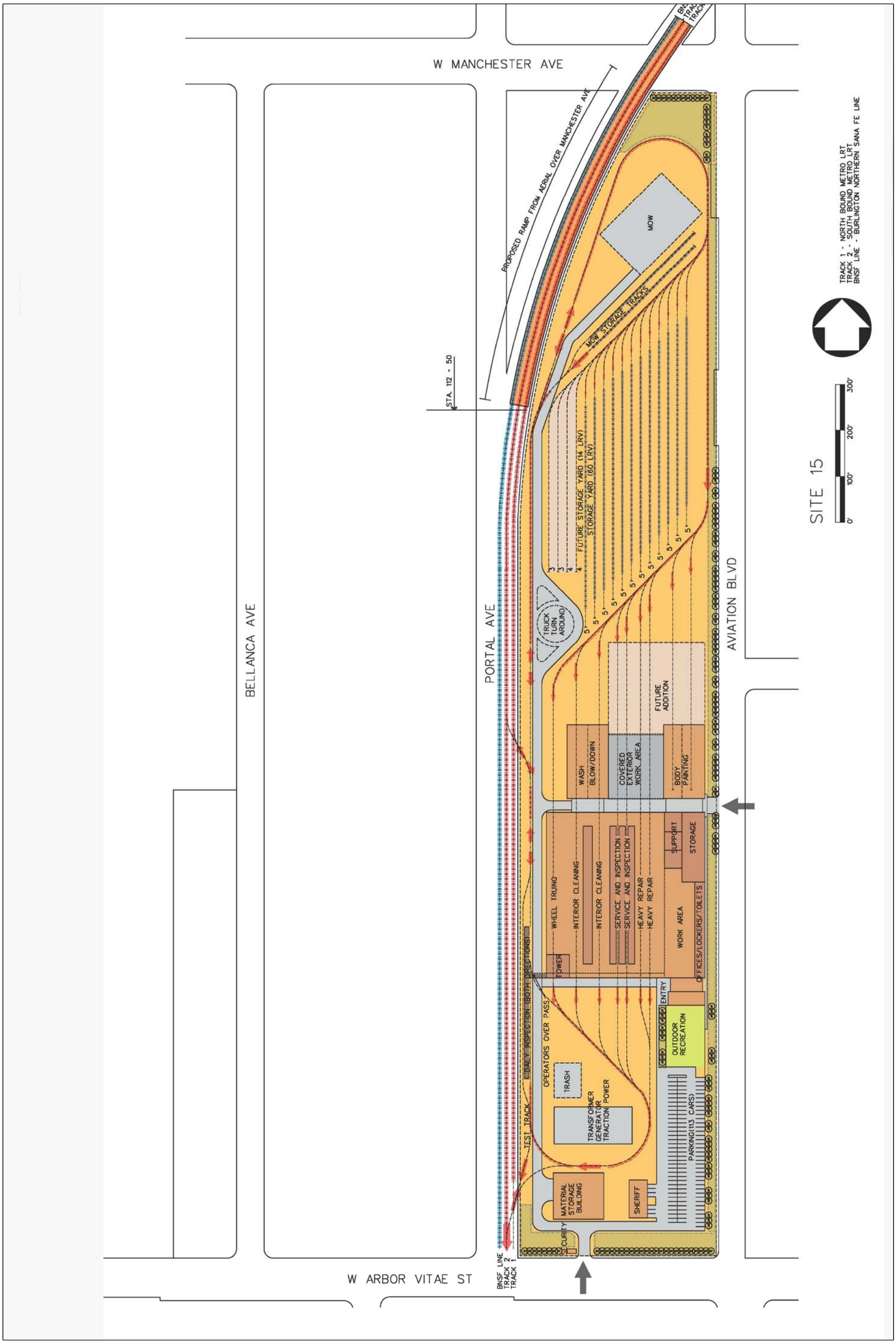
SITE PLAN FOR ALTERNATIVE SITE 14: ARBOR VITAE/BELLANCA

FIGURE 4



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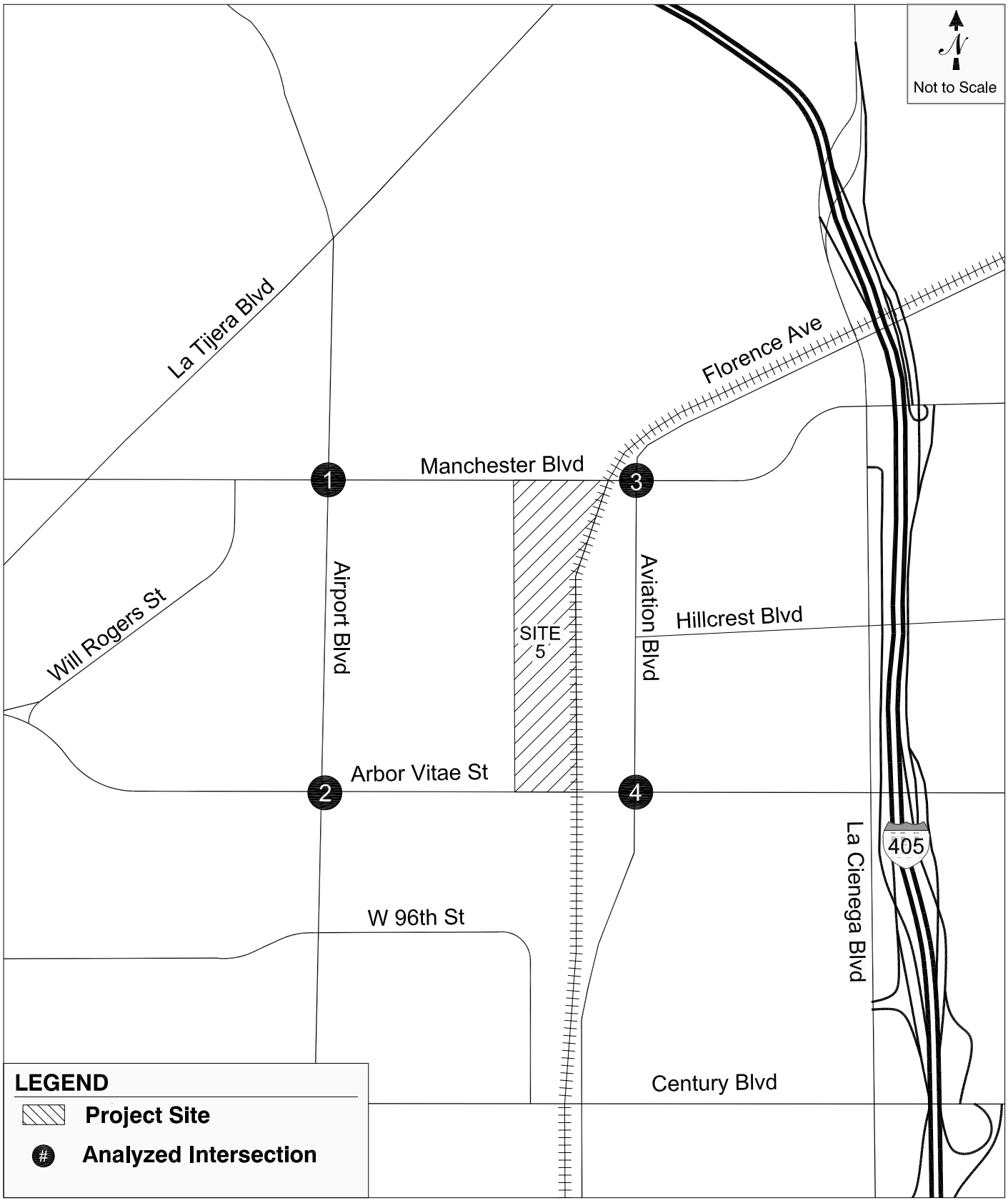
SITE PLAN FOR ALTERNATIVE SITE 15: MANCHESTER/AVIATION

FIGURE 5



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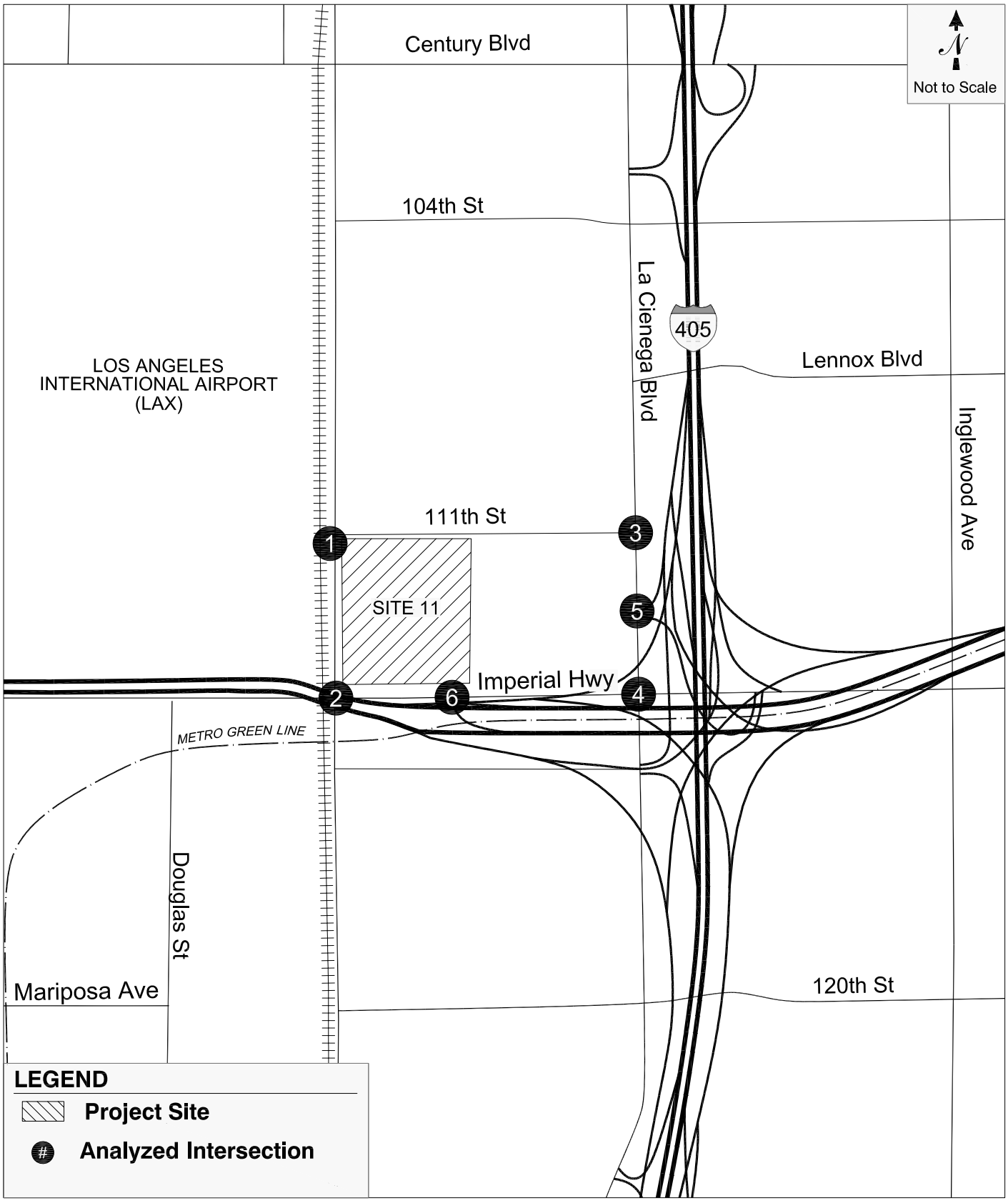
LOCATION OF ANALYZED INTERSECTIONS
SITE 5: MANCHESTER/PORTAL

FIGURE 6



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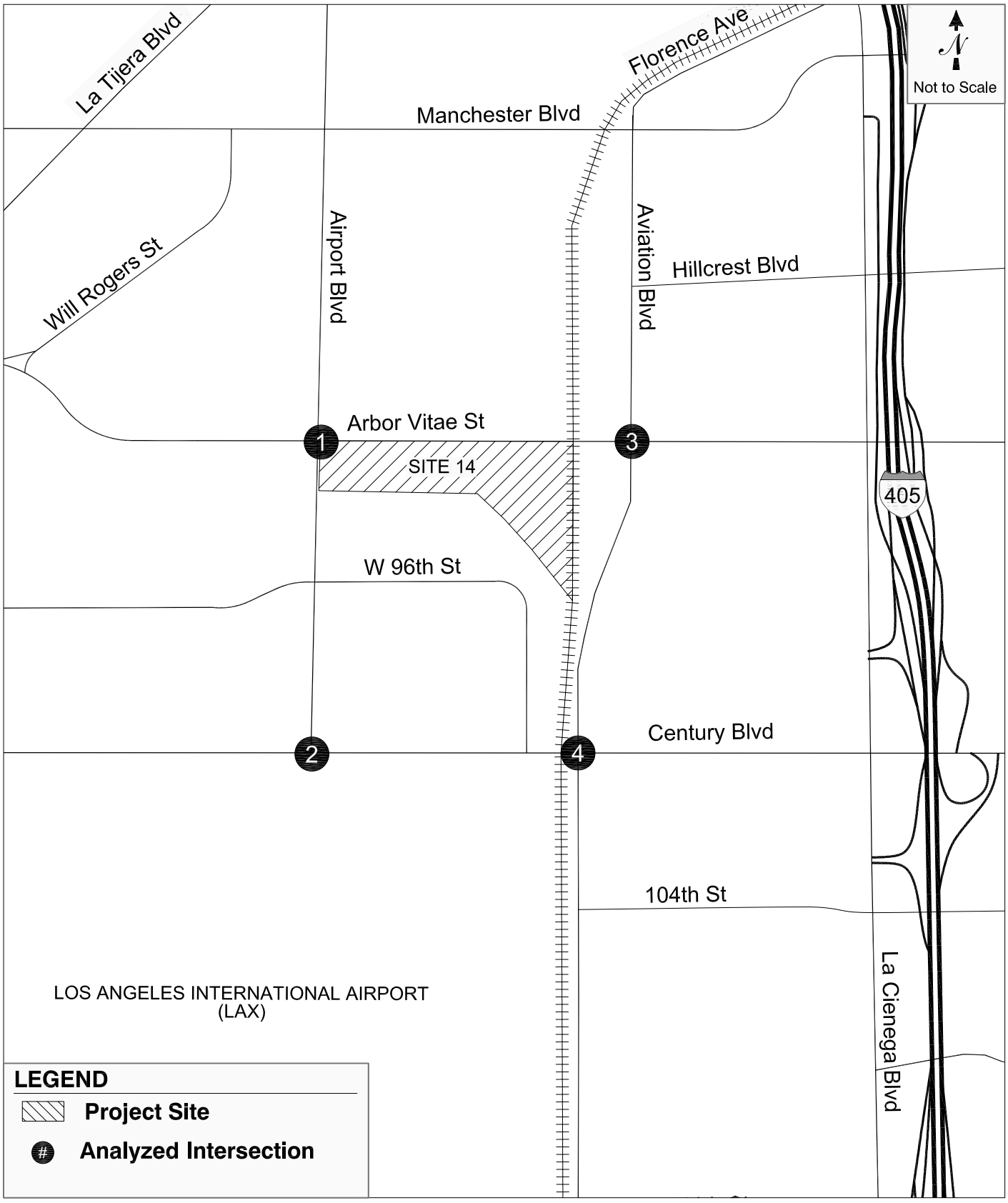
LOCATION OF ANALYZED INTERSECTIONS
SITE 11:IMPERIAL/AVIATION

FIGURE 7



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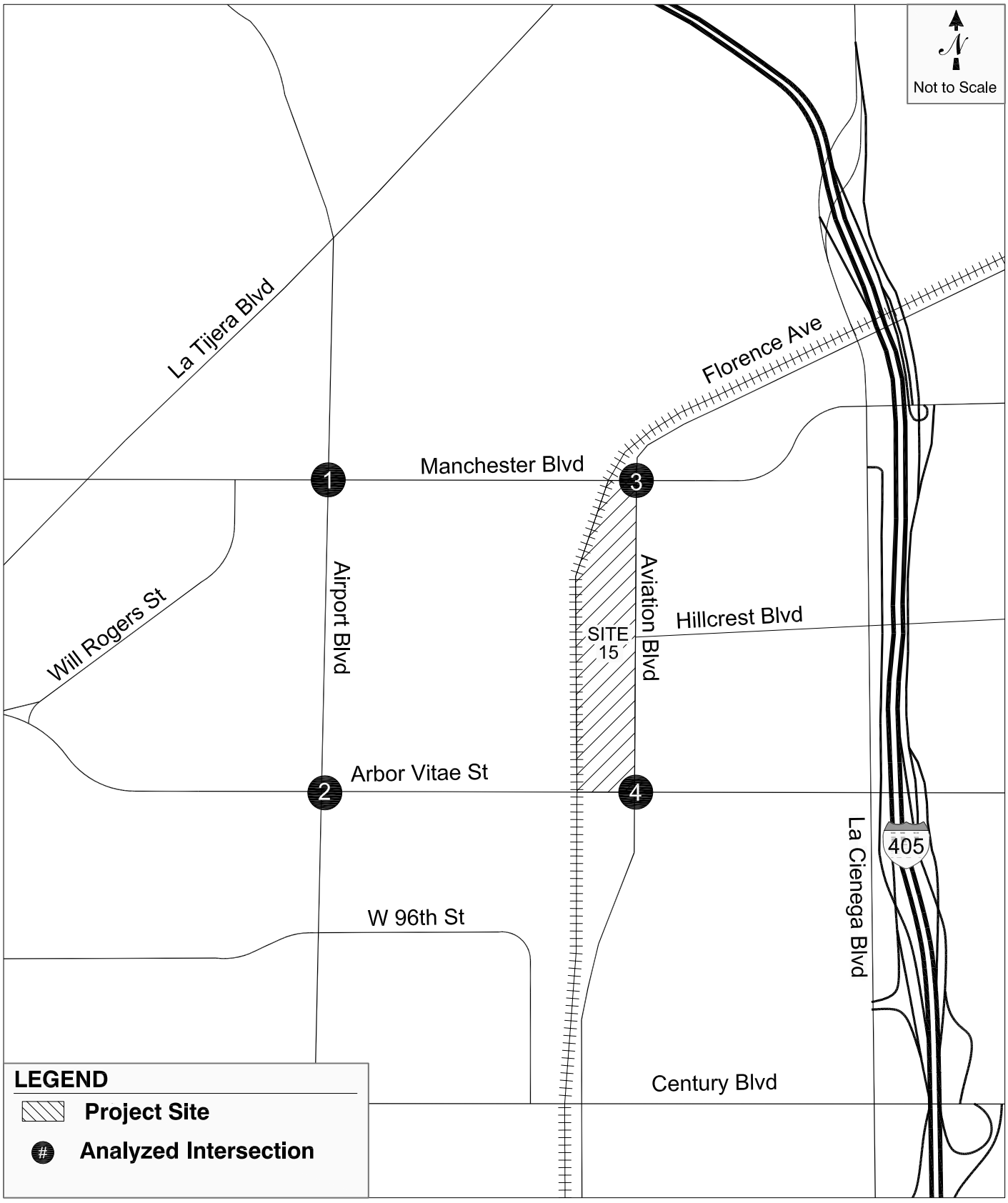
LOCATION OF ANALYZED INTERSECTIONS
SITE 14: ARBOR VITAE/BELLANCA

FIGURE 8



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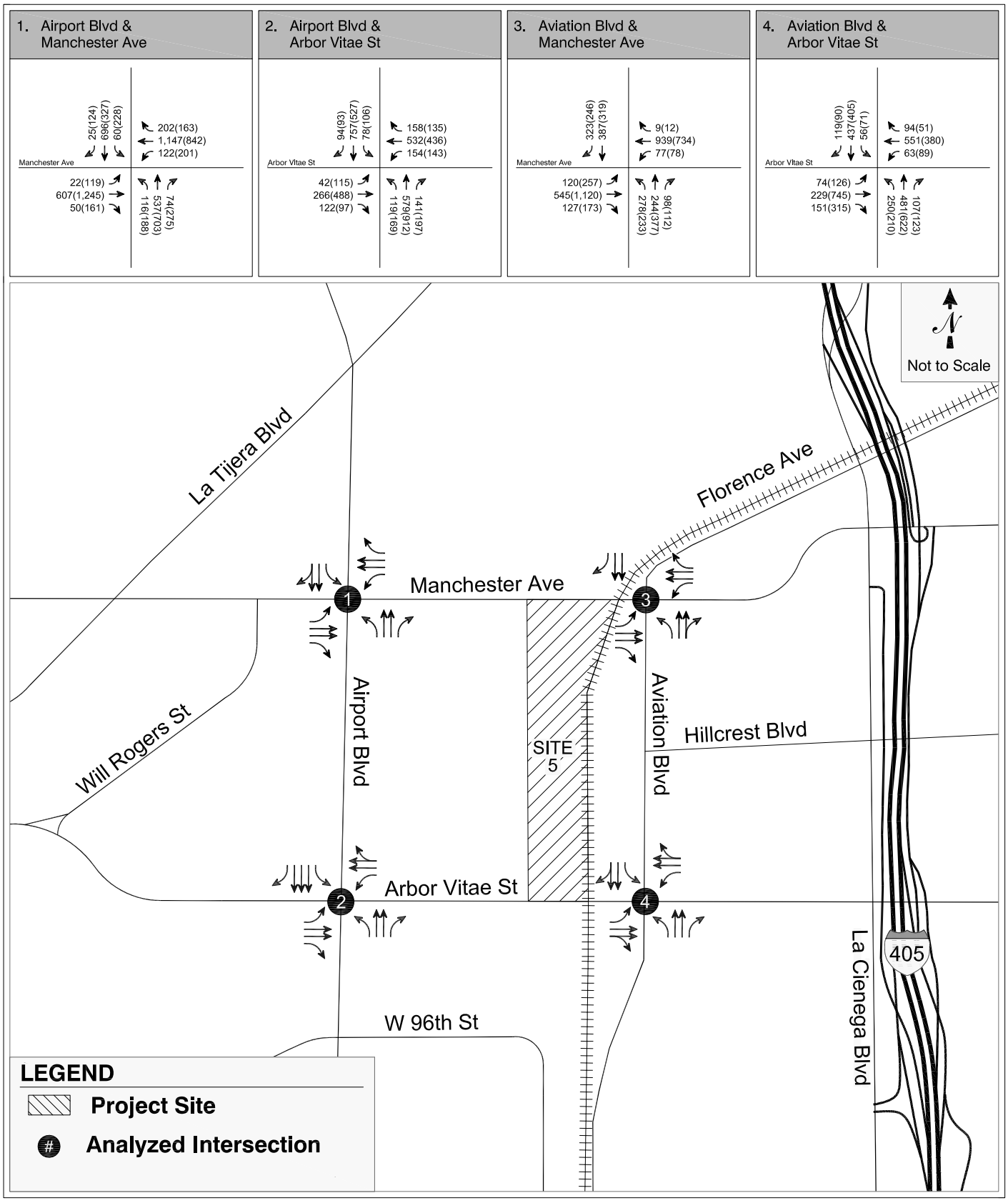
LOCATION OF ANALYZED INTERSECTIONS
SITE 15: MANCHESTER/AVIATION

FIGURE 9



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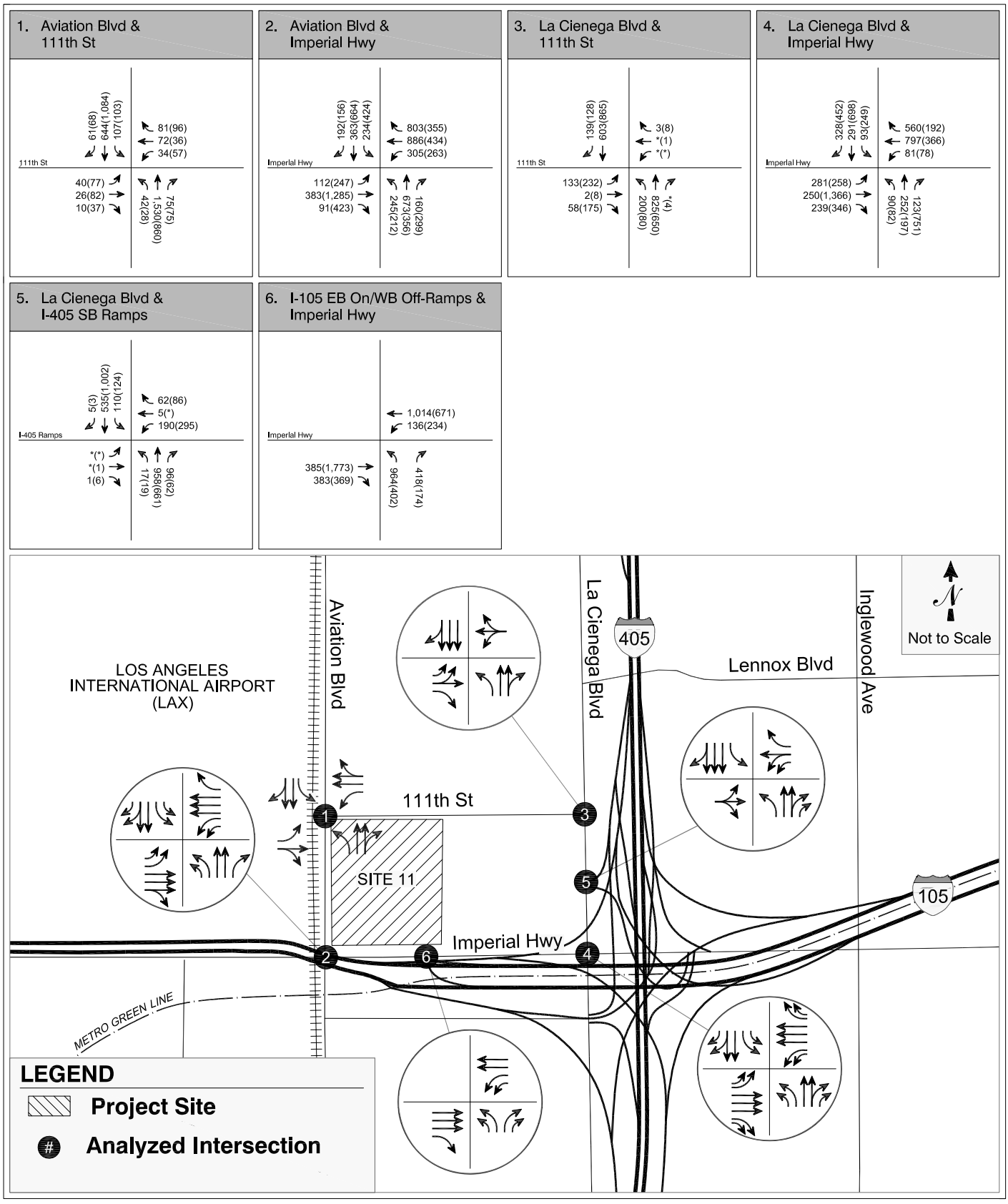
EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS
SITE 5: MANCHESTER/PORTAL

FIGURE 10



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EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS
SITE 11: IMPERIAL/AVIATION

FIGURE 11

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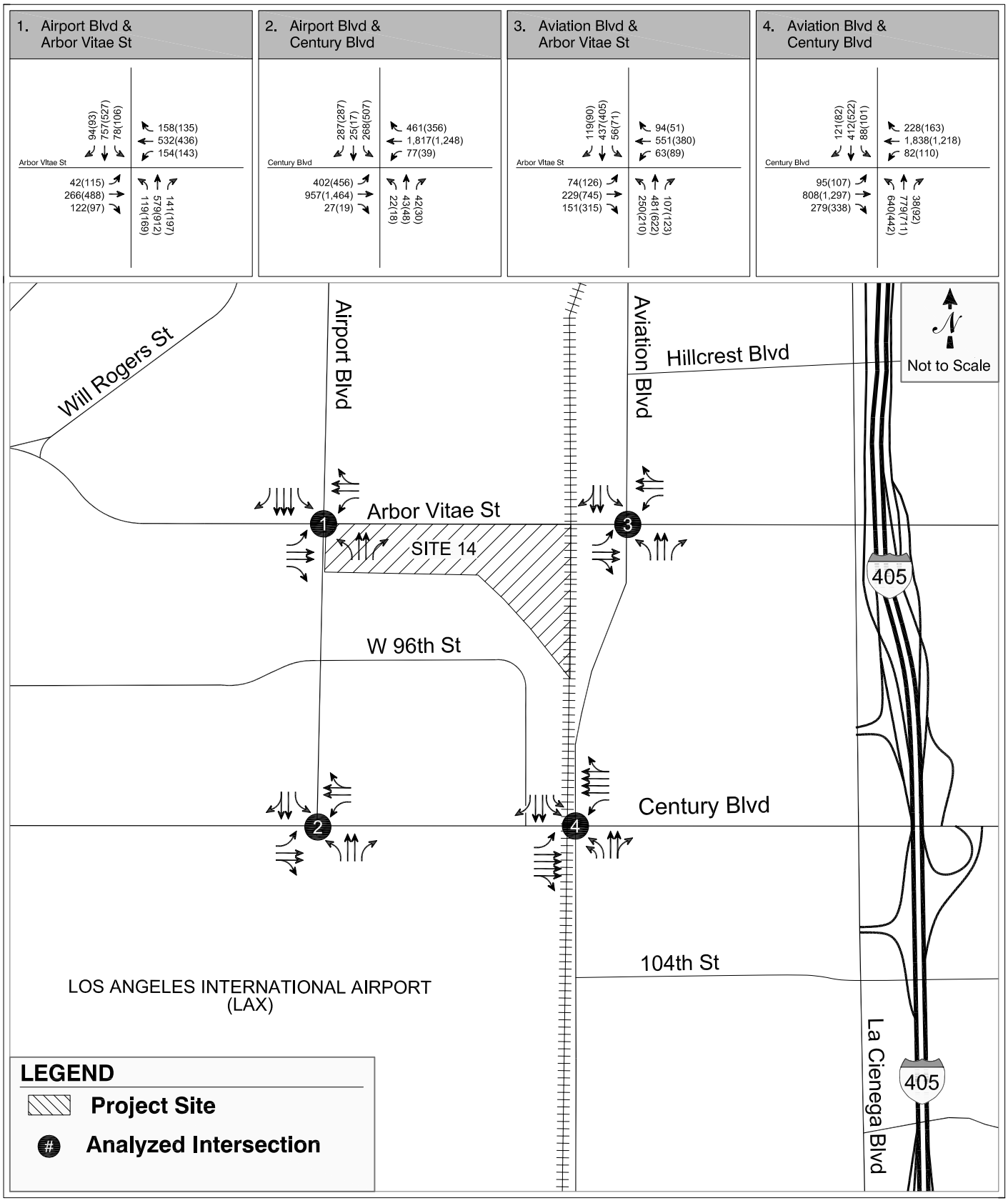
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg



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EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS
SITE 14: ARBOR VITAE/BELLANCA

FIGURE 12

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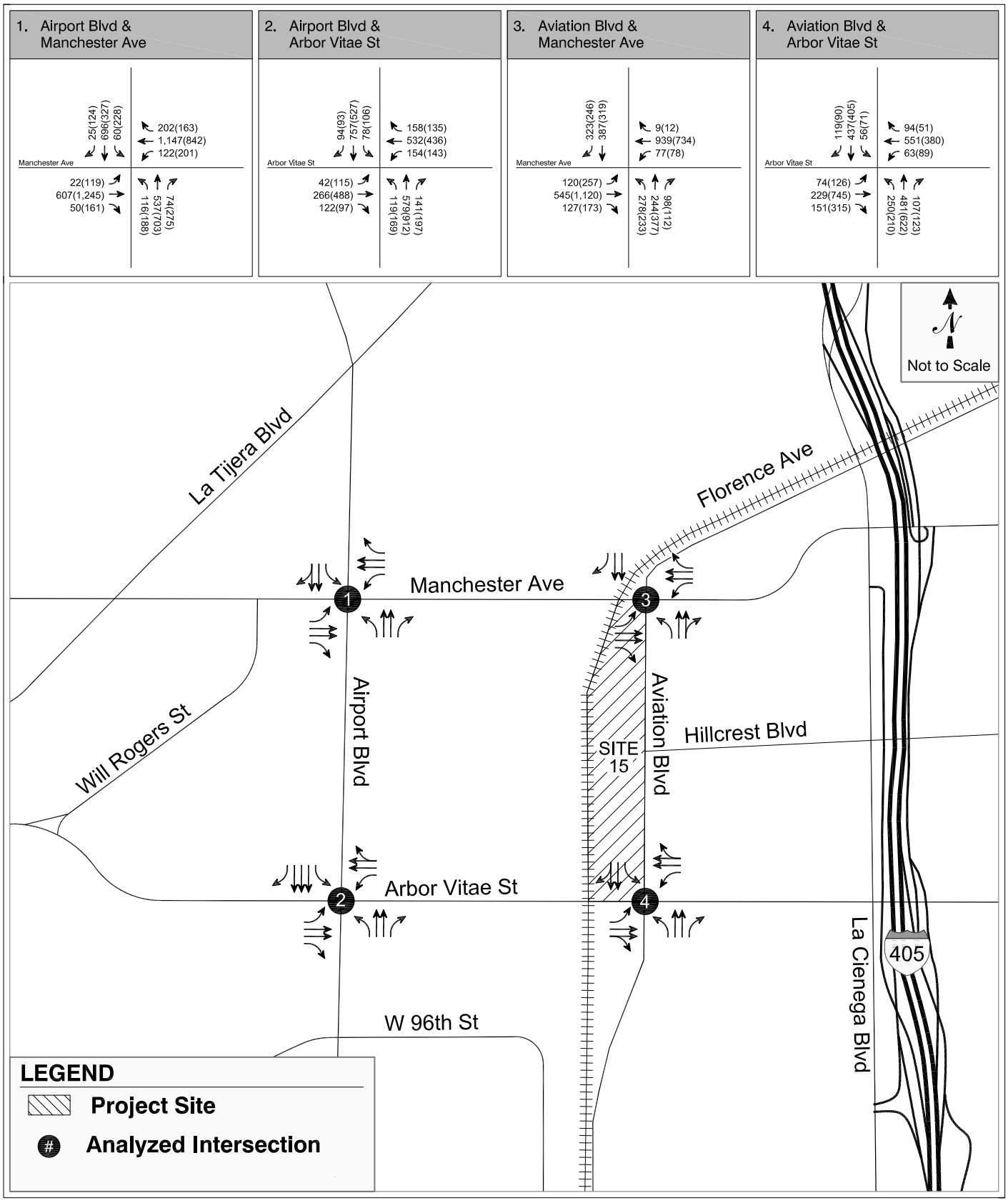

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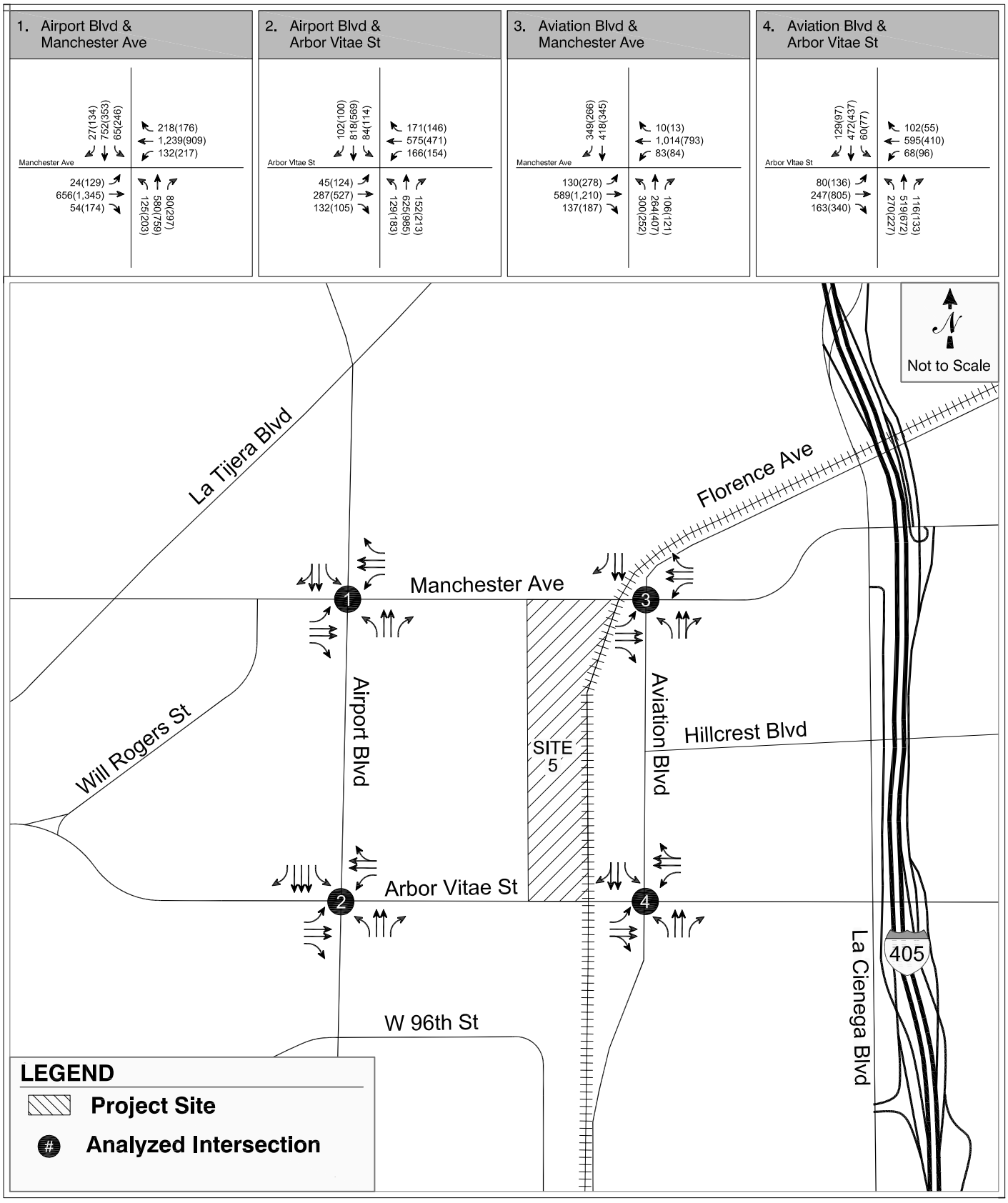
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg

EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS
SITE 15: MANCHESTER/AVIATION

FIGURE 13



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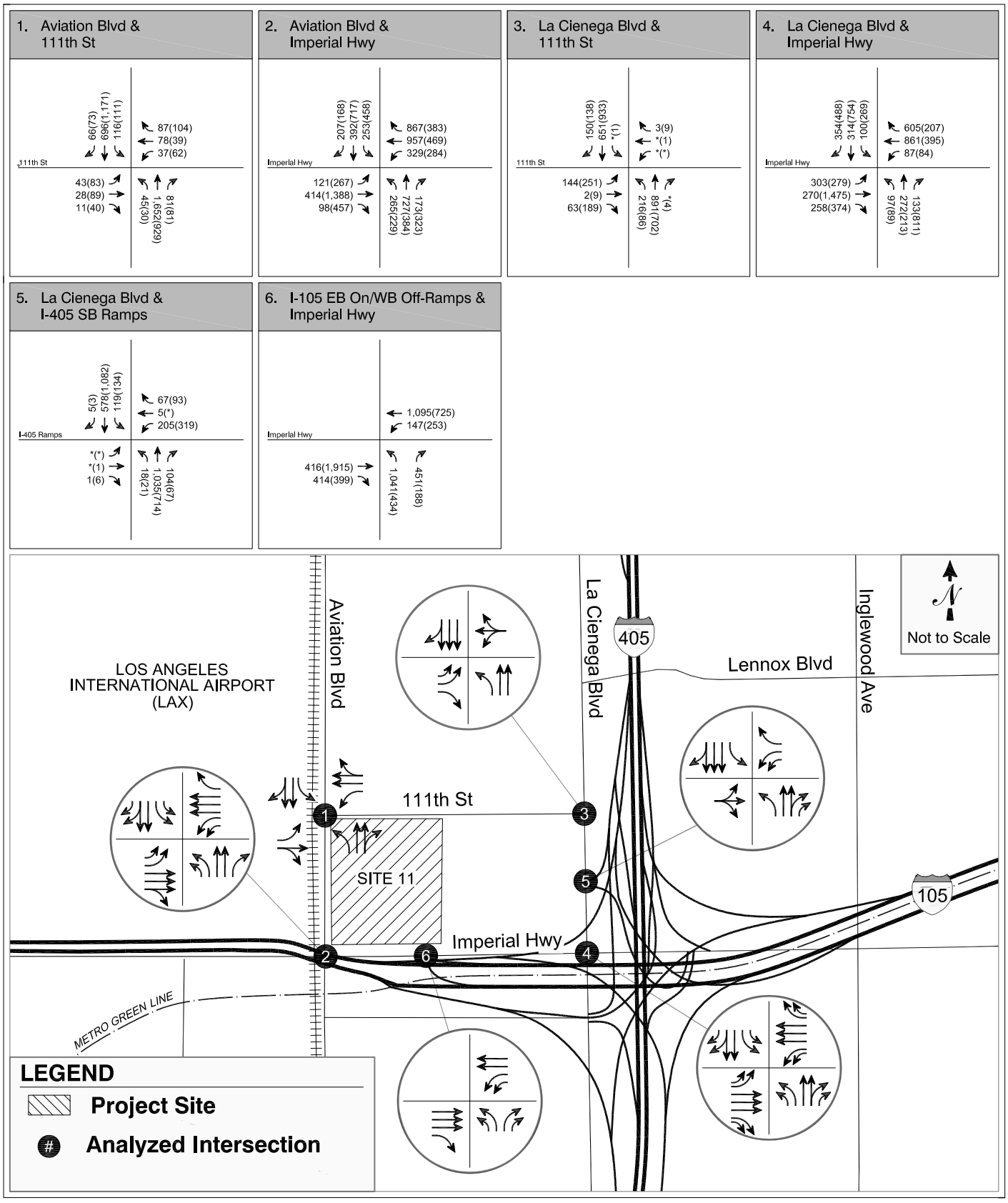
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg

FUTURE (YEAR 2018) BASE TRAFFIC VOLUMES AND LANE CONFIGURATIONS SITE 5: MANCHESTER/PORTAL

FIGURE 14



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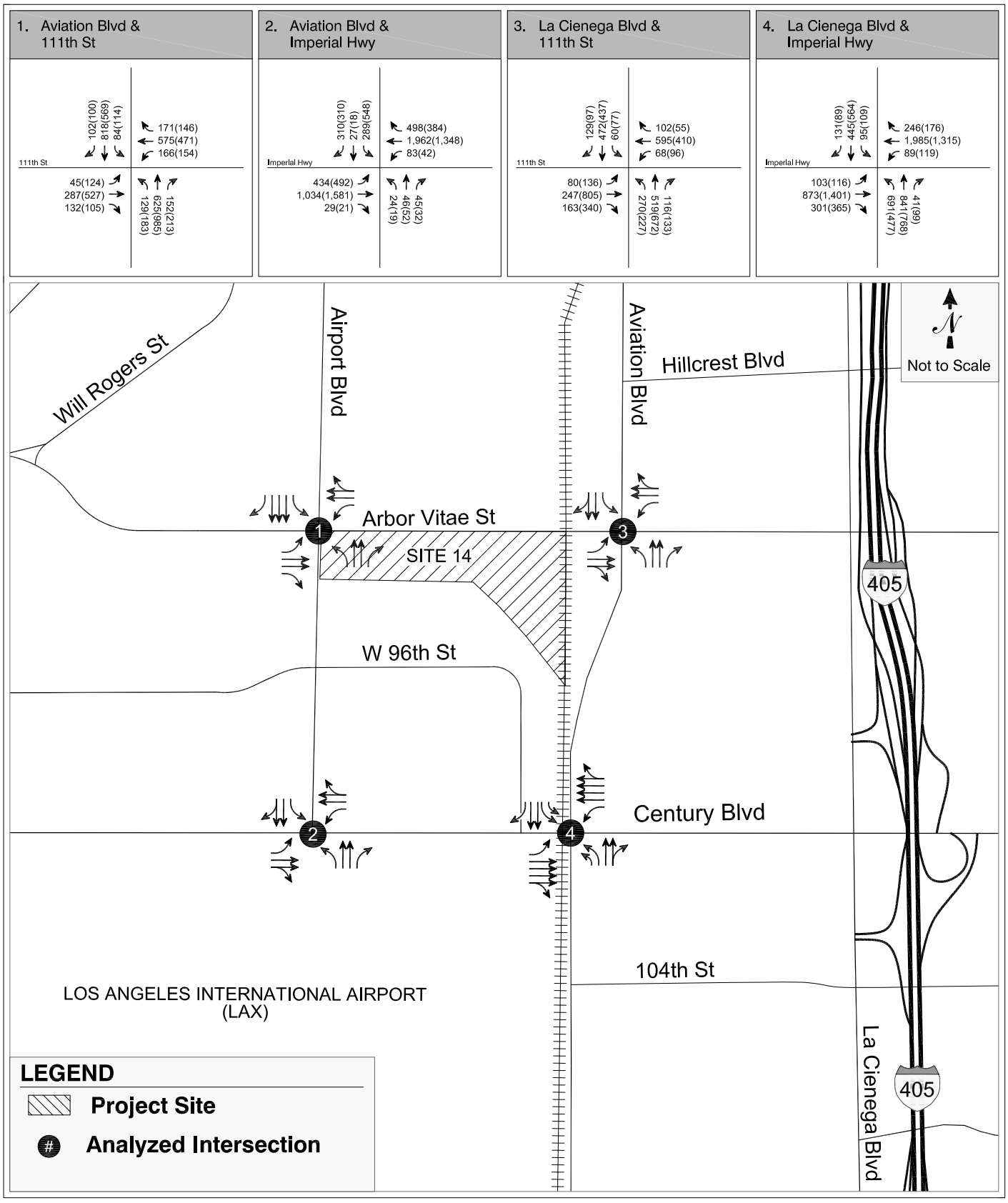
Jul 02, 2010 AN
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg

FUTURE (YEAR 2018) BASE TRAFFIC VOLUMES AND LANE CONFIGURATIONS SITE 11: IMPERIAL/AVIATION

FIGURE 15



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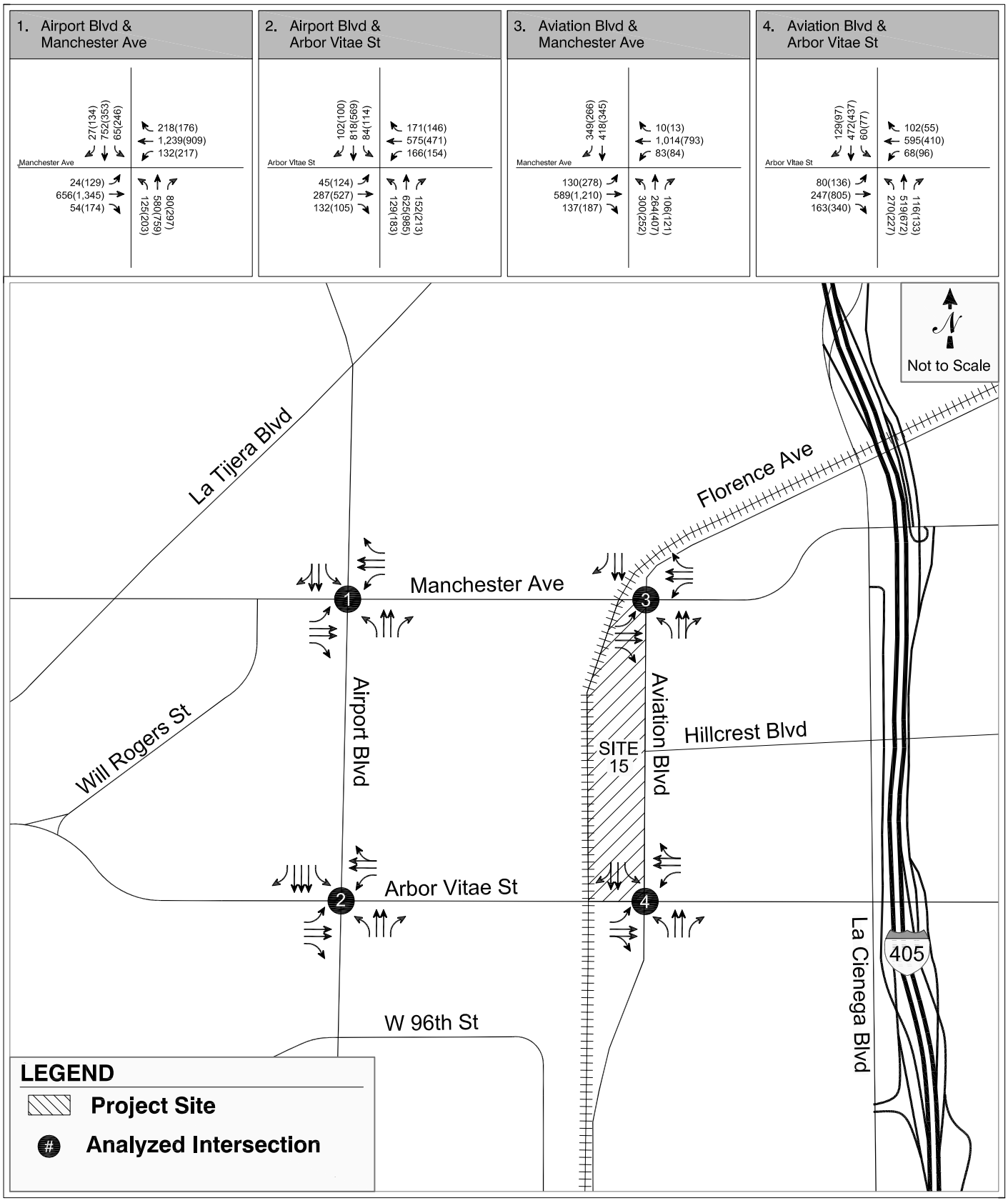
Jul 02, 2010 AN
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg

FUTURE (YEAR 2018) BASE TRAFFIC VOLUMES AND LANE CONFIGURATIONS
SITE 14: ARBOR VITAE/BELLANCA

FIGURE 16



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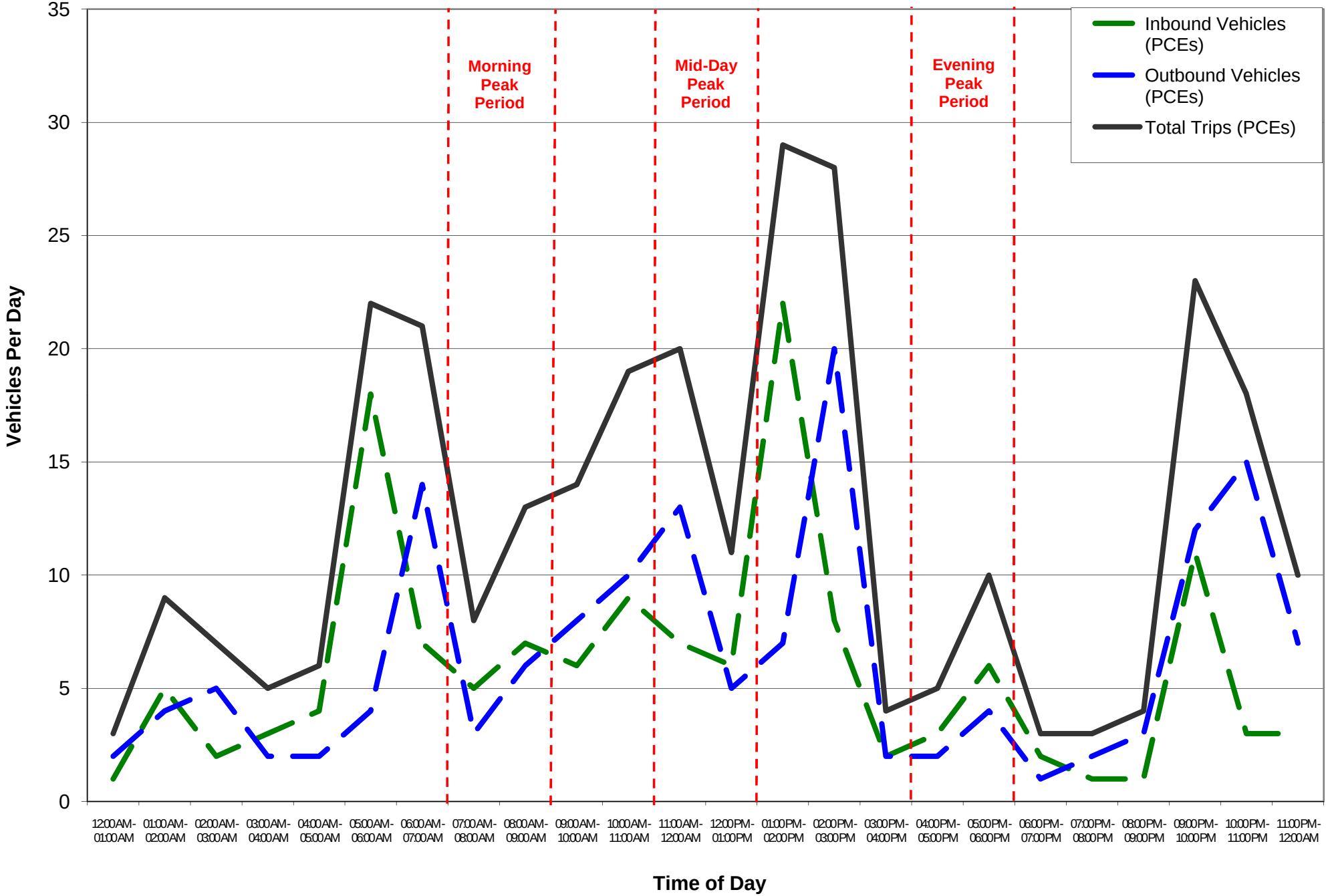
fpla1 data Jobs Active 2100s 2179.02 Crenshaw O&M Graphics ACAD 2179.02_Base.dwg

FUTURE (YEAR 2018) BASE TRAFFIC VOLUMES AND LANE CONFIGURATIONS SITE 15: MANCHESTER/AVIATION

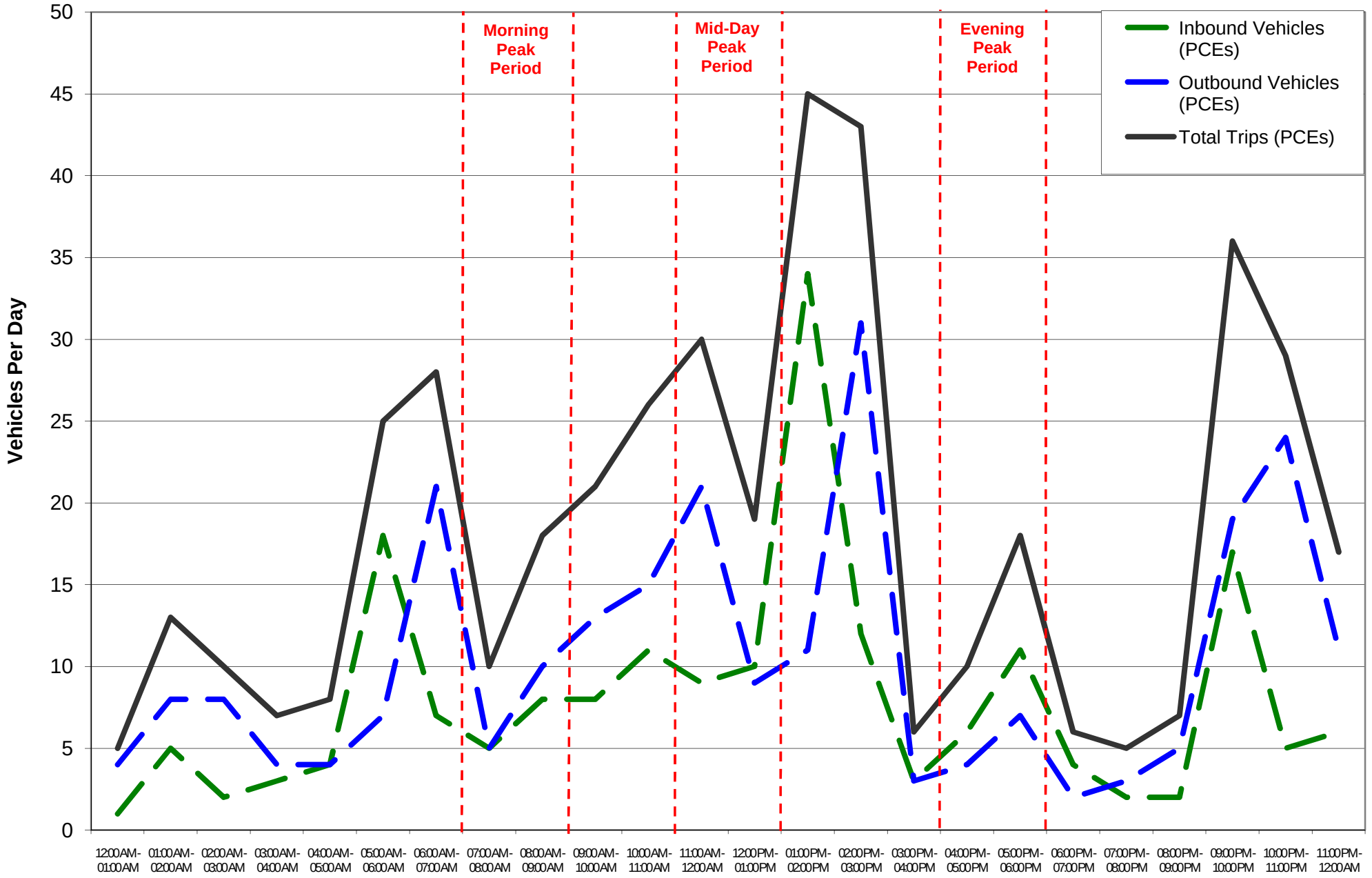
FIGURE 17

FIGURE 18
MTA DIVISION 22 TRAFFIC COUNT DATA



Traffic count conducted on Thursday, June 10, 2010 at MTA Division 22 Metro Green Line O & M Facility located at 14724 Aviation Blvd, Lawndale, CA 90260
PCEs - Passenger Car Equivalent

FIGURE 19
CRENSHAW/LAX TRANSIT CORRIDOR LRT MAINTAINANCE FACILITY TRIP GENERATION PROJECTION



Traffic projections based on Traffic counts collected at MTA Division 22 Metro Green Line O & M Facility located at 14724 Aviation Blvd, Lawndale, CA 90260
PCEs - Passenger Car Equivalent