

May 17, 2021

Mr. Adan Madrid
ASi Development
5932 Bolsa Avenue, Suite 107
Huntington Beach, CA 92649

LLG Reference: 2.20.4318.1

Subject: **Updated Traffic Impact Assessment for the Proposed Long Beach Boulevard & Cambridge 7-Eleven Project**
Long Beach, California

Dear Mr. Madrid:

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the findings of this *Updated* Traffic Impact Assessment for the proposed Long Beach Boulevard & Cambridge 7-Eleven Project, hereinafter referred to as the Project. The Project site is located on the block bounded by Long Beach Boulevard, Cambridge Street, Gordon Street, and an alleyway in the City of Long Beach, California. In addition, the Project site is currently occupied with a Chinese fast-food restaurant and commercial vehicle gasoline fueling station, which will be demolished in conjunction with the proposed Project. The proposed Project will consist of a 2,840 square-foot (SF) 7-Eleven convenience store with three (3) gasoline pumps (6 vehicle fueling positions) as well as a 120 SF office space for a non-profit community group.

It is our understanding that the City of Long Beach Public Works Department/Traffic Bureau has requested a trip generation and distribution analysis for the Project as described below:

- *Applicant shall prepare a trip generation and distribution analysis and submit to the City Traffic Engineer for review prior to project entitlement. Based on these studies, a traffic impact analysis may be required. Any conditions generated by the analysis shall be made a part of these conditions.*

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As a result, this letter summarizes the net traffic generation forecast potential and traffic distribution pattern/assignment for the proposed Project.

PROJECT LOCATION AND DESCRIPTION

The Project site is located on the block bounded by Long Beach Boulevard on the west, Cambridge Street on the north, Gordon Street on the south, and an alleyway on the east in the City of Long Beach, California.. **Figure 1**, attached, presents a Vicinity Map that illustrates the general location of the Project and surrounding street system.

The Project site is currently occupied with a 679 SF Chinese fast-food restaurant and commercial vehicle gasoline fueling station with six (6) vehicle fueling positions, which will be demolished in conjunction with the proposed Project. Access is currently provided along Long Beach Boulevard, Cambridge Street, Gordon Street, and the alleyway via six (6) driveways. **Figure 2** presents an existing site aerial, which shows the existing uses, driveways, and adjacent roadways.

The proposed Project will consist of a 2,840 square-foot (SF) 7-Eleven convenience store with three (3) gasoline pumps (6 vehicle fueling positions) as well as a 120 SF office space for a non-profit community group. The Project will look to break ground sometime in 2021 with an anticipated completion by 2022. Vehicular access for the proposed Project will be provided via two (2) right-in/right-out access driveways along Long Beach Boulevard and one (1) full movement driveway located along the alleyway in its existing location [one existing driveway along Long Beach Boulevard, the one (only) existing driveway along Gordon Street and the one (only) existing driveway along Cambridge Street will be closed in conjunction with the Project]. **Figure 3** presents the proposed site plan for the Project, prepared by ASi Development, Architecture, Engineering, Construction.

PROJECT TRAFFIC CHARACTERISTICS

Trip Generation Forecast Comparison

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the Tenth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2017].

Table 1, attached, summarizes the trip generation rates used in forecasting the vehicular trips generated by the existing uses and proposed Project and also presents

the existing uses and proposed Project's forecast peak hour and daily traffic volumes. As shown in the upper portion of *Table 1*, the trip generation potential of the proposed 7-Eleven convenience store with gasoline station was estimated using ITE Land Use 853: *Convenience Market with Gasoline Pumps* and ITE Land Use 712: *Small Office Building* trip rates whereas the existing development was estimated using ITE Land Use 933: *Fast Food Restaurant without Drive Through Window* and ITE Land Use 944: *Gasoline Service Station* trip rates. Review of the middle of *Table 1* indicates that the proposed Project is forecast to generate 1,338 net daily trips, with 44 net trips (22 inbound, 22 outbound) produced in the AM peak hour and 49 net trips (24 inbound, 25 outbound) produced in the PM peak hour on a "typical" weekday after application of the appropriate pass-by reductions.

Next, review of the following section of *Table 1* indicates that the existing development is forecast to generate 675 net daily trips, with 28 net trips (14 inbound, 14 outbound) produced in the AM peak hour and 55 net trips (28 inbound, 27 outbound) produced in the PM peak hour on a "typical" weekday after application of the appropriate pass-by reductions. It should be noted that since the Chinese fast food restaurant is not open for breakfast, no existing AM peak hour trips were assumed. In addition, given that the existing commercial gasoline fueling station is not likely as busy as a typical gasoline service station, we only applied three (3) vehicle fueling positions to the trip generation calculation instead of the six (6) existing vehicle fueling positions to be conservative.

It should be further noted that the aforementioned overall Project trip generation includes adjustments for pass-by based on the *Trip Generation Handbook, 3rd Edition*, published by ITE (2014) as a reference, to account for trips that are already in the everyday traffic stream on the adjoining streets (i.e. Long Beach Boulevard and Cambridge Street) and will stop as they pass by the Project site as a matter of convenience on their path to another destination. Per the *Trip Generation Handbook*, a pass-by reduction factor of 63% and 66% is assumed for the AM and PM peak hours, respectively, for the proposed convenience market with gasoline pumps land use with a daily pass-by percentage of 25%. In addition, given the characteristics of the fast food restaurant and commercial gasoline fueling station, a pass-by reduction factor of 10% was estimated for the AM and PM peak hours and daily conditions for the existing uses.

As shown on the last row of *Table 1*, the net trip generation potential of the proposed Project compared to the trip generation of the existing uses is 663 net greater daily trips, with 16 net greater trips (+8 inbound, +8 outbound) produced in the AM peak

hour and 6 net fewer trips (-4 inbound, -2 outbound) produced in the PM peak hour on a “typical” weekday.

As a result, while the proposed Project exceeds the 500 net daily trips threshold in which a TIA may be required, as presented in the *City of Long Beach Traffic Impact Analysis Guidelines (June 2020)*, the proposed Project will not add 50 or more peak hour trips to any street or intersection in the vicinity of the Project site and therefore, the proposed Project will not significantly impact the surrounding transportation system and does not require the preparation of a traffic impact analysis report.

Traffic Distribution and Assignment

Project trips have been further distributed and assigned to the adjacent street system based on the following considerations:

- the orientation of the site and the proximity to key area roadways (i.e. Long Beach Boulevard, Victoria Street, Susana Road, etc.),
- expected localized traffic patterns based on adjacent street channelization and presence of traffic signals,
- nearby turn restrictions, and
- ingress/egress availability at the Project site driveways.

Figure 4 presents the Project trip distribution pattern through the study area. It should be noted that the proposed distribution took into consideration that left turn access is restricted along the Long Beach Boulevard Project frontage due to the fact that there is a combination of a raised median and double-double striping. As shown in **Figure 4**, given the left turn restrictions along Long Beach Boulevard, primary access for southbound inbound and outbound vehicular traffic is expected to be provided via Gordon Street and the driveway along the alleyway at the southeast portion of the Project site.

Figures 5 and **6** present the anticipated net peak hour Project traffic volumes associated with proposed Project for the AM and PM peak hours, respectively. The AM and PM peak hour traffic volume assignments presented in **Figures 5** and **6** reflect the Project trip distribution characteristics illustrated in **Figure 4** and the Project trip generation forecast presented in **Table 1**. It should be noted that the volume assignments in **Figures 5** and **6** reflect both net new trips as well as pass-by trips at the public street intersections and reflects the full Project trips at the three (3) Project driveways.

SITE ACCESS AND ON-SITE CIRCULATION EVALUATION

As shown in *Figure 3*, access for the proposed Project site will be improved by reducing the number of driveways and will be efficiently provided via two (2) right-in/right-out access driveways along Long Beach Boulevard and one (1) full movement driveway located along the alleyway in its existing location. It should be noted that one existing driveway along Long Beach Boulevard, the one (only) existing driveway along Gordon Street and the one (only) existing driveway along Cambridge Street will be closed in conjunction with the Project, which will improve site access around the Project site by reducing the amount of potential conflicting movements from six driveways versus three driveways.

The on-site circulation layout of the proposed Project as illustrated in *Figure 3* on an overall basis is adequate. Vehicles will be able to adequately circulate throughout the site even with all of the fueling positions occupied. The driveway widths have been confirmed and are generally adequate for small service/delivery (FedEx, UPS) trucks, trash trucks, and fuel delivery trucks.

SB 743 VMT ASSESSMENT

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743. Under SB 743, the focus of transportation analysis pursuant to CEQA will shift from driver delay, or level of service (LOS), to reduction of vehicle miles traveled (VMT), reduction in greenhouse gas emissions, and creation of multimodal networks and promotion of mixed-use developments. In December 2018, the California Natural Resources Agency certified and adopted amendments to the CEQA Guidelines implementing SB743 with a target implementation date of July 1, 2020. It should be noted that the approach and methodology outlined in this section is based on the *City of Long Beach Traffic Impact Analysis Guidelines (June 2020)* and is generally consistent with the Technical Advisory for Evaluating Transportation Impacts In CEQA, published by the Governor's Office of Planning and Research (OPR), December 2018 (OPR Technical Advisory), which provides additional detail on the language and approach.

Under the VMT methodology, screening is used to determine if a project will be required to conduct a detailed VMT analysis. The following assessment is based on the screening methods recommended by the City of Long Beach and the State of California in the OPR Technical Advisory.

Based on the characteristics of this Project, which consists of a local-serving retail redevelopment with 2,960 total square feet (SF), the project was analyzed using the screening criteria identified in the *City of Long Beach Traffic Impact Analysis Guidelines (June 2020)* and “Technical Advisory on Evaluating Transportation Impacts in CEQA”, dated December 2018 from the Governor’s Office of Planning and Research (OPR). Given that the proposed Project is considered a local serving retail use and would be presumed to have less than significant impacts, the Project can be evaluated against the *Screening and Thresholds for Other Land Uses*; projects that are local serving retail developments less than 50,000 SF generally may be assumed to create a less-than-significant transportation impact. Therefore, since the proposed 2,840 SF 7-Eleven convenience store with gasoline pumps and 120 SF office use is primarily local-serving and significantly less than 50,000 SF, this project could be screened from a VMT analysis and could be presumed a less than significant impact on VMT, per the City of Long Beach Guidelines and OPR Technical Advisory.

CONCLUSION

Based on the results of the aforementioned net project trip generation forecast between the existing fast food restaurant and commercial gasoline fueling station versus the proposed 2,840 square-foot (SF) 7-Eleven convenience store with three (3) gasoline pumps (6 vehicle fueling positions) and 120 SF office space, which is 663 net greater daily trips, with 16 net greater trips (+8 inbound, +8 outbound) produced in the AM peak hour and 6 net fewer trips (-4 inbound, -2 outbound) produced in the PM peak hour on a “typical” weekday, we conclude that the proposed Project will not add 50 or more peak hour trips to any street or intersection in the vicinity of the Project site and therefore, the proposed Project will not significantly impact the surrounding transportation system and does not require the preparation of a traffic impact analysis report.

In addition, given that the proposed 2,840 SF 7-Eleven convenience store with gasoline pumps and 120 SF office use is primarily local-serving and significantly less than 50,000 SF, this project could be screened out from a VMT analysis and could be presumed a less than significant impact on VMT, per the City of Long Beach Guidelines and OPR Technical Advisory.

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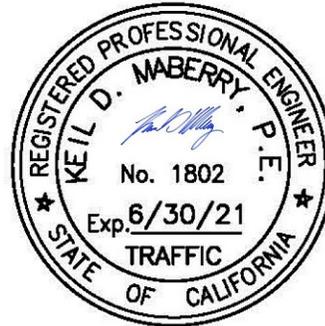
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We appreciate the opportunity to provide this Updated Traffic Impact Assessment. Should you have any questions regarding this analysis, please call us at (949) 825-6175.

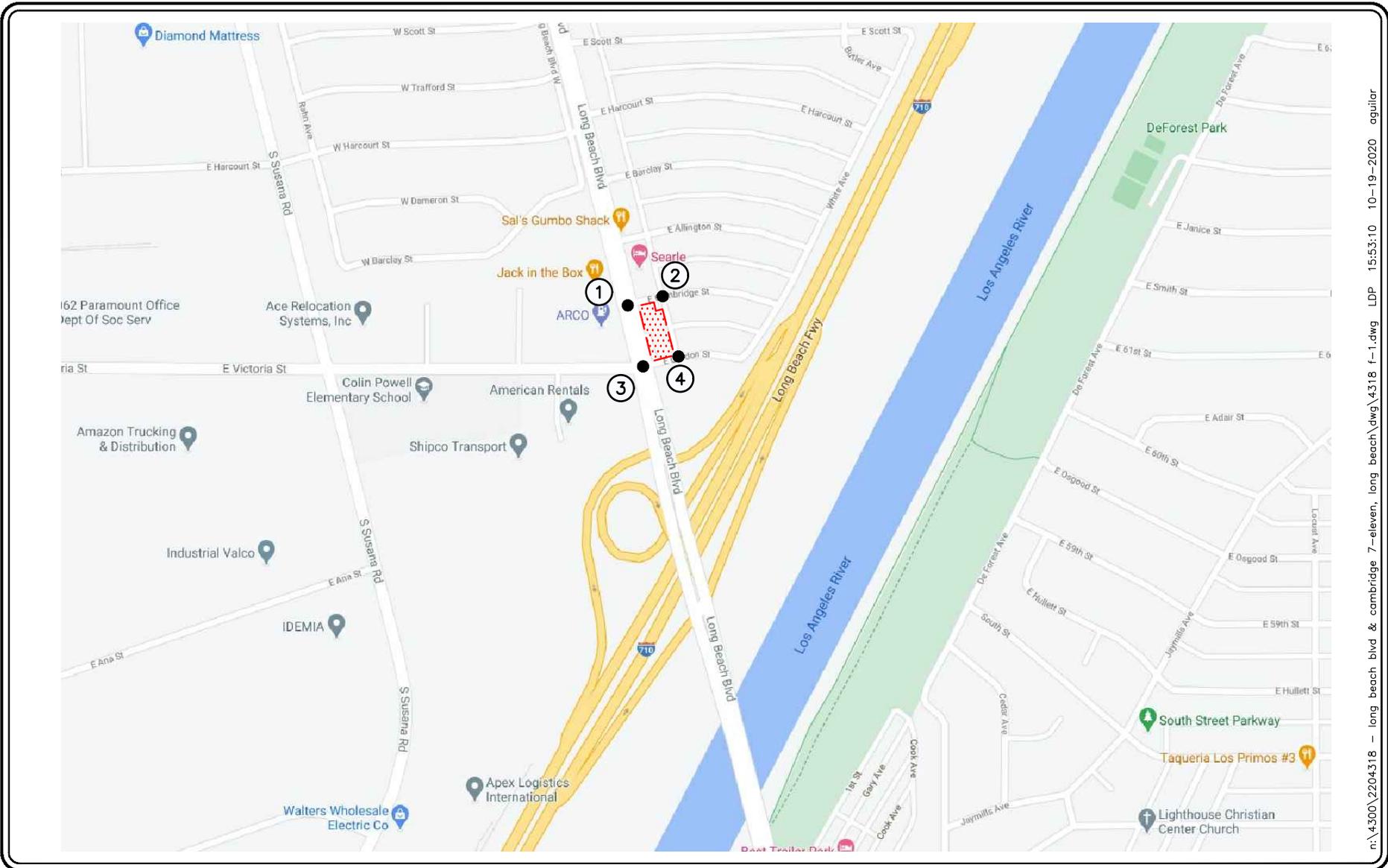
Very truly yours,
Linscott, Law & Greenspan, Engineers



Keil D. Maberry, P.E.
Principal



Attachments



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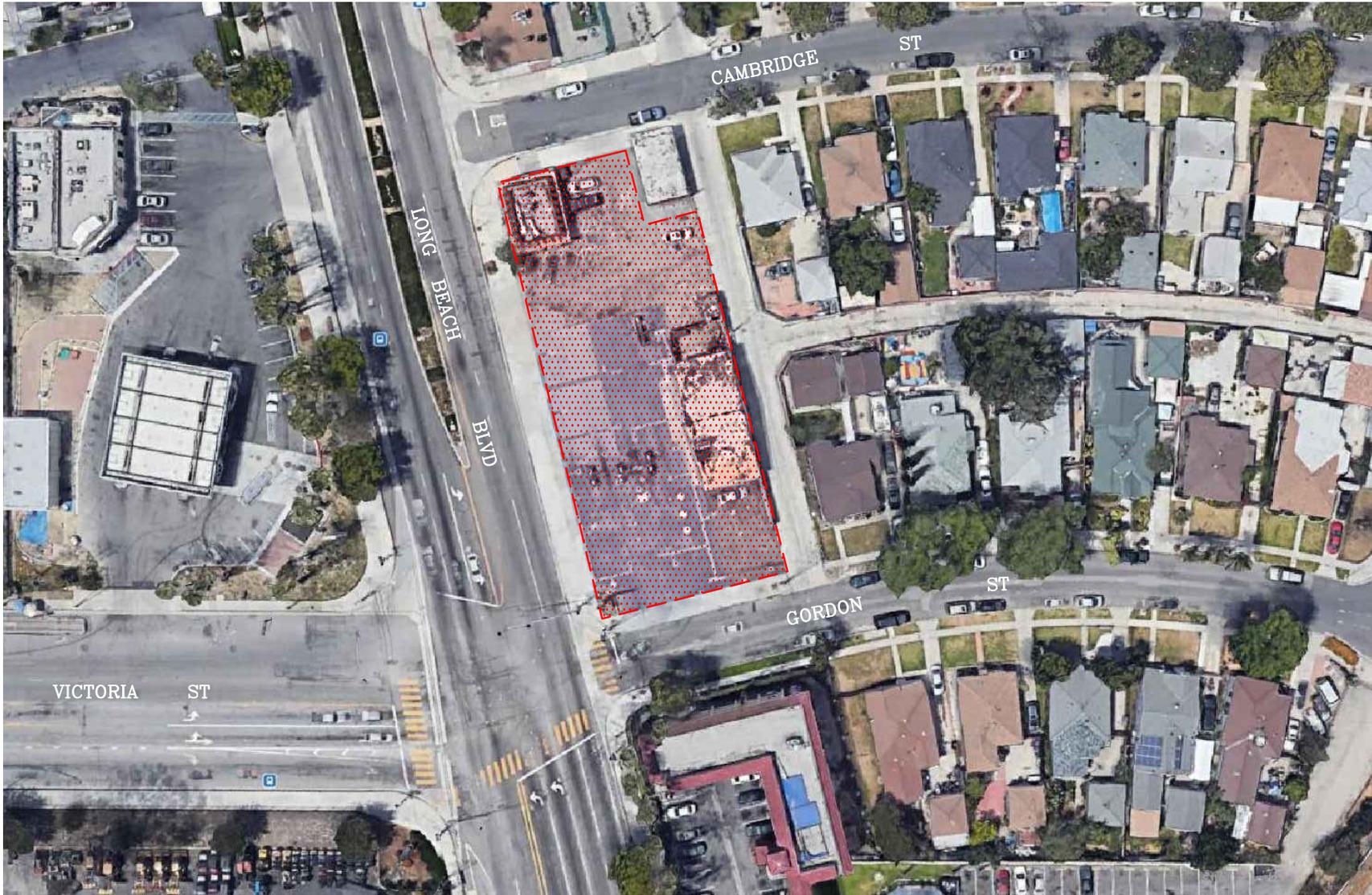
KEY

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FIGURE 1

VICINITY MAP

LONG BEACH BLVD & CAMBRIDGE ST 7-ELEVEN, LONG BEACH



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engineers



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FIGURE 2

EXISTING AERIAL SITE PLAN

LONG BEACH BLVD & CAMBRIDGE ST 7-ELEVEN, LONG BEACH

TABLE 1
PROJECT TRAFFIC GENERATION RATES AND FORECAST¹
LONG BEACH BLVD & CAMBRIDGE 7-ELEVEN, LONG BEACH

ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Generation Rates:</u>							
▪ 712: Small Office Building (TE/Employee)	7.98	84%	16%	1.03	35%	65%	1.20
▪ 853: Convenience Market with Gasoline Pumps (TE/TSF)	624.20	50%	50%	40.59	50%	50%	49.29
▪ 933: Fast Food Restaurant without Drive Through Window (TE/TSF)	346.23	60%	40%	25.10	50%	50%	28.34
▪ 944: Gasoline Service Station (TE/VFP)	172.01	50%	50%	10.28	50%	50%	14.03
<u>Proposed Project Trip Generation Forecast:</u>							
▪ Small Office (1 Employee)	8	1	0	1	0	1	1
▪ Convenience Market With Gasoline Pumps [7-Eleven] (2,840 SF)	1,773	58	57	115	70	70	140
Pass-By (Daily: 25%, AM: 63%, PM: 66%) ²	<u>-443</u>	<u>-37</u>	<u>-35</u>	<u>-72</u>	<u>-46</u>	<u>-46</u>	<u>-92</u>
<i>Convenience Market with Gasoline Pumps [7-Eleven] Subtotal</i>	<i>1,330</i>	<i>21</i>	<i>22</i>	<i>43</i>	<i>24</i>	<i>24</i>	<i>48</i>
<i>Total Proposed Project Trip Generation</i>	<i>1,338</i>	<i>22</i>	<i>22</i>	<i>44</i>	<i>24</i>	<i>25</i>	<i>49</i>
<u>Existing Trip Generation Forecast:</u>							
▪ Fast Food Restaurant without Drive Through Window (679.5 SF) ³	235	0	0	0	10	9	19
Pass-By (Daily: 10%, AM: 10%, PM: 10%) ⁴	<u>-24</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-1</u>	<u>-1</u>	<u>-2</u>
<i>Fast Food Restaurant Subtotal</i>	<i>211</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9</i>	<i>8</i>	<i>17</i>
▪ Commercial Vehicle Gas Station (3 VFP)	516	16	15	31	21	21	42
Pass-By (Daily: 10%, AM: 10%, PM: 10%)	<u>-52</u>	<u>-2</u>	<u>-1</u>	<u>-3</u>	<u>-2</u>	<u>-2</u>	<u>-4</u>
<i>Gas Station Subtotal</i>	<i>464</i>	<i>14</i>	<i>14</i>	<i>28</i>	<i>19</i>	<i>19</i>	<i>38</i>
<i>Total Existing Trip Generation</i>	<i>675</i>	<i>14</i>	<i>14</i>	<i>28</i>	<i>28</i>	<i>27</i>	<i>55</i>
Net Project Trip Generation Forecast (Proposed Project vs. Existing)	+663	+8	+8	+16	-4	-2	-6

Notes:

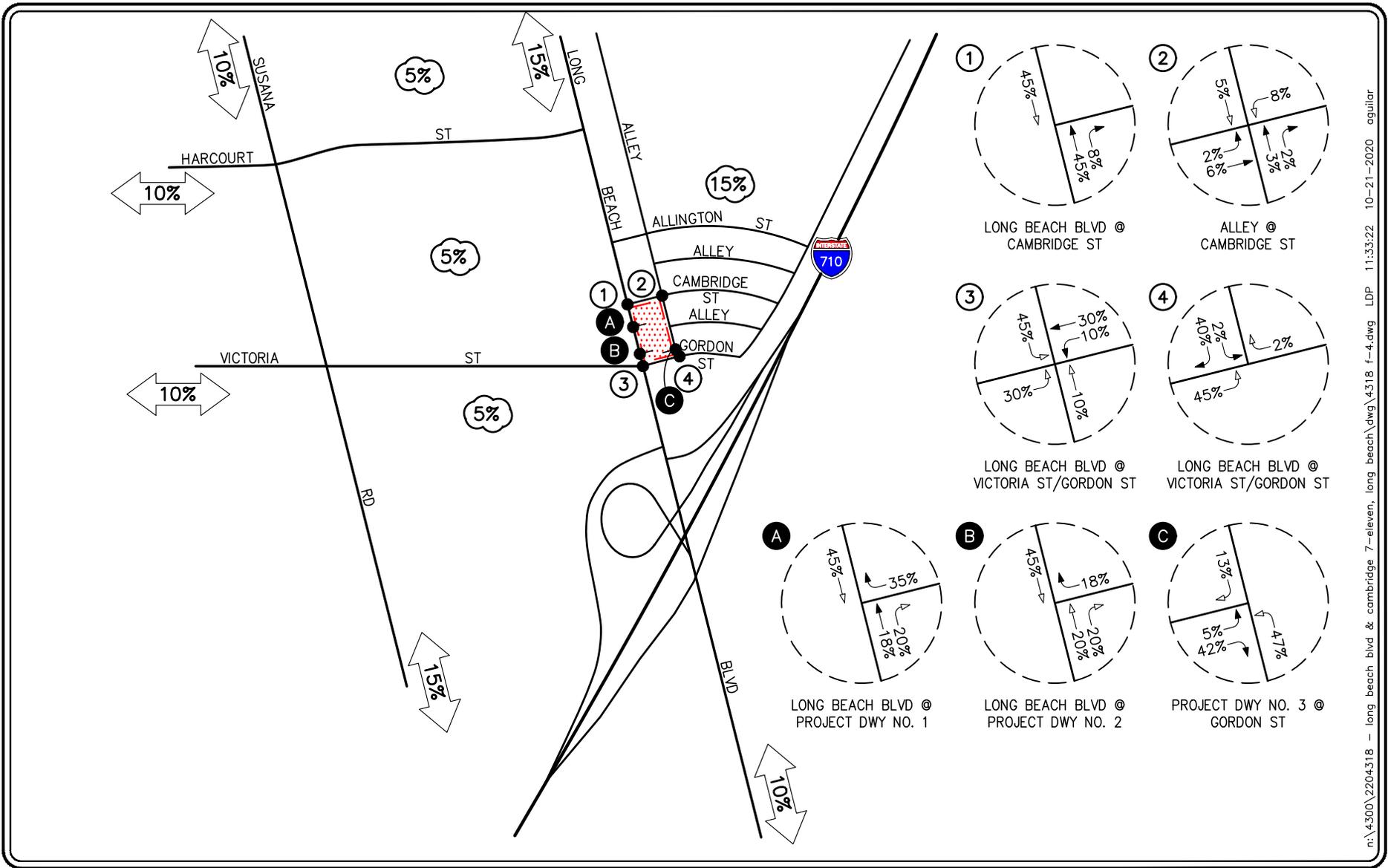
- TE/Employee = trip end per Employee
- TE/TSF = trip end per 1,000 SF
- TE/VFP = trip end per Vehicle Fueling Position

¹ Source: *Trip Generation*, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).

² Consistent with the *Trip Generation Handbook*, 3rd Edition, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2014)]. Pass-by reductions for ITE Land Use 853: Convenience Market with Gasoline Pumps consist of the following: 25% daily (estimated), 63% AM peak hour, and 66% PM peak hour.

³ Existing Fast Food Restaurant does not operate during AM peak hour.

⁴ Existing pass-by reductions consist of the following: 10% daily (estimated), 10% AM peak hour (estimated), and 10% PM peak hour (estimated).



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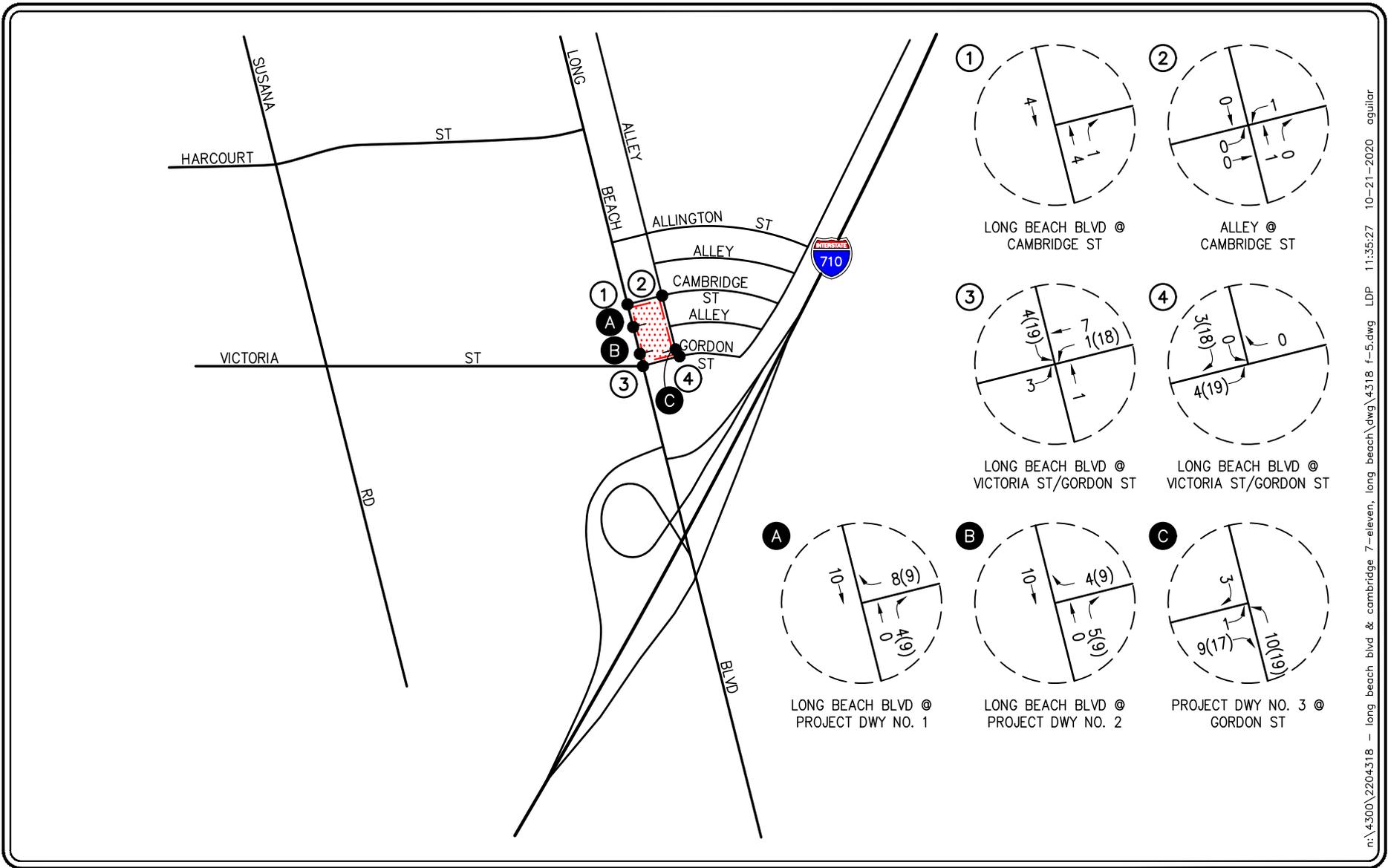
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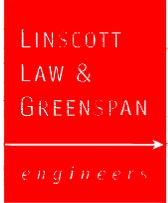
- KEY**
- # = STUDY INTERSECTION
 - ← = INBOUND PERCENTAGE
 - = OUTBOUND PERCENTAGE
 - [Red Hatched Box] = PROJECT SITE

FIGURE 4

PROJECT TRIP DISTRIBUTION PATTERN
LONG BEACH BLVD & CAMBRIDGE ST 7-ELEVEN, LONG BEACH



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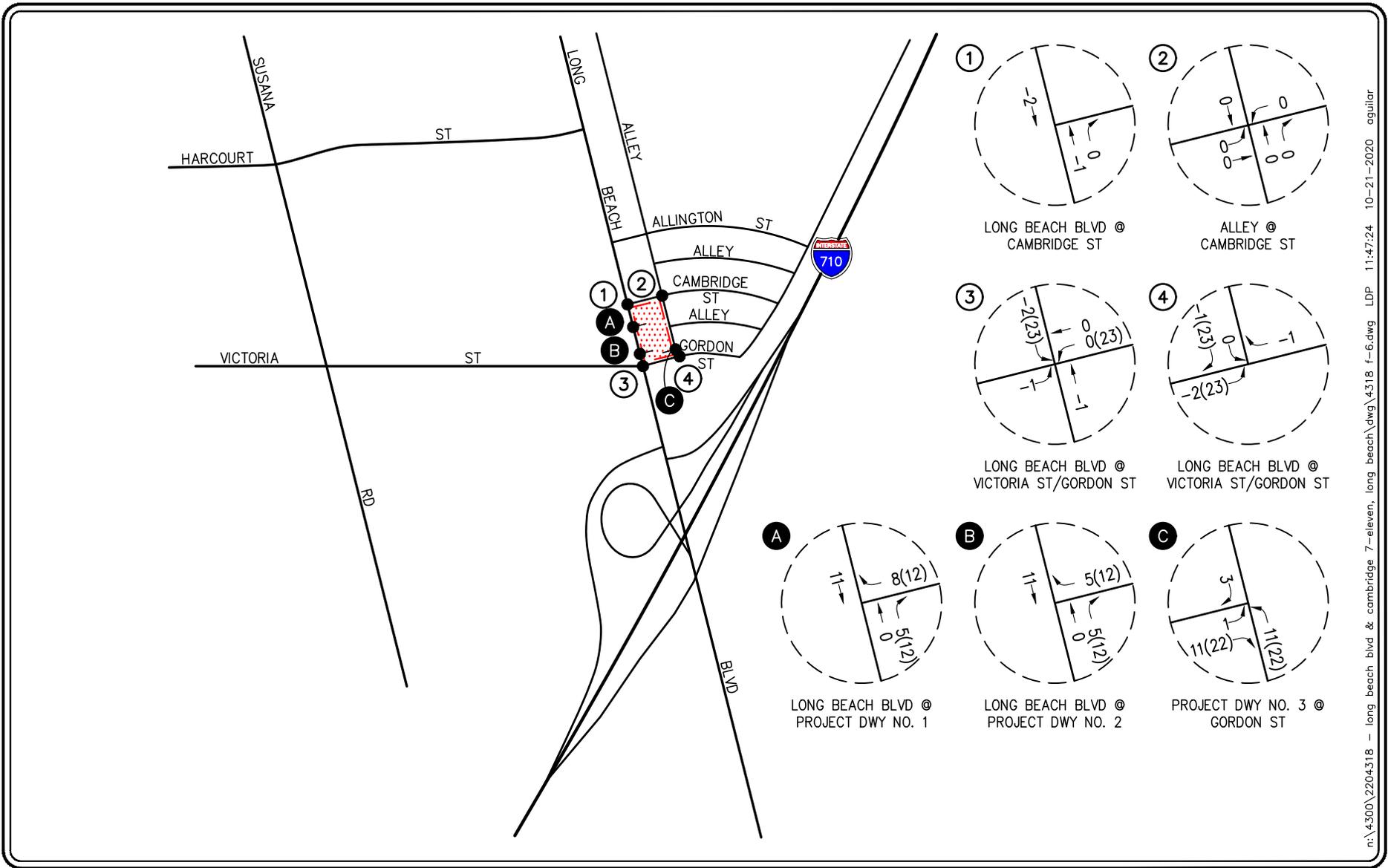
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FIGURE 5

AM PEAK HOUR PROJECT TRAFFIC VOLUMES
LONG BEACH BLVD & CAMBRIDGE ST 7-ELEVEN, LONG BEACH



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- KEY**
- ⊕ = STUDY INTERSECTION
 - (XX) = PASS-BY TRIPS
 - ▨ = PROJECT SITE

FIGURE 6

PM PEAK HOUR PROJECT TRAFFIC VOLUMES
LONG BEACH BLVD & CAMBRIDGE ST 7-ELEVEN, LONG BEACH