



March 27, 2019

Mr. Darius Fatakia
Lewis Management Corp.
1156 N. Mountain Avenue
Upland, CA 91786

LLG Reference: 2.18.4024.1

**Subject: Traffic Assessment for
Van Vliet Site in The Preserve Specific Plan (Tract No. 17571)
Chino, California**

Engineers & Planners
Traffic
Transportation
Parking

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Dear Mr. Fatakia:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Traffic Assessment for the proposed development of the Van Vliet site (Tract No. 17571), which is located within the North of Pine (NOP) component of the Preserve Specific Plan (herein after referred to as Project) in the City of Chino, California.

Pasadena
Irvine
San Diego
Woodland Hills

The proposed Project was previously analyzed and approved as part of the *Chino Agriculture Preserve Subarea 2 TIA* prepared by Urban Crossroads in July of 2002. In addition, the subject property has been included in the cumulative traffic analysis prepared as part of the *Traffic Impact Analysis "South of Pine" (Tentative Tract Map No. 16420) The Preserve Phase 3 and 4 Areas Internal Evaluation and External Evaluation, prepared by LLG, dated January 2008*, as well as other recent traffic studies, such as the *Falloncrest at The Preserve Traffic Impact Analysis (Revised) prepared by Urban Crossroads dated February 2014*, that included a long-term (buildout) traffic assessment.

This letter summarizes the traffic generation forecast potential for the proposed Project and compares it to the original entitlement for the site.

PROJECT DESCRIPTION

The Project site, known as the Van Vliet site (Tract No. 17571), is located within the western portion of the North of Pine component of the Preserve Specific Plan. The Project site is a 44.13-acre site that is generally located south of Bickmore Avenue, east of Sultana Avenue, west of Rincon Meadows Avenue, and north of Pine Avenue.

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The Meadowsquare Apartment Community borders the Project site on the southeast. **Figure 1-1** presents the vicinity map for the proposed Project.

The Van Vliet site falls under the Medium Density Residential (MDR) Land Use Zone as identified in the Preserve Specific Plan. The zoning range for MDR is between 6 to 14 dwelling units (DU) per acre (AC). The Project proposes seven residential product types within a single neighborhood consisting of single family homes, detached condominiums, stacked-flats and bungalows.

The Entitled Development/Current Zoning, as designated in The Preserve Specific Plan¹, included the development of 141 single family units and 329 multi-family units for a total of 470 units. The proposed Project includes development of 494 units consisting of 102 single family units and 392 multi-family units. A comparison of the proposed Project to the Entitled Development indicates that the Project will result in 39 fewer single family units but 63 more multi-family units, which amounts to a net increase of 24 more units. Please note that the net addition of 24 units for the Van Vliet site will not affect the overall entitled land holdings and total maximum dwelling units allowed for Chino Development Corporation as the maximum allowed unit count will remain unchanged. **Figure 2-1** presents the new proposed Project site plan for Van Vliet, while **Figure 2-2** overlays the site plan on an aerial.

Site Access

As depicted in the project site plan, access to the Project will be provided via roadways/driveways on existing roadways that borders the subject property, such as Bickmore Avenue and Pine Avenue. A portion of the back-bone internal network has already been completed with existing curb cut outs for two full access driveways located along Bickmore Avenue and one full access driveway located along Pine Avenue.

There is an entry street, Meadowhouse Avenue which has a paved cross-section that ranges between 68 feet wide to 76 feet wide. This primary roadway has direct access to Pine Avenue on the south via a signalized intersection. Two additional entry streets, Meadowhouse Avenue and Osprey Avenue, which have paved cross-sections of 86 feet and 36 feet, respectively, provide connectivity to Bickmore Avenue on the north via a full access unsignalized intersection. These streets are currently part of the public right-of-way. The remainder of the site is served by a combination of smaller public right-of-way, and private alleys. Based on our review of the preliminary site plan, the overall layout is considered adequate.

¹ **Appendix A** located at the end of this report presents the approved masterplan dated 2006 which identifies the entitled uses for Van Vliet.

PROJECT TRAFFIC CHARACTERISTICS

Trip Generation Forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Based on review of prior documents throughout the Preserve Area, trip generation has been estimated based on the most current version of the *Trip Generation Manual*.

Although the July 2002 Preserve Subarea 2 TIA was based on trip generation rates published in the 6th Edition of *Trip Generation*, subsequent studies within the Preserve Specific Plan were based on the current trip generation information available at the time, as the South of Pine “Internal/External” January 2008 TIAs and the February 2014 Falloncrest TIA used trip generation rates published in the 7th Edition and 9th of *Trip Generation*, respectively. Therefore, generation factors and/or equations used in this analysis are based on most current information found in the 10th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington, D.C., 2017].

Table 5-1 summarizes the traffic generation forecast for the Entitled Development and the Proposed Project. The upper portion of *Table 5-1* summarizes the traffic generation rates that were used in forecasting the vehicular trips. As shown, the traffic generation rates that were used in forecasting the vehicular trips for the Entitled Development and the proposed Project are based on ITE Land Use 210: Single Family Detached Housing and ITE Land Use 220: Multifamily Housing (Low-Rise).

A review of the middle portion of *Table 5-1* shows the trip generation forecast for the Entitled Development totals 3,739 daily trips, with 255 trips (61 inbound, 194 outbound) during the AM peak hour and 324 trips (204 inbound, 120 outbound) during the PM peak hour. A review of the lower portion of *Table 5-1* shows that the trip generation forecast for the Proposed Project totals 3,832 daily trips, with 255 trips (60 inbound, 195 outbound) during the AM peak hour and 321 trips (203 inbound, 118 outbound) during the PM peak hour.

A comparison of the Proposed Project trips with that of the Entitled Development indicates that the net trip generation for the proposed Project would result in 93 more daily trips, 0 more AM peak hour trips and 3 fewer PM peak hour trips. From a “trip budgeting” point of view, the AM and PM peak hours typically govern as traffic studies focus the potential impact of a development project during the weekday AM peak hour

and PM peak hour. While daily traffic is of interest, it is not the basis of peak hour service level calculations that are conducted during the preparation of traffic studies.

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. Pine Avenue, Bickmore Avenue, etc.),
- expected localized traffic patterns based on adjacent street channelization and presence of traffic signals
- nearby turn restrictions,
- pertinent traffic study in the area, and
- ingress/egress availability at the Project site driveways.

Figure 3 presents the Project trip distribution pattern at the project driveways and nearby intersections. *Figures 4* and *5* present the anticipated 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 4* and *5* reflect the Project trip distribution characteristics illustrated in *Figure 3* and the Project trip generation forecast presented in *Table 5-1*. Please note that the parenthetical values represent the anticipated project trips when compared to the entitlement for the site. Review of *Figures 4* and *5* identifies that the Project would have minimal trips when distributed to the three project driveways.

SITE ACCESS EVALUATION

As currently shown in the *Figure 2-1*, access to the Project is provided via a three main entry points, one along Pine Avenue and two along Bickmore Avenue. Based on the forecast traffic volumes at the site driveways, as illustrated in *Figure 4* and *Figure 5*, LLG concludes that the proposed Project driveways can be expected to operate at acceptable service levels (LOS D or better).

CONCLUSION

Review of the South of Pine “External” January 2008 TIA as well as the February 2014 Falloncrest TIA identifies that the nearby intersections of Euclid Avenue at Bickmore Avenue, Euclid Avenue at Pine Avenue, Rincon Meadows Avenue at Bickmore Avenue during long term buildout traffic conditions with implementation of the programmed improvements are forecast to operate at LOS D or better.

Based on the trip generation analysis identified above, the implementation of the proposed Project is forecast to result in an increase in weekday daily trips (93 more) to that of Entitled Development of Van Vliet site. However, it is concluded that there are no additional peak hour trips that would result from implementation of the proposed Project (i.e. 0 more AM and 3 fewer PM peak hour trips). Therefore, the proposed Project will not create any new traffic impacts beyond those already previously identified in these studies.

We appreciate the opportunity to prepare this investigation. Should you have any questions regarding this analysis, please call us at (949) 825-6175.

Sincerely,

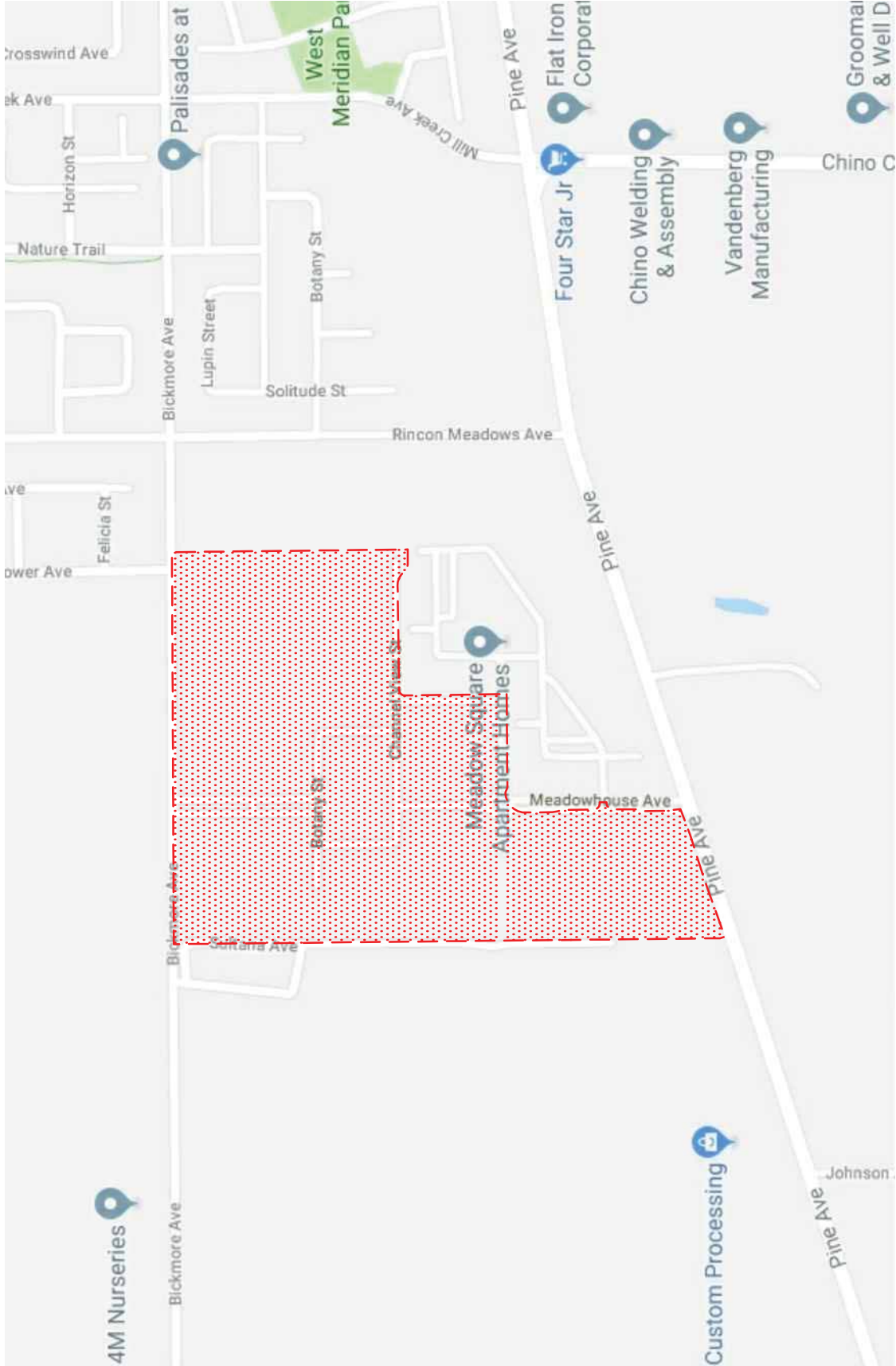
Linscott, Law & Greenspan, Engineers



Richard Barretto, P.E.
Principal

cc: File
Shane S. Green, P.E., Transportation Engineer III





SOURCE: GOOGLE

KEY
 = PROJECT SITE



FIGURE 1-1

VICINITY MAP VAN VLIET, CHINO

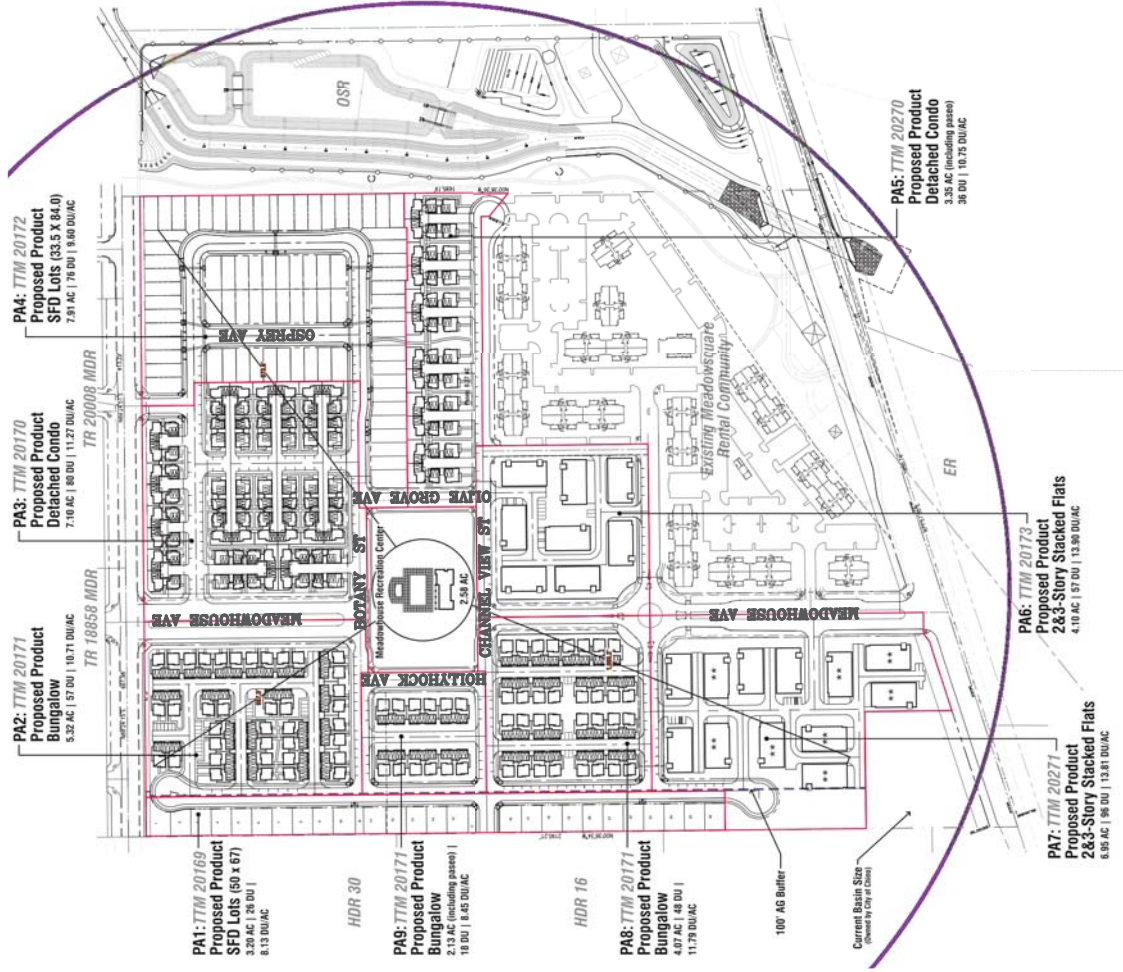


FIGURE 2-1
PROPOSED PROJECT SITE PLAN
VAN VLIET, CHINO

SOURCE: WHA ARCHITECTS



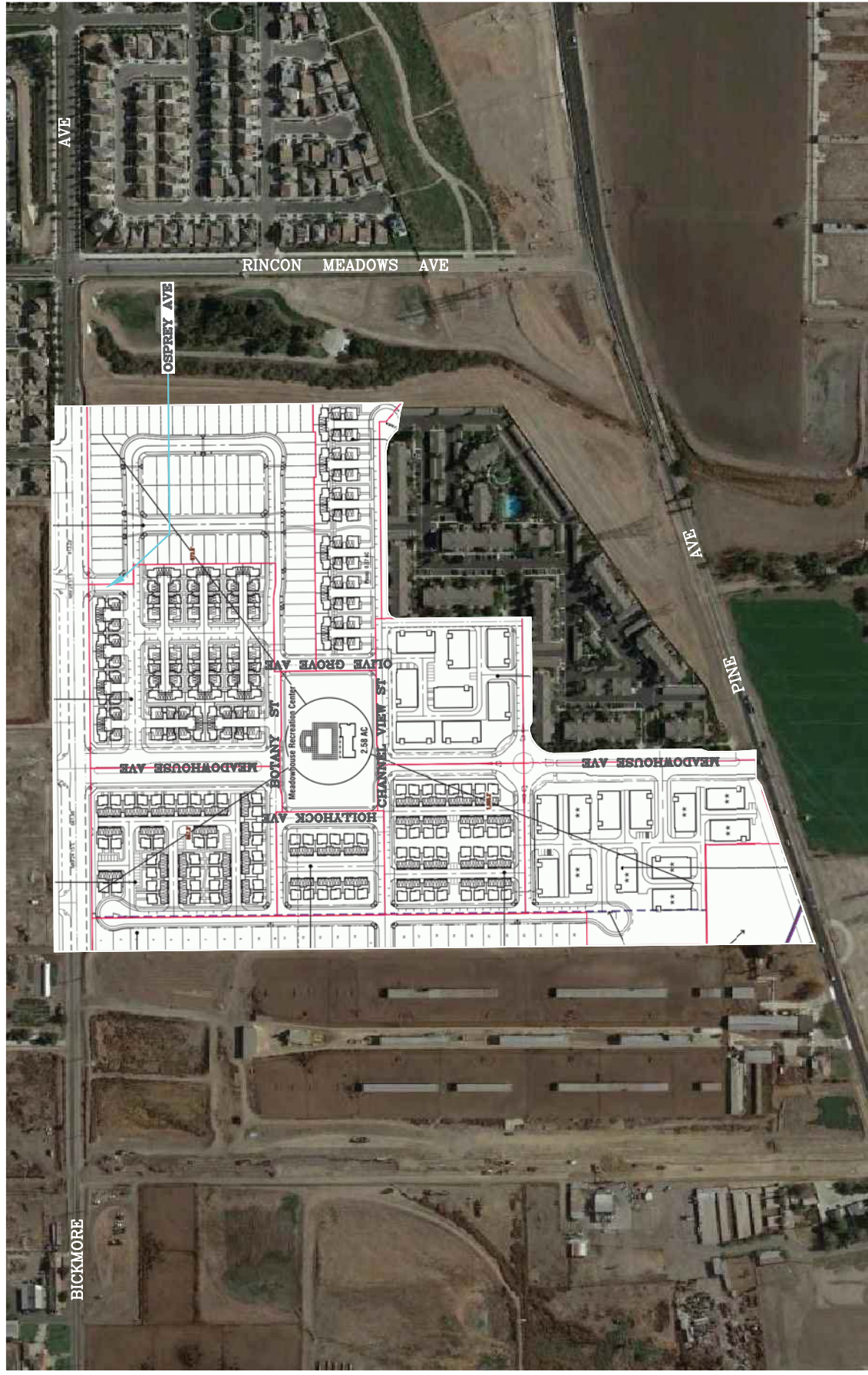
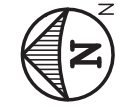


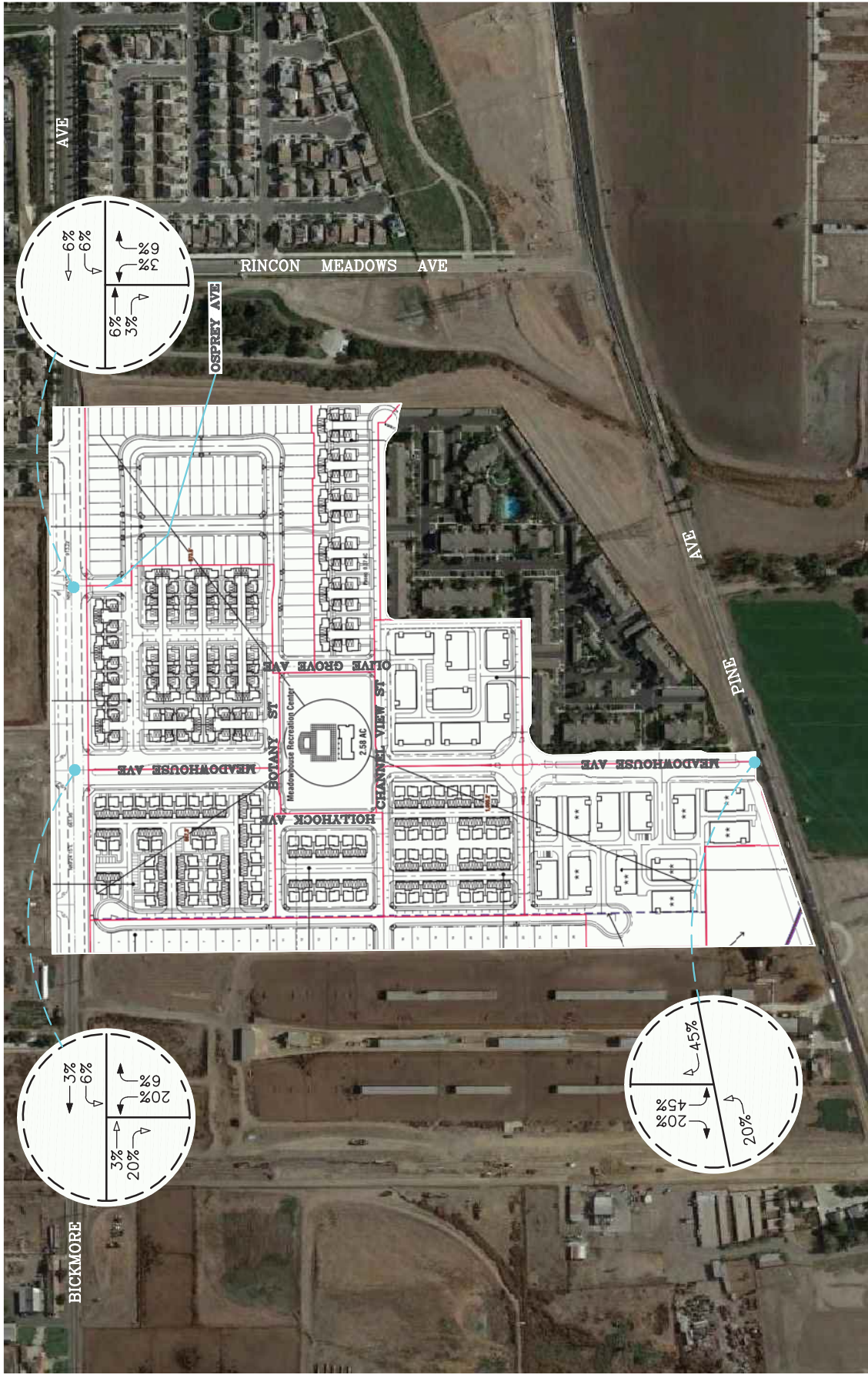
FIGURE 2-2
SITE PLAN WITH AERIAL
 VAN VLIET, CHINO

SOURCE: WHA ARCHITECTS



NO SCALE

LINSCOTT
 LAW &
 GREENSPAN
engineers



SOURCE: WHA ARCHITECTS

KEY

- ← = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE

FIGURE 3

PROJECT TRAFFIC DISTRIBUTION PATTERN VAN VLIET, CHINO



NO SCALE

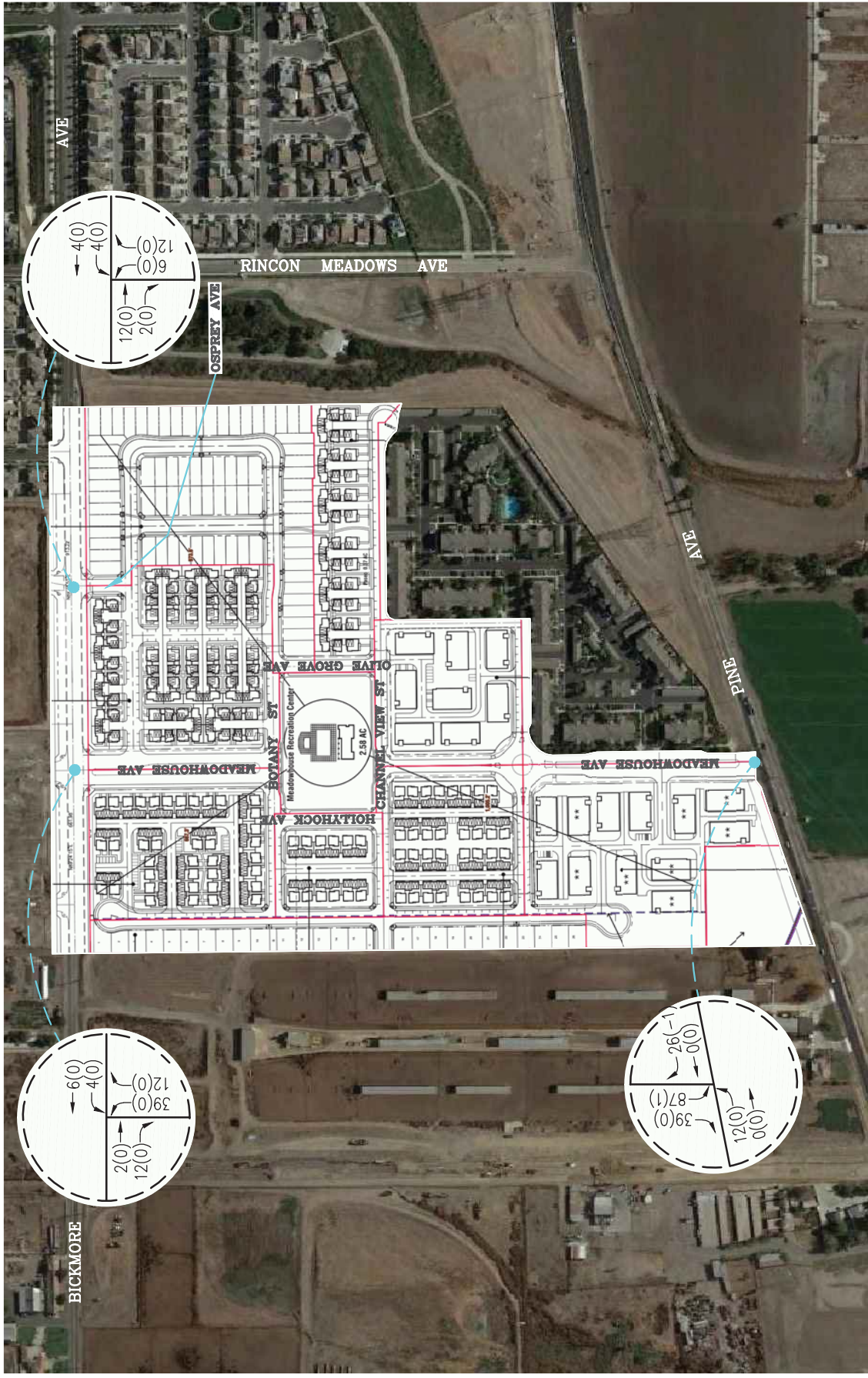


FIGURE 4
AM PEAK HOUR TRAFFIC VOLUMES
 VAN VLIET, CHINO

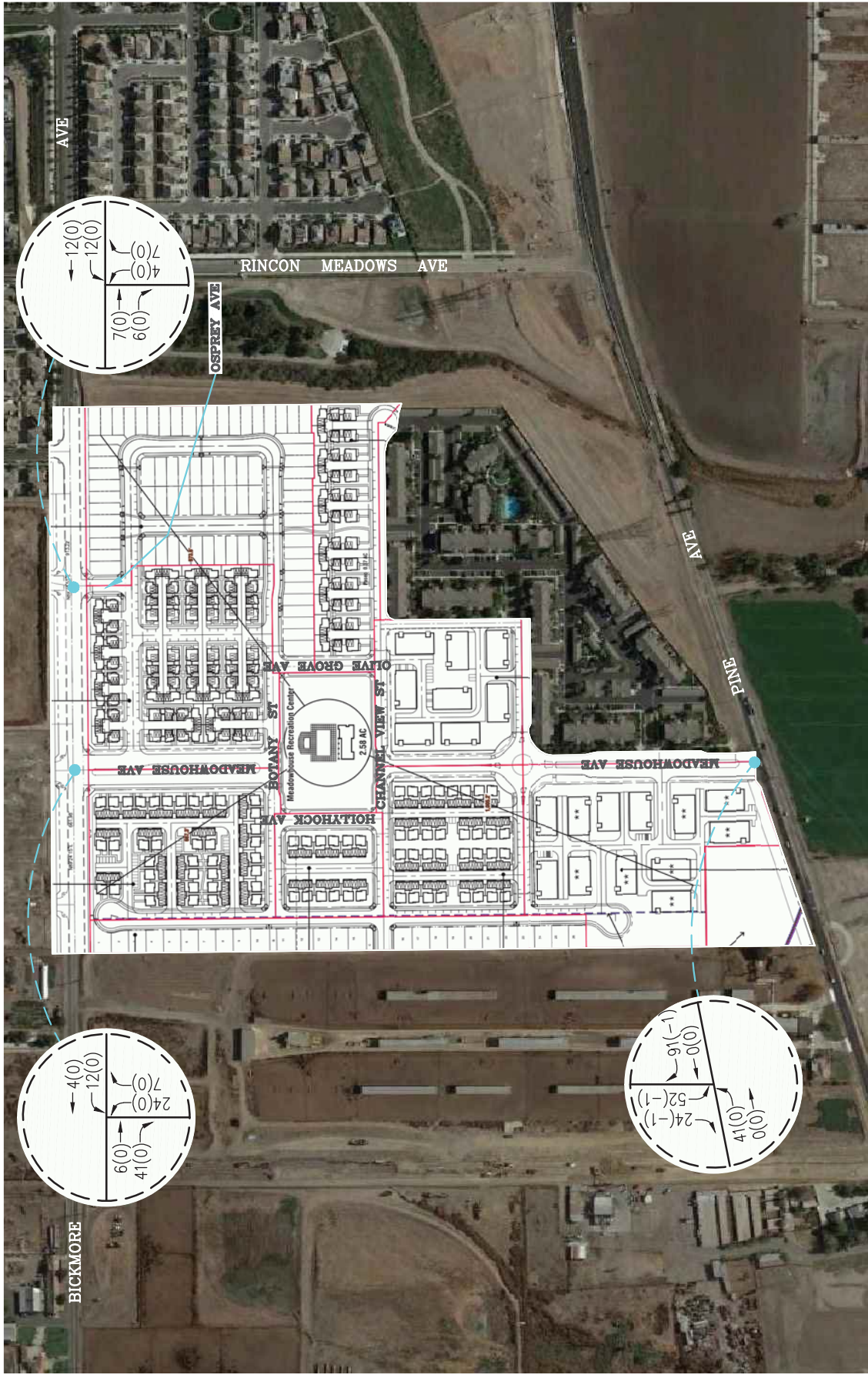


FIGURE 5
PM PEAK HOUR TRAFFIC VOLUMES
 VAN VLIET, CHINO

SOURCE: WHA ARCHITECTS

KEY

- XX = TOTAL PROJECT TRIPS
- (XX) = NET TRIPS WHEN COMPARED TO ENTITLEMENT



NO SCALE



TABLE 5-1
PROJECT TRAFFIC GENERATION FORECAST²

ITE Land Use/Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<i>Trip Generation Factors:</i>							
▪ ITE 210: Single Family Detached Housing (TE/ DU)	9.44	25%	75%	0.74	63%	37%	0.99
▪ ITE 220: Multifamily Housing (Low-Rise) ³ (TE/ DU)	7.32	23%	77%	0.46	63%	37%	0.56
<i>Trip Generation Forecast Comparison:</i>							
<u><i>Entitled Development/Current Zoning</i></u>							
▪ ITE 210: Single Family (141 DU)	1,331	26	78	104	88	52	140
▪ ITE 220: Multifamily (329 DU)	<u>2,408</u>	<u>35</u>	<u>116</u>	<u>151</u>	<u>116</u>	<u>68</u>	<u>184</u>
<i>Entitled Subtotal:</i>	<u>3,739</u>	<u>61</u>	<u>194</u>	<u>255</u>	<u>204</u>	<u>120</u>	<u>324</u>
<u><i>Proposed Project</i></u>							
▪ ITE 210: Single Family (102 DU)	963	19	56	75	64	37	101
▪ ITE 220: Multifamily (392 DU)	<u>2,869</u>	<u>41</u>	<u>139</u>	<u>180</u>	<u>139</u>	<u>81</u>	<u>220</u>
<i>Proposed Project Subtotal:</i>	<u>3,832</u>	<u>60</u>	<u>195</u>	<u>255</u>	<u>203</u>	<u>118</u>	<u>321</u>
<i>Difference in Trip Generation – Proposed Project vs. Entitled Land Use</i>	93	-1	1	0	-1	-2	-3

Notes:

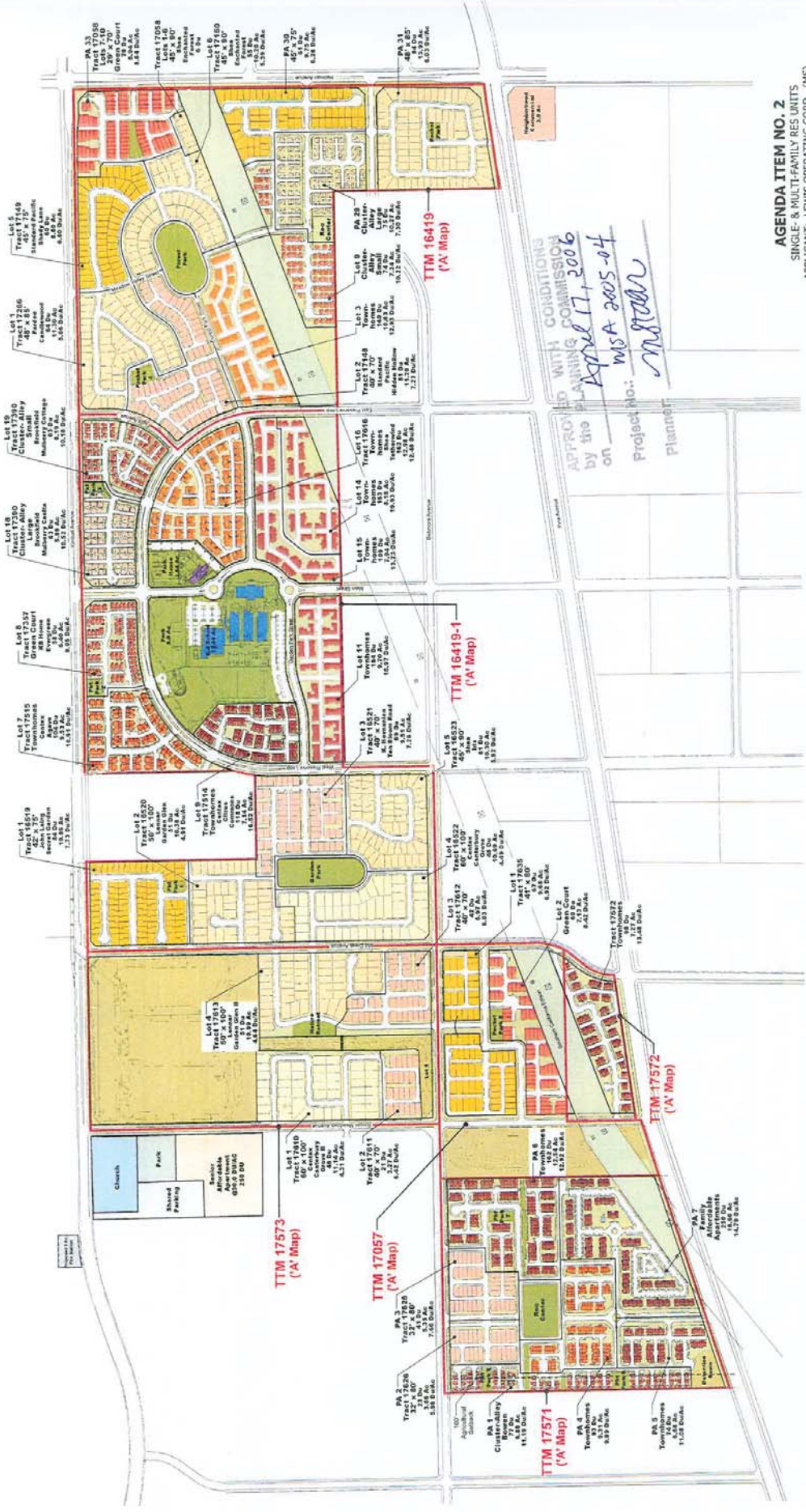
- TE/DU = Trip ends per dwelling unit

² Source: *Trip Generation, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).*

³ Low-Rise Multifamily Housing consists of buildings that with 2 levels or lower.

APPENDIX A

APPROVED 2006 PRESERVE MASTER PLAN



APPROVED WITH CONDITIONS
 by the PLANNING COMMISSION
 on April 17, 2006
 Project No.: MSA 2005-04
 Planner: M. Starn

AGENDA ITEM NO. 2
 SINGLE- & MULTI-FAMILY RES UNITS
 APPLICANT: LEWIS OPERATING CORP. (MS)

Amendment To Master Plan Concept
 for Phase 1 and 2



The Preserve
 Lewis Planned Communities
 Chino, California

