



January 14, 2026, Updated February 19, 2026, April 22, 2026, June 12, 2026

Mr. Justin Kirk, Deputy Director
OC Public Works, Development Services
601 North Ross Street
Santa Ana, CA 92701

Subject: Amendment to PA3&4 Master and Subarea Plans (PA25-0162)

Dear Mr. Kirk,

On behalf of Rancho Mission Viejo (RMV), we hereby submit the attached application for Orange County Planning Commission approval of an Amendment to the Master Area Plan and Subarea Plans for Planning Areas 3 and 4 (PA3&4).

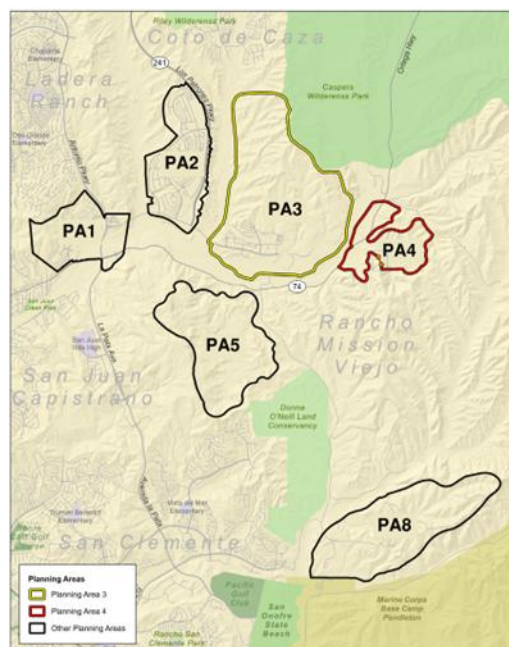
The purpose of this application is to accelerate the efficient delivery of new housing in accordance with Orange County's Housing Element and Regional Housing Needs Assessment (RHNA) targets. The overall Countywide 2029 RHNA target is 183,861 housing units with Unincorporated Orange County accounting for 10,406 of those targeted housing units.

RMV proposes to:

1. Capitalize on the progress (and optimize the benefits) of grading and infrastructure development already well under way within Planning Area 3;
2. Shift the remaining residential dwelling units (DUs) previously allocated within Planning Areas 5 and 8 (PA5&8) northwards into PA3&4; and
3. Reallocate a portion of the non-residential square footage approved within PA3&4 to PA5&8.

Importantly, RMV's proposal does not:

1. Change the amount of approved Developable Acres in the Ranch Plan.
2. Amend the existing approved Development Boundaries for Planning Areas 3, 4, 5 or 8.
3. Create any new or significant impacts to a) roadways or intersections in the Ranch Plan Planned Community (PC) Area, or b) approved water (both potable and non-potable), wastewater or energy usage.
4. Impact RMV's ability to deliver affordable housing necessary to comply with Exhibit D of the Ranch Plan Development Agreement and the Affordable Housing Implementation Agreement (AHIA).



I. Project Background:

Following approval of the overall Ranch Plan project in November of 2004, the Orange County Planning Commission approved the PA3&4 Master and Subarea Plans (PA14-0027 through PA14-0081) on February 25, 2015.

Since 2015, the Deputy Director, OCPW Development Services, has approved updates to the PA3&4 Master Area and Subarea Plans, up to and including the most recent administrative approval of MB24-0070 on May 28, 2025.

II. Project Description:

This application proposes adjusting the PA3&4 portion of the Ranch Plan Planned Community Program Text Statistical Table per the redlines integrated into the attached Draft Updated PC Statistical Table (Table 1), as summarized below:

- **Residential:** Gross acreage would be increased from 2,396 to 2,490 acres, and dwelling units would be increased from 7,500 to 9,977 ~~9,997~~, all within the previously approved PA3&4 Development Boundary.
- **Non-Residential:** Urban Activity Center, Neighborhood Center and Business Park uses would be adjusted as follows:
 - Approved gross acreage would be decreased from 270 to 190 acres.
 - Approved gross floor area would be decreased from 3,280,000 to 2,549,000 square feet, with 1,092,000 square feet of non-residential previously approved in the northern portions of Planning Area 3 (Subareas 3.8, 3.9, and 3.11) shifting southward (*i.e.*, 361,000 square feet being added to Subareas 3.14 and 4.1 and 731,000 square feet being added to PA5&8).

As noted above, the changes proposed by this application result in no net change to Developable Acreage within the Ranch Plan PC Area. Although attached updated Table 1 reflects a change in gross acres for PA3&4 from 2,666 acres to 2,680 acres, this modification corrects an error in the PC Statistical Table that has been carried forward since the October 2019 approval of PA18-0030. Of particular import, the 2,680-acre Development Area total is consistent with the gross acreage identified for PA3&4 in EIR 589 (and its associated addenda) as well as being consistent with the U.S. Fish & Wildlife Incidental Take Permit and the Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) issued in relation to the Ranch Plan.

The attached Draft Updated Development Table (Table 2) reflects how the changes which appear in updated Table 1 translate to the individual subareas within PA3&4. These table revisions and additional minor text and exhibit updates are reflected in the redlines attached as Attachment A to this application letter, demonstrating how the proposed changes compare with the currently approved PA3&4 Master Area Plan. Additional details regarding anticipated dwelling units by zoning category (*i.e.*, Conventional Single-Family Detached Dwellings, Planned Concept Detached Dwellings, Multiple-Family Dwellings and Age Qualified Dwellings) are also incorporated as part of the proposed Table 2 redline changes.

Ranch Plan Planned Community Program Text General Regulation No. 27 states that EIR 589 “analyzed the provision of approximately 6,000 senior citizen housing dwelling units” as set forth in PDF 4.1-3. The implementing action for this PDF is the inclusion of a statistical table estimating the proposed senior citizen (AQ) dwelling units in Master Area Plans and each subsequent Subarea Plan is to specify the location and number of Senior Housing dwelling units. The Draft Updated Development Table: Planning Area 3 & 4 Master Area Plan and Subarea Plans – Table 2 included in the application sets forth the location and number of senior

DRAFT UPDATED PLANNED COMMUNITY STATISTICAL TABLE

PA3&4 Master Area Plan Table 1

Planning Area	Development Use										Open Space Use	Planning Area Totals	
	Residential			Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort Gross Acreage			
	Gross Acres	Maximum Dwelling Units	Maximum Non-Residential Square Footage (000)	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)		Gross Acres	Open Space Acres	Gross Acres
Planning Area 1	446	1,247	110	5	30	13	95				464	240	704
Planning Area 2	806	2,776	15	45	495	5	30				856	824	1,680
Planning Areas 3 & 4	2,396 2,490	7,500 9,977	120	204 170	2,830 2,332	49 20	145 217	50 0	305 0	0	2,666 2,680	647 633	3,313
Planning Areas 5 & 8	1,705 1,608	2,477 0				13	220 148	30 80	805 1,110	25	1,773 1,759	3,040 3,024	4,783
Planning Area 10												12,203	12,203
Total	5,350	14,000	245	253	3,355	51	490	80	1,110	25	5,759	16,924	22,683

PA25-0162

DRAFT UPDATED DEVELOPMENT TABLE																					
Planning Area 3 & 4 Master Area Plan & Subarea Plans - Table 2																					
Planning Area	Development Use																		Open Space Use	Planning Area Totals	
	Residential										Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort Gross Acreage	Gross Acres			
	Gross Acres	Net Acres	Maximum Dwelling Units	Conventional Single-Family Detached Dwellings	Planned Concept Detached Dwellings	Multiple-Family Dwellings	Estate Lots	Age Qualified Dwelling Units	Maximum Non-Residential Square Footage (000)	Parkland Gross Acreage	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)					
Planning Areas 3 & 4	2,396 2,490	1,579 1,669	7,500 9,977	1,625 1,964	3,499 4,947	2,376 3,066	0 0	2,876 2,169	120 120	95 68	201 170	2,830 2,332	19 20	145 217	50 0	305 0	0 0	2,666 2,680	647 633	3,313	
Subarea 3.1	105 115	76	671	73	346	252			120	5 0	13	10						118 128			
Subarea 3.2a	58 60	43	279	134	145			145		5 11								58 60			
Subarea 3.2b	47 56	37 46	514		314 315	200 199												47 56			
Subarea 3.3	88 76	65 58	450 382	200 175		250 207				10 6								88 76			
Subarea 3.4	80 84	58	331 326	140 44	125 282	66 0		331 326		5 0								80 84			
Subarea 3.5	177 173	119	740 539	123 178	504 361	113 0		390 307										177 173			
Subarea 3.6	172 166	122	1,135 1,060	350 348	185 183	600 529		135 133		5 6								172 166			
Subarea 3.7	106 149	77 104	360 771	50 75	160 366	150 330		160 0		5								106 149			
Subarea 3.8	104 144	79 127	355 1,245	160 200	195 470	495 575		240 230		5	25 0	405 0	14 0	100 0				140 144			
Subarea 3.9	14 168	42 118	0 690	139	451	100		209			77 56	970 686	5 10	45 107	50 0	305 0		146 234			
Subarea 3.10	169 144	123 98	825 649	200 124	625 525			825 649		5								169 144			
Subarea 3.11	235 129	171 95	300 596	300 188	300 293	115		145 0		20	8 14	210 150						243 143			
Subarea 3.12	157 131	85 75	515 730	80 65	305 555	130 110												157 131			
Subarea 3.13	133 150	97 115	305 590	50 65	155 425	400 100		305 0		5								133 150			
Subarea 3.14	276 258	195 190	220 265			220 265				20 0	53 71	535 686	0 10	0 110				329 339			
Subarea 4.1	478 487	220 225	500 670	225 156	175 230	400 284		200 170		5	25 16	700 800						503 503			
PA25-0162																					

dwelling units. The impetus for analysis of up to 6,000 senior DUs was primarily related to internal and regional traffic concerns. Each subsequent Master Area Plan and related traffic analysis have concluded that providing less than 43% AQ DUs (based on market demand) would not result in new traffic impacts. See Section V. of this letter and Attachment C for more detailed traffic analysis.

Each applicable PA3&4 Subarea Plan requests that future wireless facilities be up to 75 feet in height, when the previous PA3&4 Subarea Plans were limited to 70 feet. This requested increase will facilitate multiple carriers on fewer towers and is due to changing carrier equipment challenges and the coverage challenges present in PA3&4 due to the terrain

III. PC Text Area Plan Amendment Regulations:

As regulated by Section II.A.4.f of the Ranch Plan Planned Community Program Text (and as described in more detail in Attachment B of this application letter), "Any revision to reallocate the number of dwelling units or Urban Activity Center, Business Park and Neighborhood Center acreage and square footages from one Planning Area to another Planning Area by more than ten percent (10%) shall require an amended Statistical Table, and an Area Plan to be approved by the Planning Commission." The addition of 2,497 dwelling units in PA3&4 (from 7,500 to 9,977 9,997) is a 33.3% change.

As further required by Section II.A.4.h of the Ranch Plan Planned Community Program Text (also described in more detail in Attachment B of this application letter), "Any amendment to the PC Development Map shall be accompanied by a Traffic Analysis that supplements the Final Program EIR 589 traffic study (Austin Foust Associates, Inc., May 2004), concluding that there

will be no significant impacts to roadways and intersections within the Ranch Plan PC Area or in the surrounding vicinity following approval of the amendment." Accordingly, this application includes an updated traffic analysis dated November, 2025, as prepared by Fehr & Peers (Attachment C), which concludes that the PA3&4 road network is adequately planned to accommodate the project traffic.

Therefore, this application is consistent with the Ranch Plan PC Program Text procedure requirements for amending the PC Statistical Table.

IV. Local Park Implementation Plan:

The Orange County Subdivision Committee originally approved PM07-01 Ranch Plan Planned Community Park Modification and Local Park Implementation Plan (LPIP) on March 14, 2007. Per the approved LPIP, 94 creditable Parkland acres total are required, of which 75% or 70.5 acres can be creditable public parkland and 25% or 23.5 acres of creditable private parkland. To date, through Planning Area 1 and 2, along with Subareas 1-6 of Planning Area 3, RMV has received credit for 70.7 public park land acres and 6.8 private parkland acres (as shown in LPIP Amendment #5). With the parkland acres already credited, 82% of the 94 acres required, RMV is ahead of schedule and well on its way towards meeting the total required parkland acres.

With the reallocation of residential units to Planning Areas 3 and 4, the full 94 acres of required parkland would need to be accommodated in Planning Areas 1 through 4 because this area would support the full number of residents in the Planned Community. As shown in proposed Table 2, the Amended PA3&4 Development Table, 68 acres of parkland are proposed in PA3&4. When combined with the parkland credited in Planning Areas 1 and 2, the full Ranch Plan parkland requirement under the LPIP would be satisfied.

V. Infrastructure & Utility Capacity:

The proposed PA3&4 increased dwelling units from 7,500 to 9,977 ~~9,997~~ and proposed decrease in non-residential floor area from 3,154,000 to 2,549,000 square feet has been analyzed to ensure sufficient infrastructure and utilities are in place or will be built, including:

- Circulation: See updated PA3&4 Master Area Plan (Attachment A), Exhibit 5 – The November 2025 Fehr & Peers Traffic Analysis (Attachment C) concludes that there will be no significant impacts to roadways and intersections within the community or in the surrounding vicinity. This traffic analysis concludes that build-out of the PA25-0162-proposed PC-wide land use mix, including the proposed reduction in total AQ units, would not result in new traffic impacts.
- Domestic Water, Non-Domestic Water and Wastewater, Storm Drainage and Water Quality: See Attachment A, Exhibits 6 thru 10 – SMWD planned water and sewer capacity is projected to be sufficient to meet future demands.
- Gas Service: Southern California Gas Company has sufficient capacity utilizing the high-pressure gas line at Antonio Parkway and Cow Camp Road.
- Electrical Service: SDG&E has sufficient capacity to accommodate the entire Ranch Plan. RMV is building out its electrical network in accordance with SDG&E guidelines as they evolve.

VI. Specific Proposed Planning Area 3 and 4 Revisions:

Attachment A of this application letter contains the redlines of text, exhibits and tables that reflect proposed modifications to the previously approved PA3&4 Master and Subarea Plans.

VI. Compliance with Ranch Plan PC Program Text: Development Map and Statistical Table – Amendments and Procedures:

Attachment B of this application letter is a detailed analysis of the compliance of the PA3&4 proposed Master and Subarea Plan and Subarea Plan acreage, dwelling unit and square footage changes, with the appropriate subsections of Section II.A.4 of the Ranch Plan Planned Community Program Text regarding proposed Master and Subarea Plan revisions.

VII. CEQA Compliance:

The proposed changes to PA3&4 have the potential to change the impacts evaluated in the FEIR 589 and the 2015 Addendum prepared for the Master Area and Subarea Plans. As such, the revisions need to be evaluated to determine if any of the three conditions specified in Section 21166 of the Public Resources Code exists that would trigger the need for a subsequent or supplemental EIR (SEIR). Based on our preliminary review, it is not anticipated that any of the three conditions would occur. There are no physical changes to the environment occurring outside of the previously approved and established development boundaries for Rancho Mission Viejo. Therefore, it is proposed that an Addendum in compliance with CEQA Guidelines Section 15164 be prepared to address the changes associated with the proposed amendments. The Addendum will use the County's CEQA Environmental Checklist to ensure that the analysis is comprehensive.

Please contact me with any questions if you, or your staff, need any further information.

Sincerely,



Jay Bullock
Vice President, Planning and Entitlement
Rancho Mission Viejo

Attachments:

- A. Specific Proposed Planning Area 3 and 4 Revisions (Redline of PA3&4 Master Area Plan)
- B. Compliance with Ranch Plan PC Program Text: Development Map and Statistical Table – Amendments and Procedures
- C. Transportation Study of: Rancho Mission Viejo Amendment to PA3&4 Master and Subarea Plans (PA25-0162)

Attachment A**Specific Proposed Planning Area 3 and 4 Revisions:****3.2 Land Use Plan and Master Area Plan Development Table:**

The Master Area Plan is intended to show the general location, acreage and type of land use for each Planning Subarea. 14 Subareas are contained in Planning Area 3 and one Subarea is contained within Planning Area 4. The Land Use Plan (Exhibit 4) depicts the general location of each proposed Subarea Plan within Planning Areas 3 and 4, as required by Ranch Plan PC Program Text Section I1.B.3.a.2. The distribution of these land use types is also depicted on Table 2, PA3&4 Master Area Plan Development Table. The location of each of the Subareas is also depicted in Exhibit 4 (Land Use Plan).

The Planning Areas 3 and 4 Master Area Plan include residential, Urban Activity Center (UAC), Business Park, Neighborhood Center and open space uses as well as public facilities and public parklands, and open space. Table 2 provides statistical information for Planning Areas 3 and 4. Exhibit 4, Planning Areas 3 and 4 Land Use Plan, depicts the 30-foot grading contours and identifies the land uses within Planning Areas 3 and 4. In summary, 2,490 ~~2,396~~-gross acres of residential use allowing 9,977 ~~7,500~~ total dwelling units, 190 ~~270~~ gross acres and 2,549,000 ~~3,400,000~~ square feet of non-residential uses (168 ~~204~~ acres of Urban Activity Center, and 20 ~~19~~ acres of Neighborhood Center ~~and 50 acres of Business Park~~) are proposed within the 2,680 ~~2,666~~-gross acre development area portion of Planning Areas 3 and 4. The provision of open space dedications associated with Planning Areas 3 and 4 is discussed further in Section 4.1.D.

The Planning Area 4 Master Area Plan would include Urban Activity Center uses, residential uses, and open space. Table 2 provides statistical information for Planning Area 4. Exhibit 4, Planning Areas 3 and 4 Land Use Plan, depicts the 30-foot grading contours and identifies the land uses within Planning Area 4.

The 14 Planning Subareas within PA3 and one in PA4 are generally described below, including proposed land uses, and described in detail in each specific Subarea Plan.

NOTE: The approved dwelling unit and square footage totals for each Subarea Plan are not-to-exceed totals, but this does not preclude the ability of an applicant to implement less than the approved totals and does not require a subsequent Area Plan revision or amendment to account for the difference.

Subarea 3.1

The 128 ~~148~~-gross-acre Subarea 3.1 is located in the southwesterly portion of Planning Area 3. Cow Camp Road would traverse the southerly boundary of the subarea in a generally east-west direction. Gobernadora Canyon is located easterly of Subarea 3.1.

The following land uses are proposed:

- 115 ~~105~~ gross acres of residential development area, allowing a total of 671 dwelling units, none of which are planned as age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential Home Based Business Enclave (HBBE).
 - Recreational Uses (including but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses
 - ~~Up to 5 acres of public parkland~~

Planning Area 3 & 4

Planning Area	Development Use											Open Space Use	Planning Area Totals
	Residential			Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort			
	Gross Acres	Maximum Dwelling Units	Maximum Non-Residential Square Footage (000)	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Gross Acres		
Planning Area 1	446	1,247	110	5	30	13	95				464	240	704
Planning Area 2	806	2,776	15	45	495	5	30				856	824	1,680
Planning Areas 3 & 4	2,490	9,977	120	170	2,332	20	217				2,680	633	3,313
Planning Areas 5 & 8	1,608			33	498	13	148	80	1,110	25	1,759	3,024	4,783
Planning Area 10												12,203	12,203
Subtotal	5,350	14,000	245	253	3,355	51	490	80	1,110	25	5,759	16,924	22,683
Total													

MASTER AREA PLAN

PC STATISTICAL TABLE REVISION (Per Ranch Plan Planned Community Program Text Section II.A.4.b)

Ranch Plan Planned Community

PA-3 & 4 MASTER AREA PLAN
Table 1

Planning Area 3 & 4

Planning Area	Development Use																	Open Space Use	Planning Area Totals	
	Residential										Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort Gross Acreage			
	Gross Acres	Net Acres	Maximum Dwelling Units	Conventional Single-Family Detached Dwellings	Planned Concept Detached Dwellings	Multiple-Family Dwellings	Estate Lots	Age Qualified Dwelling Units	Maximum Non-Residential Square Footage (000)	Parkland Gross Acreage	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)		Gross Acres		
Planning Areas 3 & 4	2,490	1,669	9,977	1,964	4,947	3,066		2,169	120	68	170	2,332	20	217				2,680	633	3,313
Subarea 3.1	115	76	671	73	346	252			120		13	10						128		
Subarea 3.2a	60	43	279	134	145			145		11								60		
Subarea 3.2b	56	46	514		315	199												56		
Subarea 3.3	76	58	382	175		207				6								76		
Subarea 3.4	84	58	326	44	282			326										84		
Subarea 3.5	173	119	539	178	361			307										173		
Subarea 3.6	166	122	1,060	348	183	529		133		6								166		
Subarea 3.7	149	104	771	75	366	330				5								149		
Subarea 3.8	144	127	1,245	200	470	575		230		5								144		
Subarea 3.9	168	118	690	139	451	100		209			56	686	10	107				234		
Subarea 3.10	144	98	649	124	525			649		5								144		
Subarea 3.11	129	95	596	188	293	115				20	14	150						143		
Subarea 3.12	131	75	730	65	555	110												131		
Subarea 3.13	150	115	590	65	425	100				5								150		
Subarea 3.14	258	190	265			265					71	686	10	110				339		
Subarea 4.1	487	225	670	156	230	284		170		5	16	800						503		

MASTER AREA PLAN

DEVELOPMENT TABLE (Per Ranch Plan Planned Community Program Text Section II.B.3.a. and II.B.3.b.)

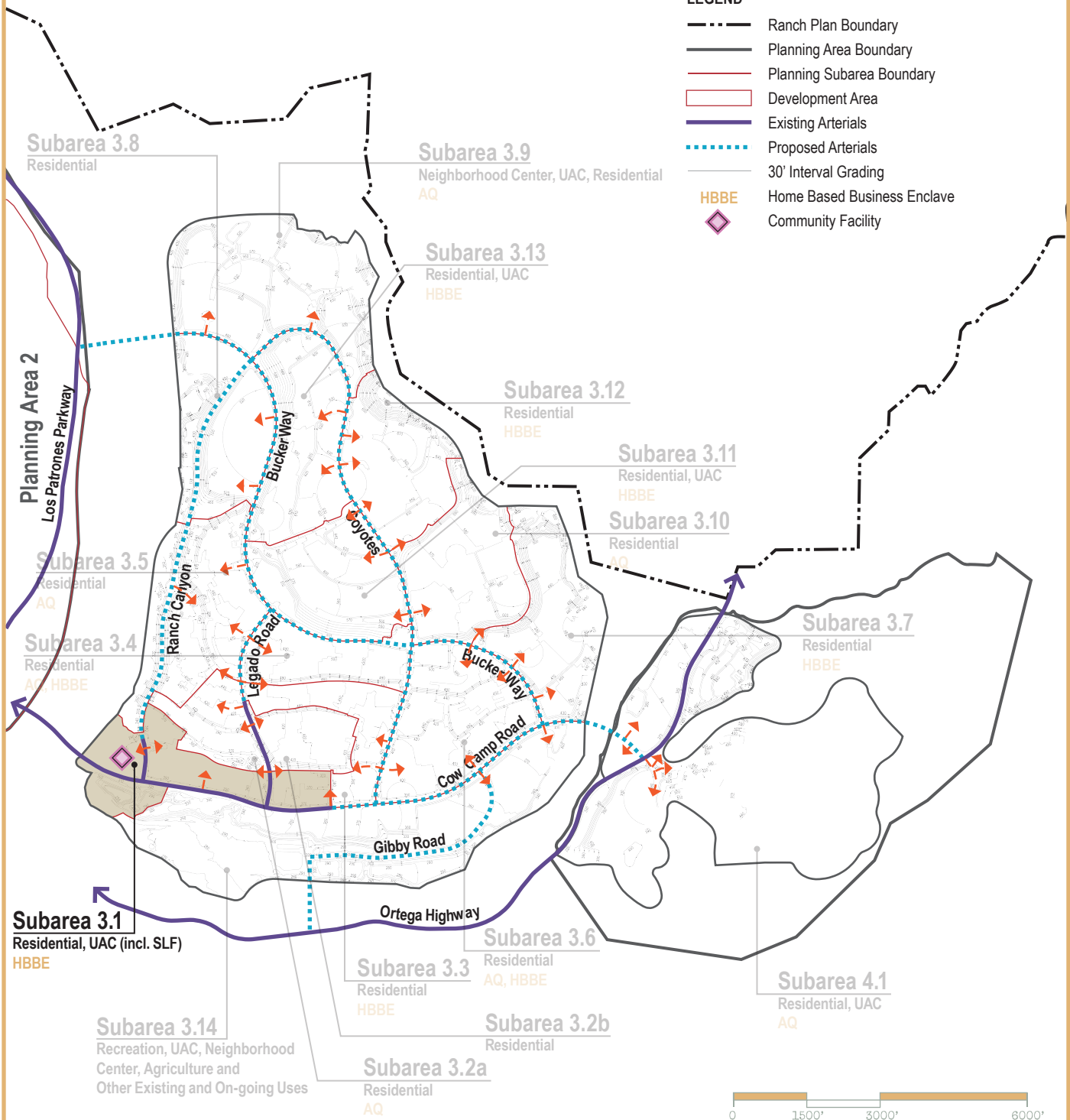
Ranch Plan Planned Community

PA-3 & 4 MASTER AREA PLAN
Table 2

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- HB Home Based Business Enclave
- ◆ Community Facility



SUBAREA 3.1
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



- Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - ~~A wireless facilities tower up to 70 feet in height~~
- Up to 13 acres of Urban Activity Center (UAC) uses and up to 10,000 square-feet of general uses allowed by Section III.D.1.a (UAC Principal Permitted Uses) of the Ranch Plan PC Program Text. This UAC area may also include, but not be limited to, the following uses allowed by Section III.D.1.a (UAC Principal Permitted Uses)
- Up to 120,000 square feet of Senior Living Facility uses, as allowed by Section III.A.5.a.3)c) (Senior Housing – Principal Permitted Uses) of the Ranch Plan Planned Community Program Text. Units compliant with Section III.A.5.a.3)c) (Senior Housing) would not count as dwelling units with respect to the Ranch Plan PC limit of 14,000 total allowed dwelling units. For the purpose of traffic impact analysis, a maximum of 480 facility units are assumed. The precise mix of nursing care beds, assisted living, and independent living would be determined when a specific project is proposed and would be evaluated as part of the site development permit process.

Subarea 3.2a

The ~~60 58~~ gross-acre Subarea 3.2a is located in the south-west portion of Planning Area 3, north of Subarea 3.1, west of Legado Road. The following land uses are proposed:

- ~~60 58~~ gross acres of residential development area, allowing a total of up to 279 dwelling units, 145 of which are planned as age-qualified units. This residential PA3&4 Master Area Plan Updated October 14, 2024 Page 14 of 40 area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - Community facility uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses; the Master Maintenance Corporation owned and operated community facilities may allow the service of alcohol.
 - Up to ~~11 5~~ acres of public parkland

Subarea 3.2b

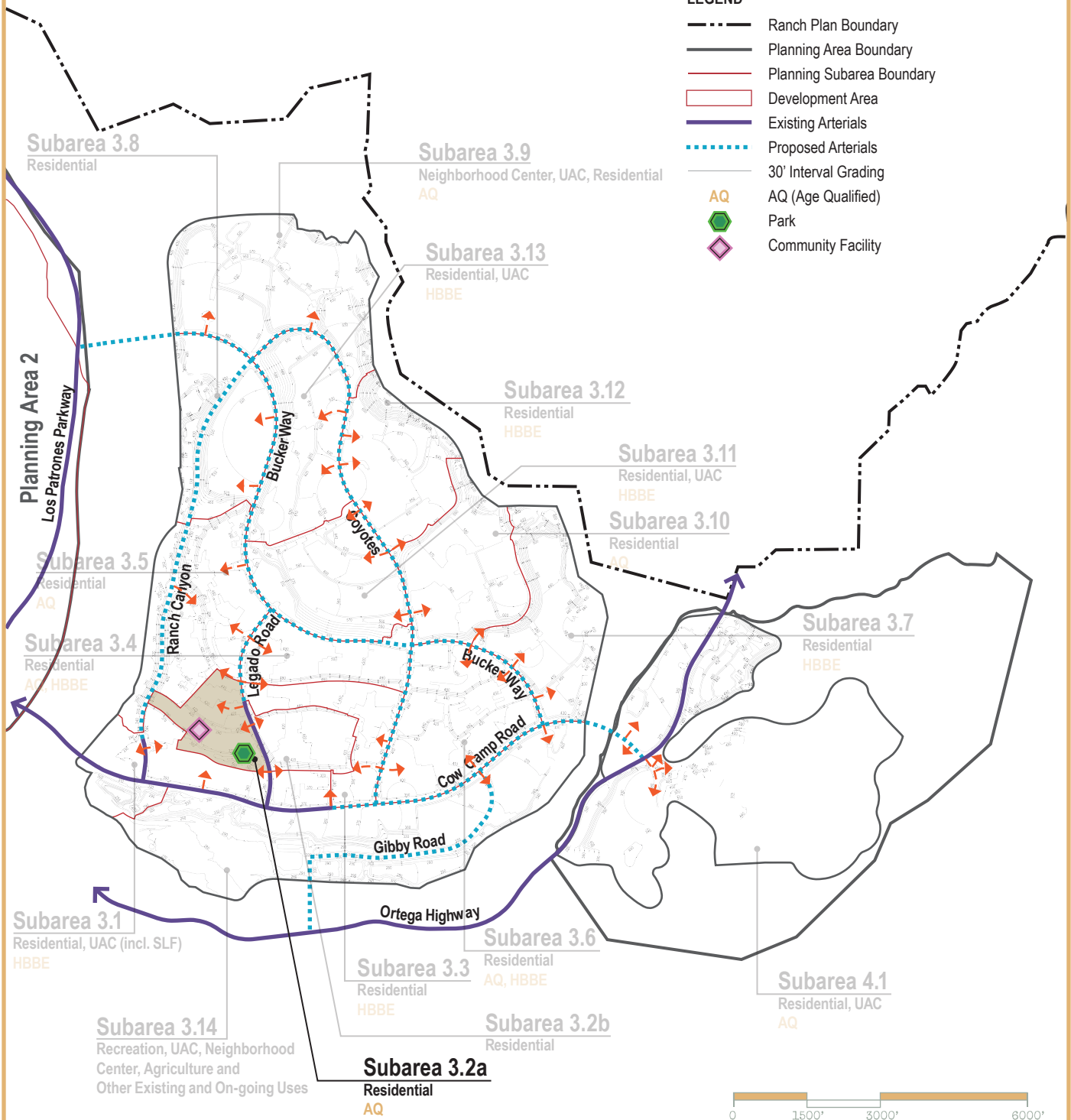
The ~~56 47~~ gross-acre Subarea 3.2b is located in the south-west portion of Planning Area 3, north of Subarea 3.1, east of Legado Road. The following land uses are proposed:

- ~~56 47~~ gross acres of residential development area, allowing a total of up to 514 dwelling units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - Community facility uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses; the Master Maintenance Corporation owned and operated community facilities may allow the service of alcohol.
 - ~~A wireless facilities tower up to 70 feet in height~~

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ AQ (Age Qualified)
- Park
- ◆ Community Facility



SUBAREA 3.2a
LAND USE PLAN
Ranch Plan Planned Community

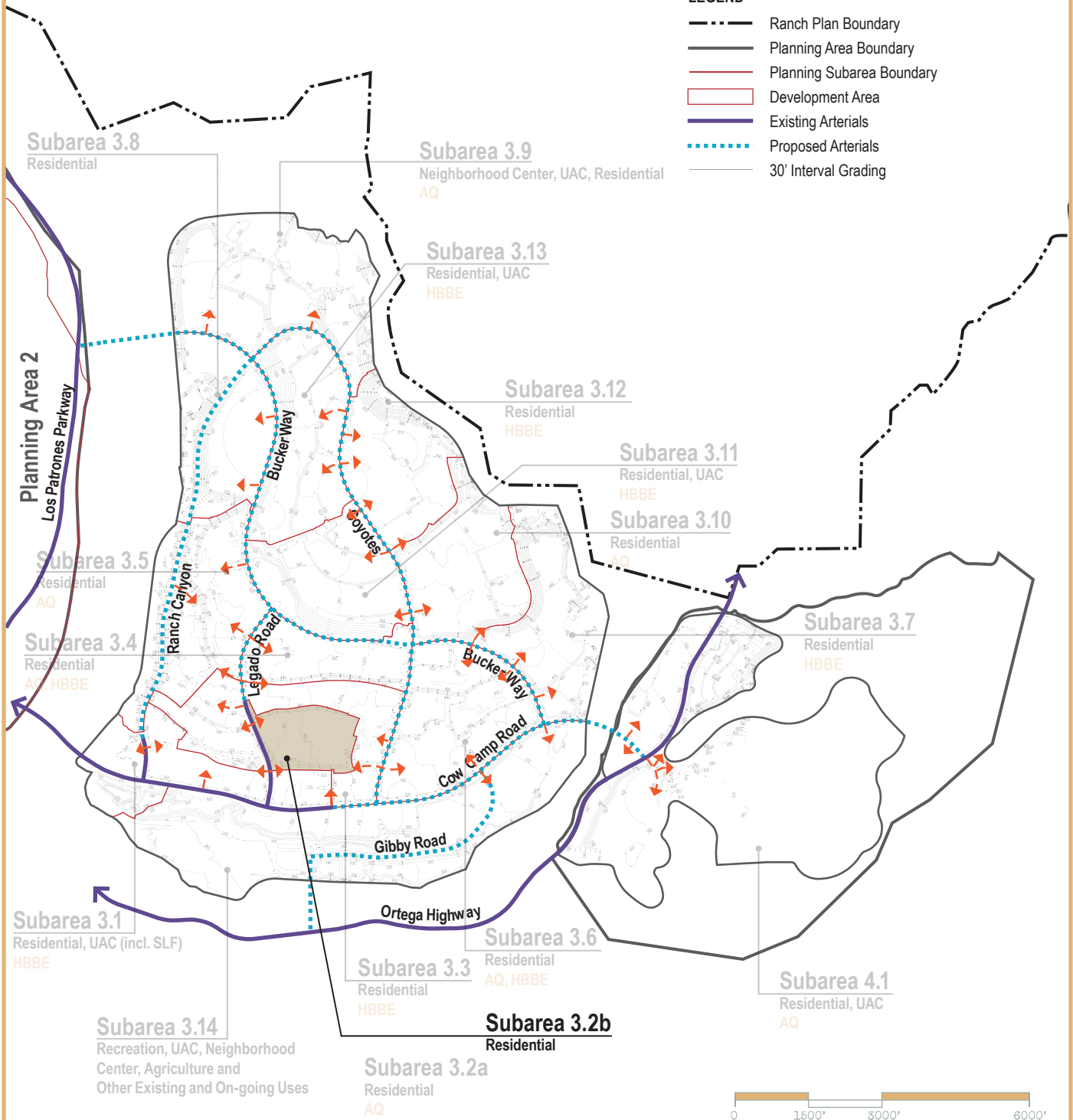
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading



SUBAREA 3.2b
LAND USE PLAN
 Ranch Plan Planned Community

Exhibit: 4



Subarea 3.3

The ~~76 88~~ gross-acre Subarea 3.3 is located in the south-central portion of Planning Area 3. Cow Camp Road would traverse the southerly boundary of the subarea and Coyotes would traverse the easterly boundary of the subarea. The following land uses are proposed:

- ~~76 88~~ gross acres of residential area, allowing a total of up to ~~382 450~~ dwelling units, none of which are planned as age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential affordable housing site ~~of up to 6 gross acres~~ in compliance with the Affordable Housing Implementation Agreement (AHIA).
 - A potential Home Based Business Enclave (HBBE).
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - Up to ~~6 40~~ acres of public parkland
 - Community Facility uses (including, but not limited to):
 - A K-8 public school
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - ~~A wireless facilities tower up to 70 feet in height~~

Subarea 3.4

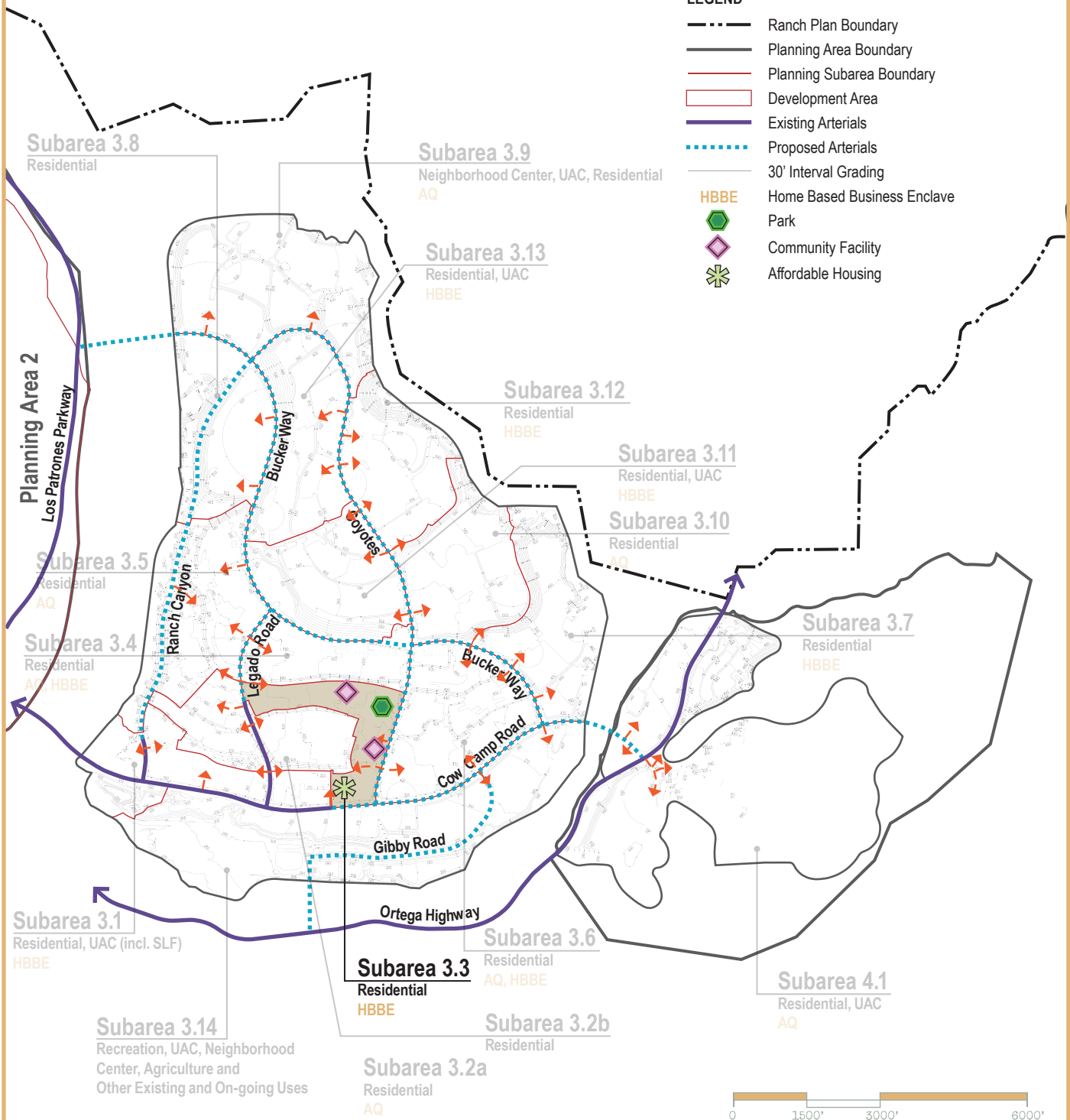
The ~~84 80~~ gross-acre Subarea 3.4 is located in the central portion of Planning Area 3, northerly of Subarea 3.3. Bucker Way would traverse the northerly boundary of the subarea. The following land uses are proposed:

- ~~84 80~~ gross acres of residential area, allowing a total of up to ~~326 334~~ dwelling units, all of which are anticipated to be age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential Home Based Business Enclave (HBBE).
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses
 - ~~Up to 5 acres of public parkland~~
 - Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - A wireless facilities tower up to ~~75 70~~ feet in height

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- HBBE
- Park
- Community Facility
- ✱ Affordable Housing



SUBAREA 3.3
LAND USE PLAN
Ranch Plan Planned Community

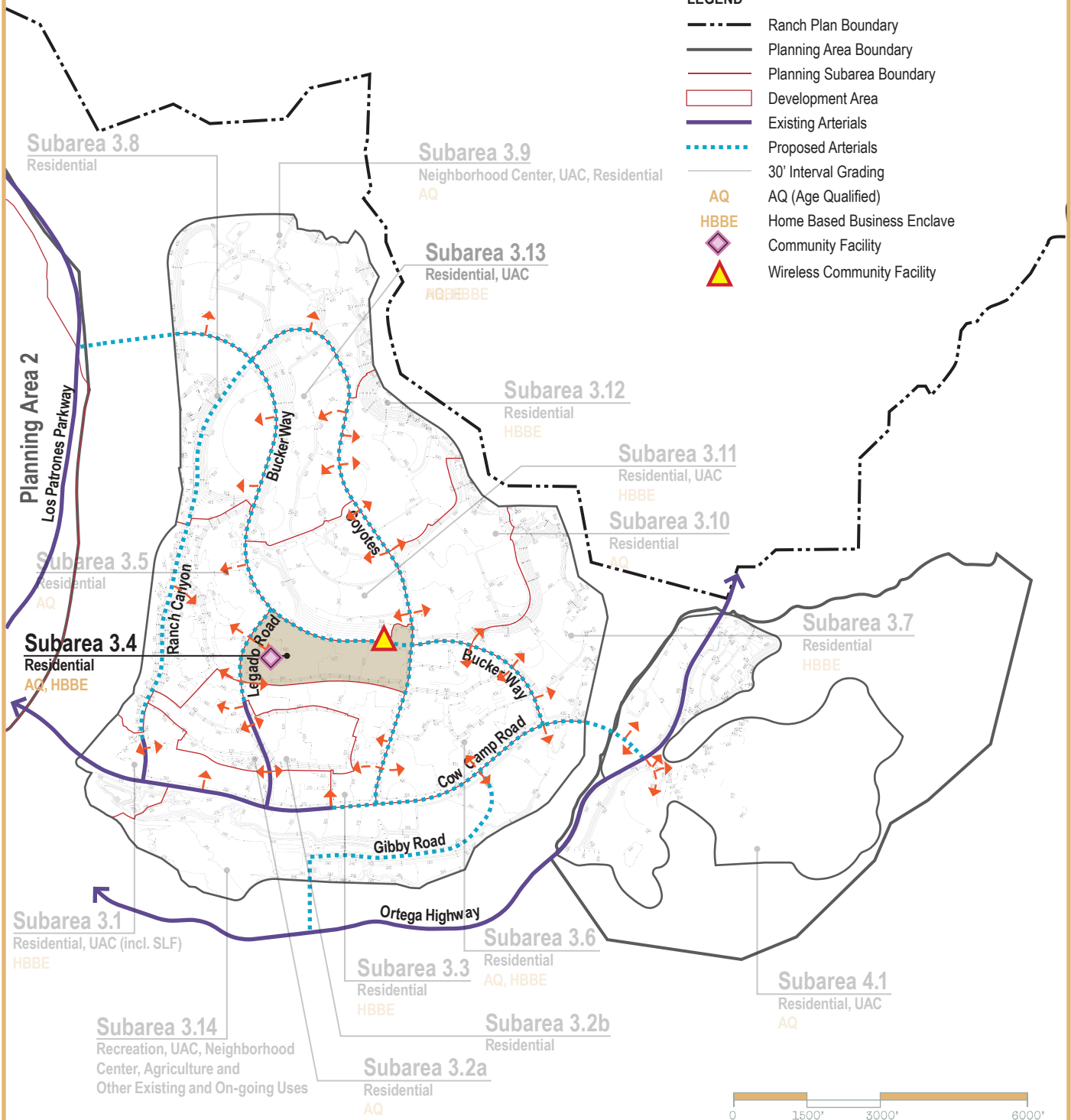
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ AQ (Age Qualified)
- HBBE Home Based Business Enclave
- Community Facility Community Facility
- Wireless Community Facility Wireless Community Facility



SUBAREA 3.4
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



Subarea 3.5

The ~~173 477~~-gross-acre Subarea 3.5 is located in the west-central portion of Planning Area 3. Ranch Canyon would traverse the westerly boundary of the subarea, in a generally north-south direction. Gobernadora Canyon and flood/water quality basins are located westerly of Subarea 3.5. The following land uses are proposed:

- ~~173 477~~ gross acres of residential area, allowing a total of up to ~~539 740~~ dwelling units, including approximately ~~307 390~~ age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - ~~Up to 5 acres of public parkland~~
 - Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - A wireless facilities tower up to ~~75 70~~ feet in height.

Subarea 3.6

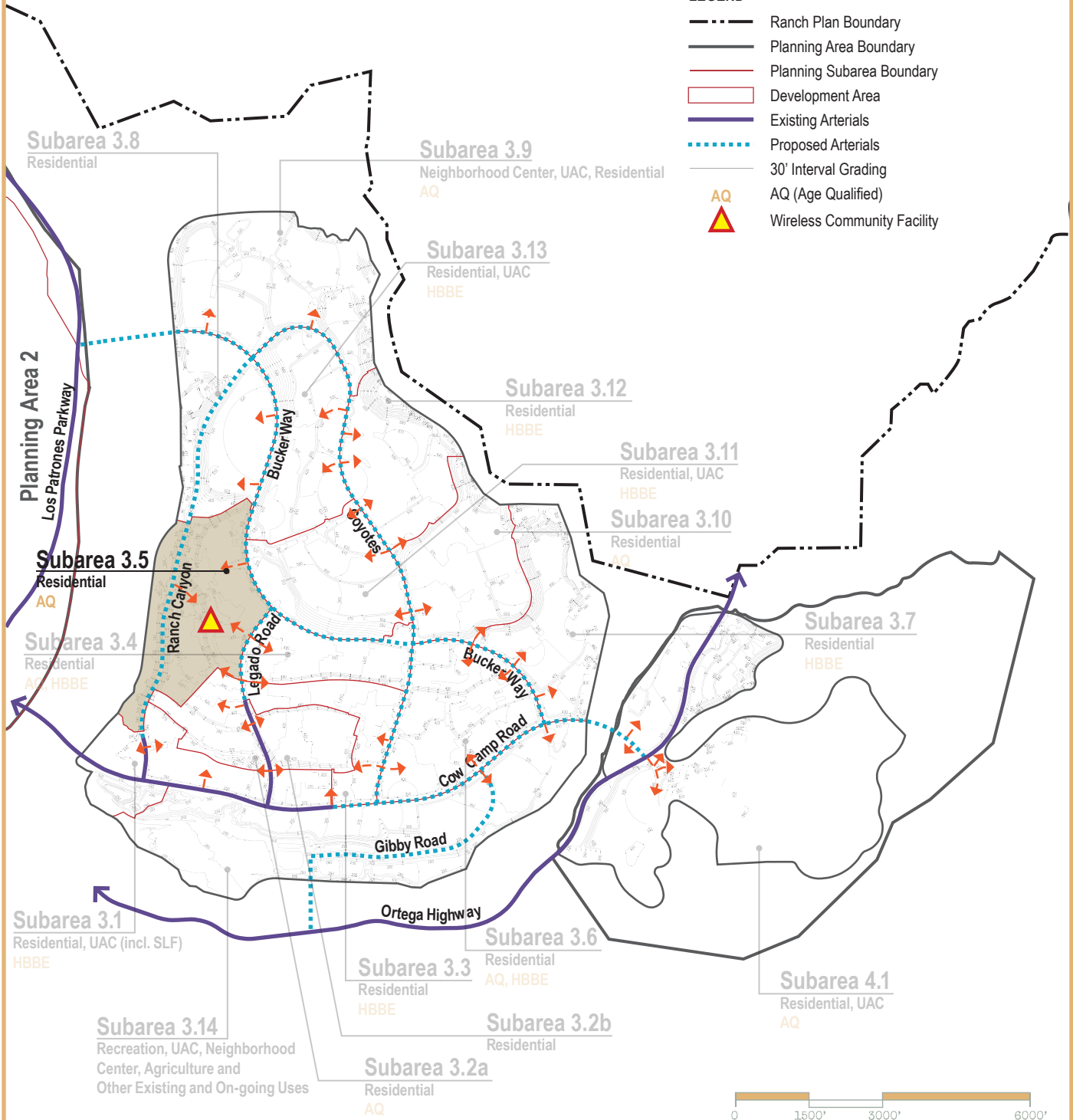
The ~~166 472~~-gross-acre Subarea 3.6 is located in the central portion of Planning Area 3. San Juan Creek is located southerly of Subarea 3.6. Cow Camp Road would traverse the southern boundary of the subarea in a generally east-west direction, Coyotes would traverse the westerly boundary and Bucker Way would traverse the northeasterly boundary of the subarea. The following land uses are proposed:

- ~~166 472~~ gross acres of residential area, allowing a total of up to ~~1,060 4,435~~ dwelling units, including approximately ~~133 435~~ age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential affordable housing site ~~of up to 6 gross acres~~ in compliance with the Affordable Housing Implementation Agreement (AHIA).
 - A potential Home Based Business Enclave (HBBE)
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and club houses
 - Up to ~~6 5~~ acres of public parkland
 - Community Facility uses (including, but not limited to):
 - Churches and daycare facilities
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ AQ (Age Qualified)
- ▲ Wireless Community Facility



SUBAREA 3.5
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



Subarea 3.7

The ~~149 406~~-gross-acre Subarea 3.7 is located in the southeasterly portion of Planning Area 3. Cow Camp Road would traverse the southerly boundary of the subarea in a generally east-west direction. San Juan Creek and Planning Area 4 located easterly of Subarea 3.7. The following land uses are proposed:

- ~~149 406~~ gross acres of residential area, allowing a total of up to ~~771 360~~ dwelling units, ~~none of which are including approximately 160~~ age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential affordable housing site ~~of up to 6 gross acres~~ in compliance with the Affordable Housing Implementation Agreement (AHIA).
 - A potential Home Based Business Enclave (HBBE)
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - Up to 5 acres of public parkland
 - Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - A wireless facilities tower up to ~~75 70~~ feet in height

Subarea 3.8

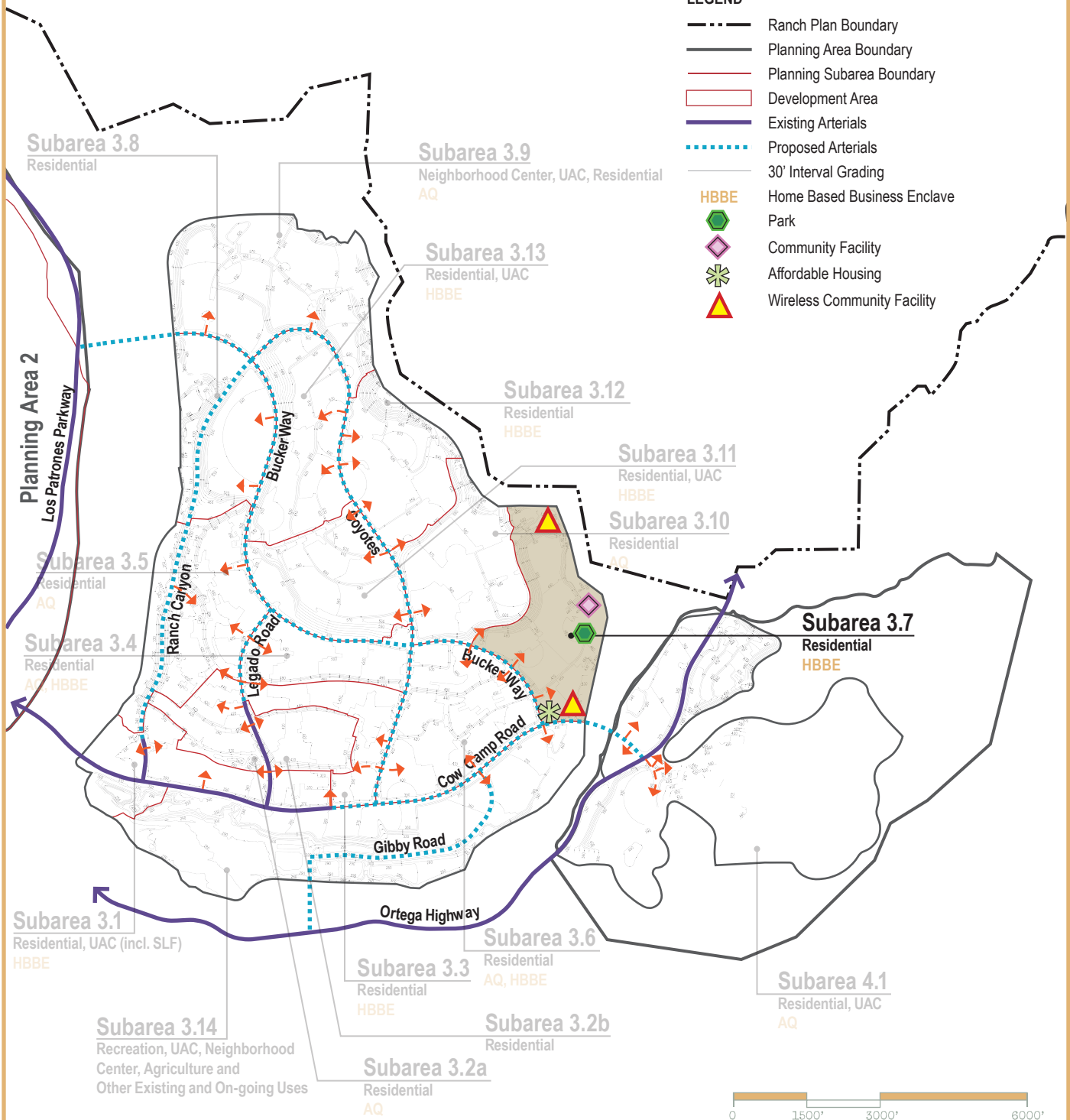
The ~~144 404~~-gross-acre Subarea 3.8 is located in the west-central portion of Planning Area 3. ~~Bucker Way "D" Street~~ would traverse the northerly and easterly boundary of the subarea in a generally north/south direction. Gobernadora Canyon is located westerly of Subarea 3.8. The following land uses are proposed:

- ~~144 404~~ gross acres of residential area, allowing a total of up to ~~1,245 355~~ dwelling units, including approximately ~~230 240~~ age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - A potential affordable housing site ~~of up to 6 gross acres~~ in compliance with the Affordable Housing Implementation Agreement (AHIA).
 - **Recreational Uses (including, but not limited to):**
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - Up to 5 acres of public parkland
 - **Community Facility uses (including, but not limited to):**
 - Civic and cultural facilities, including but not limited to community centers, day care facilities, and churches and places of worship:
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - Two wireless facilities towers up to ~~75 70~~ feet in height

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- HBBE
- Park
- Community Facility
- ✱ Affordable Housing
- ▲ Wireless Community Facility



SUBAREA 3.7
LAND USE PLAN
Ranch Plan Planned Community

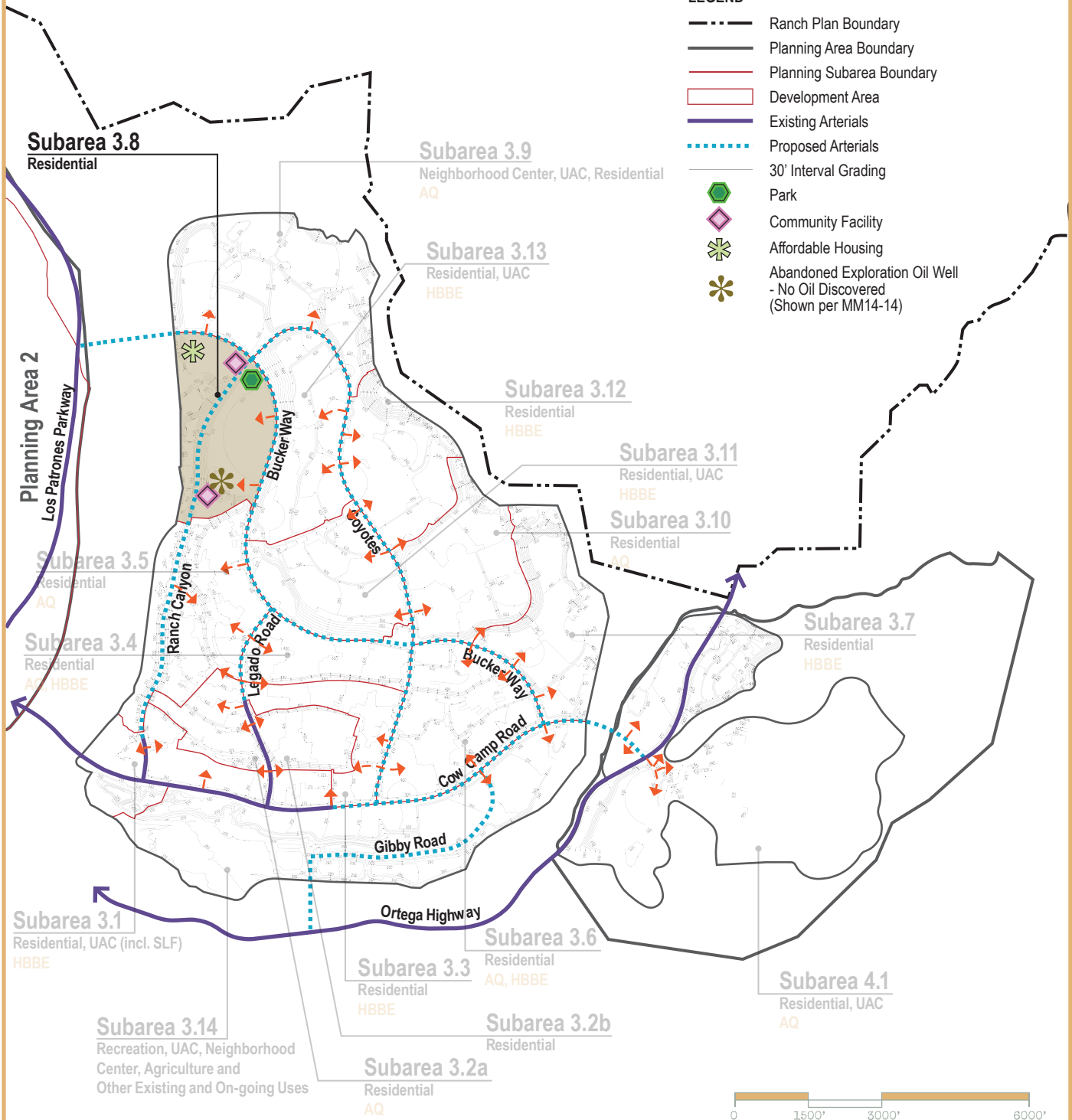
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- Park
- Community Facility
- ✱ Affordable Housing
- ✱ Abandoned Exploration Oil Well
- No Oil Discovered
(Shown per MM14-14)



SUBAREA 3.8
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



- ~~Up to 25 acres and up to 279,000 square feet of uses permitted by Section III.D.1.a (Urban Activity Center—Principal Permitted Uses) of the Ranch Plan PC Program Text.~~
- ~~Up to 14 acres and up to 100,000 square feet of uses permitted by Section III.C.1.a (Neighborhood Center—Principal Permitted Uses) of the Ranch Plan PC Program Text.~~

Subarea 3.9

The ~~234 146~~ gross-acre Subarea 3.9 is located in the northerly portion of Planning Area 3. Buckner Way would traverse the southerly boundary of the of the subarea in a generally an east-west direction. Gobernadora Canyon is located westerly of Subarea 3.9. The following land uses are proposed:

- ~~168 44~~ gross acres of residential development area, allowing a total of up to 690 dwelling units, including approximately 209 age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch plan Planned Community Program Text ~~generally-zoned residential which would not include any dwelling units but may include other uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:~~
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - Community Facility uses (including, but not limited to):
 - A wireless facilities tower up to ~~75 70~~ feet in height
- ~~Up to 50 acres and up to 305,000 square feet of uses permitted by Section III.E.1.a (Business Park—Principal Permitted Uses) of the Ranch Plan PC Program Text.~~
- Up to ~~10 5~~ acres and up to ~~107,000 45,000~~ square-feet of Neighborhood Center Uses
- Up to ~~56 77~~ acres and up to ~~686,000 970,000~~ square-feet of uses permitted by Section III.D.1.a (Urban Activity Center – Principal Permitted Uses) of the Ranch Plan PC Program Text.

Subarea 3.10

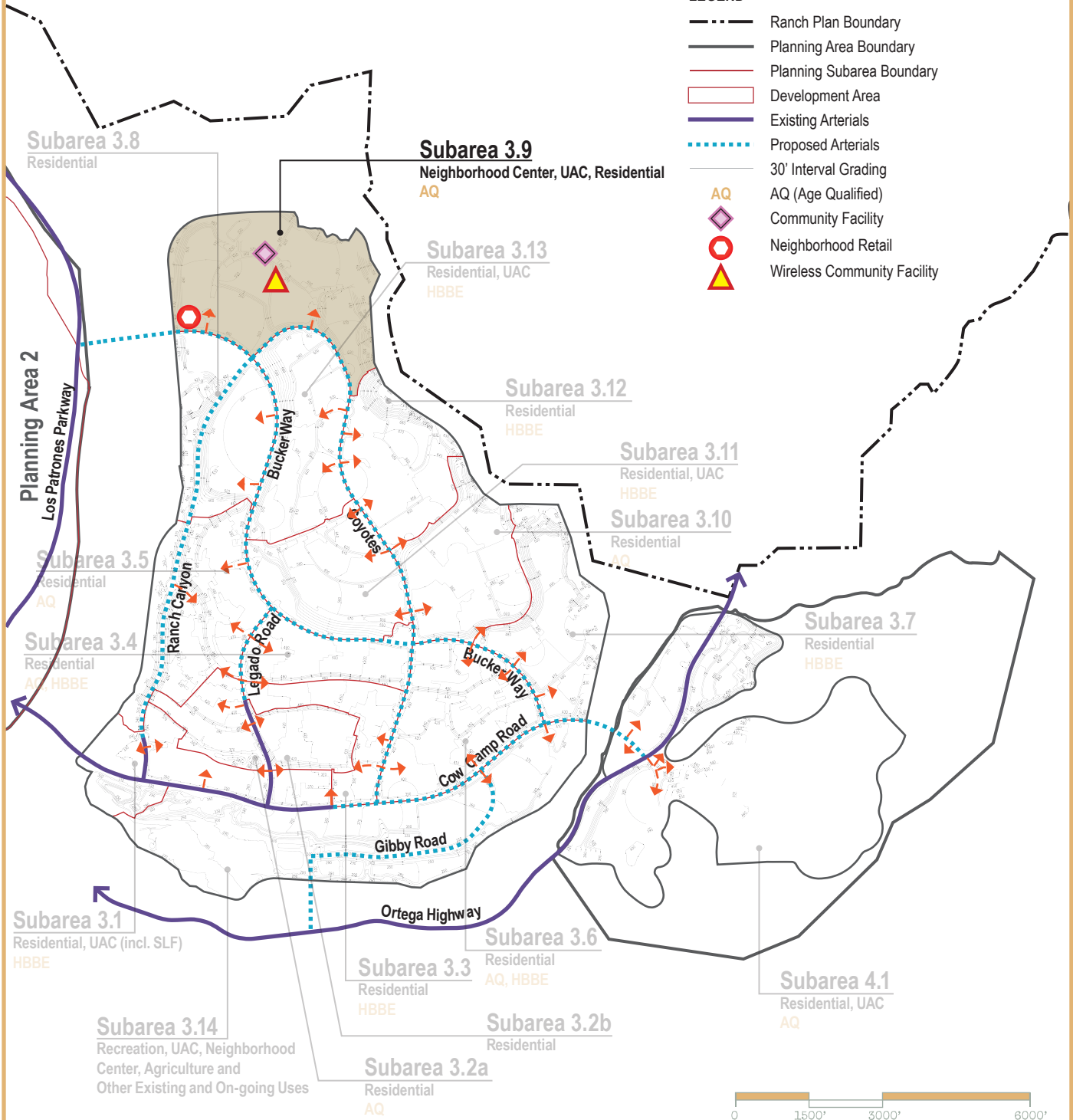
The ~~144 169~~ gross-acre Subarea 3.10 is located in the easterly portion of Planning Area 3. Coyotes would traverse the westerly boundary of the subarea in a generally north-south direction. Caspers Regional Park is located easterly of this subarea. The following land uses are proposed:

- ~~144 169~~ gross acres of residential area, allowing a total of ~~649 825~~ dwelling units, all of which are anticipated to be age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses
 - Up to 5 acres of public parkland

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ (Age Qualified)
- ◆ Community Facility
- Neighborhood Retail
- ▲ Wireless Community Facility



SUBAREA 3.9
LAND USE PLAN
Ranch Plan Planned Community

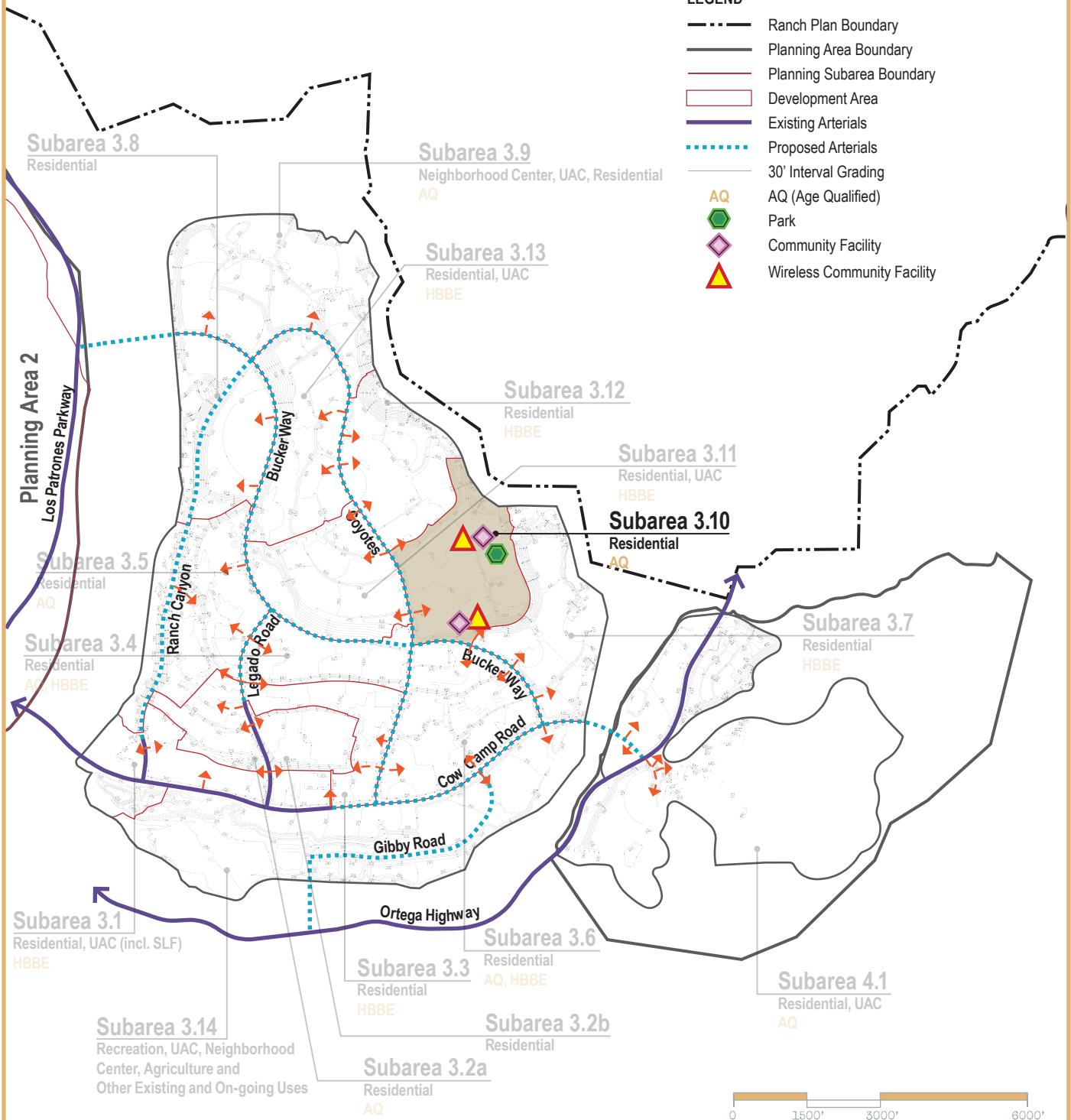
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ AQ (Age Qualified)
- Park
- ◆ Community Facility
- ▲ Wireless Community Facility



SUBAREA 3.10
LAND USE PLAN
 Ranch Plan Planned Community

Exhibit: 4



- Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - Two wireless facilities towers up to ~~75~~ 70 feet in height

Subarea 3.11

The ~~143~~ 235 gross-acre Subarea 3.11 is located in the central portion of Planning Area 3. Coyotes would traverse the easterly boundary and Bucker Way would traverse the westerly boundary of the subarea in a generally north-south direction. The following land uses are proposed:

- ~~143~~ 235 gross acres of residential area, allowing a total of up to ~~596~~ 300 dwelling units, none of which ~~145 dwelling units~~ are planned as age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - ~~A potential affordable housing site of up to 6 gross acres in compliance with the Affordable Housing Implementation Agreement (AHIA).~~
 - A potential Home Based Business Enclave (HBBE)
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses
 - Up to 20 acres of public parkland
 - Community Facility uses (including, but not limited to):
 - Churches, day care, and a potential school site
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - ~~A Two~~ wireless ~~facility facilities~~ towers up to ~~75~~ 70 feet in height
- Up to ~~14~~ 8 acres and up to ~~150,000~~ 210,000-square-feet of uses permitted by Section III.D.1.a (Urban Activity Center – Principal Permitted Uses) of the Ranch Plan PC Program Text.

Subarea 3.12

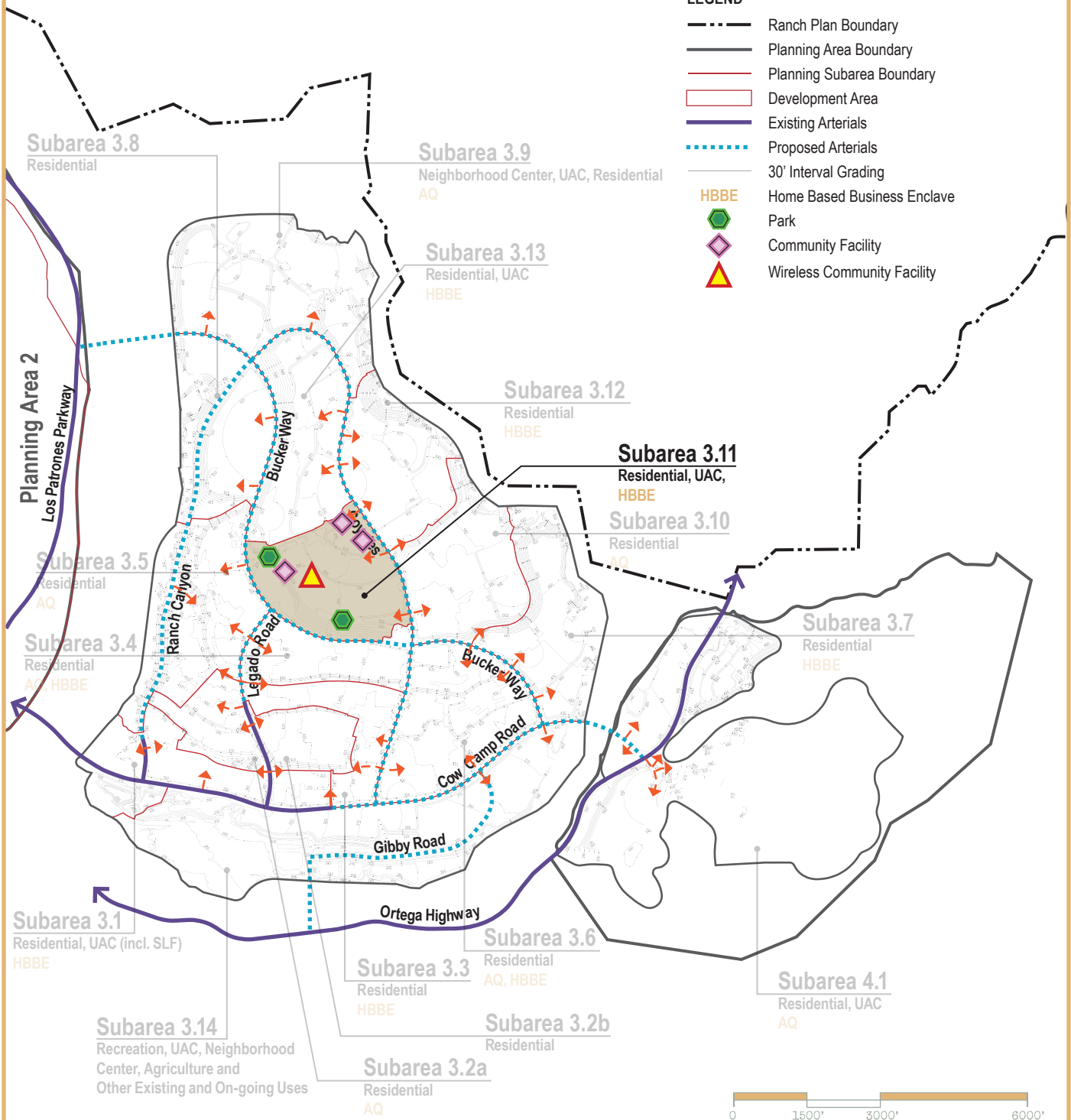
The ~~131~~ 457 gross-acre Subarea 3.12 is located in the easterly portion of Planning Area 3. Coyotes would traverse the westerly boundary of the subarea in a generally north-south direction. Caspers Regional Park is located easterly of this subarea. The following land uses are proposed:

- ~~131~~ 457 gross acres of residential area, allowing a total of up to ~~750~~ 545 dwelling units, none of which are planned as age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - ~~A potential affordable housing site of up to 6 gross acres in compliance with the Affordable Housing Implementation Agreement (AHIA).~~
 - A potential Home Based Business Enclave (HBBE)

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- HBBE Home Based Business Enclave
- Park
- ◆ Community Facility
- ▲ Wireless Community Facility



SUBAREA 3.11
LAND USE PLAN
Ranch Plan Planned Community

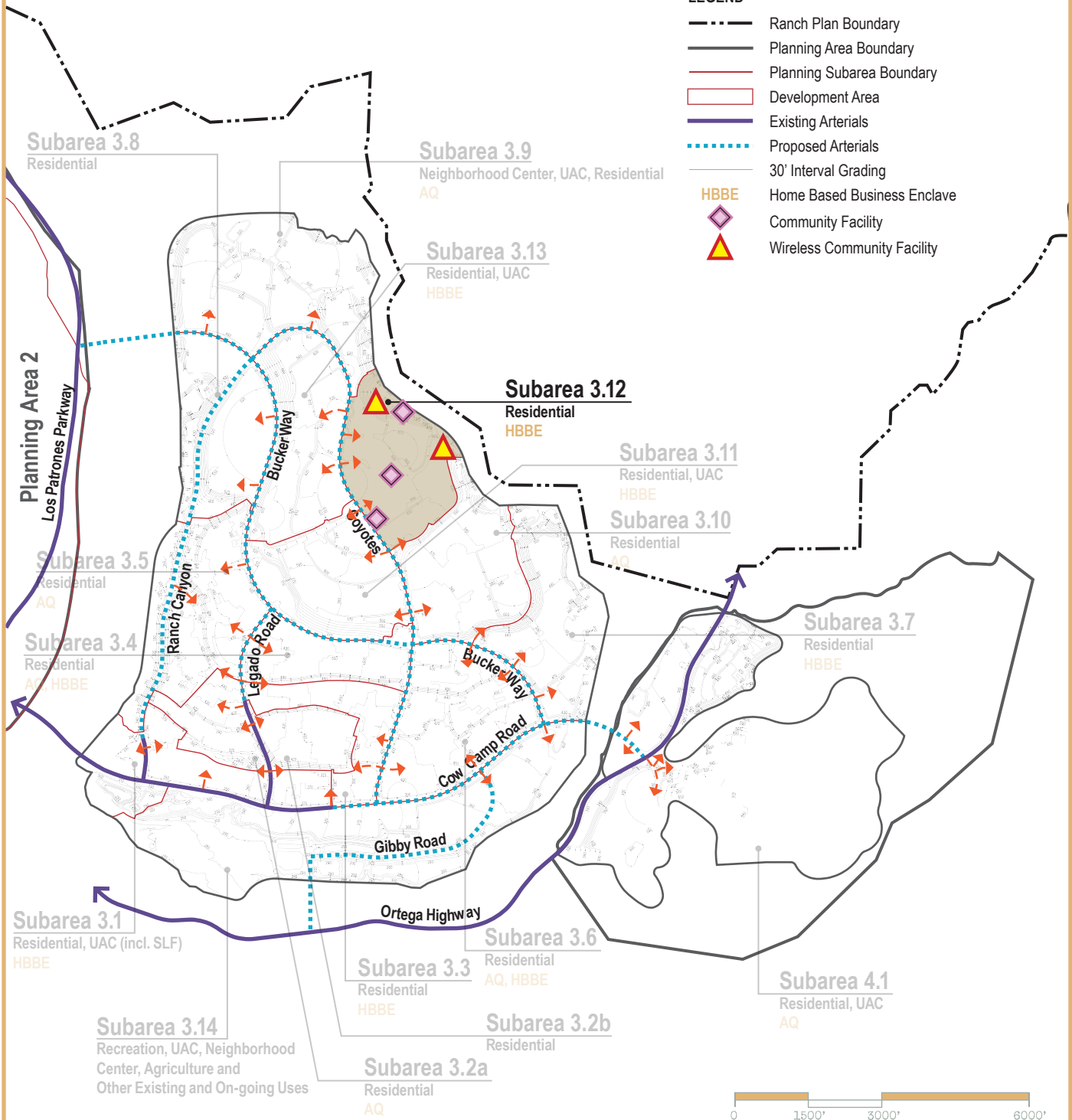
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- HBBE
- Community Facility
- Wireless Community Facility



SUBAREA 3.12
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



- Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses:
- Community Facility uses (including, but not limited to):
 - Churches, day care, and a potential school site.
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - Two wireless facilities towers up to ~~75~~ 70 feet in height

Subarea 3.13

The ~~150~~ 433 gross-acre Subarea 3.13 is located in the easterly portion of Planning Area 3. Coyotes would traverse the westerly boundary of the subarea in a generally north-south direction. Caspers Regional Park is located easterly of this subarea. The following land uses are proposed:

- ~~150~~ 433 gross acres of residential area, allowing a total of up to ~~590~~ 305 dwelling units, ~~none~~ all of which are planned as age-qualified units. This residential area may also include, but not be limited to, the following uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - ~~○ A potential affordable housing site of up to 6 gross acres in compliance with the Affordable Housing Implementation Agreement (AHIA)~~
 - A potential Home Based Business Enclave (HBBE)
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools, and clubhouses
 - Up to 5 acres of public parkland
 - Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - Two wireless facilities towers up to ~~75~~ 70 feet in height

Subarea 3.14

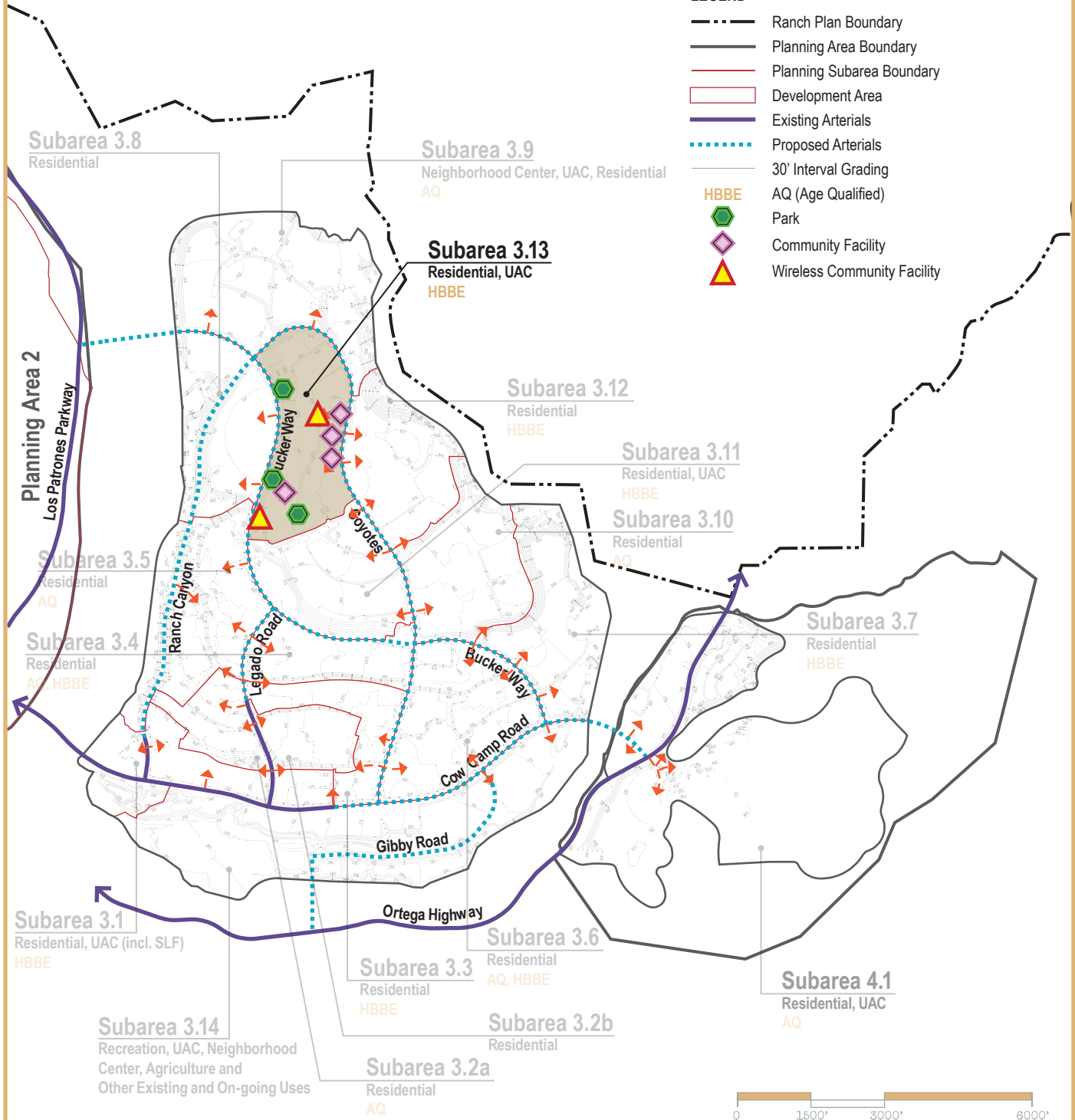
The ~~339~~ 329 gross-acre Subarea 3.14 is located in the southerly portion of Planning Area 3. Cow Camp Road would traverse the northerly boundary of the of the subarea in generally an east-west direction. Gibby Road would traverse the south-easterly boundary of the subarea in a generally an east-west direction. San Juan Creek is located southerly of Subarea 3.14. The following land uses are proposed:

- ~~258~~ 276 gross acres of development area generally zoned residential, which would include ~~265~~ 220 dwelling units and may also include other uses allowed by Section III.A (Residential) of the Ranch Plan Planned Community Program Text:
 - ~~○ A potential affordable housing site of up to 6 gross acres in compliance with the Affordable Housing Implementation Agreement (AHIA),~~
 - ~~○ Recreational Uses (including, but not limited to):~~
 - ~~▪ Up to 20 acres of proposed sports park uses~~

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ (Age Qualified)
- HBBE
- Park
- ◆ Community Facility
- ▲ Wireless Community Facility



SUBAREA 3.13
LAND USE PLAN
Ranch Plan Planned Community

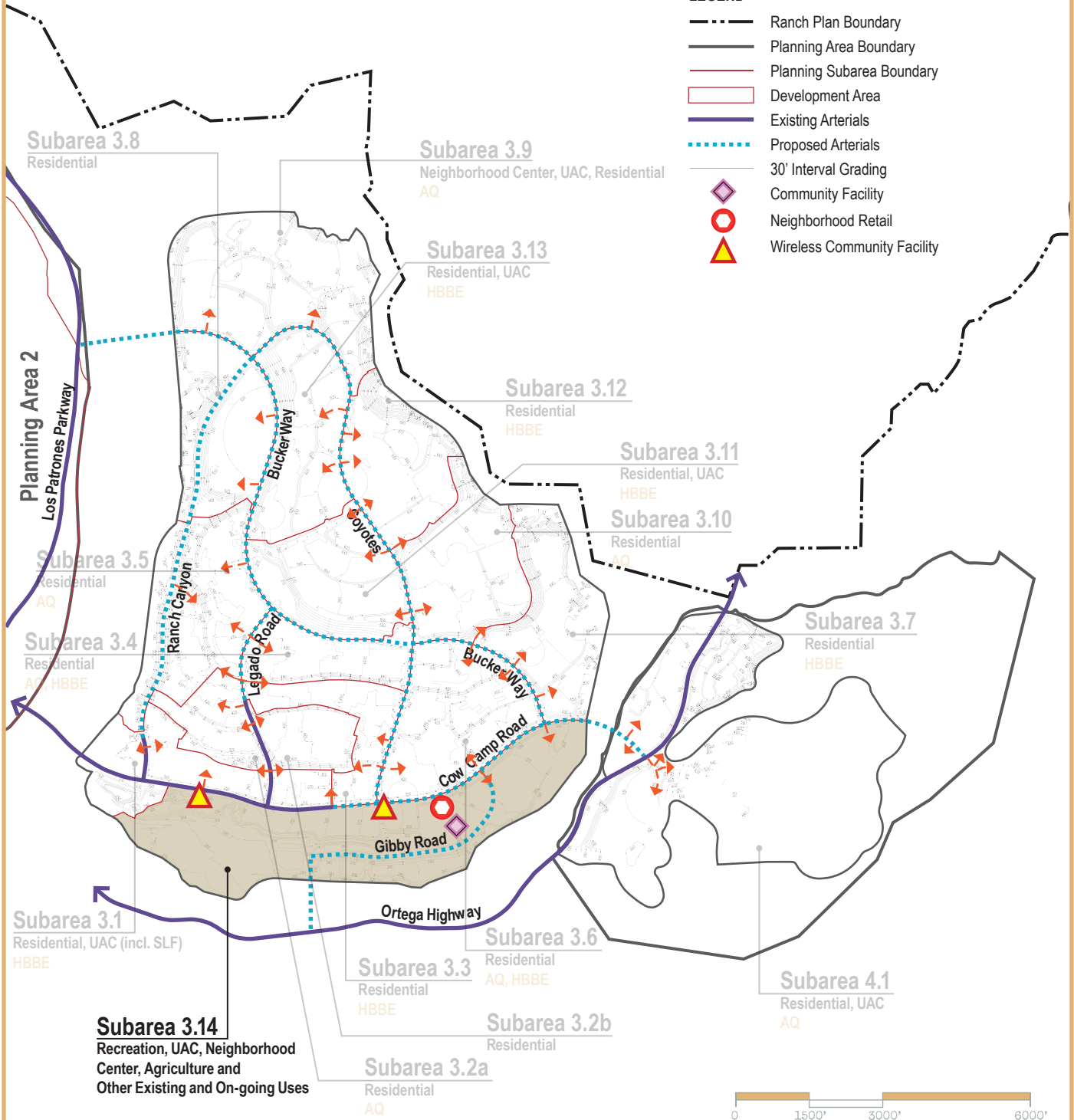
Exhibit: 4



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- ◆ Community Facility
- Neighborhood Retail
- ▲ Wireless Community Facility



SUBAREA 3.14
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



- Community Facility uses (including, but not limited to):
 - Two ~~75~~ 70 foot tall towers to allow wireless facilities
 - Fire Station, churches and places of worship
 - Approximately 80 acres of detention basins and water quality basins, as allowed by Section III.F.a (Community Facilities) of the Ranch Plan Planned Community Program Text
- Approximately ~~93~~ 75 acres of uses allowed by Ranch Plan Planned Community Text Section III.H (Agricultural and Other Existing and On-Going Uses), including but not limited to the existing uses defined under III.H.2.d, as approved per TT19227, Lots 1 through 11.
- Up to ~~71~~ 53 acres and up to ~~686,000~~ 535,000-square-feet of uses permitted by Section III.D.1.a (Urban Activity Center – Principal Permitted Uses) of the Ranch Plan PC Program Text
- Up to 10 acres and up to 110,000-square-feet of uses permitted by Section III.C.1.a (Neighborhood Center – Principal Permitted Uses) of the Ranch Plan PC Program Text.

Subarea 4.1

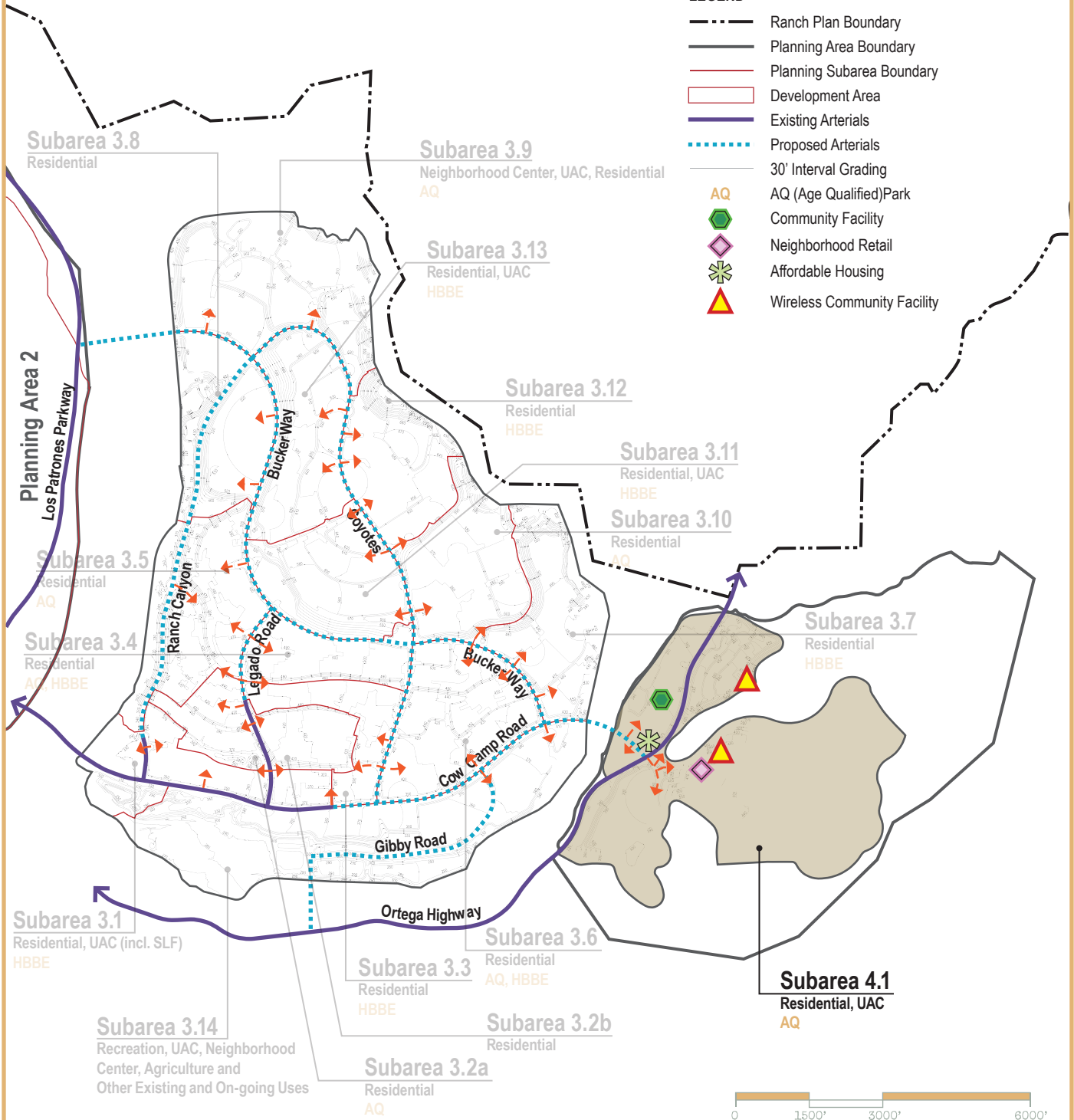
Subarea 4.1 is the only Subarea proposed within Planning Area 4. The 1,127-gross acre Planning Area 4 includes the 503-gross acre Subarea 4.1 boundary that is coterminous with the Development Area portion of Planning Area 4. Ortega Highway would traverse the westerly portion of the subarea in a generally east-west direction. San Juan Creek is located northwesterly of Subarea 4.1. The following land uses are proposed:

- ~~503~~ 487 gross acres of residential area, allowing a total of up to ~~670~~ 500 dwelling units, including approximately ~~170~~ 200 age-qualified units.
 - A potential affordable housing site in compliance with the Affordable Housing Implementation Agreement (AHIA).
 - Recreational Uses (including, but not limited to):
 - Private recreational uses, including but not limited to sports fields, sports courts, tot lots, and pedestrian and bike trails, swimming pools and clubhouses
 - Up to 5 acres of public parkland
 - Community Facility uses (including, but not limited to):
 - Private clubs and recreational facilities to be owned and operated by the Master Maintenance Corporation, including serving alcoholic beverages
 - Two 75 foot tall towers to allow wireless facilities. A wireless facilities tower up to 70 feet in height.
 - Cemetery: Up to 70 acres
- Up to ~~16~~ 25 acres and up to ~~800,000~~ 700,000 square-feet of uses permitted by Section III.D.1.a (Urban Activity Center – Principal Permitted Uses) of the Ranch Plan PC Program Text
- Open Space uses as permitted by Section III.I (Open Space) of the Ranch Plan PC Program Text
- Uses allowed by Ranch Plan Planned Community Text Section III.H (Agricultural and Other Existing and On-Going Uses)

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- AQ AQ (Age Qualified) Park
- Community Facility
- ◆ Neighborhood Retail
- ✱ Affordable Housing
- ▲ Wireless Community Facility



SUBAREA 4.1
LAND USE PLAN
Ranch Plan Planned Community

Exhibit: 4



3.3 Preliminary Conceptual Grading:

The proposed PA3&4 Land Use Plan (Exhibit 4) provides the PA3&4 preliminary conceptual grading at 30-foot contour intervals, as required by Ranch Plan PC Program Text Section II.B.3.a.10. A more detailed Concept Grading Plan, at ten-foot contour intervals, ~~is will be~~ provided as part of each applicable Subarea Plan, as required by PC Program Text Section II.B.3.b.8. The Concept Grading Plan for each Subarea Plan and all subsequent subdivision and grading permits must be consistent with the preliminary concept grading shown on the proposed PA3&4 Land Use Plan (Exhibit 4), or an Area Plan amendment will be required.

3.4 Infrastructure Phasing:

In satisfaction of Section B.3.a.10 of the Ranch Plan PC Text Master Area Plan requirements regarding infrastructure phasing, the applicant anticipates that all proposed infrastructure elements for Planning Areas 3 and 4 depicted on Exhibits 5 through 11 (circulation, domestic and non-domestic water, wastewater, storm drainage and water quality) will generally be phased by the Subarea order listed below, with the caveat that these assumptions are subject to change as a result of presently unanticipated circumstances (including, but not limited to, market forces):

- Phase 1: Subarea 3.1
- Phase 2: Subarea 3.2 and a portion of Subarea 3.14 (non-residential uses, flood control and water quality basins)
- Phase 3: Subarea 3.3
- Phase 4: Subarea 3.4
- Phase 5: Subarea 3.5
- Phase 6: Subarea 3.6 and a portion of Subarea 3.14 (non-residential uses, flood control and water quality basins)
- Phase 7: Subarea 3.7 and remainder of Subarea 3.14 (east)
- Phase 8: Subarea 3.8
- Last Phases: Subarea 4.1 and Subareas 3.9 thru 3.13

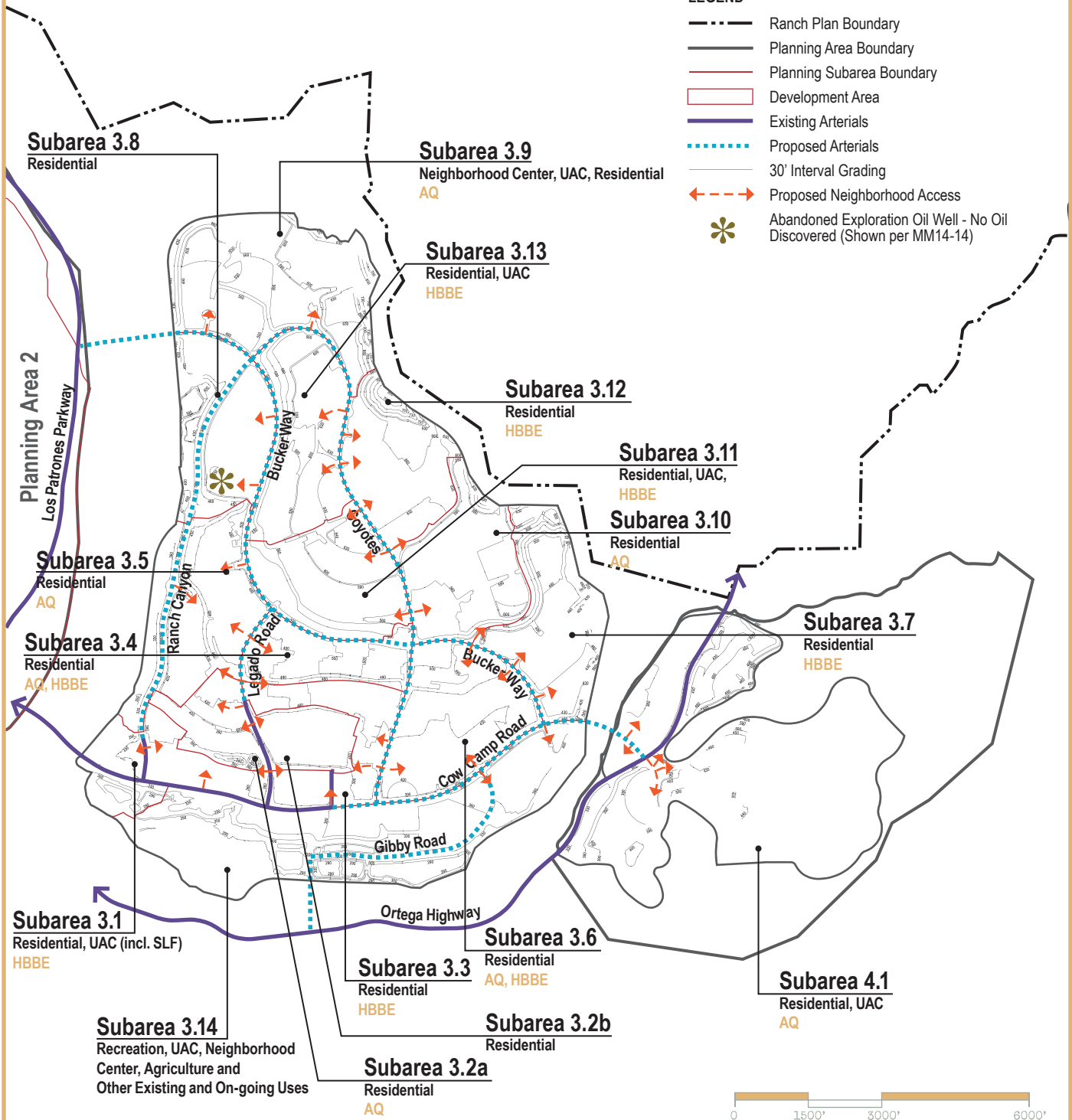
In reference to circulation improvements, Exhibit 5 identifies the following proposed PA3&4 arterial highways:

- **Cow Camp Road:** East-west arterial that will extend from Antonio Parkway to the existing Ortega Highway near the common boundary of the Rancho Mission Viejo Planned Community and Caspers Wilderness Park. A portion of Cow Camp Road, known as Segment 1, is located within Planning Areas 1 and 2 (~~four lanes completed, two to be added~~). The segment adjacent to and within Planning Area 3, known as Segment 2 includes a bridge over Cañada Gobernadora (~~four lanes completed, two to be added currently under construction~~) and a future bridge over San Juan Creek to Planning Area 4. Cow Camp Road is designated as a Scenic Highway Landscape Corridor by the General Plan. In compliance, a 25-foot scenic highway easement from curb-line will be clear of structures and signage. Additional widening of the roadway and bridges will occur as the development occurs and traffic demands dictate.
- ~~Bucker Way "K" Street/"D" Street.~~ Bucker Way "K" Street is proposed as an ~~east-west~~ arterial that will extend from Planning Area 2, bridge across Cañada Gobernadora, ~~and at the intersection with "A" Street/"C" Street~~ This arterial will continue through PA3 (~~depicted as "D" Street on Exhibit 5~~), ending at a signalized intersection with Cow Camp Road near the ~~southeastern western~~ boundary of PA3.

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- >--> Proposed Neighborhood Access
- ✱ Abandoned Exploration Oil Well - No Oil Discovered (Shown per MM14-14)



MASTER AREA PLAN
CIRCULATION PLAN
Ranch Plan Planned Community

Exhibit: 5

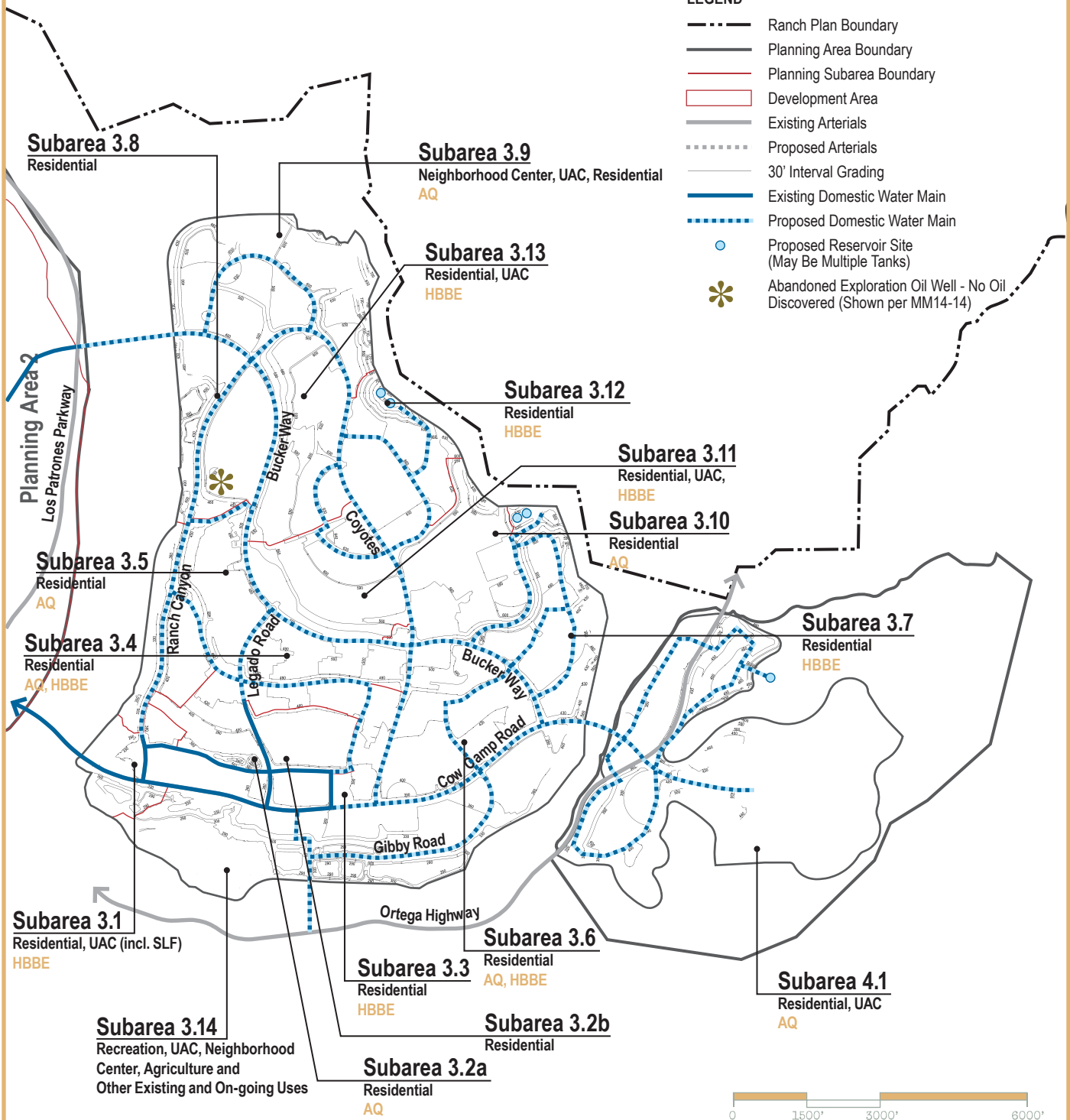


- **Coyotes “C” Street.** ~~Coyotes “C” Street~~ is proposed as a north-south arterial that will traverse the central portion of PA3, ending at a signalized intersection with Cow Camp Road.
- **Ranch Canyon “A” Street.** ~~Ranch Canyon “A” Street~~ is proposed as a north-south arterial that will traverse the western portion of PA3, ending at a signalized intersection with Cow Camp Road.
- **Gibby Road.** Gibby Road is ~~a collector an existing ranch~~ road that connects PA3 to the existing traffic signal on Ortega Highway. This roadway ~~will eventually~~ traverses Subarea 3.14 and intersects with Cow Camp Road. ~~The County of Orange has approved bridge plans to replace the existing Arizona crossing of San Juan Creek.~~
- **Ortega Highway.** ~~California State Route 74 (Ortega Highway) is the existing north-south arterial that traverses PA4. The existing roadway~~ will be modified to allow the connection of Cow Camp Road. ~~This will include options for an at-grade intersection or at a~~ roundabout. Portions of Ortega Highway may be realigned in the vicinity of Planning Area 4 while maintaining the two-lane configuration and an additional roundabout access. Minor roadway and drainage improvements would be constructed with the adjacent property development. An additional roundabout or signalized intersection would be added northeast of the Cow Camp Road intersection, and south of the current unsignalized intersection that provides access to Tree of Life Nursery to the west and the Verdugo Canyon ranch road to the east to provide access to the adjacent lots.
- **PA 4 Arterials:** Arterial Roadways within Planning Area 4 will provide access from Ortega Highway into the adjacent areas. These roadways will provide a two-lane secondary arterial roadway for neighborhood and commercial uses within Planning Area 4.

Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- Existing Domestic Water Main
- Proposed Domestic Water Main
- Proposed Reservoir Site (May Be Multiple Tanks)
- ✱ Abandoned Exploration Oil Well - No Oil Discovered (Shown per MM14-14)



0 1500' 3000' 6000'

MASTER AREA PLAN
CONCEPTUAL DOMESTIC WATER SYSTEM
 Ranch Plan Planned Community

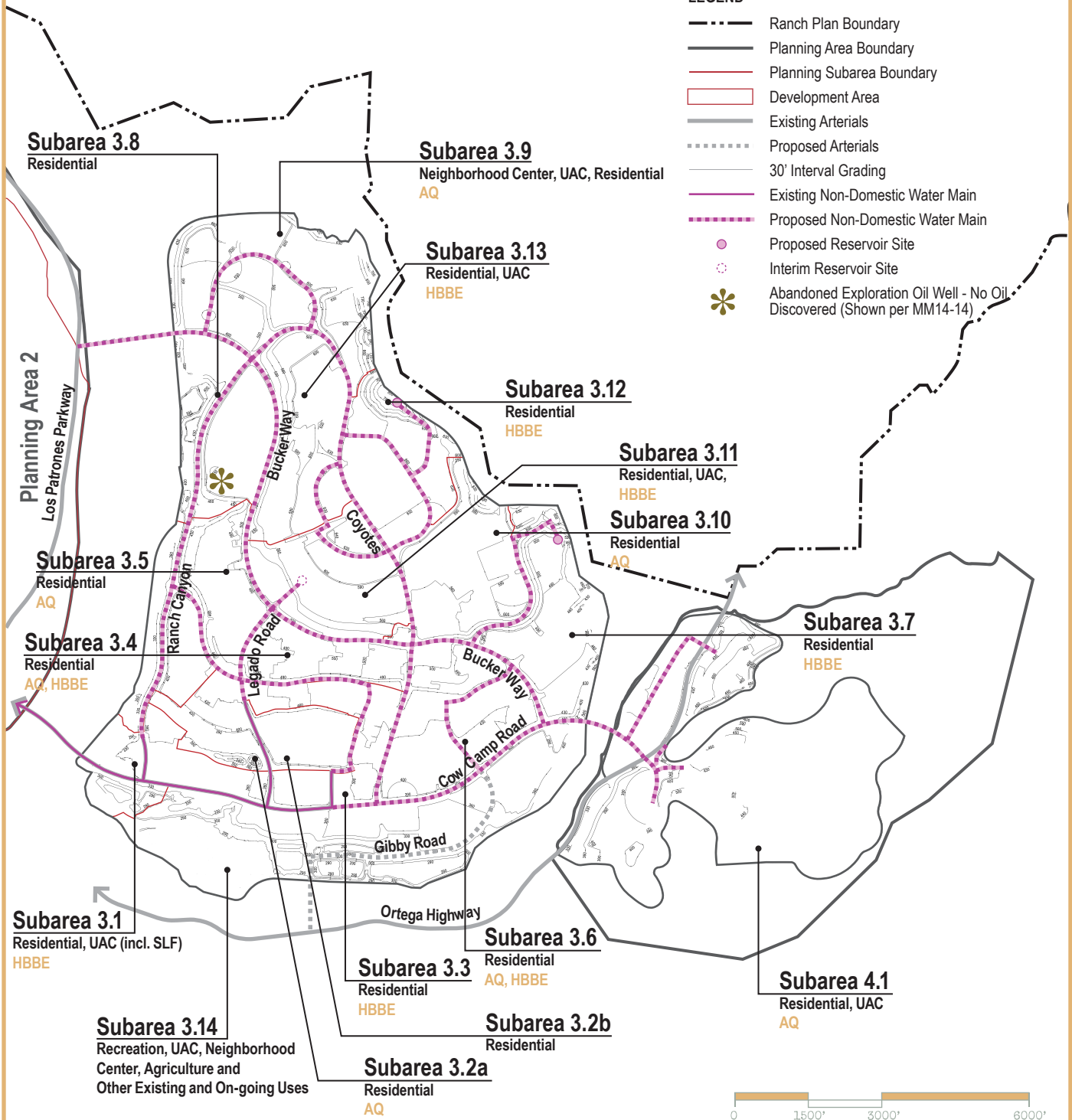
Exhibit: 6



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- Existing Non-Domestic Water Main
- Proposed Non-Domestic Water Main
- Proposed Reservoir Site
- Interim Reservoir Site
- ✱ Abandoned Exploration Oil Well - No Oil Discovered (Shown per MM14-14)



MASTER AREA PLAN
CONCEPTUAL NON-DOMESTIC WATER SYSTEM
 Ranch Plan Planned Community

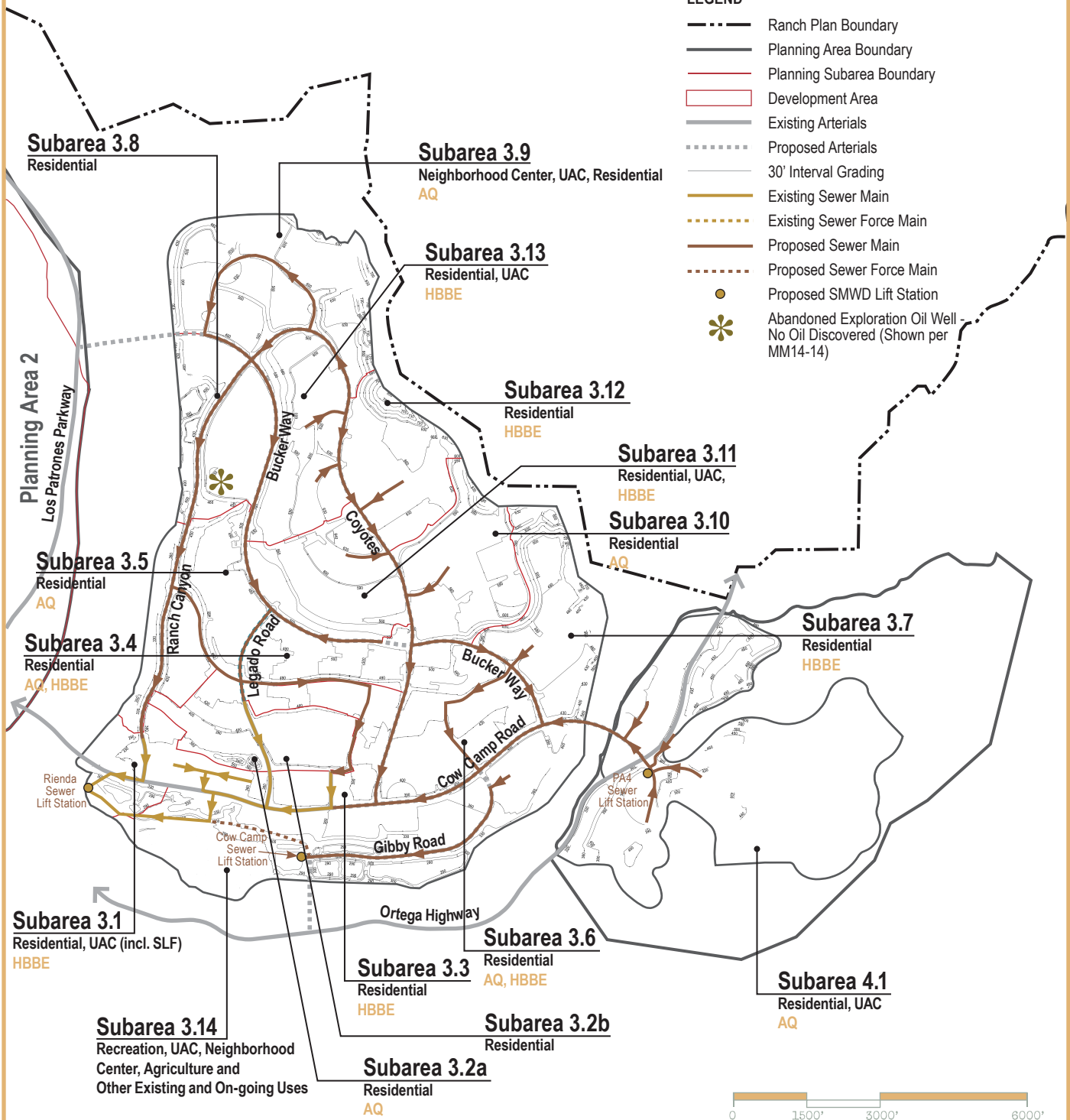
Exhibit: 7



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- Existing Sewer Main
- Existing Sewer Force Main
- Proposed Sewer Main
- Proposed Sewer Force Main
- Proposed SMWD Lift Station
- ✱ Abandoned Exploration Oil Well - No Oil Discovered (Shown per MM14-14)

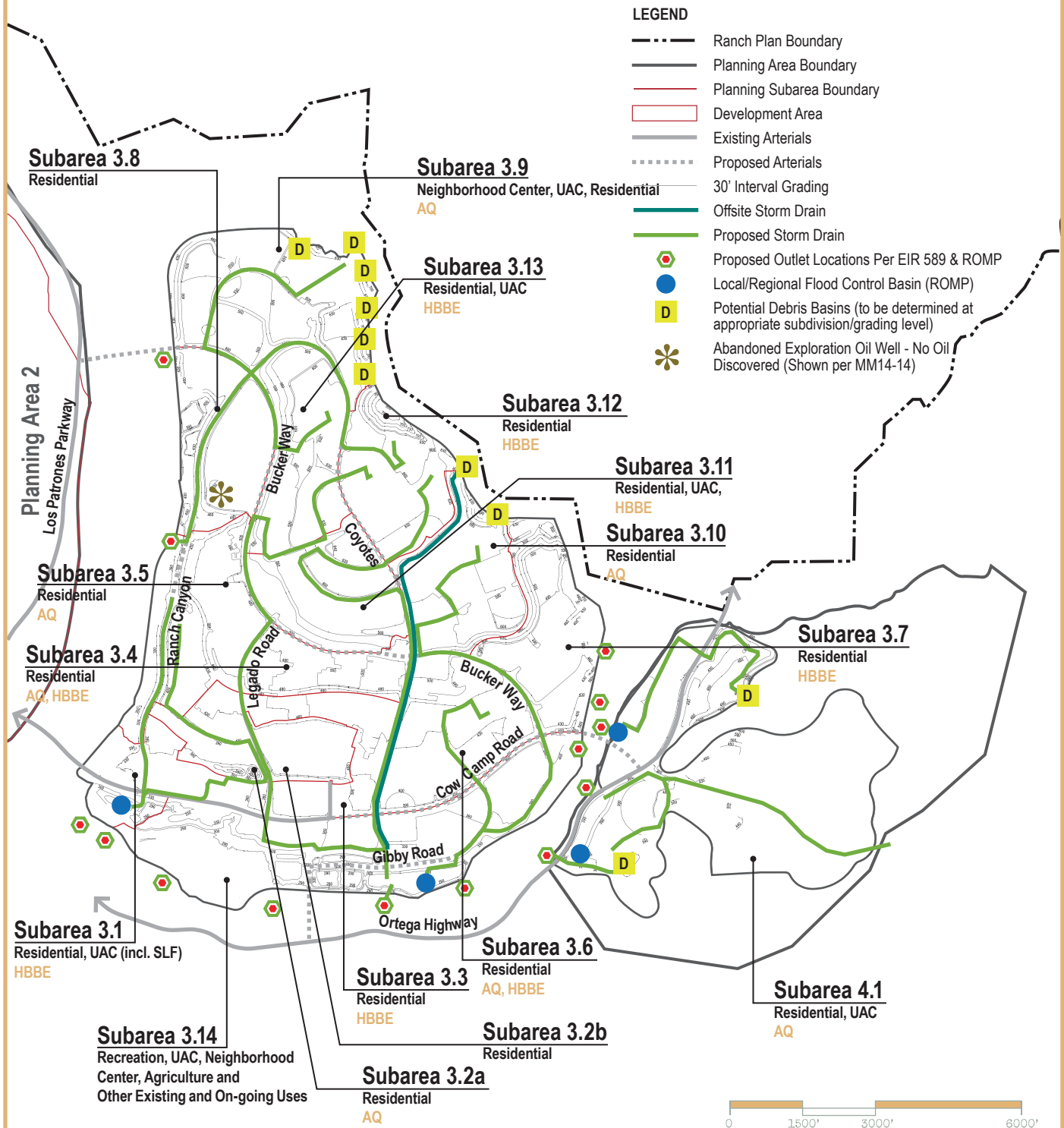


MASTER AREA PLAN
PRELIMINARY WASTEWATER SYSTEM
 Ranch Plan Planned Community

Exhibit: 8



Planning Area 3 & 4



MASTER AREA PLAN
PRELIMINARY STORM DRAINAGE SYSTEM
Ranch Plan Planned Community

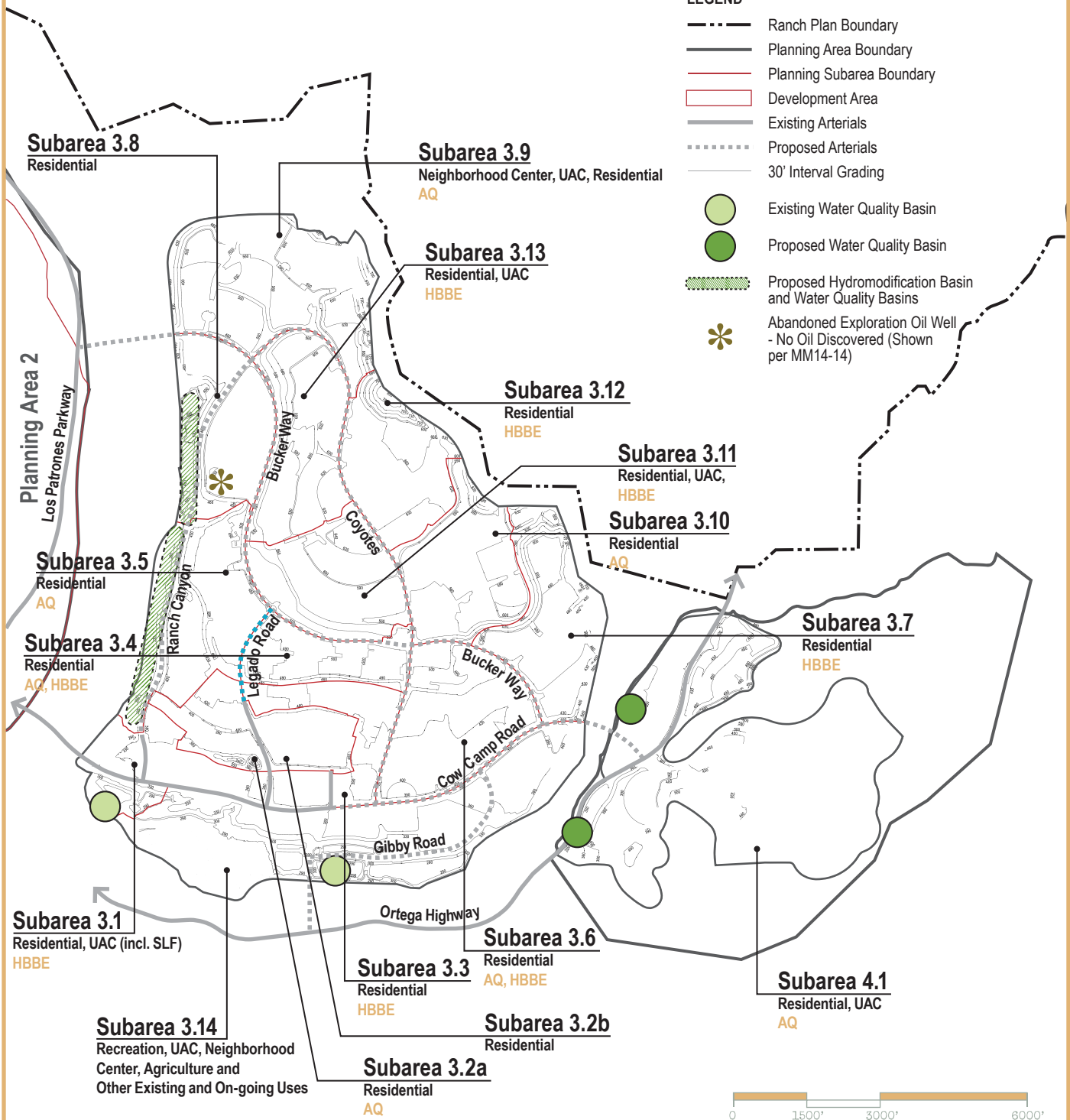
Exhibit: 9



Planning Area 3 & 4

LEGEND

- Ranch Plan Boundary
- Planning Area Boundary
- Planning Subarea Boundary
- Development Area
- Existing Arterials
- Proposed Arterials
- 30' Interval Grading
- Existing Water Quality Basin
- Proposed Water Quality Basin
- Proposed Hydromodification Basin and Water Quality Basins
- Abandoned Exploration Oil Well
- No Oil Discovered (Shown per MM14-14)



MASTER AREA PLAN
PRELIMINARY WATER QUALITY SYSTEM
Ranch Plan Planned Community

Exhibit: 10



Attachment B**Compliance with Ranch Plan PC Program Text: Development Map and Statistical Table – Amendments and Procedures**

The following is a detailed analysis of the compliance of these PA3&4 proposed Master and Subarea Plan and Subarea Plan acreage, dwelling unit and square footage changes, with the appropriate subsections of Section II.A.4 of the Ranch Plan Planned Community Program Text regarding proposed Master and Subarea Plan revisions:

Development Map and Statistical Table – Amendments and Procedures**LEGEND:**

Black text = 2004 Board of Supervisors approved text

Blue text = 2009-14 Planning Director approved guidance text

Orange text = Current RMV request / explanation

- d. Any revisions to increase the number of units in any Planning Area shall be offset by a corresponding decrease in other Planning Areas in order that the total number of units for the Ranch Plan PC Area is not changed, subject to II.A.4.h, below.

All 2,477 dwelling units previously allocated to Planning Areas 5 and 8 are being reallocated to Planning Areas 3 and 4, increasing the proposed dwelling unit total from 7,500 to 9,997 9,977.

- e. Any revision proposing to increase or decrease the number of acres assigned to a Planning Subarea (as a result of a Planning Subarea boundary refinement) shall be offset by a corresponding increase or decrease of acreage to the affected Planning Subareas. [Note: For purposes of clarification, this provision should be interpreted as if the word “remaining” was inserted in the sentence and that the provision read as follows: “Any revision proposing to increase or decrease the number of acres assigned to a Planning Subarea (as a result of a Planning Subarea boundary refinement) shall be offset by a corresponding increase or decrease of acreage to the ‘remaining’ affected Planning Subareas.”] Such adjustments are considered a necessary and routine result of the more refined planning process and shall not require an Area Plan so long as a substantial change in policy would not result. [Note: For purposes of clarification, this provision should be interpreted as if the word “amendment” was inserted in the second sentence and that the provision read as follows: “Such adjustments are considered a necessary and routine result of the more refined planning process and shall not require an Area Plan ‘amendment’ so long as a substantial change in policy would not result.”] The total dwelling unit counts and the total square footage for nonresidential uses shall not be exceeded except as otherwise authorized by subparagraph f., below or in accordance with the alternative unit/acreage revision protocols set forth herein.

See Project Description on Page 2 of the application letter and redlined Statistical Table & Development Table on Pages 3 and 4 of the application letter.

- f. Any revision to reallocate the number of dwelling units or Urban Activity Center, Business Park and Neighborhood Center acreage and square footages from one Planning Area to another Planning Area by more than ten percent (10%) shall require an amended Statistical Table, and an Area Plan to be approved by the Planning Commission. Changes of ten percent (10%) or less shall require approval of the *Deputy Director, OC Development Services* subject to II.A.4.h, below.

This Area Plan amendment application requires OC Planning Commission approval due to proposed modifications to residential acreages and dwelling units, and non-residential acreage and square footages, that are sufficient to require approval by the Orange County Planning Commission (see discussion on Page 2 of the application letter).

- g. Any reallocation of the number of dwelling units between Planning Subareas within the same Planning Area shall not require a change to the PC Development Map as long as the total dwelling unit count and the total square footage for non-residential uses for that Planning Area are not exceeded.

This application proposes an increase in PA3&4 residential dwelling units from 7,500 to ~~9,997~~ 9,977, but proposes no amendment to the PA3&4 Development Boundaries depicted on PC Development Map.

- h. Any amendment to the PC Development Map shall be accompanied by a Traffic Analysis that supplements the Final Program EIR 589 traffic study (Austin Foust Associates, Inc., May 2004), concluding that there will be no significant impacts to roadways and intersections within the Ranch Plan PC Area or in the surrounding vicinity following approval of the amendment.

Accompanying this planning application letter (see Attachment C) is a November 2025 traffic analysis prepared by Fehr & Peers. The traffic analysis concludes that implementation of the proposed Project will not generate significant impacts to roadways / intersections.

See CEQA Compliance portion on Page 6 of the application letter for more details.

- i. All applications to increase or decrease the acreage assigned to a Planning Area shall, subject to the request of the *Deputy Director, OC Development Services* to include the following:
- 1) A statement or analysis of the effects, if any, that such change would have on the enhancement or enlargement of open space and any potential effects on surrounding land uses and circulation.
 RMV is not proposing any changes to the 16,924 square feet of permanent open space for the entire Ranch Plan Planned Community.
 The November 2025 Fehr & Peers traffic analysis (Attachment C) concludes on Page 1 that "... no changes to the mitigation measures defined in the EIR are needed with the updated traffic forecasts".
 - 2) A statement explaining clearly the Planning Areas and statistical components proposed to be revised.
 See Project Description on Page 2 of the application letter and redlined Statistical Table & Development Table on Pages 3 and 4 of the application letter.
 - 3) A revised PC Development Map and PC Statistical Table depicting the proposed revisions.
 No changes are proposed to the PC Development Map.
 See the attached redlined Statistical Table on Pages 3 of the application letter.

Fehr & Peers

**Transportation Study of:
Rancho Mission Viejo
Amendment to PA 3&4 Master and Subarea
Plans (PA25-0162)**

Prepared for:
County of Orange

Submitted:
May 2026

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1. Background

This report provides an evaluation of the transportation impacts associated with Rancho Mission Viejo's (RMV) proposal to reallocate residential units and commercial square footage within the approved Planning Area (PA) 3, 4, 5, and 8 of the Ranch Plan Planned Community. The details of RMV's request are provided in **Figure 1** and **Figure 2**. This proposed reallocation of uses will require an amendment to the County of Orange approved PA 3&4 Master and Subarea Plans (PA25-0162) ... Section II.A.4.h of the Ranch Plan Planned Community Program Text states, "Any amendment to the PC Development Map shall be accompanied by a Traffic Analysis that supplements the Final Program EIR 589 traffic study (Austin Foust Associates, Inc., May 2004), concluding that there will be no significant impacts to roadways and intersections within the Ranch Plan PC Area or in the surrounding vicinity following approval of the amendment." This application proposed adjusting the PA3-4 portion of the Ranch Plan Planned Community Program Text Statistical Table (Figure 2), as summarized below:

- Residential: Gross acreage would be increased from 2,396 to 2,490 acres, and dwelling units would be increased from 7,500 to 9,977 units (vis-à-vis reallocation of units from PAs 5 and 8), all within the previously approved PA3-4 Development Boundary
- Non-Residential: Urban Activity Center, Neighborhood Center and Business Park uses would be adjusted as follows:
 - Approved gross acreage would be decreased from 270 to 190 acres.
 - Approved gross floor area would be decreased from 3,280,000 to 2,549,000 square feet, with 1,092,000 square feet of non-residential previously approved in the northern portions of Planning Area 3 (Subareas 3.8, 3.9, and 3.11) shifting southward (i.e., 361,000 square feet being added to Subareas 3.14 and 4.1, and 731,000 square feet being added to PAs 5 and 8).

The most recent prior comprehensive look at transportation conditions in/around RMV was prepared in 2018 and is presented in the Rancho Mission Viejo Planning Area 3-4 Transportation Study (the 2018 Study). At the time of the 2018 Study, the extension of Los Patrones Parkway south of Ortega Highway was not included in the Orange County Transportation Authority (OCTA) Master Plan of Arterial Highways (MPAH). Therefore, the 2018 Study did not assume Los Patrones Parkway would be extended from the current terminus at Cow Camp Road to the south and connect to Avenida La Pata, which was reflected in the travel forecasts. Subsequently, the Los Patrones Parkway extension was added to the 2021 MPAH Amendment, and the roadway design has been advanced along with a corresponding environmental document for the roadway project. This 2026 transportation impact evaluation for RMV's proposed master area plan amendment assumes that Los Patrones Parkway will be extended south to Avenida La Pata within the 25-year horizon of the travel forecasts.

For the comparison of LOS results between the current approved entitlements for the Ranch Plan Planned Community (Current Entitlements) and the requested reallocation of land uses (Amendment Request), we applied the OCTA regional model (OCTAM) to forecast what the traffic volumes will be on the area roadways. The future roadway network is reflective of the MPAH. The Current Entitlement land use assumptions for PA 3 and 4 (Figure 2A) and for PA 5 and 8 (Figure 2B) are reflected in the Master Area Plan Table (**Figure 2**). The current version of OCTAM was used to evaluate both the Current Entitlements and Amendment Request, such that the difference in performance is due exclusively to the land use reallocation.

The most recent forecasts reflect several changes from the 2018 Study as reflected in OCTAM: 1) the socio-economic forecasts for the County have been revised downward to reflect trends in migration, reduction in household size, work-from-home, etc. 2) the level of trips projected from Riverside County and San Diego County have been reduced, 3) the extension of Los Patrones Parkway has been included, and 4) post-COVID travel patterns have changed due to work-from-home and household deliveries.

This study examines the intersections in the area to be sure that the mitigation measures defined in Final Environmental Impact Report (FEIR) 589 for the Ranch Plan Planned Community are still adequate. Those mitigation measures were formalized into the South County Roadway Improvement Program (SCRIP), which has provided a mechanism for implementing and funding the roadway improvements and new roadway construction identified in FEIR 589. As will be shown, no changes to the mitigation measures defined in FEIR 589 are needed with the updated traffic forecasts.

Planning Area 3 & 4

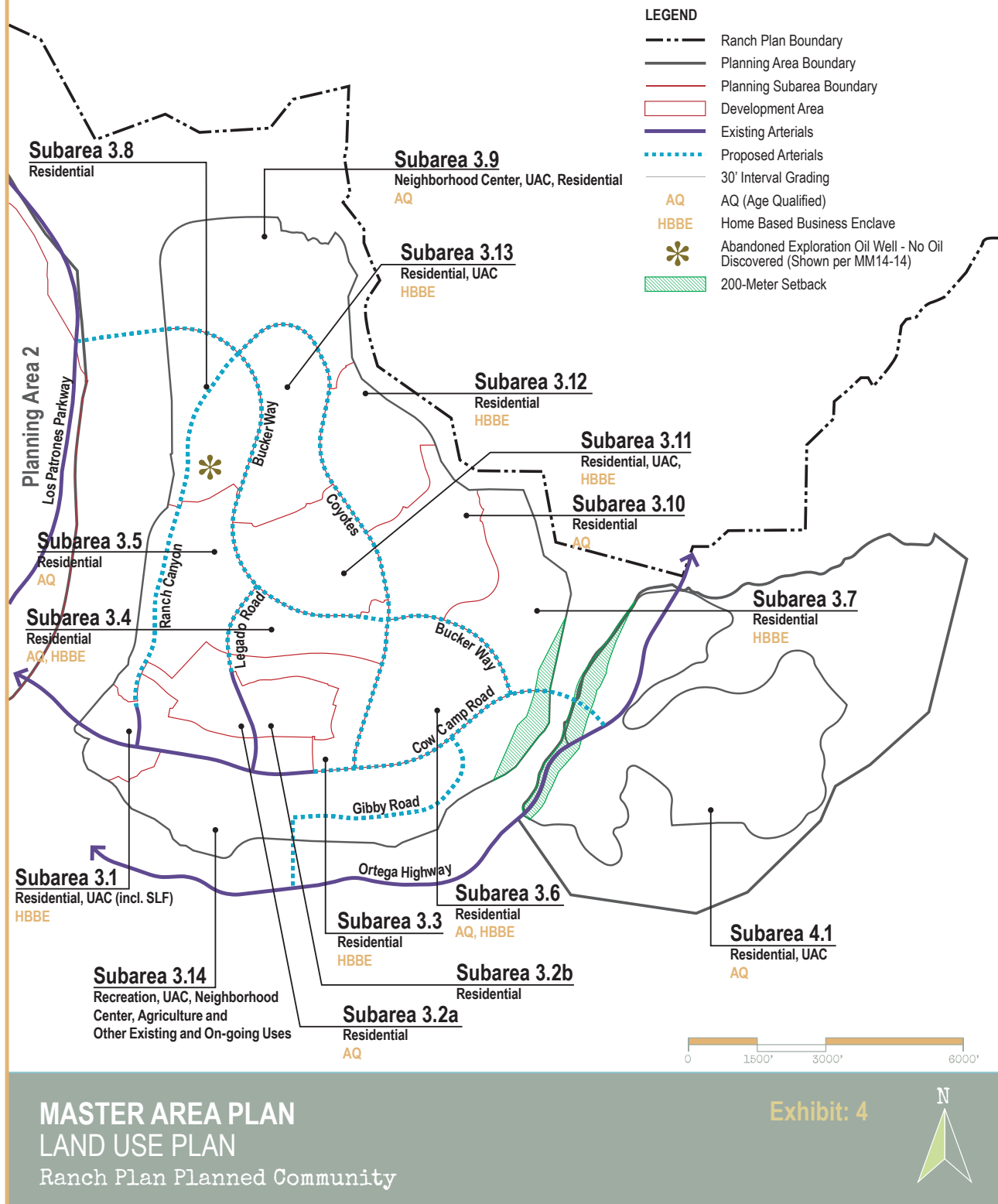


FIGURE 1

PA 3-4 Updated Site/Land Use Plan (May 2026)

UPDATED DEVELOPMENT TABLE																						
Planning Area 3 & 4 Master Area Plan & Subarea Plans																						
Planning Area	Development Use																	Open Space Use	Planning Area Totals			
	Residential										Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort Gross Acreage			Gross Acres	Open Space Acres	Gross Acres
	Gross Acres	Net Acres	Maximum Dwelling Units	Conventional Single-Family Detached Dwellings	Planned Concept Detached Dwellings	Multiple-Family Dwellings	Estate Lots	Age Qualified Dwelling Units*	Maximum Non-Residential Square Footage (000)	Parkland Gross Acreage	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)						
Planning Areas 3 & 4	2,396 2,490	1,579 1,669	7,500 9,977	1,625 1,964	3,499 4,947	2,376 3,066	0 0	2,876 2,169	420 120	95 68	204 170	2,830 2,332	19 20	145 217	50 0	305 0	0	2,666 2,680	647 633	3,313		
Subarea 3.1	405 115	76	671	73	346	252			120	5 0	13	10						418 128				
Subarea 3.2a	58 60	43	279	134	145			145		5 11								58 60				
Subarea 3.2b	47 56	37 46	514		314 315	200 199												47 56				
Subarea 3.3	88 76	65 58	450 382	200 175		250 207				10 6								88 76				
Subarea 3.4	80 84	58	331 326	140 44	125 282	66 0		331 326		5 0								80 84				
Subarea 3.5	477 173	119	740 539	423 178	504 361	413 0		390 307										477 173				
Subarea 3.6	472 166	122	1,135 1,060	350 348	485 183	600 529		435 133		5 6								472 166				
Subarea 3.7	406 149	77 104	360 771	50 75	160 366	150 330		160 0		5								406 149				
Subarea 3.8	404 144	79 127	355 1,245		160 470	195 575		240 230		5	25 0	405 0	14 0	100 0				140 144				
Subarea 3.9	44 168	42 118	0 690	139	451	100		209			77 56	970 686	5 10	45 107	50 0	305 0		146 234				
Subarea 3.10	169 144	123 98	825 649	200 124	625 525			825 649		5								169 144				
Subarea 3.11	235 129	174 95	300 596	188	300 293	115		145 0		20	8 14	240 150						243 143				
Subarea 3.12	157 131	85 75	515 730	80 65	305 555	130 110												157 131				
Subarea 3.13	133 150	97 115	305 590	50 65	155 425	100 100		305 0		5								133 150				
Subarea 3.14	276 258	195 190	220 265			220 265				20 0	53 71	535 686	0 10	0 110				329 339				
Subarea 4.1	478 487	220 225	500 670	225 156	175 230	400 284		200 170		5	25 16	700 800						503 503				
PA25-0162																						

*Age Qualified dwelling units are included within each subcategory of residential types..

FIGURE 2A

PA 3&4 Master Area Plan Table (May 2026)

PA 5&8 Master Area Plan Table Current Entitlement

Planning Area	Development Use										Open Space Use	Planning Area Totals	
	Residential			Urban Activity Center (UAC)		Neighborhood Center		Business Park		Golf Resort Gross Acreage			
	Gross Acres	Maximum Dwelling Units	Maximum Non-Residential Square Footage (000)	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)		Gross Acres		
Planning Areas 5 & 8	1,705	2,477				13	220	30	805	25	1,773	3,010	4,783

PA 5&8 Master Area Plan Table Amendment Request

Planning Area		Development Use															Open Space Use	Planning Area Totals				
		Residential									Urban Activity Center (UAC)		Neighborhood Center		Business Park					Golf Resort Gross Acreage	Gross Acres	Open Space Acres
		Gross Acres	Net Acres	Maximum Dwelling Units	Conventional Single-Family Detached Dwellings	Planned Concept Detached Dwellings	Multiple-Family Dwellings	Estate Lots	Age Qualified Dwelling Units	Maximum Non-Residential Square Footage (000)	Parkland Gross Acreage	Gross Acres	Maximum Square Footage of Non-Residential Uses (000)	Gross Acres	Maximum Square Footage (000)	Gross Acres	Maximum Square Footage (000)					
Planning Areas 5 & 8		1,608	0							14	33	498	13	148	1,110	158	25	1,759	3,024	4,783		
Planning Areas 5											16.5	249	7	74	555	79						
Planning Areas 8											16.5	249	6	74	555	79						

*A 50/50 land use split was assumed for PA 5 and 8, however RMV has the flexibility to allocate between the two Planning Areas

FIGURE 2B

PA 5&8 Master Area Plan Table (May 2026)

2. Multi-Modal Systems

It is possible through Transportation Demand Management to reduce the number of vehicle trips by incentivizing residents and employees to use other modes of transportation. The Ranch Plan NEV Transportation and Sustainable Circulation Plan (2017) provides details of sustainable mobility facilities that have been, and will continue to be, developed throughout RMV.

Providing multimodal features can complement the roadway network and reduce vehicle trips in the network. Multimodal infrastructure integrated into the RMV community includes walking paths, bike paths, Neighborhood Electric Vehicle (NEV) paths, and a community circulator bus system. In addition to reducing traffic on roadways within RMV, these sustainable mobility choices would contribute to reduced emissions and increased energy savings.

Although RMV is committed to supporting alternative modes, no credit was applied for purposes of this report. In sizing the roadways within RMV and evaluating off-site impacts, a worst-case approach was taken in not deducting from the potential auto trips to account for alternative mode usage.

3. Travel Forecasting Method

Fehr & Peers utilized the latest version of the Orange County Transportation Analysis Model (OCTAM) (Version 5.0.1, released in 2024) to prepare traffic forecasts for the assessment. OCTAM Version 5.0.1 provides forecasts for the Year 2050, with regional land uses and roadway systems consistent with the 2024 Southern California Association of Governments Regional Transportation Plan and Sustainable Communities Strategy (2024 SCAG RTP/SCS).

The travel forecasts reflect 2050 conditions, including build-out of PA1-4, PA5, and PA8. OCTAM incorporates the roadway system defined by the Master Plan of Arterial Highways (MPAH), which includes the extension of Cow Camp Road to Ortega Highway and the extension of Los Patrones Parkway, south of Cow Camp Road. The planned future conditions of PA3-4 are summarized in the site plan shown on **Figure 1**. We incorporated this site plan into OCTAM by updating the Socioeconomic Data (SED) to reflect the land use of the PAs when the community is built out. Starting from the OCTAM Traffic Analysis Zone (TAZ) structure, we disaggregated the TAZs within RMV to ensure the details of the land use distribution in the designated area can be accurately reflected in the traffic loading on the local arterials in the area. This approach supports a more reliable assessment of transportation impacts resulting from the proposed reallocation of land uses.

4. Trip Generation

This section addresses the cumulative trip generation for the Ranch Plan for all areas (both built and planned). The updated trip generation calculation changes are based on the requested land use changes for PA3-4 Master Area Plan and the corresponding changes to PA 5 and 8 land use allocations. The changes maintain the original land use totals for RMV as a whole.

We applied the definitive source for travel forecasts in Orange County, OCTAM, to identify both the internal and external trips from RMV. Internal trips being defined as those that both begin and end within RMV. External trips have one end of the trip within RMV. The number of peak hour external trips generated by PA1-5 was a benchmark used in FEIR 589.

OCTAM covers all of Southern California, with an enhanced level of detail in Orange County. We further amplified the details within RMV, given that is the focus of this effort. More zones were added for the RMV area, and the proposed roadway system was made more granular than the base version of OCTAM.

The trip generation in **Table 1** and **Table 2** were generated based on the trip assignment values produced from the updated Amendment Request and Current Entitlement OCTAM model runs. **Table 1** shows the results of internal, external, and total trip generation within PA 3 and 4 only as the TAZs within these planning areas were used as a boundary for trips entering, existing, and remaining internal. **Table 2** shows the results of internal, external, and total trip generation throughout PA 1-5 with the TAZs in all five planning areas as the boundary.

Table 1: RMV PA 3-4 Trip Generation Comparison

Study	Planning Areas	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Amendment Request (this study)	Internal	577	577	1,544	756	756	1,511	24,088
	External	968	2,935	3,903	2,971	1,783	4,754	61,082
	Total	1,545	3,512	5,057	3,727	2,539	6,265	85,170
Current Entitlement	Internal	471	471	942	586	586	1,172	18,628
	External	1,254	2,150	3,404	2,257	1,880	4,137	51,843
	Total	1,725	2,621	4,346	2,843	2,466	5,309	70,472
<i>Change due to Amendment Request</i>	<i>External</i>			+15%			+15%	+18%
	<i>Total</i>			+16%			+18%	+18%

Source: Fehr & Peers, 2026.

Table 2: RMV PA 1-5 Trip Generation Comparison

Study	Planning Areas	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Amendment Request (this study)	Internal	902	902	1,803	1,173	1,173	2,346	37,150
	External	1,608	3,885	5,493	4,074	2,732	6,806	86,336
	Total	2,510	4,787	7,296	5,247	3,905	9,152	123,486
Current Entitlement	Internal	744	744	1,487	930	930	1,860	29,430
	External	1,516	3,605	5,121	3,767	2,554	6,321	80,523
	Total	2,260	4,349	6,608	4,697	3,484	8,181	109,953
Change due to Amendment Request	External			+7%			+8%	+7%
	Total			+10%			+12%	+12%

Source: Fehr & Peers, 2026.

Table 3 shows the results of the external trip generation when compared to the estimates in prior relevant documents. The trend has been downwards due to changes in land uses and greater specificity/granularity in the land plans. The external trip comparison in this table shows that the 5,493 trips in the AM peak hour and 6,806 trips in the PM peak hour are substantially less than estimated in FEIR 589 and all subsequent documents.

Table 3. RMV External Trip Generation Comparison

Study	Planning Areas	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Amendment Request (this study)	PA 1-5	1,608	3,885	5,493	4,074	2,732	6,806
2015 CEQA Analysis ¹	PA 1-5	3,412	4,241	7,653	4,534	4,062	8,596
Change due to Amendment Request				-2,160			-1,790
2004 CEQA Analysis ²	PA 1-5	4,415	4,902	9,321	5,399	5,261	10,661
Change due to Amendment Request				-3,828			-3,855

¹ PA 3-4 Area Plan Traffic Study, Austin-Foust Associates, 2015 prepared for CEQA study of Master and Subarea Plans.² The Ranch Plan EIR Traffic Report, Austin-Foust Associates, Inc, May 2004, prepared for the Ranch Plan Draft Program EIR No. 589

5. Roadway Infrastructure

In order to evaluate the appropriate roadway sizing within PA3, average daily traffic (ADT) volumes on roadways within PA3 were calculated based on the land uses detailed in **Figure 1**. As has been the protocol for all planning areas, the sizing of the backbone roadways within PA4 will occur when more detail is known about the configuration of the driveways and minor roadways at the sub-division level. However, the trips from PA4 have been accounted for in all analysis in this document.

Based on the ADT volumes produced from the model as described in Section 3, the LOS s for each study segment was determined based on OCTA MPAH capacity values, as shown below in **Table 4**.

Table 4. Roadway LOS Based upon ADT

Arterial Type	Level of Service ¹					
	A	B	C	D	E	F
2-Lane Arterial (Undivided)	7,500	8,800	10,000	11,300	12,500	–
2-Lane Arterial (Divided)	9,000	12,000	15,000	20,000	22,000	–
4-Lane Arterial (Undivided)	15,000	17,500	20,000	22,500	25,000	–
4-Lane Arterial (Divided)	22,500	26,300	30,000	33,800	37,500	–
6-Lane Arterial (Divided)	33,900	39,400	45,000	50,600	56,300	–
8-Lane Arterial (Divided)	45,000	52,500	60,000	67,500	75,000	–

Source: Fehr & Peers, 2026.

Notes:

1. Level of Service “C” or better is the desirable value when planning the arterial system as set by OCTA MPAH.

Facility types and the ADT results produced from the model, based on the May 2026 Land Use Plan, are illustrated in **Figure 3**. For the roadways within PA3, the proposed sizes (**Figure 3**) are sufficient to meet the LOS C sizing guidelines (**Table 4**) based upon the travel forecasts for the proposed 2026 land use plan.

Consistent with the requirements of the Ranch Plan Planned Community Program Text, **Table 5** displays the forecasted ADT of the internal roadways within PA 3. These roadways are forecasted to fall under the OCTA MPAH threshold for the LOS C/D, such that the internal roadways are appropriately sized.

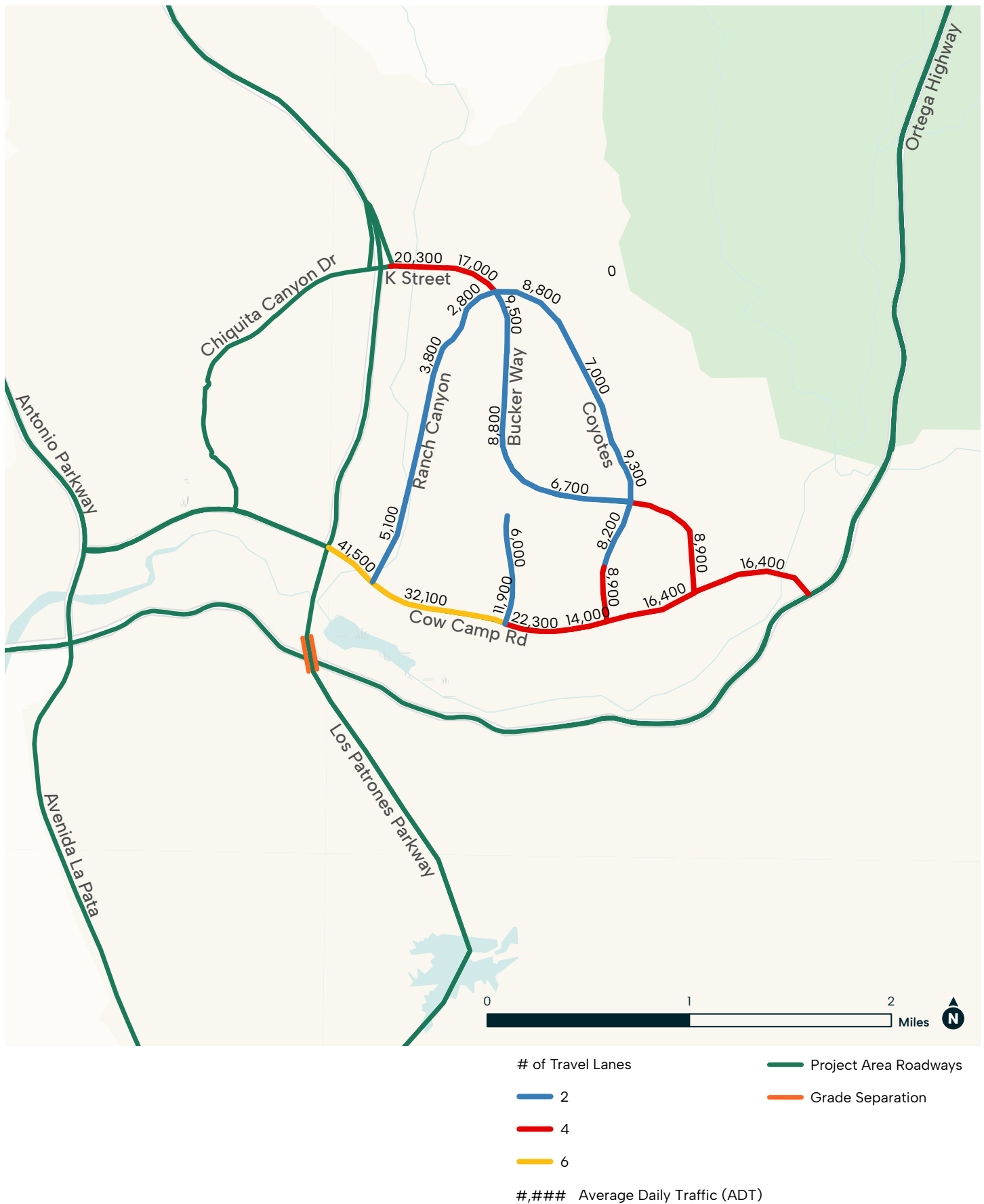


FIGURE 3

Average Daily Traffic & Number of Travel Lanes

Table 5: PA3-4 Internal Roadways Forecast ADT

Facility	Location	Roadway Type	Amendment Request Forecasted ADT	LOS	V/C
Ranch Canyon Road	North of Cow Camp Road	2-Lane Divided	9,400	A	0.43
	North of Lamkin Lane	2-Lane Divided	3,800	A	0.17
	South of Bucker Way	2-Lane Divided	2,800	A	0.13
Bucker Way	North of Cow Camp Road	2-Lane Divided	8,900	A	0.24
	West of Coyotes	2-Lane Divided	6,700	A	0.30
	West of Legado Road	2-Lane Divided	8,700	A	0.40
	South of Ranch Canyon	2-Lane Divided	9,500	A	0.43
Coyotes	North of Bucker Way	2-Lane Divided	9,300	A	0.42

Source: Fehr & Peers, 2026.

1. LOS C is the maximum desired value per OCTA Arterial Highways MPAH.

Table 6 provides a comparison of the forecasted ADT volumes on the key roadway segments surrounding the PA3-4 area originally projected in FEIR 589, with (i) the ADT volumes that were previously projected under the Current Entitlements land use scenario and (ii) the ADT volumes projected under the Amendment Request land use scenario. The Level of Service is also shown based upon the criteria in Table 4.

Table 6: PA3-4 External Roadways Forecast ADT

Facility	Location	Roadway Type	Forecast ADT Volume			Amendment Request LOS	
			2004 EIR ³	Current Entitlements	Amendment Request	LOS	V/C
Ortega Highway	West of Antonio Parkway	4-Lane Divided	41,000	26,000	27,000	C	0.72
	East of Cow Camp Road	4-Lane Divided	n/a	19,500	21,300	A	0.57
	West of Cow Camp Road	4-Lane Divided	n/a	6,500	6,200	A	0.17
	East of PA 4	4-Lane Divided	n/a	19,500	20,000	A	0.53
Crown Valley	West of Antonio Parkway	6-Lane Divided	48,000	32,500	32,600	A	0.58
Oso Parkway	West of Los Patrones Parkway	6-Lane Divided	44,000	30,600	31,500	A	0.56
	East of Los Patrones Parkway	4-Lane Undivided	24,000	15,100	15,000	A	0.60
Avenida La Pata	South of Ortega Highway	6-Lane Divided	25,000	14,000	14,400	A	0.26
	North of Avenida Pico	6-Lane Divided	58,000	18,000	18,000	A	0.32
Avenida Vista Hermosa	West of Avenida La Pata	4-Lane Divided	43,000	10,600	10,200	A	0.27
Avenida Pico	West of Avenida La Pata	6-Lane Divided	34,000	26,100	24,300	A	0.43
	East of Avenida La Pata	6-Lane Divided	24,000	17,800	15,400	A	0.27

Source: Fehr & Peers, 2026.

³ Figure 4-4, "committed circulation system plus La Pata"

6. Traffic Operations

The following section provides a review of proximate intersections covered by the SCRIP to determine if the reallocation of land uses to PA3-4 would result in the need for additional improvements. Those locations are:

1. Ortega Highway/Antonio Parkway
2. Cow Camp Road/Antonio Parkway
3. Cow Camp Road/Chiquita Canyon Drive
4. Cow Camp Road/Los Patrones Parkway
5. Cow Camp Road/Ortega Highway
6. Chiquita Canyon Drive/Los Patrones Parkway Southbound Off-Ramp
7. Chiquita Canyon Drive/K Street/Los Patrones Parkway Northbound On-Ramp
8. Oso Parkway/Los Patrones Parkway Southbound Ramps
9. Oso Parkway/Los Patrones Parkway Northbound Ramps

The Level of Service (LOS) at each intersection was analyzed using the Intersection Capacity Utilization (ICU) methodology to perform the operational analysis, resulting in estimates of LOS and vehicle-to-capacity (V/C) ratios. The following assumptions were applied to the LOS analysis:

- Saturation flow rate: 1700 vehicles per hour per lane, per County of Orange General Plan
- Double left-turn penalty: 10%
- Lost Time: 5% of the cycle
- Right Turn on Red: 50% of right-turn volumes.

Additionally, we included a right turn overlap phase (the right turn has a green right arrow for some phases) at all locations which currently provide for such, namely: Antonio Pkwy & Ortega Hwy (southbound), Antonio Pkwy & Cow Camp Rd (westbound), Cow Camp Rd & Chiquita Canyon Dr (southbound), and Cow Camp Rd & Los Patrones Pkwy (westbound and eastbound).

The results of the traffic operations analysis are shown in **Table 7**. All of the intersections are projected to operate at LOS A or B, which is better than the County's minimum standard. As explained in the Background section, several factors have led to improved forecasts of future conditions when compared to conditions predicted in prior studies related to travel patterns, demographic changes, and changes in built and planned regional infrastructure.

The intersection configurations and peak hour periods turning movement forecasts from OCTAM are presented in **Figure 4**. These forecasts represent build-out of RMV and 2050 levels of development elsewhere in the region. In conclusion, the PA3 design is appropriate and adequate for the 2050 design horizon.

Table 7: PA3–4 Intersection LOS and Delay

Intersection	Traffic Control	Peak Hour	Current Entitlements		Amendment Request	
			LOS ¹	V/C ²	LOS ¹	V/C ²
1. Ortega Hwy/Antonio Pkwy	Signalized	AM	A	0.36	A	0.39
		PM	A	0.52	A	0.56
2. Cow Camp Rd/Antonio Pkwy	Signalized	AM	A	0.40	A	0.40
		PM	A	0.54	A	0.56
3. Cow Camp Rd/Chiquita Canyon Dr	Signalized	AM	A	0.52	A	0.55
		PM	A	0.50	A	0.44
4. Cow Camp Rd/Los Patrones Pkwy	Signalized	AM	A	0.43	A	0.46
		PM	A	0.56	B	0.65
5. Cow Camp Rd/Ortega Hwy	Roundabout	AM	A	0.35	A	0.39
		PM	A	0.37	A	0.44
6. Chiquita Canyon Dr/Los Patrones Pkwy SB	Signalized	AM	A	0.43	A	0.30
		PM	A	0.46	A	0.51
7. Chiquita Canyon Dr/D St/Los Patrones NB	Signalized	AM	A	0.49	A	0.53
		PM	A	0.47	A	0.53
8. Oso Pkwy/Los Patrones Pkwy SB	Signalized	AM	A	0.38	A	0.37
		PM	A	0.56	A	0.56
9. Oso Pkwy/Los Patrones Pkwy NB	Signalized	AM	A	0.46	A	0.46
		PM	A	0.40	A	0.40

Source: Fehr & Peers 2026.

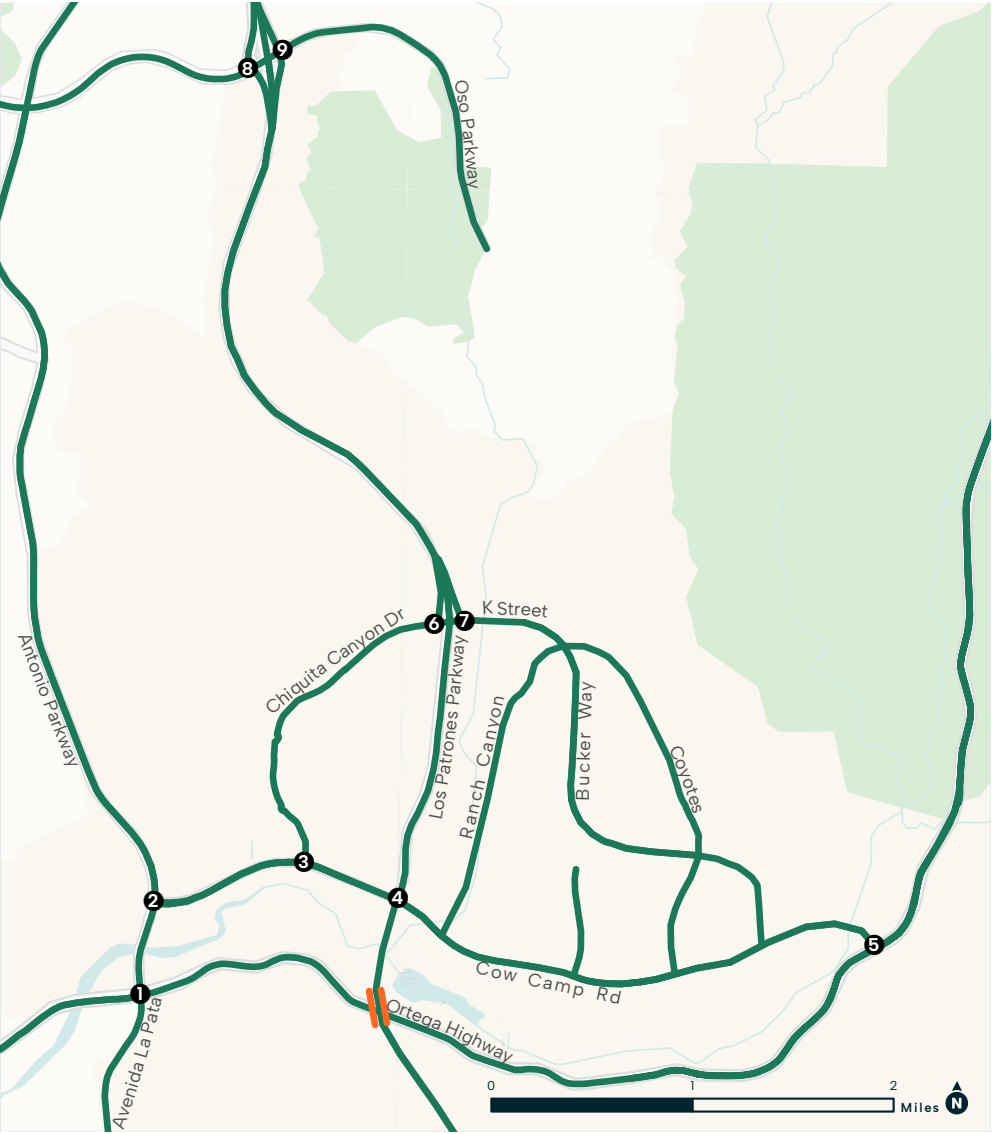
Notes:

1. LOS calculations performed using the Intersection Capacity Utilization (ICU) method.
2. Vehicle-to-capacity ratio.

Table 8: Intersection LOS Thresholds

Level of Service	Signalized Intersection V/C
A	≤0.60
B	>0.60 to ≤0.70
C	>0.70 to ≤0.80
D	>0.80 to ≤0.90
E	>0.91 to ≤1.00
F	>1.00

Source: Intersection Capacity Utilization (ICU) method.



1. Antonio Pkwy/Ortega Hwy Antonio Pkwy Ortega Hwy 727 (600) 739 (509) 12 (65) 14 (15) 305 (255) 151 (68) 343 (754) 184 (351) 46 (21) 12 (55) 261 (723) 33 (151)	2. Antonio Pkwy/Cow Camp Rd Antonio Pkwy Cow Camp Rd 564 (696) 224 (798) 879 (531) 969 (543) 370 (675) 269 (894)	3. Chiquita Canyon Dr/Cow Camp Rd Chiquita Canyon Dr Cow Camp Rd Private Dr 259 (193) 0 (0) 1,589 (880) 0 (0) 121 (259) 371 (1,433) 0 (0) 0 (0) 0 (0)
4. Los Patrones Pkwy/Cow Camp Rd Los Patrones Pkwy Cow Camp Rd 1 (34) 184 (184) 109 (353) 199 (104) 1,309 (677) 698 (409) 24 (7) 291 (1,150) 225 (109) 57 (273) 113 (172) 295 (773)	5. Ortega Hwy/Cow Camp Rd Ortega Hwy Cow Camp Rd 661 (539) 394 (193) 476 (741) 5 (33) 30 (13) 127 (442)	6. Los Patrones Pkwy SB Ramp/Chiquita Canyon Dr Los Patrones Pkwy SB Ramp Chiquita Canyon Dr K St 115 (186) 294 (571) 213 (151) 277 (374)
7. Los Patrones Pkwy NB Ramp/K St Los Patrones Pkwy NB Ramp K St 646 (479) 213 (151) 165 (151) 406 (819)	8. Los Patrones Pkwy SB Ramp/Oso Pkwy Los Patrones Pkwy SB Ramp Oso Pkwy 16 (113) 0 (0) 12 (87) 1,181 (845) 98 (57) 188 (515) 423 (753)	9. Los Patrones Pkwy NB Ramp/Oso Pkwy Los Patrones Pkwy NB Ramp Oso Pkwy 69 (20) 632 (348) 41 (10) 159 (592) 646 (554) 0 (0) 59 (107)

LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign
- Signalized
- Study Intersection

FIGURE 4
Peak Hour Traffic Volumes and Lane Configurations
Future Year (2050) Conditions

Appendix A: ICU Calculation Sheets

Project Title: RMV Amendment to PA3&4
Intersection: 1 - Antonio Pkwy & Ortega Hwy
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : SBR,
 FF Movements:

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	2.00	727	3,400	0.100	N-S(1):	0.060
	TH	3.00	739	5,100	0.140 *	N-S(2):	0.140 *
	LT	1.00	12	1,700	0.010	E-W(1):	0.140
Westbound	RT	1.00	14	1,700	0.000	E-W(2):	0.200 *
	TH	2.00	305	3,400	0.090 *	V/C:	0.340
	LT	1.00	151	1,700	0.090	Lost Time:	0.050
Northbound	RT	1.00	33	1,700	0.000	ITS:	0.000
	TH	3.00	261	5,100	0.050	ICU:	0.390
	LT	2.00	12	3,060	0.000 *	LOS:	A
Eastbound	RT	1.00	46	1,700	0.030		
	TH	2.00	184	3,400	0.050		
	LT	2.00	343	3,060	0.110 *		

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	2.00	600	3,400	0.000	N-S(1):	0.180 *
	TH	3.00	509	5,100	0.100	N-S(2):	0.120
	LT	1.00	65	1,700	0.040 *	E-W(1):	0.140
Westbound	RT	1.00	15	1,700	0.010	E-W(2):	0.330 *
	TH	2.00	255	3,400	0.080 *	V/C:	0.510
	LT	1.00	68	1,700	0.040	Lost Time:	0.050
Northbound	RT	1.00	151	1,700	0.090	ITS:	0.000
	TH	3.00	723	5,100	0.140 *	ICU:	0.560
	LT	2.00	55	3,060	0.020	LOS:	A
Eastbound	RT	1.00	21	1,700	0.010		
	TH	2.00	351	3,400	0.100		
	LT	2.00	754	3,060	0.250 *		

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 2 - Antonio Pkwy & Cow Camp Rd
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : WBR
 FF Movements: NBR,

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.140 *
	TH	3.00	564	5,100	0.110	N-S(2): 0.110
	LT	2.00	224	3,060	0.070 *	E-W(1): 0.210 *
Westbound	RT	2.00	879	3,400	0.190	E-W(2): 0.190
	TH	0.00	0	0	0.000	
	LT	3.00	969	4,590	0.210 *	V/C: 0.350
Northbound	RT	1.00	269	1,700	0.000	Lost Time: 0.050
	TH	3.00	370	5,100	0.070 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.400
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.390 *
	TH	3.00	696	5,100	0.140	N-S(2): 0.140
	LT	2.00	798	3,060	0.260 *	E-W(1): 0.120 *
Westbound	RT	2.00	531	3,400	0.000	E-W(2): 0.000
	TH	0.00	0	0	0.000	
	LT	3.00	543	4,590	0.120 *	V/C: 0.510
Northbound	RT	1.00	894	1,700	0.000	Lost Time: 0.050
	TH	3.00	675	5,100	0.130 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.560
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 3 - Chiquita Canyon Dr & Cow Camp Rd
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : SBR,
 FF Movements:

N-S Split Phase : Y
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	259	1,700	0.150 *	N-S(1):	0.150 *
	TH	0.00	0	0	0.000	N-S(2):	0.000
	LT	1.00	0	1,700	0.000	E-W(1):	0.070
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.350 *
	TH	3.00	1,589	5,100	0.310 *	V/C:	0.500
	LT	1.00	0	1,700	0.000	Lost Time:	0.050
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	1.00	0	1,700	0.000	ICU:	0.550
	LT	0.00	0	0	0.000 *	LOS:	A
Eastbound	RT	0.00	0	0	0.000		
	TH	3.00	371	5,100	0.070		
	LT	2.00	121	3,060	0.040 *		

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	193	1,700	0.110 *	N-S(1):	0.110 *
	TH	0.00	0	0	0.000	N-S(2):	0.000
	LT	1.00	0	1,700	0.000	E-W(1):	0.280 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.250
	TH	3.00	880	5,100	0.170	V/C:	0.390
	LT	1.00	0	1,700	0.000 *	Lost Time:	0.050
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	1.00	0	1,700	0.000	ICU:	0.440
	LT	0.00	0	0	0.000 *	LOS:	A
Eastbound	RT	0.00	0	0	0.000		
	TH	3.00	1,433	5,100	0.280 *		
	LT	2.00	259	3,060	0.080		

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 4 - Los Patrones Pkwy & Cow Camp Rd
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : EBR, WBR
 FF Movements:

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	1	1,700	0.000	N-S(1): 0.050
	TH	2.00	184	3,400	0.050 *	N-S(2): 0.080 *
	LT	3.00	109	4,590	0.020	E-W(1): 0.330 *
Westbound	RT	2.00	199	3,400	0.030	E-W(2): 0.270
	TH	3.00	1,309	5,100	0.260	V/C: 0.410
	LT	2.00	698	3,060	0.230 *	Lost Time: 0.050
Northbound	RT	2.00	295	3,400	0.000	ITS: 0.000
	TH	2.00	113	3,400	0.030	
	LT	1.00	57	1,700	0.030 *	
Eastbound	RT	1.00	225	1,700	0.100 *	ICU: 0.460
	TH	3.00	291	5,100	0.060	
	LT	2.00	24	3,060	0.010	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	34	1,700	0.020	N-S(1): 0.240 *
	TH	2.00	184	3,400	0.050	N-S(2): 0.210
	LT	3.00	353	4,590	0.080 *	E-W(1): 0.360 *
Westbound	RT	2.00	104	3,400	0.000	E-W(2): 0.130
	TH	3.00	677	5,100	0.130	V/C: 0.600
	LT	2.00	409	3,060	0.130 *	Lost Time: 0.050
Northbound	RT	2.00	773	3,400	0.160 *	ITS: 0.000
	TH	2.00	172	3,400	0.050	
	LT	1.00	273	1,700	0.160	
Eastbound	RT	1.00	109	1,700	0.000	ICU: 0.650
	TH	3.00	1,150	5,100	0.230 *	
	LT	2.00	7	3,060	0.000	LOS: B

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 6 - Los Patrones SB & Chiquita Canyon Dr
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	115	1,700	0.070	N-S(1): 0.170 *
	TH	0.00	0	0	0.000	N-S(2): 0.070
	LT	1.00	294	1,700	0.170 *	E-W(1): 0.080 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.060
	TH	2.00	213	3,400	0.060	V/C: 0.250
	LT	0.00	0	0	0.000 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.300
	TH	2.00	277	3,400	0.080 *	
	LT	0.00	0	0	0.000	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	186	1,700	0.110	N-S(1): 0.350 *
	TH	0.00	0	0	0.000	N-S(2): 0.110
	LT	1.00	597	1,700	0.350 *	E-W(1): 0.110 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.040
	TH	2.00	151	3,400	0.040	V/C: 0.460
	LT	0.00	0	0	0.000 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.510
	TH	2.00	374	3,400	0.110 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 7 - Los Patrones NB & K Street
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.000 *
	TH	0.00	0	0	0.000 *	N-S(2): 0.000 *
	LT	0.00	0	0	0.000 *	E-W(1): 0.240
Westbound	RT	1.00	646	1,700	0.380 *	E-W(2): 0.480 *
	TH	2.00	213	3,400	0.060	
	LT	0.00	0	0	0.000	V/C: 0.480
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.050
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.530
	TH	1.00	406	1,700	0.240	
	LT	1.00	165	1,700	0.100 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.000 *
	TH	0.00	0	0	0.000 *	N-S(2): 0.000 *
	LT	0.00	0	0	0.000 *	E-W(1): 0.480 *
Westbound	RT	1.00	479	1,700	0.280	E-W(2): 0.370
	TH	2.00	151	3,400	0.040	
	LT	0.00	0	0	0.000 *	V/C: 0.480
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.050
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.530
	TH	1.00	819	1,700	0.480 *	
	LT	1.00	151	1,700	0.090	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 8 - Los Patrones SB & Oso Pkwy
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

OLA Movements :
 FF Movements:

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.71	16	2,914	0.010 *	N-S(1): 0.010 *
	TH	0.00	0	0	0.000	N-S(2): 0.010 *
	LT	1.29	12	1,967	0.010 *	E-W(1): 0.310 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.230
	TH	3.00	1,181	5,100	0.230	V/C: 0.320
	LT	1.00	98	1,700	0.060 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	1.00	423	1,700	0.250 *	ICU: 0.370
	TH	2.00	188	3,400	0.060	
	LT	0.00	0	0	0.000	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.70	113	2,882	0.040 *	N-S(1): 0.040 *
	TH	0.00	0	0	0.000	N-S(2): 0.040 *
	LT	1.31	87	1,997	0.040 *	E-W(1): 0.470 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.170
	TH	3.00	845	5,100	0.170	V/C: 0.510
	LT	1.00	57	1,700	0.030 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	1.00	753	1,700	0.440 *	ICU: 0.560
	TH	2.00	515	3,400	0.150	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 9 - Los Patrones NB & Oso Pkwy
Description: Future Year (2050), Amendment Request

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.020
	TH	0.00	0	0	0.000 *	N-S(2): 0.210 *
	LT	0.00	0	0	0.000	E-W(1): 0.050
Westbound	RT	1.00	69	1,700	0.040	E-W(2): 0.200 *
	TH	2.00	632	3,400	0.190 *	V/C: 0.410
	LT	0.00	0	0	0.000	Lost Time: 0.050
Northbound	RT	2.00	59	3,400	0.020	ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	646	3,060	0.210 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.460
	TH	2.00	159	3,400	0.050	
	LT	2.00	41	3,060	0.010 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.030
	TH	0.00	0	0	0.000 *	N-S(2): 0.180 *
	LT	0.00	0	0	0.000	E-W(1): 0.170 *
Westbound	RT	1.00	20	1,700	0.010	E-W(2): 0.100
	TH	2.00	348	3,400	0.100	V/C: 0.350
	LT	0.00	0	0	0.000 *	Lost Time: 0.050
Northbound	RT	2.00	107	3,400	0.030	ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	554	3,060	0.180 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.400
	TH	2.00	592	3,400	0.170 *	
	LT	2.00	10	3,060	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 1 - Antonio Pkwy & Ortega Hwy
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : SBR,
 FF Movements:

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	2.00	726	3,400	0.100	N-S(1):	0.060
	TH	3.00	631	5,100	0.120 *	N-S(2):	0.120 *
	LT	1.00	5	1,700	0.000	E-W(1):	0.130
Westbound	RT	1.00	16	1,700	0.010	E-W(2):	0.190 *
	TH	2.00	270	3,400	0.080 *	V/C:	0.310
	LT	1.00	127	1,700	0.070	Lost Time:	0.050
Northbound	RT	1.00	37	1,700	0.000	ITS:	0.000
	TH	3.00	304	5,100	0.060	ICU:	0.360
	LT	2.00	15	3,060	0.000 *	LOS:	A
Eastbound	RT	1.00	41	1,700	0.020		
	TH	2.00	202	3,400	0.060		
	LT	2.00	336	3,060	0.110 *		

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	2.00	567	3,400	0.000	N-S(1):	0.140 *
	TH	3.00	568	5,100	0.110	N-S(2):	0.130
	LT	1.00	20	1,700	0.010 *	E-W(1):	0.130
Westbound	RT	1.00	9	1,700	0.010	E-W(2):	0.330 *
	TH	2.00	270	3,400	0.080 *	V/C:	0.470
	LT	1.00	74	1,700	0.040	Lost Time:	0.050
Northbound	RT	1.00	133	1,700	0.080	ITS:	0.000
	TH	3.00	650	5,100	0.130 *	ICU:	0.520
	LT	2.00	50	3,060	0.020	LOS:	A
Eastbound	RT	1.00	23	1,700	0.010		
	TH	2.00	317	3,400	0.090		
	LT	2.00	754	3,060	0.250 *		

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 2 - Antonio Pkwy & Cow Camp Rd
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : WBR
 FF Movements: NBR,

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.150 *
	TH	3.00	521	5,100	0.100	N-S(2): 0.100
	LT	2.00	216	3,060	0.070 *	E-W(1): 0.200 *
Westbound	RT	2.00	806	3,400	0.170	E-W(2): 0.170
	TH	0.00	0	0	0.000	
	LT	3.00	896	4,590	0.200 *	V/C: 0.350
Northbound	RT	1.00	245	1,700	0.000	Lost Time: 0.050
	TH	3.00	432	5,100	0.080 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.400
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.380 *
	TH	3.00	713	5,100	0.140	N-S(2): 0.140
	LT	2.00	750	3,060	0.250 *	E-W(1): 0.110 *
Westbound	RT	2.00	489	3,400	0.000	E-W(2): 0.000
	TH	0.00	0	0	0.000	
	LT	3.00	509	4,590	0.110 *	V/C: 0.490
Northbound	RT	1.00	849	1,700	0.000	Lost Time: 0.050
	TH	3.00	639	5,100	0.130 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.540
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 3 - Chiquita Canyon Dr & Cow Camp Rd
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : SBR,
 FF Movements:

N-S Split Phase : Y
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	166	1,700	0.100 *	N-S(1): 0.100 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	0	1,700	0.000	E-W(1): 0.050
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.370 *
	TH	3.00	1,535	5,100	0.300 *	V/C: 0.470
	LT	1.00	0	1,700	0.000	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	1.00	0	1,700	0.000	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.520
	TH	3.00	251	5,100	0.050	
	LT	2.00	210	3,060	0.070 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	288	1,700	0.170 *	N-S(1): 0.170 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	0	1,700	0.000	E-W(1): 0.280 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.200
	TH	3.00	710	5,100	0.140	V/C: 0.450
	LT	1.00	0	1,700	0.000 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	1.00	0	1,700	0.000	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.500
	TH	3.00	1,406	5,100	0.280 *	
	LT	2.00	194	3,060	0.060	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 4 - Los Patrones Pkwy & Cow Camp Rd
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %
 OLA Movements : EBR, WBR
 FF Movements:

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	1	1,700	0.000	N-S(1): 0.090
	TH	2.00	80	3,400	0.020 *	N-S(2): 0.160 *
	LT	3.00	72	4,590	0.020	E-W(1): 0.180
Westbound	RT	2.00	161	3,400	0.030	E-W(2): 0.220 *
	TH	3.00	1,072	5,100	0.210 *	V/C: 0.380
	LT	2.00	398	3,060	0.130	Lost Time: 0.050
Northbound	RT	2.00	372	3,400	0.040	ITS: 0.000
	TH	2.00	222	3,400	0.070	
	LT	1.00	245	1,700	0.140 *	
Eastbound	RT	1.00	89	1,700	0.000	ICU: 0.430
	TH	3.00	233	5,100	0.050	
	LT	2.00	26	3,060	0.010 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	38	1,700	0.020	N-S(1): 0.140
	TH	2.00	294	3,400	0.090 *	N-S(2): 0.180 *
	LT	3.00	279	4,590	0.060	E-W(1): 0.330 *
Westbound	RT	2.00	74	3,400	0.000	E-W(2): 0.110
	TH	3.00	551	5,100	0.110	V/C: 0.510
	LT	2.00	428	3,060	0.140 *	Lost Time: 0.050
Northbound	RT	2.00	493	3,400	0.080	ITS: 0.000
	TH	2.00	108	3,400	0.030	
	LT	1.00	157	1,700	0.090 *	
Eastbound	RT	1.00	229	1,700	0.040	ICU: 0.560
	TH	3.00	986	5,100	0.190 *	
	LT	2.00	8	3,060	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 6 - Los Patrones SB & Chiquita Canyon Dr
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	118	1,700	0.070	N-S(1):	0.260 *
	TH	0.00	0	0	0.000	N-S(2):	0.070
	LT	1.00	444	1,700	0.260 *	E-W(1):	0.120 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.030
	TH	2.00	108	3,400	0.030	V/C:	0.380
	LT	0.00	0	0	0.000 *	Lost Time:	0.050
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	0.00	0	0	0.000 *	ICU:	0.430
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000		
	TH	2.00	424	3,400	0.120 *	LOS:	A
	LT	0.00	0	0	0.000		

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	186	1,700	0.110	N-S(1):	0.320 *
	TH	0.00	0	0	0.000	N-S(2):	0.110
	LT	1.00	550	1,700	0.320 *	E-W(1):	0.090 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.090 *
	TH	2.00	294	3,400	0.090 *	V/C:	0.410
	LT	0.00	0	0	0.000 *	Lost Time:	0.050
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	0.00	0	0	0.000 *	ICU:	0.460
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000		
	TH	2.00	311	3,400	0.090 *	LOS:	A
	LT	0.00	0	0	0.000 *		

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 7 - Los Patrones NB & K Street
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.000 *
	TH	0.00	0	0	0.000 *	N-S(2): 0.000 *
	LT	0.00	0	0	0.000 *	E-W(1): 0.410
Westbound	RT	1.00	575	1,700	0.340 *	E-W(2): 0.440 *
	TH	2.00	108	3,400	0.030	
	LT	0.00	0	0	0.000	V/C: 0.440
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.050
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.490
	TH	1.00	697	1,700	0.410	
	LT	1.00	171	1,700	0.100 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.000 *
	TH	0.00	0	0	0.000 *	N-S(2): 0.000 *
	LT	0.00	0	0	0.000 *	E-W(1): 0.420 *
Westbound	RT	1.00	563	1,700	0.330 *	E-W(2): 0.420 *
	TH	2.00	294	3,400	0.090	
	LT	0.00	0	0	0.000	V/C: 0.420
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.050
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.470
	TH	1.00	708	1,700	0.420	
	LT	1.00	153	1,700	0.090 *	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 8 - Los Patrones SB & Oso Pkwy
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.71	16	2,914	0.010 *	N-S(1): 0.010 *
	TH	0.00	0	0	0.000	N-S(2): 0.010 *
	LT	1.29	12	1,967	0.010 *	E-W(1): 0.320 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.230
	TH	3.00	1,172	5,100	0.230	V/C: 0.330
	LT	1.00	98	1,700	0.060 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	1.00	437	1,700	0.260 *	ICU: 0.380
	TH	2.00	200	3,400	0.060	
	LT	0.00	0	0	0.000	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.70	118	2,893	0.040	N-S(1): 0.050 *
	TH	(0.00)	0	(0)	0.000	N-S(2): 0.040
	LT	1.30	90	1,986	0.050 *	E-W(1): 0.460 *
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.170
	TH	3.00	845	5,100	0.170	V/C: 0.510
	LT	1.00	56	1,700	0.030 *	Lost Time: 0.050
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	1.00	737	1,700	0.430 *	ICU: 0.560
	TH	2.00	514	3,400	0.150	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: RMV Amendment to PA3&4
Intersection: 9 - Los Patrones NB & Oso Pkwy
Description: Future Year (2050), Current Entitlements

Thru Lane: 1700 vph
 Left Lane: 1700 vph
 Double Lt Penalty: 10 %
 ITS: 0 %

N-S Split Phase : N
 E-W Split Phase : N
 Lost Time (% of cycle) : 5
 V/C Round Off (decs.) : 2

OLA Movements :
 FF Movements:

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.020
	TH	0.00	0	0	0.000 *	N-S(2): 0.210 *
	LT	0.00	0	0	0.000	E-W(1): 0.050
Westbound	RT	1.00	75	1,700	0.040	E-W(2): 0.200 *
	TH	2.00	627	3,400	0.180 *	V/C: 0.410
	LT	0.00	0	0	0.000	Lost Time: 0.050
Northbound	RT	2.00	57	3,400	0.020	ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	643	3,060	0.210 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.460
	TH	2.00	161	3,400	0.050	
	LT	2.00	51	3,060	0.020 *	LOS: A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.030
	TH	0.00	0	0	0.000 *	N-S(2): 0.180 *
	LT	0.00	0	0	0.000	E-W(1): 0.170 *
Westbound	RT	1.00	20	1,700	0.010	E-W(2): 0.100
	TH	2.00	349	3,400	0.100	V/C: 0.350
	LT	0.00	0	0	0.000 *	Lost Time: 0.050
Northbound	RT	2.00	106	3,400	0.030	ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	552	3,060	0.180 *	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.400
	TH	2.00	593	3,400	0.170 *	
	LT	2.00	11	3,060	0.000	LOS: A

* - Denotes critical movement

INTERSECTION SUMMARY

 **Site: 101 [Intersection 5 Amendment Proposal AM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Intersection Performance - Hourly Values			
Performance Measure	Vehicles:	All MCs	Persons
Travel Speed (Average)	mph	23.3	23.3 mph
Travel Distance (Total)	veh-mi/h	1167.4	1400.8 pers-mi/h
Travel Time (Total)	veh-h/h	50.1	60.1 pers-h/h
Desired Speed	mph	25.0	
Speed Efficiency		0.93	
Travel Time Index		9.25	
Congestion Coefficient		1.07	
Demand Flows (Total)	veh/h	1847	2216 pers/h
Arrival Flows (Total)	veh/h	1847	
Percent Heavy Vehicles (Demand)	%	3.0	
Percent Heavy Vehicles (Arrivals)	%	3.0	
Degree of Saturation		0.389	
Practical Spare Capacity	%	118.6	
Effective Intersection Capacity	veh/h	4749	
Control Delay (Total)	veh-h/h	2.57	3.08 pers-h/h
Control Delay (Average)	sec	5.0	5.0 sec
Control Delay (Worst Lane by MC)	sec	11.2	
Control Delay (Worst Movement by MC)	sec	19.2	19.2 sec
Geometric Delay (Average)	sec	0.0	
Stop-Line Delay (Average)	sec	5.0	
Idling Time (Average)	sec	2.9	
Intersection Level of Service (LOS)		LOS A	
95% Back of Queue - Veh (Worst Lane)	veh	2.3	
95% Back of Queue - Dist (Worst Lane)	ft	59.1	
Ave. Que Storage Ratio (Worst Lane)		0.01	
Effective Stops (Total)	veh/h	313	375 pers/h
Effective Stop Rate		0.17	0.17
Proportion Queued		0.25	0.25
Performance Index		58.8	58.8
Cost (Total)	\$/h	1070.34	1070.34 \$/h
Fuel Consumption (Total)	gal/h	39.8	
Carbon Dioxide (Total)	kg/h	357.3	
Hydrocarbons (Total)	kg/h	0.025	
Carbon Monoxide (Total)	kg/h	0.18	
NOx (Total)	kg/h	0.422	

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Intersection LOS value for Vehicles is based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand effects.

In Network analysis, Arrival Flows will be reduced if Upstream Capacity Constraint exists.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

Site Model Variability Index (Average value of largest changes in Lane Degrees of Saturation from the third to the last Main (Timing-Capacity) Iterations): 0.0 %

Number of Iterations: 3 (Maximum: 10)

Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 100.0% 1.8% 0.0%

Intersection Performance - Annual Values			
Performance Measure	Vehicles:	All MCs	Persons
Demand Flows (Total)	veh/y	886,435	1,063,722 pers/y
Delay (Total)	veh-h/y	1,232	1,478 pers-h/y

Effective Stops (Total)	veh/y	150,042	180,050 pers/y
Travel Distance (Total)	veh-mi/y	560,336	672,403 pers-mi/y
Travel Time (Total)	veh-h/y	24,042	28,850 pers-h/y
Cost (Total)	\$/y	513,762	513,762 \$/y
Fuel Consumption (Total)	gal/y	19,111	
Carbon Dioxide (Total)	kg/y	171,526	
Hydrocarbons (Total)	kg/y	12	
Carbon Monoxide (Total)	kg/y	88	
NOx (Total)	kg/y	203	

1 Hours per Year: 480 (Site)

MOVEMENT SUMMARY

 Site: 101 [Intersection 5 Amendment Proposal AM ICU (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh ft		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Dwy															
3	L2	All MCs	1	3.0	1	3.0	0.004	5.0	LOS A	0.0	0.4	0.51	0.35	0.51	23.0
8	T1	All MCs	1	3.0	1	3.0	0.004	5.0	LOS A	0.0	0.4	0.51	0.35	0.51	23.1
18	R2	All MCs	1	3.0	1	3.0	0.004	9.4	LOS A	0.0	0.4	0.51	0.35	0.51	23.1
Approach			3	3.0	3	3.0	0.004	6.4	LOS A	0.0	0.4	0.51	0.35	0.51	23.1
East: Ortega Highway															
1	L2	All MCs	1	3.0	1	3.0	0.389	5.9	LOS A	2.3	59.1	0.18	0.05	0.18	23.2
6	T1	All MCs	428	3.0	428	3.0	0.389	5.9	LOS A	2.3	59.1	0.18	0.05	0.18	23.3
16	R2	All MCs	718	3.0	718	3.0	0.389	0.9	LOS A	2.3	59.1	0.02	0.01	0.02	24.5
Approach			1148	3.0	1148	3.0	0.389	2.8	LOS A	2.3	59.1	0.08	0.02	0.08	24.0
North: Cow Camp Road															
7	L2	All MCs	517	3.0	517	3.0	0.299	9.1	LOS A	1.3	33.3	0.54	0.41	0.54	22.0
4	T1	All MCs	1	3.0	1	3.0	0.282	6.9	LOS A	1.2	31.0	0.54	0.41	0.54	22.1
14	R2	All MCs	5	3.0	5	3.0	0.282	6.9	LOS A	1.2	31.0	0.54	0.41	0.54	22.1
Approach			524	3.0	524	3.0	0.299	9.1	LOS A	1.3	33.3	0.54	0.41	0.54	22.0
West: Ortega Highway															
5	L2	All MCs	33	3.0	33	3.0	0.115	5.3	LOS A	0.4	10.3	0.49	0.39	0.49	23.0
2	T1	All MCs	138	3.0	138	3.0	0.115	7.7	LOS A	0.4	10.3	0.49	0.40	0.49	23.3
12	R2	All MCs	1	3.0	1	3.0	0.094	5.5	LOS A	0.3	8.5	0.50	0.41	0.50	23.4
Approach			172	3.0	172	3.0	0.115	7.3	LOS A	0.4	10.3	0.49	0.40	0.49	23.2
All Vehicles			1847	3.0	1847	3.0	0.389	5.0	LOS A	2.3	59.1	0.25	0.17	0.25	23.3

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on degree of saturation per movement.

Intersection and Approach LOS values are based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

INTERSECTION SUMMARY

 **Site: 101 [Intersection 5 Amendment Proposal PM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Intersection Performance - Hourly Values			
Performance Measure	Vehicles:	All MCs	Persons
Travel Speed (Average)	mph	22.8	22.8 mph
Travel Distance (Total)	veh-mi/h	1357.8	1629.4 pers-mi/h
Travel Time (Total)	veh-h/h	59.7	71.6 pers-h/h
Desired Speed	mph	25.0	
Speed Efficiency		0.91	
Travel Time Index		9.00	
Congestion Coefficient		1.10	
Demand Flows (Total)	veh/h	2138	2566 pers/h
Arrival Flows (Total)	veh/h	2138	
Percent Heavy Vehicles (Demand)	%	3.0	
Percent Heavy Vehicles (Arrivals)	%	3.0	
Degree of Saturation		0.438	
Practical Spare Capacity	%	93.9	
Effective Intersection Capacity	veh/h	4877	
Control Delay (Total)	veh-h/h	5.18	6.21 pers-h/h
Control Delay (Average)	sec	8.7	8.7 sec
Control Delay (Worst Lane by MC)	sec	20.2	
Control Delay (Worst Movement by MC)	sec	48.0	48.0 sec
Geometric Delay (Average)	sec	0.0	
Stop-Line Delay (Average)	sec	8.7	
Idling Time (Average)	sec	4.0	
Intersection Level of Service (LOS)		LOS A	
95% Back of Queue - Veh (Worst Lane)	veh	2.1	
95% Back of Queue - Dist (Worst Lane)	ft	54.2	
Ave. Que Storage Ratio (Worst Lane)		0.01	
Effective Stops (Total)	veh/h	597	716 pers/h
Effective Stop Rate		0.28	0.28
Proportion Queued		0.35	0.35
Performance Index		74.4	74.4
Cost (Total)	\$/h	1276.52	1276.52 \$/h
Fuel Consumption (Total)	gal/h	47.6	
Carbon Dioxide (Total)	kg/h	427.4	
Hydrocarbons (Total)	kg/h	0.030	
Carbon Monoxide (Total)	kg/h	0.23	
NOx (Total)	kg/h	0.511	

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Intersection LOS value for Vehicles is based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand effects.

In Network analysis, Arrival Flows will be reduced if Upstream Capacity Constraint exists.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

Site Model Variability Index (Average value of largest changes in Lane Degrees of Saturation from the third to the last Main (Timing-Capacity) Iterations): 0.0 %

Number of Iterations: 3 (Maximum: 10)

Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 100.0% 1.8% 0.0%

Intersection Performance - Annual Values			
Performance Measure	Vehicles:	All MCs	Persons
Demand Flows (Total)	veh/y	1,026,261	1,231,513 pers/y
Delay (Total)	veh-h/y	2,486	2,983 pers-h/y

Effective Stops (Total)	veh/y	286,472	343,766 pers/y
Travel Distance (Total)	veh-mi/y	651,762	782,114 pers-mi/y
Travel Time (Total)	veh-h/y	28,639	34,367 pers-h/y
Cost (Total)	\$/y	612,728	612,728 \$/y
Fuel Consumption (Total)	gal/y	22,862	
Carbon Dioxide (Total)	kg/y	205,155	
Hydrocarbons (Total)	kg/y	15	
Carbon Monoxide (Total)	kg/y	109	
NOx (Total)	kg/y	246	

1 Hours per Year: 480 (Site)

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\CCR_Ortega_Roundabout_FY_73125_LU_V3.sip9

MOVEMENT SUMMARY

 **Site: 101 [Intersection 5 Amendment Proposal PM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Queue	Back Of Dist	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	ft				mph
South: Dwy															
3	L2	All MCs	1	3.0	1	3.0	0.008	8.9	LOS A	0.0	0.6	0.68	0.61	0.68	22.1
8	T1	All MCs	1	3.0	1	3.0	0.008	8.9	LOS A	0.0	0.6	0.68	0.61	0.68	22.2
18	R2	All MCs	1	3.0	1	3.0	0.008	18.1	LOS A	0.0	0.6	0.68	0.61	0.68	22.2
Approach			3	3.0	3	3.0	0.008	12.0	LOS A	0.0	0.6	0.68	0.61	0.68	22.2
East: Ortega Highway															
1	L2	All MCs	1	3.0	1	3.0	0.268	4.5	LOS A	1.4	34.6	0.10	0.02	0.10	23.5
6	T1	All MCs	210	3.0	210	3.0	0.268	4.5	LOS A	1.4	34.6	0.10	0.02	0.10	23.6
16	R2	All MCs	586	3.0	586	3.0	0.268	1.3	LOS A	1.4	34.6	0.02	0.01	0.02	24.4
Approach			797	3.0	797	3.0	0.268	2.1	LOS A	1.4	34.6	0.04	0.01	0.04	24.2
North: Cow Camp Road															
7	L2	All MCs	805	3.0	805	3.0	0.388	11.2	LOS A	2.1	52.6	0.44	0.26	0.44	22.0
4	T1	All MCs	1	3.0	1	3.0	0.367	6.8	LOS A	1.9	48.4	0.44	0.26	0.44	22.2
14	R2	All MCs	36	3.0	36	3.0	0.367	6.8	LOS A	1.9	48.4	0.44	0.26	0.44	22.1
Approach			842	3.0	842	3.0	0.388	11.0	LOS A	2.1	52.6	0.44	0.26	0.44	22.0
West: Ortega Highway															
5	L2	All MCs	14	3.0	14	3.0	0.438	11.9	LOS A	2.1	54.2	0.69	0.77	0.95	21.8
2	T1	All MCs	480	3.0	480	3.0	0.438	15.5	LOS A	2.1	54.2	0.69	0.74	0.89	22.0
12	R2	All MCs	1	3.0	1	3.0	0.356	11.2	LOS A	1.5	38.6	0.68	0.71	0.82	22.1
Approach			496	3.0	496	3.0	0.438	15.4	LOS A	2.1	54.2	0.69	0.74	0.90	22.0
All Vehicles			2138	3.0	2138	3.0	0.438	8.7	LOS A	2.1	54.2	0.35	0.28	0.40	22.8

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on degree of saturation per movement.

Intersection and Approach LOS values are based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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\CCR_Ortega_Roundabout_FY_73125_LU_V3.sip9

INTERSECTION SUMMARY

 **Site: 101 [Intersection 5 Current Entitlement AM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Intersection Performance - Hourly Values			
Performance Measure	Vehicles:	All MCs	Persons
Travel Speed (Average)	mph	23.2	23.2 mph
Travel Distance (Total)	veh-mi/h	1127.9	1353.4 pers-mi/h
Travel Time (Total)	veh-h/h	48.7	58.4 pers-h/h
Desired Speed	mph	25.0	
Speed Efficiency		0.93	
Travel Time Index		9.19	
Congestion Coefficient		1.08	
Demand Flows (Total)	veh/h	1782	2138 pers/h
Arrival Flows (Total)	veh/h	1782	
Percent Heavy Vehicles (Demand)	%	3.0	
Percent Heavy Vehicles (Arrivals)	%	3.0	
Degree of Saturation		0.345	
Practical Spare Capacity	%	146.2	
Effective Intersection Capacity	veh/h	5159	
Control Delay (Total)	veh-h/h	2.66	3.19 pers-h/h
Control Delay (Average)	sec	5.4	5.4 sec
Control Delay (Worst Lane by MC)	sec	10.5	
Control Delay (Worst Movement by MC)	sec	21.2	21.2 sec
Geometric Delay (Average)	sec	0.0	
Stop-Line Delay (Average)	sec	5.4	
Idling Time (Average)	sec	3.1	
Intersection Level of Service (LOS)		LOS A	
95% Back of Queue - Veh (Worst Lane)	veh	1.7	
95% Back of Queue - Dist (Worst Lane)	ft	42.9	
Ave. Que Storage Ratio (Worst Lane)		0.01	
Effective Stops (Total)	veh/h	351	421 pers/h
Effective Stop Rate		0.20	0.20
Proportion Queued		0.29	0.29
Performance Index		57.4	57.4
Cost (Total)	\$/h	1042.30	1042.30 \$/h
Fuel Consumption (Total)	gal/h	39.0	
Carbon Dioxide (Total)	kg/h	349.6	
Hydrocarbons (Total)	kg/h	0.025	
Carbon Monoxide (Total)	kg/h	0.18	
NOx (Total)	kg/h	0.415	

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Intersection LOS value for Vehicles is based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand effects.

In Network analysis, Arrival Flows will be reduced if Upstream Capacity Constraint exists.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

Site Model Variability Index (Average value of largest changes in Lane Degrees of Saturation from the third to the last Main (Timing-Capacity) Iterations): 0.0 %

Number of Iterations: 3 (Maximum: 10)

Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 100.0% 1.8% 0.0%

Intersection Performance - Annual Values			
Performance Measure	Vehicles:	All MCs	Persons
Demand Flows (Total)	veh/y	855,130	1,026,157 pers/y
Delay (Total)	veh-h/y	1,277	1,533 pers-h/y

Effective Stops (Total)	veh/y	168,301	201,961 pers/y
Travel Distance (Total)	veh-mi/y	541,375	649,650 pers-mi/y
Travel Time (Total)	veh-h/y	23,368	28,041 pers-h/y
Cost (Total)	\$/y	500,304	500,304 \$/y
Fuel Consumption (Total)	gal/y	18,701	
Carbon Dioxide (Total)	kg/y	167,831	
Hydrocarbons (Total)	kg/y	12	
Carbon Monoxide (Total)	kg/y	88	
NOx (Total)	kg/y	199	

1 Hours per Year: 480 (Site)

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\CCR_Ortega_Roundabout_FY_73125_LU_V3.sip9

MOVEMENT SUMMARY

 **Site: 101 [Intersection 5 Current Entitlement AM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue	Dist	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	ft				mph
South: Dwy															
3	L2	All MCs	1	3.0	1	3.0	0.005	5.3	LOS A	0.0	0.4	0.53	0.38	0.53	22.9
8	T1	All MCs	1	3.0	1	3.0	0.005	5.3	LOS A	0.0	0.4	0.53	0.38	0.53	23.1
18	R2	All MCs	1	3.0	1	3.0	0.005	9.9	LOS A	0.0	0.4	0.53	0.38	0.53	23.0
Approach			3	3.0	3	3.0	0.005	6.9	LOS A	0.0	0.4	0.53	0.38	0.53	23.0
East: Ortega Highway															
1	L2	All MCs	1	3.0	1	3.0	0.316	5.4	LOS A	1.7	42.9	0.19	0.06	0.19	23.3
6	T1	All MCs	342	3.0	342	3.0	0.316	5.4	LOS A	1.7	42.9	0.19	0.06	0.19	23.5
16	R2	All MCs	585	3.0	585	3.0	0.316	0.8	LOS A	1.7	42.9	0.02	0.01	0.02	24.5
Approach			928	3.0	928	3.0	0.316	2.5	LOS A	1.7	42.9	0.08	0.03	0.08	24.1
North: Cow Camp Road															
7	L2	All MCs	571	3.0	571	3.0	0.345	9.0	LOS A	1.6	41.7	0.52	0.37	0.52	22.0
4	T1	All MCs	1	3.0	1	3.0	0.326	7.0	LOS A	1.5	38.7	0.51	0.36	0.51	22.3
14	R2	All MCs	87	3.0	87	3.0	0.326	7.0	LOS A	1.5	38.7	0.51	0.36	0.51	22.2
Approach			659	3.0	659	3.0	0.345	8.8	LOS A	1.6	41.7	0.52	0.36	0.52	22.0
West: Ortega Highway															
5	L2	All MCs	45	3.0	45	3.0	0.135	5.8	LOS A	0.5	12.1	0.51	0.43	0.51	22.8
2	T1	All MCs	146	3.0	146	3.0	0.135	8.4	LOS A	0.5	12.1	0.52	0.44	0.52	23.2
12	R2	All MCs	1	3.0	1	3.0	0.110	6.0	LOS A	0.4	9.9	0.53	0.45	0.53	23.3
Approach			191	3.0	191	3.0	0.135	7.8	LOS A	0.5	12.1	0.52	0.44	0.52	23.1
All Vehicles			1782	3.0	1782	3.0	0.345	5.4	LOS A	1.7	42.9	0.29	0.20	0.29	23.2

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on degree of saturation per movement.

Intersection and Approach LOS values are based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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\CCR_Ortega_Roundabout_FY_73125_LU_V3.sip9

INTERSECTION SUMMARY

 **Site: 101 [Intersection 5 Current Entitlement PM ICU (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Intersection Performance - Hourly Values			
Performance Measure	Vehicles:	All MCs	Persons
Travel Speed (Average)	mph	22.8	22.8 mph
Travel Distance (Total)	veh-mi/h	1321.7	1586.0 pers-mi/h
Travel Time (Total)	veh-h/h	57.9	69.5 pers-h/h
Desired Speed	mph	25.0	
Speed Efficiency		0.91	
Travel Time Index		9.04	
Congestion Coefficient		1.10	
Demand Flows (Total)	veh/h	2082	2498 pers/h
Arrival Flows (Total)	veh/h	2082	
Percent Heavy Vehicles (Demand)	%	3.0	
Percent Heavy Vehicles (Arrivals)	%	3.0	
Degree of Saturation		0.374	
Practical Spare Capacity	%	127.6	
Effective Intersection Capacity	veh/h	5573	
Control Delay (Total)	veh-h/h	4.37	5.25 pers-h/h
Control Delay (Average)	sec	7.6	7.6 sec
Control Delay (Worst Lane by MC)	sec	16.9	
Control Delay (Worst Movement by MC)	sec	40.3	40.3 sec
Geometric Delay (Average)	sec	0.0	
Stop-Line Delay (Average)	sec	7.6	
Idling Time (Average)	sec	3.7	
Intersection Level of Service (LOS)		LOS A	
95% Back of Queue - Veh (Worst Lane)	veh	1.9	
95% Back of Queue - Dist (Worst Lane)	ft	49.8	
Ave. Que Storage Ratio (Worst Lane)		0.01	
Effective Stops (Total)	veh/h	539	647 pers/h
Effective Stop Rate		0.26	0.26
Proportion Queued		0.36	0.36
Performance Index		70.6	70.6
Cost (Total)	\$/h	1241.02	1241.02 \$/h
Fuel Consumption (Total)	gal/h	46.5	
Carbon Dioxide (Total)	kg/h	417.5	
Hydrocarbons (Total)	kg/h	0.030	
Carbon Monoxide (Total)	kg/h	0.22	
NOx (Total)	kg/h	0.500	

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Intersection LOS value for Vehicles is based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand effects.

In Network analysis, Arrival Flows will be reduced if Upstream Capacity Constraint exists.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

Site Model Variability Index (Average value of largest changes in Lane Degrees of Saturation from the third to the last Main (Timing-Capacity) Iterations): 0.0 %

Number of Iterations: 3 (Maximum: 10)

Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 100.0% 1.9% 0.0%

Intersection Performance - Annual Values			
Performance Measure	Vehicles:	All MCs	Persons
Demand Flows (Total)	veh/y	999,130	1,198,957 pers/y
Delay (Total)	veh-h/y	2,098	2,518 pers-h/y

Effective Stops (Total)	veh/y	258,799	310,559 pers/y
Travel Distance (Total)	veh-mi/y	634,416	761,299 pers-mi/y
Travel Time (Total)	veh-h/y	27,790	33,348 pers-h/y
Cost (Total)	\$/y	595,690	595,690 \$/y
Fuel Consumption (Total)	gal/y	22,334	
Carbon Dioxide (Total)	kg/y	200,413	
Hydrocarbons (Total)	kg/y	14	
Carbon Monoxide (Total)	kg/y	106	
NOx (Total)	kg/y	240	

1 Hours per Year: 480 (Site)

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MOVEMENT SUMMARY

 **Site: 101 [Intersection 5 Current Entitlement PM ICU (Site Folder: General)]**

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Ortega Highway (SR-74)/Cow Camp Road

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue	Dist	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	ft				mph
South: Dwy															
3	L2	All MCs	1	3.0	1	3.0	0.007	8.1	LOS A	0.0	0.5	0.65	0.56	0.65	22.3
8	T1	All MCs	1	3.0	1	3.0	0.007	8.1	LOS A	0.0	0.5	0.65	0.56	0.65	22.4
18	R2	All MCs	1	3.0	1	3.0	0.007	15.3	LOS A	0.0	0.5	0.65	0.56	0.65	22.4
Approach			3	3.0	3	3.0	0.007	10.5	LOS A	0.0	0.5	0.65	0.56	0.65	22.4
East: Ortega Highway															
1	L2	All MCs	1	3.0	1	3.0	0.286	5.4	LOS A	1.4	36.3	0.28	0.13	0.28	23.3
6	T1	All MCs	204	3.0	204	3.0	0.286	5.4	LOS A	1.4	36.3	0.28	0.13	0.28	23.4
16	R2	All MCs	615	3.0	615	3.0	0.286	1.4	LOS A	1.4	36.3	0.07	0.03	0.07	24.4
Approach			821	3.0	821	3.0	0.286	2.4	LOS A	1.4	36.3	0.12	0.05	0.12	24.1
North: Cow Camp Road															
7	L2	All MCs	754	3.0	754	3.0	0.373	10.0	LOS A	1.9	49.8	0.43	0.25	0.43	22.0
4	T1	All MCs	1	3.0	1	3.0	0.353	6.6	LOS A	1.8	45.9	0.43	0.25	0.43	22.3
14	R2	All MCs	59	3.0	59	3.0	0.353	6.6	LOS A	1.8	45.9	0.43	0.25	0.43	22.2
Approach			814	3.0	814	3.0	0.373	9.7	LOS A	1.9	49.8	0.43	0.25	0.43	22.1
West: Ortega Highway															
5	L2	All MCs	102	3.0	102	3.0	0.374	10.2	LOS A	1.6	42.0	0.66	0.67	0.81	21.8
2	T1	All MCs	340	3.0	340	3.0	0.374	13.9	LOS A	1.6	42.0	0.65	0.64	0.74	22.2
12	R2	All MCs	1	3.0	1	3.0	0.303	9.8	LOS A	1.2	30.2	0.65	0.62	0.69	22.4
Approach			443	3.0	443	3.0	0.374	13.1	LOS A	1.6	42.0	0.65	0.65	0.76	22.2
All Vehicles			2082	3.0	2082	3.0	0.374	7.6	LOS A	1.9	49.8	0.36	0.26	0.38	22.8

Site Level of Service (LOS) Method: Degree of Saturation (ICU). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on degree of saturation per movement.

Intersection and Approach LOS values are based on worst degree of saturation for any vehicle movement.

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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