

# **DEXTER WILSON ENGINEERING, INC.**

WATER • WASTEWATER • RECYCLED WATER

CONSULTING ENGINEERS

## **OTAY RANCH TOWN CENTER REDEVELOPMENT WATER CONSERVATION PLAN**

June 22, 2023

**OTAY RANCH TOWN CENTER  
REDEVELOPMENT  
WATER CONSERVATION PLAN**

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Prepared By:

Dexter Wilson Engineering, Inc.  
2234 Faraday Avenue  
Carlsbad, CA 92008  
(760) 438-4422

Job Number 509-127

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## ABBREVIATIONS

ac -	acre
ac-ft -	acre-foot
cfcd -	community facilities district
cfs -	cubic feet per second
gpc -	gallons per cycle
gpd -	gallons per day
gpf -	gallons per flush
gpm -	gallons per minute
HOA -	homeowner's association
mgd -	million gallons per day

## USEFUL CONVERSIONS

1 acre-foot	=	325,829 gallons
1 mgd	=	1,000,000 gallons/day
1 cfs	=	448.8 gpm
1 cubic foot	=	7.48 gallons
1 mgd	=	694.4 gpm

## **EXECUTIVE SUMMARY**

The City of Chula Vista's Growth Management Ordinance (CVMC 19.09.050C) requires that all development projects with 50 dwelling units or greater prepare a Water Conservation Plan (WCP) at the time of the Sectional Planning Area (SPA) plan preparation. A WCP was prepared for the Freeway Commercial (FC) project when the project was originally approved in 2002 and updated in 2019 when the SPA was amended for the northern portion of the SPA. This plan presents a review of presently available technologies and practices which result in water conservation in primarily residential development. This report presents an updated WCP with measures that will be incorporated into the planning and design of the Otay Ranch Town Center SPA, including the requirements outlined in the Chula Vista Landscape Water Conservation Ordinance (CVMC 20.12).

The FC SPA consists of the FC 1 site (Otay Ranch Town Center) which has been developed as commercial per the originally approved SPA plan, the FC 2 site that was approved in 2019 and under-construction, and an update to FC 1 site to add approximately 840 residential units. This updated water conservation plan is limited to the FC 1 site. Town Center Drive, which bisects the FC 2 site, was constructed concurrent with the FC 1 site development.

The FC 1 site consists of 87.25 acres of property that is entitled for commercial uses. The SPA Amendment would rezone 16.57 acres from FC to Mixed-Use/Residential (MU/R) to allow up to 840 dwelling units. The rezone would reduce the allowed commercial space from 960,000 to 816,000 square-feet – a reduction of 144,000 square-feet.

The Otay Water District is the local water agency that supplies potable water and recycled water to the Otay Ranch Town Center. The current total estimated average potable and recycled water use for the project is 0.26 mgd and 0.02 mgd, respectively.

June 22, 2023

Otay Ranch Town Center Water Conservation Plan

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The federal, state, and local governments have mandated a number of water conservation measures. The project will install hot water pipe insulation, pressure reducing valves, and water efficient dishwashers in all multi-family residential units. Additionally, the builder will install dual flush toilets and other water conserving irrigation equipment and techniques in compliance with the Landscape Water Conservation Ordinance. At buildout of the project, implementation of the above measures along with the use of recycled water would reduce estimated potable water usage on the project by an approximate 42,105 gpd.

## INTRODUCTION

In recent years, the subject of water conservation has been given increased attention. The growing awareness of the need and value of water conservation has been sparked by local and regional water purveyors concerned about meeting the future water demands of their customers, particularly during drought conditions. Water conservation provides an alternative approach to the problem of finding new water sources to meet the water demand for a proposed community. The intent of water conservation is to manage water demand so that the customers receive adequate service but use less water.

Much has been done to educate consumers about limitations of water supply, the serious implications of a long-term drought and the need for water conservation, but there is a practical limit to the percentage reduction of water use in established communities. This limit is a result of the types of plumbing fixtures installed in existing homes as well as the difficulty in altering consumers' established patterns of water use. Any water conservation effort, voluntary or mandatory, requires the cooperation of the public. Public information should be utilized to inform and convince the consumer that a change in personal water use habits is in everyone's best interest.

The private development sector has become more attuned to the concerns of water availability and has recognized the value of addressing water conservation issues throughout planned development projects. By incorporating low water use plumbing fixtures, promoting drought tolerant landscaping, and providing educational materials to homeowners within the development project, private developments can do much to cultivate an interest in water conservation and establish new patterns of water use. These efforts can have significant impacts with regard to reducing the need for securing and importing larger quantities of water for use in San Diego County.

In 2006, the State repealed the Water Conservation in Landscaping Act and adopted a new Water Conservation in Landscaping Act, Government Code Sections 65591 et seq. The new Act requires the Department of Water Resources to update the previously adopted model water efficient landscape ordinance that provides for greater efforts at water conservation and more efficient use of water in landscaping. The modeled ordinance was required to include provisions for: 1) water conservation by the appropriate use and groupings of plants



that are well adapted to particular sites and local conditions, 2) a landscape water budget that establishes the maximum amount of water to be applied through the irrigation system, 3) automatic irrigation systems and irrigation schedules based on climatic conditions, terrains and soil types and other environmental conditions, 4) onsite soil assessment and soil management plans that include grading and drainage to promote healthy plant growth and prevent excessive erosion and runoff, and 5) promoting the use of recycled water for landscaping when it is available and the use is consistent with State law.

Government Code Section 65595 requires that on or before January 1, 2010 a local agency shall adopt a water efficient landscape ordinance that is at least as effective in conserving water as the updated model ordinance or adopt the model ordinance. The City of Chula Vista Landscape Water Conservation Ordinance went into effect on January 1, 2010 and requires homeowners to be efficient with the landscape systems and plant selection.

The City of Chula Vista ordinance complies with the findings and declarations of the State's Water Conservation in Landscaping Act and is as effective as the State's updated model water efficient landscape ordinance. This water conservation plan incorporates the requirement of the City's ordinance.

The Otay Ranch Freeway Commercial project is within the Otay Ranch General Development Plan (Otay Ranch GDP). The Otay Ranch GDP was adopted in 1993 and included objectives for water conservation to be incorporated into the development of Otay Ranch. These objectives included the implementation of water efficient fixtures, increased use of drought tolerant landscaping, and use of recycled water for irrigation. The objective of these measures is to reduce the per capita water use within Otay Ranch by 25-percent as compared to county wide 1989, per capita levels. This report will demonstrate how the City, in partnership with the Otay Water District and development community are meeting these objectives.

## PURPOSE

The State Legislature determined in the Water Conservation in Landscaping Act that the State's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design and maintenance must be water efficient. The City of Chula Vista's Growth Management Implementation Manual requires Water Conservation Plans for 1) all major development projects of 50 dwelling units or greater; 2) commercial and industrial projects with 50 EDUs or greater; and 3) all SPA Plans and Tentative Maps. The City has adopted guidelines for the preparation and implementation of required Water Conservation Plans.

This report will present water conservation measures which will be incorporated into the planning and design of the project, including an estimate of the anticipated water savings. Approximately half of the water used by residences in California is used outdoors. For this reason, the City's Landscape Water Conservation Ordinance will be an important component of reduced water usage.

Although not covered in detail, there are several secondary benefits to conserving water that should be kept in mind when reviewing material in this report. These benefits include reduced sewage flows, reduced natural gas use, and reduced electricity use. Using less water in the shower, for example, reduces the amount of water input into the sewer system which requires treatment and disposal and reduces the amount of energy required to heat the water.

## PROJECT DESCRIPTION

The Freeway Commercial SPA includes the Otay Ranch Town Center (FC 1) site which is located on the east side of State Route 125, and bounded by Olympic Parkway to the north, Birch Road to the south, and Eastlake Parkway to the east. The proposed redevelopment includes 16.57 acres of the Otay Ranch Town Center site to allow up to 840 residential dwelling units and a reduction in the entitled commercial from 960,000 to 816,000 square-feet – a reduction of 144,000 square-feet. Appendix A provides the proposed land use plan for Otay Ranch Town Center Redevelopment and Table 1 provides a land use summary of the entire Otay Ranch Town Center site.

<b>TABLE 1 OTAY RANCH TOWN CENTER REDEVELOPMENT LAND USE SUMMARY</b>		
<b>Land Use</b>	<b>Area, Ac</b>	<b>Units</b>
Existing Commercial <sup>1</sup>	70.66	---
Mixed-Use (Multi-Family Residential and Proposed Commercial)	10.91	840
Park/Plaza	2.73	---
Private Streets	2.93	---
<b>TOTAL SITE AREA</b>	<b>87.25</b>	<b>840</b>

1. Acreage of existing Otay Ranch Town Center site (87.25 acres) reduced by 16.57 acres (redevelopment area).

## WATER SERVICE AND SUPPLY

The Otay Water District is the local water agency that supplies potable water and recycled water to the Otay Ranch Town Center. The Otay Water District relies solely on the San Diego County Water Authority (SDCWA) for its potable water supply. The SDCWA is the largest of 27-member agencies of the Metropolitan Water District of Southern California (MWD), which is the primary importer of domestic water in Southern California.

## PROJECTED WATER USE

### Potable Water Demand

Potable water use is estimated by taking the acreage for each land use category and multiplying by the corresponding water use factor. Table 2 provides the projected potable water demand for the Otay Ranch Town Center Redevelopment. The total estimated potable water use is 0.26 mgd. Potable water use factors were taken from the 2015 Otay Water District Water Facilities Master Plan.

<b>TABLE 2 OTAY RANCH TOWN CENTER REDEVELOPMENT PROJECTED POTABLE WATER DEMAND</b>			
<b>Land Use</b>	<b>Quantity</b>	<b>Water Demand Factor</b>	<b>Average Potable Water Demand, gpd</b>
<b>Existing Development to Remain</b>			
Existing Commercial <sup>1</sup>	70.68 acres	1,607 gpd/acre	113,583
<b>Proposed Development<sup>2</sup></b>			
Residential (>10 DU/ac)	840 DU	170 gpd/DU	142,800
Proposed Commercial	0.85 acres	1,607 gpd/acre	1,366
<b>TOTAL</b>			<b>257,749</b>

1. Acreage of existing Otay Ranch Town Center site (87.25 acres) reduced by 16.57 acres (redevelopment area).
2. Acreage excludes private street area (2.93 acres) and park/plaza area (2.73 acres) as no potable water demands are expected.

**Recycled Water Demand**

In accordance with Section 26 of the Otay Water District Code of Ordinances, the Otay Ranch Town Center Redevelopment will utilize recycled water for the irrigation of open space slopes, and the common area of multi-family residential sites. Appendix B includes an exhibit that shows the location of anticipated recycled water use areas in green. Table 3 provides the estimated recycled water demand for the project. The total estimated recycled water demand is 0.02 mgd.

<b>TABLE 3                      OTAY RANCH TOWN CENTER REDEVELOPMENT                      PROJECTED RECYCLED WATER DEMAND</b>					
<b>Land Use</b>	<b>Quantity</b>	<b>% Irrigated</b>	<b>Irrigated Acreage</b>	<b>Recycled Water Demand Factor</b>	<b>Average Recycled Water Demand, gpd</b>
<b>Existing Development to Remain</b>					
Existing Commercial <sup>1</sup>	70.68 acres	10	7.07	1,900 gpd/ac	13,433
<b>Proposed Development<sup>2</sup></b>					
Mixed-Use (Residential and Commercial)	10.91 acres	15	1.64	1,900 gpd/ac	3,116
Park/Plaza	2.73 acres	100	2.73	1,900 gpd/ac	5,187
<b>TOTAL</b>					<b>21,736</b>

1. Acreage of existing Otay Ranch Town Center site (87.25 acres) reduced by 16.57 acres (redevelopment area).
2. Acreage excludes private street area (2.93 acres) as no recycled water demand is expected.

### STATE AND FEDERAL WATER CONSERVATION REQUIREMENTS

The State and Federal Governments have mandated a number of water conservation measures. Table 4 summarizes the conservation measures that are currently mandated by the State of California and nationally. The State of California requirements are based on the 2022 Green Building Standards Code and the federal requirements are based on the 2021 National Standard Plumbing Code.

<b>TABLE 4 MANDATED WATER CONSERVATION DEVICES</b>		
<b>Device</b>	<b>2022 Green Building Standards Code</b>	<b>2021 National Standard Plumbing Code</b>
Water Closets	1.28 gpf	1.25 gpf
Wall-Mounted Urinals	0.125 gpf	0.5 gpf
Floor-Mounted Urinals	0.5 gpf	
Showerhead	1.8 gpm	2.0 gpm
Lavatory Faucets	0.5 gpm	0.5 gpm
Kitchen Faucets <sup>1</sup>	1.8 gpm	1.8 gpm
Wash Fountains	1.8 gpm/20 [rim space (in.)]	2.2 gpm/20 [rim space (in.)]
Metering Faucets	0.2 gpc	0.25 gpc
Pre-Rinse Spray Valve – Product Class 1	1.00 gpm	1.3 gpm
Pre-Rinse Spray Valve – Product Class 2	1.20 gpm	
Pre-Rinse Spray Valve – Product Class 3	1.28 gpm	
Food Waste Disposers <sup>2</sup>	8 gpm	N/A

<sup>1</sup> Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute, and must default to a maximum flow rate of 1.8 gpm.

<sup>2</sup> Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use or shall automatically shut off after no more than 10 minutes of inactivity.

## **LOCAL WATER CONSERVATION REQUIREMENTS**

There are a number of water conserving measures required by the Otay Water District and City of Chula Vista Landscape Manual. These include the use of recycled water for the irrigation of open space slopes and common landscaped areas where feasible. The Landscape Manual also requires some drought tolerant plant selection in the landscaping plan and the use of evapotranspiration controllers for parks and common landscaped areas. Additionally, the City of Chula Vista Landscape Water Conservation Ordinance that was updated on January 1, 2015 is expected to reduce outdoor water consumption due to the setting of strict water budgets on City approved landscape plans that must not be exceeded.

The City of Chula Vista Water Conservation Plan Guidelines requires the following three indoor water conservation measures for non-residential units. These measures are mandatory.

### **Residential Measures - Mandatory**

1. Hot Water Pipe Insulation. This measure involves the insulation of hot water pipes with 1-inch walled pipe insulation and separation of hot and cold water piping. This measure is estimated to cost an additional \$50 during initial construction and result in annual savings of 2,400 gallons per residential unit.
2. Pressure Reducing Valves. Setting the maximum service pressure to 60 psi reduces any leakage present and prevents excessive flow of water from all appliances and fixtures. This measure is estimated to cost \$100 during initial construction and result in annual water savings of 1,800 gallons per residential unit.
3. Water Efficient Dishwashers. There are a number of water efficient dishwashers available that carry the Energy Star label. These units cost an additional \$500 on average and result in an estimated yearly water savings of 650 gallons per residential unit.

In addition, to comply with the City's current water conservation requirements, the developer must select at least one outdoor measure and one additional indoor or outdoor water conservation measure for residential development and non-residential development. Water conservation measures not included on the City's Residential Water Conservation Measures list may be proposed by the developer. Since this project does not propose any single-family residences, all outdoor irrigation water use is proposed to be met with recycled water. Thus, there are no outdoor water measures that would result in a direct reduction in potable water use.

The developer will implement, from the City's list of approved measures, the following indoor non-mandatory measure in multi-family residential units and non-residential units.

1. Dual Flush Toilets. The developer will install dual flush toilets within the project. This measure is estimated to cost \$200 per household and result in annual water savings of 4,000-gallons per year per residential unit.

### **WATER CONSERVATION ESTIMATED SAVINGS**

The estimated water savings for water conservation measures are based on the estimates provided in the previous section of this report. The potential water savings varies widely based on land use types. Multi-family residential units, for example, have much less opportunity to implement additional water saving measures than low density single family residential units. This is primarily because the common landscaped areas of multi-family units are required to be irrigated with recycled water and, thus, there are no outdoor water conservation measures that can directly offset potable water usage in these areas.

Table 5 summarizes the total estimated water savings for the Otay Ranch Town Center SPA Amendment based on the proposed required measures and non-mandatory measure described above.



**TABLE 5  
 OTAY RANCH TOWN CENTER REDEVELOPMENT  
 WATER CONSERVATION ESTIMATED SAVINGS**

<b>Measure</b>	<b>Location</b>	<b>Yearly Water Savings, gal/unit</b>	<b>Daily Water Savings, gpd/unit</b>	<b>Percentage of Total Usage<sup>1</sup></b>	<b>Project Total Water Savings<sup>2</sup>, gpd</b>
Hot Water Pipe Insulation	Indoor	2,400	6.58	3.9	5,527
Pressure Reducing Valves	Indoor	1,800	4.93	2.9	4,141
Water-Efficient Dishwashers	Indoor	650	1.78	1.0	1,495
Dual Flush Toilets	Indoor	4,000	10.96	6.4	9,206
<b>TOTAL</b>		<b>8,850</b>	<b>24.25</b>	<b>14.3</b>	<b>20,369</b>

1. Based on 170 gpd/unit average usage.
2. Based on 840 Multi-Family Residential Units.

**Water Conservation Summary**

As detailed in this report, the Otay Ranch Town Center project is committed to being water efficient through the use of recycled water for irrigation and utilizing other water conservation devices and measures. Table 6 summarizes the baseline potable water use if recycled water and water conservation measures were not utilized and provides the anticipated water savings outlined in this report. As shown, the use of recycled water and other water conservation measures is expected to reduce potable water usage by 42,105 gpd, or 15.1 percent.

<b>TABLE 6                  OTAY RANCH TOWN CENTER REDEVELOPMENT                  WATER CONSERVATION SUMMARY</b>	
<b>Description</b>	<b>Average Use, gpd</b>
<b>Total Water Use</b>	
Potable Water Use (Table 2)	<b>257,749</b>
Recycled Water Use (Table 3)	<b>21,736</b>
<b>Total Baseline Water Use</b>	<b>279,485</b>
<b>Water Conservation Savings</b>	
Recycled Water (Table 3)	<b>21,736</b>
Multi Family Measures (Table 5)	<b>20,369</b>
<b>Total Conservation Savings</b>	<b>42,105</b>
Net Potable Water Usage <sup>1</sup>	<b>237,380</b>
Reduction from Baseline Usage	<b>15.1%</b>

1. Potable water use (Table 2) minus water conservation savings (Table 5).

### IMPLEMENTATION AND MONITORING

For the water conservation measures proposed to be incorporated into the project, Table 7 summarizes the responsibility party for the water conservation implementations, as well as who will monitor the implementation of the measures.

<b>TABLE 7 OTAY RANCH TOWN CENTER REDEVELOPMENT IMPLEMENTATION AND MONITORING PROGRAM</b>		
<b>Water Conservation Measure</b>	<b>Responsibility for Implementation</b>	<b>Monitoring of the Implementation</b>
Hot Water Pipe Insulation	Merchant Builder	City Building Department
Pressure Reducing Valves	Merchant Builder	City Building Department/Otay Water District
Water Efficient Dishwashers	Merchant Builder	City Building Department
Dual Flush Toiles	Merchant Builder	City Building Department

## REFERENCES

1. 2010 California Code Government Code Article 10.8. Water Conservation in Landscaping. Government Code Section 65591-65599.
2. National Standard Plumbing Code, 2021.
3. Chapter 19.09 City of Chula Vista Growth Management Municipal Code, November 1, 2022.
4. City of Chula Vista Growth Management Implementation Manual, February 2015.
6. Chapter 20.12 Chula Vista Landscape Water Conservation Municipal Code, November 1, 2022.
7. Otay Water District Water Facilities Master Plan Update, 2015.
8. California Green Building Standards Code, 2022.

**APPENDIX A**

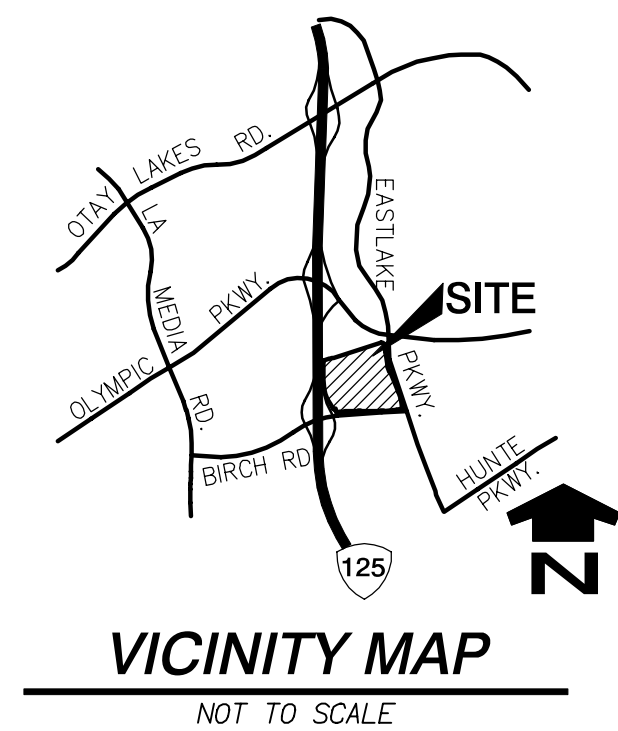
**OTAY RANCH TOWN CENTER  
PROPOSED TENTATIVE MAP**



# TENTATIVE MAP/CVT 22-0002 FOR: OTAY RANCH TOWN CENTER FC-1 CITY OF CHULA VISTA, CALIFORNIA

**LEGEND**

- SUBDIVISION BOUNDARY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- EXISTING ASSESSOR'S MAP OR PARCEL NO. LOT 1 MAP 105037
- PROPOSED RESIDENTIAL NEIGHBORHOOD **MUR**
- PROPOSED RESIDENTIAL LOT (NUMBERED) LOT 1
- PROPOSED PRIVATE STREET OR PARK LOT (LETTERED) LOT A
- EXISTING ZONING **FC-1**
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING SEWER MAIN WITH MANHOLE
- PROPOSED PUBLIC SEWER MAIN WITH MANHOLE (8" PVC UNLESS OTHERWISE NOTED)
- EXISTING WATER MAIN WITH FIRE HYDRANT
- PROPOSED PUBLIC WATER MAIN (8" PVC UNLESS OTHERWISE NOTED)
- EXISTING RECLAIMED WATER MAIN
- PROPOSED PUBLIC RECLAIMED WATER MAIN (8" PVC UNLESS OTHERWISE NOTED)
- EXISTING GAS MAIN
- EXISTING STORM DRAIN SYSTEM
- PROPOSED PRIVATE STORM DRAIN SYSTEM
  - A. INLET OR CATCH BASIN
  - B. HEADWALL
  - C. CLEANOUT
  - D. CATCH BASIN
  - E. MODULAR WETLANDS UNIT
- PROPOSED STREET CENTERLINE ELEVATION
- PROPOSED STREET GRADE
- STREET LIGHT
- CUT/FILL LINE
- PROPOSED SLOPE
- PROPOSED PRIVATE RETAINING WALL
- NUMBER OF PARKING STALLS IN A BLOCK
- ACCESS RIGHTS RELINQUISHED PER DOC. NO. 2009-080407 REC. 5/22/2009, O.R.
- ACCESS RIGHTS RELINQUISHED PER DOC. NO. 2009-018147 REC. 3/4/2005, O.R.
- ACCESS RIGHTS RELINQUISHED PER DOC. NO. 2009-0181409 REC. 3/4/2005, O.R.
- INDICATES FOUND MONUMENT AS NOTED.
  - INDICATES FOUND 3/4" IRON PIPE WITH DISC STAMPED "LS 7696" PER CERTIFICATE OF CORRECTION FOR MAP NO. 15037 RECORDED 8/10/2009 AS DOC NO. 2009-0446488.
  - INDICATES FOUND 2" IRON PIPE WITH DISC STAMPED "LS 7969" PER MAP NO. 15037 AND THE CERTIFICATE OF CORRECTION THEREOF.
  - INDICATES FOUND LEAD & DISC STAMPED "LS 7696" PER MAP NO. 15037 AND CERTIFICATES OF CORRECTION THEREOF.
  - INDICATES FOUND LEAD & DISC STAMPED "LS 6922" PER OR 43680, 43681 OR 43682, UNLESS OTHERWISE NOTED.
  - ▲ INDICATES FOUND 2" IRON PIPE WITH DISC STAMPED "LS 6187" IN STANDARD STREET WELL MONUMENT PER ROS 19985, UNLESS OTHERWISE NOTED.
  - ▲ INDICATES FOUND STANDARD STREET WELL MONUMENT MARKED "LS 7322" FOR MAP NO. 14780 OR CERTIFICATE OF CORRECTION THEREOF, UNLESS OTHERWISE NOTED.
  - ▲ INDICATES FOUND STANDARD STREET WELL MONUMENT MARKED "LS 7322" AS SHOWN ON ROS 19985, UNLESS OTHERWISE NOTED.
  - S.F.N.F. INDICATES SEARCHED FOR NOTHING FOUND.
- EXISTING IRRIGATION LINE TO REMAIN
- EXISTING IRRIGATION LINE TO BE RELOCATED
- EXISTING METER



**LEGAL DESCRIPTION:**

REAL PROPERTY IN THE CITY OF CHULA VISTA, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL A:  
LOTS 1 AND 4 OF CHULA VISTA TRACT NO. 05-02, OTAY RANCH FREEWAY COMMERCIAL SECTIONAL PLANNING AREA, IN THE CITY OF CHULA VISTA, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF, 15037, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 30, 2005, AND AS CORRECTED BY A CERTIFICATE OF CORRECTION RECORDED JANUARY 3, 2008 AS INSTRUMENT NO. 2008-0003099, AND FURTHER CORRECTED BY A CERTIFICATE OF CORRECTION RECORDED AUGUST 10, 2009 AS INSTRUMENT NO. 2009-0446488, BOTH OF OFFICIAL RECORDS.

EXCEPTING THEREFROM FROM LOT 1 THAT PORTION OF LAND CONVEYED TO SAN DIEGO ASSOCIATION OF GOVERNMENTS, A CALIFORNIA LEGISLATIVELY-CREATED REGIONAL PLANNING AGENCY, IN GRANT DEED RECORDED DECEMBER 29, 2016 AS INSTRUMENT NO. 2016-0714265 AND 2016-0714266, BOTH OF OFFICIAL RECORDS.

PARCEL B:  
EASEMENTS FOR COMMON AREA, UNDERGROUND SUPPORTS AND MINOR ENCROACHMENTS, ACCESS, SIGNAGE, UTILITIES, DRAINAGE AND INCIDENTAL PURPOSES AS SET FORTH IN INSTRUMENT ENTITLED "CONSTRUCTION, OPERATION AND RECIPROCAL EASEMENT AGREEMENT", EXECUTED BY GGP-OTAY RANCH, L.P., A DELAWARE LIMITED PARTNERSHIP AND MACY'S DEPARTMENT STORES, INC., AN OHIO CORPORATION, RECORDED NOVEMBER 21, 2008 AS INSTRUMENT NO. 2008-0604340 OF OFFICIAL RECORDS.

APN(S): 643-061-06-00 (AFFECTS: LOT 1) AND 643-061-04-00 (AFFECTS: LOT 4)

**PUBLIC UTILITIES**

- SEWER CITY OF CHULA VISTA
- WATER OTAY WATER DISTRICT
- STORM DRAIN CITY OF CHULA VISTA
- TELEPHONE AT&T
- GAS AND ELECTRIC SOGEC
- CABLE T.V. COX COMMUNICATIONS
- POLICE & FIRE CITY OF CHULA VISTA
- SCHOOLS CHULA VISTA ELEMENTARY SCHOOL DISTRICT
- SWEETWATER UNION HIGH SCHOOL DISTRICT

**LAND USE SUMMARY**

LOT	LAND USE	AREA AC	COMMERCIAL	DENSITY DU/AC	UNITS
MUR LOT 1	Urban Core	1.65	-	77.0	-
MUR LOT 2	Urban Core	1.23	-	77.0	-
MUR LOT 3	Urban Core	1.88	-	77.0	-
MUR LOT 4	Urban Core	1.86	*37,200 SF	77.0	-
MUR LOT 5	Urban Core	0.73	-	77.0	-
MUR LOT 6	Urban Core	0.73	-	77.0	-
MUR LOT 7	Urban Core	1.19	-	77.0	-
MUR LOT 8	Urban Core	1.17	-	77.0	-
MUR LOT 9	Urban Core	0.47	-	77.0	-
<b>SUBTOTAL MUR</b>		<b>10.91</b>			<b>840</b>
PS LOT A	Private St.	1.50	-	-	-
PS LOT B	Private St.	0.80	-	-	-
PS LOT C	Private St.	0.26	-	-	-
PS LOT D	Private St.	0.37	-	-	-
<b>SUBTOTAL PS</b>		<b>2.93</b>			
P LOT E	Park/Plaza	0.72	-	-	-
P LOT F	Park	0.87	-	-	-
P LOT G	Park	0.38	-	-	-
P LOT H	Park	0.76	-	-	-
<b>SUBTOTAL PARK</b>		<b>2.73</b>			
<b>SUBTOTAL REDEVELOPMENT</b>		<b>16.57</b>			
LOT 10	Commercial Retail	41.93	-	-	-
<b>TOTAL</b>		<b>58.49</b>		*37,200	<b>840</b>

Note: Acreages rounded to the nearest hundredth of an acre  
\*37,200 sf of existing commercial to be replaced with 37,200 sf of new commercial

**B. EXISTING LOTS**

LOT	LAND USE	AREA AC
** LOT 1	Commercial Retail	** 50.791
LOT 4	Commercial Retail	7.699
<b>TOTAL</b>		<b>58.490</b>

\*\* THE BOUNDARY AND ACREAGE OF LOT 1 OF FINAL MAP 15037 WAS CORRECTED PURSUANT TO CERTIFICATE OF CORRECTION REC. 1/03/2008 AS INST. NO. 2008-0003099 AND CERTIFICATE OF CORRECTION REC. 8/10/2009 AS INST. NO. 2009-0446488. THE ACREAGE REFLECTED HEREON IS ACCORDANCE WITH THESE CORRECTIONS.



**GENERAL NOTES**

- GROSS SITE AREA EXISTING: 78,291 ACRES (EXCLUDING MAP PARCEL 3 8,955 ACRES) GROSS REDEVELOPMENT SITE AREA PROPOSED: 16.57 ACRES (REMAINDER OF 58.49 ACRES TO REMAIN AS CURRENTLY DEVELOPED)
- TOTAL NUMBER OF LOTS: 19, BROKEN DOWN AS FOLLOWS  
MULTI-FAMILY RESIDENTIAL: 9 LOTS  
PARK/PLAZA: 5 LOTS  
PRIVATE STREETS: 4 LOTS  
COMMERCIAL/RETAIL: 1 LOT
- MAXIMUM NUMBER UNITS ALLOWED: 840 UNITS
- ASSESSOR'S PARCEL NUMBERS: 643-061-08-00 AND 643-061-04-00
- EXISTING GENERAL PLAN DESIGNATIONS: COMMERCIAL RETAIL
- PROPOSED GENERAL PLAN LAND USES: COMMERCIAL RETAIL, URBAN CORE
- EXISTING ZONING: COMMERCIAL RETAIL (FC-1)
- PROPOSED ZONING: MIXED-USE
- PRESENT LAND USE: RETAIL

**GENERAL DESIGN NOTES**

- WATER SYSTEM TO BE INSTALLED IN ACCORDANCE WITH THE STANDARDS OF THE OTAY WATER DISTRICT AND SHALL BE MAINTAINED AND OPERATED BY THE DISTRICT.
- SPECIFIC METHODS OF HANDLING STORM WATER ARE SUBJECT TO DETAILED APPROVAL BY THE DEVELOPMENT SERVICES DEPARTMENT AT THE TIME OF SUBMISSION OF IMPROVEMENT AND GRADING PLANS. DESIGN SHALL BE ACCOMPLISHED ON THE BASIS OF THE REQUIREMENTS OF THE SUBDIVISION MANUAL. DRAINAGE EASEMENTS SHALL BE PROVIDED AS REQUIRED BY THE CITY DEVELOPMENT SERVICES DEPARTMENT.
- SANITARY SEWER TO BE PROVIDED AND CONNECTED TO CITY OF CHULA VISTA SEWERS. SEWER MAINS ARE 8" MINIMUM P.V.C. UNLESS SHOWN OTHERWISE. EVIDENCE SHALL BE PROVIDED OF HAVING OBTAINED GRADING RIGHTS UPON ADJACENT PROPERTY WHERE REQUIRED DURING FINAL ENGINEERING.
- STREET TREE DEPOSITS SHALL BE PAID IN ACCORDANCE WITH ORDINANCE NUMBER 1369 AND NO. 1687 OF THE CITY OF CHULA VISTA.
- UTILITIES SHALL BE UNDERGROUND AND EASEMENTS PROVIDED AS NECESSARY.
- SUBDIVIDER TO PROVIDE AND INSTALL APPROVED STREET LIGHT STANDARDS AND FIXTURES IN THE TYPE AND NUMBER APPROVED BY THE DEVELOPMENT SERVICES DEPARTMENT FOR PUBLIC RIGHT-OF-WAY.
- SLOPE PLANTING SHALL BE IN ACCORDANCE WITH THE CITY OF CHULA VISTA LANDSCAPE MANUAL, AND/OR THE OTAY RANCH VILLAGE DESIGN PLAN.
- GRADING SHALL BE CONSTRUCTED IN ACCORDANCE WITH TITLE 15 OF THE CITY OF CHULA VISTA MUNICIPAL CODE.
- ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE SAN DIEGO AREA REGIONAL STANDARD DRAWINGS AND THE DESIGN AND CONSTRUCTION STANDARDS OF THE CITY OF CHULA VISTA.
- THE STREET SYSTEM SHOWN HEREON SHALL COMPLY WITH CHULA VISTA FIRE DEPARTMENT GUIDELINES, INCLUDING THE AUTOTURN DETAIL. FIRE HYDRANTS TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF CHULA VISTA DESIGN STANDARD NO. 8. FIRE HYDRANTS AS SHOWN ON THIS MAP SHALL BE USED AS A GUIDE ONLY. ONE FOOT CONTROL LOTS TO BE GRANTED TO THE CITY OF CHULA VISTA BY SEPARATE DEED WHERE DETERMINED NECESSARY BY THE DEVELOPMENT SERVICES DEPARTMENT.
- GRADING AND MODEL HOMES MAY BE BUILT, AFTER CITY APPROVAL, PRIOR TO FINAL MAP RECORDED.
- GRADING SHOWN HEREON IS PRELIMINARY AND SUBJECT TO MODIFICATION IN FINAL DESIGN SUBJECT TO SUBSTANTIAL CONFORMANCE APPROVAL BY THE CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT.
- STORM DRAIN AND SEWER SHOWN HEREON IS PRELIMINARY AND SUBJECT TO MODIFICATION IN FINAL DESIGN.
- TEMPORARY AND PERMANENT STRUCTURAL BEST MANAGEMENT PRACTICES WILL BE INCORPORATED IN THE DESIGN AND IMPLEMENTATION OF THE DEVELOPMENT.
- PRELIMINARY GEOTECHNICAL REPORT PREPARED BY: GEOTECH, INC. DATED FEBRUARY 4, 2022.
- REFER TO THE "WATER QUALITY TECHNICAL REPORT SNOW" FEBRUARY 28, 2022 PREPARED BY HUNSAKER & ASSOCIATES FOR COMPLIANCE WITH THE REGIONAL WATER QUALITY CONTROL BOARD JURISDICTIONAL PERMIT.
- TEMPORARY TURNBARRENDS SHALL BE PROVIDED AT ALL DEAD END STREETS DURING FINAL ENGINEERING AS REQUESTED BY THE DEVELOPMENT SERVICES DEPARTMENT.
- A FUEL MODIFICATION ZONE IS NOT PROPOSED AS THE PROJECT IS SURROUNDED BY EXISTING PAVEMENT AND DEVELOPMENT.
- SPEED BUMPS FOR TRAFFIC CALMING PURPOSES ARE PROHIBITED ON STREETS TO BE BUILT FOR THIS PROJECT.

**CONDOMINIUM NOTES**

THIS IS A MAP OF A RESIDENTIAL CONDOMINIUM PROJECT AS DEFINED IN SECTION 4125 OF THE CIVIL CODE OF THE STATE OF CALIFORNIA AND IS FILED PURSUANT TO THE SUBDIVISION MAP ACT. PLANNING NEIGHBORHOOD INCLUDED WITHIN THE RESIDENTIAL CONDOMINIUM PROJECT DESIGNATION ARE (R-1, R-2, R-3A, R-3B, R-4, R-5), FOR A MAXIMUM NUMBER OF (840) DWELLING UNITS.

THIS IS ALSO A MAP OF A COMMERCIAL CONDOMINIUM PROJECT AS DEFINED IN SECTION 6531 OF THE CIVIL CODE OF THE STATE OF CALIFORNIA AND IS FILED PURSUANT TO THE SUBDIVISION MAP ACT. PLANNING NEIGHBORHOOD INCLUDED WITHIN THE COMMERCIAL CONDOMINIUM PROJECT DESIGNATION IS MUR-3A AND MUR-3B FOR A MAXIMUM OF 37,200 SF.

**SOURCE OF TOPOGRAPHY**

THE INFORMATION SHOWN HEREON IS BASED ON AERIAL PHOTODIAPHRAMETRY FLOWN BY R.J. LUNG AND ASSOCIATES ON AUGUST 5, 2020, TOGETHER WITH FIELD SURVEY MEASUREMENTS PERFORMED BY HUNSAKER & ASSOCIATES SAN DIEGO, INC. ON AUGUST 5, 2016.

**BENCHMARK:**

VERTICAL RELIEF SHOWN HEREON WAS PRODUCED BY FIELD METHODS COMBINED WITH AERIAL TOPOGRAPHY BY R.J. LUNG AND ASSOCIATES FLOWN ON AUGUST 5, 2020. VERTICAL DATUM BASED ON CITY OF CHULA VISTA BENCHMARK NO. NUMBER 2375 (4057) NAVD 88  
ELEV. 639.072'

**EARTHWORK/GRADING QUANTITIES**

CUT: 19,490 C.Y.  
FILL: 6,405 C.Y.  
EXPORT: 11,085 C.Y.

GRADING QUANTITIES SHOWN ARE RAW QUANTITIES ONLY AND DO NOT INCLUDE THE EFFECT OF REMOVAL GRADING SHOWN IN THE PRELIMINARY SOI. A TRANSPORTATION PERMIT AND A LETTER FROM THE SITE ACCEPTING EXPORTED MATERIAL IS REQUIRED PRIOR TO ISSUANCE OF PERMIT.

**EASEMENT & ENCUMBRANCE NOTES**

SEE SHEETS 7 & 8

**APPLICANT/OWNER**

GGP-OTAY RANCH L.P.  
350 W. ORLEANS ST. SUITE 300, CHICAGO, IL 60654

JAMES VARSAMIS  
VICE PRESIDENT - RETAIL  
(312) 835-4764



AUSA S. WALPANDO R.C.E. 47945 DATE

**SHEET INDEX**

- SHEET 1 - TITLE SHEET/TABLES
- SHEET 2 - STREET SECTIONS & SITE SECTION
- SHEET 3 - PROJECT DESIGN
- SHEET 4 - PROJECT DESIGN
- SHEET 5 - PROJECT DESIGN
- SHEET 6 - PROPOSED LOTTING, EASEMENTS & EASEMENTS OR PORTIONS OF EASEMENTS TO BE VACATED
- SHEET 7 - BOUNDARY, EASEMENTS & ENCUMBRANCES
- SHEET 8 - BOUNDARY, EASEMENTS & ENCUMBRANCES

PREPARED BY:	NO. REVISIONS	DATE	BY
 <b>HUNSAKER &amp; ASSOCIATES</b> SAN DIEGO, INC. PLANNING: 9707 Waples Street San Diego, CA 92121 SURVEYING: PH080505-0000-19308028-1414	1	FIRST SUBMITTAL	01/26/21 H&A
	2	SECOND SUBMITTAL	03/09/22 H&A
	3	THIRD SUBMITTAL	10/13/22 H&A
	4	FOURTH SUBMITTAL	02/15/23 H&A
	5		
	6		
	7		

**TENTATIVE MAP/CVT 22-0002**

## OTAY RANCH TOWN CENTER FC-1

City Of Chula Vista, California

**SHEET**

**1**

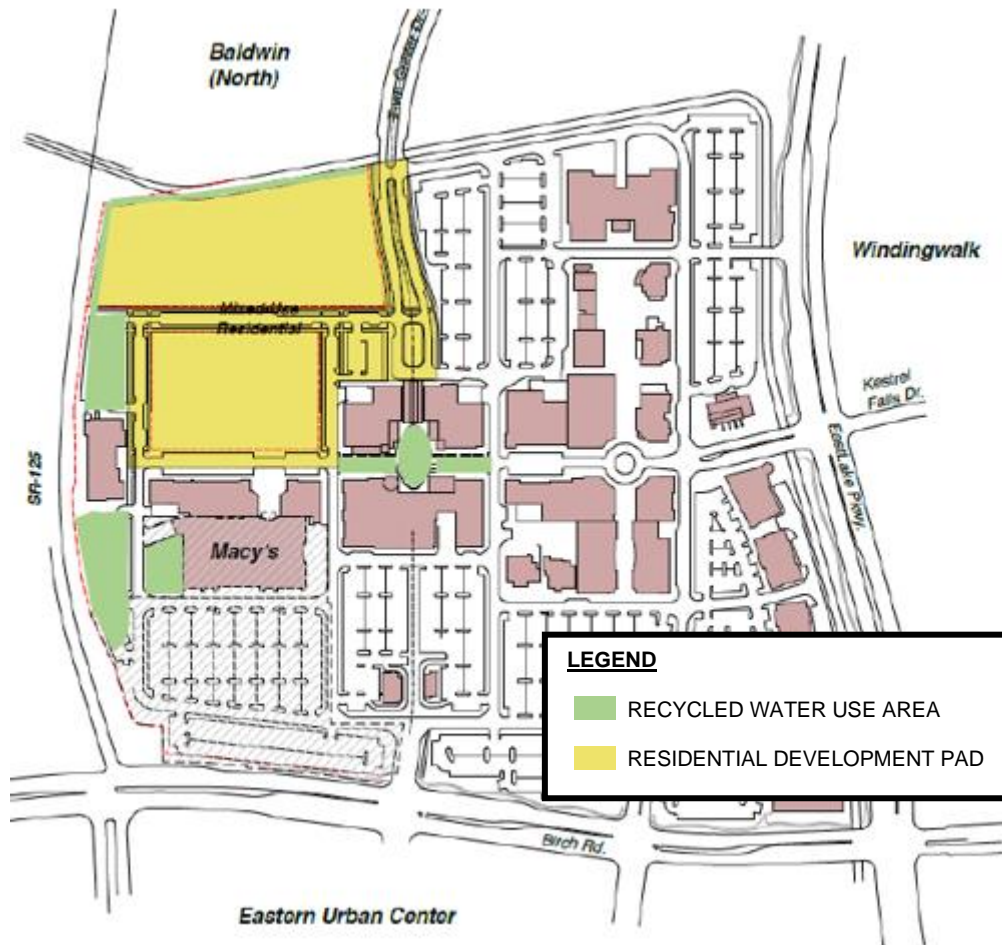
**OF**

**8**



## APPENDIX B

### OTAY RANCH TOWN CENTER REDEVELOPMENT PROPOSED RECYCLED WATER USE AREAS



NOTE: RECYCLED WATER WILL BE USED WITHIN COMMON USABLE OPEN SPACE AND LANDSCAPE AREAS. FINAL RECYCLED WATER USE AREAS WILL BE ESTABLISHED DURING FINAL ENGINEERING.