

*In order to meet the primary objective of creating a sustainable, family-oriented community emphasizing education and recreation, it is essential to understand the setting, constraints, and historic elements that guide the development plan for 101 RANCH.*

## II. PROJECT SETTING

### A. COMMUNITY SETTING

Imperial County, situated in the southeast corner of California, shares its borders with San Diego County to the west, Riverside County to the north, the Colorado River and the state of Arizona on the east, and the United Mexican States (Mexico) to the south. The region's climate is predominately hot with the coolest temperatures falling into the mid-30° Fahrenheit (F) range in January, and the hottest frequently rising over 100°F in July and August. Weather conditions also are exemplified by small amounts of precipitation, creating a dry climate that averages less than three inches of annual rainfall. In exceptional years, up to eight inches of rain can fall.

Imperial County consists of approximately 4,597 square miles, with about 50 percent of the County falling within federal and state jurisdiction. These state- and federally-controlled properties include military uses, public parks and recreation areas, wildlife refuges, natural areas, historic landmarks, and mining lands held by the U.S. Bureau of Land Management (BLM). The site and its boundaries are depicted on Figure 2.1, *Aerial Photograph*.

The County's terrain ranges from 235 feet below sea level at the Salton Sea to 4,548 feet above sea level at Blue Angel Peak. As depicted on Figure 2.2, *SPA Topographic Map*, the 101 RANCH Specific Plan Area lies below sea level with elevations varying from 95 feet below sea level at its northwest corner to 130 feet below sea level at its southeastern boundary near Harvey Road.

The combination of rugged terrain and a hot, dry climate restrict the region's land to primarily recreation and mining uses. However, abundant agricultural uses, made feasible by irrigation water supplied from the Colorado River by the Imperial Irrigation District (IID), cover more than 18 percent of the total County area, including 101 RANCH prior to its development. The project lies within the largest of the County's agricultural areas, which extends generally from the Westside Main Canal to the East Highline Canal and from the Salton Sea to the International Border.

The County's urban development exists for the most part within the cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland. Additional urban use can be found in the unincorporated areas of Heber, Niland, and Seeley. These cities and unincorporated towns constitute about one percent of the County's total land area. The 101 RANCH is situated between two of the largest County urban areas, approximately two miles north of the Cities of Imperial and El Centro and about three miles south of Brawley.

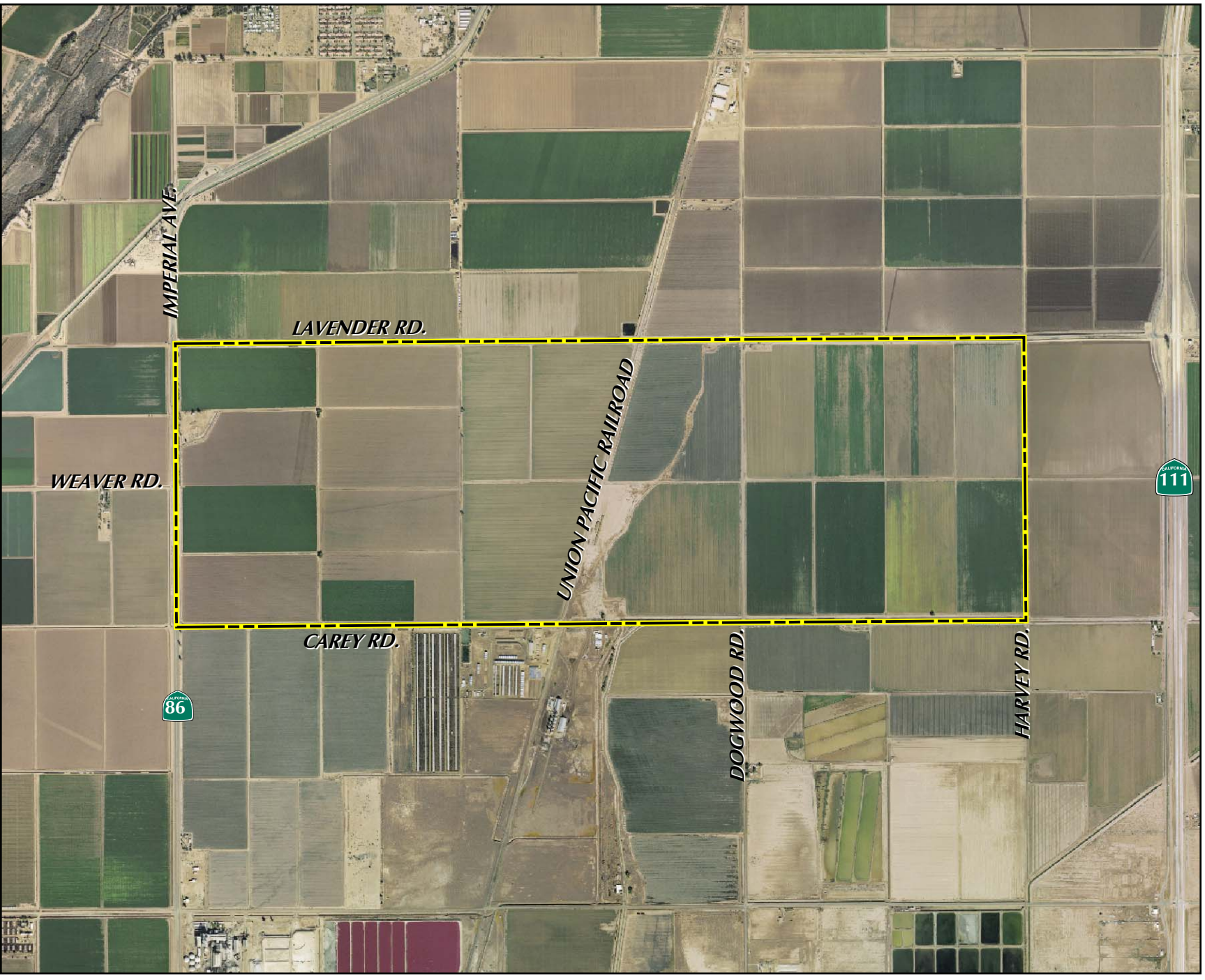
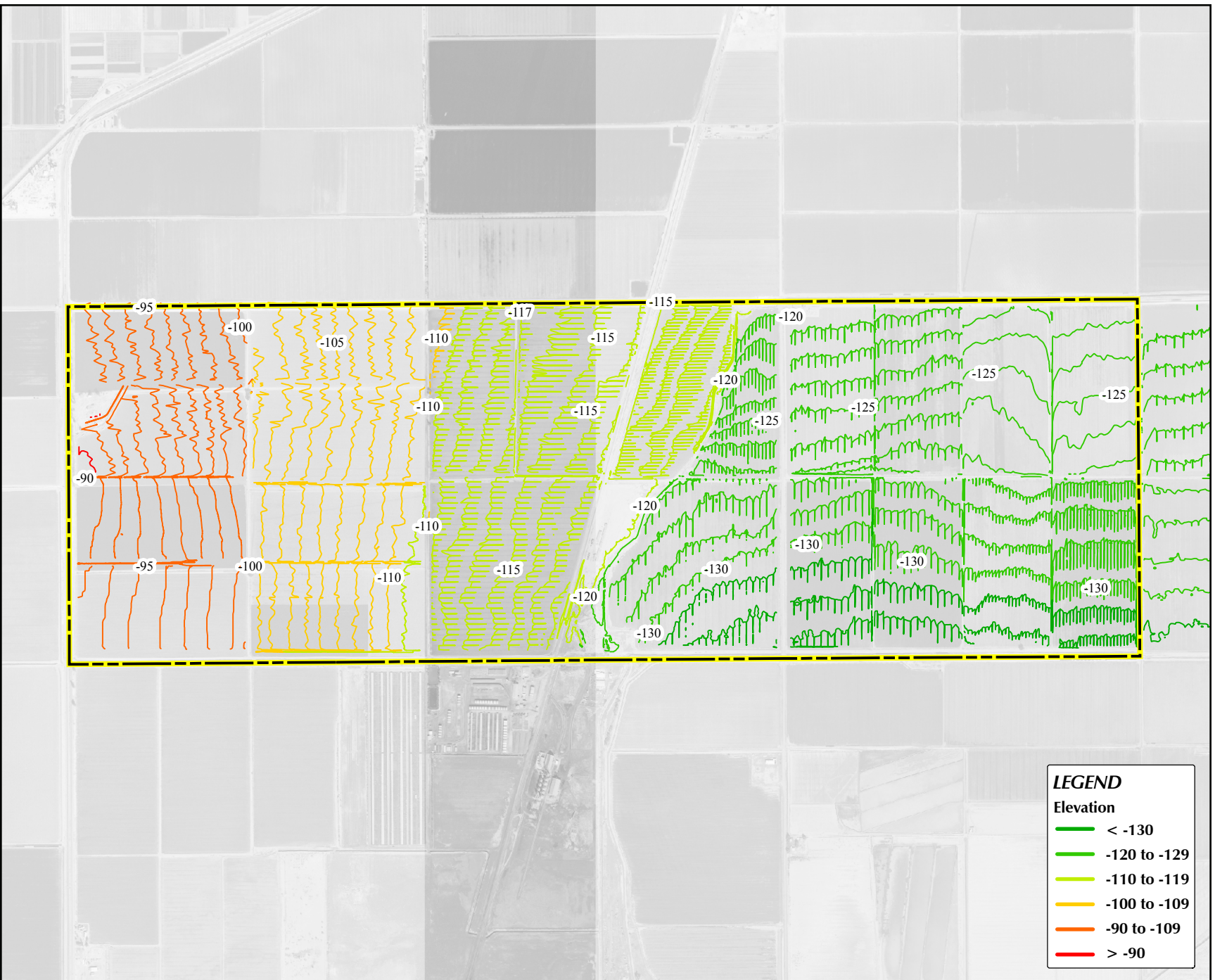


FIGURE 2.1

AERIAL PHOTOGRAPH





**LEGEND**

**Elevation**

- █ < -130
- █ -120 to -129
- █ -110 to -119
- █ -100 to -109
- █ > -90

**FIGURE 2.2**

SPA TOPOGRAPHIC MAP



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## **B. PHYSICAL SETTING**

101 RANCH, as with the rest of Imperial County, is situated in the Salton Trough, a 3,100-square-mile structural depression that extends from the Transverse Range on the north to the Gulf of California on the south and from the Peninsular Range on the west to the Colorado River at the east. The Colorado River delta, which lies perpendicular to the Salton Trough, establishes a closed northern basin that encompasses the Salton Sea and the Imperial Valley. The resulting effect is the existence of geologically young, unconsolidated alluvial sediments that readily respond to climate and geology.

Prior to the arrival of non-native peoples, the Imperial Valley experienced occasional flooding from Colorado River overflows that resulted in the creation of ephemeral lakes that were not conducive to farming uses. The subsequent establishment of irrigation and drainage canals managed the flow of water to minimize flooding and created more reliable conditions for agricultural uses.

In addition to historic flooding, the Imperial Valley undergoes continuous natural subsiding toward the Salton Sea. This movement, caused by the gradual, local settling of land with little or no horizontal motion, results from a previous landslide or slope failure. Within the Imperial Valley, the greatest subsidence occurs at the center of the Salton Sea, where sinking occurs on an average of about two inches per year. This movement is generally uniform as it shifts and decreases to little or no subsidence at the Mexican border.

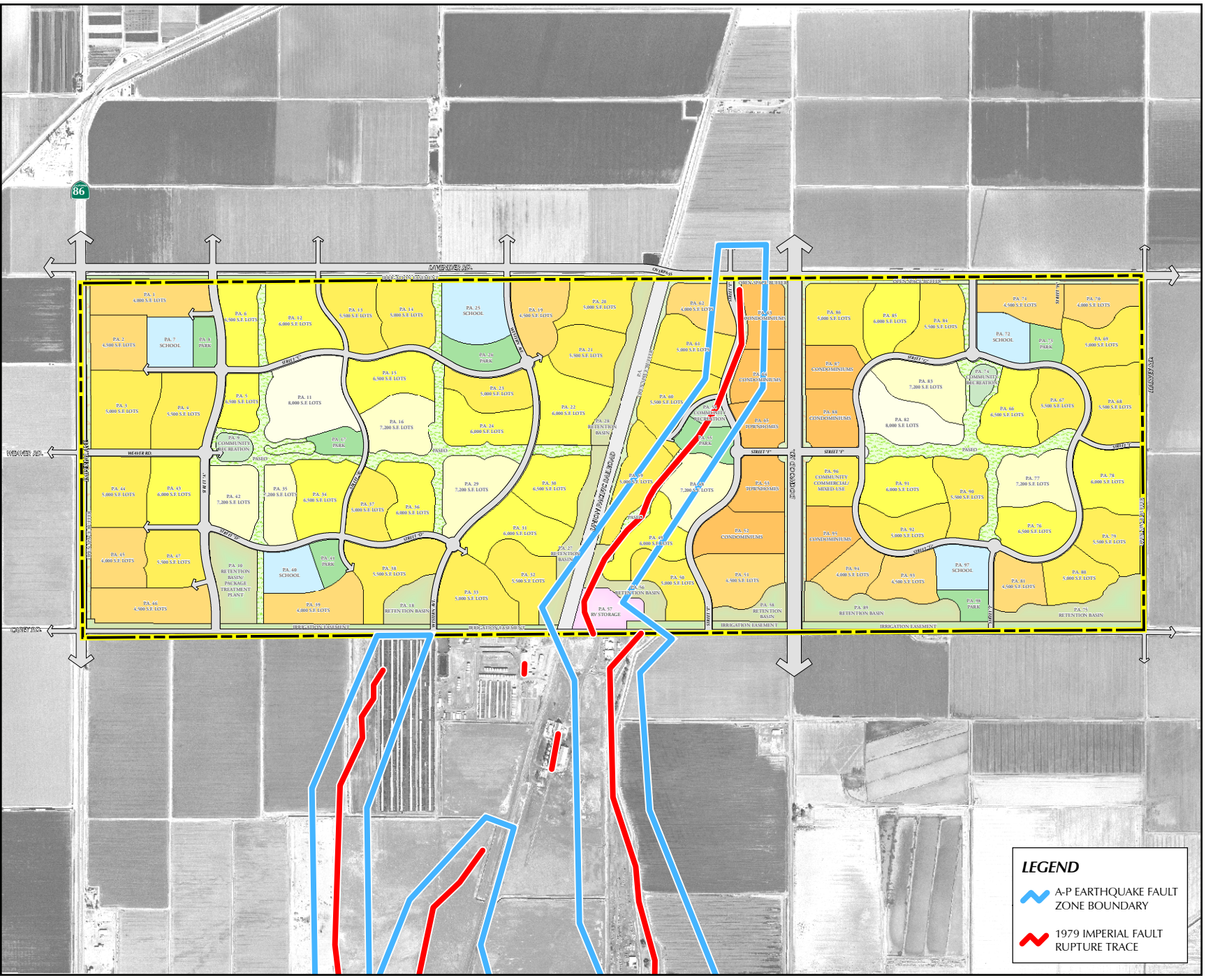
### **1. SEISMIC ACTIVITY**

The Salton Trough features the San Jacinto-Coyote Creek and the Elsinore-Laguna Salada faults at its western boundary and branches of the San Andreas Fault along its eastern border, resulting in one of the nation's highest tectonically active regions. The existence of these significant geologic conditions exposes the Imperial Valley to potentially damaging earthquakes with concurrent ground failure. Throughout the irrigated portion of the Valley where the soil is generally saturated, liquefaction and related loss of foundation support are common hazards (County of Imperial 1993).

A tectonic feature, the Imperial Fault, courses through the central portion of the 101 RANCH Specific Plan Area in a general north to south direction. The location of the Imperial Fault and its 1,500-foot setback zone, as established by the project geotechnical engineer, is depicted on Figure 2.3, *Earthquake Fault Zone Map*.

### **2. FLOODING**

All of Imperial County is subject to flooding caused by flash floods in desert areas and slow-rising floods in the level Valley area that occur during heavy, slow-draining events. The Federal Insurance Administration delineates areas of special flood hazards, the risk premium zones, and floodways through official maps identified as the Flood Insurance Rate Map (FIRM) and the Flood Boundary and Floodway Map. These maps form the basis of Imperial County's Flood Ordinance, which is intended to be applied to those



**LEGEND**  
 A-P EARTHQUAKE FAULT ZONE BOUNDARY  
 1979 IMPERIAL FAULT RUPTURE TRACE

FIGURE 2.3



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areas subject to periodic flooding and accompanying hazards. The 101 RANCH Specific Plan Area, like most of the irrigated Valley, is designated "Zone C, Indefinite Minor Flooding," which is a low-to-moderate risk category consistent with the flat terrain and drainage/canal system that exists on the property.

## **C. ENVIRONMENTAL RESOURCES**

### **1. BIOLOGICAL RESOURCES**

The Specific Plan Area is characterized by agricultural and ruderal (weedy) vegetation communities. The agriculture vegetation community comprises a majority of the site and primarily consists of areas being actively cultivated with crops, as well as fields left fallow. The ruderal vegetation community is comprised of small patches of vegetation found primarily along on-site irrigation drains and canals and contains weedy botanical species, such as salt cedar, white horse nettle, and alkali mallow. Patches of ruderal vegetation on-site are not large enough to support sensitive species typical to the region. No sensitive plant species were observed or are reasonably expected to occur due to the disturbed nature of the project area.

Wildlife species identified in the project area consist of those commonly associated with agricultural and disturbed areas. Seven (7) burrowing owls, representing the only sensitive species located on-site, were observed along with seven (7) active burrows throughout the property. In addition, seven (7) burrowing owls and nine (9) active burrows were observed in IID canals, drains, and right-of-way adjacent to the 101 RANCH. No other sensitive species were observed during surveys or are reasonably expected to occur on-site.

Several drains, canals, and irrigation ditches exist within the project site. None of the drains, canals, or irrigation ditches are considered "Waters of the United States" and therefore are not under the jurisdiction of the United States Army Corps of Engineers. In addition, the drains, canals, and irrigation ditches are not under the jurisdiction of the California Department of Fish and Game, as they do not support significant riparian habitat that could provide suitable habitat for sensitive riparian species. Accordingly, no jurisdictional areas exist on-site.

### **2. CULTURAL RESOURCES**

Although the Tumau clan of the west mountain Kumeyaay tribe is known to have used the Brawley area – especially the moist banks of the New and Alamo Rivers, published accounts, records, and limited field examination conducted by Jay von Werlhof indicate that the prehistoric Tumau did not use the subject site. Further, the historic and on-going agricultural use of the 101 RANCH Specific Plan Area would not likely allow archaeological resources to remain.

## **D. EXISTING LAND USE**

Prior to development, 101 RANCH was employed exclusively for agricultural and related uses. An active railroad line and high-voltage power lines generally traverse the approximate middle of

the property in a north-to-south orientation with an agricultural irrigation canal and drain forming its north and south boundaries respectively. Additional smaller canals feed numerous farm parcels on the Ranch. This network of canals and drains, along with the individual farm fields that were under active agricultural use at the time this Specific Plan was adopted, are depicted on Figure 2.4, *Farm Operations Map*. Because development of 101 RANCH requires phasing over a number of years, it is anticipated that agricultural activities will continue on portions of the site as an interim use.

## **E. EXISTING CIRCULATION**

### **1. STATE HIGHWAYS**

101 RANCH is bounded on the west by State Route (SR) 86 (Imperial Avenue), a four-lane divided highway that is designated within the County Bicycle Master Plan portion of the Circulation and Scenic Highways Element of the County General Plan as a Class II Bicycle Route. Although Harvey Road establishes the eastern boundary of 101 RANCH, SR 111, an existing four-lane divided highway that is slated to become an Expressway, parallels the site's eastern boundary about one-half mile to the east. An existing at-grade intersection and proposed freeway interchange occur at the intersection of SR 111 and Lavender Road (formerly "Schartz Road"), which establishes the community's northern boundary.

### **2. COUNTY CIRCULATION ELEMENT ROADS**

The General Plan Circulation Element establishes classifications for certain specified County roadways. Right-of-way (R.O.W.) standards for each classification of County Circulation Plan road are illustrated on Table 2-1, *Cross-Section Design Criteria for Recommended Roadway Classifications*.<sup>1</sup> Roadway standards and conditions existing at the time this Specific Plan was adopted were as detailed below:

#### **A. Modified Prime Arterial**

The north-south aligned Dogwood Road, a County Circulation Plan designated Modified Prime Arterial, traverses through the approximate center of 101 RANCH. Dogwood Road existed as a two-lane, paved roadway with graded shoulders and no curbs at the time this Specific Plan was adopted. Prime Arterials consist of a six-lane divided roadway intended to be improved to a paved width of 106 feet and a right-of-way (R.O.W.) of 136 feet. However, the County has proposed expansion of Dogwood Road to accommodate a proposed rapid transit corridor.

#### **B. Major Collector**

Lavender Road, an east-west trending roadway that forms the approximate northern boundary of 101 RANCH, existed as a dirt farming road east of Dogwood and was paved from west of Dogwood Road to SR 86 (Imperial Avenue) at the time this

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<sup>1</sup> As noted in Chapter III, SPECIFIC LAND USE PLAN, Sec. D., *Circulation Plan*, certain of these Circulation Element road sections have been modified to address conditions specific to circulation needs within the 101 RANCH Specific Plan

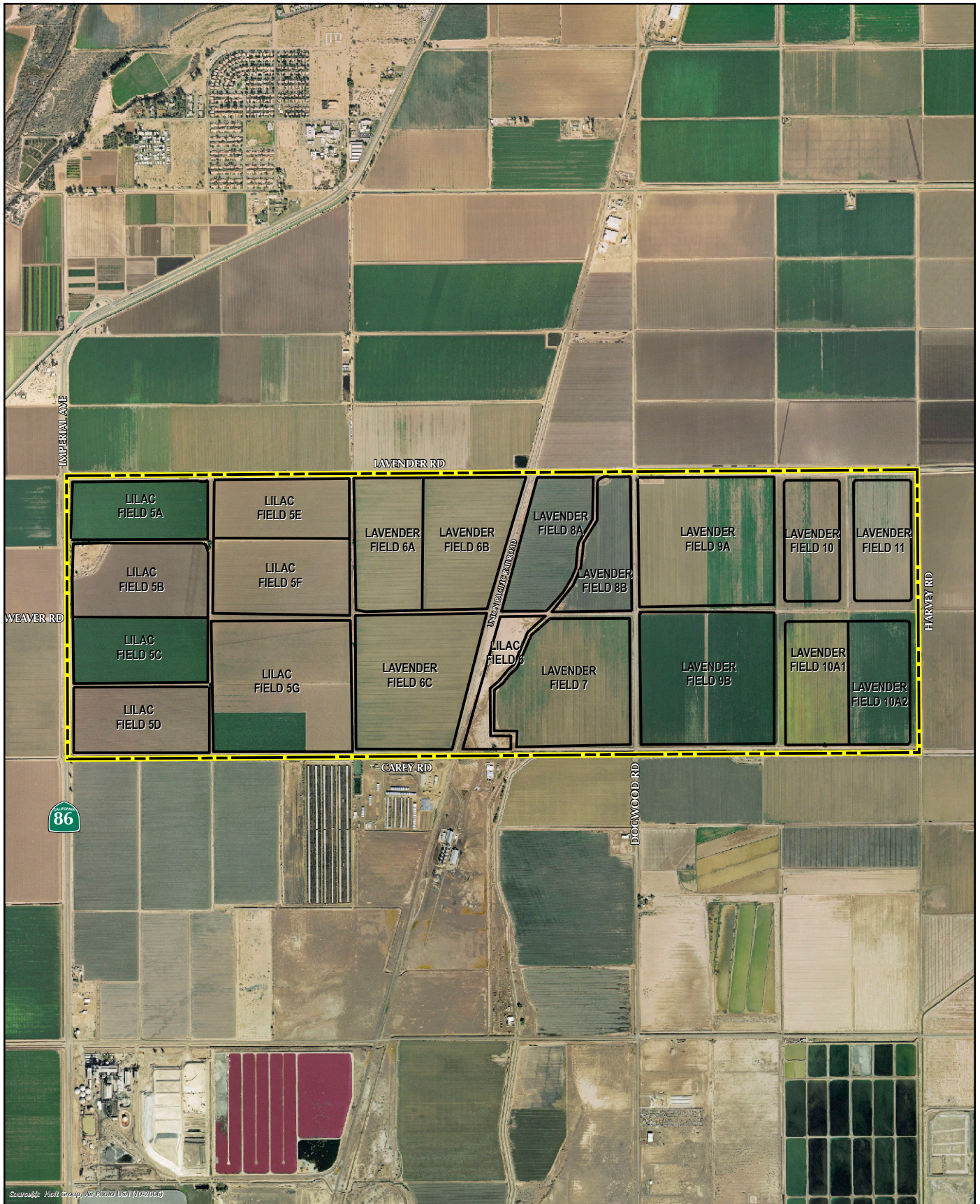


FIGURE 2.4



**Table 2-1 CROSS-SECTION DESIGN CRITERIA FOR RECOMMENDED ROADWAY CLASSIFICATIONS**

IMPERIAL COUNTY AND CITIES IN IMPERIAL COUNTY <sup>a</sup>								
Roadway Classification	Travel Way No. Lanes/Width	ROW Width	Road Surface Width	Parkway Width	Paved Shoulder No./Width	Median Width	Median Shoulder No./Width	Minimum Design Speed (MPH) <sup>a</sup>
Modified Prime Arterial	6 – 12'	210' <sup>b</sup>	154'	56'	2 – 10'	46'	2 – 8'	65
Prime Arterial	6 – 12'	136'	106'	30'	2 – 8'	18'	None	65
Minor Arterial	4 – 12'	102'	82'	20'	2 – 8'	18'	None	55
Major Collector (Collector)	4 – 12'	84'	64'	20'	2 – 8'	None	None	55
Minor Collector (Local Collector)	2 – 12'	70'	40'	30'	2 – 8'	None	None	30
Residential	2 – 12'	60'	40'	20'	2 – 8'	None	None	30
Major Industrial Collector (Industrial)	4 – 12'	96'	76'	20'	2 - 9'	10'	None	30
Industrial Local	2 – 13'	64'	44'	20'	2 – 9'	None	None	25

**Last Updated: January 29, 2008, Imperial County General Plan – Circulation and Scenic Highways Element**

**Footnote:**

- All ROW dimensions are MINIMUM and may be wider as determined on a case by case basis. Please consult with the County.
- The minimum design speed shall be used as a guideline only. Final minimum design speeds are subject to the Director of Public Works determination and approval. The Modified Prime Arterial varies from a Prime Arterial in order to accommodate transit lanes and/or utility corridors or other public facility structures, as determined by the County.

**General Notes:**

- Additional through lanes, dual turn lanes, or other unusual circumstances may require additional right-of-way, road surface widths, etc. in addition to those shown in Table 2-1.
- Roads in undeveloped, unincorporated portions of the County may require different standards such as unpaved shoulders or no curb, gutter improvements, etc.
- Modification to roadway classification and any widths shown are subject to County Road Commissioner determination and approval.

Specific Plan was adopted. The County General Plan Circulation Element designates this roadway as a four-lane, undivided Major Collector with 64-feet of pavement within an 84-foot R.O.W.

Western Avenue, which lies to the north and off-site from 101 RANCH, also has been designated by the County as a Major Collector. As discussed in Chapter 3, SPECIFIC LAND USE PLAN, Western Avenue is planned to be extended in a north-south direction through the project site.

### **C. Minor Collector**

Carey Road, which forms the southern boundary of 101 RANCH, consisted of a two-lane paved road at the time this Specific Plan was adopted. The County General Plan designates Carey Road as a two-lane Minor Collector with an improved R.O.W. of 70 feet, which consists of two 12-foot travel lanes, two 8-foot parking lanes, and two 15-foot parkways including a sidewalk. Pursuant to County standards, Minor Collectors possess a design capacity of 7,100 ADT at LOS "C."

Weaver Road, which lies directly west of the project site halfway between Lavender Road and Carey Road, also has been designated as a Minor Collector in the County's Circulation Element. As discussed in Chapter 3, SPECIFIC LAND USE PLAN, Weaver Road is discussed in this section, because it may be extended into the West Community of 101 RANCH.

### **D. Residential Street**

As noted above, Harvey Road forms the approximate eastern boundary of 101 RANCH. At the time this Specific Plan was adopted, Harvey Road was a dirt farming road. The County General Plan designates Harvey Road as a two-lane Residential Street with an improved R.O.W. of 60 feet.

## **3. OTHER TRANSPORTATION FACILITIES**

Along with the existing circulation system, 101 RANCH also is served by the countywide Imperial Valley Transit System, the Imperial County Airport, and the Brawley Municipal Airport. Daily service on the Countywide Transit System is provided along SR 86 and SR 111 between El Centro and Brawley. The Union Pacific Railroad extends through the middle of 101 RANCH in a generally north-south alignment, but provides no direct service to the project site. Regional service is provided in a relative north-south alignment from Calexico through Riverside County to Los Angeles and eastward through Arizona.

The publicly-owned and operated Imperial County Airport, which offers commercial passenger service, is located six and one-half (6.5) miles to the southwest of the 101 RANCH Specific Plan Area, and the Brawley Municipal Airport, also publicly owned and operated, lies approximately four miles to the northeast of 101 RANCH Specific. Airport details and service statistics for both fields are provided below in Table 2-2, *Airport Service Statistics*.

**Table 2-2 AIRPORT SERVICE STATISTICS**

<b>Imperial County Airport</b>			
Aircraft based on the field:	86	Aircraft operations:	Avg. 202/day*
Single engine airplanes:	66	Transient general aviation:	43%
Multi engine airplanes:	15	Local general aviation:	41%
Helicopters:	5	Air taxi:	13%
		Military:	2%
<b>Brawley Municipal Airport</b>			
Aircraft based on the field:	65	Aircraft operations:	Avg. 137/day*
Single engine airplanes:	59	Transient general aviation:	59%
Multi engine airplanes:	5	Local general aviation:	40%
Helicopters:	1	Air taxi:	1%

\* For 12-month period ending 31 December 2004

Source: AirNav.com, as of January 18, 2007.

## **F. EXISTING INFRASTRUCTURE**

### **1. ELECTRICAL SERVICE**

The Imperial Irrigation District Energy Department (IID Energy) provides electrical power to the 101 RANCH Specific Plan Area and had installed three transmission lines through the site at the time this Specific Plan was adopted. One 92 kilovolt (kV) line extends in a general north-south direction parallel and to the west of the Union Pacific Railroad easement from the Brawley Substation to the Imperial Substation, and a second 92kV line runs along the west side of Dogwood Road from the Brawley Diesel Substation to the El Centro Substation (ECSS). The third transmission line, rated at 34.5kV, stretches generally between the Union Pacific Railroad alignment and the first 92kV line from the Rockwood Substation to the north to the intersection of Keystone Road and Highway 86. IID Energy also has reserved the right to extend power line easements along the east and west sides of Dogwood Road as it extends through the development.

### **2. WATER**

The Imperial Irrigation District Water Department provides non-potable, irrigation water (used for agricultural purposes on site) from the Colorado River via the All-American Canal. Agricultural irrigation flows through a gate at the Central Main Canal into the Lavender Canal along Lavender Road at the northern edge of the project site. 101 RANCH is located within the Mesquite Lake CSA (MLCSA), which will provide potable water for the project.

### **3. DRAINAGE SYSTEMS**

The drainage system existing on site at the time of project approval was designed to carry irrigation runoff to the Alamo River via IID drains. The Lilac Drain, located along the northern edge of Carey Road, serves 101 RANCH. The drain system also carries urban runoff from impervious surfaces such as streets, paved parking lots, and buildings.

#### **4. WASTEWATER TREATMENT**

101 RANCH is located within the MLCSA, which will provide wastewater treatment for the project.

#### **5. SOLID WASTE DISPOSAL**

Trash service in the area is available from private collection companies such as Allied Waste for disposal at local landfills. The Allied Imperial Landfill accepts Class III (municipal) waste at its facility located approximately two miles south of 101 RANCH on SR 111. Class II (special) waste is accepted at the Desert Valley Company disposal facility and storage site located northwest of Westmorland. Recycling facilities are limited to privately owned and operated drop-off centers.

#### **6. OTHER FACILITIES**

At the time this Specific Plan was approved, natural gas lines provided by Southern California Gas Company were located adjacent to Keystone Road and SR 111, and a main natural gas transmission line was located along Dogwood Road. The Imperial Valley, generally, receives telecommunications services from AT&T, and cable television and internet services are provided by Time Warner.

### **G. PUBLIC SERVICES AND FACILITIES**

Public services and community facilities available at the time this Specific Plan was adopted include police, fire, and emergency medical. The Imperial County Sheriff provides patrol and criminal investigations with its emergency dispatches emanating from the County Service Center south of El Centro on McCabe Road to the nearest available patrol unit. Under an existing mutual aid agreement, additional law enforcement services are provided when and if required by the cities of Imperial and Brawley. The Imperial County Fire Department, located at the airport in the City of Imperial about three miles to the south, provides service in the Specific Plan Area, and mutual aid service also is available from Brawley and El Centro. Emergency medical response is provided by private ambulance companies operating from Pioneers Hospital in Brawley and the El Centro Regional Medical Center, both of which provide full medical facilities, including 24-hour emergency room service.

### **H. REGULATORY ENVIRONMENT**

#### **1. AIR QUALITY REGULATIONS**

Air quality in the project area is regulated by the U.S. Environmental Protection Agency (USEPA), California Air Resources Board (CARB), and the Imperial County Air Pollution Control District (ICAPCD).

The 101 RANCH Specific Plan is located within the Salton Sea Air Basin (SSAB) of Imperial County. The pollutants of concern for Imperial County are ozone and "respirable" particulate matter, consisting of particulate matter that is 10 microns or less in diameter (PM10). Areas are classified under the federal Clean Air Act as either "attainment" or "non-attainment" areas for each criteria pollutant based on whether the National

Ambient Air Quality Standards (NAAQS) have been achieved. The SSAB has been classified under federal standards as a “non-attainment” area for ozone and PM10, but has achieved “attainment” or is designated “unclassified” for carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead. Imperial County is designated by the ICAPCD as “transitional” for the one-hour ozone standard and “non-attainment – marginal” for the eight-hour ozone standard.

## **2. WATER QUALITY REGULATIONS**

### **A. Federal and State Water Quality Acts**

The Federal Water Pollution Control Act, enacted in 1948 and commonly referred to as the Clean Water Act (CWA), serves as the primary applicable legislation for water protection. The intent of the Clean Water Act is implemented in California through the Porter-Cologne Water Quality Control Act (Porter-Cologne), which is located in Section 1300 of the California Water Code. Administrative and regulatory provisions are contained in Title 23 of the California Code of Regulations. The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) implement Porter-Cologne and manage water quality in the state. The 101 RANCH Specific Plan is located within the jurisdiction of the Colorado River Basin RWQCB.

### **B. NPDES Program**

The Colorado River Basin RWQCB implements the National Pollutant Discharge Elimination System (NPDES) program by regulating applicable discharges of wastewater and agricultural runoff. In order to comply with water quality regulations, the RWQCB requires permits for discharging or proposing to discharge materials that could affect water quality, other than land uses that normally discharge into a community sewer system.

### **C. Construction Permits**

The Colorado River Basin RWQCB and other Regional Water Boards enforce construction-site stormwater management in accordance with the State’s Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002. This State General Permit prohibits unauthorized stormwater discharges from construction projects that disturb one or more acres of land, unless the discharge is in compliance with an NPDES permit. This process requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) through Best Management Practices (BMPs) specified within the SWPPP.

## **3. EARTHQUAKE FAULT SPECIAL STUDIES ZONE**

The Office of the State Geologist, consistent with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act (Chapter 7.5 of Division 2, California Public Resources Code), is charged with delineating Special Study Zones that include potentially- or recently-active traces of major faults. The County of Imperial enforces the Alquist-Priolo Earthquake Fault Zoning Act through County Land Use Ordinance Division 15. County regulations include a prohibition on construction of buildings used for human occupancy

across the trace of an active fault, and a requirement that such buildings proposed to be located near the fault or within a designated Special Studies Zone only be permitted if a geologic report shows that no undue hazard would be created by the construction.