4.8.3.3 Impacts and Mitigation

Threshold LU-1: Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project, which would result in a significant environmental impact?

Discussion

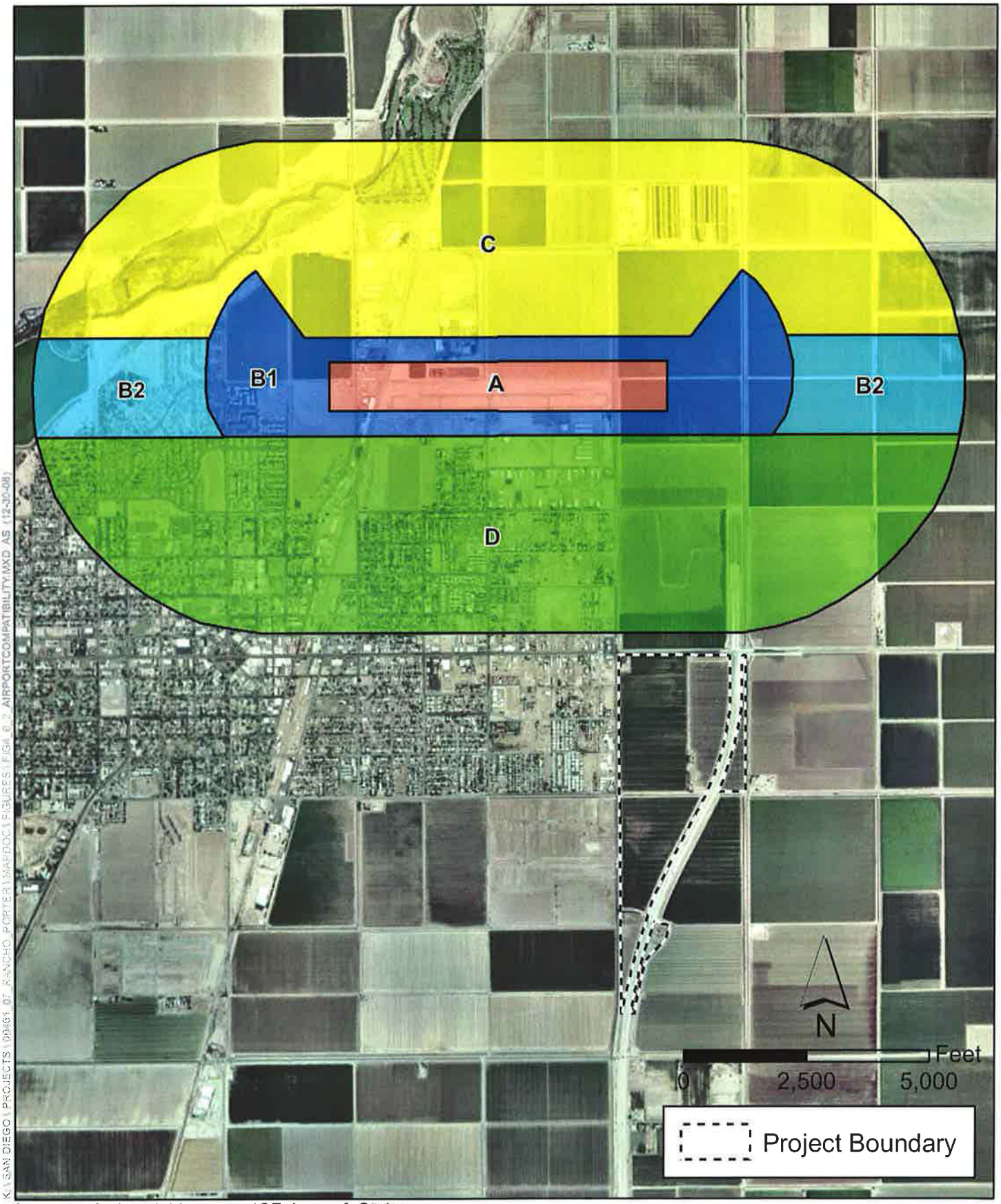
Imperial County General Plan. The Imperial County General Plan, which provides a comprehensive land use plan, specifies selected portions of the County as "Urban Areas," which are areas slated for eventual annexation or incorporation into neighboring cities. The Project site is designated as a part of the Brawley Urban Area by the Imperial County General Plan, which was applied to the site in anticipation of future annexation into the neighboring City of Brawley. Proposed land uses include low and medium density residential, mixed use (commercial and multi-family), commercial, and park land uses, which are consistent with the County Urban Area land use designation, which encourages "a broad range of residential, commercial and industrial uses." Implementation of the proposed Project would not result in a conflict with the site's land use designation and the proposed land uses are consistent with those designated by the County. Therefore, the proposed Project would not result in a conflict with the Imperial County General Plan.

Imperial County Land Use Ordinance. The Imperial County Land Use Ordinance designates the site as A2U (General Agriculture/Urban Overlay) and M1NU (Light Industrial/Urban Overlay), which anticipates the conversion of the zone from an agricultural and light-industrial to an urban use in conformance with the land use designations specified by the City of Brawley. As such, the conversion of the proposed Project site from an agricultural and light industrial use to a mixed use development with commercial, residential, and park land uses would be consistent with the County's A2U and M1NU zones and a conflict would not occur.

City of Brawley General Plan and Service Area Plan. The City of Brawley General Plan has designated the Project site as a special study area, which means that the site has been identified for a large-scale master planned development governed by a Specific Plan. The proposed Rancho Porter Specific Plan is required to be consistent with the City of Brawley General Plan and contains a detailed account of the proposed Project and its consistency with the applicable goals and objectives of the City's General Plan. The consistency analysis, provided in Chapter 2 of the Rancho Porter Specific Plan, groups the City's General Plan goals and objectives into the following categories; land use, circulation and public services, environmental management, and economic development. As exhibited by the consistency analysis, the proposed Project would not result in a conflict with the City of Brawley General Plan.

The City's Service Area Plan provides a comprehensive survey of the existing land uses for the City of Brawley, including those areas identified within the City's SOI, and presents a detailed analysis regarding the future availability of general public facilities and services. The proposed Project site was included when the SAP was prepared, and thereby any expansion of public facilities and/or services would be provided to the Project site upon implementation and an impact would not occur.

Brawley Municipal Airport Master Plan. The proposed Project is located approximately one mile south and east of the Brawley Municipal Airport. As shown on Figure 4.8-2, *Airport Master Plan Compatibility*, because the site is located outside of the noise contour area and land use compatibility



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Source: ESRI Aerial Imagery, ICF Jones & Stokes

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Figure 4.8-2
Airport Master Plan Compatibility
Rancho-Porter Project EIR

zone, implementation of the proposed Project would not conflict with the Brawley Municipal Airport Master Plan and an impact would not occur.

SCAG Regional Comprehensive Plan and Guide. The proposed Project would be consistent with the SCAG's RCPG, as shown on Table 4.8-1, *SCAG, RCPG Policies, And Consistency Analysis*, which provides a point-by-point review of applicable SCAG goals, policies, and implementation measures and their consistency with the proposed Project. As shown, the Project would not result in a conflict with the SCAG's RCPG and impacts would be less than significant.

Impact Determination
As identified in the above analysis, the proposed Project would not result in any conflicts with the County of Imperial General Plan or Zoning Ordinance, the City of Brawley General Plan, and Service Area Plan, and the Southern California Association of Government's Regional Comprehensive Plan and Guide. As such, impacts would not occur.

Mitigation Measures
Mitigation would not be required.

Residual Impact
No impact would occur.

Table 4.8-1. SCAG RCPG Policies and Consistency Analysis

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
Consistency with Regional Comprehensive Plan and Guide Policies	
3.01 The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.	The City coordinates its population and housing Projections with SCAG. The regional, subregional, and City population and housing Projections listed in the 2004 RTP reflect the most current numbers available. Analysis presented in this EIR takes into account the current regional, subregional, and City population and housing Projections.
3.03 The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	This EIR addresses potential impacts to public facilities, utility systems, and transportation systems and in doing so assists SCAG with implementing its regional growth policies.
GMC Policies Related to the RCPG Goal to Improve the Regional Standard of Living	
3.04 Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.	The proposed Project is designed specifically to address diverse housing needs and will provide duplexes, mobile homes, and apartments.
3.05 Encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.	The Project is located adjacent to existing City development that contains existing roadway and utilities infrastructure. Proposed development requires extension of infrastructure, but the pattern of development presented by the Project would present efficient use of existing facilities and infrastructure and minimize the cost of service delivery.

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
3.09 Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.	See response above. Additionally, the proposed Project would finance creation of new infrastructure, including roadways, sidewalks, curbs, gutters, retention basins, parks, and utilities
3.10 Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	See responses above. Throughout the environmental review and development permitting process, the City will carry out necessary actions as efficiently as possible while conducting proper review in accordance with all relevant laws and regulations.
GMC Policies Related to the RCPG Goal to Improve the Regional Quality of Life	
3.12 Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.	The proposed Project includes many amenities that would reduce automobile trips including a mix of residential and commercial developments (nearby shopping), pedestrian and bicycle trails, and various private and public park sites within the community and nearby.
3.13 Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and development.	The Project does not represent infill. . However, the Project would not preclude or impede infill development.
3.14 Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers	The Project is located near existing Imperial Valley Transit lines with the Calexico-Brawley line running along the western edge of the site on Hwy 111. Project.
3.15 Support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.	The proposed Project is mixed use residential, commercial, and park and near transit corridors.
3.17 Support and encourage settlement patterns which contain a range of urban densities.	The Project would include a variety of residential housing and commercial developments available to various economic segments of the population in a range of urban densities.
3.18 Encourage planned development in locations least likely to cause adverse environmental impact.	The Project would be located in areas consistent with previous disturbances and surrounding development. The site contains limited amounts of native vegetation, and the majority of open areas are disked/plowed fields. Mitigation measures are required of the Project to reduce any potential environmental impacts to acceptable levels.
3.19 National Forests shall remain permanently preserved and used as open space. SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.	The proposed Project is not located near any National Forests, and therefore would have no impact on National Forests.

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
3.20 Vital resources as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals should be protected.	The proposed Project would be located in areas consistent with previous disturbances and surrounding development and it is compatible with approved land uses for the site, as well as the nature of the development in the vicinity. The site contains limited amounts of native vegetation, and the majority of open areas are disked/plowed fields. There are no wetlands, woodlands, or land containing unique or endangered plants and animals within the Project area. Impacts to Burrowing Owl would be mitigated.
3.21 Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	A cultural resources records search and site survey was conducted for the Project, as detailed in the Cultural Resources section of this EIR. The Native American Heritage Commission was also consulted. This research and consultation identified a previously identified resources within the boundaries of the Project area.
3.22 Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	The Project site has historically been used for agricultural production and has no significant slopes, fire, or flood hazard conditions. Seismic hazards are addressed in the Geology and Soils section of the EIR and design recommendations from the geotechnical investigation would be required.
3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and develop emergency response and recovery plans.	As discussed throughout this EIR, the Project entails mitigation to limit the proposed development's noise and biological impacts. The Project entails mitigation to limit the proposed development's effect on the burrowing owl. No other biological or ecological resources are located on the Project site. The Project would be constructed to all applicable UBC standards to ensure seismic safety and adheres to existing emergency response and recovery plans
GMC Policies Related to the RCPG Goal to Provide Social, Political, and Cultural Equity	
3.24 Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.	The proposed Project is responding to demand for residential and commercial development in a rapidly growing region. The development is consistent with planned growth and densities in the City of Brawley. As discussed above, the Project would provide a wide variety of housing types to appeal to a broad range of future residents.
3.27 Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	The Project would not impede access to public education, housing, health care, social services, recreational facilities, law enforcement, and fire Projection. The Project proposes construction of public parks thereby improving the City's public services.

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
Air Quality Chapter Core Actions	
5.07 Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community-based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emission fees) so that options to command and control regulation can be assessed.	This EIR contains a thorough analysis of the air quality impacts of the Project. Specific actions in the form of mitigation will be required of the Project to mitigate potential air quality impacts, including construction, operation, and cumulative air quality effects.
5.11 Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	This EIR thoroughly addresses air quality, land use, transportation, and many other environmental topics to be considered by the City along with the economic implications of the Project.
Regional Transportation Plan	
4.01 Transportation investments shall be based on SCAG's adopted Regional Performance Indicators. **Mobility** – Transportation systems should meet the public need for improved access, and for safe, comfortable, convenient and economical movements of people and goods. Average Work Trip Travel Time in Minutes – 22 minutes PM Peak Highway Speed – 33 mph Percent of PM Peak Travel in Delay (All Trips) – 33% **Accessibility** – Transportation Systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost. Work Opportunities within 25 Minutes – 88% **Environment** – Transportation Systems should sustain development and preservation of the existing system and the environment. (All Trips) Meeting Federal and state Standards – Meet Air Plan Emission Budgets **Reliability** – Reasonable and dependable levels of service by mode. (All Trips) Transit – 63% Highway – 76%	The City of Brawley is continuously implementing major transportation improvements in conjunction with the County of Imperial and Caltrans. These investments are largely tied to development triggers in order to maintain and improve transportation conditions on a cumulative scope throughout the City and the County. The goals of these improvements mirror those detailed in SCAG's Regional Transportation Plan - namely to promote dependable public mobility, accessibility, and livable communities, in the most efficient and economical means possible with least impact to the environment.

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
Safety – Transportation Systems should provide minimal risk, accident, death and injury. (All Trips)	
Fatalities Per Million Passenger Miles – 0.008	
Injury Accidents – 0.929	
Livable Communities – Transportation Systems should facilitate Livable Communities in which all residents have access to all opportunities with minimal travel time (All Trips)	
Vehicle Trip Reduction – 1.5%	
Vehicle Miles Traveled Reduction – 10%	
Equity – The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All Trips)	
Low-Income (Household Income $12,000)) Share of Net Benefits – Equitable Distribution of Benefits	
Cost Effectiveness – Maximize return on transportation investment. (All Trips)	
Net Present Value – Maximum Return on Transportation Investment	
Value of a Dollar Invested – Maximum Return on Transportation Investment	
Growth Visioning	
PRINCIPLE 1: Improve Mobility for All Residents	The development is planned adjacent to the existing city and transportation network and will therefore be near existing and new jobs. Transportation investments are ongoing within the City and County to support planned land uses. Pedestrian and bicycle corridors are planned along with roads to promote a variety of travel choices.
Encourage transportation investments and land use decisions that are mutually supportive	
Locate new housing near existing jobs and new jobs near existing housing	
Encourage transit-oriented development	
Promote a variety of travel choices	
PRINCIPLE 2: Foster Livability in All Communities	The Project is located within the County urban limit line, and as such is consistent with all development planning for the region, as well as demand for additional residential housing in the area. The development is mixed use with residential, commercial, and park plans. Public parks and bike paths are included in the proposed Project fostering "people-scaled" communities.
Promote infill development and redevelopment to revitalize existing communities	
Promote developments that provide a mix of uses	
Promote "people-scaled," walkable communities	
Support the preservation of stable, single-family neighborhoods	
PRINCIPLE 3: Enable Prosperity for All People	The proposed Project would be constructed with a

SCAG Goals, Policies, and Implementation Measures	Consistency Analysis
Provide, in each community, a variety of housing types to meet the housing needs of all income levels Support educational opportunities that promote balanced growth Ensure environmental justice regardless of race, ethnicity or income class Support local and state fiscal policies that encourage balanced growth Encourage civic engagement	variety of housing types, including duplexes, mobile homes, and apartments to appeal to a broad range of socioeconomic strata. Commercial plans, public parks, and other amenities would further foster opportunities for balanced growth and civic engagement.
PRINCIPLE 4: Promote Sustainability for Future Generations Preserve rural, agricultural, recreational and environmentally sensitive areas Focus development in urban centers and existing cities Develop strategies to accommodate growth that use resources efficiently, eliminate pollution and significantly reduce waste Utilize "green" development techniques	This Project is located within the County urban boundary, which is an area planned for residential development. This promotes opportunities for preservation of rural, agricultural, recreational and environmentally sensitive areas outside of this boundary, since those areas are not planned for development.

Source: SCAG RCP, 2008

4.9 NOISE

This section discusses the potential noise impacts associated with implementation of the proposed project. The noise setting section includes a background on the fundamentals of environmental noise and discusses existing noise conditions in the project area. The regulatory framework identifies the applicable state and local regulations. A summary of the significance thresholds and a discussion of potential noise impacts associated with the project are provided in the Impact Analysis section of this chapter. Where significant noise impacts are identified, mitigation is recommended to reduce these impacts to less than significant; however, noise related to traffic would remain significant and unavoidable.

4.9.1 Noise Setting

4.9.1.1 Fundamentals of Environmental Noise

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary enormously within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called "A-weighting," written "dBA." In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving sound level.

Different types of metrics are used to characterize the time-varying nature of sound. These metrics include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}), percentile-exceeded sound levels (L_{xx}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). Below are brief definitions of these metrics and other terminology used in this chapter:

- **Sound.** A vibratory disturbance created by a vibrating object that, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Maximum Sound Level (L_{max}).** The maximum sound level measured during the measurement period.
- **Minimum Sound Level (L_{min}).** The minimum sound level measured during the measurement period.
- **Equivalent Sound Level (L_{eq}).** The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
- **Percentile-Exceeded Sound Level (L_{xx}).** The sound level exceeded "x" percent of a specific time period. L_{10} is the sound level exceeded 10% of the time.
- **Day-Night Level (L_{dn}).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- Ldn and CNEL values rarely differ by more than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment.

4.9.1.2 Existing Noise Environment

The project site is situated in directly southeast of the City of Brawley, California south of Main Street on the slice of land located between SR 111 and Old Highway 111 (Best Avenue). Land uses around the project area consist primarily of agricultural fields, with residential, commercial, and industrial land uses located to the northwest of the site.

Noise monitoring surveys were performed from February 13th to 14th, 2007 and on April 3rd, 2008 to establish baseline noise conditions and to identify noise sensitive receptors in the vicinity of the site and along the surrounding roadway network. One long-term (24+ hour) and six short-term (15- minute) measurements were conducted (Figure 4.9-1, *Noise Monitoring Locations*).

Sound level measurements were conducted using Larson Davis Model 700 and 812 Sound Level Meters, set to slow time response and using A-Weighting (dBA). Traffic volume counts were conducted concurrent to the short-term noise measurements.

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SOURCE: NAIP Imagery (2005)

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Figure 4.9-1
Noise Monitoring Locations
Rancho-Porter Project EIR

The long-term measurement (LT-1) was located on a utility pole at the southeastern edge of the project site, adjacent to Best Avenue and about 250 feet from the center of SR 111. The primary noise source at this location was traffic along SR 111, which was calculated to generate a noise level of 57 CNEL dBA at the measurement location. Occasional traffic on Best Avenue generated high maximum noise levels that were not indicative of noise levels generated along SR 111; intervals where these noises were thought to have influenced the data were removed. The hourly trend in noise levels at LT-1 is displayed graphically in Figure 4.9-2, *Daily Trend in Noise Levels*.

The six attended short-term measurements (ST-1, ST-2, ST-3, ST-4, ST-5, and ST-6) were conducted at locations representative of project setbacks and at noise sensitive receptors along the surrounding roadway network, specifically along Malan Street, to establish the existing baseline noise conditions and for use in calibrating the noise model. Measurements were conducted at a height of 5 feet above the surrounding ground. The primary noise source at these locations was vehicular traffic on the adjacent roadways. Meteorological conditions during the short-term measurements consisted of clear skies with temperatures ranging from 73 to 80°F and winds speeds from 3 to 8 mph. The results of the sound level measurements are summarized in Table 4.9-1.

Table 4.9-1. Baseline Noise Measurements

Site ID	Measurement Location (Date, Start Time)	Primary Noise Source	Measurement Results (dBA)			
			L_{eq}	L_{90}	L_{50}	L_{10}
ST-1	Setback of 1641 Malan Street (4/3/2008, 9:37)	Traffic on Malan Street	57	45	49	61
ST-2	East of intersection of Best Avenue and Malan Street (4/3/2008, 10:10)	Traffic on Best Avenue	55	45	51	59
ST-3	Setback of Residence on Main Street, east of Best Avenue (4/3/2008, 10:45)	Traffic on Main Street	63	52	58	67
ST-4	Project site, west of CA-111 (4/3/2008, 11:09)	Traffic on CA-111	60	44	51	64
ST-5	Project site, south of Main Street (4/3/2008, 11:32)	Traffic on Main Street	63	47	59	68
ST-6	Setback of 367 Wildcat Road (2/14/2007, 11:42)	Traffic on CA-111	60	54	58	63

Source: ICF Jones & Stokes, 2008

4.9.2 Regulatory Setting

The State of California, the City of Brawley, and Imperial County have each established plans and policies designed to limit noise exposure at noise sensitive land uses. These plans and policies are contained in the following documents: (1) the State CEQA Guidelines, Appendix G, (2) the California Building Code, (3) the City of Brawley General Plan, (4) the Imperial County Noise Element, and (5) the Imperial County Noise Ordinance.

4.9.2.1 State Regulations

California Building Code and Guidelines

Title 24, Appendix Chapter 12, Section 1208A.8.2 of the California Building Code specifies that interior noise levels attributable to exterior noise sources shall not exceed 45 dBA L_{dn} or CNEL in any habitable room of new multi-family dwellings (includes hotels). Residential structures proposed where the noise level exceeds 60 dBA L_{dn} or CNEL are required to have an acoustical analysis showing that the proposed design will limit exterior noise to the prescribed allowable interior level.

4.9.2.2 Local Regulations and Planning Guidelines

The project is located in unincorporated Imperial County within the City of Brawley's adopted sphere of influence. Accordingly, Brawley plans and policies are applied to the project. Where the City of Brawley does not specify applicable noise standards, policies from the Imperial County General Plan and Noise Ordinance are included to supplement the Brawley noise standards.

City of Brawley General Plan Public Safety/Noise Element

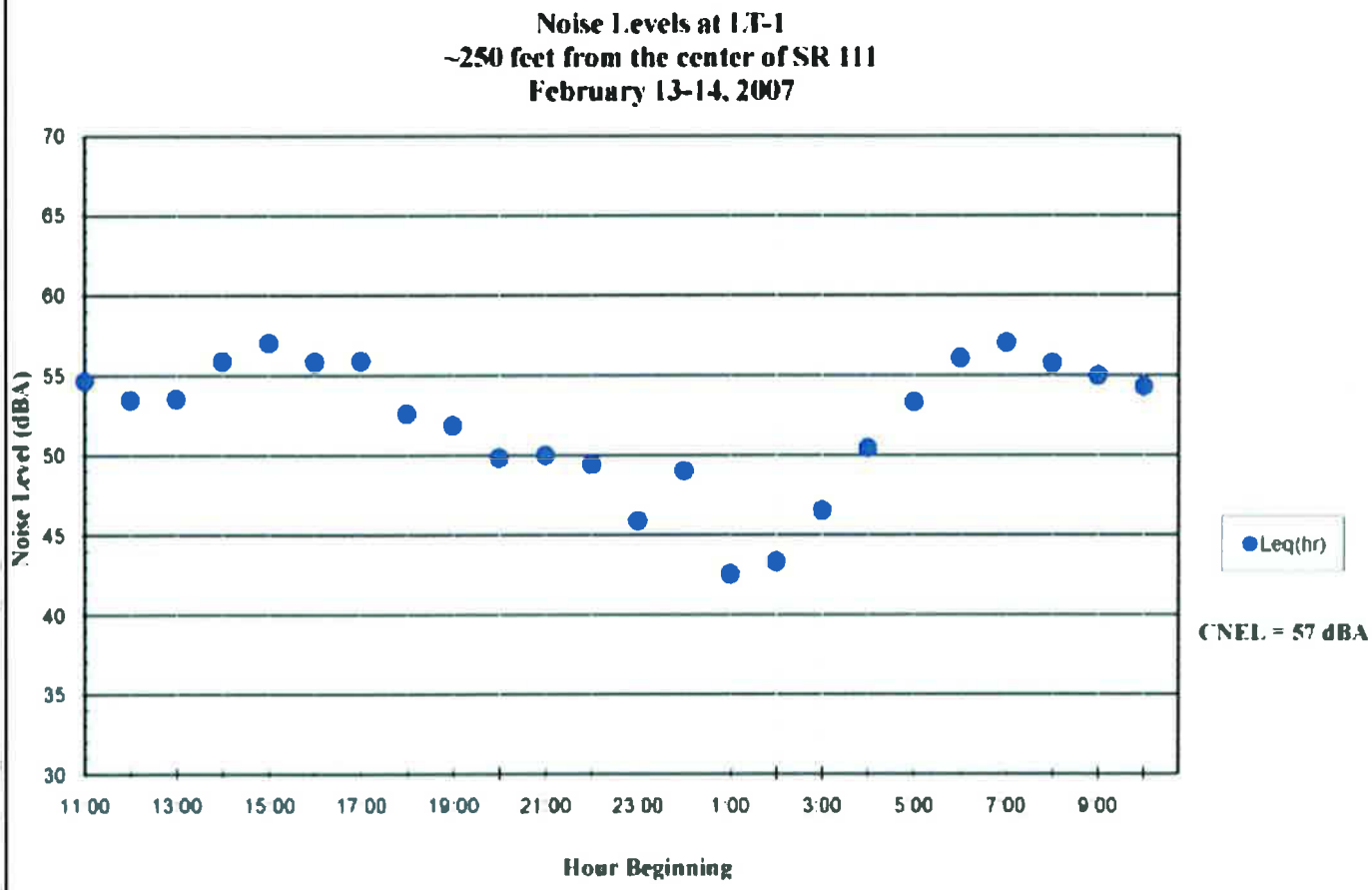
The City of Brawley General Plan Noise Element "identifies noise sensitive land uses and noise sources, defines areas of noise impacts, and establishes policies and programs to protect residents from excessive noise."

Noise and Land Use Planning

To identify potential conflicts between proposed land uses and the exterior noise environment, the City of Brawley has established a noise compatibility matrix, shown in Table 4.9-1. If a project falls within Zone A or Zone B the project is considered compatible with the noise environment. Zone A implies that no mitigation will be needed. Zone B implies that minor soundproofing of the structure may be needed to mitigate interior noise levels to achieve the Land Use Compatibility Guidelines, summarized in Table 4.9-2. For projects that fall within Zone C, noise mitigation is typically necessary to successfully mitigate noise levels to achieve the exterior and interior Land Use Compatibility Guidelines (Table 4.9-2).

The City of Brawley considers exterior noise levels of 65 dBA CNEL or less to be compatible (Zones A and B) for single-family residences, mobile homes, and multi-family residences. Parks and office uses would be considered compatible in areas where exterior noise levels are 75 dBA CNEL or less and commercial retail uses and restaurants would be considered compatible if exterior noise levels do not exceed 80 dBA CNEL.

As indicated in Table 4.9-2, the City of Brawley extends the CBC interior noise standards to apply to new single-family dwellings, in addition to new hotels, motels, apartment houses and dwellings, as specified by the CBC. For schools, libraries, offices and other noise-sensitive land uses for which occupancy is



SOURCE: NAIP Imagery (2005)

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Figure 4.9-2
Daily Trend in Noise Levels at Measurement Location LT-1
Rancho-Porter Project EIR

typically only during daytime hours, the interior noise standard is averaged over a 12-hour daytime period (L_{eq12h}).

The City of Brawley specifies policies to avoid noise impacts resulting from the "juxtaposition of incompatible land uses … by considering the effects of noise early in the land use planning process". New residential developments located in proximity to existing commercial/industrial operations are required to control residential interior noise levels (Policy 10.5). New commercial/industrial operations located in proximity to existing or proposed residential areas are required to incorporate noise mitigation into project design (Policy 10.6). For commercial uses developed as part of a mixed-use project (with residential), the commercial use must not be noise intensive and mixed-use structures must be designed to prevent transfer of noise from the commercial to the residential use (Policy 10.7).

Table 4.9-2. Land Uses and CNEL Values

Land Use Categories	Land Uses	CNEL <55	CNEL 55-60	CNEL 60-65	CNEL 65-70	CNEL 70-75	CNEL 75-80
Residential	Single Family, Duplex, Multiple Family	A	A	B	C	C	D
Residential	Mobile Home	A	A	B	C	C	D
Commercial; regional, district	Hotel, Motel, Transient Lodging	A	A	B	B	C	C
Commercial; regional, village, district, special	Commercial Retail, Bank, Restaurant, Movie Theater	A	A	A	A	B	B
Commercial, Industrial, Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C
Commercial; Recreation Institutional; Civic Center	Amphitheater, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D
Commercial; Recreation	Children Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D

Zone A – Clearly compatible. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B – New construction of development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction with closed windows and fresh air supply systems or air conditionally will normally suffice.

Zone C – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation

Land Use Categories	Land Uses	CNEL <55	CNEL 55-60	CNEL 60-65	CNEL 65-70	CNEL 70-75	CNEL 75-80
features included in the design.							
Zone D – New construction or development should generally not be undertaken.							
Source: City of Brawley General Plan Public Safety/Noise Element, Table PSN-2							

Table 4.9-3. Land Uses Compatibility Guidelines

Land Use	Interior Noise Standards	Exterior Noise Standards
Residential – Single family, multifamily, duplex, mobile home	CNEL 45 dBA	CNEL 65 dBA
Residential – Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dBA	CNEL 65 dBA
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls.	Leq (12) 45 dBA	-
Schools	Leq (12) 45 dBA	Leq (12) 67 dBA
General offices, reception, clerical	Leq (12) 50 dBA	-
Bank lobby, retail stores, restaurant, typing pool, etc.	Leq (12) 55 dBA	-
Manufacturing kitchen, warehousing, etc.	Leq (12) 65 dBA	-
Parks, playgrounds	-	CNEL 65 dBA
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dBA
Source: City of Brawley General Plan Public Safety/Noise Element, Table PNS-3		

Construction Noise

Policy 9.2 of the General Plan specifies that the impacts of construction noise on adjacent land uses be minimized through limiting the permitted hours of activity.

Imperial County General Plan Noise Element (Construction Limits)

The County Noise Element (in Chapter IV, Section C, subsection 3) establishes maximum noise levels and limits on the hours of construction related activities, as follows:

- "Construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB L_{eq}, when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor… In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB L_{eq} when averaged over a one (1) hour period.

- Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays."

Imperial County Noise Ordinance

Imperial County's Municipal Code (Title 9 Land Use Code, Section 90702.00 Sound Level Limits) has established maximum noise levels at the boundary of various land uses as shown in Table 4.9-3. These limits apply to noise generation from one property to an adjacent property. These standards are also contained in the Noise Element, as Property Line Noise Limits.

Table 4.9-4. Property Line Noise Limits

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential Zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential Zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial Zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

Note: When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB Leq.

Source: Imperial County General Plan

4.9.3 Impact Analysis

4.9.3.1 Significance Criteria

Noise and Land Use Compatibility

Implementation of the proposed project is considered to result in a significant noise impact if proposed land uses would be exposed to noise levels that exceed the land use compatibility guidelines specified in Tables 4.9-1 and 4.9-2. A significant noise impact would occur if proposed land uses would be exposed to exterior noise levels exceeding 60 dBA CNEL for new single and multi-family residential uses, 65 dBA CNEL for parks and offices, and 70 dBA CNEL for restaurants and retail uses.

Project Generated Traffic Noise

Neither the City of Brawley nor the State of California identifies significance thresholds for increases in noise due to increases in traffic generated by a project. Accordingly, the following significance thresholds have been developed based on city noise standards and professional judgment. The proposed project is considered to result in a significant traffic noise impact at existing offsite noise residential uses if it would:

- Result in a noise increase of 3 dBA or more where the resulting outdoor noise levels with project traffic would exceed 60 dBA CNEL; or
- Result in a noise increase of 5 dBA or more where the resulting outdoor noise levels with project traffic would continue to be 60 dBA CNEL or less.

In both cases the increase in noise is based on comparing project and no project conditions within the same time frame.

Construction Noise

The City of Brawley does not specify noise standards for construction. Therefore, the County standards are used as the basis for the construction noise significance thresholds. Construction activity is considered to result in a significant construction noise impact if the activity is predicted to result in a 1-hour L_{eq} sound level at the nearest noise sensitive receptor that exceeds 75 dBA between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturday. Any noise-generating construction operations that occur on Sunday or holidays would be considered to result in a significant noise impact.

California Environmental Quality Act

CEQA contains the following guidelines to evaluate the significance of noise impacts attributable to a proposed project. Based on the CEQA Guidelines, a proposed project would have a significant impact on the noise environment if it would result in:

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- Be located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.
- Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

Of these guidelines, items (a), (c), and (d) are applicable to the proposed project. Guideline (b) is not applicable because the project is not located near, nor proposes to introduce, any substantial generators of ground borne vibration. Guidelines (e) and (f) are not applicable because the project is not located in the vicinity of any public airport or private airstrip.

Thresholds of Significance

Significance thresholds for noise are based on Imperial County and City of Brawley noise standards mentioned above.

A significant operational impact would occur if the Project would:

NOI-1: Expose new, noise sensitive land uses to transportation noise levels in excess of City standards.

NOI -2: Develop noise generating land uses in proximity to or integrated with noise sensitive land uses.

NOI-3: Expose off-site noise sensitive land uses to increased traffic noise

A significant construction-related impact would occur if the Project would:

NOI-4: Expose off-site noise sensitive land uses to short-term construction noise.

4.9.3.2 Impact Analysis

Operational Noise

Threshold NOI-1: Would the Project expose new, noise sensitive land uses to transportation noise levels in excess of City standards?

Discussion

The proposed Project would develop residential and commercial uses adjacent to major and local roadways. Single-family Patio and Caravilla homes would back onto Best Avenue, with homes setback 20 feet or further from the edge of the roadway. Multi-family homes in the Village Suites and in the mixed use areas would be developed with buildings fronting Best Avenue and SR 111. The multi-family homes would be setback from SR 111 by open space retention areas. Mixed use areas, which include multi-family units, are also planned adjacent to SR 111 and Best Avenue. In addition, recreational facilities and parks are planned along SR 111.

Noise sensitive residential uses and commercial uses, such as offices, would be developed as part of the mixed use areas located primarily along SR 111, with some development along Best Avenue. Less noise sensitive commercial uses, such as big box stores, fast food restaurants, and regional commercial, would be developed in the northern portion of the site along Main Street, SR 111, and Best Avenue. Restaurants would also be developed as part of the mixed use areas.

Cumulative traffic noise levels along Main Street, Best Avenue, and SR 111 were calculated based on noise measurements made during the noise monitoring survey, traffic volumes supplied by Linscott, Law & Greenspan, and traffic noise modeling using the FHWA Traffic Noise Model (TNM). The calculated distances to the 60, 65, and 70 dBA CNEL noise contours from the center of Main Street, Best Avenue, and SR 111 are summarized in Table 4.9-5 for the cumulative with project traffic condition. Figure 4.9-3 illustrates the noise contour lines with the installation of an 8-foot masonry wall.

Table 4.9-5. Unshielded Distance to 60, 65 and 70 dBA CNEL Noise Contours under Cumulative with Project Traffic Conditions

	Distance from Center of Road to CNEL Noise Contour, ft		
Road	**60 dBA CNEL**	**65 dBA CNEL**	**70 dBA CNEL**
Main Street (SR 78)	550 ft	280 ft	140 ft
Best Ave (Old Hwy 111)	200 ft	120 ft	70 ft
SR 111	390 ft	210 ft	110 ft

Source: ICF Jones & Stokes, 2008

Noise sensitive land uses are proposed in areas where exterior noise is predicted to exceed the City's established land use compatibility thresholds as stated above. There is also potential for noise to exceed the City's interior noise standards for these uses.

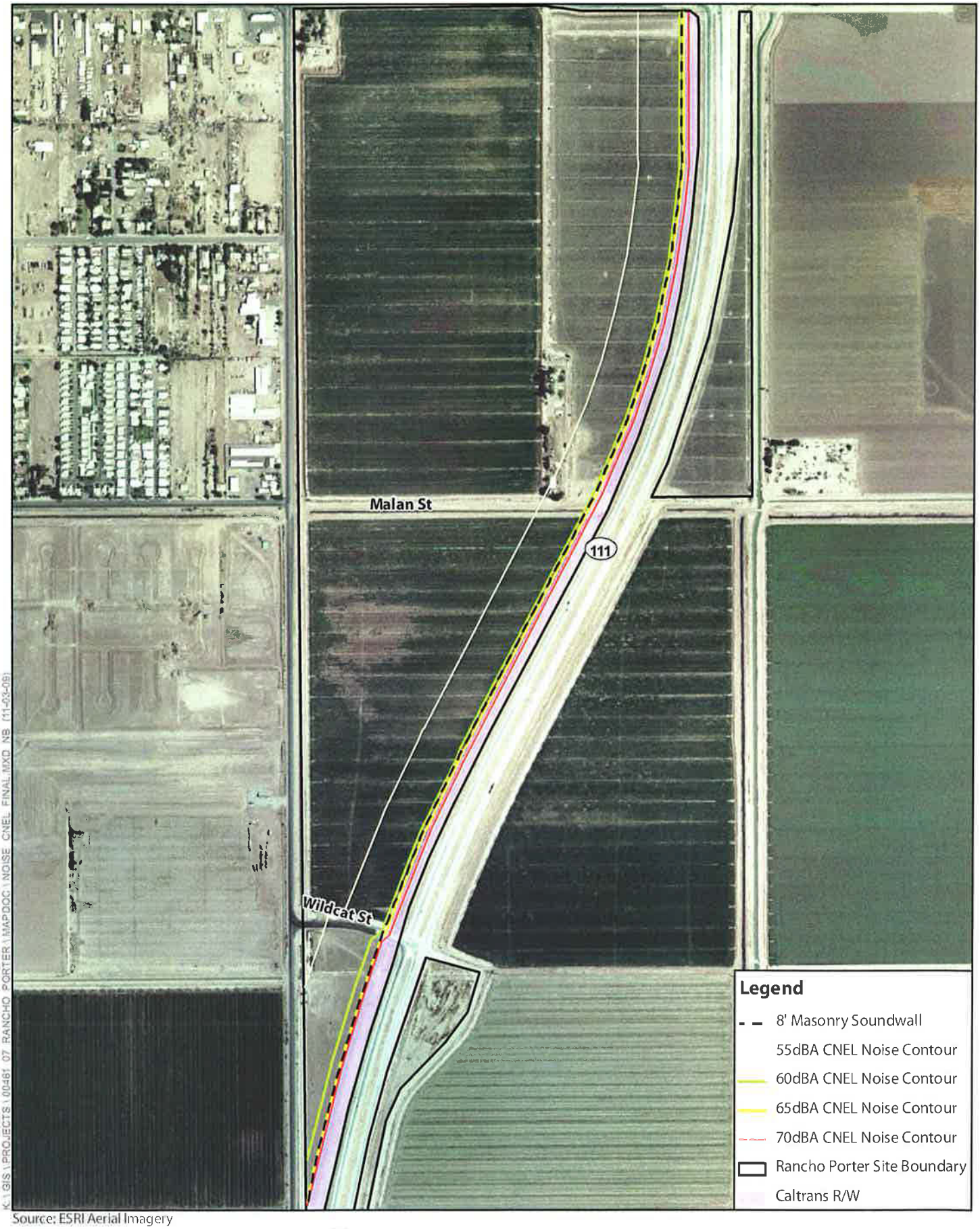
Impact Determination

Impact NOI-1: The Project would expose new noise sensitive land uses to transportation noise levels in excess of City standards.

Mitigation Measures

MM NOI-1: Implement noise-reducing measures at new noise sensitive residential and park uses to comply with City land use compatibility guidelines for noise. In areas where new residential development or noise sensitive park uses would be developed adjacent to Best Avenue, SR 111, or noise generating project commercial development, the project applicant shall retain a qualified acoustical professional to prepare a design level study to define reasonable and feasible noise mitigation to reduce exterior and interior noise levels in noise sensitive areas to comply with the applicable City land use compatibility guidelines. The identified mitigation shall be included in the design of the project. Measures that can be implemented to achieve this include but are not limited to:

- Utilizing site planning to minimize noise in parks and residential outdoor activity areas by locating these areas as far as possible from noise sources or at locations behind buildings.
- Utilizing noise barriers or berms to acoustically shield these uses where site planning methods are not sufficient to reduce noise in noise sensitive exterior use areas to below 65 dBA CNEL. An 8-foot masonry wall or equivalent shall be constructed along SR 111, as illustrated in Figure 3.9-3, to ensure noise levels at noise sensitive lands uses remain under 65 dBA CNEL.



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Source: ESRI Aerial Imagery

ICF Jones & Stokes
an ICF International Company

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Figure 4.9-3
Noise Contour Lines Along SR-111
Rancho-Porter Project EIR

- Providing mechanical ventilation so that windows can remain closed to maintain interior noise levels below 45 dBA CNEL where exterior noise levels at residential façades are predicted to exceed 60 dBA CNEL.
- Providing sound-rated windows and applying other noise-reducing construction methods where exterior noise levels at residential facades are predicted to exceed 65 dBA CNEL.

MM NOI-2: Implement noise-reducing measures at new noise sensitive commercial uses to comply with City land use compatibility guidelines for noise. Where new commercial uses would be developed in areas where exterior noise is predicted to exceed the City's land use compatibility guidelines (65 dBA CNEL for offices and 70 dBA CNEL for restaurants and retail), the project applicant shall retain a qualified acoustical professional to prepare a design level study to define reasonable and feasible noise mitigation to reduce exterior and interior noise levels in noise sensitive areas to comply with the applicable City land use compatibility guidelines. The identified mitigation shall be included in the design of the project. Measures that can be implemented to achieve this include but are not limited to:

- Providing mechanical ventilation so that windows can remain closed to maintain interior noise levels below 50 dBA L_{eq}, averaged over a 12-hour daytime period (L_{eq12h}) where exterior noise levels are predicted to exceed 65 dBA CNEL at the façade of offices.
- Providing mechanical ventilation so that windows can remain closed to maintain interior noise levels below 55 dBA L_{eq}, averaged over a 12-hour daytime period (L_{eq12h}) where exterior noise levels are predicted to exceed 70 dBA CNEL at the façade of retail or restaurant uses.

Residual Impacts

With implementation of mitigation measures MM NOI-1 and MM NOI-2, this impact would be reduced to a less-than-significant level.

Threshold NOI-2: Would the Project develop noise generating land uses in proximity to or integrated with noise sensitive land uses?

Discussion

Commercial uses would include big box stores, fast food restaurants, and regional commercial uses. Noise sources associated with these types of uses include mechanical equipment, parking lot activities, loading dock activities, and drive thru activities. Although there are no existing noise sensitive uses within 500 feet of these uses, noise sources associated with project commercial uses could affect residences proposed in the plan area if not designed properly.

Mixed use development would integrate residential apartments with restaurants, retail, and office commercial uses. These types of commercial uses do not typically create noise and land use compatibility conflicts, although again noise sources such as mechanical equipment, truck deliveries, and noise from general activity in the area could affect project residences if acoustics is not considered as part of the design of the project. Noise sensitive uses could be exposed to noise that exceeds applicable city land use compatibility guidelines for noise. This impact is therefore considered to be significant.

Implementation of mitigation measures MM NOI-1 and MM NOI-3 would reduce this impact to a less-than-significant level.

Impact Determination

Impact NOI-2: The Project would develop noise generating land uses in proximity to or integrated with noise sensitive land uses.

Mitigation Measures

MM NOI-3: Implement noise-reducing measures at commercial uses such that noise generated at adjacent noise sensitive uses complies with Imperial County noise standards. In areas where new noise generating uses are proposed adjacent to or integrated with noise sensitive uses, the project applicant shall retain a qualified acoustical consultant to prepare a design level study to define reasonable and feasible noise mitigation to reduce noise levels to comply with Imperial County noise standards (Table 4.9-3). The identified mitigation shall be included in the design of the project. Measures that can be implemented to achieve this include but are not limited to:

- Utilizing site planning to minimize noise in noise sensitive areas by locating noise generating operations in areas that are setback or acoustically shielded from noise sensitive uses.
- Incorporating appropriate noise controls so that mechanical equipment from proposed uses does not generate noise levels in excess of 50 dBA Leq during daytime hours (7:00 am to 10:00 pm) or 45 dBA L_{eq} during nighttime hours (10:00 pm to 7:00 am) at single family land uses or generate noise levels in excess of 55 dBA Leq during daytime hours or 50 dBA L_{eq} during nighttime hours at multifamily land uses.
- Limiting the hours of noise generating activities, such as maintenance, loading and unloading, and drive thru operations, to 7:00 a.m. to 10:00 p.m., where potential noise conflicts exist.

Residual Impacts

With implementation of mitigation measure MM NOI-3, this impact would be reduced to a less-than-significant level.

Project Generated Traffic Noise

Threshold NOI-3: Would the Project expose off-site noise sensitive land uses to increased traffic noise?

Discussion

Development of the proposed project would increase traffic volumes on the local roadway network, which would result in increased traffic noise levels at noise sensitive receptors located along these roadways. Project generated noise increases are calculated by comparing project traffic conditions to non-project traffic conditions within the same time frame (i.e., project + existing vs. existing, project + cumulative + existing vs. cumulative + existing). Calculations were based on ADT traffic volumes supplied by Linscott, Law & Greenspan. The calculated traffic noise levels at 100 feet from the center of the roadway under existing, existing + project, existing + cumulative, and existing + cumulative + project traffic conditions are summarized in Table 4.9-6.

Table 4.9-6. Calculated Traffic Noise Levels at 100 feet from Center of Roadway

		Calculated CNEL at 100 feet from Center of Road					
Road	**Segment**	**Existing**	**Existing + Project**	**Increase over Existing**	**Existing + Cumulative**	**Existing + Cumulative + Project**	**Increase over Cumulative**
Main Street (SR 78)	SR 86 to Old Hwy 111	70 dBA	70 dBA	<1 dBA	73 dBA	73 dBA	<1 dBA
	Old Hwy 111 to Best Ave	69 dBA	69 dBA	<1 dBA	72 dBA	72 dBA	<1 dBA
	Best Ave to SR 111	65 dBA	68 dBA	3 dBA*	70 dBA	71 dBA	1 dBA
Malan Street	SR 86 to Bryant Road	<55 dBA	58 dBA	>3 dBA*	59 dBA	61 dBA	2 dBA
	Bryant Rd to Best Ave	<55 dBA	59 dBA	>3 dBA*	58 dBA	61 dBA	3 dBA*
Wildcat Road	Best Ave to SR 111	<55 dBA	<55 dBA	<3 dBA	59 dBA	60 dBA	<1 dBA
Best Avenue	SR 78 to Malan St	59 dBA	65 dBA	6 dBA*	60 dBA	65 dBA	5 dBA*
	Malan Set to Mead Rd	59 dBA	64 dBA	5 dBA*	63 dBA	66 dBA	3 dBA*
SR 111	SR 78 to Wildcat Rd	67 dBA	68 dBA	<1 dBA	70 dBA	70 dBA	<1 dBA
	Wildcat Rd to Schartz Rd	67 dBA	69 dBA	2 dBA	72 dBA	73 dBA	<1 dBA
	Schartz Rd to Keystone Rd	67 dBA	69 dBA	2 dBA	73 dBA	73 dBA	<1 dBA
	Keystone Rd to Harris Rd	67 dBA	69 dBA	2 dBA	73 dBA	73 dBA	<1 dBA
	Harris Road to Worthington Road	67 dBA	68 dBA	1 dBA	72 dBA	73 dBA	<1 dBA
	Worthington Road to Aten Road	68 dBA	69 dBA	<1 dBA	72 dBA	73 dBA	<1 dBA

*potentially significant impact

Source: ICF Jones & Stokes, 2008

Significant noise impacts would occur where project traffic would result in noise level increases of 3 dBA or more at noise sensitive receptors where resulting noise levels would exceed 60 dBA CNEL and of 5 dBA or more where noise levels would continue to be 60 dBA CNEL or less at noise sensitive receptors. As indicated in Table 4.9-6, significant traffic noise impacts could potentially occur along Main Street between Best Avenue and SR 111, along Malan Street between SR 86 and Best Avenue, and along Best Avenue from SR 78 to Mead Road.

Existing land uses along the identified segments of Main Street and Best Avenue include agricultural, commercial, and industrial uses. One existing residence is located to the east of Best Avenue, south of Main Street, on the project site, which would be redeveloped as part of the project. There are no existing noise sensitive uses along the identified segments of Main Street or Best Avenue that would remain with the development of the project. Therefore, traffic noise impacts along Main Street and Best Avenue are considered to be less-than-significant.

Residential subdivisions are located to the north and south of Malan Street through most of the length of the roadway from SR 86 to Best Avenue. Most of these residences side or back onto Malan Street and are not shielded by noise attenuation features such as sound barriers, berms, or structures. A new residential subdivision is being constructed to the south of Malan Street, west of Best Avenue. A 6 foot high block wall has been constructed between the new homes and Malan Street. Unshielded noise levels along Malan Street are calculated to be about 67 dBA CNEL under cumulative with project traffic conditions, assuming a setback of 50 feet from the center of the roadway. Traffic noise levels behind a 6 foot high sound barrier are predicted to be 5 to 6 dBA lower which would reduce noise to be in compliance with City land use compatibility guidelines for noise. However, at existing locations that are not protected by sound barrier project-related traffic noise increases along this segment of roadway would exceed the significance thresholds. This impact is therefore considered to be significant along Malan Street between SR-86 and Best Avenue.

Implementation of Mitigation Measure MM NOI-4 would reduce this impact. However, because it may not be feasible to implement noise reducing measures in all cases, this impact is considered to be significant an unavoidable.

Impact Determination

Impact NOI-3: The Project would expose off-site noise sensitive land uses to increased traffic noise.

Mitigation Measures

MM NOI-4: Implement traffic noise reduction measures. The project applicant shall retain a qualified acoustical professional, to define reasonable and feasible noise mitigation for noise sensitive receptors along Malan Street that are predicted to be exposed to traffic noise increases that exceed the noise significance thresholds. Noise reduction measures could include but are not limited to the following:

- Constructing new or larger noise barriers or berms to protect existing residential land uses. This method would be most applicable to residential subdivisions.
- Implementing alternative noise reduction techniques, such as installing traffic calming measures to slow traffic, coordinating routing and other traffic control measures, and/or re-paving the streets with "quiet" pavement types such as a porous Open-Grade Asphalt Concrete with fine aggregate.
- Providing building sound insulation such as sound rated windows and doors on a case-by-case basis as a method of reducing noise levels in interior spaces of affected residences. This method would typically be applicable where the construction of sound barriers is not found to be feasible and interior noise levels inside residences are anticipated to exceed 45 dBA CNEL.

Residual Impacts

Implementation of Mitigation Measure MM NOI-4 would reduce this impact. However, mitigation may not be feasible in some areas due to considerations such as roadway access, cost, terrain, access, and

multiple property owners of existing residences. As a result, this impact is considered to be significant and unavoidable.

Construction Noise

Threshold NOI-4: Would the Project expose off-site noise sensitive land uses to short-term construction noise?

Discussion

Construction of the project would occur in four phases over a period of about 12 years. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance and shielding between construction noise sources and noise sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction lasts over extended periods of time. Detailed plans for construction of the project and the selection of construction equipment have not yet been determined. Table 4.9-7 summarizes noise levels produced by commonly used construction equipment.

Table 4.9-7. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Grader	85
Bulldozers	85
Truck	88
Loader	85
Roller	74
Air Compressor	81
Backhoe	80
Pneumatic Tool	85
Paver	89
Concrete Pump	82

Source: Federal Transit Administration 2006.

Pile driving would not be employed as a construction method. Individual types of construction equipment are expected to generate noise levels ranging from 74 to 89 dBA at a distance of 50 feet. Noise generated by construction is anticipated to be the greatest during site grading activities, roadway construction, and excavation for underground utilities. Noise generated during building construction would be lower. Maximum noise levels would typically range from 70 to 90 dBA during excavation and grading activities and from 65 to 85 dBA during building construction at a distance of 50 feet from the source. Hourly average construction noise levels are typically 75 dBA to 85 dBA measured at a distance of 50 feet from the center of

the site during busy construction periods. Construction noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in much lower construction noise levels at distant receptors.

Residences located to the west of the project site between Main Street (SR 78) and Malan Street are located 700 feet or further from the site and are generally shielded by existing industrial structures located along Best Avenue. There are no noise sensitive receptors located within 1,000 feet to the north, south, or east of the project site. At a distance of 700 feet, not taking into account any acoustical shielding that is located between the receptor and the noise source, hourly average construction generated noise levels would be about 53 to 63 dBA during busy construction periods when construction is located in the western portion of the site, adjacent to Best Avenue. Maximum noise levels could reach 68 dBA. These noise levels would be in the range of maximum noise levels generated by traffic along the local roadway network. Construction noise would be lower in acoustically shielded locations, at noise sensitive receivers located further from the project site, or when construction occurs on the eastern or southern portion of the site. Maximum and hourly average noise levels during construction would be well below 75 dBA at these homes, even when construction is located in the western portion of the project site, adjacent to Best Avenue. As a result, project-related construction noise impacts are considered to be less-than-significant impact at existing noise sensitive receptors.

Due to the extended duration of the project, construction of later phases would occur adjacent to noise sensitive receptors built as part of the earlier phases of the project. Although construction noise would be localized to individual sites during construction, businesses and residences constructed during earlier phases of the project would be intermittently exposed to elevated levels of noise throughout later phases of the multi-year construction period. Construction noise levels at these receptors could intermittently exceed 75 dBA. This impact is therefore considered to be significant impact at noise sensitive uses on the project site. Implementation of mitigation measure MM NOI-5 would reduce this impact to a less-than-significant level.

Impact Determination

Impact NOI-4: The Project would expose off-site noise sensitive land uses to short-term construction noise.

Mitigation Measures

MM NOI-5: Employ Measures to Reduce Construction Noise to Comply with Applicable County Construction Noise Standards. The following measures shall be incorporated into the project contract specifications to reduce construction noise impacts to be in compliance with applicable County noise standards when construction is located within 500 feet of noise sensitive receptors:

- Limit all construction activities, including loading and unloading of materials and on-site truck movements, to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturday, as stated in the Imperial County General Plan.
- Equip all internal combustion engine-driven equipment with mufflers, air-inlet silencers, and any other shrouds, shields, or other noise-reducing features that are in good operating condition and appropriate for the equipment.
- Utilize "quiet" models of air compressors and other stationary noise sources where such technology exists.

- Utilize electrically powered equipment instead of pneumatic or internal combustion powered equipment, where feasible.
- Use of noise-producing signals, including horns, whistles, alarms, and bells, for safety warning purposes only.
- Restrict the use of any public address or music systems so that they are not audible at any adjacent receptor.
- Locate stationary noise-generating equipment, construction parking, and maintenance areas as far as reasonable from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines (i.e., in excess of five minutes).
- Place temporary barriers or enclosure around noise-generating equipment
- Designate a "construction liaison" that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.

Residual Impacts

With implementation of mitigation measure MM NOI-5, this impact would be reduced to a less–than-significant level.

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4.10

PUBLIC SERVICES AND RECREATION

The purpose of this section is to determine the potential impact of the proposed project regarding local public services and recreational facilities. This section provides an analysis of potential impacts of the proposed project for fire protection/emergency services, law enforcement services, schools, libraries, solid waste disposal, and recreation/parks. Sources of information for the following section include the City of Brawley Final Service Area Plan and correspondence with various City and County departments.

4.10.1 Existing Conditions

4.10.1.1 Fire Protection/Emergency Medical Services

Fire protection and emergency response services to the proposed Project would be provided by the City of Brawley Fire Department, located at 815 Main Street and shown on Figure 4.10-1, *Public Facilities Location Map*. The City of Brawley has signed a mutual aid agreement with other cities in Imperial County as well as with the County of Imperial. Under exigent circumstances, fire protection services may also be provided by the other city and County fire departments. The primary agency providing assistance to the City of Brawley is the City of Calipatria, located approximately 10 miles north of the proposed project site at 125 N. Park Avenue, also shown on Figure 4.10-1. Estimated response time from the Calipatria station to the project site is approximately 15 minutes.

4.10.1.2 Law Enforcement

The Imperial County Sheriff's Department is the primary law enforcement agency in Imperial County and provides law enforcement for unincorporated areas and, including jail facilities for both incorporated and unincorporated areas. Sheriff substations are located in the communities of Brawley, Salton City, and Winterhaven, with resident deputies located in the unincorporated communities of Ocotillo, Bombay Beach, Niland and Palo Verde.

The Brawley Police Department would provide primary law enforcement and investigation for the proposed project site. Figure 4.10-1, *Public Facilities Location Map*, shows the location of the Brawley police station, located at 351 Main Street. This substation has 28 sworn officers and 12 full/time non-sworn personnel. The current staffing level for the Brawley Police Station is approximately 1.1 sworn officers per 1,000 population. This represents an existing deficiency in the level of service for this area, as the City's goal is 1.5 sworn officers per 1,000 population.

The City's performance standard is to respond to all calls within five minutes, which is currently achieved by the Brawley Police Department. The Department maintains this performance level by providing dispatch services from the Police Station for all of the officers working in the field on a continual basis.

4.10.1.3 Library Resources

The Imperial County Free Library (ICFL) provides library services to the proposed project site. However, the project would be served by the City of Brawley upon project implementation.

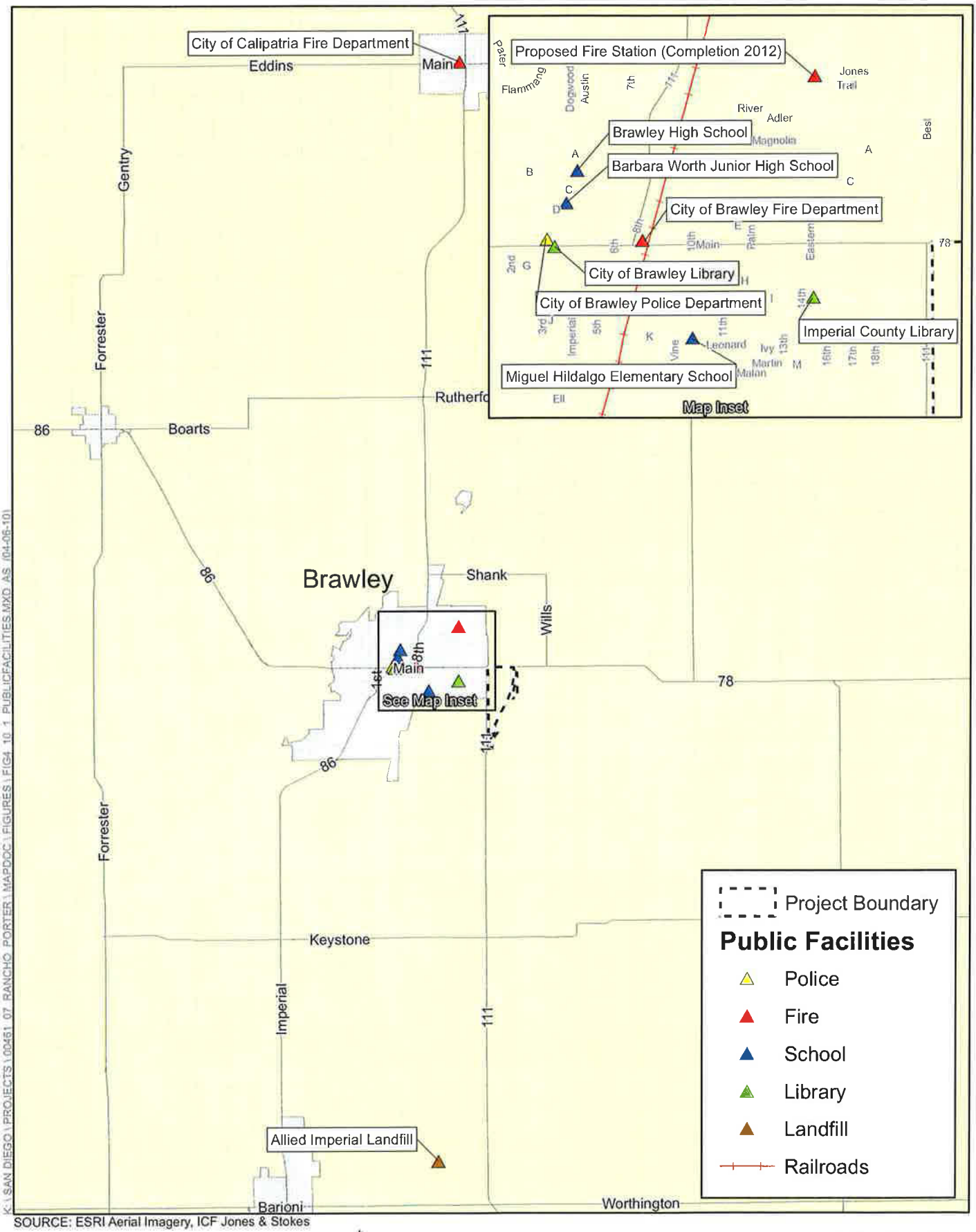
The City of Brawley owns and operates a public library facility located at 400 Main Street, as shown on Figure 4.10-1, *Public Facilities Location Map*. The library is 6,515 square feet and houses approximately 40,000 books. Services provided by the library include: circulation of library materials to all patrons; reference service, including telephone reference service; audio visual services, including records, tapes, and video cassettes; Spanish language books; English language tutoring; book reservations; inter-library loan service; access to "second level" reference services through the cooperative library system; and special children's programming including school class visits, story hours, movies, and craft programs.

A new library branch is being built adjacent to a community center and will be on the grounds of the Imperial County Office of Education's Del Rio School at the corner of "I "and Eastern Ave. According to library staff, its opening has been postponed until a tentative date in August, 2008.

4.10.1.4 Schools

The project site would be located within the jurisdiction of the Brawley Elementary School District and the Brawley Union High School District, which serve the City of Brawley including nearby unincorporated areas. Figure 4.10-1, *Public Facilities Location Map*, shows the location of the project site in relation to existing schools. The Brawley Elementary School District enrolls 3,618 students, with a capacity for 4,179 students (Desert Schools Consultants, 2008a). The Brawley Union High School District enrolls 1,986 students, but has capacity for 1,755 students (Desert Schools Consultants, 2008b).

Four existing schools would serve the project area's student population: Myron D Witter Elementary (K-3, 721 students) located at 150 K Street, Hildalgo Elementary School (K, 4-6, 624 students) located at 4502 Casey Road, Barbara Worth Junior High School (5-8, 794 students) located at 385 D Street, and the Brawley Union High School (9-12, 1,744 students) located at 480 N. Imperial Avenue.



SOURCE: ESRI Aerial Imagery, ICF Jones & Stokes

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Figure 4.10-1
Public Facilities Location Map
Rancho-Porter Project EIR

4.10.1.5 Solid Waste

The project would be served by the City of Brawley, who contracts waste hauling with Allied Waste Management Services, a privately owned company that transports solid waste from residences and businesses to the Allied Imperial Landfill. This 42-acre landfill is located along East Robinson Road in unincorporated land on the eastern outskirts of the City of Imperial, approximately 10 miles northeast of the project site, and its location is shown on Figure 4.10-1. It has approximately two million cubic yards of capacity remaining and an estimated closure date of 2013. The landfill currently receives approximately 600 tons a day and has the capacity to receive 1,135 tons a day. Residents and businesses pay fees in exchange for waste removal services. Allied Imperial Waste Management, in conjunction with the City, has incorporated a comprehensive waste reduction program that would limit the amount of solid waste production from City businesses and residents.

Additionally, the Imperial Waste Management Board (IWMB) and the County encourage existing and new developments to participate in recycling programs to help meet or exceed diversion goals. Moreover, Allied Imperial Landfill purchased an additional 160 acres, of which 100 acres are proposed for landfill use and 60 acres are proposed for buffer. This new acreage would have a 30-40 year capacity at 1,000 tons a day. This property could alternatively be used for the construction of a transfer station that would allow for the exportation of solid waste. Allied currently owns a landfill in Yuma, Arizona which has a 100-year life capacity and would be a possible site if the waste needed to be exported.

4.10.1.6 Recreation

As shown in Table 4.10-1, *Existing Developed and Undeveloped Parks City of Brawley, 2006*, there are a total of 118.10 acres of developed parkland and 26.65 acres of undeveloped parkland within the City of Brawley. Developed parkland consists of approximately 3.25 acres of mini-parks, 33.741 acres of neighborhood parks, and 81.14 acres of community parks/facilities.

Table 4.10-1. Existing Developed and Undeveloped Parks City of Brawley, 2006

Types of Parkland	Developed Acres	Undeveloped Acres
Mini-Parks		
Ridge	1.63	0
Kissee	.34	0
Kelley	.63	0
Citrus View	.65	0
Neighborhood Parks		
Abe Gonzalez	4.42	0
Meserve	4.42	0
Hinojosa	6.52	0
Guadalupe	3.59	0

Types of Parkland	Developed Acres	Undeveloped Acres
Alyce Gereaux	3.88	0
Plaza Park	5.38	0
Thornton	5.5	0
Parkside		6.45
Community Parks/Facilities		
Lions Center	8.91	6.2
Cattle Call	56	4
Pat Williams	15.71	10
Senior Center	.52	0
Total	**118.10**	**26.65**

Source: Draft Park and Recreation Five Year Plan (2010)

4.10.2 Regulatory Setting

4.10.2.1 State of California

Senate Bill 610: Water Supply Assessment

SB 610 became effective January 1, 2002. The bill requires a city or county that determines that a project (as defined in Water Code Section 22 10912) is subject to CEQA to identify any public water system that may supply water for the project and to request those public water systems prepare a specified water supply assessment. This assessment is required to include an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. The assessment must be approved by the governing body of the public water system supplying water to the project. If the projected water demand associated with the project was included as part of the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in the water supply assessment. The bill requires the city or county, if it is not able to identify any public water system that may supply water for the project, to prepare the water supply assessment after a prescribed consultation.

If the public water system concludes that water supplies are, or will be, insufficient, plans for acquiring additional water supplies are required to be submitted to the city or county. The city or county must include the water supply assessment in any environmental document prepared for the project pursuant to the act. It also requires the city or county to determine whether project water supplies will be sufficient to satisfy the demand of the project, in addition to existing and planned future uses.

A WSA was prepared for the proposed project and is included in this EIR as Appendix J. Results from the assessment are summarized in the analysis below.

Assembly Bill 939: California Integrated Waste Management Act

The State of California requires that all jurisdictions achieve compliance with AB 939, a state mandate that required jurisdictions to achieve 50% diversion of solid waste from landfills by 2000. AB 939 further requires each city to conduct a Solid Waste Generation Study and to prepare annually a Source Reduction and Recycling Element (SRRE) to describe how it will reach its goals. AB 939 was designed to focus on source reduction, recycling and composting, and environmentally safe landfilling and transformation activities.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 required each jurisdiction to adopt an ordinance by September 1, 1994, requiring any "development project" for which an application for a building permit is submitted to provide an adequate storage area for collection and removal of recyclable materials. AB 1327 regulations govern the transfer, receipt, storage, and loading of recyclable materials within the City.

California's Building Code CCR, Title 24, Part 6

Title 24, Part 6 of the California's Building Code describes California's energy efficiency standards for residential and nonresidential buildings. These standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption and have been updated periodically to include new energy efficiency technologies and methods. Title 24 requires building according to energy efficient standards for all new construction, including new buildings, additions, alterations, and, repairs in nonresidential buildings.

California Building Code CCR, Title 24, Part 9

Title 24, Part 9 of the California's Building Code contains fire-safety–related building standards referenced in other parts of Title 24. This Code is preassembled with the 2006 International Fire Code by the International Code Council. Title 24 requires building according to fire-safety standards for all new construction, including new buildings, additions, alterations, and, in nonresidential buildings, repairs.

1975 Quimby Act (California Government Code Section 66477)

The 1975 Quimby Act authorizes cities and counties in the State of California to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park

improvements. Originally, the goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements, and it was designed to ensure "adequate" open-space acreage in jurisdictions adopting Quimby Act standards (i.e., 2.5 to 5 acres for every 1,000 residents). In 1982, the act was amended to provide, among other regulations, detailed acreage/population standards. The Quimby Act gives local government agencies the authority to pass land dedication and/or "in-lieu of" fee ordinances for park uses (California Department of Parks and Recreation 2002).

Senate Bill 50 (Greene)

SB 50 established a maximum fee that could be imposed on a development project for impacts on schools; payment of school fees under SB 50 is considered full mitigation under CEQA (Government Code 65996). Furthermore, SB 50 strictly prohibits a local agency from denying a project on the basis that school facilities are inadequate to serve a development project.

4.10.2.2 City of Brawley

City of Brawley Service Area Plan

As mentioned, the City recently adopted its SAP, which has also been approved by LAFCO in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. The SAP outlines the City of Brawley's existing public services and facilities, estimates the current and future anticipated demand for such facilities and services, and describes how necessary facilities and services will or may be developed and extended to meet demands. The SAP is intended to demonstrate the City's intent and ability to provide adequate services to the Sphere of Influence boundaries at the time of annexation.

The SAP is incorporated herein by reference, and a separately bound copy of the SAP and all of its Appendices is available for review at the City of Brawley Planning Department, located at 400 Main Street, Brawley, CA 92227.

City of Brawley Park Standards

The City has implemented goals and policies to guide park development within the City's SOI. These goals and policies are outlined in the City's SAP. In particular, the City's SAP requires that neighborhood parks be developed to offer a minimum of 5.0 acres for every 1,000 people. This requirement may be met all or in part by onsite recreation for developments such as Planned Unit Developments. Developers are required to dedicate land and provide improvements (or pay in-lieu of park fees) to serve the needs of the population in newly developing areas. The City will extend recreation programming and services to annexed areas in the same manner as they are provided within the existing City. If the need for additional parks arises for future annexations, each development shall be required to dedicate and/or construct parks to serve each particular area per the City performance standards.

4.10.3 Impact Analysis

4.10.3.1 Methodology

The following impact analysis references the City of Brawley Final Service Area Plan and oral correspondence with relevant City and County departments.

4.10.3.2 Thresholds of Significance

Public Services

Thresholds of significance for public services are based on Appendix G of the State CEQA Guidelines. According to Appendix G, the proposed project would be considered to cause a significant environmental impact if it would:

PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

PS-1a: Fire protection

PS-1b: Police protection

PS-1c: Schools

PS-1d: Library Facilities

PS-1e: Solid Waste Management Facilities

PS-1f: Parks

Recreation

The project would result in a significant impact to recreation if the project were to:

R-1: increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated; or

R-2: include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

4.10.3.3 Impacts and Mitigation Measures

Threshold PS-1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services?

PS-1a: Fire protection?

Discussion

The proposed project would be annexed and incorporated into the City of Brawley and would be serviced by the Brawley Fire Department, and under rare exigent situations by other jurisdictions as needed through the mutual aid agreements in place. Constructing new residences on the site would increase the demand for the City of Brawley's fire services, which are already under strain and the payment of development impact fees would be required prior to the issuance of building permits. Development impact fees are mandatory fees collected by the City for all developments and are standard mechanisms for cities to recover increased costs associated with providing services to new developments. Moreover, a Community Facilities District (CFD) would be established to pay for the additional 4 firefighters required by the project. The CFD would be required to be established and paid for by the developer prior to recordation of any final map and maintained through dues. The CFD would also pay for police services and park/open space maintenance. Finally, a new fire station will be built east of the railroad tracks at the corner of North Eastern Ave and Jones Street (see Figure 4.10-1). It will support a minimum of six fire fighters, but will be able to accommodate up to twelve if necessary. The station is currently in the design phase with an estimated completion in 2012.

Therefore, with the payment of mandatory development impact fees and the establishment of a CFD, the proposed project would not result in significant impacts to fire protection services.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

Mitigation would not be required.

Residual Impacts

Impacts would be less than significant.

PS-1b: Police protection?

Discussion

The project would result in increased demand for Brawley Police Department personnel and resources due to the development of residential and commercial land uses. An increase in the number of homes and residents in the project area would result in an increase in demand for police services.

The Rancho-Porter Community is expected to house roughly 3,847 of these new residents in a maximum of 1,359 residential units. Applying the 1.5 officers per 1,000-population ratio identified as a goal in the SAP, the project would create demand for six additional police officers to ensure adequate service. The Brawley Police Department is currently understaffed. To compensate for an increase in law enforcement service costs resulting from increased demand for resources generated by the proposed project, the payment of development impact fees would be required prior to the issuance of building permits. Moreover, a CFD would be established to pay for the additional 6 police officers required by the project. The CFD would be required to be established and paid for by the developer prior to recordation of any final map. Therefore, with the payment of mandatory development impact fees and the establishment of a CFD, the proposed project would not result in significant impacts to law enforcement services.

Impact Determination
Impacts would be less than significant.

Mitigation Measures
Mitigation would not be required.

Residual Impacts
Impacts would be less than significant.

PS-1c: Schools?

Discussion
The demand for public schools within the Brawley Elementary School District and Brawley Union High School District would increase upon implementation of the proposed project.

The Brawley Elementary School District uses a student generation rate of 0.461 for single-family dwelling units and a student generation rate of 0.482 for multi-family dwelling units for grades through K-6 and a generation rate of 0.136 for single-family dwelling units and 0.083 for multi-family dwelling units for grades 7-8. The Brawley Union High School District uses a student generation rate of 0.283 for single-family dwelling units and 0.207 for multi-family dwelling units for grades 9-12 (Desert School Consultants, 2009). As shown in Table 4.10-2, *Student Generation Rates*, the proposed project would result in the addition of no more than 614 single-family and 745 multi-family residences, resulting in approximately 642 K-6th grade students, 146 7th and 8th grade students, and 328 9th-12th grade students. In total the proposed Project would generate 1,116 students.

Table 4.10-2. Student Generation Rates

Schools	Grades Served	Student Generation Rates[1]	DUs	No. of Students
Elementary	K-6	0.461 (single-family) 0.482 (multi-family)	614 SF 745 MF	642
Junior High School	7-8	0.136 (single-family) 0.083 (multi-family)		146
High School	9-12	0.283 (single-family) 0.207 (multi-family)		328
Total Number of Students Generated by the Proposed Project				**1,116**

[1]Source: School Facilities Needs Analysis for Brawley Elementary School District, March 24, 2009 and School Facilities Needs Analysis for Brawley Union High School District, April 8, 2009

The Brawley Elementary School District has capacity for additional students. The student capacity for grades K-6 is 3,163 students and 1,016 students for grades 7-8 with a current K-6 enrollment of 2,830 and a 7-8 enrollment of 788 (Desert School Consultants, 2008a). The Brawley Union High School District currently has capacity for 1,755 students, but enrolls 1,986. Development of the project would require additional school facilities to accommodate student growth if the project were implemented.

To fund school facility expansion to accommodate student growth, in accordance with SB 50, development impact fees mandated by the State to the Brawley Elementary School District and the Brawley Union High School District would be required prior to the approval of occupancy permits. The fees would provide compensation for the increase in educational costs incurred as a result of increased student enrollment generated by the proposed project. As of 2009, the developer Level I fees are $2.97 per square foot for residential projects and $0.47 per square foot for commercial projects. An increase may occur every two years, which in this case would be 2010. Moreover, pursuant to Government Code Section 65995.5, Level II fees may be authorized and a higher fee imposed on residential construction if certain conditions are met. If State funds are not available for new school facility construction, a school district that meets the applicable statutory requirements may collect Level III fees. If a district eventually receives State funding, the school district may reimburse the Level III fees collected (Desert Schools Consultants, 2009). Payment of these fees are considered full mitigation under CEQA. As such, payment of development impact fees for school service impacts would reduce impacts on school facilities and service to a level less than significance.

Impact Determination
Impacts would be less than significant.

Mitigation Measures
Mitigation would not be required.

Residual Impacts
Impacts would be less than significant.

PS-1d: Library Facilities?

Discussion
The proposed project would result in the addition of up to 1,359 residential units and approximately 3,847 residents to the City of Brawley. Based on performance standards for library services outlined in the City's SAP, a population of this number would require approximately an additional 1,258 square feet to the local library site, 225 square feet to the satellite library branch, 11,302 additional library books, 192 additional square feet of literary space, and an additional 289 square feet of computer center space. Also under the SAP standards, this population would require the addition of 2 full time employees.

The primary source of library services is funded by the City's general fund, but this does not include library facilities. The fees established in the Development Impact Fee Study are expected to finance 100% of the library facilities demands for future development within the City through 2020. With the payment of mandatory development impact fees, the proposed project would not result in significant impacts to library services or facilities.

Impact Determination
Impacts would be less than significant.

Mitigation Measures
Mitigation would not be required.

Residual Impacts
Impacts would be less than significant.

PS-1e: Solid Waste Management Facilities?

Discussion
Implementation of the proposed project would increase the amount of solid waste generated in the area, and would affect the lifespan of the Allied Imperial Landfill. Imperial County's Waste Management Plan (1999) states that there is enough landfill capacity to meet the 15-year planning requirements of the County. Current landfill capacity is sufficient to handle project-related solid waste. Additionally, the project is consistent with land use and population projections considered in the Waste Management Plan and therefore the project would not result in significant direct impacts to solid waste services.

Furthermore, Allied Imperial Waste Management, in conjunction with the City, has incorporated a comprehensive waste reduction program that would limit the amount of solid waste production from city businesses and residents. The City of Brawley is likely to continue to contract with Allied Imperial Landfill to service its existing and future solid waste needs. Also, the City will continue to participate in the IWMB waste reduction program to minimize contribution to local landfills.

Recently, Allied Imperial Landfill purchased an additional 160 acres, of which 100 acres are proposed for landfill use and 60 acres are proposed for buffer. This new acreage would have a 30-40 year capacity at 1,000 tons a day. This property could alternatively be used for the construction of a transfer station that would allow for the exportation of solid waste. Allied currently owns a landfill in Yuma, Arizona which has a 100-year life capacity and would be a possible site if the waste needed to be exported.

Because of the adequate existing landfill capacity to accommodate solid waste generated by the proposed project, the project would not result in significant impacts to solid waste management facilities.

Impact Determination
Impacts would be less than significant.

Mitigation Measures
Mitigation would not be required.

Residual Impacts
Impacts would be less than significant.

PS-1f: Parks? Or,

Threshold R-1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated? Or,

Threshold R-2: Would the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Discussion
The proposed project would provide either 16.95 or 14.76 acres of parkland, which includes two parks location alongside Highway 111. The proposed facilities include a park central to the multi-family residences and a number of smaller parks scattered among the single-family residences. Land dedicated for parks may be maintained through a LLMD or the City of Brawley, at the option of the City. The proposed project would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment beyond what is evaluated within the project area of effect covered in this EIR in the respective resource sections.

The City of Brawley's Subdivision Ordinance requires the provision of park land per Table 4.10-3, *Parkland Dedication Formula*, below. Based on the calculations, the project would require either 15.48 or 18.39 acres of park land depending on which project scenario is implemented. The project currently proposes 16.95 or 14.76 acres of park land depending on the final layout (i.e. With Overlay or Without Overlay). As such, the project layout for parkland would not meet the subdivision ordinance requirements. If a subdivision does not meet subdivision ordinance requirements, then Quimby Fees would be applied. Quimby fees would be paid to the City's Park and Recreation department, which, by law, would be used for the creation or enhancement of parks and would not be used for the operation and maintenance of park facilities. Moreover, a CFD would be established to pay for park and open space maintenance. The CFD would be required to be established and paid for by the developer prior to recordation of any final map. Therefore, with the mandatory requirement to pay Quimby Fees and establishment of a CFD, the project would not result in a significant impact to parks and recreation facilities.

Table 4.10-3. Parkland Dedication Formula

Type of Dwellings	Units per Acre	Park Acreage per Unit	*With Overlay* Park Acreage Required	*Without Overlay* Park Acreage Required
Single Family	5-9	0.0180	6.16	9.07
Duplex (medium low)	9-12	0.0155	1.77	1.77
Cluster (medium)	12-14	0.0140	4.05	4.05
Cluster (medium high)	14-17	0.0115	n/a	n/a
Apartments	17+	0.0090	3.50	3.50
Total park land acreage required			**15.48**	**18.39**

Source: Rancho-Porter Specific Plan, 20008, DD&E

Impact Determination
Impacts would be less than significant.

Mitigation Measures
Mitigation would not be required.

Residual Impacts
Impacts would be less than significant.

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4.11

TRANSPORTATION

This section discusses potential transportation and traffic impacts associated with the proposed Project based on the Project's Initial Study, as well as the Traffic Impact Analysis prepared by Linscott, Law & Greenspan (LLG) in April 2008 (Appendix I). The following discussion considers the two Project scenarios, which are referred to as the "With Overlay" and "Without Overlay" scenarios. Additional information is detailed in Chapter 2, Project Description. It should be noted that the "With Overlay" condition is presented as the "worst-case" scenario.

The term "level of service" (LOS) is referred to throughout this section, which is used in order to quantitatively express roadway conditions and to objectively assess potential impacts to transportation and traffic. Level of service is defined on a scale of "A" through "F," with LOS A representing the best operating conditions and LOS F representing the worst conditions. Roadway facilities operating at LOS A are considered as having free flow traffic conditions with no restrictions on maneuvering or operating speeds. Roadway facilities operating at LOS F are generally considered as having low speeds and high traffic volumes. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. Table 4.11-1, *Level of Service Descriptions*, summarizes the description for each level of service.

4.11.1 Existing Conditions

Primary access to the proposed Project is achieved from the north via Highway 78 (Main Street) and from the west via Best Avenue. The existing roadway configuration within the immediate Project vicinity is depicted on Figure 4.11-1, *Existing Conditions Diagram*. Because the site is currently used for agricultural production, traffic volumes generated from the Project site are low. Current traffic volumes are exhibited in Figure 4.11-2, *Existing Traffic Volumes*. A description of each of the surrounding roadways that provide access to the surrounding areas is provided below:

State Route 86 (SR-86) is classified as a Major Arterial on the City of Brawley Circulation Element. It is a north-south four lane divided roadway in the project vicinity. Bike lanes or bus stops are not provided and the posted speed limit is 55 mph. Curbside parking is prohibited along both sides of SR-86.

Table 4.11-1. Level of Service Descriptions

Level of Service:	Description
A	Represents free flow. Individual drivers have a high degree of freedom to select their travel speeds and are generally unaffected by other vehicles in the traffic system.
B	Represents stable flow, but individual drivers are somewhat affected by other vehicles in determining travel speeds.
C	Represents stable flow, but the selection of the speeds of individual drivers significantly affected by other vehicles.
D	Represents a condition of high-density, stable traffic flow in which speed and freedom of movement are severely restricted by the presence of other vehicles. At signalized intersections, some vehicles may occasionally have to wait for more than one green light in order to pass through the intersection.
E	Represents operating conditions at or near capacity. Individual vehicles have little freedom to maneuver within the traffic stream and any minor disruptions can cause a breakdown in the flow of traffic. At signalized intersections, vehicles regularly wait for more than one green light to clear the intersection.
F	Represents breakdown conditions. At this level of service, speeds are low, delay is high, and there are more vehicles entering the roadway than can be accommodated.

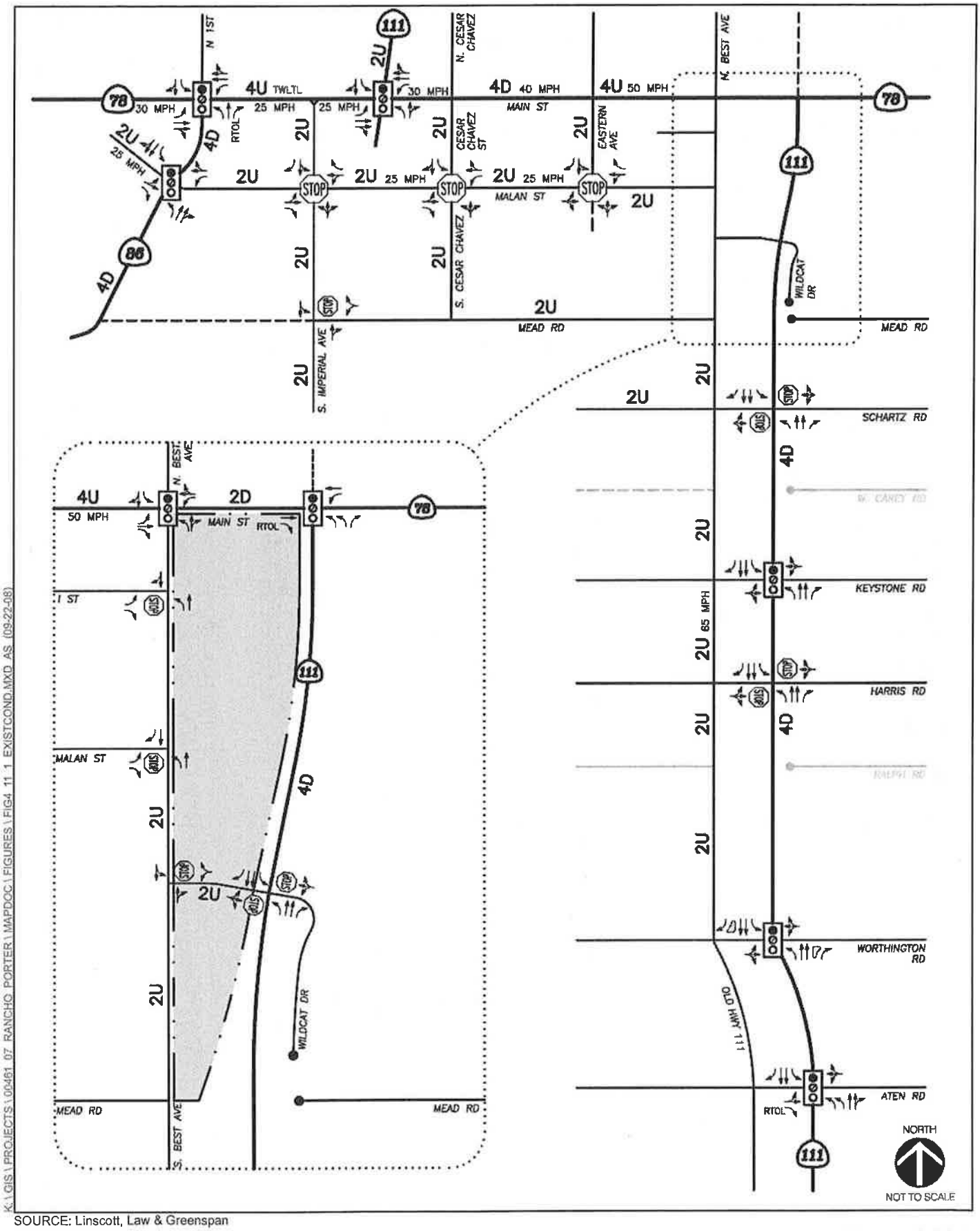
Source: JHK & Associates

S. Imperial Avenue (S-31) is classified as a Secondary Arterial on the City of Brawley Circulation Element. It is a north-south two-lane undivided roadway. Bike lanes or bus stops are not provided and the posted speed limit is 55 mph. Curbside parking is prohibited along both sides of the roadway.

Best Avenue (Old Hwy 111) is classified as a Major Arterial from Ward Road to Malan Street and a Secondary Arterial from Malan Street to Mead Road on the City of Brawley Circulation Element. Currently Best Avenue is a north-south two-lane undivided roadway. Bike lanes or bus stops are not provided and the posted speed limit ranges from 40-55 mph. Curbside parking is prohibited along both sides of the roadway.

State Route 111 (SR-111) is classified as an Expressway on the City of Brawley Circulation Element. It is a north-south four-lane divided roadway, located along the Project's eastern boundary. Bike lanes or bus stops are not provided and the posted speed limit ranges from 55 to 60 mph. Curbside parking is prohibited along both sides of the roadway.

State Route 78 (SR-78), also known as E. Main Street, is classified as a Four-Lane Major Arterial on the City of Brawley Circulation Element. It is currently an east-west two-lane divided roadway, located along the Project's northern boundary, although some portions of the roadway are undivided. Bike lanes or bus stops are not provided. Curbside parking is prohibited along both sides of the roadway.

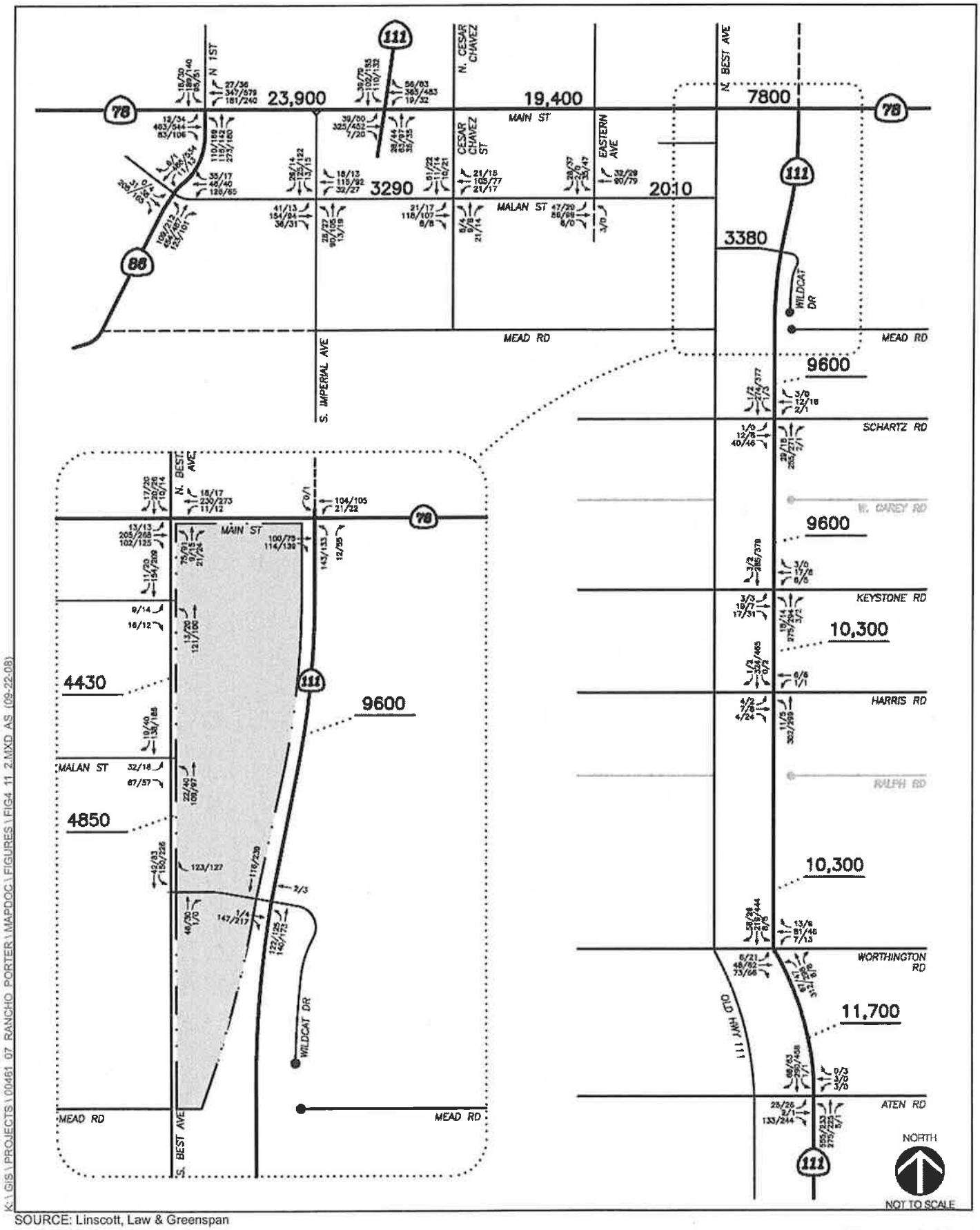


K:\GIS\PROJECTS\06461 07 RANCHO PORTER\MAPDOC\FIGURES\FIG4 11 1 EXISTCOND.MXD AS (09-22-08)

SOURCE: Linscott, Law & Greenspan

Figure 4.11-1
Existing Conditions Diagram
Rancho-Porter Project EIR

ICF Jones & Stokes
an ICF International Company



SOURCE: Linscott, Law & Greenspan

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ICF Jones & Stokes
an ICF International Company

Figure 4.11-2
Existing Traffic Volumes
Rancho-Porter Project EIR

Mead Road is classified as a Major Arterial on the City of Brawley Circulation Element. It is an east-west two-lane undivided roadway, located just south of the proposed Project site. Bike lanes or bus stops are not provided. Parking is prohibited along both sides of the roadway.

Malan Street is classified as a Major Arterial on the City of Brawley Circulation Element. It is an east-west two-lane undivided roadway, which traverses the Project site. Curbside parking is permitted along both sides of the roadway. Based on the anticipated distribution of the Project traffic, the specific study area includes the intersections and roadway street segments as listed below:

Signalized Intersections

- SR-78/SR-86/E. Main Street
- SR-78/SR-111 (west)
- SR-78/ Best Avenue
- SR-78/ Malan Street
- SR-78/SR-111 (east)
- SR-86/Malan Street
- SR-111/Keystone Road
- SR-111/Worthington Road
- SR-111/Aten Road

Unsignalized Intersections

- South Imperial Avenue/Malan Street
- Cesar Chavez Street/Malan Street
- Eastern Avenue/Malan Street
- Best Avenue/Malan Street
- Best Avenue/I Street
- Best Avenue/Wildcat Drive
- SR-111/Wildcat Drive
- SR-111/Schartz Road
- SR-111/Harris Road

Street Segments

- SR-78 from SR-86 to SR-111 (west)
- SR-78 from SR-111 (west) to Best Avenue
- SR-78 from Best Avenue to SR-111 (east)

- Malan Street from S. Imperial Avenue to Cesar Chavez Street
- Malan Street from Eastern Avenue to Best Avenue
- Best Avenue from I Street to Malan Street
- Best Avenue from Malan Street to Wildcat Drive
- SR-111 from SR-78 to Wildcat Drive
- SR-111 from Wildcat Drive to Schartz Road
- SR-111 from Schartz Road to Keystone Road
- SR-111 from Keystone Road to Harris Road
- SR-111 from Harris Road to Worthington Road
- SR-111 from Worthington Road to Aten Road

4.11.1.2 Existing Traffic Volumes

Existing Street Segment Operations

Existing street segments were classified based on *City of Brawley General Plan* ADT Level of Service Volumes by Roadway Types, as shown on Table 4.11-2, *ADT Level of Service Volume by Roadway Type.* An inventory of existing street segment operations was recorded by LLG and is presented in Table 4.11-3, *Existing Street Segment Operations.* As shown, all segments currently operate at LOS B or better in the existing condition, which is an acceptable LOS within the City of Brawley.

Table 4.11-2. ADT Level of Service Volumes by Roadway Type

	Maximum Average Daily Traffic By Level Of Service				
	LOS A	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Expressway	35,000	41,000	47,000	53,000	59,000
Major Arterial	22,000	26,000	30,000	34,000	38,000
Secondary Arterial	9,000	10,500	12,000	13,500	15,000
Collector	5,500	6,500	7,500	8,500	9,500

Source: JHK & Associates

Table 4.11-3. Existing Street Segment Operations

Segment	Existing Roadway Class [a]	LOS E Capacity [b]	Volume	LOS	V/C
SR-78					
SR-86 to SR-111 (west)	Major Arterial	38,000	23,900	B	0.63
SR-111 (west) to Best Ave	Major Arterial	38,000	19,400	A	0.51
Best Ave to SR-111 (east) [c]	Major Arterial	19,000	7,800	A	0.41
Malan Street [c]					
S. Imperial Ave to Cesar Chavez St	Major Arterial	19,000	3,290	A	0.17
Eastern Ave to Best Ave	Major Arterial	19,000	2,010	A	0.11
Best Avenue					
I Street to Malan St [c]	Major Arterial	19,000	4,430	A	0.23
Malan St to Wildcat Dr	Secondary Arterial	15,000	4,850	A	0.32
SR-111 [d]					
SR-78 to Wildcat Dr	4-Ln Expressway	53,300	9,600	A	0.18
Wildcat Dr to Schartz Rd	4-Ln Expressway	53,300	9,600	A	0.18
Schartz Rd to Keystone Rd	4-Ln Expressway	53,300	9,600	A	0.18
Keystone Rd to Harris Rd	4-Ln Expressway	53,300	10,300	A	0.19
Harris Rd to Worthington Rd	4-Ln Expressway	53,300	10,300	A	0.19
Worthington Rd to Aten Rd	4-Ln Expressway	53,300	11,700	A	0.22

Footnotes:

[a] Existing Roadway Classification.

[b] Roadway capacity based on Table 4.7.2, ADT Level of Service Volumes by Roadway types City of Brawley General Plan 1995 / Imperial County Standard Street Classification Average Daily Vehicle Trips, Circulation and Scenic Highways Element, August 2006 (see Appendix B).

Roadway capacity reduced proportionately to a two-lane arterial based on City of Brawley Major Arterial classification.

SR-111 is a 4-Lane Expressway with no more than one access per mile. Therefore, the capacity of a 6-Lane Expressway was reduced proportionately for this 4-Lane Expressway.

Existing Intersection Operations

The intersections that were analyzed in the traffic analysis were chosen based on their proximity to the Project site, schools, and interstates. Table 4.11-4, *Existing Intersection Operations*, summarizes this data based on peak hour levels and demonstrates that all study area intersections operate at LOS C or better in the existing condition, which is an acceptable LOS within the City of Brawley.

Table 4.11-4. Existing Intersection Operations

Intersection	Traffic Control	Peak Hour	Delay [a]	LOS [b]
		AM	28.2	C
1. SR-78 / SR-86 / E. Main St	Signal	PM	28.3	C
		AM	25.4	C
2. SR-78 / SR-111 (west)	Signal	PM	26.3	C
		AM	17.3	B
3. SR-78 / Best Ave	Signal	PM	17.7	B
		AM	16.8	B
4. SR-78 / SR-111 (east)	Signal	PM	16.2	B
		AM	29.1	C
5. SR-86 / Malan St	Signal	PM	26.3	C
		AM	10.3	B
6. S. Imperial Ave / Malan St	AWSC [d]	PM	9.6	A
		AM	8.5	A
7. Cesar Chavez St / Malan St	AWSC [d]	PM	8.2	A
		AM	8.3	A
8. Eastern Ave / Malan St	AWSC [d]	PM	8.3	A
		AM	9.7	A
9. Best Ave / I Street	TWSC [c]	PM	10.4	B
		AM	9.8	A
10. Best Ave / Malan Street	TWSC [c]	PM	10.0	A
		AM	9.0	A
11. Best Ave / Wildcat Dr	TWSC [c]	PM	9.0	A
		AM	13.9	B
12. SR-111 / Wildcat Dr	TWSC [c]	PM	16.4	C
13. SR-111 / Schartz Rd	TWSC [c]	AM	13.6	B

Intersection	Traffic Control	Peak Hour	Delay [a]	LOS [b]
		PM	16.3	C
		AM	9.4	A
14. SR-111 / Keystone Rd	Signal	PM	7.5	A
		AM	13.5	B
15. SR-111 / Harris Rd	TWSC [c]	PM	12.4	B
		AM	20.5	C
16. SR-111 / Worthington Rd	Signal	PM	17.6	B
		AM	15.3	B
17. SR-111 / Aten Rd	Signal	PM	20.2	C

Footnotes:

Average delay expressed in seconds per vehicle.

Level of Service.

TWSC – Two-Way Stop Controlled intersection. Minor street worst-case approach delay is reported.

AWSC – All-Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

4.11.2 Impacts Analysis

4.11.2.1 Methodology

The following impact section analyses to separate scenarios. One scenario would not implement the commercial overlay. This is referred to as the "Without Overlay" scenario. It is analyzed in the first of the of impact section. The second scenario would implement the commercial overlay and this is referred to as the "With Overlay" scenario. This scenario is analyzed in the second half the impact analysis. Depending on which scenario is chosen, only mitigation under that scenario would apply. Mitigation for the scenario that is not chosen would not apply to the final project. In many cases mitigation is the same in either scenario.

The significance criteria summarized in Table 4.11-7, *City of Brawley Intersection and Roadway Segment Standards*, is based upon the City of Brawley's goal for intersections and roadway segments to operate at LOS C or better. In general, an LOS C or better that degrades to an LOS D or worse is considered a significant direct impact. A cumulative impact can occur if the intersection or segment level of service is already operating below City/County standards and the project increases the delay by more than 2 seconds or the v/c ratio by more than 0.02.

The Project-specific Initial Study, provided as Appendix A to this DEIR, identified potentially significant impacts relative to transportation/traffic. As such, the proposed Project could result in a potentially significant impact if it were to:

TR-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).

The definition of "substantial" is defined as follows:

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Table 4.11-5, *Level of Service Thresholds for Signalized Intersections,* summarizes the delay thresholds for signalized intersections.

Table 4.11-5. Level of Service Thresholds for Signalized Intersections

Average Control Delay Per Vehicle (Seconds/Vehicle)			Level of Service
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as a whole. Table 4.13-6, *Level of Service for Unsignalized Intersections*, depicts the criteria based on the average control delay for any particular minor movement.

Table 4.11-6. Level of Service Thresholds For Unsignalized Intersections

Average Control Delay Per Vehicle (Seconds/Vehicle)		Level of Service	Expected Delay to Minor Street Traffic
0.0 ≤	10.0	A	Little or no delay
10.1to	15.0	B	Short traffic delays
15.1to	25.0	C	Average traffic delays
25.1to	35.0	D	Long traffic delays
35.1to	50.0	E	Very long traffic delays
≥	50.0	F	Severe congestion

Table 4.11-7. City of Brawley Intersection and Roadway Segment Standards with the Project

Existing	Existing + Project	Existing + Project + Cumulative Projects	Impact Type
Intersections			
LOS [a] C or better	LOS C or better	LOS C or better	None
LOS C or better	LOS D or worse	—	Direct
LOS D	LOS D and adds 2.0 seconds or more of delay	—	Cumulative
LOS D	LOS E or F	—	Direct
LOS E	LOS F	—	Direct
LOS F	LOS F and delay increases by ≥ 10.0 seconds	—	Direct
Any LOS	Project does not degrade LOS and adds 2.0 to 9.9 seconds of delay	LOS E or worse	Cumulative
Any LOS	Project does not degrade LOS and adds < 2.0 seconds of delay	Any LOS	None
Roadway Segments			
LOS C or better	LOS C or better	LOS C or better	None
LOS C or better	LOS C or better and v/c > 0.02	LOS D or worse	Cumulative
LOS C or better	LOS D or worse	—	Direct [b]
LOS D	LOS D and v/c > 0.02	—	Cumulative
LOS D	LOS E or F	—	Direct
LOS E	LOS F	—	Direct
LOS F	LOS F and v/c [c] increases by > 0.09	—	Direct
Any LOS	LOS E or worse and v/c increases by 0.02 to 0.09	LOS E or worse	Cumulative
Any LOS	LOS E or worse and v/c < 0.02	Any LOS	None

Footnotes:

[a] Level of Service.

[b] Exception: post-project segment operation is LOS D and intersections along segment are LOS D or better results in no significant impact.

[c] Volume to Capacity Ratio

Source: Linscott, Law & Greenspan, Engineers

4.11.2.2 Significance Criteria

The Project-specific Initial Study, provided as Appendix A to this DEIR, identified potentially significant impacts relative to transportation/traffic. As such, the proposed Project could result in a potentially significant impact if it were to:

TR-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections);

TR-2: Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways;

TR-3: Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

TR-4: Result in inadequate parking capacity;

TR-5: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle tracks).

4.11.2.3 Impacts and Mitigation Measures

The following is an analysis of transportation and traffic issues relative to each of the above-listed thresholds of significance for the proposed Project. The Project would be implemented in four phases over a period of five to 15 years. The discussion for **Part 1: Project Traffic Conditions (Without Overlay) Scenario** proceeds first. The discussion for **Part 2: Project Traffic Conditions "With Overlay" Scenario** succeeds Part 1.

Threshold TR-1: Would the Project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

Threshold TR-2: Would the Project cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?

Discussion

Peak hour intersection analysis at each of the key intersections and the daily street segment analysis were conducted for each of the near-term scenarios. The study area intersections and segments are analyzed for the following scenarios to determine the potential impacts to the roadway network:

Part 1: Conditions Analyzed under the "Without Overlay" Scenario

- Existing + Project Phase I

- Existing + Project Phases I and II
- Existing + Project Phases I-III
- Existing + Total Project (Phases I-IV)
- Existing + Total Project + Cumulative Projects

Part 2: Conditions Analyzed under the "With Overlay" Scenario

- Existing + Project Phase I
- Existing + Project Phases I and II
- Existing + Project Phases I-III
- Existing + Total Project (Phases I-IV)
- Existing + Total Project + Cumulative Projects

Part 1: Project Traffic Conditions (Without Overlay) Scenario

Table 4.11-8, *Project Trip Generation "Without Overlay,"* summarizes the Project trip generation by each of the four phases without the commercial overlay option. Based on the trip generation calculations, the Project is calculated to generate a total of approximately 26,070 ADT with 976 external trips during the AM peak hour (355 inbound / 621 outbound trips) and 2,370 trips during the PM peak hour (1,252 inbound / 1,118 outbound). Calculations for trips during AM peak hour, PM peak hour, and ADT for each project phase are outlined in Table 4.11-8. Figure 4.11-3, *Without Overlay Trip Distribution,* shows the trip distribution without the commercial overlay. Intersection and roadway segment operations without the commercial overlay are shown in Table 4.11-9, *Near-Term Intersection Operations "Without Overlay,"* and Table 4.11-10, *Near-Term Segment Operations, "Without Overlay."*

Analysis of Near-Term Conditions (Without Overlay)

Existing + Project Phase I

Figure 4.11-4, *Existing + Phase I Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the first phase of the proposed Project without the commercial overlay.

Impact Determination (Intersections)
Under this scenario, improvements to lane configuration at the SR-78 / SR-111 (east) intersection due to the State Route 78 / 111 Brawley bypass are included. Also included is the construction of the west leg of the Best Avenue / Wildcat Drive intersection. Both improvements would be completed previous to Phase I of the development.

With the addition of Phase I traffic, all of the study area intersections would operate at LOS C or better except Best Avenue / Malan Street (LOS E during the PM peak hour) and at Best Avenue / Wildcat Drive (LOS F during the PM peak hour).

Impact TR-1: Traffic conditions at the intersection of Best Avenue / Malan Street would be reduced from an LOS A in the existing condition to an LOS E in the PM peak hour upon implementation of Phase I of the proposed Project, and a significant direct impact would result. This impact is the same under either scenario.

Impact TR-2: Traffic conditions at the intersection of Best Avenue / Wildcat Drive would be reduced from an LOS A in the existing condition to an LOS F in the PM peak hour upon implementation of Phase I of the proposed Project, and a significant direct impact would result. This impact is the same under either scenario.

Mitigation Measures

MM TR-1: Prior to the issuance of occupancy permits for Phase I, the developer or master builder shall install a traffic signal at the intersection of Best Avenue and Malan Street, and add the following additional lane improvements: northbound – dual left turn lanes, a through-land, and a right turn lane; westbound – a left turn lane and a through lane; and eastbound – a right turn lane and a through lane.

MM TR-2: Prior to the issuance of occupancy permits for Phase I, the developer or master builder shall install a traffic signal at the intersection of Best Avenue and Wildcat Drive, in addition to the following lane improvements; a northbound left turn lane and a right turn lane, a southbound left turn lane, a westbound left turn lane and a right turn lane, an eastbound left turn lane and a right turn lane.

Residual Impacts

With the incorporation of mitigation measures MM TR-1 and MM TR-2, impacts to intersections during the first phase of the proposed Project (Without Overlay) would be less than significant.

Impact Determination (Segments)

With the addition of Phase I Project (Without Overlay) traffic, all of the street segments would operate at a LOS C or better.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

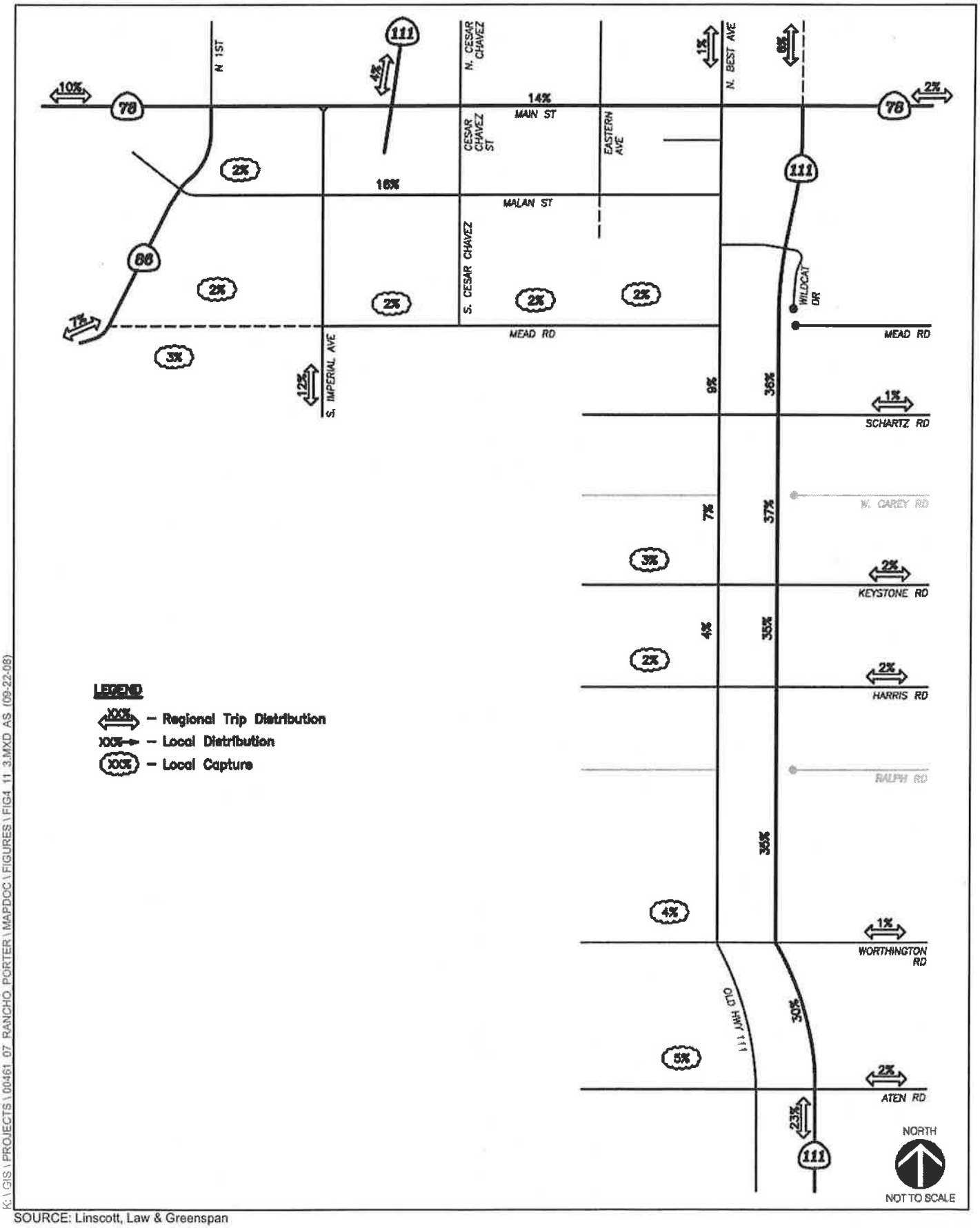
Existing + Project Phase I & II

Figure 4.11-5, *Existing + Phases I & II "Without Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the first and second phases of the proposed Project without the commercial overlay.

Impact Determination (Intersections)

Under this scenario improvements mentioned in the previous scenario are included. Also included are geometric improvements at Best Avenue / Malan Street and Best Avenue / Wildcat Drive to provide adequate access.

With the addition of Phase I & II traffic, all of the intersections would operate at LOS C or better except Best Avenue / I Street (LOS E during the PM peak hour). It should be noted that the Best Avenue / Malan Street intersection requires a traffic signal under Phase I and subsequent lane configuration improvements are required to provide adequate access with the addition of Phase II.



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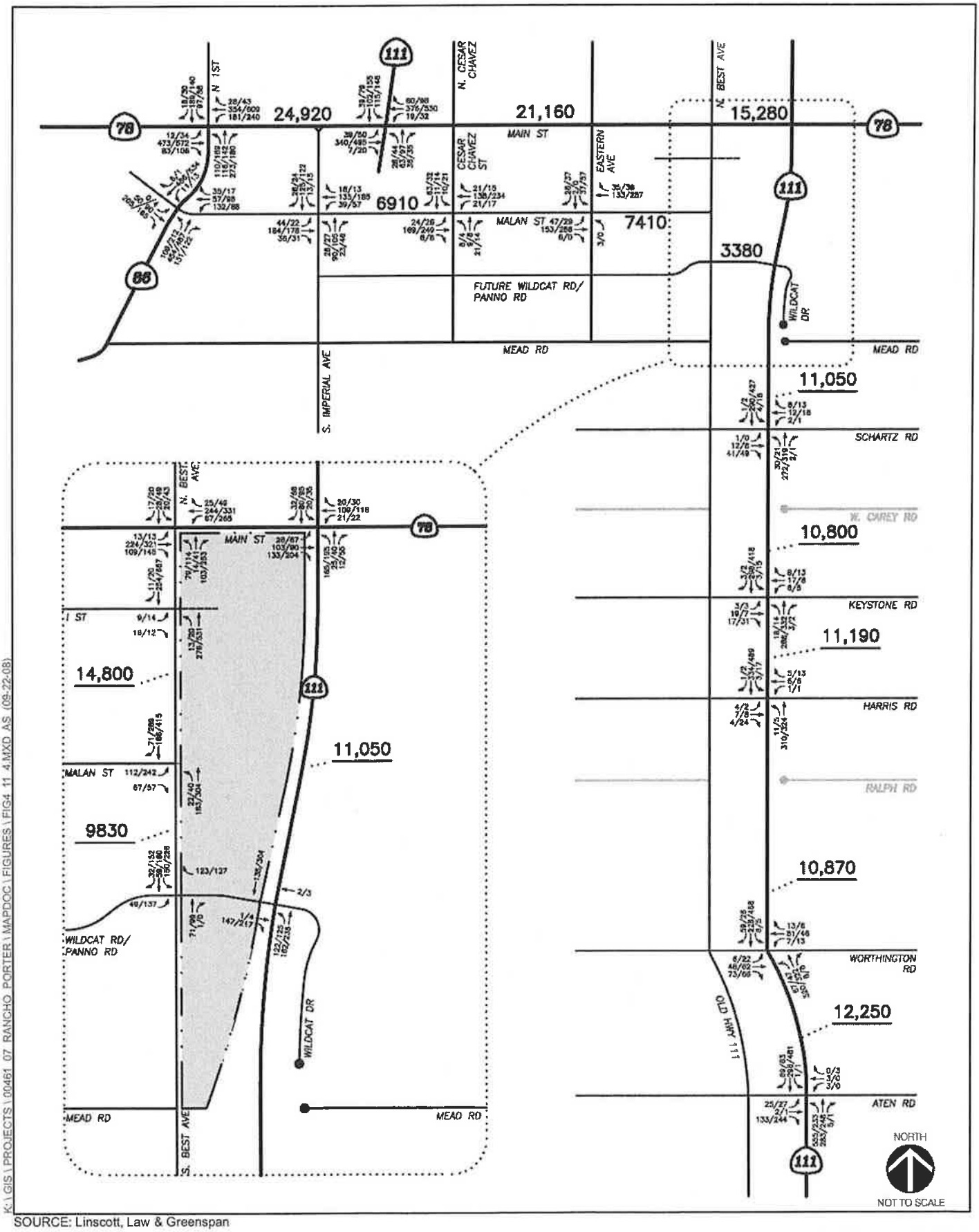
SOURCE: Linscott, Law & Greenspan

ICF Jones & Stokes
an ICF International Company

Figure 4.11-3
"Without Overlay" Trip Distribution
Rancho-Porter Project EIR



SOURCE: Linscott, Law & Greenspan

Figure 4.11-4
Existing + Project Phase I Traffic Volumes
Rancho-Porter Project EIR

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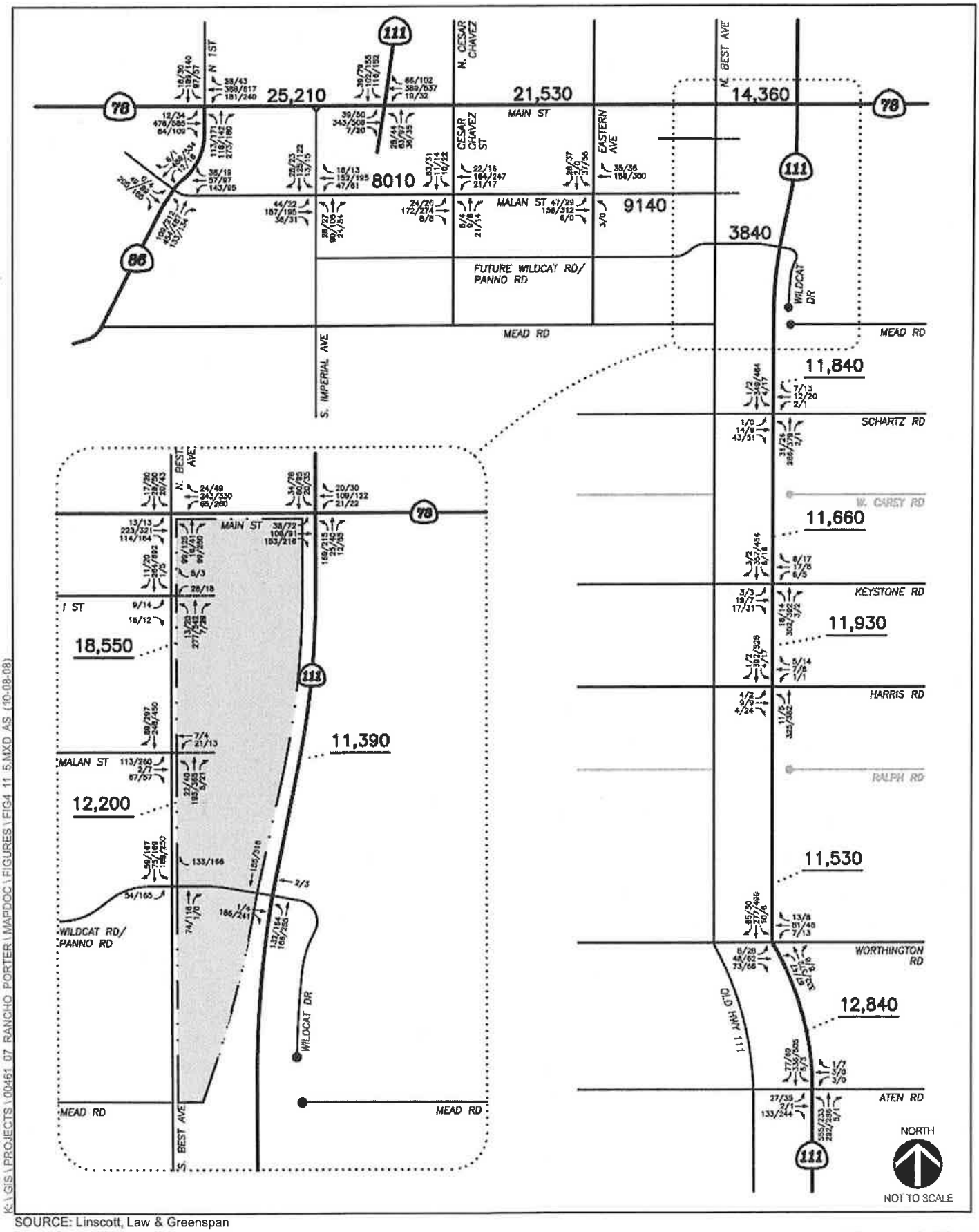

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SOURCE: Linscott, Law & Greenspan

Figure 4.11-5
Existing + Project Phases I & II "Without Overlay" Traffic Volumes
Rancho-Porter Project EIR

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Table 4.11–8. Project Trip Generation "Without Overlay"

			Daily Trip Ends (ADT)			AM Peak Hour					PM Peak Hour				
							In: Out	Volume				In: Out	Volume		
Land Use	**Quantity**		**Rate**		**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
PHASE I															
Multi-Family	49	DU	5.86	/DU	287	0.44	17:83	4	18	22	0.52	67:33	17	8	25
Commercial	512.4	TSF	[a]		19,640	[b]	61:39	256	164	420	[c]	48:52	881	958	1,839
Residential Internal Capture [d]					(28)	—	—	(0)	(1)	(1)	—	—	(2)	(1)	(3)
Net Residential					*258*	—	—	*4*	*17*	*21*	—	—	*15*	*7*	*22*
Commercial Internal Capture [e]					(28)	—	—	(1)	(0)	(1)	—	—	(1)	(2)	(3)
Subtotal Commercial					*19,612*	—	—	*255*	*164*	*419*	—	—	*880*	*956*	*1,836*
Pass-by Reduction [f]					(3,922)	—	—	(21)	(21)	(42)	—	—	(230)	(230)	(460)
Net Total Commercial					*15,690*	—	—	*234*	*143*	*377*	—	—	*650*	*726*	*1,376*
Total Phase I External Trips					**15,948**	—	—	**238**	**160**	**398**	—	—	**665**	**733**	**1,398**
PHASE I + PHASE II															
Multi-Family	49	DU	5.86	/DU	287	0.44	17:83	4	18	22	0.52	67:33	17	8	25
Mobile Homes	504	DU	4.99	/DU [a]	2,515	0.44	20:80	44	178	222	0.59	62:38	184	113	297
Park Space	8.67	Acres	1.59	/Acre	14	0.40	50:50	2	1	3	0.50	50:50	2	2	4
Commercial	512.4	TSF	[a]		19,640	[b]	61:39	256	164	420	[c]	48:52	881	958	1,839

			Daily Trip Ends (ADT)			AM Peak Hour					PM Peak Hour				
							In: Out	Volume				In: Out	Volume		
Land Use	**Quantity**		**Rate**		**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
Subtotal Residential/Park					*2,816*	—	—	*50*	*197*	*247*	—	—	*203*	*123*	*326*
Residential Internal Capture [d]					(282)	—	—	(4)	(16)	(20)	—	—	(20)	(12)	(32)
Net Residential/Park					*2,534*	—	—	*46*	*181*	*227*	—	—	*183*	*111*	*294*
Commercial Internal Capture [e]					(282)	—	—	(16)	(4)	(20)	—	—	(12)	(20)	(32)
Subtotal Commercial					*19,358*	—	—	*240*	*160*	*400*	—	—	*869*	*938*	*1,807*
Pass-by Reduction [f]					(3,872)	—	—	(20)	(20)	(40)	—	—	(226)	(226)	(452)
Net Total Commercial					*15,486*	—	—	*220*	*140*	*360*	—	—	*643*	*712*	*1,355*
Total Phase I + II External Trips					**18,020**	—	—	**266**	**321**	**587**	—	—	**826**	**823**	**1,649**
PHASE I + PHASE II + PHASE III															
Multi-Family	658	DU	5.86	/DU	3,856	0.44	17:83	49	241	290	0.52	67:33	229	113	342
Mobile Home	504	DU	4.99	/DU [a]	2,515	0.44	20:80	44	178	222	0.59	62:38	184	113	297
Park Space	10.38	Acres	1.59	/Acre	17	0.40	50:50	2	2	4	0.50	50:50	2	3	5
Commercial	734.4	TSF	[a]		24,843	[b]	61:39	316	198	514	[c]	48:52	1,124	1,212	2,336
Subtotal Residential/Park					*6,388*	—	—	*95*	*421*	*516*	—	—	*415*	*229*	*644*
Residential Internal Capture [d]					(639)	—	—	(7)	(34)	(41)	—	—	(41)	(23)	(64)
Net Residential/Park					*5,749*	—	—	*88*	*387*	*475*	—	—	*374*	*206*	*580*
Commercial Internal Capture [e]					(639)	—	—	(34)	(7)	(41)	—	—	(23)	(41)	(64)

			Daily Trip Ends (ADT)			AM Peak Hour					PM Peak Hour				
							In: Out	Volume				In: Out	Volume		
Land Use	**Quantity**		**Rate**		**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
Subtotal Commercial					*24,204*	—	—	*282*	*191*	*473*	—	—	*1,101*	*1,171*	*2,272*
Pass-by Reduction [f]					(4,840)	—	—	(21)	(21)	(42)	—	—	(284)	(284)	(568)
Net Total Commercial					*19,364*	—	—	*261*	*170*	*431*	—	—	*817*	*887*	*1,704*
Total Phase I + II + III External Trips					**25,113**	—	—	**349**	**557**	**906**	—	—	**1,191**	**1,093**	**2,284**
PHASE I + PHASE II + PHASE III + PHASE IV															
Multi -Family	856	DU	5.86	/DU	5,016	0.44	17:83	64	313	377	0.52	67:33	298	147	445
Mobile Home	504	DU	4.99	/DU [a]	2,515	0.44	20:80	44	178	222	0.59	62:38	184	113	297
Park Space	16.24	Acres	1.59	/Acre	26	0.40	50:50	3	4	7	0.50	50:50	4	4	8
Commercial	734.4	TSF	[a]		24,843	[b]	61:39	316	198	514	[c]	48:52	1,124	1,212	2,336
Subtotal Residential					*7,557*	—	—	*111*	*495*	*606*	—	—	*486*	*264*	*750*
Residential Internal Capture [d]					(756)	—	—	(8)	(40)	(48)	—	—	(49)	(26)	(75)
Net Residential/Park					*6,801*	—	—	*103*	*455*	*558*	—	—	*437*	*238*	*675*
Commercial Internal Capture [e]					(756)	—	—	(40)	(8)	(48)	—	—	(26)	(49)	(75)
Subtotal Commercial					*24,087*	—	—	*276*	*190*	*466*	—	—	*1,098*	*1,163*	*2,261*
Pass-by Reduction [f]					(4,818)	—	—	(24)	(24)	(48)	—	—	(283)	(283)	(566)

		Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
					In: Out	Volume				In: Out	Volume		
Land Use	**Quantity**	**Rate**	**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
Net Total Commercial			*19,269*	—	—	*252*	*166*	*418*	—	—	*815*	*880*	*1,695*
Total Phase I + II + III + IV External Trips			**26,070**	—	—	**355**	**621**	**976**	—	—	**1,252**	**1,118**	**2,370**

Footnotes:

[a] Shopping Center ADT Rate: Ln(T) = 0.65LN(X) + 5.83

[b] Shopping Center AM Peak: Ln(T) = 0.60LN(X) + 2.29

[c] Shopping Center PM Peak: Ln(T) = 0.66LN(X) + 3.40

[d] Residential Internal Capture Rate: 10% ADT, 8% AM, 10% PM

[e] Commercial Internal Capture was based on reverse residential splits.

[f] Pass-by Rate: 20% ADT, 10% AM, 25% PM

General Notes:

DU = Dwelling Units

TSF = Thousand Square Feet

Source: All rates are based on ITE Trip Generation Manual, 7th Edition.

Table 4.11-9. Near-Term Intersection Operations "Without Overlay"

Intersection	Control Type	Peak Hour	Existing		Existing + Phase I			Impact Type	Existing + Phases I & II			Impact Type	Existing + Phases I, II, & III			Impact Type	Existing + Total Project (Phases I-IV)			Impact Type	Existing + Total Project + Cumulative Projects		Impact Type
			Delay	LOS	Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	
1. SR-78 / SR-86 / E. Main St	Signal	AM	28.2	C	28.2	C	0.0	None	28.2	C	0.0	None	28.4	C	0.2	None	28.4	C	0.2	None	111.7	F	None
		PM	28.3	C	28.3	C	0.0		28.3	C	0.0		28.7	C	0.4		28.7	C	0.4		123.2	F	
2. SR-78 / SR-111 (west)	Signal	AM	25.4	C	25.4	C	0.0	None	25.4	C	0.0	None	25.4	C	0.0	None	25.4	C	0.0	None	163.7	F	None
		PM	26.3	C	27.1	C	0.8		27.3	C	1.0		27.6	C	1.3		27.7	C	1.4		177.2	F	
3. SR-78 / Best Ave	Signal	AM	17.3	B	23.8	C	6.5	None	23.9	C	6.6	None	24.5	C	7.2	None	25.2	C	7.9	None	49.9	D	Cumulative
		PM	17.7	B	31.3	C	13.6		31.3	C	13.6		32.4	C	14.7		32.4	C	14.7		78.3	F	
Right-In/ Right-Out Only at Seabolt Drive [m]	Signal[d]	AM	17.3	B	26.8	C	9.5	None	15.7	B	0.0	None [j]	26.5	C	0.0	None	27.0	C	0.5	None	55.7	E	Cumulative
		PM	17.7	B	34.9	C	17.2		19.3	B	0.0		33.5	C	0.0		34.6	C	1.1		84.0	F	
4. SR-78 / SR-111 (east)	Signal[e]	AM	16.8	B	19.8	B	0.0	None	20.4	C	0.6	None	21.0	C	1.2	None	33.0	C	13.2	None	35.0	C	None
		PM	16.2	B	19.8	B	0.0		20.3	C	0.5		25.4	C	5.6		25.4	C	5.6		33.4	C	
5. SR-86 / Malan St	Signal	AM	29.1	C	29.8	C	0.7	None	30.2	C	1.1	None	30.7	C	1.6	None	30.7	C	1.6	None	58.7	E	Cumulative
		PM	26.3	C	29.6	C	3.3		29.8	C	3.5		31.5	C	5.2		31.5	C	5.2		76.3	E	
6. S. Imperial Ave / Malan St	AWSC[f]	AM	10.3	B	10.9	B	0.6	None	11.1	B	0.8	None	11.5	B	1.2	None	11.5	B	1.2	None	26.7	D	Cumulative
		PM	9.6	A	11.5	B	1.9		12.0	B	2.4		13.2	B	3.6		13.3	B	3.7		109.6	F	
7. Cesar Chavez St / Malan St	AWSC[f]	AM	8.5	A	9.0	A	0.5	None	9.2	A	0.7	None	9.6	A	1.1	None	9.7	A	1.2	None	45.5	E	Cumulative
		PM	8.2	A	10.4	B	2.2		10.8	B	2.6		12.2	B	4.0		12.4	B	4.2		208.7	F	
8. Eastern Ave / Malan St	AWSC[f]	AM	8.3	A	9.0	A	0.7	None	9.2	A	0.9	None	9.6	A	1.3	None	9.6	A	1.3	None	29.9	D	Cumulative
		PM	8.3	A	11.6	B	3.3		12.2	B	3.9		14.8	B	6.5		15.2	C	6.9		235.9	F	
9. S. Best Ave / I Street	TWSC[g/h]	AM	9.7	A	11.0	B	1.3	None	10.0	A	0.3	Direct	9.9	A	0.0	None[k]	9.9	A	0.0	None	10.4	B	None
		PM	10.4	B	22.8	C	12.4		41.0	E	30.6		14.0	B	0.0		14.0	B	0.0		15.6	C	
10. S. Best Ave / Malan St	TWSC[g/i]	AM	9.8	A	11.8	B	2.0	Direct	21.5	C	0.0	Direct [l]	25.0	C	3.5	None	25.5	C	4.0	None	29.1	C	Cumulative
		PM	10.0	A	47.4	E	37.4		21.2	C	0.0		28.8	C	7.6		32.3	C	11.1		52.0	D	
11. S. Best Ave / Wildcat Dr	TWSC[g/i/m]	AM	9.0	A	16.9	C	7.9	Direct	8.8	A	0.0	None	18.4	B	6.3	None	10.8	B	0.4	None	73.6	F	Cumulative
		PM	9.0	A	72.2	F	63.0		12.3	B	0.0		17.7	C	12.4		18.8	C	1.1		>100.0	F	
12. SR-111 / Wildcat Dr	TWSC[g/i]	AM	13.9	B	14.4	B	0.5	None	15.1	C	1.2	None	15.9	C	2.0	Direct	25.1	C	0.0	None	159.4	F	Cumulative
		PM	16.4	C	18.8	C	2.4		21.9	C	5.5		29.3	D	12.9		27.1	C	0.0		304.9	F	

Intersection	Control Type	Peak Hour	Existing		Existing + Phase I			Impact Type	Existing + Phases I & II			Impact Type	Existing + Phases I, II, & III			Impact Type	Existing + Total Project (Phases I-IV)			Impact Type	Existing + Total Project + Cumulative Projects		Impact Type
			Delay	LOS	Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	
13. SR-111 / Schartz Rd	TWSC[g]	AM	13.6	B	13.6	B	0.0	None	14.0	B	0.4	None	15.6	C	2.0	None	16.0	C	2.4	None	OVRFL	F	Cumulative
		PM	16.3	C	16.4	C	0.1		17.2	C	0.9		21.2	C	4.9		22.3	C	6.0		OVRFL	F	
14. SR-111 / Keystone Rd	Signal	AM	9.4	A	9.5	A	0.1	None	9.8	A	0.4	None	10.0	B	0.6	None	10.5	B	1.1	None	11.6	B	None
		PM	7.5	A	8.2	A	0.7		8.4	A	0.9		9.1	A	1.6		9.5	A	2.0		9.6	A	
15. SR-111 / Harris Rd	TWSC[g]	AM	13.5	B	13.7	B	0.2	None	15.1	C	1.6	None	16.8	C	3.3	None	17.3	C	3.8	None	OVRFL	F	Cumulative
		PM	12.4	B	13.0	B	0.6		14.3	B	1.9		15.4	C	3.0		15.9	C	3.5		OVRFL	F	
16. SR-111 / Worthington Rd	Signal	AM	20.5	C	20.6	C	0.1	None	20.8	C	0.3	None	21.1	C	0.6	None	21.7	C	1.2	None	28.9	C	None
		PM	16.1	B	16.5	B	0.4		17.1	B	1.0		17.9	B	1.8		18.5	B	2.4		19.0	B	
17. SR-111 / Aten Rd	Signal	AM	15.3	B	15.3	B	0.0	None	16.2	B	0.9	None	17.0	B	1.7	None	17.2	B	1.9	None	18.8	B	None
		PM	20.2	C	20.3	C	0.1		20.3	C	0.1		20.3	C	0.1		20.3	C	0.1		20.3	C	

Footnotes:

[a] Average delay expressed in seconds per vehicle.

[b] Level of Service.

[c] "Δ" denotes the project-induced increase in trips at the critical movement for unsignalized intersections and an increase in the delay for signalized intersections.

[d] Geometry improvements included in Phase III of the analysis.

[e] Geometry improvements included in Phase I of the analysis.

[f] AWSC –All-Way Stop Controlled intersection.

[g] TWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.

[h] Intersection under Direct project impact. Left-turn out restricted to improve level of service.

[i] Intersection under Direct project impact. Installation of traffic signal is required to improve level of service.

[j] Under Phase I, with the right-in/right-out only at Seabolt Drive/ SR-78, SR-78/ S. Best Avenue should provide an additional westbound left-turn lane, thus mitigating a direct impact.

[k] S. Best Ave / I Street intersection under Phase III received mitigated lane geometry prohibiting left-turns out, thus project traffic is rerouted resulting in decrease in delay and LOS.

[l] As noted in the mitigation section of this report, a traffic signal under Phase I of the project will mitigate the impact; however, additional geometric improvements will be needed to provide adequate access with the addition of Phase II.

[m] Per CALTRANS directions, the intersection was reanalyzed considering a right-in/ right-out only access at Seabolt Drive and SR-78. *Appendix L* of the Traffic Study provides the AM/PM traffic volumes and analyses at SR-78/ Best Avenue.

[n] Intersection under Direct project impact during Phase I. Installation of an All-Way Stop-Control is required to improve Level of Service.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

General Notes:

Bold typeface and shading indicates a potential significant impact

Table 4.11-10. Near-Term Segment Operations, "Without Overlay"

Segment	LOS E Capacity [a]	Existing			Existing + Project Phase I			V/C Δ	Impact Type	Existing + Project Phases I & II			V/C Δ	Impact Type	Existing + Project Phases I, II & III			V/C Δ	Impact Type	Existing + Total Project (Phases I-IV)			V/C Δ	Impact Type	Existing + Total Project + Cumulative Projects			V/C Δ	Impact Type
		Volume	LOS[b]	V/C[c]	Volume	LOS	V/C			Volume	LOS	V/C			Volume	LOS	V/C			Volume	LOS	V/C			Volume	LOS	V/C		
SR-78																													
SR-86 to SR-111 (west)	38,000	23,900	B	0.63	24,920	B	0.66	0.03	None	25,100	B	0.66	0.03	None	25,300	B	0.67	0.04	None	25,400	B	0.67	0.04	None	51,700	F	1.36	0.73	Cumulative
SR-111 (west) to S. Best Ave	38,000	19,400	A	0.51	21,160	A	0.56	0.05	None	21,410	A	0.56	0.05	None	21,720	A	0.57	0.06	None	21,860	A	0.58	0.06	None	40,510	F	1.07	0.56	Cumulative
S. Best Ave to SR-111 (east)	19,000	7,800	A	0.41	11,900	B	0.63	0.22	None	10,800	A	0.38	0.00	None	11,340	A	0.40	0.02	None	11,480	A	0.40	0.02	None	26,370	E	0.93	0.55	Cumulative
Malan Street [d]																													
S. Imperial Ave to Cesar Chavez Rd	19,000	3,290	A	0.17	6,910	A	0.36	0.19	None	7,220	A	0.38	0.21	None	8,300	A	0.44	0.26	None	8,450	A	0.44	0.27	None	14,830	C	0.78	0.61	None
Eastern Ave to S. Best Ave	19,000	2,010	A	0.11	7,410	A	0.39	0.28	None	7,710	A	0.41	0.30	None	9,430	A	0.50	0.39	None	9,570	A	0.50	0.40	None	15,600	D	0.82	0.72	Cumulative
S. Best Avenue																													
I Street to Malan St [d]	19,000	4,430	A	0.23	14,800	C	0.78	0.55	None	15,810	D	0.83	0.60	Direct	15,550	A	0.41	0.00	None	15,520	A	0.41	0.00	None	17,360	A	0.46	0.05	None
Malan St to Wildcat Dr	15,000	4,850	A	0.32	9,830	B	0.66	0.33	None	10,910	C	0.73	0.40	None	14,580	A	0.51	0.00	None	15,190	A	0.53	0.02	None	23,330	D	0.82	0.31	Cumulative
SR-111 [e]																													
SR-78 to Wildcat Dr	53,300	9,600	A	0.18	11,050	A	0.21	0.03	None	11,320	A	0.21	0.03	None	11,650	A	0.22	0.04	None	11,640	A	0.22	0.04	None	20,390	B	0.38	0.20	None
Wildcat Dr to Schartz Rd	53,300	9,600	A	0.18	11,050	A	0.21	0.03	None	11,850	A	0.22	0.04	None	13,200	A	0.25	0.07	None	13,550	A	0.25	0.07	None	35,600	C	0.67	0.49	None
Schartz Rd to Keystone Rd	53,300	9,600	A	0.18	10,800	A	0.20	0.02	None	11,650	A	0.22	0.04	None	13,170	A	0.25	0.07	None	13,580	A	0.25	0.07	None	38,360	C	0.72	0.54	None
Keystone Rd to Harris Rd	53,300	10,300	A	0.19	11,190	A	0.21	0.02	None	11,990	A	0.22	0.03	None	13,370	A	0.25	0.06	None	13,750	A	0.26	0.06	None	36,860	C	0.69	0.50	None
Harris Rd to Worthington Rd	53,300	10,300	A	0.19	10,870	A	0.20	0.01	None	11,660	A	0.22	0.03	None	12,900	A	0.24	0.05	None	13,260	A	0.25	0.06	None	35,590	C	0.67	0.47	None
Worthington Rd to Aten Rd	53,300	11,700	A	0.22	12,250	A	0.23	0.01	None	12,930	A	0.24	0.02	None	14,010	A	0.26	0.04	None	14,320	A	0.27	0.05	None	35,660	C	0.67	0.45	None

Footnotes:

[a] Roadway capacity based on Table 4.7.2, ADT Level of Service Volumes by Roadway types City of Brawley General Plan 1995 / Imperial County Standard Street Classification Average Daily Vehicle Trips, Circulation and Scenic Highways Element, August 2006.

[b] Level of Service.

[c] Volume to capacity ratio.

[d] Roadway capacity reduced proportionately to a two-lane arterial based on City of Brawley Major Arterial classification.

[e] SR-111 is a 4-Lane Expressway with no more than one access per mile. Therefore, the capacity of a 6-Lane Expressway was reduced proportionately for this 4-Lane Expressway.

[f] Roadway capacity assumed to be City of Brawley Major Arterial classification and then reduced proportionately to a three-lane arterial with a capacity of 28,500.

[g] Roadway capacity assumed to be City of Brawley Major Arterial classification of 38,000.

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Impact TR-3: Traffic conditions at the intersection of Best Avenue / I Street would be reduced from an LOS B in the existing condition to an LOS E in the PM peak hour upon implementation of Phase II of the proposed Project, resulting in a significant direct impact.

Mitigation Measures

MM TR-3: Prior to the issuance of occupancy permits for Phase II, the developer or master builder shall restrict the left and through movements from I Street (east and west) and provide right-turn out only. The northbound approach should provide an exclusive right-turn lane and the southbound approach should provide an exclusive left turn lane.

Residual Impacts

With the incorporation of mitigation measure MM TR-3, impacts to intersections during the second phase of the proposed Project (Without Overlay) would be less than significant.

Impact Determination (Segments)

With the addition of the Phases I & II project traffic and proposed improvements, all of the street segments would operate at a LOS C or better except for Best Avenue from I Street to Malan Street (LOS D).

Impact TR-4: Traffic conditions along the roadway segment of Best Avenue from I Street to Malan would be reduced from an LOS A in the existing condition to an LOS D upon implementation of Phase II of the proposed Project, resulting in a significant direct impact.

Mitigation Measures

MM TR-4: Prior to the issuance of occupancy permits for Phase II, the developer or master builder shall widen Best Avenue to a Major Arterial, per the Brawley General Plan, from I Street to Malan Street.

Residual Impacts

With the incorporation of mitigation measure MM TR-4, impacts to segments during the second phase of the proposed Project (Without Overlay) would be less than significant.

Existing + Project Phases I–III

Figure 4.11-6, *Existing + Phases I-III "Without Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the first, second and third phases of the proposed Project without the commercial overlay.

Impact Determination (Intersections)

Under this scenario improvements mentioned in the previous scenarios are included. With the addition of Phase I-III traffic and proposed improvements, all of the intersections would operate at LOS C or better except SR-111 / Wildcat Drive (LOS D during the PM peak hour).

Impact TR-5: Traffic conditions at the intersection of SR-111 / Wildcat Drive would be reduced from an LOS C in the existing condition to an LOS D in the PM peak hour upon implementation of Phase III of the proposed Project, and a significant direct impact would result.

Mitigation Measures

MM TR-5: Prior to the issuance of the grading permits for Phase III, the developer will re-evaluate the traffic signal warrants for SR-111 and Wildcat Road to determine if a traffic signal is still warranted at the Phase II stage. If the signal warrants are met and Caltrans approves the installation of a traffic signal, a project study report will be required. If the signal warrants are not by Phase III, then signal warrants shall be reanalyzed prior to Phase IV, and at project completion, which if met at that time, shall be submitted to Caltrans for consideration and approval. The developer or master builder shall install a traffic signal when/if warranted by the project related traffic impacts and provide dedicated eastbound left and right-turn lanes and a westbound dedicated right-turn lane once approved by Caltrans. ~~Prior to the issuance of grading permits for Phase III, the developer or master builder shall install a traffic signal and provide dedicated eastbound left and right turn lanes and a westbound dedicated right turn lane.~~

Residual Impacts

With the incorporation of mitigation measure MM TR-5, impacts to segments during the third phase of the proposed Project (Without Overlay) would be less than significant.

Impact Determination (Segments)

The analysis performed for the Existing + Phase I-III includes the improvements previously mentioned and improvements to the segments on Best Avenue from I street to Malan Street and Malan Street to Wildcat Drive. With the addition of the Phases I-III project traffic, all of the street segments would operate at LOS C or better.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Existing + Project Phases I–IV

Figure 4.11-7, *Existing + Phases I-IV "Without Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of all four phases of the proposed Project without the commercial overlay.

Impact Determination (Intersections)

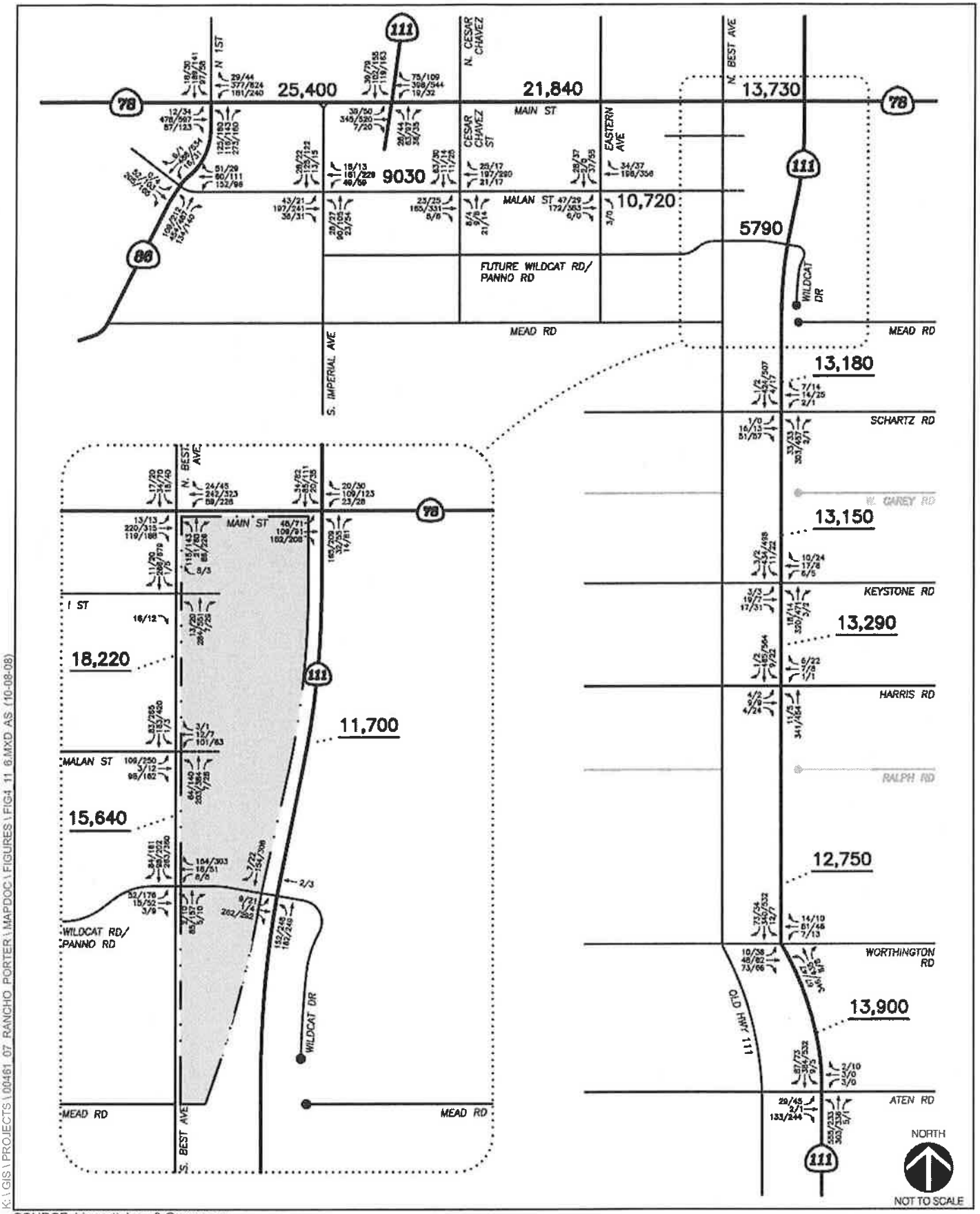
Under this scenario improvements mentioned in the previous scenarios are included. Also, the analysis includes the signal and geometric improvements at SR-111 / Wildcat Drive. With the addition of Phase I-III traffic and proposed improvements, all of the intersections would operate at LOS C or better.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.



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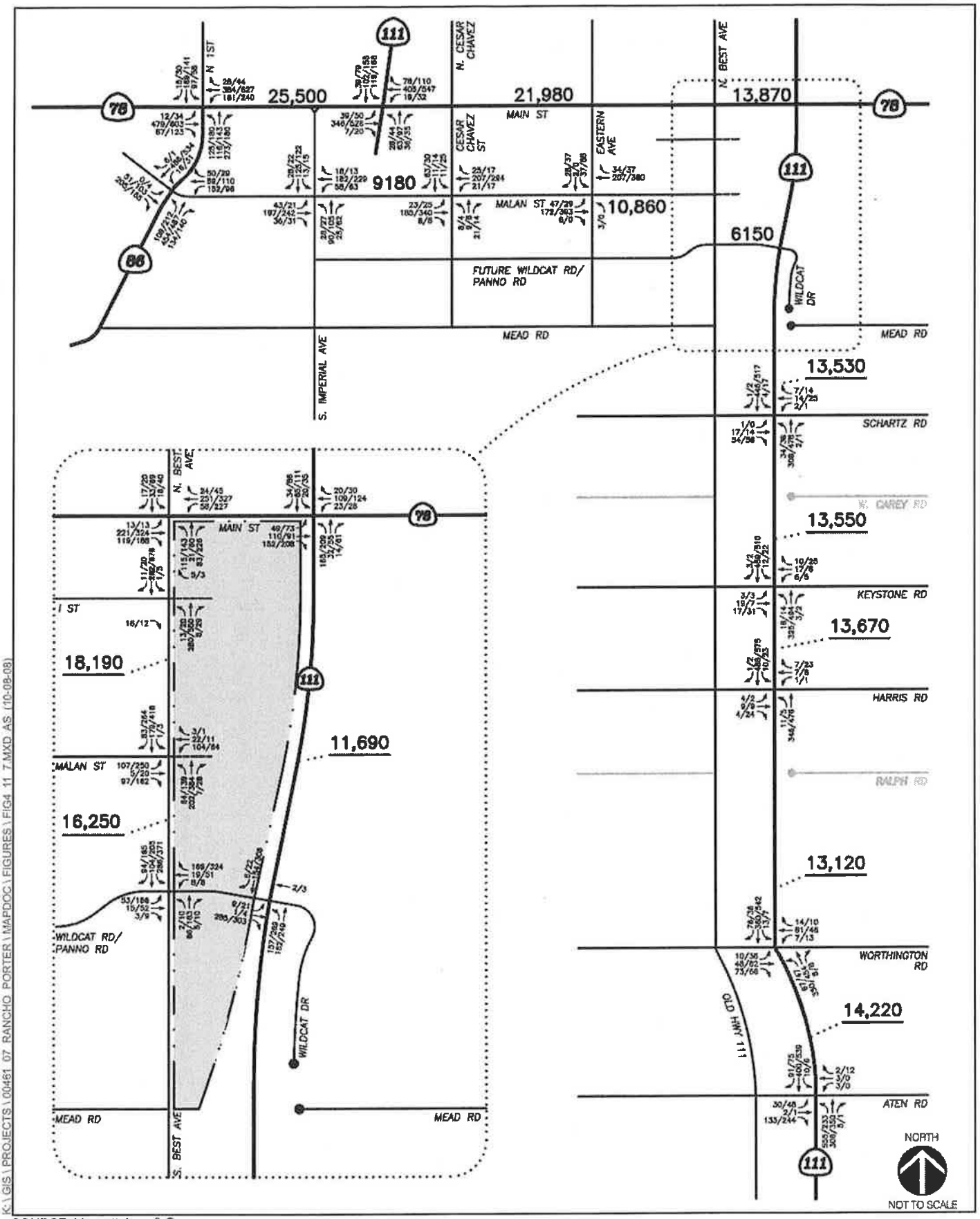
SOURCE: Linscott, Law & Greenspan

Figure 4.11-6
Existing + Project Phases I, II & III "Without Overlay" Traffic Volumes
Rancho-Porter Project EIR

ICF Jones & Stokes
an ICF International Company



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SOURCE: Linscott, Law & Greenspan

ICF Jones & Stokes
an ICF International Company

Figure 4.11-7
Existing + Total Project (Phases I-IV) "Without Overlay" Traffic Volumes
Rancho-Porter Project EIR

Impact Determination (Segments)
The analysis performed for the Existing + Phase I-IV includes the improvements previously mentioned. With the addition of the Phases I-IV project traffic, all of the street segments would operate at LOS C or better.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Existing + Total Project + Cumulative Projects

Figure 4.11-8, *Existing + Total Project + Cumulative Projects "Without Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the proposed Project plus cumulative projects without the commercial overlay.

Impact Determination (Intersections)
Under this scenario improvements mentioned in the previous scenarios are included. With the addition of Total Project + Cumulative Project traffic and proposed improvements, all of the study area intersections would operate at LOS D or worse. Any "Fair Share" contribution or proposed road infrastructure improvement within the County jurisdiction must be reviewed and approved by the County Public Works Department. In addition, upon approval, encroachment permit(s) shall be secured from the County Department of Public Works for any proposed work within the County road right-of-way(s). The County Public Works Department reserves the right to impose additional requirements within its jurisdiction as part of the permit review process. Formal acceptance of the Traffic Study shall be made in writing by the County Public Works Department.

Impact TR-6: Traffic conditions at the intersection of SR-78 / Best Avenue would be reduced from an LOS B in the existing condition to an LOS E[1] and F in the AM and PM peak hour cumulative condition, respectively, in the "Without Overlay" scenario only, resulting in a significant cumulative impact.

Impact TR-7: Traffic conditions at the intersection of SR-86 / Malan Street would be reduced from an LOS C in the existing condition to an LOS E in the AM and PM peak hours in the proposed plus cumulative projects condition for the "Without Overlay" scenario.

Likewise, traffic conditions at the intersection of SR-86 / Malan Street would be reduced from an LOS C in the existing condition to an LOS E and F in the AM and PM peak hour cumulative condition, respectively, in the "With Overlay" scenario, resulting in a significant cumulative impact.

Impact TR-8: Traffic conditions at the intersection of S. Imperial Avenue / Malan Street would be reduced from an LOS B and A in the existing AM and PM peak hour, respectively, to an LOS D and F, in the proposed Project plus cumulative projects condition under both the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

[1] In the event that jurisdiction over SR-78 is transferred from CALTRANS to the City of Brawley, then the Seabolt Drive / SR-78 intersection would be improved with a four-way traffic signal as a component of the proposed Project. This would result in a reduction from LOS B to an LOS D in the AM peak hour cumulative condition.

Impact TR-9: Traffic conditions at the intersection of Cesar Chavez Street / Malan Street would be reduced from an LOS A in the existing condition to an LOS E and F in the AM and PM peak hours, respectively, in the proposed Project plus cumulative projects condition under both the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Impact TR-10: Traffic conditions at the intersection of Eastern Avenue / Malan Street would be reduced from an LOS A in the existing condition to an LOS D and F in the AM and PM peak hours, respectively, in the proposed Project plus cumulative projects condition under both the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Impact TR-11: Traffic conditions at the intersection of Best Avenue / Malan Street would be reduced from an LOS A in the existing condition to an LOS D in the PM peak hours, in the proposed Project plus cumulative projects condition under the "Without Overlay" scenario, resulting in a significant cumulative impact.

Likewise, traffic conditions at the intersection of Best Avenue / Malan Street would be reduced from an LOS A in the existing condition to an LOS D and F in the AM and PM peak hour cumulative condition, respectively, in the "With Overlay" scenario, resulting in a significant cumulative impact.

Impact TR-12: Traffic conditions at the intersection of Best Avenue / Wildcat Drive would be reduced from an LOS A in the existing condition to an LOS F in the AM and PM peak hour cumulative condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Impact TR-13: Traffic conditions at the intersection of SR-111 / Wildcat Drive would be reduced from an LOS B and C in the existing AM and PM peak hours, respectively, to an LOS F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

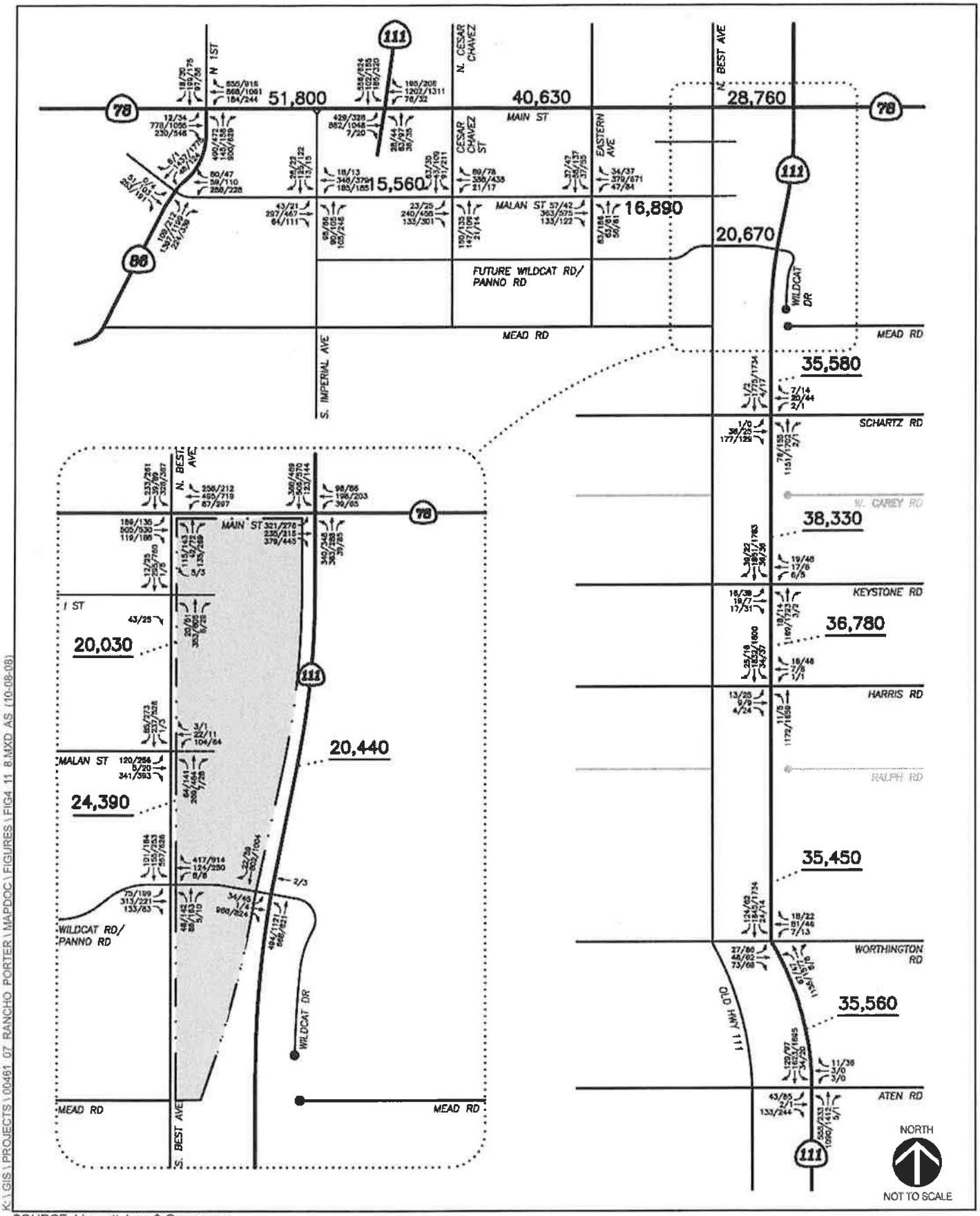
Impact TR-14: Traffic conditions at the intersection of SR-111 / Schartz Road would be reduced from an LOS B and C in the existing AM and PM peak hour condition, respectively, to an LOS F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Impact TR-15: Traffic conditions at the intersection of SR-111 / Harris Road would be reduced from an LOS B in the existing condition to an LOS F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Mitigation Measures

MM TR-6: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards providing an additional westbound through lane and an exclusive northbound right-turn lane with overlap at the SR-78 / Best Avenue intersection. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-7: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards providing a dedicated eastbound right-turn lane with overlap at the SR-86 / Malan Street intersection. The fair share contribution shall be proportional to the project's



SOURCE: Linscott, Law & Greenspan

K:\GIS\PROJECTS\00461 07 RANCHO PORTER\MAPDOC\FIGURES\FIG4 11 8.MXD AS (10-08-08)

Figure 4.11-8
Existing + Total Project + Cumulative Projects "Without Overlay" Traffic Volumes
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impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-8: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards installing a traffic signal, providing bike lanes on Malan Street, and implementing intersection geometry improvements at the intersection of S. Imperial Avenue / Malan Street. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-9: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards installing a traffic signal, providing bike lanes on Malan Street, and implementing intersection geometry improvements at the intersection of Cesar Chavez Street / Malan Street. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-10: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards installing a traffic signal, providing bike lanes on Malan Street, and implementing intersection geometry improvements at the intersection of Eastern Avenue / Malan Street. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-11: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards modifying the southbound shared through / right lane into a through lane and an exclusive right-turn lane at the intersection of Best Avenue / Malan Street. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-12: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards the installation of an all-way stop at the intersection of Best Avenue / Wildcat Avenue. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-13: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards providing dual eastbound right-turn lanes with overlap phasing and dual northbound left-turn lanes at the intersection of SR-111 / Wildcat Drive. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-14: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute a fair share towards installing a traffic signal and providing one left-turn, and one shared

through/right-turn lane in the eastbound and westbound directions at the intersection of SR-111 / Schartz Road. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

MM TR-15: Prior to the issuance of grading permits for Phase IV, the developer or master builder shall contribute the Project's fair share towards installing a traffic signal and providing one left-turn and one shared through / right-turn lane in the eastbound and westbound directions at the intersection of SR-111 / Harris Road. The fair share contribution shall be proportional to the project's impacts and will be established based on consultation with the City of Brawley's Public Works Department and the County of Imperial's Public Works Department (as appropriate) in accordance with industry standard fair share calculation methods.

Residual Impacts

With the incorporation of mitigation measures MM TR-6 through MM TR-15, cumulative impacts to intersections for the proposed Project would be reduced to less than significant.

Impact Determination (Segments)

Under this scenario improvements mentioned in the previous scenarios are included. With the addition of Total Project + Cumulative Project traffic and proposed improvements, all of the study area segments would operate at LOS C or better, except for the three segments along SR-78 from SR-86 to SR-111 (east) and along Malan Street from Eastern Avenue to Best Avenue. Traffic conditions along the segment of SR-78 from SR-86 to SR-111 (west) would be reduced from an LOS B in the existing condition to an LOS F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, however, State Route 78 / 111 Brawley Bypass Project is expected to reduce traffic at this segment by 14%. Traffic volumes shown for this analysis did not take the bypass reduction into consideration. The bypass will alleviate SR 78 traffic and reduce this cumulative impact to a level less than cumulatively considerable.

Impact TR-16: Traffic conditions along the segment of SR-78 from SR-111 (west) to Best Avenue would be reduced from an LOS A in the existing condition to an LOS F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Impact TR-17: Traffic conditions along the segment of SR-78 from Best Avenue to SR-111 (east) would be reduced from an LOS A in the existing condition to an LOS E and F in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, respectively, resulting in a significant cumulative impact.

Impact TR-18: Traffic conditions along the segment of Malan Street from Eastern Avenue to Best Avenue would be reduced from an LOS A in the existing condition to an LOS D in the proposed Project plus cumulative projects condition in the "With Overlay" and "Without Overlay" scenarios, resulting in a significant cumulative impact.

Mitigation Measures

MM TR-16: Implement MM TR-7.

MM TR-17: Implement MM TR-4.

MM TR-18: Implement MM TR-12.
~~MM TR-7 will mitigate Impact TR-16. MM TR-4 and the State Route 78 / 111 Brawley Bypass Project will mitigate Impact TR-17. MM TR-12 will mitigate MM TR-18.~~

Residual Impacts
With the incorporation of mitigation measures **MM TR-16~~7~~** through **MM TR-18~~9~~**, cumulative impacts to segments under the without overlay for the proposed Project would be reduced to less than significant.

Part 2: Project Traffic Conditions "With Overlay" Scenario

Table 4.11-11, *Project Trip Generation "With Overlay,"* summarizes the alternative project trip generation with the 17-acre commercial overlay. Based on the these trip generation calculations, the total project with the commercial overlay is calculated to generate approximately 29,124 ADT with 1,001 trips during the AM peak hour (398 inbound / 603 outbound trips) and 2,625 trips during the PM peak hour (1,354 inbound / 1,271 outbound). Comparing the trip generation from the "With Overlay" with the trip generation for "Without Overlay," it shows an average daily trip increase of approximately 3,054 trips and 25 and 255 trips during the AM and PM peak hours, respectively. Figure 4.11-9, *With Overlay Trip Distribution,* shows the trip distribution without the commercial overlay. Intersection and roadway segment operations with the commercial overlay are shown in Table 4.11-12, *Near-Term Intersection Operations "With Overlay,"* and Table 4.11-13, *Near-Term Segment Operations, "With Overlay."*

Analysis of Near-Term Conditions (With Overlay)

Existing + Project Phase I

The existing plus Project phase one scenario with the commercial overlay is analyzed in the "Without Overlay" scenario. As such, Figure 4.11-4, *Existing + Phase I Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the first phase of the proposed Project with the commercial overlay.

Impact Determination (Intersections)
The proposed Project in the "With Overlay" and "Without Overlay" would be identical and would result in the same impacts. As such, with the addition of Phase I traffic, all of the study area intersections would operate at LOS C or better except Best Avenue / Malan Street (LOS E during the PM peak hour) and at Best Avenue / Wildcat Drive (LOS F during the PM peak hour).

Impact TR-1: Traffic conditions at the intersection of Best Avenue / Malan Street would be reduced from an LOS A in the existing condition to an LOS E in the PM peak hour upon implementation of Phase I of the proposed Project, and a significant direct impact would result. This impact is the same under either scenario.

Table 4.11-11. Project Trip Generation "With Overlay"

			Daily Trip Ends (ADT)			AM Peak Hour					PM Peak Hour				
							In:Out	Volume				In:Out	Volume		
Land Use	**Quantity**		**Rate**		**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
PHASE I + PHASE II															
Multi-Family	49	DU	5.86	/DU	287	0.44	17:83	4	18	22	0.52	67:33	17	8	25
Mobile Homes	342	DU	4.99	/DU [a]	1,707	0.44	20:80	30	120	150	0.59	62:38	125	77	202
Park Space	6.48	Acres	1.59	/Acre	10	0.40	50:50	2	1	3	0.50	50:50	1	2	3
Commercial	735.4	TSF	[a]		24,820	[b]	61:39	316	199	515	[c]	48:52	1,118	1,213	2,331
Subtotal Residential/Park					*2,004*	—	—	*36*	*139*	*175*	—	—	*143*	*87*	*230*
Residential Internal Capture [d]					(200)	—	—	(3)	(11)	(14)	—	—	(14)	(9)	(23)
Net Residential/Park					*1,804*	—	—	*33*	*128*	*161*	—	—	*129*	*78*	*207*
Commercial Internal Capture [e]					(200)	—	—	(11)	(3)	(14)	—	—	(9)	(14)	(23)
Subtotal Commercial					*24,620*			*305*	*196*	*501*			*1,109*	*1,199*	*2,308*
Pass-by Reduction [f]					(4,924)			(25)	(25)	(50)			(289)	(289)	(578)
Net Total Commercial					*19,696*	—	—	*280*	*171*	*451*	—	—	*820*	*910*	*1,730*
Total Phase I + II External Trips					**21,500**			**313**	**299**	**612**			**949**	**988**	**1,937**
PHASE I + PHASE II + PHASE III															
Multi-Family	658	DU	5.86	/DU	3,856	0.44	17:83	49	241	290	0.52	67:33	229	113	342
Mobile Home	342	DU	4.99	/DU [a]	1,707	0.44	20:80	30	120	150	0.59	62:38	125	77	202

			Daily Trip Ends (ADT)			AM Peak Hour					PM Peak Hour				
							In:Out	Volume				In:Out	Volume		
Land Use	**Quantity**		**Rate**		**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
Park Space	8.19	Acres	1.59	/Acre	13	0.40	50:50	2	1	3	0.50	50:50	2	2	4
Commercial	957.4	TSF	[a]		29,488	[b]	61:39	373	239	612	[c]	48:52	1,331	1,446	2,777
Subtotal Residential/Park					*5,576*	—	—	*81*	*362*	*443*	—	—	*356*	*192*	*548*
Residential Internal Capture [d]					(558)	—	—	*(6)*	(29)	(35)	—	—	(36)	(19)	(55)
Net Residential/Park					*5,018*	—	—	*75*	*333*	*408*	—	—	*320*	*173*	*493*
Commercial Internal Capture [e]					(558)	—	—	*(29)*	(6)	(35)	—	—	(19)	(36)	(55)
Subtotal Commercial					*28,930*	—	—	*344*	*233*	*577*	—	—	*1,312*	*1,410*	*2,722*
Pass-by Reduction [f]					5,786	—	—	(29)	(29)	(58)	—	—	(340)	(340)	680
Net Total Commercial					*23,144*	—	—	*315*	*204*	*519*	—	—	*972*	*1,070*	*2,042*
Total Phase I + II + III External Trips					**28,162**	—	—	**390**	**537**	**927**	—	—	**1,292**	**1,243**	**2,535**
PHASE I + PHASE II + PHASE III + PHASE IV															
Multi - Family	856	DU	5.86	/DU	5,016	0.44	17:83	64	313	377	0.52	67:33	298	147	445
Mobile Home	342	DU	4.99	/DU [a]	1,707	0.44	20:80	30	120	150	0.59	62:38	125	77	202
Park Space	14.05	Acres	1.59	Acre	22	0.40	50:50	3	3	6	0.50	50:50	3	4	7
Commercial	957.4	TSF	[a]		29,488	[b]	61:39	373	239	612	[c]	48:52	1,331	1,446	2,777
Subtotal Residential/Park					*6,745*	—	—	*97*	*436*	*533*	—	—	*426*	*228*	*654*
Residential Internal Capture [d]					(674)	—	—	(8)	(35)	(43)	—	—	(42)	(23)	(65)
Net Residential/Park					*6,071*	—	—	*89*	*401*	*490*	—	—	*384*	*205*	*589*
Commercial Internal Capture [e]					(674)	—	—	(35)	(8)	(43)	—	—	(23)	(42)	(65)

		Daily Trip Ends (ADT)		AM Peak Hour				PM Peak Hour				
					In:Out	Volume				In:Out	Volume	
Land Use	**Quantity**	**Rate**	**Volume**	**Rate**	**Split**	**In**	**Out**	**Total**	**Rate**	**Split**	**In**	**Out**	**Total**
Subtotal Commercial			*28,814*	—	—	*338*	*231*	*569*	—	—	*1,308*	*1,404*	*2,712*
Pass-by Reduction [f]			(5,764)	—	—	(29)	(29)	(58)	—	—	(338)	(338)	(676)
Net Total Commercial			*23,053*	—	—	*309*	*202*	*511*	—	—	*970*	*1,066*	*2,036*
Total Phase I + II + III + IV External Trips			**29,124**	—	—	**398**	**603**	**1,001**	—	—	**1,354**	**1,271**	**2,625**

Footnotes:

[a] Shopping Center ADT Rate: Ln(T) = 0.65LN(X) + 5.83

[b] Shopping Center AM Peak: Ln(T) = 0.60LN(X) + 2.29

[c] Shopping Center PM Peak: Ln(T) = 0.66LN(X) + 3.40

[d] Residential Internal Capture Rate: 8% AM, 10% PM, 10% ADT

[e] Commercial Internal Capture was based on reverse residential splits.

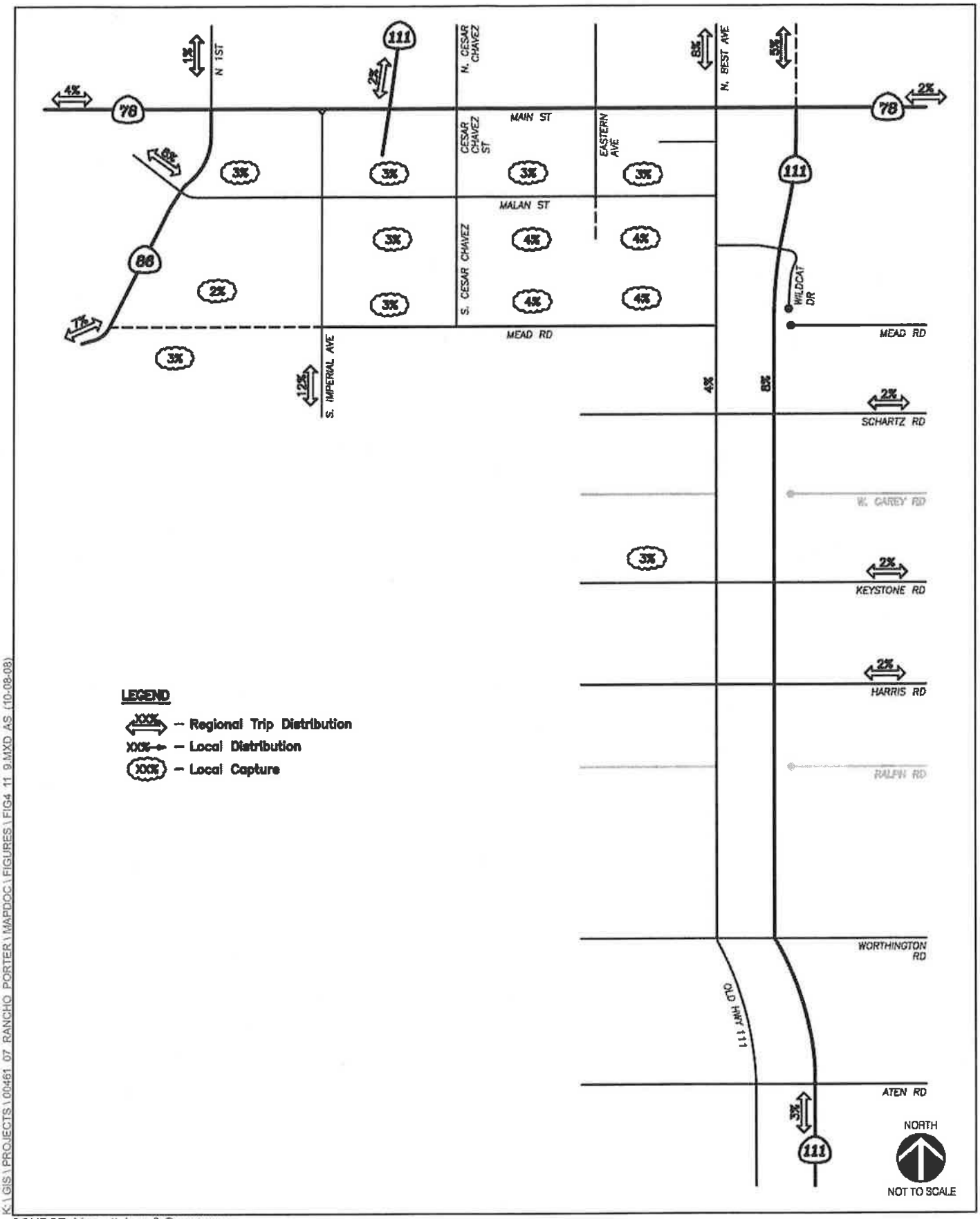
[f] Pass-by Rate: 10% AM, 25% PM, 20% ADT

General Notes:

DU = Dwelling Units

TSF = Thousand Square Feet

Source: All rates are based on ITE Trip Generation Manual, 7th Edition.



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SOURCE: Linscott, Law & Greenspan

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Figure 4.11-9
"With Overlay" Trip Distribution
Rancho-Porter Project EIR

Table 4.11-12. Near-Term Intersection Operations, "With Overlay"

Intersection	Control Type	Peak Hour	Existing		Existing + Phase I			Impact Type	Existing + Phases I & II			Impact Type	Existing + Phases I, II, & III			Impact Type	Existing + Total Project (Phases I-IV)			Impact Type	Existing + Total Project + Cumulative Projects		Impact Type
			Delay	LOS	Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	
1. SR-78 / SR-86 / E. Main St	Signal	AM	28.2	C	28.2	C	0.0	None	28.2	C	0.0	None	28.4	C	0.2	None	28.4	C	0.2	None	111.8	F	None
		PM	28.3	C	28.3	C	0.0		28.3	C	0.0		28.7	C	0.4		28.7	C	0.4		123.9	F	
2. SR-78 / SR-111 (west)	Signal	AM	25.4	C	25.4	C	0.0	None	25.4	C	0.0	None	25.4	C	0.0	None	25.4	C	0.0	None	162.9	F	None
		PM	26.3	C	27.1	C	0.8		27.3	C	1.0		27.6	C	1.3		27.7	C	1.4		178.3	F	
3. SR-78 / Best Ave	Signal[d]	AM	17.3	B	23.8	C	6.5	None	27.5	C	10.2	Direct	22.5	C	0.0	None	22.6	C	0.1	None	52.1	D	None
		PM	17.7	B	31.3	C	13.6		36.0	D	18.3		27.4	C	0.0		27.8	C	0.4		88.7	F	
Right-In/ Right-Out Only at Seabolt Drive[j]	Signal[d]	AM	17.3	B	26.8	C	9.5	None	29.5	C	2.7	Direct	25.2	C	0.0	None	26.2	C	1.0	None	55.2	E	Cumulative
		PM	17.7	B	34.9	C	17.2		37.7	D	2.8		29.2	C	0.0		30.5	C	1.3		95.7	F	
4. SR-78 / SR-111 (east)	Signal[e]	AM	16.8	B	19.8	B	0.0	None	19.8	B	0.0	None	20.0	B	0.2	None	27.9	C	8.1	None	32.5	C	None
		PM	16.2	B	19.8	B	0.0		20.1	C	0.3		22.2	C	2.4		25.5	C	5.7		32.8	C	
5. SR-86 / Malan St	Signal	AM	29.1	C	29.8	C	0.7	None	30.2	C	1.1	None	30.8	C	1.7	None	30.8	C	1.7	None	59.6	E	Cumulative
		PM	26.3	C	29.6	C	3.3		30.6	C	4.3		32.1	C	5.8		32.1	C	5.8		82.0	F	
6. S. Imperial Ave / Malan St	AWSC[f]	AM	10.3	B	10.9	B	0.6	None	11.2	B	0.9	None	11.6	B	1.3	None	11.6	B	1.3	None	27.4	D	Cumulative
		PM	9.6	A	11.5	B	1.9		12.6	B	3.0		14.0	B	4.4		14.2	B	4.6		120.9	F	
7. Cesar Chavez St / Malan St	AWSC[f]	AM	8.5	A	9.0	A	0.5	None	9.3	A	0.8	None	9.7	A	1.2	None	9.8	A	1.3	None	47.5	E	Cumulative
		PM	8.2	A	10.4	B	2.2		11.7	B	3.5		13.3	B	5.1		13.6	B	5.4		233.0	F	
8. Eastern Ave / Malan St	AWSC[f]	AM	8.3	A	9.0	A	0.7	None	9.3	A	1.0	None	9.7	A	1.4	None	9.8	A	1.5	None	32.2	D	Cumulative
		PM	8.3	A	11.6	B	3.3		14.0	B	5.7		17.5	C	9.2		18.1	C	9.8		272.6	F	
9. S. Best Ave / I Street	TWSC[g/h]	AM	9.7	A	11.0	B	1.3	None	11.1	B	1.4	Direct	9.8	A	0.0	None	9.8	A	0.0	None[j]	10.3	B	None
		PM	10.4	B	22.8	C	12.4		460.8	F	450.4		13.8	B	0.0		14.2	B	0.4		15.3	C	
10. S. Best Ave / Malan St	TWSC[g/i]	AM	9.8	A	11.8	B	2.0	Direct	17.7	B	0.0	Direct[j]	20.9	C	3.2	None	21.4	C	3.7	None	25.9	C	Cumulative
		PM	10.0	A	47.4	E	37.4		27.7	C	0.0		34.3	C	6.6		34.7	C	7.0		64.4	E	
11. S. Best Ave / Wildcat Dr	TWSC[g/i/k]	AM	9.0	A	16.9	C	7.9	Direct	9.8	A	0.0	None	11.5	B	0.7	Direct	10.9	C	1.5	None	95.1	F	Cumulative
		PM	9.0	A	72.2	F	63.2		17.2	B	0.0		28.5	D	8.0		19.5	C	13.6		226.5	F	
12. SR-111 / Wildcat Dr	TWSC[g/i]	AM	13.9	B	14.4	B	0.5	None	14.9	B	1.0	None	15.7	C	1.8	Direct	24.9	C	0.0	None	159.8	F	Cumulative
		PM	16.4	C	18.8	C	2.4		21.6	C	5.2		28.6	D	12.2		27.0	C	0.0		309.5	F	

Intersection	Control Type	Peak Hour	Existing		Existing + Phase I			Impact Type	Existing + Phases I & II			Impact Type	Existing + Phases I, II, & III			Impact Type	Existing + Total Project (Phases I-IV)			Impact Type	Existing + Total Project + Cumulative Projects		Impact Type
			Delay	LOS	Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	Δ Delay		Delay	LOS	
13. SR-111 / Schartz Rd	TWSC[g]	AM	13.6	B	13.6	B	0.0	None	14.0	B	0.4	None	15.5	C	1.9	None	15.9	C	2.3	None	OVRFL	F	Cumulative
		PM	16.3	C	16.4	C	0.1		17.9	C	1.6		21.9	C	5.6		23.2	C	6.9		OVRFL	F	
14. SR-111 / Keystone Rd	Signal	AM	9.4	A	9.5	A	0.1	None	9.6	A	0.2	None	9.6	A	0.2	None	9.8	A	0.4	None	9.8	A	None
		PM	7.5	A	8.2	A	0.7		8.2	A	0.7		8.4	A	0.9		8.5	A	1.0		9.1	A	
15. SR-111 / Harris Rd	TWSC[g]	AM	13.5	B	13.7	B	0.2	None	14.8	B	1.3	None	16.4	C	2.9	None	16.9	C	3.4	None	OVRFL	F	Cumulative
		PM	12.4	B	13.0	B	0.6		14.0	B	1.6		15.3	C	2.9		15.7	C	3.3		OVRFL	F	
16. SR-111 / Worthington Rd	Signal	AM	20.5	C	20.6	C	0.1	None	20.8	C	0.3	None	21.1	C	0.6	None	21.8	C	1.3	None	34.6	C	None
		PM	16.1	B	16.5	B	0.4		16.7	B	0.6		16.9	B	0.8		16.9	B	0.8		17.2	B	
17. SR-111 / Aten Rd	Signal	AM	15.3	B	15.3	B	0.0	None	16.0	B	0.7	None	16.9	B	1.6	None	17.0	B	1.7	None	18.6	B	None
		PM	20.2	C	20.3	C	0.1		20.3	C	0.1		20.3	C	0.1		20.3	C	0.1		20.3	C	

Footnotes:

[a] Average delay expressed in seconds per vehicle.

[b] Level of Service.

[c] "Δ" denotes the project-induced increase in delay.

[d] Geometry improvements included in Phase III of the analysis.

[e] Geometry improvements included in Phase I of the analysis.

[f] AWSC –All-Way Stop Controlled intersection.

[g] TWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.

[h] Intersection has Direct project impact. Left-turn out prohibited to improve level of service.

[i] Intersection has Direct project impact. Installation of traffic signal is required to improve level of service.

[j] As noted in the mitigation section of this report, a traffic signal under Phase I of the project will mitigate the impact, however, additional geometric improvements will be needed to provide adequate access with the addition of Phase II. Per CALTRANS directions, the intersection was reanalyzed considering a right-in/ right-out only access at Seabolt Drive and SR-78. *Appendix R* of the Traffic Study provides the AM/PM traffic volumes and analyses at SR-78/ Best Avenue.

[k] Intersection under Direct project impact during Phase I. Installation of an All-Way Stop-Control is required to improve Level of Service.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

General Notes:

Bold typeface and shading indicates a potential significant impact

Table 4.11-13. Near-Term Segment Operations, "With Overlay"

Segment	LOS E Capacity [a]	Existing			Impact Type	Existing + Project Phases I & II			V/C Δ	Impact Type	Existing + Project Phases I, II & III			V/C Δ	Impact Type	Existing + Total Project (Phases I-IV)			V/C Δ	Impact Type	Existing + Total Project + Cumulative Projects			V/C Δ	Impact Type
		Volume	LOS[b]	V/C[c]		Volume	LOS	V/C			Volume	LOS	V/C			Volume	LOS	V/C			Volume	LOS	V/C		
SR-78																									
SR-86 to SR-111 (west)	38,000	23,900	B	0.63	None	25,210	B	0.66	0.03	None	25,400	B	0.67	0.04	None	25,500	B	0.67	0.04	None	51,800	F	1.36	0.73	Cumulative
SR-111 (west) to S. Best Ave	38,000	19,400	A	0.51	None	21,530	A	0.57	0.06	None	21,840	A	0.57	0.06	None	21,980	A	0.58	0.07	None	40,630	F	1.07	0.56	Cumulative
S. Best Ave to SR-111 (east)	19,000	7,800	A	0.41	None	14,360	A[f]	0.50	0.00	None	13,730	A	0.48	0.00	None	13,870	A	0.49	0.00	None	28,760	F	1.01	0.51	Cumulative
Malan Street [d]																									
S. Imperial Ave to Cesar Chavez Rd	19,000	3,290	A	0.17	None	8,010	A	0.42	0.25	None	9,030	A	0.48	0.30	None	9,180	A	0.48	0.31	None	15,560	D	0.82	0.65	None
Eastern Ave to S. Best Ave	19,000	2,010	A	0.11	None	9,140	A	0.48	0.38	None	10,720	A	0.56	0.46	None	10,860	A	0.57	0.47	None	16,890	D	0.89	0.78	Cumulative
S. Best Avenue																									
I Street to Malan Street [d]	19,000	4,430	A	0.23	None	18,550	E	0.98	0.74	Direct	18,220	A[g]	0.48	0.00	None	18,190	A	0.48	0.00	None	20,030	A	0.53	0.05	None
Malan Street to Wildcat Dr	15,000	4,850	A	0.32	None	12,200	D	0.81	0.49	Direct	15,640	A[f]	0.55	0.00	None	16,250	A	0.57	0.02	None	24,390	D	0.86	0.31	None
SR-111 [e]																									
SR-78 to Wildcat Dr	53,300	9,600	A	0.18	None	11,390	A	0.21	0.03	None	11,700	A	0.22	0.04	None	11,690	A	0.22	0.04	None	20,440	B	0.38	0.20	None
Wildcat Dr to Schartz Rd	53,300	9,600	A	0.18	None	11,840	A	0.22	0.04	None	13,180	A	0.25	0.07	None	13,530	A	0.25	0.07	None	35,580	C	0.67	0.49	None
Schartz Rd to Keystone Rd	53,300	9,600	A	0.18	None	11,660	A	0.22	0.04	None	13,150	A	0.25	0.07	None	13,550	A	0.25	0.07	None	38,330	C	0.72	0.54	None
Keystone Rd to Harris Rd	53,300	10,300	A	0.19	None	11,930	A	0.22	0.03	None	13,290	A	0.25	0.06	None	13,670	A	0.26	0.06	None	36,780	C	0.69	0.50	None
Harris Rd to Worthington Rd	53,300	10,300	A	0.19	None	11,530	A	0.22	0.02	None	12,750	A	0.24	0.05	None	13,120	A	0.25	0.05	None	35,450	C	0.67	0.47	None
Worthington Rd to Aten Rd	53,300	11,700	A	0.22	None	12,840	A	0.24	0.02	None	13,900	A	0.26	0.04	None	14,220	A	0.27	0.05	None	35,560	C	0.67	0.45	None

Footnotes:

[a] Roadway capacity based on Table 4.7.2, ADT Level of Service Volumes by Roadway types City of Brawley General Plan 1995 / Imperial County Standard Street Classification Average Daily Vehicle Trips, Circulation and Scenic Highways Element, August 2006.

[b] Level of Service.

[c] Volume to capacity ratio.

[d] Roadway capacity reduced proportionately to a two-lane arterial based on City of Brawley Major Arterial classification.

[e] SR-111 is a 4-Lane Expressway with no more than one access per mile. Therefore, the capacity of a 6-Lane Expressway was reduced proportionately for this 4-Lane Expressway.

[g] Roadway capacity increased to City of Brawley Major Arterial classification and then reduced proportionately to a three-lane arterial with a capacity of 28,500.

[g] Roadway capacity increased to City of Brawley Major Arterial classification of 38,000.

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Impact TR-2: Traffic conditions at the intersection of Best Avenue / Wildcat Drive would be reduced from an LOS A in the existing condition to an LOS F in the PM peak hour upon implementation of Phase I of the proposed Project, and a significant direct impact would result. This impact is the same under either scenario.

Mitigation Measures

MM TR-1 and MM TR-2 would apply. These measures are the same under either scenario.

Residual Impacts

With the incorporation of mitigation measures MM TR-1 and MM TR-2, impacts to intersections during the first phase of the proposed Project would be less than significant.

Impact Determination (Segments)

With the addition of Phase I Project traffic, all of the street segments would operate at a LOS C or better

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Existing + Project Phases I & II

Figure 4.11-10, *Existing + Phases I & II "With Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of phases one and two of the proposed Project with the commercial overlay.

Impact Determination (Intersections)

The analysis performed for the Existing + Project Phases I & II conditions includes the same improvements mentioned under Existing + Project Phase I conditions of the without overlay option. Additionally, due to the Malan Street project access connection to Best Avenue, geometric improvements at Best Avenue / Malan Street and Best Avenue / Wildcat Drive were included to provide adequate access.

With the addition of the Phases I & II project traffic, all of the intersections would operate at LOS C or better except for SR-78 / Best Avenue (LOS D during the PM peak hour) and Best Avenue / I Street (LOS F during the PM peak hour). It should be noted that the Best Avenue / Malan Street intersection requires a traffic signal under Phase I and subsequent lane configuration improvements are required to provide adequate access with the addition of Phase II.

Impact TR-~~20~~19: Traffic conditions at the intersection of SR-78 (E. Main Street) / Best Avenue would be reduced from an LOS B in the existing condition to an LOS D in the PM peak hour upon implementation of Phase II of the proposed Project, resulting in a significant direct impact.

In the event that Caltrans maintains jurisdiction over SR-78 and it does not change to the city's jurisdiction, the SR-78/Seabolt Drive intersection would result in a right-in/right-out turn only at Seabolt Drive. Traffic~~In the event that Caltrans restricts the intersection of SR-78 / Seabolt Drive to a right-~~

~~in/right-out turn only, then traffic~~ conditions at the intersection of SR-78 (E. Main Street) / Best Avenue would be reduced from an LOS B in the existing condition to an LOS D in the PM peak hour upon implementation of Phase II of the proposed Project, resulting in a significant direct impact. To mitigate for this direct impact, SR-78/ S. Best Avenue shall provide an additional westbound left-turn lane and an intersection shall not be permitted at SR-78/Seabolt Drive.

Impact TR-~~21~~20: Traffic conditions at the intersection of Best Avenue / I Street would be reduced from an LOS B in the existing condition to an LOS F in the PM peak hour upon implementation of Phase II of the proposed Project, resulting in a significant direct impact.

Mitigation Measures

MM TR-~~20~~19: Prior to the issuance of grading permits for Phase II, the developer or master builder shall provide a dedicated northbound right turn lane and an additional dedicated westbound right turn lane at the intersection of SR-78 (E. Main Street) / Best Avenue. ~~Prior to the issuance of grading permits for Phase II, the developer or master builder shall provide a dedicated northbound right turn lane and an additional dedicated westbound right turn lane at the intersection of Best Avenue / I Street.~~ If SR-78 remains in Caltrans jurisdiction at the time of the project's implementation, then intersection at SR-78 / Seabolt Drive shall be improved to a right-in/right-out turn only and improvements to SR-78/ S. Best Avenue shall be required during Phase I, which shall include an additional westbound left-turn lane. An intersection shall not be permitted at SR-78/Seabolt Drive.

MM TR-~~21~~20: Prior to the issuance of grading permits for Phase II, the developer or master builder shall provide a dedicated northbound right turn lane and an additional dedicated westbound right turn lane at the intersection of Best Avenue / I Street.~~Prior to the issuance of grading permits for Phase II, the developer or master builder shall provide a dedicated northbound right turn lane and an additional dedicated westbound right turn lane at the intersection of SR-78 (E. Main Street) / Best Avenue.~~

Residual Impacts

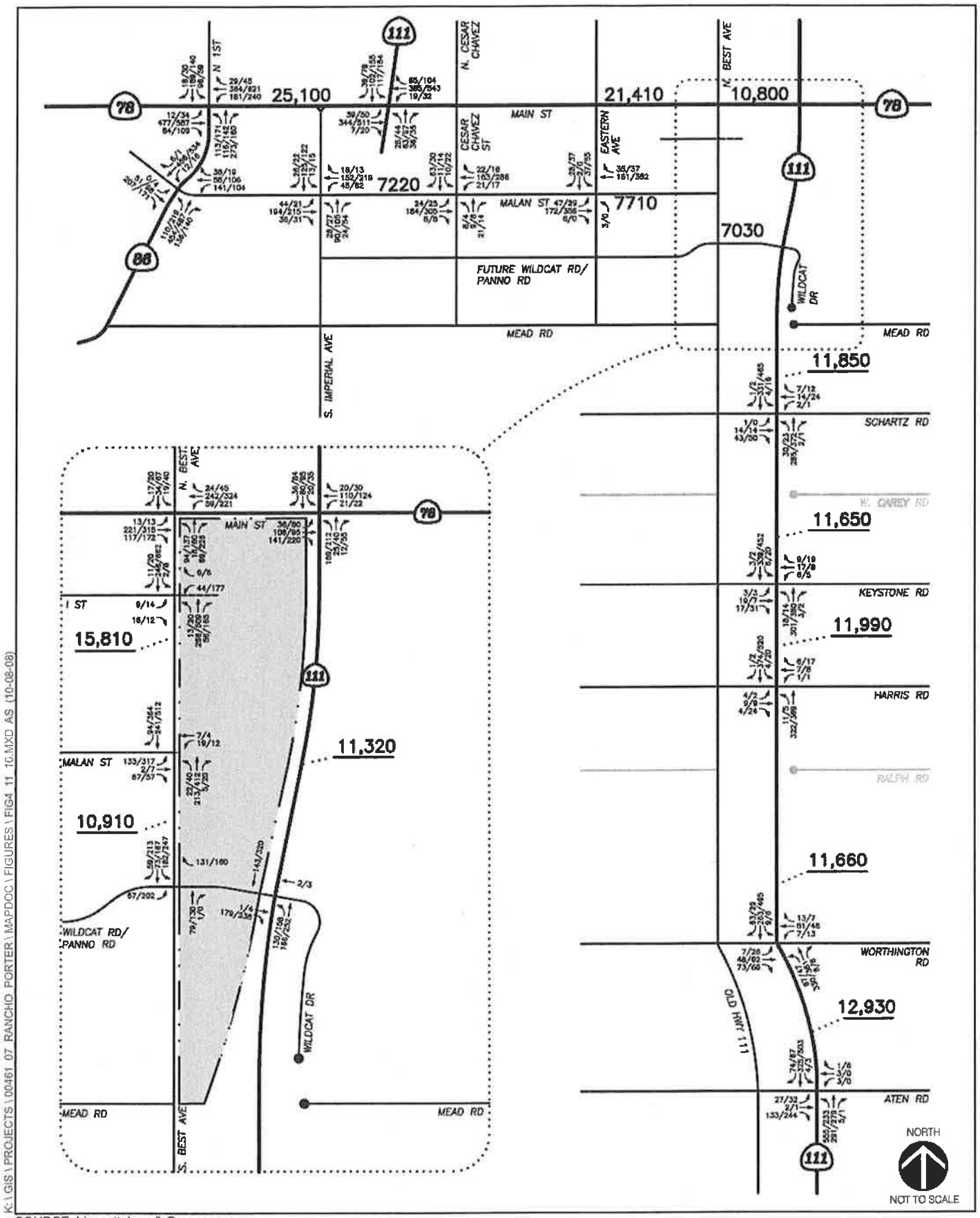
With the incorporation of mitigation measures MM TR-~~20~~-19 and MM TR-~~21~~20, impacts would be less than significant.

Impact Determination(Segments)

The analysis performed for the Existing + Project Phases I & II conditions includes the widening of the segment on SR-78 between Best Avenue and SR-111. With the addition of Phases I & II traffic, all of the street segments are calculated to operate at LOS C or better, except for the segment of Best Avenue from I Street to Malan Street (LOS E) and from Malan Street to Wildcat Drive (LOS D).

Impact TR-~~22~~21: Traffic conditions along the roadway segment of Best Avenue from I Street to Malan Street would be reduced from an LOS A in the existing condition to an LOS E upon implementation of Phase II of the proposed Project, and a significant direct impact would result.

Impact TR-~~23~~22: Traffic conditions along the roadway segment of Best Avenue from Malan Street to Wildcat Drive would be reduced from an LOS A in the existing condition to an LOS D upon implementation of Phase II of the proposed Project, and a significant direct impact would result.



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SOURCE: Linscott, Law & Greenspan

Figure 4.11-10
Existing + Project Phases I & II "With Overlay" Traffic Volumes
Rancho-Porter Project EIR

ICF Jones & Stokes
an ICF International Company

Mitigation Measures

MM TR-~~22~~21: Prior to the issuance of grading permits for Phase II, the developer or master builder shall improve Best Avenue to a Major Arterial, per the Brawley General Plan, from I Street to Malan Street.

MM TR-~~23~~22: Prior to the issuance of grading permits for Phase II, the developer or master builder shall improve Best Avenue to a three-lane Major Arterial, per the Brawley General Plan, from Malan Street to Wildcat Drive.

Residual Impacts

With the incorporation of mitigation measures MM TR-~~22~~-21 and MM TR-~~23~~22, impacts would be less than significant.

Existing + Project Phase I–III

Figure 4.11-11, *Existing + Phases I-III "With Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of phases one through three of the proposed Project with the commercial overlay.

Impact Determination (Intersections)

The analysis performed for the Existing + Project Phases I-III conditions includes the same improvements previously mentioned under Existing + Project Phases I & II. With the addition of the Phases I-III project traffic and proposed improvements, all of the intersections would operate at a LOS C or better except for the intersection of SR-111 / Wildcat Drive (LOS D during the PM peak hour).

Impact TR-5: Traffic conditions at the intersection of SR-111 / Wildcat Drive would be reduced from an LOS C in the existing condition to an LOS D in the PM peak hour upon implementation of Phase III of the proposed Project, and a significant direct impact would result. This impact is the same in the Without Overlay scenario.

Mitigation Measures

MM TR-5 would apply.

Residual Impacts

With the incorporation of mitigation measure MM TR-5, impacts would be less than significant.

Impact Determination (Segments)

The analysis performed for the Existing + Project Phases I-III includes the improvements previously mentioned under Existing + Project Phases I & II. Additionally, the analysis includes the improvements to the segments on Best Avenue from I street to Malan Street and Malan Street to Wildcat Drive. With the addition of the Phases I-III project traffic and proposed improvements, all of the street segments would operate at a LOS C or better.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Existing + Project Phase I–IV (Total Project)

Figure 4.11-12, *Existing + Phases I-IV "With Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of all four phases of the proposed Project with the commercial overlay.

Impact Determination (Intersections)
The analysis performed for the Existing + Total Project (Phases I-IV) conditions includes the improvements previously mentioned under Existing + Project Phases I-III. Additionally, the analysis includes the signal and geometric improvements at SR-111 / Wildcat Drive.

With the addition of the Total Project (Phases I-IV) traffic and proposed improvements, all of the intersections would operate at a LOS C or better.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Impact Determination (Segments)
The analysis performed for the Existing + Total Project (Phases I-IV) includes the improvements to the segments previously mentioned under Existing + Project Phases I-III. With the addition of Total Project (Phases I-IV) traffic, all of the street segments would operate at LOS C or better.

Mitigation Measures
No mitigation is required.

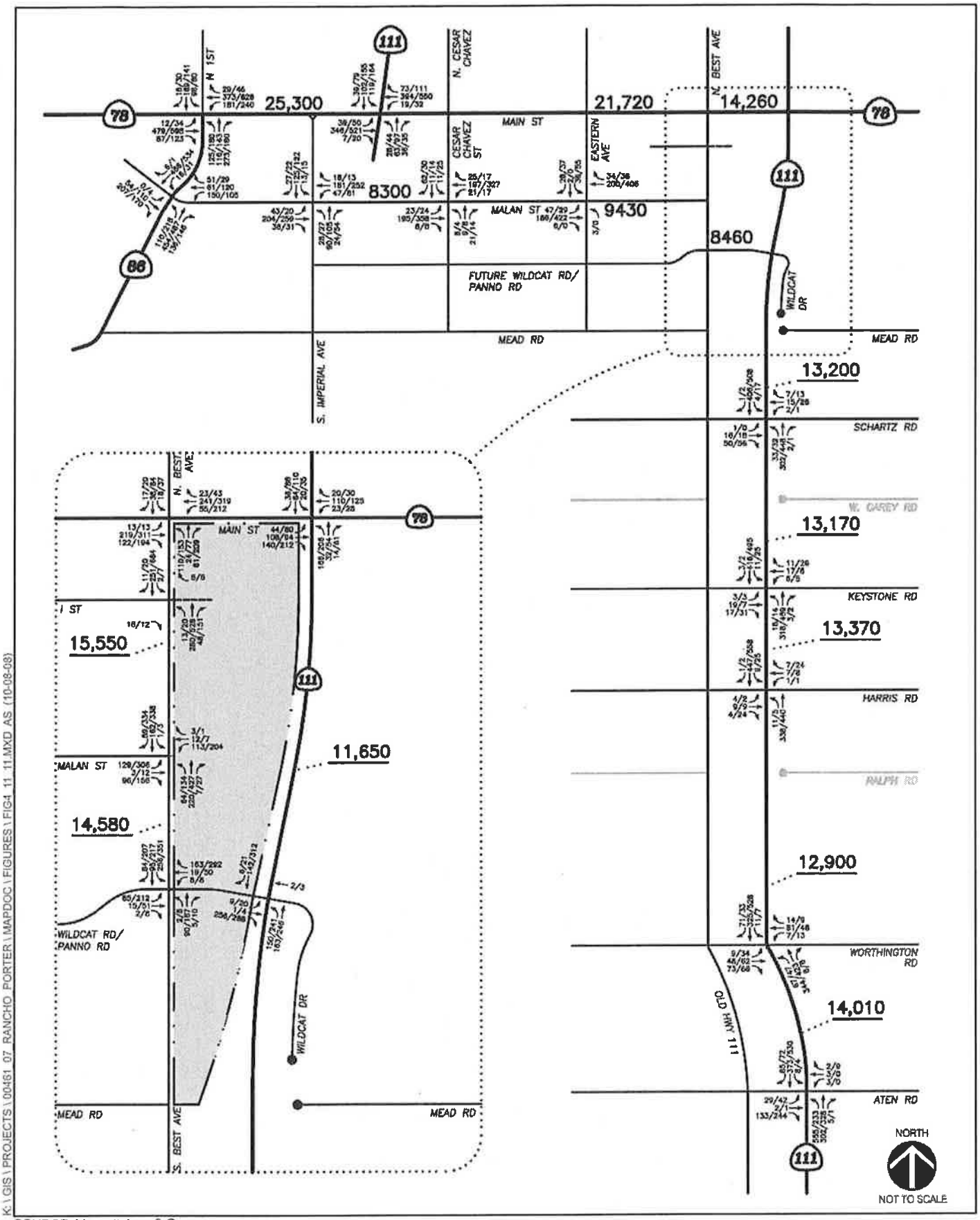
Residual Impacts
Impacts would be less than significant.

Existing + Total Project + Cumulative Projects

Figure 4.11-13, *Existing + Total Project + Cumulative Projects "With Overlay" Traffic Volumes*, illustrates both intersection and roadway segment operations with the completion of the proposed Project plus cumulative projects with the commercial overlay.

Impact Determination (Intersections)
Under this scenario improvements mentioned in the previous scenarios are included. With the addition of Total Project + Cumulative Project traffic and proposed improvements, all of the study area intersections would operate at LOS D or worse, except for the intersection of SR-78 / Best Avenue. As such, **Impact TR-6** through **Impact TR-15**, as identified in this chapter, would occur in the "With Overlay" scenario under cumulative conditions.

Mitigation Measures
Mitigation measures **MM TR-6** through **MM TR-15** would apply.



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SOURCE: Linscott, Law & Greenspan

Figure 4.11-11
Existing + Project Phases I, II & III "With Overlay" Traffic Volumes
Rancho-Porter Project EIR

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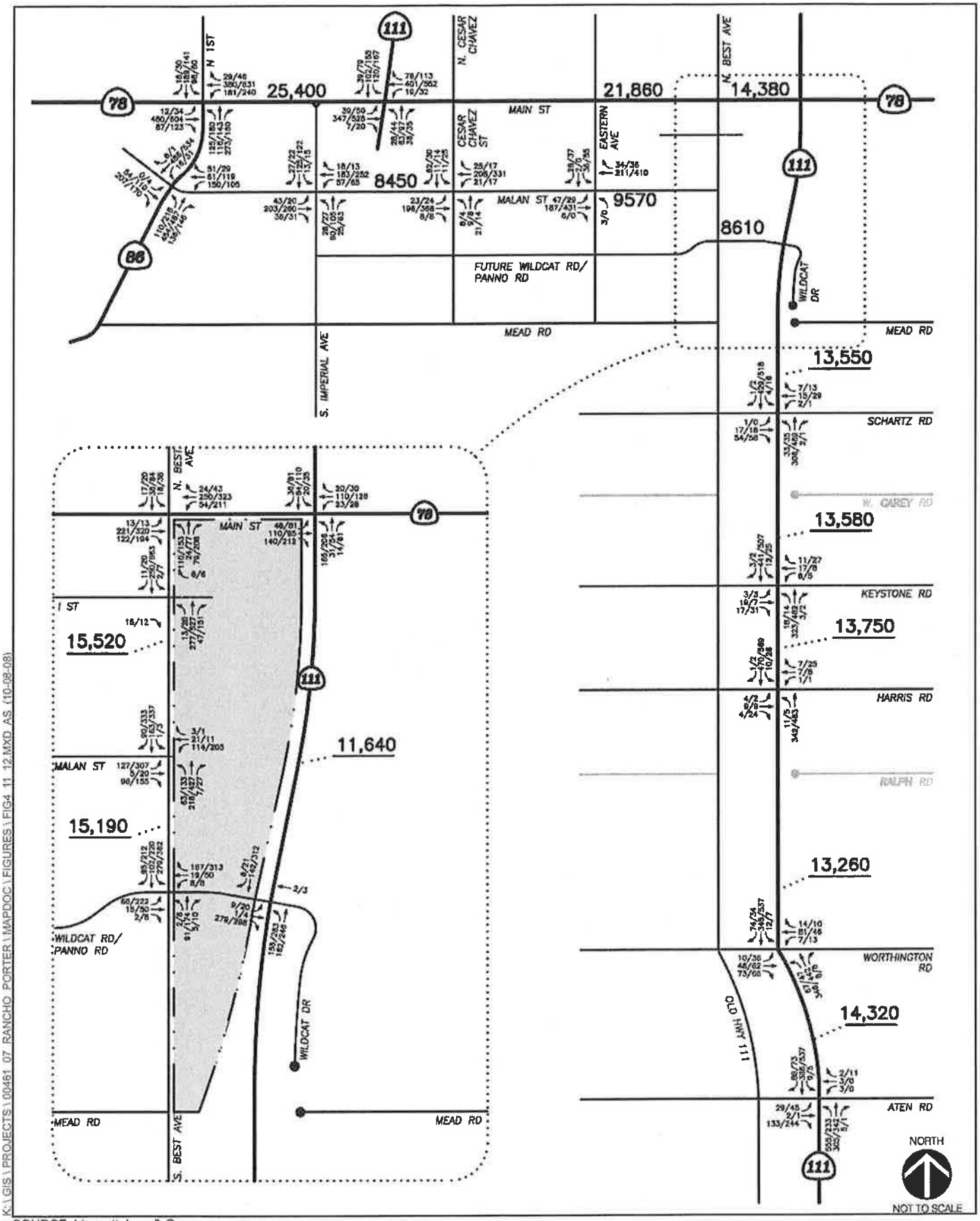

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SOURCE: Linscott, Law & Greenspan

Figure 4.11-12
Existing + Total Project (Phases I-IV) "With Overlay" Traffic Volumes
Rancho-Porter Project EIR

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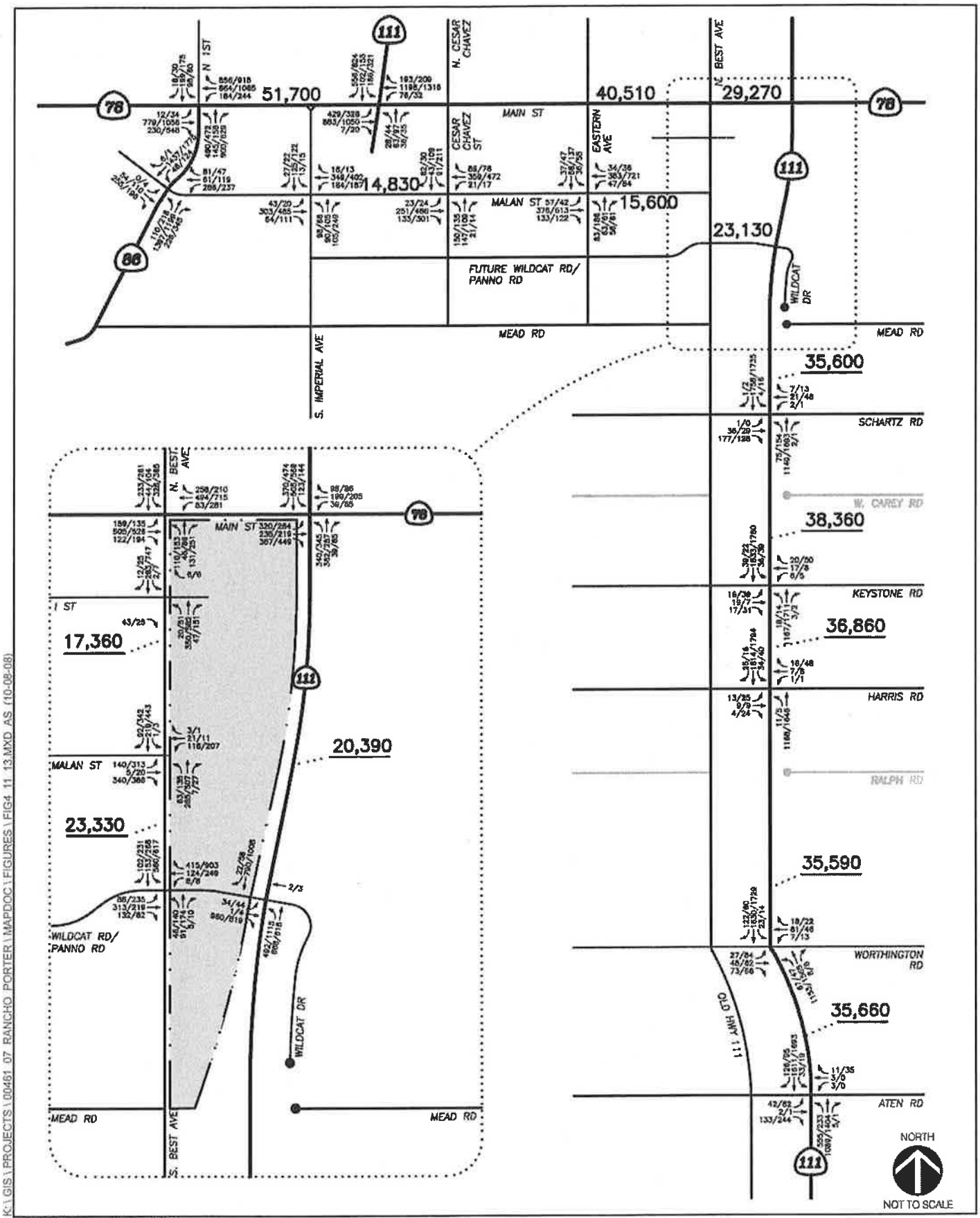

SOURCE: Linscott, Law & Greenspan

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Figure 4.11-13
Existing + Total Project "With Overlay" + Cumulative Projects Traffic Volumes
Rancho-Porter Project EIR

ICF Jones & Stokes
an ICF International Company

Residual Impacts
With the incorporation of mitigation measures **MM TR-6** through **MM TR-15**, cumulative impacts to intersections for the proposed Project would be reduced to less than significant.

Impact Determination (Segments)
The analysis performed for the Existing + Total Project + Cumulative Projects includes the improvements previously mentioned under Existing + Total Project (Phases I-IV) of the development. With the addition of total project + cumulative projects traffic, the street segments that would operate at LOS D or worse in the cumulative condition under the "Without Overlay" scenario also would operate at LOS D or worse in the cumulative condition under the "With Overlay" scenario. As such, under the "With Overlay" scenario, **Impacts TR-16** through **TR-18** would occur.

Mitigation Measures
Mitigation measures **MM TR-16** through **MM TR-18** would apply.

Residual Impacts
With the incorporation of mitigation measures **MM TR-16** through **MM TR-18**, cumulative impacts to intersections for the proposed Project would be reduced to less than significant.

Threshold TR-3: Would the Project substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Discussion
A total of five driveways are proposed to access the Project site. Project traffic would enter and exit the site via SR-78 (Main Street) to the north and via four access points along Best Avenue to the west. All Project-related access improvements would be constructed according to City roadway standards and would include a combination of traffic signals, stop signs, and widening of roadway rights-of-way. For a detailed summary of the proposed access improvements, see subsection 2.3.1.5, *Infrastructure*, located in Chapter 2.0, *Project Description*.

Impact Determination
The proposed Project would provide for access improvements according to City roadway standards and would not substantially increase hazards because of a design feature or incompatible uses. As such, impacts would be less than significant.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Threshold TR-4: Would the Project result in inadequate parking capacity?

Discussion
No parking capacity impacts have been identified. The Project would be required to comply with City Parking Ordinance standards and would provide adequate parking for residents of the proposed Project. No deviations from parking standards have been requested, and no parking capacity impacts have been identified.

Impact Determination
The Project would provide parking according to City standards for parking and would not result in a significant impact.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Threshold TR-5: Would the Project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle tracks)?

Discussion
The Rancho-Porter Specific Plan Project proposes a multi-family residential development with commercial and open space land uses. The Project would encourage the implementation of smart growth principals by proposing higher residential densities in close proximity to commercial and open spaces, which promotes walking, bicycling, and using public transportation. No adopted policies, plans, or programs supporting alternative transportation in the City of Brawley have been identified and therefore, the Project would not result in a significant impact.

Impact Determination
The Project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Impacts would be less than significant.

Mitigation Measures
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

4.12

UTILITIES

This section analyzes the potential impacts of the proposed project on wet and dry utilities. Wet utilities include potable and irrigation water service, as well as sewer services. A Water Supply Assessment (WSA) prepared by Development Design & Engineering (DD&E), February 2010 (Appendix J), addresses the existing and projected demands for water and identifies any potential impacts to wet utilities. Dry utilities include electricity, natural gas, and telephone services. Solid waste service is discussed in Public Services. This section evaluates the adequacy of the existing infrastructure for each of these services to determine whether improvements would be required prior to implementation of the proposed project.

4.12.1 Existing Conditions

Information from the City of Brawley's Service Area Plan (SAP) and General Plan was used to determine the necessary utilities for the project. Table 4.12-1, *Service Providers*, identifies the service providers for the proposed project.

Table 4.12-1. Service Providers

Utility	Provider
Water	City of Brawley
Sewer	City of Brawley
Natural Gas	Southern California Gas Company
Electricity	Imperial Irrigation District
Telecommunication	SBC and Cox Communications

Source: Water Supply Assessment, DD&E, 2010 and City of Brawley Final Service Area Plan, 2007.

4.12.1.1 Water Services

Existing Water Services

The IID is the sole provider of raw water to the City of Brawley. The City provides treated raw water throughout the City via IID-owned and operated canals (i.e., the Mansfield and Central Main Canals) and provides potable water to all areas within the City and the SOI. The City of Brawley treats the raw water from the IID and includes adequate space for future expansion to 30 million gallons per day (MGD). Based on the City of Brawley 2007 Service Area Plan, there is a current average annual demand (AAD)of 8.9 MGD and a maximum daily demand (MDD) of 14.2 MGD.

Untreated water to be used for agricultural purposes is delivered to customers directly from the IID canal systems, while water to be used for domestic and industrial/commercial purposes is delivered to the City's water treatment plant, where the water is filtered and disinfected before it is pumped into the water distribution system. Currently, the City's Water Treatment Plant (WTP) has a storage capacity of 15 MGD, which is planned to provide the City with adequate water reserves through the year 2030, based on population and growth projections. The WTP includes adequate space for future expansion up to 30 MGD.

Water Treatment Plant Demand & Capacity

Table 14.12-2, *WTP Demand & Capacity Summary*, highlights the City of Brawley's AAD, MDD, and capacity for potable water from 2010 to 2030 in five-year increments. Currently, the City of Brawley has an AAD of 8.9 MGD, a MDD of 14.2 MGD and existing capacity of 15 MGD. As shown, the WTP capacity will increase during the years 2015 through 2030 to 30 MGD.

Table 4.12-2. WTP Demand and Capacity Summary

	2010	2015	2020	2025	2030
AAD	8.9	10.4	12.8	16.7	17.7
MDD	14.2	16.6	20.5	26.7	28.3
Capacity	15	30	30	30	30

Source: Water Supply Assessment, DD&E, 2010, (City of Brawley SAP and IID Integrated Water Resources Management Plan).

4.12.1.2 Sewer Services

Existing Wastewater Treatment Plant

The City of Brawley provides wastewater collection, treatment and disposal services to residential, commercial and industrial land uses. The City of Brawley Public Works Department is responsible for planning, constructing and maintaining the sewage system. The wastewater collection system includes a network of pipes and a wastewater treatment plant (WWTP) located in the northeastern portion of the

City, and two lift stations (i.e., South Brawley Sewage Lift Station No. 1 and Citrus View Sewage Lift Station No. 2), that pump wastewater into nearby gravity sewers. The existing design capacity of the WWTP is 5.9 MGD, the City is currently evaluating improvements to treat existing flows to 4 MGD and be able to easily expand to 6 MGD when the need arises.

Performance Standards for operation of the City's WWTP are based on compliance with discharge requirements of the SWRCB Colorado River Basin Region 7. All wastewater collectors and mains flow to the City's WWTP which processes the effluent with an aerated lagoon process before discharging the treated water into the New River.

System Capacity Standards

Table 4.12-3, *Wastewater Treatment Plant Capacity Standards,* highlights the City of Brawley's average daily flow and daily WWTP capacity from 2005 to 2020 in five-year increments. With a population of 25,216 in 2005, the City of Brawley had an average daily flow of 3.5 MGD and daily capacity of 5.9 MGD. By 2020, the average daily flow is projected to be 5.1 MGD, with a daily capacity of 12.0 MGD.

Table 4.12-3. Wastewater Treatment Plant Capacity Standards

Year	Projected Population	Projected Average Daily Flow	Projected Daily WWTP Capacity
2005	25,216	3.5 MGD	5.9 MGD
2010	29,525	4.0 MGD	5.9 MGD
2015	34,606	4.6 MGD	5.9 MGD
2020	42,638	5.1 MGD	12.0 MGD

Source: Water Supply Assessment, DD&E, 2009; 2005, 2010, 2015, 2020 population projections: SCAG

4.12.1.3 Energy Services

Electricity

The City assumes the role of coordinating the provision of electricity and other services for new development to ensure that adequate right-of-ways, easements, and improvements are provided. The IID, which provides electricity to more than 135,000 customers, operates in accordance with ANSI Standards Q-84, 1-1995 that establish normal voltage ratings and operating tolerances for 60-herz electric power systems. The primary source of electrical energy is provided by fossil fuels; approximately 63 percent is purchased from outside the region and about 37 percent is produced locally. The IID estimates that the average residential consumer uses approximately 13,000-kilowatt hours (KWH) per year. The IID has implemented energy conservation measures to reduce consumption but anticipated growth in the region is likely to require new facilities in the foreseeable future.

Power lines are adjacent to and within the Rancho-Porter project area. IID electrical service facilities include a 161- kilovolt (kV) transmission line and a 92 kV transmission line that runs along Shank Road

adjacent to or through the northern Luckey Ranch area. All transmission lines are required to be located above ground. Future undergrounding of distribution lines is allowed.

Natural Gas

The City coordinates with the Southern California Gas Company to provide adequate right-of-ways and easements for natural gas services. The City has developed policies to promote energy conservation and new development is required to conform to State Title 24 Energy Regulations. Natural gas supply and infrastructure are well established and can be extended as development proceeds.

Natural gas lines located along Dogwood Road and Bryant Road are most likely to provide services for the Rancho-Porter Community. South of Mead Road, the 10-inch line turns east until it reaches Bryant Road and proceeds to the north. The 16-inch line along Dogwood Road crosses over the 10-inch line where it drops to 8-inches and proceeds north following Dogwood Road. It is assumed that the 10-inch line would service the Rancho-Porter Community.

4.12.1.4 Telephone Services

SBC and Cox Communications are the primary phone service providers in the Imperial Valley and would be accessible for the Rancho Porter Community. There is a visible telecommunication line available just north of the project site. There are no cellular facilities within or adjacent to the project area.

4.12.2 Regulatory Setting

4.12.2.1 State of California

California Department of Water Resources

The mission of the California Department of Water Resources is to manage the water resources of California in cooperation with other agencies, to benefit the state's people, and to protect, restore, and enhance the natural and human environments. Its responsibilities include: educating the public on the importance of water and its proper use; collecting, analyzing, and distributing water-related information to the general public and to the scientific, technical, educational, and water management communities; serving local water needs by providing technical assistance; cooperating with local agencies on water resources investigations; supporting watershed and river restoration programs; encouraging water conservation; exploring conjunctive use of ground and surface water; facilitating voluntary water transfers; and, when needed, operating a state drought water bank. The department's Office of Water Use Efficiency administers financial assistance in the form of loans and grants for implementation of cost-effective, efficient agricultural and urban water management, or for programs that are not locally cost-effective but provide a statewide benefit.

Senate Bill 610

Senate Bill 610 took effect on January 1, 2002. It requires that water supply assessments occur early in the land use planning process for significant projects (specifically only projects greater than 500 units and others of similar scale) that are subject to the California Environmental Quality Act. The required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the groundwater basin's ability to sustain a new project's demands. It also requires identification of existing water entitlements, rights, and contracts, and a quantification of the prior year's water deliveries.

4.12.2.2 Imperial County

The Imperial County LAFCO is a state-mandated agency that maintains jurisdiction regarding land use decisions throughout the County. LAFCO is directed by the state to: 1) promote orderly growth and development; 2) discourage urban sprawl while preserving open space and agricultural lands; and 3) encourage the efficient provision of municipal services by local governments. Accordingly, LAFCO has jurisdiction over annexation procedures as they pertain to the provision of public services and service areas. When applicable, specific issues regarding the annexation procedures and their effects on maintaining the continuity of service are discussed in each applicable subsection below.

4.12.2.3 City of Brawley

The City recently adopted its SAP, which has also been approved by the LAFCO. The SAP has been prepared for the City of Brawley in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, which requires that such a plan identifying the existing and projected demand for public facilities and services be prepared by all incorporated cities and special districts within the State. The 2000 legislation is specifically implemented by LAFCO, whose policy states that a SAP must be implemented by a city within its jurisdiction in order for any formal annexation of land into that city's boundaries to take place.

The SAP outlines the City's existing public services and facilities, estimates their current and future anticipated demand, and describes how necessary facilities and services may be developed and extended to meet demands. The SAP is intended to demonstrate the City's ability to provide adequate services to the SOI boundaries at the time of annexation.

The SAP is incorporated herein by reference, but is not attached as an Appendix to this EIR due to its large size. A separately bound copy of the SAP and all of its Appendices is available for review at the City of Brawley Planning Department offices.

4.12.3 Impacts Analysis

4.12.3.1 Methodology

The following impact analysis uses existing availability of utility systems discussed in Section 4.12.1, *Existing Conditions*, as well as the planning documents discussed above in Section 4.12.2, *Regulatory Framework*, to determine if the proposed project would require new or expanded systems to service the proposed project. In addition, a Water Supply Assessment (Appendix J) prepared by DD&E, February 2010, was used in the analysis below.

4.12.3.2 Thresholds of Significance

Based on the CEQA Initial Study checklist, impacts involving utilities and service systems for this project would be considered significant if the proposed project would:

UT-1: **Water Services and Supply.** Require or result in the construction of new water treatment facilities or expansion of existing facilities, which could cause significant environmental effects, or have insufficient water supplies available to serve the project from existing entitlements and resources, and new expanded entitlements would be needed;

UT-2: **Wastewater.** Result in a determination by the wastewater treatment provider that serves or may serve the project that it would not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

UT-3: **Stormwater.** Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

UT-4: **Energy Systems.** Result in a demand for energy such as electricity, natural gas, and communication systems in which the existing utility systems are insufficient to meet the project need and would therefore require new systems to be constructed.

4.12.3.3 Impacts and Mitigation

Threshold UT-1: Would the Project require or result in the construction of new water treatment facilities or expansion of existing facilities, which could cause significant environmental effects, or have insufficient water supplies available to serve the project from existing entitlements and resources, and new expanded entitlements would be needed?

Discussion

The project would not require or result in the construction of new water treatment facilities or expansion of existing facilities outside the 274.4-acre development footprint. Planned development areas within the City's SOI, including the Project site, were considered in both the City of Brawley Service Area Plan (2007) and the Rancho-Porter Water WSA (2010), which confirm that water services would be available to serve the proposed Project under both the "With Overlay" and "Without Overlay" scenarios. The project's WSA is subject to approval by IID. Review and approval or denial will occur prior to the finalization of the EIR. Any changes required by IID will be reflected in the Final EIR. Therefore, because potable water supplies would be available to serve the project with existing facilities, impacts to water services would be less than significant.

In addition, the proposed project would have sufficient water supplies available to serve the project. The proposed Rancho Porter project would replace agricultural operations on the site with 110 single-family homes, 745 multi-family homes (includes mixed-use), 504 mobile homes, and 35.45 acres of commercial development. The project also would include 16.95 acres of neighborhood park, multiple pocket parks and retention basins. The current water demand on the site for agricultural uses is about 1,104.8 acre-feet per year. As shown in Table 4.12-4, *Project Water Demand*, the approximate water usage in the "Without Overlay" condition is estimated at 616.08 acre-feet per year at build-out, a decrease of about 44% from existing demand, while water usage in the "With Overlay" condition is estimated at 587.0 acre-feet per year, which represents a decrease of approximately 47%. Therefore, the proposed project's water usage would be less when compared to the site's annual average water delivery history and impacts to water supplies would be less than significant.

Table 4.12-4. Project Water Demand

Land Use	Water Usage Per Day (gallons)	Water Usage Per Year (acre-feet)
Without Overlay		
Residential	350,000	392.05
Commercial	140,000	156.82
Open Space	60,000	67.21
Total	**550,000**	**616.08**
With Overlay		
Residential	282,000	315.88
Commercial	183,000	204.99
Open Space	59,000	66.09
Total	**524,000**	**587.0**

Source: Water Supply Assessment, Development Design & Engineering, 2010.

Impact Determination

The proposed project has been considered in recently prepared water reports which have indicated that existing water services would be available to serve the proposed project. In addition, the WSA shows that

the proposed project's water usage would be less than the site's current water demand. As such, impacts on water systems and supply would be less than significant.

Mitigation Measures
Because impacts would be less than significant, mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Threshold UT-2: Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it would not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Discussion
The existing wastewater treatment plant capacity is 5.9 MGD and the projected demand for the City for 2005 was 3.5 MGD. Considering the proposed project would increase demand for wastewater services, the developer would be required to pay standard development impact fees. Because the existing wastewater treatment plant capacity exceeds demand, the existing sewer system is adequate to serve wastewater demands of the proposed project. In addition, the City is planning on expanding its infrastructure and the ongoing Water and Sewer Replacement Program Phase 1 project would upgrade approximately 6,800 linear feet of water distribution pipelines and approximately 3,200 linear feet of sewer collection pipelines. Moreover, a modernization and rehabilitation project will begin in the Spring of 2010. New developments are responsible for adding or upgrading infrastructure as needed. Connection fees would be required. Additionally, the City is researching a program to institute a "capacity fee" in addition to DIFs for water and wastewater. Therefore, because the proposed project would contribute its fair share to the expansion of wastewater facilities, the project would not result in a significant impact to sewer services.

Impact Determination
Existing wastewater facilities have available capacity based on the existing demand. In addition, the project proponent would be required to add or upgrade connections, pay development impact fees and connection fees for wastewater services, and may be subject to a capacity fee if deemed appropriate. As such, impacts on sewer systems would be less than significant.

Mitigation Measures
Because impacts would be less than significant, mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Threshold UT-3: Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Discussion
Storm water drainage within the City of Brawley utilizes a combination of storm drain piping into the New River from IID main and lateral drains and retention basins. All storm drains will flow into the existing IID drainage facilities. All urban runoff will be piped into the retention facilities through a storm drain system consisting of inlets throughout the project area. Per the City of Brawley, retention basins capable of handling 100-year/24 hour storm (assuming a total of three (3) inches of rain) will be required within the project area. All storm drain systems would be designed to City of Brawley and California Regional Water Quality Control Board standards; therefore, significant impacts would not occur.

Impact Determination
Impacts on stormwater systems would be less than significant.

Mitigation Measures
Mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Threshold UT-4: Would the project result in a demand for Energy Systems such as electricity, natural gas, and telecommunication in which the existing utility systems are insufficient to meet the Project need and would therefore require new systems to be constructed?

Electricity

Discussion
The IID provides electrical power to Imperial Valley. IID's combined estimate for December 2005 for residential and commercial consumption totals 300,648,711 KWH. Buildout of the project is estimated to require either 11,817,864KWH or 13,579,128KWH, for the "With Commercial Overlay" and "Without Commercial Overlay" scenarios, respectively. This represents less than 5 percent growth at project buildout. Expected consumption within the City of Brawley is to grow at an annual rate between 4 and 6 percent.

A substation location has been dedicated to IID. The parcel is located on the La Paloma subdivision on the corner of Eastern Avenue and Panno Street. At this time, construction of this substation is pending on new development in the vicinity and the justification for need. Line extensions to serve this project will be made in accordance with IID Regulation No. 15 and Regulation No. 2 (Pers. Comm. Rick M. Torres, IID, October 28, 2009). The developer, along with the City of Brawley and IID, would coordinate to ensure that installation of electrical distribution infrastructure, including adequate right-of-ways, easements, and improvements, is provided for the Rancho Porter project.

Impact Determination
The proposed project would not result in significant impacts to electricity systems.

Mitigation Measures
Mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Natural Gas

Discussion
The City coordinates with the natural gas supplier, Southern California Gas Company, when new development occurs to ensure adequate right-of-ways and easements are provided. Natural gas supply and infrastructure are well established and can be extended as development proceeds. Natural gas lines are located near the project site and would provide services for the Rancho Porter project. As such, impacts to natural gas services would be less than significant.

Impact Determination
The proposed project would not result in significant impacts to natural gas systems.

Mitigation Measures
Mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Energy Efficiency

Discussion
The City has developed policies to promote energy conservation, and new development is required to conform to State Title 24 Energy Regulations. The IID has also implemented energy conservation measures to reduce consumption. The Rancho Porter project would adhere to all energy conservation policies of the City and conform to State Regulations and IID energy conservation measures. Therefore, the proposed project would not result in significant impacts to efficient use of energy.

Impact Determination
The proposed project would not result in significant impacts to energy efficiency polices.

Mitigation Measures
Mitigation measures would not be required.

Residual Impacts
Impacts would be less than significant.

Telephone Service

Discussion

SBC and Cox Communications provide telecommunications services to the City. The California Public Utilities Commission sets the performance standard through a series of established tariffs. The telephone company is a publicly regulated utility and is obligated to serve the community and improve facilities as needed. According to the Brawley SAP, the exact need for telephone lines to serve the proposed SOI cannot be determined at this time. Conservative estimates could result in the installation of two lines per residential dwelling unit and an unknown number of lines to serve commercial and industrial areas. It is anticipated that SBC and Cox Communications can accommodate all project demand that would occur. As such, the proposed project is not anticipated to result in significant impacts to telecommunications services.

Impact Determination

The proposed project would not result in significant impacts to telecommunication systems.

Mitigation Measures

Mitigation measures would not be required.

Residual Impacts

Impacts would be less than significant.

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5.0

ALTERNATIVES

5.1 Purpose

In accordance with Section 15126.6 of the State CEQA Guidelines, EIRs must evaluate a "...range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project." The discussion of alternatives should focus on "...alternatives capable of eliminating any significant adverse impacts or reducing them to below a level of significance, even if these alternatives could impede to some degree the attainment of the project objectives or would be more costly." CEQA further directs that "...the significant effects of an alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. Rather, the alternatives must be limited to ones that meet the project objectives, are ostensibly feasible, and would avoid or substantially lessen at least one of the significant environmental effects of the project. The EIR must also identify the environmentally superior alternative other than the No-Project Alternative. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the Project objectives, are infeasible, or do not avoid any significant environmental effects.

The factors that may be taken into account when addressing the feasibility of alternatives include alternative site suitability, economic viability of revisions to the project design, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.

CEQA Guidelines define "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." When making the decision as to whether an alternative is feasible or infeasible, the decision-making body may consider the stated project objectives in an EIR in light of any relevant economic, environmental, social, and technological factors. The inclusion of an alternative in an EIR

does not constitute evidence that the alternative is "feasible." The final decision regarding the feasibility of alternatives lies with the decision-maker for a given project who must make the necessary findings on the severity of significant environmental effects (Pub. Resources Code, §21081; see also CEQA Guidelines, §15091), though discussion in the EIR alternatives analysis may present information and recommendations as to the alternative's feasibility.

5.2 Project Alternatives

5.2.1 CEQA Project Objectives and Project Alternative Section Criteria

Project objectives are numbered 1 through 6 for ease of reference within this chapter. The Project's overall goal is to provide residential and recreational opportunities for the growing population of the City. Project objectives include:

1) creating a well-planned, high-quality community of residential and commercial development;
2) providing an assortment of high-quality housing, including affordable housing, that allows residents to live in close proximity to employment opportunities in the City;
3) providing an assortment of commercial businesses and restaurants to serve residents of the Project site and throughout the City and region;
4) providing increased recreational opportunities for local residents and visitors; and
5) accommodating growth projections for the region.

Three alternatives to the proposed Project are described below: the No Project Alternative; the Reduced Density Alternative; and the No Commercial Regional (C-RE) Alternative.

5.2.2 No Project Alternative

The No Project Alternative would allow development consistent with the existing plans and policies. Any development that occurred on-site under the No Project Alternative would have to meet the specifications of the land use designation and zone. The majority of the site is designated A-2U, or General Agriculture, Urban Overlay, though the northwest corner of the site is designated M-1NU, Light Industrial, No Residential Overlay and Urban Overlay. The current agricultural activity on the site, along with the on-site residences associated with the agricultural operations, is compatible with the County's existing zone of A2U, an agricultural designation that accepts ongoing agricultural activity but indicates likely conversion to urban uses as part of planned expansion of the City's urban area. Under the No Project Alternative, the site would remain active agricultural land, although a small portion could development light industrial uses. Only limited infrastructure could be installed or constructed on the site within the M-1NU zone. None of the project site would be annexed from Imperial County to the City of Brawley. This alternative would not meet any of the project objectives listed in Section 5.2.1 and in Chapter 2.

Because the site would mostly remain agricultural land, the No Project Alternative would eliminate all significant environmental impacts associated with the proposed Project development. Lack of project traffic would avoid intersection and segment impacts, air quality and noise impacts associated with project traffic would be avoided; impacts on air quality from construction and construction-created noise impacts would be avoided; impacts on burrowing owls would not occur unless in the process of active field cultivation and agricultural activity; project-related structures would not be erected which could potentially result in geologic impacts; previously undiscovered archeological resources would not be disturbed by earth excavation activities; and potential soil erosion, sedimentation and increase in impervious surfaces would not occur.

Although this alternative would avoid all significant project impacts, it would also present a conflict with the Imperial County and City of Brawley General Plans, which call for the annexation of the site into the City and allow the development of the site for a combination of residential, commercial, and public use. Non-annexation would eventually create an island of County land in the midst of incorporated City land. This inconsistency with adopted plans both in the County of Imperial and the City of Brawley that could result in an isolated piece of land within the jurisdiction of the county may represent a significant land use impacts that would not occur with implementation of the proposed Project. Furthermore, by not developing the site, the No Project Alternative would conflict with planned growth foreseen by SCAG and the Brawley General Plan; accordingly, residential development would need to occur in the City, which would either increase densities elsewhere in the City or require additional annexation of existing agricultural land not foreseen by the current plan.

In summary, while the No Project Alternative would avoid nearly all of the proposed Project's significant impacts, it would not meet any of the stated goals and objectives of the project and may present additional significant land use impacts not assessed to the proposed Project.

5.2.3 Reduced Density Alternative

The Reduced Density Alternative would entail developing the site with a similar mix of residential, commercial, mixed-use and open space uses, but would change the type of residential use to create a project of lower density. Under this alternative, the multi-family Residential Village Suites (R-VS) would be replaced with the lower density Residential Patio (R-PA).

All necessary infrastructure would be installed and constructed as necessary to accommodate the development. This alternative has been devised as a way to reduce the number of vehicle trips generated by the site (and thereby reducing the traffic, noise, and air quality impacts). The Reduced Density Alternative would achieve several of the project objectives, but the reduction in density would not meet Objective 2 or Objective 5. It would not meet Objective #2 because it would remove the multi-family component and focus on low density housing, meaning affordability associated with higher density housing would be eliminated and the number of housing choices would substantially reduced. It would not meet objective #5 because the lower density proposal would mean fewer households overall, which in turn would require additional housing in other locations to meet the growing population.

Below is a brief, qualitative discussion of how the impacts resulting from the Reduced Density Alternative would compare to those of the proposed Project.

Agricultural Resources

The Reduced Density Alternative would have a similar impact on agricultural resources when compared with the proposed Project. Impacts on agricultural resources were identified as less than significant with mitigation for the proposed Project, and would also be less than significant for the Reduced Density Alternative since the project footprint would be the same size in both project scenarios. Changing the type of land uses for the project would have no positive or negative effects on impacts on agricultural resources.

Air Quality

Similar to the proposed Project, the Reduced Density Alternative would create pollutants from construction activity and automobile traffic. By reducing the density when compared to the proposed Project, the Reduced Density Alternative would result in the same amount of air quality impacts during the construction phase and slightly reduced impacts during the operation of the project. Since the project would remain the same size with a similar type of development, construction of this alternative would have the same impacts and would require the same mitigation to reduce those impacts as the proposed Project. During operation, this alternative would have reduced air quality impacts due to fewer people making trips to the project site; however, such a reduction would likely not be enough to reduce this Alternative's air quality impacts to less than significant. Therefore, the Reduced Density Alternative would result in air quality impacts that are slightly less than those of the proposed Project, but would still require mitigation similar to the proposed Project.

Biological Resources

The Reduced Density Alternative would have a similar biological resource impacts to that of the proposed Project. Impacts to biological resources were identified as less than significant with mitigation incorporated for the proposed Project, and the same determination would apply for the Reduced Density Alternative. Reduced Density Alternative construction activity would have the same potential of affecting burrowing owls on-site and all mitigation measures needed to reduce proposed Project impacts on biological resources to less-than-significant levels would be necessary. In addition, the Reduced Density Alternative would use the same drainage channels as the proposed Project which may be regulated by CWA. It is not known at this time if the drains are regulated under Section 404 of the CWA; however, as with the proposed Project, filling of these features would be considered significant if the drains are determined to be regulated by CWA. Therefore, the same mitigation measure would be used to reduce the impact to less than significant.

Cultural Resources

Reduced Density Alternative cultural resources impacts would be similar to those of the proposed Project. The Reduced Density Alternative would entail excavation for project construction as with the proposed Project, and therefore would have the same potential to unearth previously undiscovered archeological

resources and human remains. Therefore, the Reduced Density Alternative would also result in significant impacts to cultural resources and would need to implement the same mitigation measures identified for the proposed Project to reduce these impacts to less-than-significant levels.

Geology and Soils

The Reduced Density Alternative would erect structures on the site, and therefore would encounter the same geological and soils conditions discussed for the proposed Project in Section 4.5 of this EIR. Therefore, the Reduced Density Alternative would result in the same significant impacts related to liquefiable and expansive soils as those of the proposed Project, and would require the same mitigation measures to reduce these impacts to less-than-significant levels.

Hazards and Hazardous Materials

The Reduced Density Alternative's hazards and hazardous materials impacts would be comparable to those of the proposed Project. By developing the site, the Reduced Density Alternative would encounter the same soils conditions as would the proposed Project, and would also be located in proximity to distant hazardous sites. Commercial operations would be similar and would comply with all applicable regulations regarding the use, transport, and disposal of hazardous materials. Like the proposed Project, the Reduced Density Alternative would result in less-than-significant hazards and hazardous materials impacts.

Hydrology and Water Quality

The Reduced Density Alternative would have impacts on hydrology and water quality similar to that of the proposed Project. Hydrology impacts identified for the proposed Project were determined to be less than significant, and impacts on water and groundwater quality were identified as less than significant with mitigation incorporated. Because the same area would be cleared and graded and similar types of land uses would be implemented, the Reduced Density Alternative would use a similar drainage plan including the same guidelines for the establishment of retention basin facilities within the project area that reduce impacts on hydrology to less than significant. The Reduced Density Alternative would also require mitigation similar to that of the proposed Project to reduce construction-related surface water and groundwater quality impacts to less-than-significant levels. Therefore, impacts on hydrology and water quality associated with the Reduced Density Alternative would be similar to that of the proposed Project.

Land Use

The Reduced Density Alternative would have similar land use impacts to that of the proposed Project. Impacts to land use were identified as less than significant for the proposed Project, and would also be so for the Reduced Density Alternative. By replacing multi-family Residential Village Suites (R-VS) with the lower density Residential Patio (R-PA), the Reduced Density Alternative would still be in compliance with the Imperial County and City of Brawley General Plans which anticipate development of the site

with a mixture of residential, commercial and public development. Therefore, the Reduced Density Alternative's land use impacts would be similar than those of the proposed Project.

Noise

Noise impacts under the Reduced Density Alternative would be less than under the proposed Project. Noise impacts were identified as significant for both operation and construction of the proposed Project. With the lower density Residential Patio designation replacing the higher density Residential Village Suites designation, there would be a reduction in vehicle traffic associated with the Reduced Density Alternative. This reduction would decrease the amount of noise generated at the site. However, noise levels would not likely be reduced to a point that avoid significant impacts identified for the proposed Project, and the same mitigation measures to reduce operational noise impacts to less than significant for the proposed Project would need to be implemented for the Reduced Density Alternative. In regards to the construction phase, the Reduced Density Alternative would include comparable construction noise impacts and mitigation measures as the proposed Project.

Public Services and Recreation

The Reduced Density Alternative would reduce the number of residents by replacing the multi-family Residential Village Suites (R-VS) with the lower density Residential Patio (R-PA) which would mean a reduced demand on fire, law enforcement, schools, libraries, solid waste services and recreational facilities. Therefore, this alternative would have a reduced impact on these services when compared with the Project (see Section 4.10). However; the Reduced Density Alternative would increase the population in the area and as with the proposed Project, development impact fees would be paid to address increases in service demand.

Traffic and Circulation

The Reduced Density Alternative would result in a reduced traffic impact when compared with the proposed Project. Replacing the higher density Residential Village Suites land use designation with lower density Residential Patio would generate fewer vehicle trips, which would incrementally lessen project impacts to the street intersections and segments that were analyzed in the traffic study (see Appendix I) and addressed in Section 4.11 of this EIR. However, such a reduction would likely not be enough to reduce the alternative's traffic quality impacts below a significant level and many of the same mitigation measures included in the proposed Project would need to be implemented for the Reduced Density Alternative.

Utilities

Impacts to utilities under the Reduced Density Alternative would be less than under the proposed Project. This alternative would result in fewer new residents that would reduce the demand on water supply, wastewater, energy and telephone service. Accordingly, this would reduce the potential for secondary effects on service providers in terms of increased demand for personnel, equipment, and for new facilities.

Therefore, impacts of this alternative would be reduced from those less-than-significant impacts identified for the proposed Project.

5.2.4 No Commercial Regional (C-RE) Alternative

The No C-RE Alternative would entail developing the site similar as the proposed Project, but would replace the C-RE land use designation with R-PA. Under this alternative, the northernmost portion of the project site just south of Highway 78 (see Figure 2-2) would be developed for single family duplexes instead of commercial use as planned in the proposed Project. All other aspects of the project would be exactly the same as the proposed Project including all necessary infrastructure to accommodate the development.

This alternative has been devised as a way to reduce environmental impacts related to commercial development. The Reduced Project Alternative would meet several of the project objectives listed above, but the reduction in commercial development would mean that Objectives 1 and 3 would not be met. Objective 1 would not be met because commercial development would be limited to the mixed-use component; Objective 2 would not be met because the project would not provide an assortment of commercial businesses and restaurants to serve residents of the Project site and throughout the City and region and the limited mixed use commercial component would not meet the needs of the region.

Below is a brief, qualitative discussion of how the impacts resulting from the No C-RE Alternative would compare to those of the proposed Project.

Agricultural Resources

The No C-RE Alternative would have a similar impact on agricultural resources as compared to the proposed Project. Impacts from the proposed Project on agricultural resources were identified as less than significant with mitigation. Impacts on agriculture from this Alternative would be similar since the impact footprint of the project would be the same in both project scenarios. Changing the type of land uses for the project would have no positive or negative effects on agricultural resources since they would be removed from the site.

Air Quality

Like the proposed Project, the No C-RE Alternative would affect air quality by emitting pollutants associated with construction activity and additional automobile traffic. By replacing the C-RE land use designation with R-PA, the No C-RE Alternative would result in similar air quality impacts during construction and a reduced air quality impact during operation the project. Since this alternative would develop the entire site as would the proposed Project, construction of this alternative would have similar impacts and would require the same or similar mitigation to reduce those impacts as the proposed Project. During operation, this alternative would include slightly reduced air quality impacts since replacing the commercial regional land use designation with residential use would generate a smaller amount of automobile traffic than the proposed Project. Therefore, the No C-RE Alternative would have slightly reduced air quality impacts as compared to those of the proposed Project.

Biological Resources

Since the same area would be developed under the No C-RE Alternative, impacts related to biological resources would be similar to those assessed for the proposed Project. No C-RE Alternative construction activity would have the potential of affecting sensitive bird species that may utilize the site, and all mitigation measures needed to reduce proposed Project impacts to less-than-significant levels would be necessary. In addition, the No C-RE Alternative would use the same drainage channels as the proposed Project which may be regulated by CWA. It is not known at this time if the drains are regulated under Section 404 of the CWA; however, as with the proposed Project, filling of these features would be considered significant if the drains are determined to be regulated by CWA and mandatory federal regulations were not followed. Therefore, the same mitigation measure would be used to reduce this potential impact to less than significant.

Cultural Resources

No C-RE cultural resources impacts would be similar to those of the proposed Project. The No C-RE Alternative would entail excavation for project construction, and therefore would have the same potential to unearth previously undiscovered archeological resources and human remains. Therefore, the No C-RE Alternative would also result in significant impacts to historical resources and would need to implement the same mitigation measures identified for the proposed Project to reduce these impacts to less-than-significant levels.

Geology and Soils

The No C-RE Alternative would erect structures on the site, and therefore would encounter the same geological and soils conditions discussed for the proposed Project in Section 4.5 of this EIR. Therefore, the No C-RE Alternative would result in the same significant impacts related to liquefiable and expansive soils as those of the proposed Project, and would require the same or similar mitigation measures to reduce these impacts to less-than-significant levels.

Hazards and Hazardous Materials

The No C-RE Alternative's hazards and hazardous materials impacts would be comparable to those of the proposed Project. By developing the site, the No C-RE Alternative would encounter the same soils conditions as would the proposed Project, and would also have the same potential for hazardous spills due to construction activities. The No C-RE Alternative would comply with all applicable regulations regarding the use, transport, and disposal of hazardous materials. Therefore, like the proposed Project, the No C-RE Alternative would result in less-than-significant hazards and hazardous materials impacts.

Hydrology and Water Quality

The No C-RE Alternative would have similar impacts on hydrology and water quality to that of the proposed Project. Hydrology impacts identified for the proposed Project were determined to be less than significant, and impacts on water and groundwater quality were identified as less than significant with mitigation incorporated. By replacing the C-RE with R-PA, the storm drainage plan and associated measures would have to be adjusted to accommodate a single family duplex land use designation instead of commercial use; however, the same guidelines would be implemented to reduce impacts on hydrology to less than significant. Impervious areas would be slightly reduced due to the lack of parking lots and the slight increase in permeable surfaces (i.e. lawns) although the No C-RE Alternative would still require mitigation similar to that of the proposed Project to reduce construction-related surface water and groundwater quality impacts to less-than-significant levels. Therefore, impacts on hydrology and water quality associated with the No C-RE Alternative would be similar to that of the proposed Project.

Land Use

The No C-RE Alternative would have similar land use impacts to that of the proposed Project. Impacts to land use were identified as less than significant for the proposed Project, and would be comparable for the No C-RE Alternative. By replacing C-RE with R-PA, the No C-RE Alternative would still be in compliance with the Imperial County and City of Brawley General Plans which anticipate development of the site with a mixture of residential, commercial and public development. Although substantially reduced, commercial use is still included in the Alternative's MU-P land use designation. Therefore, the No C-RE Alternative's land use impacts would be similar than those of the proposed Project.

Noise

Noise impacts generated by the No C-RE Alternative would be less than the proposed Project. Noise impacts were identified as significant for both operation and construction of the proposed Project. Noise sources associated with the operation of commercial development include mechanical equipment, parking lot activities, loading dock activities, and drive-thru activities (see Section 4.9). By replacing the commercial development in the C-RE designation with low density residential use, these noise sources would be eliminated and operational noise impacts would be reduced, possibly to a level less than significant. However, commercial development would still be included in the multi-use designations of this project alternative, and noise mitigation measures would still be required to reduce noise impacts within these areas to less than significant. Since the project footprint would be the same size, construction noise impacts would be similar for the No C-RE Alternative as compared to the proposed Project.

Public Services and Recreation

The No C-RE Alternative would include more residences on site than the proposed Project, which would create greater demand for schools, libraries, and recreational facilities and similar demand for fire protection and law enforcement. Impacts to solid waste services would be similar in both scenarios. An increase in residents would also add to the student generation creating additional demand on schools