

SCH #89072424

ENVIRONMENTAL IMPACT REPORT I-205 CORRIDOR SPECIFIC PLAN

PREPARED FOR
CITY OF TRACY

MAY 1990



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EXECUTIVE SUMMARY

SUMMARY OF IMPACTS

The following table presents a summary of the Specific Plan's significant environmental impacts and mitigation measures which would eliminate or reduce such impacts to a level of insignificance. The table also identifies significant impacts on the environment which cannot be mitigated to a level of insignificance. The responsibility for implementing the mitigation measures has been identified throughout the summary. The city is required under Statute AB 3180 to adopt a reporting or monitoring program to ensure compliance during project implementation. It must be adopted when making findings required by CEQA (Section 21081) and is a part of the approval process though not a part of this EIR. This will include impacts and mitigations in response to the completed specific plan. The plan itself will provide mitigation measures.

TABLE 8.1
SUMMARY OF IMPACTS AND MITIGATIONS
AND COMPARISON

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
3.1 LAND USE							
1. The proposed regional shopping mall may impact nearby residences on Corral Hollow Road and Larch Road	Specific Plan should include design specifications for regional mall which address potential incompatibilities.	Yes	No impact.	Same as project.	Provides setback.	No impact.	No impact.
2. Electromagnetic fields associated with the high voltage transmission lines may present a health hazard.	PG&E should approve all development plans involving their easements prior to issuance of building permits. City staff shall consult PG&E regarding EMF issues for specific proposals within 300 feet of easements.	Yes	No impact.	Same as project.	Possibly same as project.	No impact.	No impact.
3. The potential for the Chevron pipeline to leak or rupture constitutes a public safety hazard.	City shall maintain location data for pipeline. Pipeline shall be marked during construction and permanently.	Yes	No impact.	Same as project.	Provides setback.	No impact.	No impact.
4. If not properly fenced, the irrigation ditches could present a safety hazard.	Specific Plan shall establish minimum setbacks from easement to protect public safety.	Yes	No impact.	Same as project.	Provide setbacks.	Similar impact as project.	Similar impact as project.
5. Conversion of 600 acres of prime agricultural land to urban uses represents a significant loss of a natural resource.	Specific Plan should specify standards for enclosing irrigation ditches. There are no mitigation measures to offset the loss of prime agricultural land.	No	No impact.	Same as project.	Same as project.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
6. The Specific Plan may encourage conversion of other agricultural parcels along the I-205 corridor.	General Plan amendment should geographically define I-205 corridor area to delineate extent of amendments.	Yes	No impact.	Same as project.	Same as project.	Similar impact.	Similar impact along I-580.
7. Land use conflicts may arise between commercial and light industrial uses and adjacent agricultural lands.	Specific Plan should include provisions for physical separation of commercial and light industrial uses from agricultural lands.	Yes	No impact.	Same as project.	Same as project.	Similar impact as project.	Similar impact as project.
1. The Specific Plan would require the expansion of Tracy's sphere of influence.	City should consider expanding sphere of influence beyond Specific Plan area or establish a city limit boundary within Specific Plan area. This would continue the buffer around Tracy's urban area.	Yes	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
2. The General Plan amendments would allow for the expansion of Tracy's urban area and will increase growth-related impacts	Mitigation measures summarized in Sections 4.1 - 4.19, below, would help offset growth-related impacts.	See below	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
3. Limits to urban expansion on I-205 corridor undefined.	General Plan amendment should clearly define I-205 corridor area.	Yes	No impact.	Same as project.	Same as project.	Potentially the same as project.	No impact.
4. Commercial development in the I-205 corridor may adversely affect downtown commercial uses.	See mitigation measures under Section 3.3.	See below	No impact.	Same as project.	Less impacted.	Same as project.	Same as project.
5. The new land use designations set forth in the Specific Plan are unclear and ambiguous.	Specific Plan must include policies which clearly establish rationale behind each land use designation.	Consistency with General Plan policies will be evaluated once changes are completed.	No impact.	Same as project.	Same as project.	Same as project.	Same as project.

3.2 PLANNING POLICY

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
6. There is an inconsistency between the proposed reserve designations and agricultural zoning.	Zoning designations must be consistent with Specific Plan. Either uses in urban and commercial reserve designations should be changed or land should remain in agricultural land use designations.	Yes	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
3.3 FISCAL							
1. Development of regional mall could draw retail businesses from downtown and result in decline in retail sales for downtown merchants.	Commercial development within Specific plan area should pay a linkage fee to help fund economic development study for downtown.	No	No impact.	Depends upon amount & type of commercial development.	Same as project.	Same as project.	Same as project.
4.1 GEOLOGY AND SOILS							
1. Future development could be subjected to moderate to severe groundshaking and seismically related ground failures including liquefaction and subsidence.	Uniform Building Code and City of Tracy standards would be applied as minimum standards for all construction. All structures should be designed to withstand strong seismic ground shaking. Fill material should meet requirements of city, county and state grading ordinances. Highly expansive soils should be removed or covered with non-expansive soils. Surface water control and specialized foundation systems should be used.	Yes	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
2. Surficial soils have a high shrink/swell potential and could result in differential settlement.	Highly expansive soils should be removed or covered with non-expansive soils. Surface water control and specialized foundation systems should be used.	Yes	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
3. The shallow water table in the area contributes to high rates of ground subsidence which could adversely affect utilities, foundations and paved areas.	All structures should be designed to accommodate local ground settlement. Presence of shallow ground water and saturated surficial soils shall be investigated and considered in final project designs.	Yes	No impact.	Same as project.	Same as project.	Unknown.	Unknown.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50x Density Reduction Alternative	Alternative Site #1	Alternative Site #2
4. Past agricultural pesticide applications may have contaminated the groundwater and/or soils.	Shallow ground water should be controlled through installation of subdrains. An environmental assessment to test for contamination of soils must be conducted prior to Tentative Map approval.	Yes	No impact.	Same as project.	Same as project.	Same as project.	Same as project.
4.2 CLIMATE AND AIR QUALITY							
1. Project-generated traffic would contribute to localized and regional air quality impacts. Projected CO concentrations, NOx emissions, TSP and SO ₂ emissions would not exceed state or federal standards.	The San Joaquin County Smog Check program should be expanded to include NOx testing. Ridesharing activities should be promoted. Employers should be required to participate in TSM program.	Yes	No change.	Same as project.	Reduced emissions.	Same as project.	Same as project.
2. Short-term air quality impacts could result from construction activities.	Two park-and-ride facilities should be provided in the Specific Plan area. Bus services should be monitored and expanded as needed. Several dust-control measures to limit ozone precursor emissions from construction vehicles are recommended. (Refer to Section 4.2.)	Yes	No change.	Same as project.	Reduced emissions.	Same as project.	Same as project.
4.3 AESTHETICS							
1. In general, the change from a rural landscape to suburban uses constitutes a visual impact.	Specific Plan designates a park to develop a "gateway" at western edge of Tracy. Specific Plan includes many site design specifications and guidelines.	Yes	No change.	Same as project.	Provide greater site planning flexibility.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mail Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
2. Site development may be visually incompatible with adjacent development.	Specific Plan should include standards for soundwall design and buffering of commercial and residential land uses. See mitigations for Impact 1, above.	Yes	No change.	Same as project.	Increased setbacks.	No change.	No change.
3. Undesirable site elements, such as utility areas, may be visible from existing city landscape.	Specific Plan includes design guidelines to mitigate this impact.	Yes	No change.	Same as project.	Same as project.	No change.	No change.
4. Site development may result in a visually chaotic variety of signage styles.	Specific Plan includes policy to aesthetically unify signage.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
5. Development located in floodplain would require elevated pads which may have a negative visual impact.	Specific Plan includes policy to ensure appropriate design of parcels in floodplain.	Yes	No change.	Same as project.	No change.	No change.	No change.
4.4 BIOTICS							
1. The conversion of agricultural land would result in a loss of foraging sites for native predators, including the threatened Swainson's hawk.	There are no mitigation measures to offset this impact.	No	No change.	Same as project.	Same as project.	Same as project.	Same as project.
4.5 CULTURAL RESOURCES							
1. Subsurface or buried historic or archaeological artifacts may be disturbed during construction.	If archaeological materials are found during the course of future grading or trenching, work should stop immediately and an archaeologist should be retained to examine the site.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50x Density Reduction Alternative	Alternative Site #1	Alternative Site #2
<p><u>4.5. JOBS/HOUSING</u></p> <p>1. The project would generate demand for 9,767 employees, who would, in turn, generate a demand for 6,426 dwelling units. Additional employment generation would help to offset existing jobs/housing imbalance. Surplus demand for housing could be met by other residential developments in city.</p>	No mitigations are necessary.		No change.	May be decrease in employees.	Generate fewer employees.	Same as project.	Same as project.
<p><u>4.7. TRAFFIC AND CIRCULATION</u></p> <p>Project traffic added to the future base conditions would result in severely congested (LOS "D-F") operating conditions at six intersections:</p> <p>I-205 WB ramps/Grant Line/Naglee I-205 EB off-ramp/Grant Line Corral Hollow/Grant Line Corral Hollow/West Eleventh Tracy/Grant Line I-205 EB on ramp/Grant Line/Toste</p>	<p>Intersection improvements are outlined in Section 4.7, pages *** and ****. Improvements include road widening, provision of additional thru lane and turning lanes.</p>	Yes	No change.	Similar to project.	Percentage reduction - does not require as much mitigation.	Poor freeway access; impacts concentrated at critical intersections; greater travel times.	Poor freeway access; impacts concentrated at critical intersections; greater travel times.
<p><u>4.8. NOISE</u></p> <p>1. Proposed high density residential development along I-205 would be exposed to unacceptable noise levels.</p>	<p>Noise walls (12-14 feet in height) would be required along property boundaries.</p> <p>Architectural design shall include noise attenuation measures.</p>	Yes	No change.	Same as project.	Same as project.	Noise impacts from I-205 & 11th St.	Noise impacts from I-580.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mail Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
Proposed neighborhood park at southwest corner would be exposed to conditionally acceptable noise levels.	If park is used for passive recreational uses, a sound barrier would be required.	Yes	No change.	Same as project.	Same as project.	No effect.	No effect.
Properties along Corral Hollow Rd. would be exposed to conditionally acceptable noise levels.	A six to eight foot high sound barrier would be required.	Yes	No change.	Same as project.	Same as project.	No effect.	Unknown.
Proposed residential lots adjacent to railway line would be exposed to unacceptable noise levels and ground vibration.	A 12-foot high sound barrier would be required.	Yes	No change.	Same as project.	Greater setbacks could be provided - reduce noise impact.	No effect.	No effect.
Loading facilities and waste disposal for commercial development may result in unacceptable noise levels at adjacent residential properties.	A site specific acoustical analysis should be prepared for the shopping center prior to approval of development plans.	Yes	No change.	Will depend upon types of business.	Greater setbacks could be provided - reduce noise impact.	No effect.	No effect.
4.9 MUNICIPAL WATER SYSTEMS							
1. Project water demand would increase the demands on the City of Tracy water system.	Acquire additional surface water rights and/or pump more groundwater and/or store water in wet years and/or expand the conservation effort. Increase water treatment plant capacity. Expand distribution network. Acquiring surface water rights may prove difficult. Safe groundwater yield is unknown.	Yes	No change.	Same as project.	Reduced by 10-40 percent	Same as project.	Same as project.
Water requirements of developed project are greater than those needed for agricultural use of the same land. Thus, if surface water is used to make up the difference, the water available for other users, possibly agricultural, will decrease.	Irrigate equivalent acreage with reclaimed water if water currently used to irrigate agricultural land is used to make up difference.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
Increased groundwater pumping may produce water with higher levels of total dissolved solids.	Continue to blend with surface water and/or recharge groundwater with water low in total dissolved solids, and/or treat groundwater to reduce total dissolved solids.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
Increased water supply and delivery capacity may reduce barriers to growth.	Only acquire necessary capacity.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
Conservation measures may adversely affect the economy.	Design conservation measures to minimize economic impact.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
4.10 MUNICIPAL WASTEWATER							
City of Tracy's existing wastewater collection and treatment facilities not adequate to accommodate wastewater from project area.	Construct new pipelines, new pump stations and force mains, upgrade Larch Road pump station and expand existing wastewater treatment plant.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
Increased wastewater collection and treatment capacity may induce growth.	Design and upgrade facilities for wastewater from project area only.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
4.11 STORM DRAINAGE							
The proposed project will generate additional runoff.	Construct storm drainage outfall channel to accommodate increased runoff.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
Local runoff may result in flooding to the project without proper hydraulic design of on-site storm drainage facilities.	Utilize parking and paved areas as "storage pockets" to reduce level of downstream improvements.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
Preferred drainage option will require joint use of some irrigation district facilities.	Perform hydrology study to determine increased levels of storm runoff.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
<u>4.12 IRRIGATION AND RECLAMATION DISTRICTS</u>							
Reduction in revenue will impact Naglee Burk's ability to provide same levels of service for downstream users.	City will consider assisting in maintenance and repair of drainage ditches used to convey runoff.	Yes	No change.	Same as project.	Same as project.	Limited capacity available in WSID main drain for runoff.	Would require on-site facilities to detain runoff.
<u>4.13 SOLID WASTE</u>							
Development would increase waste collection and affect landfill capacity.	Recycling program to be implemented by city prior to 1995.	Yes	No change.	Same as project.	Waste reduced proportionally.	Same as project.	Same as project.
<u>4.14 OTHER UTILITIES</u>							
No significant impacts are anticipated.	Development plans should be reviewed by utility companies prior to construction.	Yes	No change.	Same as project.	Same as project.	Same as project.	Same as project.
<u>4.15 FIRE</u>							
The need for fire protection and medical emergency calls would increase.	All development equipped with sprinkler systems; fire retardant landscaping; and fire department to review all plans.	Yes	No change.	Same as project.	Demand reduced.	Same as project.	Same as project.
<u>4.16 LAW ENFORCEMENT</u>							
Demand for law enforcement would significantly increase, requiring additional staff and equipment.	Provide funding for extra staff and equipment through plan's funding mechanism. Incorporate crime prevention measures into design. Police department to participate in review of plans.	Yes	No change.	Same as project.	Demand reduced.	Same as project.	Same as project.

Potentially Significant Impacts	Recommended Mitigation Measures	If Implemented, Will Impact be Mitigated to an Acceptable Level?	No Project Alternative	No Mall Alternative	50% Density Reduction Alternative	Alternative Site #1	Alternative Site #2
<u>4.17 SCHOOLS</u>							
Number of students generated by residential development will impact capacity of existing and yet-to-be-built middle and high schools.	One-time development fees and establishment of a new community facilities district will provide funding for development of new schools.	Yes	No change.	Same as project.	Demand reduced.	Same as project.	Same as project.
<u>4.18 PARKS AND RECREATION</u>							
The Specific Plan falls short of meeting city parkland standards.	The plan should provide for an additional acre of parkland.	Yes	No change.	Same as project.	Demand reduced.	Same as project.	Same as project.

INTRODUCTION

1.0 INTRODUCTION

EIR Requirement

Adoption of a specific plan is a project subject to the California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 15378). If the jurisdiction involved determines that any aspect of the proposed specific plan may cause a significant effect on the environment, the jurisdiction must prepare an environmental impact report (EIR). Such a determination was made in the Initial Study prepared for the City of Tracy (see Appendix A).

Although legally distinct, a specific plan and its EIR overlap in addressing the same issues. For this reason, the State Office of Planning and Research (OPR) recommends that environmental assessment be an integral part of preparation of a specific plan and that the documents be written concurrently. The I-205 Specific Plan and its EIR have been produced in this parallel manner.

Scope

This EIR will be a complete and detailed analysis that will cover the forthcoming actions to implement and approve the Specific Plan. It is prepared for a series of related actions that can be characterized as one large project or program. They include the following:

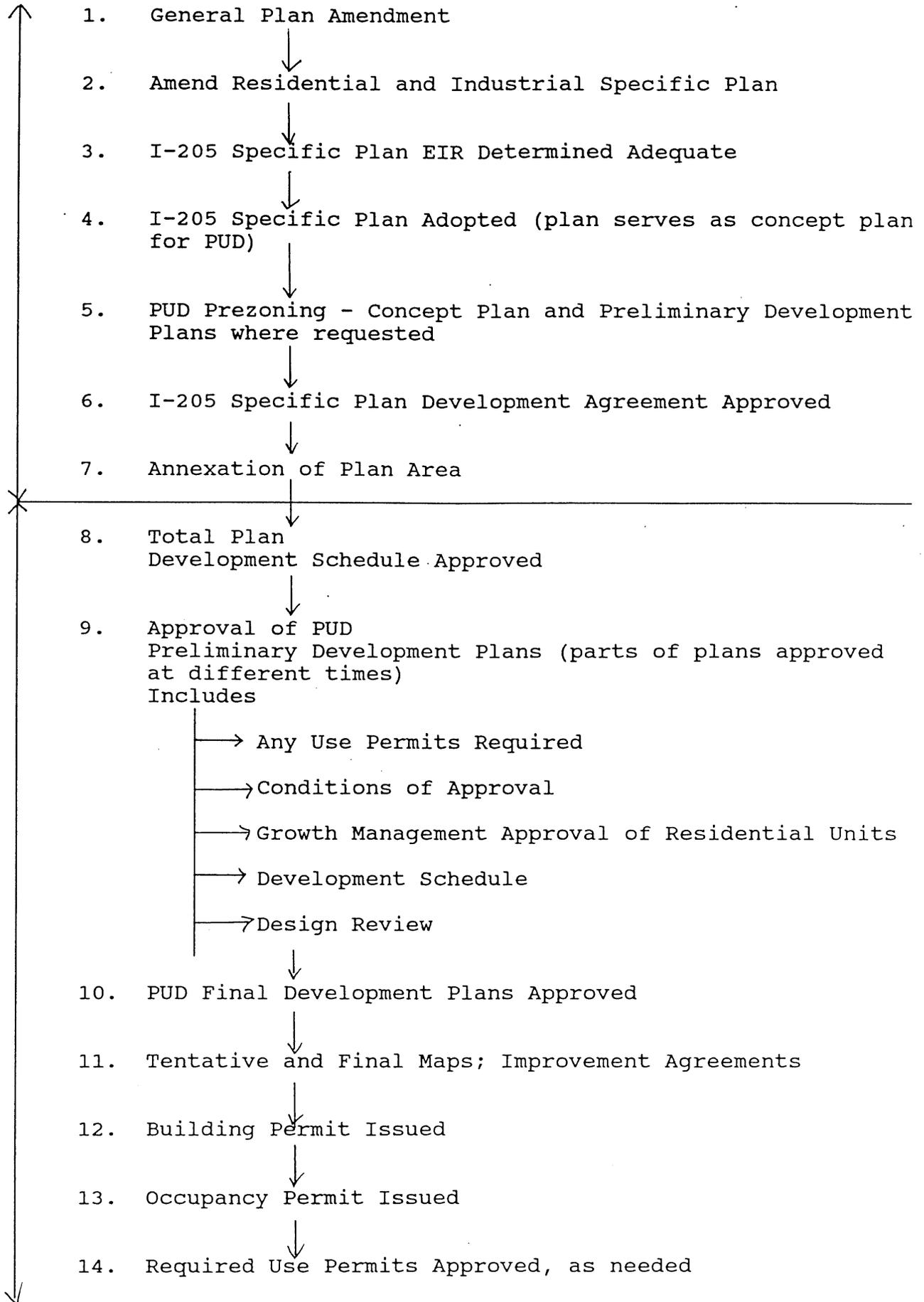
- adjustment of the City of Tracy's sphere of influence;
- annexation of approximately 625 acres to the City of Tracy;
- amendment of the Tracy General Plan map and text;
- amendment of the Tracy Industrial Areas Specific Plan;
- amendment of the Tracy Residential Specific Plan;
- rezoning and prezoning;
- proposed public improvements; and,
- adjustment of service district boundaries.

As subsequent activities occur in accordance with the Specific Plan, they must be examined to determine whether they will result in effects not examined in the EIR. If no additional effects can be identified or no new mitigation measures are needed, no new environmental document is necessary. If it is determined that the project will cause additional significant effects, a subsequent EIR or mitigated negative declaration must be prepared. (See Table 1-1, I-205 Plan and Permit Processing.)

Definition of Significance

The following definition is provided to help clarify the concept of significant effects, as required by the California Environmental Quality Act (CEQA), as amended.

Table 1.1
I-205 PLAN AND PERMIT PROCESSING



"Significant effect on the Environment" is defined in Section 15382 of the State CEQA Guidelines as:

A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and object of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Potentially significant impacts of the Specific Plan have been identified in the Initial Study, responses to the Notice of Preparation and during preparation of this EIR. These impacts relate to the following issues:

- Land Use
- Geology and Soils
- Hydrology and Water Quality
- Air Quality
- Aesthetics
- Biotic Resources
- Traffic
- Noise Levels
- Public Services and Utilities
- Fiscal and Employment Issues

Those issues considered not to be significantly impacted include energy consumption and cultural resources. (A records search was conducted at the Central California Information Center, CSU Stanislaus. There was no evidence of cultural resources within the study area. Also, a review of the City of Tracy General Plan reported no site of historical significance within the study area.)

Findings

In adopting a specific plan (or a general plan) for which an EIR has been prepared, local governments must make findings concerning the identified, significant environmental effects. (Title 14, California Administrative Code Section 15091.) As stated in the 1987 California General Plan Guidelines,

The findings, supported by substantial evidence, must explain how the significant effects have been or should be mitigated or explain why mitigation is not feasible. Further, the city or county may not approve the general plan (or specific plan) document unless: 1) the plan as approved will not result in a significant effect on the environment, or 2) the city or county has eliminated or substantially lessened all significant

effects where feasible, and determined that any remaining unavoidable significant effects are acceptable due to overriding considerations which outweigh the unavoidable adverse impacts (Title 14, California Administrative Code Sections 15091, 15092 and 15093).

History

The Tracy Economic Development Commission, in the spring of 1986, requested that the Tracy City Council explore the potential for commercial and industrial development of properties adjacent to Interstate Highway 205 (I-205) abutting the city's northern limits. The planning commission and city council recognized the importance of the regional visibility and access which provides excellent development potential for these properties and directed city staff to investigate planning alternatives for the area.

An agreement was reached in May 1987 between the city and land owners in the study area which established a mechanism for the project's analysis and planning. The core of this agreement had two basic parts. First was the commitment of the city to enter into the necessary consultant contracts and direct the planning process. The second part was the property owners' commitment to reimburse the city for all costs incurred during the planning process. A public/private partnership has existed from the outset of the project which has allowed the city to shape a plan for orderly development while involving the property owners in the organized planning process.

The planning process has progressed through a number of steps leading to this Specific Plan. Phase I of the project was essentially a feasibility study of the area and included a baseline assessment of the market forecast, visual image, and environmental and infrastructure conditions. This initial stage of the project considered all properties in the I-205 corridor from the Eleventh Street eastbound off-ramp to approximately 4,500 feet east of the MacArthur Drive interchange. The Tracy planning commission and City Council directed the project to proceed in November 1987 after reviewing the results of the first phase of work.

The next phase of work refined the study boundaries and developed the land use, circulation and visual image elements of the project. This work was completed in October 1988 and reflected the baseline assumptions which were developed in phase one. The market forecast assumption which had been developed indicated that it was unlikely that a major regional enclosed shopping facility would ever locate in Tracy. That assumption had to be abandoned in October 1988 when one of the nation's most successful "regional mall" developers gained control of an appropriate site in the study area and announced its intention to locate a facility in Tracy.

There have been significant changes in the land use and circulation elements of the project since the October 1988 plan in order to facilitate the location of the "mall" and the other uses which traditionally seek locations on the periphery of a major regional center. Particular emphasis has been placed on developing an appropriate design for the Grant Line Road/I-205 interchange. A project study report has been prepared for this improvement and is currently being reviewed by Caltrans and FHWA. These changes have been incorporated in the Specific Plan published in February 1990 which is being considered in this EIR as the Proposed Project.

PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 Site Location

The I-205 Corridor Specific Plan area is located at the northern end of the City of Tracy in San Joaquin County. The regional location map (Figure 2-1) illustrates Tracy's position relative to the San Francisco Bay Area. Also shown are the project sites in their area setting. As can be seen, the sites are divided by one of the three interstate freeways that surround the City of Tracy.

The I-205 Corridor Specific Plan area includes segments of unincorporated San Joaquin County as well as lands within the City of Tracy (see Figure 2-2). The planning area covers roughly 717 acres in two separate sites. Grant Line Road runs through the western site which contains approximately 611 acres. The eastern site contains approximately 106 acres and is bordered by MacArthur Drive. Table 2-1 lists the project area parcels by development parcel number, assessor's parcel number and property owner. Each parcel is identified by Development Parcel Number in Figure 2-3.

2.2 Technical Description of the Proposed Project Taken From the I-205 Specific Plan

Land Use Concept (717 total acres)

The land uses proposed for the I-205 Corridor establish a series of designations that allow for orderly development of the area and position the city to capture regional, freeway-oriented commercial and industrial demand for the next 15-20 years. This plan also allows for a variety of other commercial and residential product types, provides for school and park facilities, and insures the development of adequate circulation and utility systems. Tables 2.2 and 2.3 provide a summary of proposed land uses. Figure 2-4 illustrates the proposed amendments to the county and city land use maps.

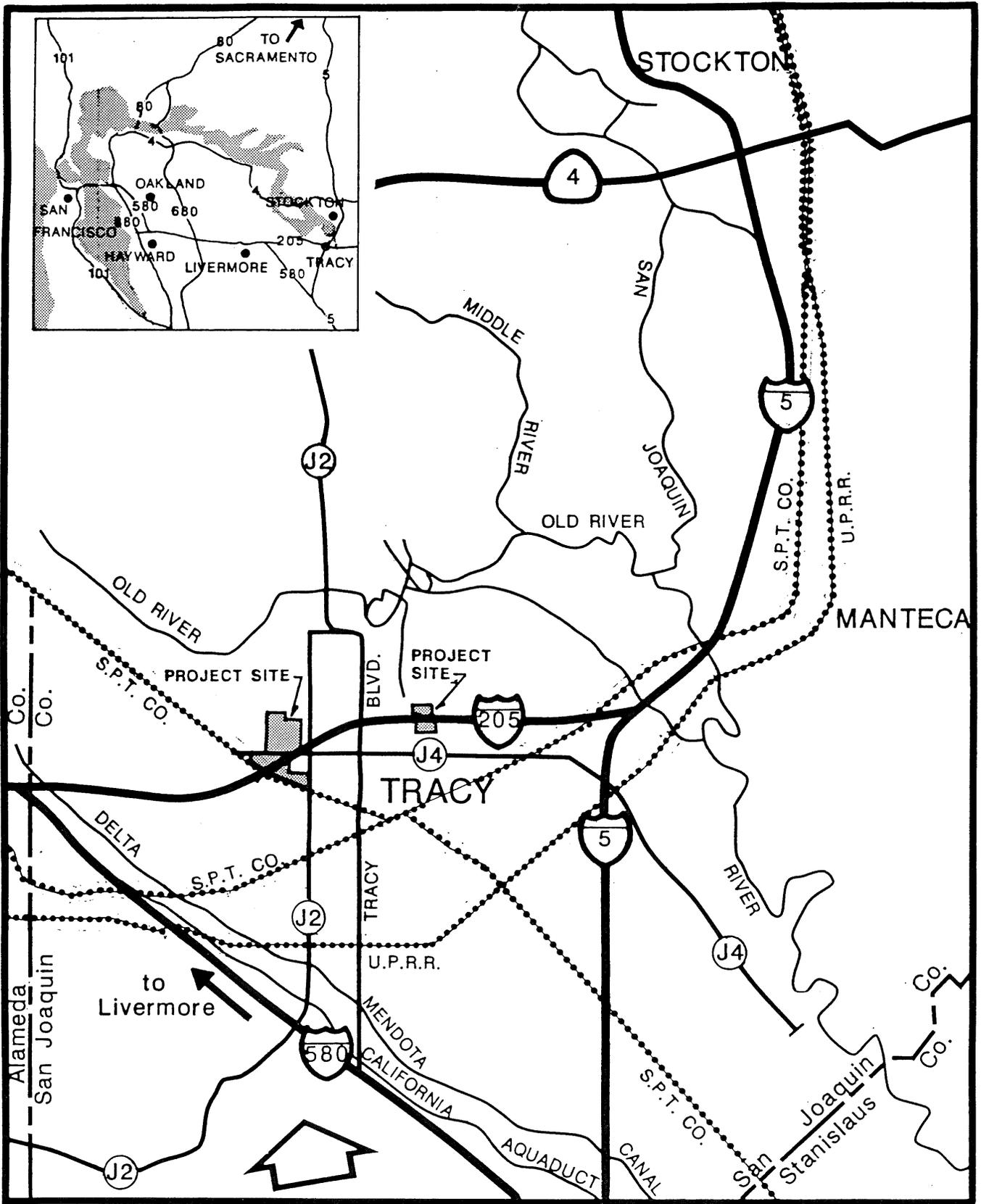


FIGURE 2-1
PROJECT SITE LOCATION/REGIONAL SETTING

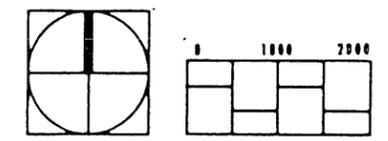
I-205 CORRIDOR E.I.R.



SPHERE OF INFLUENCE BOUNDARY / CITY BOUNDARY

- Project Boundary
- Sphere of Influence Boundary
- - - City Boundary
- Proposed Sphere of Influence Boundary

Source: City of Tracy General Plan



City of Tracy

David L. Gates & Associates
The Sword Company
Mills Associates

FIGURE 2-2

MAY 1990

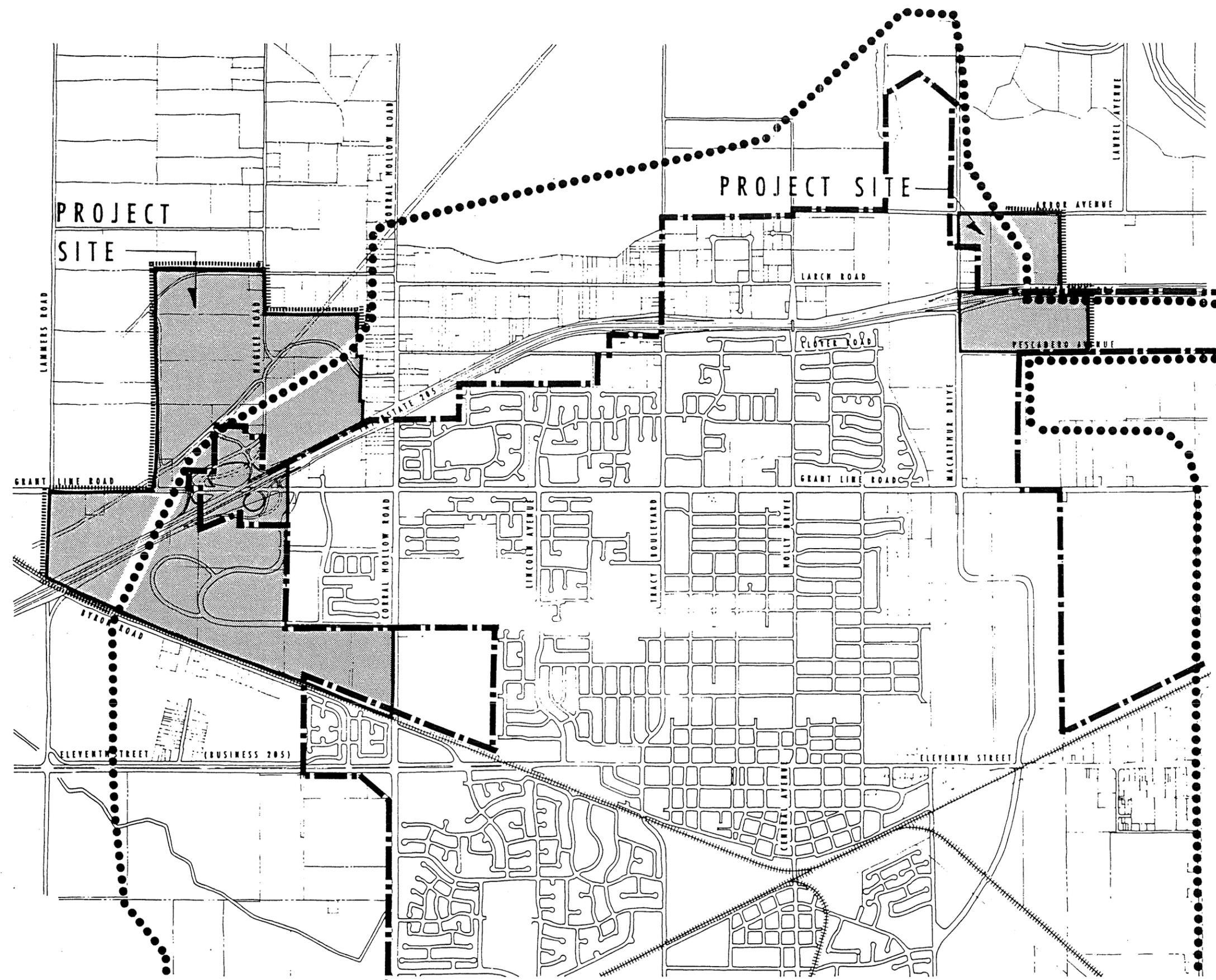


TABLE 2-1
I-205 CORRIDOR SPECIFIC PLAN
PARCEL NUMBERS AND PROPERTY OWNERS

Dev't. Parcel	Assessor's Parcel Number	Property Owner
Grant Line Road Planning Area - Commercial/Industrial Properties		
GL-1	211-04-74	CPK Associates
GL-2	211-04-15	Yee
GL-3	211-04-15	Robertson
GL-4	211-04-33	Yee
GL-5	211-04-18	Midland Pacific
GL-6	211-04-17	Pombo
GL-7	211-04-71	Y.M. Associates
GL-8	211-04-72	Alfonso
GL-9	211-04-47	Erceg
GL-10	211-04-48	Erceg
GL-11	211-04-61	Boswell
GL-12	211-04-13	General Growth
GL-13	211-04-14	Leonardo
GL-14	211-04-38	Muelliele
GL-15	211-04-60	Cintra/General Growth
GL-16	237-17-01	Furtado
GL-17	237-17-02 (portion)	Dividend
GL-18	237-17-23	Tracy/Grant Line Association
GL-19	237-17-37	Toste Farms, Inc.
GL-20	237-17-38	Toste Farms, Inc.
GL-21	237-17-39	Toste Farms, Inc.
GL-22	237-17-35	Toste Farms, Inc.
GL-23	237-17-02 (portion)	Dividend Properties/ Harrington
GL-24	237-17-34	Toste
Grant Line Road Planning Area - Residential Properties		
GL-23	237-17-02	Dividend
GL-24	237-17-34	Toste
GL-25	237-17-13	Toste/Harrington
GL-26	237-17-12	Kehl
MacArthur Planning Area		
M-1	213-06-02	N. Bacchetti
M-2	213-06-04	B. Bacchetti
M-3	213-06-16	M.M.J. Equities
M-4	213-06-15	Ujdur/Reyes
GL represents Grant Line Planning Area		
M represents MacArthur Planning Area		

Table 2.2
I-205 Specific Plan Land Uses (717 Acres):

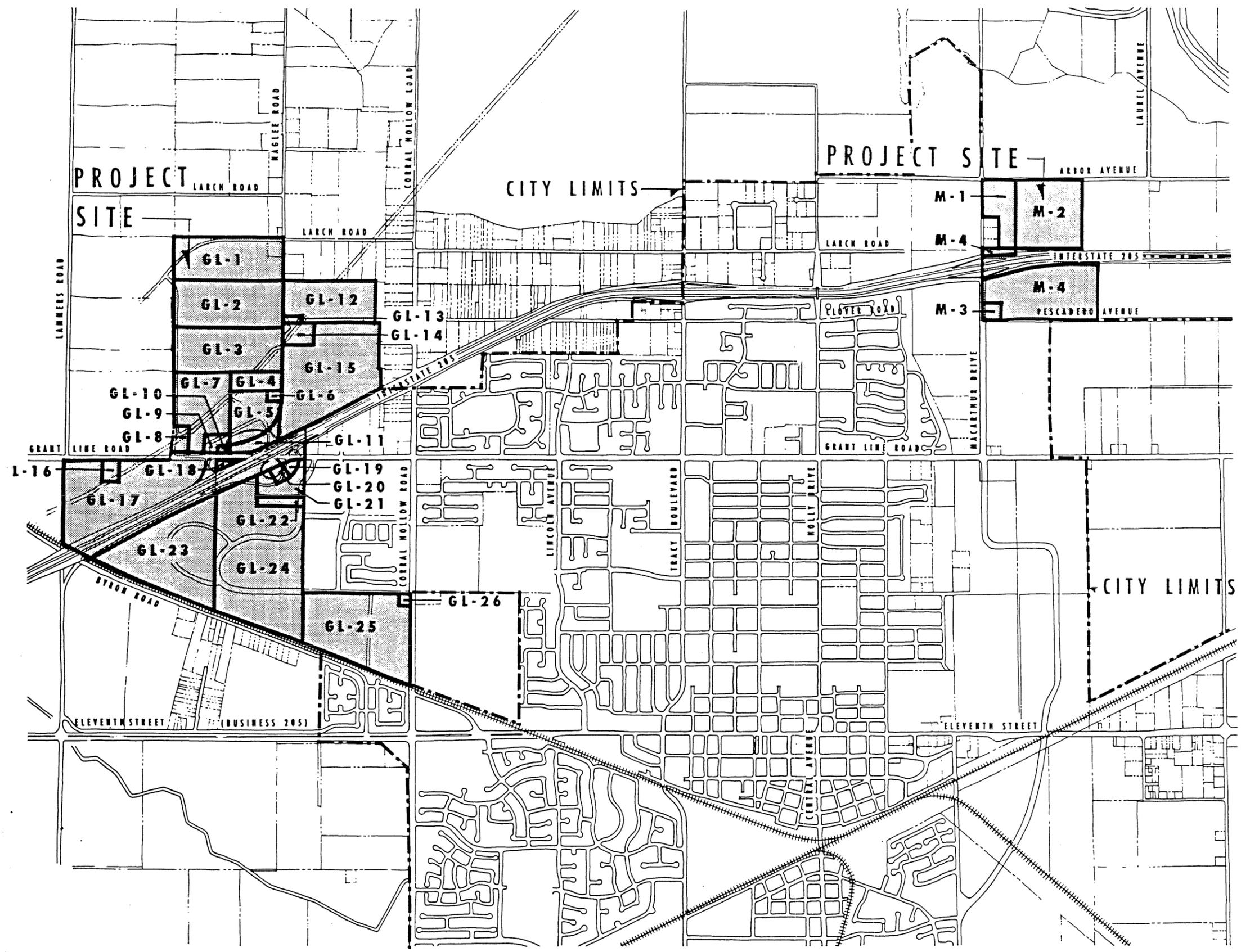
<u>Land Use</u>		<u>Acres</u>	<u>Percent</u>
Commercial			
- Grant Line Area	280*		
- MacArthur Area	52		
	<u>332</u>	332	46
Light Industrial			
- Grant Line Area	109**		
- MacArthur Area	54		
	<u>163</u>	163	23
Park/School/Open Space - Grant Line Area		34	5
Residential - Grant Line South Area			
- Low Density	115		
- Medium Density	31		
- High Density	20		
	<u>166</u>	166	23
Freeway Interchange		<u>23</u>	<u>3</u>
TOTALS		717	100

* Including 35 acres of GCR.

** Including 38 acres of UR.

Table 2.3
Proposed Maximum
I-205 Specific Plan Gross Floor Areas
Commercial/Industrial Uses

Shopping Center/Mall	815,000 SF
General Retail Commercial	976,000 SF
Service Commercial	1,220,000 SF
Freeway Commercial	335,000 SF
Total Commercial	3,346,000 SF
Light Industry	994,000 SF
Urban Reserve (Light Industrial)	574,000 SF
General Commercial Reserve	385,000 SF

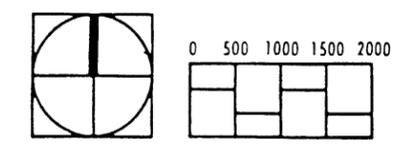


LAND OWNERSHIP

GL-2 Parcel Numbers,
keyed to land

M-2 ownership chart

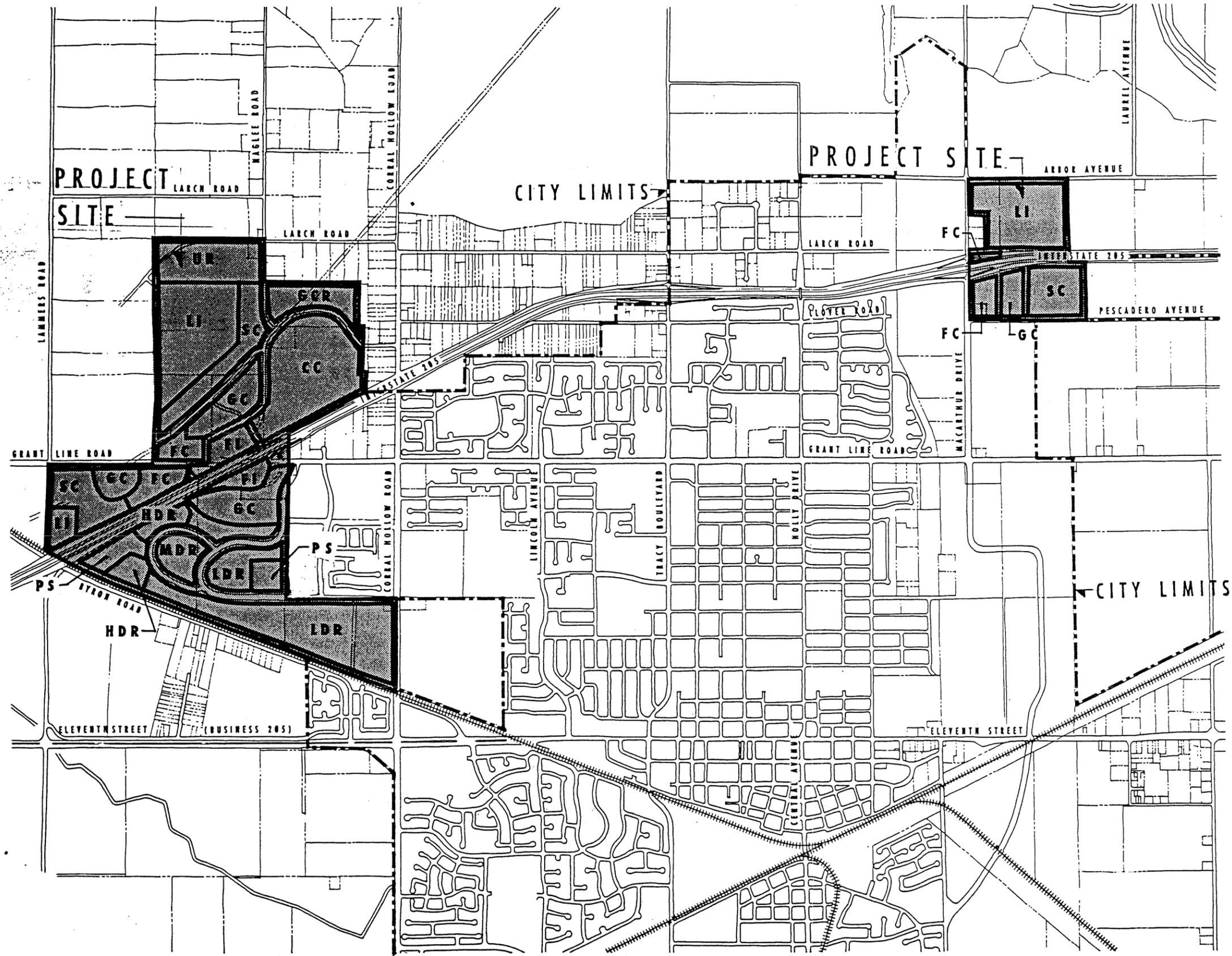
See Figure
for additional information



City of Tracy

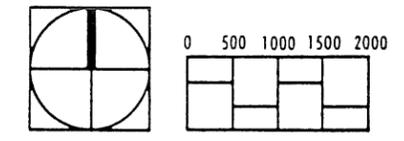
David L. Gates & Associates
The Sword Company

FIGURE 2-3



**PROPOSED SPECIFIC PLAN
LAND USE MAP**

- FC** Freeway Commercial
- GC** General Commercial
- SC** Service Commercial
- CC** Commercial Center
- GCR** General Commercial Reserve
- LI** Light Industrial
- PS** Park/School/Open Space
- FI** Freeway Interchange
- LDR** Low Density Residential
- MDR** Medium Density Residential
- HDR** High Density Residential
- UR** Urban Reserve



City of Tracy

David L. Gates & Associates
The Sword Company

FIGURE 2-4

The predominant land uses proposed in the Specific Plan are those of a 370-acre freeway-oriented, commercial-industrial complex located north of I-205. The land use concepts for this complex area are as follows:

1. (CC) Community Center Area, also called the "Regional Shopping Center," also called the "Mall" area - 75 acres. This land will include 815,000 feet of gross floor area for retailing, mostly one story in height, enclosed common walk and store entrance area, with a few anchor tenants strategically placed throughout. This center is expected to be built soon, within the next two to three years.
2. (GC) General Commercial Areas - 78 acres. This land use is planned in two areas in the commercial complex. It allows most retail uses (some by special permit) and is sited on major thoroughfares, and enclosed in several store structures located in large parking lots.
3. (SC) Service Commercial Areas - two areas, 68 total acres. This land use is for commercial services requiring large sites for less attractive but necessary activities such as a tire store, building and supply, etc. Such uses also require more fencing, screening and control of outdoor activities.
4. (FC) Freeway Commercial - two areas, 24 total acres. Travel land uses, sites for utilities, gas stations, restaurants.
5. (GCR) General Commercial Reserve, (UR) Urban Reserve areas - 73 acres. Land use to remain agriculture for several years until more urban land is needed.
6. (LI) Light Industrial Areas - two areas, 71 total acres. Land uses to be business parks, heavy service, warehouse uses, and manufacturing. Design controls and use permits required by many uses.

Commercial uses likely to generate the most traffic are concentrated near the freeway interchanges with uses associated with lower traffic volumes located toward the edges of the planning area. At the furthest edges of the area urban and commercial reserve designations provide for the holding of the land for later development, depending upon what the market will bear at the time.

The existing arterial street circulation system will be expanded to provide for the convenient movement of employment and shopping-related vehicular traffic. Each of these arterials will be designed to provide for a pleasing and aesthetic solution while buffering adjacent neighborhoods from nearby traffic.

Within the residential areas a neighborhood park, mini-parks and a school are provided. The land use intensities in these zones will be varied to provide buffering and screening from the freeway and railroad and to nearby commercial development.

The proposed land use plan is divided into two planning areas. As shown in Figure 2-4 the Grant Line planning area encompasses the properties near the intersection of Grant Line Road and I-205 while the MacArthur planning area covers properties near the MacArthur Drive/I-205 interchange.

Grant Line Planning Area (611 Acres)

The majority of the proposed Specific Plan area is located in the Grant Line planning area. In this area, in the portion north of I-205, the most significant feature of the land use plan is the provision of a 75-acre site designated for a regional shopping center/mall.

The mall site is the focus of this area with the General and Service Commercial areas serving as a transition in intensity of use to the Light Industrial lands to the northwest. Near the interchange, areas of Freeway Commercial uses will be located to be easily seen and serve regional auto traffic coming off the interstate. Urban and General Commercial Reserve areas set aside for later development fill out the remainder of the planning area.

The major feature of this portion of the plan is a 199+ acre residential community area. The southern portion of the Grant Line planning area is subdivided into the following land use designations: General Commercial (GC), Low Density Residential (LDR), Medium Density Residential (MDR), High Density Residential (HDR), Park/School/Open Space (PS), and Freeway Interchange (FI).

The proposed residential community is the focus of this southern portion of this planning area. Extensive design standards and guidelines have been established to encourage the development of a recreation-oriented community buffered from the noise of the railroad and freeway. The 11.1-acre neighborhood park at the west end of the area will also serve as a visual gateway to the community from I-205.

The proposed residential community's land use concepts are as outlined below:

1. Basic Concept: Housing variety - one of this area's concepts is to offer housing alternatives different than the typical Tracy low-density, large lot, single-family homes. A housing variety is proposed to appeal to busy, freeway and shopping center-oriented people.

2. Lot Sizes: Low Density Residential (5,6000 - 17,000 square foot lots on 115 acres), Medium Density Residential (3,600 - 5,600 square foot lots on 31 acres), High Density Residential (1,740 -2,900 square foot lots on 20 acres).

3. Housing Density:

Low Density Units - single-family homes, approximately 3-6 units per acre.

Medium Density Units - Duplexes, patio homes, zero lot line houses, clustered and attached owned homes, approximately 6-12 units per acre.

High Density Units - Owned or rented townhouses, condominiums, apartments, up to 20 units per acre.

4. Maximum Units:

	<u>Acres</u>	<u>Units Per Acre</u>	<u>Total Units</u>
Low Density Residential	115	5.5	632
Medium Density Residential	31	10.0	310
High Density Residential	<u>20</u>	20.0	<u>400</u>
Totals	166		1342

MacArthur Planning Area (106 Acres)

The MacArthur planning area is located at the intersection of Interstate 205 and MacArthur Drive. All the lands included lie east of MacArthur Drive and are designated one of the following land use categories: General Commercial (GC), Service Commercial (SC), Freeway Commercial (FC) or Light Industrial (LI).

Here, much like the north Grant Line planning area, commercial uses are graded away from the freeway in zones of decreasing traffic-generating impact. North of the freeway the Light Industrial Zone is compatible with existing similar developments on adjacent parcels.

Summary of Specific Plan and Land Uses - By Plan Area

"Commercial/Industrial Complex"
717 Total Acres

<u>Grant Line Commercial/ Industrial Park - 412 acres</u>	<u>Residential Community - 199 acres</u>	<u>MacArthur 106 acres</u>
Regional Shopping Center/Mall 75 acres, 815,000 square feet floor area	Low Density - 114 acres	General Commercial 12 acres
General Commercial/Retail* 112 acres	Medium Density - 31 acres	Freeway Commercial 15 acres
Service Commercial 68 acres, 2 areas	High Density - 20 acres	Service Commercial 25 acres
Freeway Commercial 24 acres, 2 areas	Parks/Schools/Open Space - 34 acres	Light Industrial 54 acres
Light Industrial 21 acres		
Misc. Other Uses** 61 acres		

* Including General Commercial Reserve

** Including Urban Reserve

Development Plan and Downtown Tracy

The proposed development of a variety of major retail projects in the I-205 Corridor will collectively become a regional shopping center located on the northwest edge of Tracy. While this will bring sales tax revenue from shoppers from outside of Tracy, and be a convenient location for Tracy residents to shop, the shopping center will draw shoppers and retailers away from the existing downtown. Consequently, it will be important to provide means for the I-205 Corridor and the existing downtown to each find their new roles in the retailing environment.

The Specific Plan provides for funding mechanisms to assist the downtown in keeping and attracting merchants. Beginning in the first development year the plan provides funds to be utilized in the preparation of an economic development plan for the Main Street/downtown area. The primary impact of the regional shopping center will be an increase in vacancies in large buildings in downtown Tracy. An economic development plan is proposed to be prepared containing strategies for how vacant buildings can be reused downtown. The economic development plan should consider this potential affect and address the reuse

potential of major space users. Both private and public reuse of these facilities should be considered. For example, the city might consider future governmental or cultural needs that might be satisfied by moving to the structures.

In addition, a detailed supplemental financing plan will be developed and approved at the time the Specific Plan is adopted. The financing plan will propose a fee on the development of I-205 retail spaces to be used as a continuing source of funding for the economic development plan's implementation programs, or to pay for promotional activities. Details of this per-square-foot charge will be described in the forthcoming financing plan.

Traffic Circulation Concepts

The I-205 Specific Plan will alter the local street network in the plan area and will change the interface between that network and the I-205 regional freeway. The Specific Plan will include a number of arterial and collector streets to serve the plan's development traffic as well as traffic generated by other development in the area. The I-205 Specific Plan streets must integrate with the overall Tracy network. The plan outlines the specific construction of new streets (or reconstruction of existing streets) needed in the area. Table 2.4 lists the arterial and collector streets within and adjacent to the Specific Plan area.

Given the projected volumes, levels of service were calculated for all of the key intersections. Where congestion problems (LOS "D" or worse) were evident, appropriate traffic improvements were identified. At each intersection, the identified improvements will return the peak hour operation to LOS "C" or better.

TABLE 2.4
ARTERIAL AND COLLECTOR STREETS IN THE I-205 SPECIFIC PLAN

Grant Line Planning Area:

<u>Street Name</u>	<u>Designation</u>	<u>Section</u>
Grant Line Road	Major Arterial Major Collector	Tracy Boulevard to Street "A" Street "A" Westerly
Corral Hollow Rd.	Major Arterial Minor Arterial	Schulte Road to Street "C" North of Street "C"
Street "A"	Major Arterial	Grant Line Road to Street "C"
Street "B"	Minor Arterial	Street "C" to Street "A"
Street "C"	Major Arterial	Grant Line Road to Corral Hollow Road
Street "D"	Major Collector	North of Street "A"
(New) Toste Road	Major Arterial	Grant Line Road to north G.C. loop road
	Major Collector	South G.C. loop road to residential loop road
Lowell Avenue	Major Collector	Corral Hollow Road to residential "loop" street

MacArthur Planning Area:

MacArthur Drive	Major Arterial	Grant Line Road to westbound I-205 ramps
	Minor Arterial	North of I-205 westbound ramps

Parks and Open Space Concepts

The Specific Plan will provide an additional 13.6 acres of dedicated parkland, with all of the acreage provided in the south of Grant Line planning area adjacent to residential land uses. Key objectives of the park system in the I-205 Corridor are to:

- Develop a high-quality public park system for the Specific Plan residential area that provides varied recreation opportunities.
- Conform to the current park dedication factor of four acres of park per 1,000 population, with a public park facility within a 660-foot (1/8 mile) radius from all homes.

Two types of parks are proposed for the study area: mini-parks and a neighborhood park. The mini-parks are planned to be one-half acre areas located within subdivisions, thus serving a small radius of homes without the need to cross major streets. Another key objective of mini-parks is to provide a visual amenity that can serve as a focal point or identification feature for the neighborhood.

The neighborhood park is planned to be approximately 11 acres in size and is intended to serve the needs of local residents. As the focal point for neighborhood-wide social, sport and passive recreation events, the neighborhood park is intended to accommodate all ages and user groups. This park is also planned to act as a special city gateway element, taking advantage of the high level of visibility from the freeway to establish a desirable image and identity for Tracy within the I-205 corridor. The majority of homes near this park are proposed to be high density, thus the neighborhood park will supplement the smaller yard areas associated with this type of home.

Pedestrian and Bikeway System

A continuous pedestrian and bikeway system is planned for the north and south Grant Line planning areas to provide internal connections, as well as interconnecting commercial facilities to outlying residential areas.

Key objectives of the pedestrian and bikeway system in the I-205 corridor are to:

- Promote more convenient walking/cycling to commercial and city facilities.
- Provide a "visual break" in a developed area particularly if associated with a moderate amount of open space and landscaping.

- Provide a safe way for younger children to move within a neighborhood.

The pedestrian and bikeway system is planned to be organized into a network consisting of major and minor trails. Where possible, this pedestrian/bikeway system will be jointly developed with the open channel storm drainageways located along Corral Hollow Road, Lowell Avenue, Orchard Parkway, and the West Side Irrigation District Easement. This combination will ease problems of security, maintenance, and grade separation. Potential conflicts between heavy vehicle use and pedestrian needs will be addressed in a number of ways including special intersection treatment and siting of sidewalks at a greater than standard distance from the roadway.

Drainageway Open Space Corridors

The I-205 Corridor Specific Plan seeks to continue the program of open channel storm drainageways proposed in the Residential Areas Specific Plan. As in the previous plan, this plan recognizes the ability of the storm drainage system to be an amenity to the surrounding community. The pedestrian and bikeway system discussed in the previous section is planned to be developed adjacent to storm channels to create links to the city-wide open space network.

Storm Drainage

A portion of the Specific Plan area lies within the inundation zone of the 100-year flood zone as identified by the Federal Emergency Management Administration (FEMA). Development of properties within this zone must conform to the design standards of Section 4.5 of the Specific Plan.

Collection and Discharge Systems

Study area lands in the MacArthur Planning Area and those portions of the Grant Line planning area south of I-205 are to be drained via a network designated in the city's 1989 Storm Drainage Master Plan (Figure 4-4). This Master Plan identifies an open channel drainageway system discharging to the Sugar Cut. Only the lands south of the freeway were included in the Master Plan.

In the Grant Line Road area the lands south of I-205 and tributary to the planned city channel will drain directly to this facility. If development proceeds prior to such time as the city implements this channel an interim retention pond will be allowed.

North of I-205 in the Grant Line area the lands may drain to either the city's planned outfall to Sugar Cut or to the Naglee Burk Irrigation District (NBID) outfall channel. The Specific Plan identifies a system of pipes and open channels discharging via the NBID channel to a pump outfall on Bethany Road west of Reeve Road. The plan provides funds for improvements to the NBID

drain and the construction of a new pump station and force main outfall. In addition the plan provides funding to NBID for long-term maintenance of these facilities.

The MacArthur planning area south of I-205 is traversed by the Pescadero Reclamation District which will be enlarged to become the city's east side drainage channel. The Specific Plan lands will drain directly to this drainageway.

North of I-205 the plan area lands will be drained by a drain channel parallel to Arbor Avenue (see Figure 4-25). A box culvert under MacArthur Drive will route water to the city's east side drainage channel near Sugar Cut.

Irrigation District Concepts

Planning area lands, as shown in Figure 4-25, are located within the boundaries of the Naglee Burk Irrigation District (NBID), and West Side Irrigation District (WSID), and the Pescadero Reclamation District (PRD). As lands are annexed and developed they will be required to maintain irrigation district facilities that are necessary to continue flows to downstream properties. In the case of the lands in the Grant Line planning area south of I-205 the WSID main canal is to be incorporated into the planned storm drainageway. A short, dead-end portion of WSID facilities along the railroad will be abandoned once the lands develop.

In a similar fashion lands north of I-205 at Grant Line will be removed from the Naglee Burk Irrigation District and at MacArthur Drive from the Pescadero Reclamation District. The plan will relocate or reconstruct district facilities so as to accommodate development and maintain the integrity of the irrigation system.

Utilities Concepts

City of Tracy wastewater is treated at the 9.0 mgd capacity treatment plant located at Holly Drive and Arbor Avenue. Currently the plant treats and discharges to the Old River a maximum of 6.0 mgd. The full capacity of this plant is obligated to serve the Residential and Industrial Areas Specific Plan and infill development within the existing city.

I-205 Specific Plan development will generate approximately 1.30 mgd of additional sewage. In order to treat this flow either the treatment plant could be expanded or a separate treatment facility utilizing land disposal of treated effluent could be constructed north of the community. A 1989 report by CH2M Hill Engineers identifies these facilities and provides an opinion of probable costs. The Specific Plan proposes construction of the land disposal facility and commits monies to finance this solution.

The CH2M Hill report points out that based on existing growth management plans and an assessment of the pace of industrial development, excess capacity may exist in the Corral Hollow trunk sewer and the treatment plant until 1996-97. The plan proposes this interim connection be utilized while the treatment options are studied and implemented. City council action may be necessary in order for this interim capacity to be so utilized.

Wastewater Collection

The proposed collection systems are shown on Figure 4-23. In the MacArthur planning area the lift station, force main and collectors south of I-205 are being built as a part of 1990 construction to serve the Yellow Freight and Market Wholesale developments. The collection system north of I-205 is funded by this plan as well as a planned enlargement of the lift station.

The Grant Line planning area is to be served by a new collection system draining from south to north and terminating at a new lift station to be located at Corral Hollow Road near Larch Road. Effluent collected at the new lift station will be pumped in a new force main to the existing Larch Road pump station which will be expanded to accept the new flows. An interim force main connection may be utilized to tie to the Corral Hollow trunk while interim capacity exists in this facility (see above).

Solid Waste

Solid waste in Tracy is collected by Tracy Delta Disposal Company (TDDC) and disposed of in a joint city/county landfill site located seven miles south of town. The landfill site has only a three-year remaining capacity at current waste generation rates. TDDC is currently pursuing the construction of a waste transfer facility in Tracy which would assist in reducing air quality impacts as the number of trips to the landfills by Tracy residents would be reduced.

Municipal Water System

Many years of city expansion are possible before the existing water supply is exhausted. As the nature of this supply solution is unidentified at this time, this plan includes a provision for a capital improvements charge to reflect the plan area's proportional role in paying for supply expansion. The plan also provides for expansion to the city domestic and fire protection water distribution network. The mains to be provided as a part of this plan include an 18-inch supply main which completes the west side looped main delivery system along Corral Hollow Road.

Other Utilities

The existing providers of electricity and natural gas (Pacific Gas & Electric Company) and telephone (Pac Bell) have plans to provide utility service to the area as land is developed.

Two noteworthy long distance utility lines are located within the plan area along Grant Line Road (Figure 3-2). The first of these is the AT&T transcontinental trunk which is located on the south side of the road and contains both fiber optic and conventional phone cables. The second facility is a Chevron Oil Company high pressure fuel line running along the north side of the road. These lines are extremely costly to repair and, in the case of the fuel line, dangerous if disturbed. The plan requires developers and contractors to contact these companies well in advance of design and construction so as to insure these features are not inadvertently disturbed.

Air Quality Concepts

While Tracy is subjected to reduced air quality due to the emission from automobiles, solvents and pesticides "upwind" of town, development in Tracy contributes to further "downwind" problems southward in the Central Valley. Recognizing the need to take a positive step in addressing the attainment of regional air quality standards, the I-205 Specific Plan proposes a series of actions to contribute to improved air quality.

As most objectionable emissions are automobile related, the plan proposes an active campaign to encourage an enhanced ride-sharing program. The first measure is to provide for the development of park-and-ride lots adjacent to the Grant Line Road and MacArthur Drive interchanges. Secondly, the plan commits funding to support a program to encourage active van-pooling and ride-sharing programs for Tracy residents working for the major employers in the Tri-Valley area. These measures are also discussed in the section on Transportation Systems Management.

In addition to these active measures at preventing air quality degradation the plan budgets funds to assist in the implementation and operation of a regional air quality monitoring system. The plan provides a lump sum to the regional agency for this purpose.

2.3 Buildout Rate

The draft Specific Plan does not require a development plan for the buildout of the study area. An infrastructures phasing plan will be established as a part of the financing implementation plan which will have the effect of making some areas of the Specific Plan available for development before other properties. A growth management plan will be required for the residential areas of the Specific Plan. The growth management rate will be set as a part of the development agreements.

2.4 Responsible and Reviewing Agencies

Caltrans (highway improvements)
Public Utilities Commission (transmission lines)
San Joaquin County (Williamson Act contracts)
Air Quality Control Board (industrial development)
Local Agency Formation Commission (SOI, annexation and extension of urban services)
Naglee Burk Irrigation District (irrigation facilities, extension of urban services)
Pescadero Reclamation District (irrigation facilities)
West Side Irrigation District (irrigation facilities)

2.5 Proposed General Plan Amendments

Adoption of this Specific Plan requires approval of a General Plan Amendment (Government Code Section 65450). The Tracy General Plan land use map would be amended to reflect the changes in Tracy's sphere of influence, city limits, and the land use designations identified on the Specific Plan land use map. The goals, objectives and policies of the General Plan would be amended to reflect those proposed in the Specific Plan. Since the General Plan is a policy document for the entire community, these amendments to goals, objectives, and policies must be consistent with the rest of the plan.

The following are the proposed amendments to the Tracy General Plan text. Both the existing and the proposed text are shown as well as any deletions. Proposed additions are underlined and proposed deletions are so noted. Only those portions proposed to be amended are included for discussion.

General Plan Map

Retail Center Commercial. Patrons are encouraged to park once and visit several establishments. Auto body shops, building material sales, and similar uses are excluded and drive-in establishments are controlled to avoid interference with pedestrians. In the 1990s the city recognizes that commercial retail centers can be located in three distinct places to provide local, community and regional goods and services. Their locations are:

Downtown - Tracy's central shopping and service area will emphasize offices, specialty stores, and restaurants. Coordinated public parking will be provided.

Delete:

Shopping Center - Five to ten-acre sites developed as a unit will serve a population of about 10,000 persons living within a one-mile radius. Each circle on the plan designates one existing or proposed shopping center, but the proposed shopping center could be on any one of several sites in the vicinity of the circle (see Policy 5-4).

Add:

Shopping Centers - Community and neighborhood locations of various sizes, 2-10 acres, to serve individual residential neighborhoods and larger sections of the community.

Regional Shopping Complex - A major commercial center, oriented to the I-205 Corridor, 50-200 plus acres, containing retail, general commercial, service commercial, and freeway commercial land uses to serve citizens of Tracy as well as regional shoppers and passers-by.

Trafficways.

Major Arterial Streets. Four lanes or more with turning lanes, on-street parking is not to be provided; designed to carry more than 10,000 vehicles per day.

Minor Arterial Street. Four lanes; designed to carry 5,000 to 13,000 vehicles per day.

Collector Street. Two lanes; designed to carry 2,000 to 5,000 vehicles per day.

Add:

Specific Plan. This category is intended for major Specific Plan study areas. As specific plans are designed to meet the specific requirements for an area of the City of Tracy, the land use designations may be distinct from those listed on the General Plan, provided the specific plan sets forth the definitions of such designations.

Land Use Element Policy Areas (Section 2.1 of the Tracy General Plan)

The Land Use Element includes policies for the location and intensity of development of all major land uses. Policies relating specifically to the Open Space and Recreation and Public Facilities Elements appear under those headings. (See the General Plan Technical Supplement, Section 1, 2.1, 2.2, and 3 for background information.)

Policy Area 2: Urban Expansion and Agricultural Land Preservation

(See the General Plan Technical Supplement, Section 2.1 and 4.1.4, and the EIR.)

Guiding Policy: Preserve agricultural land to the extent that is feasible without restricting the amount of urban growth.

Implementing Policies:

Delete:

2-2 When subdivision maps have been recorded on 75 percent of parcels 20 acres or larger designated for urban residential development, the General Plan shall be amended to provide additional growth area (Phase II) as indicated on the General Plan map.

Add:

2-2 Now, in the 1990s, the city has determined that it is most beneficial to commit the I-205 Corridor area to regional-oriented commercial-industrial urban expansion. This determination was made based on the following urban expansion and agricultural land preservation factors - 1) outside of the I-205 Corridor area exists agricultural lands of better quality that are more worthy of preservation; 2) freeway, commercial, and industrial urban land uses have already intruded into the I-205 Corridor area; 3) urban residential development lacking in site planning and architectural design quality, is encroaching on the I-205 Corridor area; 4) a local need exists for regional shopping opportunities that can best be provided by urban expansion on large sites in the I-205 Corridor area.

Policy Area 5: Commercial Development

Delete:

Guiding Policy: Encourage downtown development while also providing for necessary, convenient shopping centers.

Add:

Guiding Policy: Commercial development includes land uses planned for several activities, such as neighborhood convenience markets; retailing, convenience, and service commercial activities in the downtown area as well as in community centers and freeway-oriented regional centers; thoroughfare and freeway interchange commercial; and small, individual offices up to major regional office complexes. Commercial development in the 1990s may locate, depending on its requirements, in downtown Tracy, in neighborhood and community centers dispersed throughout town, and in the I-205 Corridor in community-wide and regional oriented shopping centers.

Delete:

5-3 Tracy will have six shopping centers in addition to downtown in the year 2000. These shopping centers should be oriented mainly to the needs of the community.

Delete:

- 5-4 Enact rezoning for a shopping center only after commitments by anchor tenant(s) and approval of a schematic design by the city. A shopping center need not be the exact location in the same service area where good traffic access is available and it can be buffered from residential areas.

Add:

- 5-3 Encourage the development of regional market-serving commercial facilities in the I-205 Corridor area in order: 1) to take advantage of the transportation network inviting to regional marketers; 2) to stop the drainage of sales tax dollars from Tracy residents to other communities causing insufficient tax funds for Tracy's on-going service level requirements; 3) to provide Tracy residents with wider shopping opportunities than are currently available in the immediate area; and 4) to provide an area with the proper access, parcel sizes and freeway visibility to encourage commercial users in need of such factors to locate in Tracy.

Specifically, in the I-205 Corridor area, encourage the location of a regional mall and/or major community shopping center; wholesale and off-price center; auto sales facilities; freeway serving hospitality facilities; and service commercial uses.

- 5-5 5-4 Limit commercial development on Tracy Boulevard north of Eleventh Street and south of Grant Line Road to land currently designated for that use in order to preserve the traffic-carrying capacity of Tracy Boulevard.
- 5-6 5-5 Establish design standards to improve the appearance of new commercial development and transitions between commercial and residential areas.

Policy Area 6: Office Development

(See the Technical Supplement, Section 2.2, and the EIR, Section 1.3.)

Guiding Policy: Provide separate locations for local, regional-serving, and medical office development.

Implementing Policies:

- 6-1 Locate local-serving business and professional offices downtown and along Eleventh Street.

6-2 Locate Encourage the location of large, region-serving offices, data processing centers, or research and development firms near in the I-205 Corridor where both the firms and Tracy can benefit from the views of handsome buildings and grounds as seen from the freeway and commuter traffic will not use city streets. Require a minimum site area of two acres and a minimum building area large enough to exclude small, local-serving offices, which the plan intends to locate in or near downtown.

Policy Area 7: Industrial Development

(See the General Plan Technical Supplement, Section 2.3, and the EIR, Section 1.3.)

Guiding Policy: Provide an adequate supply of industrial land appropriately buffered from residential uses.

Implementing Policies:

Delete:

7-7 Extend the designated industrial areas into Phase II when 50 percent of the adjoining industrial areas are occupied.

Add:

7-7 In the 1990s, encourage industrial growth north into the I-205 Corridor area. Such growth shall also be encouraged in the Industrial Areas Specific Plan and in the I-205 Specific Plan. Specifically, Light Industrial uses shall be planned for the Grant Line Road and MacArthur Drive areas.

2.6 Proposed Zoning

The proposed zoning for the 717-acre Specific Plan area is Planned Unit Development (PUD). The uses allowed in each land use designation under the proposed PUD are listed in Appendix B.

2.7 Proposed Sphere of Influence Boundary Change and Annexation

The Specific Plan proposes to expand the City of Tracy's Sphere of Influence to encompass the Specific Plan area. The city would annex all lands within the Specific Plan areas.

LAND USE / PLANNING POLICY

3.0 LAND USE AND PLANNING POLICY

3.1 Land Use

A. Environmental Setting

Existing Land Uses

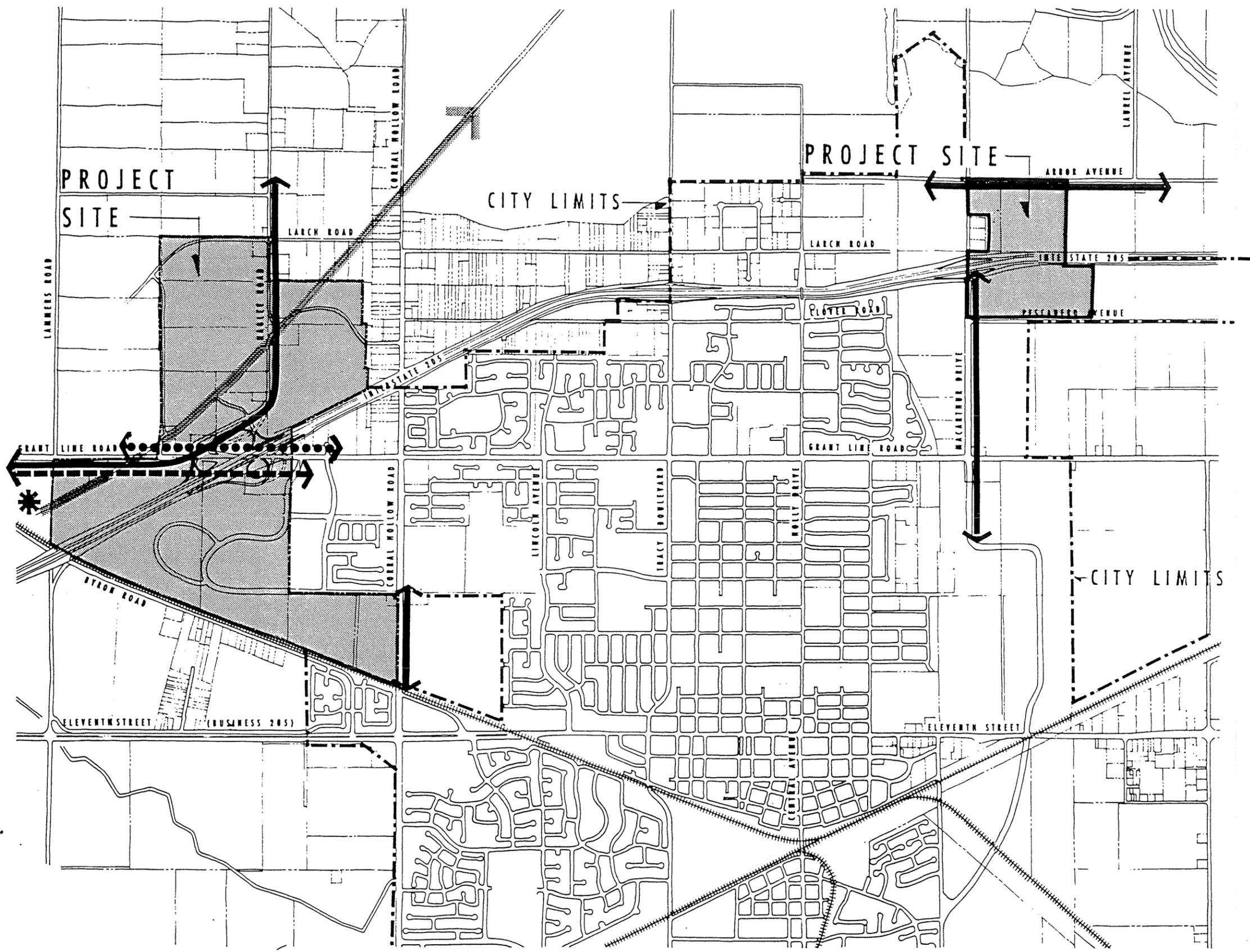
Most of the lands within the Grant Line Road planning area are currently in agricultural use. The "Dividend" parcel, located south of I-205 and directly north of Byron Road is fallow. In addition to agricultural cropland, there are single-family residences along Corral Hollow Road and scattered throughout the study area, as shown on Figure 3-1.

Several types of infrastructure corridors traverse the Grant Line Road planning area (Figure 3-1). I-205 bisects the area in a southwest-northeast direction and the Grant Line Road interchange provides access to both the northern and southern portions of the study area. Several local roads provide access through and around the study area. The Southern Pacific railroad tracks run along the north side of Byron Road, parallel to the southern boundary of the study area. Figure 4-25 indicates the location of the Naglee-Burk and West Side Irrigation Districts irrigation ditches which run through the area. As shown on Figure 3-2, Chevron Oil Company has a 6-5/8-inch steel high pressure fuel line extending along the north side of Grant Line Road. This line carries a variety of fuels. An AT&T transcontinental trunk line extends along the south side of Grant Line Road. Three high voltage Pacific Gas and Electric Company transmission lines are located in an easement which is roughly parallel to and 1,000 to 2,000 feet north of the freeway. Pacific Gas and Electric Company identifies the transmission lines as follows:

Halsey Junction - Newark # 1 (115,000 volts)
Tesla - Tracy # 271 (115,000 volts)
Bellota - Tesla # 1 & 2 (230,000 volts)

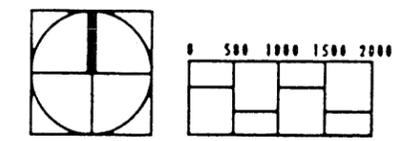
The MacArthur Drive planning area is also currently in agricultural use. The Pescadero Reclamation District provides irrigation water via several open ditches and supply lines which run through the area (Figure 4-25). I-205 bisects the study area as well. Pacific Gas and Electric Company overhead lines are located along Arbor Avenue and MacArthur Drive adjacent to the Specific Plan area (Figure 3-2).

There are two existing land uses in the vicinity of the MacArthur planning area which could potentially conflict with future development of the area. The City of Tracy's wastewater treatment facilities (WTF) are located at Holly Drive and Arbor Avenue approximately one-half mile west of the study area. The Holly Sugar Company plant is located to the north of the WTF. Both of



EXISTING UTILITIES

-  Proposed PG&E Substation
-  AT&T Transcontinental U.G. Line
-  Existing PG&E Overhead Line
-  Chevron Gas Pipeline
-  115 KV & 230 KV PG&E Tower Line



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FIGURE 3-2

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these facilities occasionally emit noxious odors which may be observed in the MacArthur Drive study area, depending on wind conditions.

Agricultural Lands

Lands within the project area, excluding the Dividend parcel, have been in active agricultural production for many years. Recently, some of the properties have been sold or are presently tenant farmed.

A questionnaire was sent to all landowners within the I-205 Specific Plan area and to surrounding land owners with 40 or more acres. Of the responses received the majority of the land within the Specific Plan area is in active agricultural production. The larger parcels consist of grains, sugar beets, and fodder crops such as alfalfa, while the smaller parcels are in pasture and grazing land. Lands adjacent to the project area are currently in grain production, alfalfa and pasture. A breakdown of the following list of crops and their acreages has been taken from the responses to the questionnaire. (The questionnaire, sent November, 1989, is on file at Mills Associates. Not all of the property owners responded.)

<u>Crops</u>	<u>Acreage</u>
Alfalfa	123+
Grains	110
Beans	40
Pasture	32
Corn	43
Sugar beets	30
Fallow land	67
Unidentified Crops	165

The 1988 San Joaquin County Agricultural Crop Report indicated that other than pasture land, alfalfa is the leading field crop with a harvested acreage of 65,400 acres. Average yield in 1988 was 7.14 tons/acre with revenues averaging \$88.90/ton. Conversion of at least 123+ acres of alfalfa for development represents .18 percent of the total yield, based on 1988 figures. At \$88.90/ton, the 123+ acres produced approximately \$11,000 in revenue in 1988.

Grain crops, including barley, wheat, and oats, totaled 51,650 acres in the county. (1988 figures.) The average price for these grains was \$99/ton. Conversion of the identified lands currently in grain production represents a .21 percent reduction of the county-wide grain acreage.

The land in production (approximately 600 acres) within the Specific Plan project area represents approximately .10 percent of the county-wide land currently in production, based on 1988 figures.

Soil types in the project area are shown on Figure 3-4. The majority of the site includes Capay clay, 0-2 (CP), and Stomar clay loam, 0-2 (RM), both of which are considered prime farmland soils by the USDA Soil Conservation Service. A small portion of the Grant Line Study area includes a small area of Willows clay, 0-2 (WA), which is not considered as a prime farmland soil due to saline-sodic conditions, the high water table and very slow permeability. Capay clay is a moderately well drained soil and Stomar clay loam is a deep, well drained soil on nearly level alluvial fans. Both soil types are suited to irrigated row, field and orchard crops.

SCS has established a national criteria for identifying potential prime soils which is based on soil properties. The classification system is no longer used. All soils, whether Class I or II prime, are now identified in a single "prime soil" category.¹ (Refer to list of prime soils in Appendix B.)

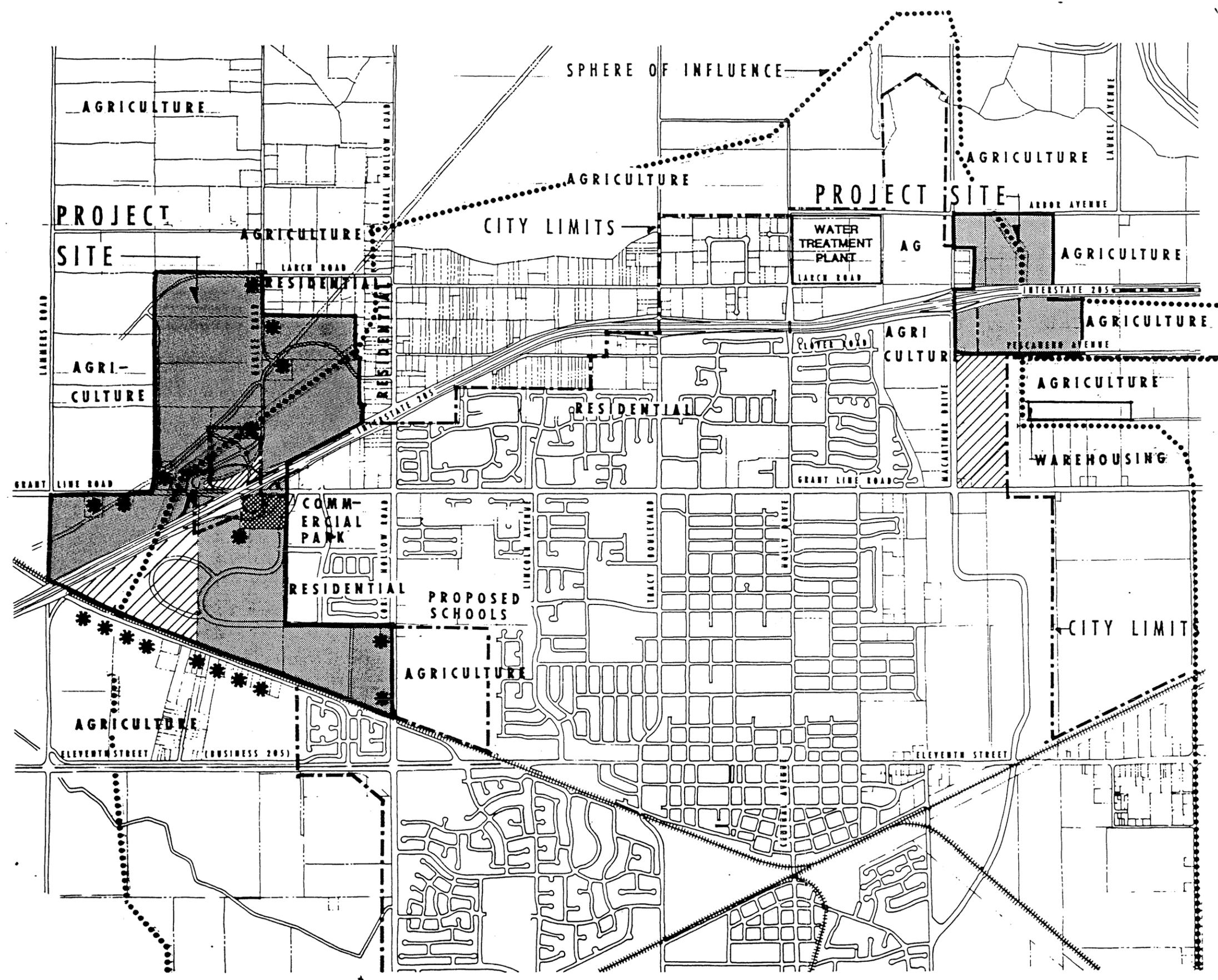
The city's General Plan Technical Supplement (Volume II) notes that one method of preserving the most valuable land is to direct "new development to the least productive agricultural land in the planning area." The document goes on to state that land "south and east of Tracy (particularly east of Tracy Boulevard) is more versatile than land to the west and north." The average annual yield is much higher on lands to the south and east than the lands located north and west of the city. However, the general plan policies calling for development south of the city are a contradiction to the findings in the Technical Supplement.

Williamson Act Contracts

Three parcels within the Specific Plan area are currently under California Land Conservation Act (Williamson Act) contracts with the county and have filed for non-renewal. A list of these parcels follows with the date the contract will terminate:

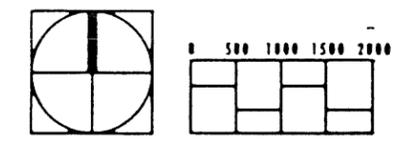
<u>Old parcel #</u>	<u>Size</u>	<u>New parcel #</u>	<u>Termination Date</u>
APN 211-04-13	35.36 acres	APN 212-050-08	1995
APN 211-04-74	37.71 acres	APN 212-040-11	1996
APN 237-17-34	103.26 acres	APN 238-020-08	1992
Total		173.33 acres	

This represents approximately one quarter of the total Specific Plan area. As provided in the act, landowners of these properties agree to maintain the land in agriculture or open space for a period of at least ten years. In exchange, the landowners have been allowed a reduction in property taxes on the land. Currently, all of these parcels are in the non-renewal process (personal



EXISTING LAND USE

-  Agriculture
-  Freeway Commercial
-  Residence
-  Vacant



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FIGURE 3-1

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communication, San Joaquin County Assessor's Office, 12/18/89). The properties would be free of restrictions and tax benefits ten years after filing for non-renewal if the county does not cancel the contract before the termination date. Owners of parcels 211-04-13 and 211-04-74 may wish to cancel the contract prior to their termination date in the event development plans proceed before termination of the contract. Without the benefit of a development phasing plan in the Specific Plan, it is unknown whether these properties will develop prior to the termination of the Williamson Act contracts presently held on the two properties. In order to cancel, the Board of Supervisors must make one of the following findings:

"(a) The cancellation is consistent with the purposes of the Williamson Act. In order to make this finding the board shall make all of the following findings:

(1) The cancellation is for land on which a Notice of Nonrenewal has been served pursuant to Section 51245 of the Government Code;

(2) The cancellation is not likely to result in the removal of adjacent lands from agricultural use;

(3) The cancellation is for an alternative use which is consistent with the applicable provisions of the County General Plan;

(4) The cancellation will not result in discontinuous patterns of urban development;

(5) There is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land; or

(b) The cancellation is in the public interest. In order to make this finding, the board shall make all of the following findings:

(1) Other public concerns substantially outweigh the objectives of the Williamson Act;

(2) There is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land." (Ord. No. 3174)

As shown on Figure 3-3, four parcels totaling 230.31 acres and located adjacent to the Specific Plan areas are also under Williamson Act contract.

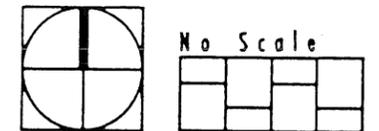


WILLIAMSON ACT CONTRACT PARCELS

- Project Site
- Williamson Act Contract Parcels

Sources:

San Joaquin County Assessor's Map and San Joaquin County Planning Department

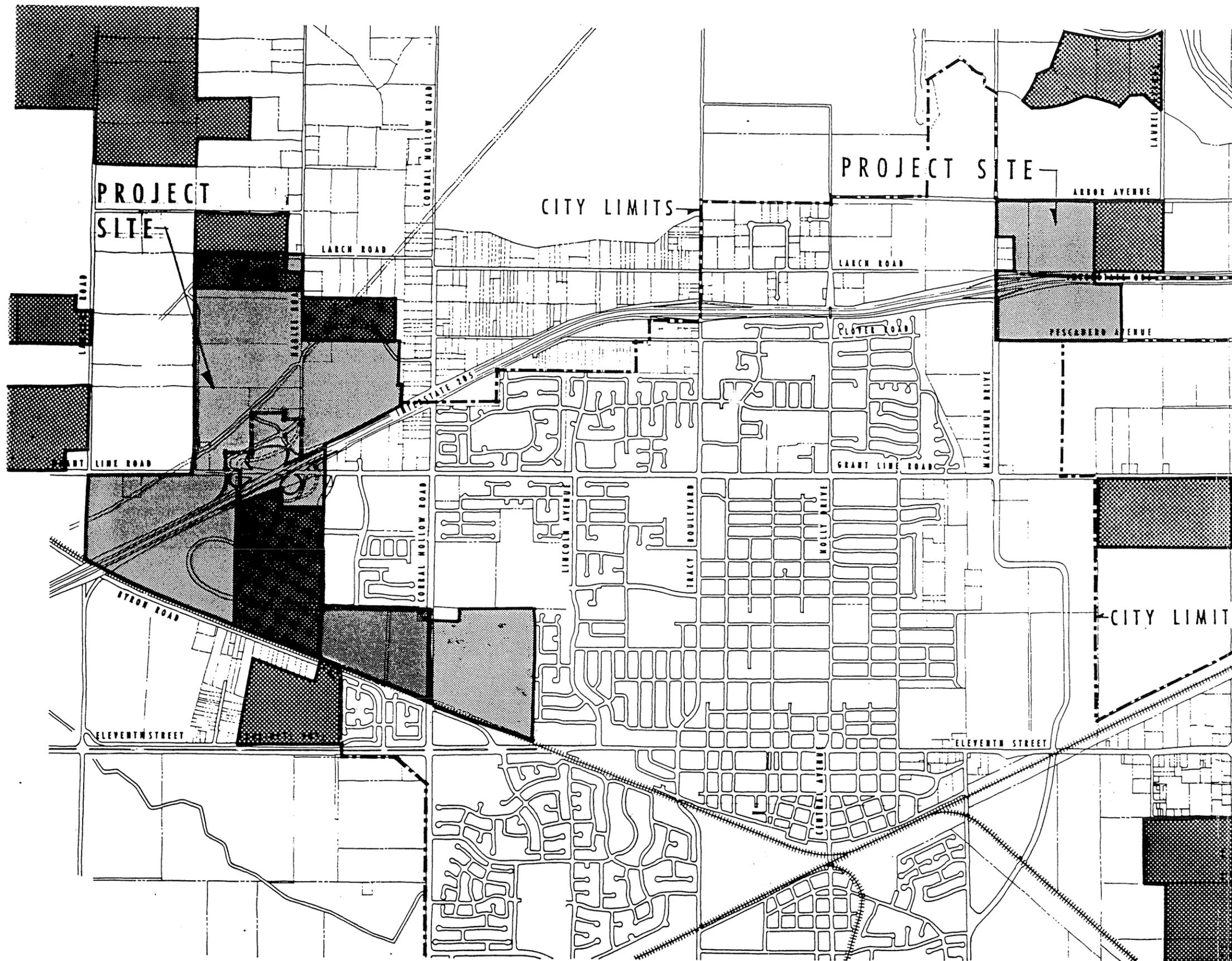


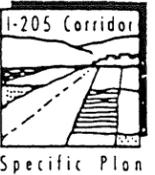
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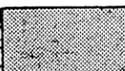
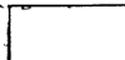
FIGURE 3-3

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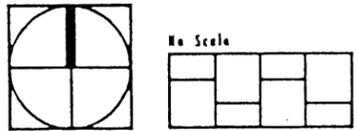




PRIME FARMLAND SOILS

-  Copay Clay (CP)
-  Zacharias Clay Loam (CZ)
-  Zacharias Gravelly Clay Loam 0% - 2% slope
-  Zacharias Gravelly Clay Loam 2% - 8% slope
-  Stomar Clay Loam (RM)
-  Carbona Clay Loam (CCL)
-  Pleito Clay Loam
-  Non-Prime Farmland Soil

Source: USDA Soil Conservation Service

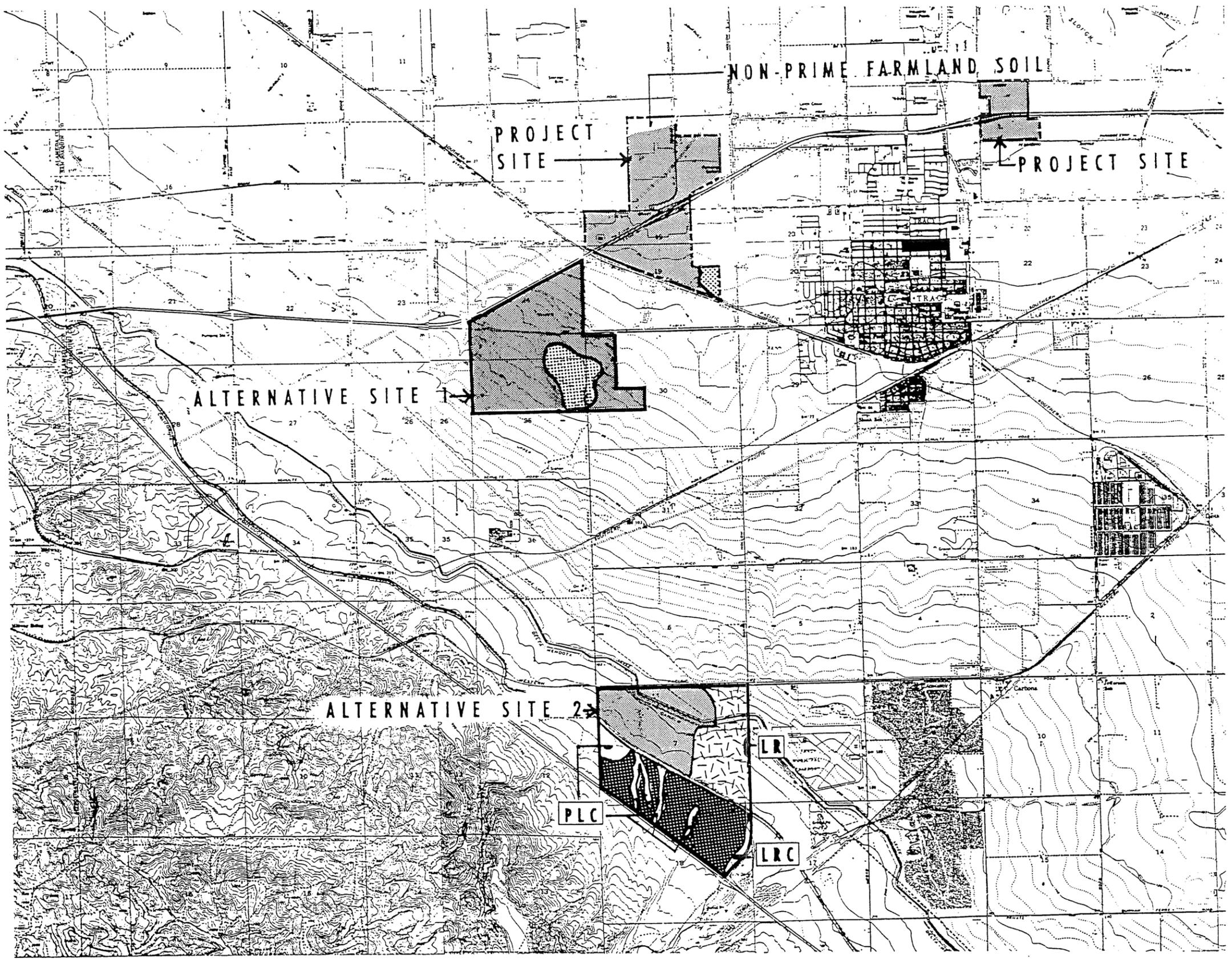


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FIGURE 3-4

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B. Environmental Impacts

Existing Land Uses

Several residences located on Corral Hollow Road and Larch Road, north of I-205, abut land which is designated for the regional shopping mall and other commercial uses in the Specific Plan. The Specific Plan calls for a 25-foot minimum side and rear building setback for shopping centers, but does not specifically address the potential incompatibilities which accompany development of a regional shopping center adjacent to single-family residential uses. In particular, development of the regional shopping facility could result in increased noise levels on adjacent parcels, and possible exposure to increased light and glare associated with parking lot lighting and building signage. Specific setback requirements, landscaping and fencing criteria, and site design mitigations are necessary to ensure that existing residential uses are not adversely impacted.

There is presently significant public concern over possible health effects associated with electric and magnetic fields present near high voltage transmission lines. PG&E has issued a public policy issue statement regarding possible health effects associated with electromagnetic fields (EMF) which is included in Appendix C. This statement discusses the potential health hazards associated with exposure to EMFs.

The Specific Plan land use designations for properties traversed by overhead transmission lines are primarily commercial. No lands containing overhead transmission lines are designated for residential or school uses. The easements may not be used for building or other permanent structures which limit PG&E's accessibility.

The CEQA Guidelines state that a project will normally have a significant public health impact if it will create a potential public health hazard, or involve the use, production or disposal of materials which pose a hazard to people, animal or plant populations in the area affected. The Specific Plan does not restrict future development occurring under overhead power lines to prevent exposure of persons to EMFs. The potential future exposure of persons (particularly children) to EMFs associated with the overhead transmission lines would constitute a potential public health hazard and is considered a potentially significant impact.

The Chevron pipeline which traverses the Grant Line Road study area also constitutes a significant public health hazard. Recent experiences in southern California indicate the need to protect both persons and property from the potential of pipeline explosions and fires. The Specific Plan requires developers of properties traversed by the pipeline easement to contact Chevron during the site planning phase of the proposed development. Additional measures are necessary to ensure the long-term

protection of the public health and safety. The Specific Plan also requires developers and contractors to contact AT&T during the planning phase of development.

Potential impacts associated with the proximity of the MacArthur Drive study area to the wastewater treatment facilities and the Holly Sugar Company site would be offset by the fact that prevailing winds flow to the southeast in the summer and to the northeast in the winter and would tend to carry odors away from the MacArthur Drive area. Further dispersal would occur over the parcels lying between the study area and the wastewater treatment facilities. In addition, the area is designated for Light Industrial uses which are not considered to be sensitive land uses.

The open irrigation ditches that traverse the Grant Line Road planning area could pose a safety hazard if not properly fenced. An open storm drain channel is proposed for the residential development.

Agricultural Lands

The Specific Plan proposes urban uses in an agricultural setting. The area designated for residential development south of I-205 is bounded by existing development, lands designated for development and some agriculture. Adoption of the proposed residential uses would, therefore, not introduce development into a predominantly agricultural area. Lands north of the freeway and near the MacArthur area are more consistently in or designated for agricultural use. The proposed plan extends urban development into an agricultural area in the north Grant Line area and the MacArthur area.

The proposed project would remove approximately 600 acres of prime soils from agricultural production. The conversion of this land contributes to the overall loss of agricultural land within the county. A study prepared by the American Farmlands Trust (Risks, Challenges and Opportunities, Agricultural Resources and Growth in a Changing Central Valley, 1989) reported that between 1974 and 1986, San Joaquin County urbanized at a rate of 1,500 acres annually. A review of development proposals in the Central Valley between July 1987 and April 1989 revealed that more than 86,600 acres of farmland would be converted for urban use. Of this acreage, 13,869 acres would be converted in San Joaquin County. While the city's General Plan Technical Supplement calls for directing growth on lands less versatile, under CEQA, loss of this natural resource is considered a significant impact and cannot be mitigated.

The proposed I-205 Specific Plan and General Plan amendment state that the land use concept for the city shall capture regional, freeway-oriented commercial and industrial demand along the I-205 Corridor. As written, this concept establishes an open end of growth along the I-205 Corridor, primarily north of the freeway and between Corral Hollow Road and Lammers Road. (Refer to discussion in Section 3.2.)

Land use conflicts may arise between the commercial and light industrial designated properties and the surrounding agricultural lands. Of particular concern are the problems associated with trash and vandalism. Since so much of the area is planted in grain and fodder crops rather than row crops, it is unlikely that conflicts would arise due to chemical spraying. The Specific Plan has not provided guidelines for buffering between urban and agricultural land uses.

C. Suggested Mitigation Measures

1) The Specific Plan should include specific measures which address the potential adverse environmental effects which may result from locating the regional shopping facility adjacent to residential uses. At a minimum, the Specific Plan should include the following specifications for the design of the regional shopping facility:

- Standards for construction of fences or walls to buffer adjacent residential properties;
- Landscaping requirements for perimeter buffers;
- Minimum setback requirements for buildings;
- Site design specifications which require loading docks, trash collection areas and other potentially noisy activities to be located away from residential properties; and
- Standards for parking lot lighting and signage to ensure that nighttime illumination of the regional shopping facility does not adversely affect neighboring land uses.

2) The Specific Plan requires developers to contact the owners of any utility easements well in advance of any development plans involving properties traversed by the easements. Prior to development approval, PG&E and AT&T staff should be consulted to ensure that no safety hazards or damage to utilities would result from development on the transmission line easements. Although no buildings or structures are permitted on the easements, other uses such as roads, parking, landscaping, etc. are permitted. Lighting fixtures, plantings and any other proposed improvements should be approved by PG&E prior to issuance of building permits.

3) Although the public health impacts of electromagnetic fields due to transmission lines are not fully known, it is prudent to avoid development which would unnecessarily expose large numbers of people to high doses of EMFs. City of Tracy staff shall consult with PG&E when specific development projects in the I-205 Specific Plan area are proposed within 300 feet of the transmission line easement to obtain their estimation of the potential public health hazards. As additional information regarding the effects of EMFs becomes available, the city shall develop specific standards restricting development in the vicinity of transmission lines. Such standards shall then be incorporated into the I-205 Specific Plan.

4) Accurate location data for the Chevron Oil pipeline should be retained on file at the city. This data will be extremely important when designing and constructing other underground facilities. The pipeline should be clearly flagged during the construction period and permanent markers should be placed along the pipeline easement after completion of construction activities. In addition, the City of Tracy should establish specific policies for construction work in the vicinity of the pipeline to reduce the potential for accidental disturbance or rupture of the line.

5) The Specific Plan should establish minimum setbacks from the pipeline easement for buildings and structures. Setbacks are necessary to protect lives and property from potential harm in the event of leaks, explosions or fires associated with the pipeline. The setback standard should be established in coordination with staff from the Chevron Oil Company.

6) The Specific Plan should specify appropriate standards for fencing or otherwise enclosing any open irrigation ditches that pass through developed areas.

7) The Specific Plan calls for a 25-foot perimeter setback for all non-residential property and conceptual landscape plans show a landscape planting surrounding the edge of the property. Unless the landscape edge is very dense, trash could travel onto agricultural lands. The Specific Plan should include provisions to physically separate the commercial/light industrial land uses from agricultural lands (e.g., a landscaped woven fence). This would also help to curtail trespassers from entering the agricultural lands.

8) Define the I-205 Corridor area geographically in the General Plan amendment so that the extent of the proposed amendments are clear.

-
1. Wayne Sheldon, U.S.D.A. Soil Conservation Service, Sacramento Office, personal communication, May 1990.

3.2 Planning Policy

A. Introduction

This EIR serves as a single document for several planning actions required to implement the I-205 Corridor Specific Plan. As a result, it is necessary to evaluate potential planning policy inconsistencies as they relate to the Sphere of Influence boundary adjustment and annexation, the proposed General Plan amendments, consistency of the Specific Plan with the amended General Plan and zoning. Since the I-205 Specific Plan covers lands within the City of Tracy, as well as unincorporated areas of San Joaquin County, both city and county land use documents apply.

B. Environmental Setting

Sphere of Influence

Figure 2-2 shows the city limits and the sphere of influence (SOI) of the City of Tracy. The SOI indicates the city's intended ultimate physical boundary and service area. The Tracy General Plan designates land use categories for all lands within this SOI. The city is currently initiating a General Plan revision that would extend its SOI to an approximate 170-square mile area.¹ This action would require approval by the Local Agency Formation Commission (LAFCO).

Both the Grant Line Road and MacArthur Drive study areas contain lands both within and beyond the current Tracy sphere of influence. Over half of the Specific Plan area is within Tracy's SOI. Adoption of the Specific Plan and the subsequent annexation to the city would also require previous approval by LAFCO for the expansion of Tracy's SOI.

The following information must accompany a city's application for adjustment of the sphere of influence:²

1. City Service Plan: Any application proposing annexation to a city shall be accompanied by a plan for city services prepared in accordance with Section 56653 of the Government Code. If any essential city service would not be available within the first five years, thereby limiting development, explain why the city proposes the annexation at this time.

Plan for provision of services

- (a) Whenever a local agency submits a resolution of application for a change of organization or reorganization pursuant to this part, the local agency shall submit with the resolution of application a plan for providing services within the affected territory.
- (b) The plan for providing services shall include all of the following information and any additional information required by the commission or the executive officer:
 - (1) An enumeration and description of the services to be extended to the affected territory.
 - (2) The level and range of those services.
 - (3) An indication of when those services can feasibly be extended to the affected territory.
 - (4) An indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed.
 - (5) Information with respect to how those services will be financed.

- 2. Conversion of Prime Ag-Land: Any application proposing to annex prime ag-land to a city shall be accompanied by sufficient data to demonstrate that the annexation is consistent with the state policies provided in Section 56377 of the Government Code.

Conversion of open-space lands to other use; policies and priorities

In reviewing and approving or disapproving proposals which could reasonably be expected to induce, facilitate or lead to the conversion of existing open-space lands to

uses other than open-space uses, the commission shall consider the following policies and priorities.

(a) Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use toward areas containing non-prime agricultural lands, unless such an action would not promote the planned, orderly, efficient development of an area.

(b) Development of existing vacant or non-prime agricultural lands for urban uses within an agency's existing jurisdiction or within an agency's sphere of influence should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non-open space uses which are outside of the agency's existing jurisdiction or outside of an agency's existing sphere of influence.

(Added by Stats. 1974, c. 531.)

The City Service Plan may be brief but should clearly contain all five elements required by Section 56653, attached: 1) enumeration of services, 2) level and range, 3) when available, 4) improvements required, and 5) how the services will be financed.

When a proposed annexation includes prime agricultural land, the supplemental data should be sufficient to assist the commission in consideration of whether the proposal conforms with the state's policies and priorities contained in Section 56377, attached. Both division (a) and (b) of the code section should be discussed.

City of Tracy General Plan

Since its adoption in 1982, the City General Plan has been extended by inclusion of both Residential and Industrial Specific Plans.

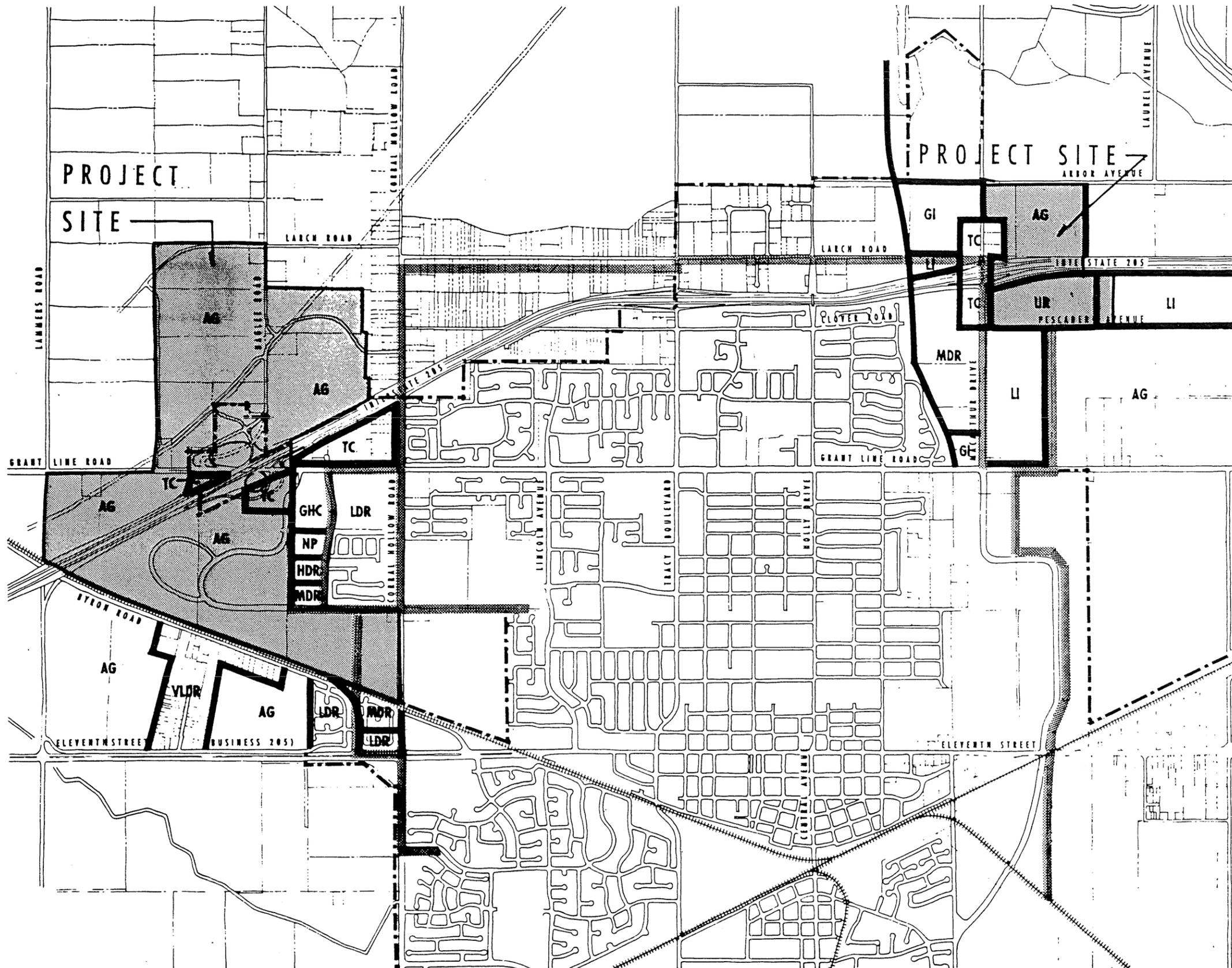
Grant Line Road

Figure 3-5 shows the City Land Use map combining the land use designations from the city's General Plan, the Industrial Specific Plan and the Residential Specific Plan. One designation applying to lands within the study area is that of Thoroughfare Commercial near the I-205/Grant Line Road intersection. As stated in the Tracy General Plan:



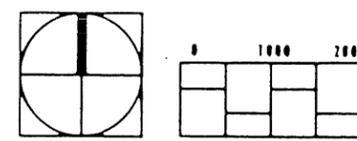
Specific Plan

CITY OF TRACY
GENERAL PLAN



- AG Agriculture
- LDR Low Density Residential
- MDR Medium Density Residential
- HDR High Density Residential
- VLDR Very Low Density Residential
- LMDR Low Medium Density Residential
- GHC General Highway Commercial
- GI General Industrial
- TC Thoroughfare Commercial
- LI Limited Industrial
- UR Urban Reserve
- NP Neighborhood Park
- Open Space Corridors

Source: City of Tracy
General Plan, 1982



City of Tracy

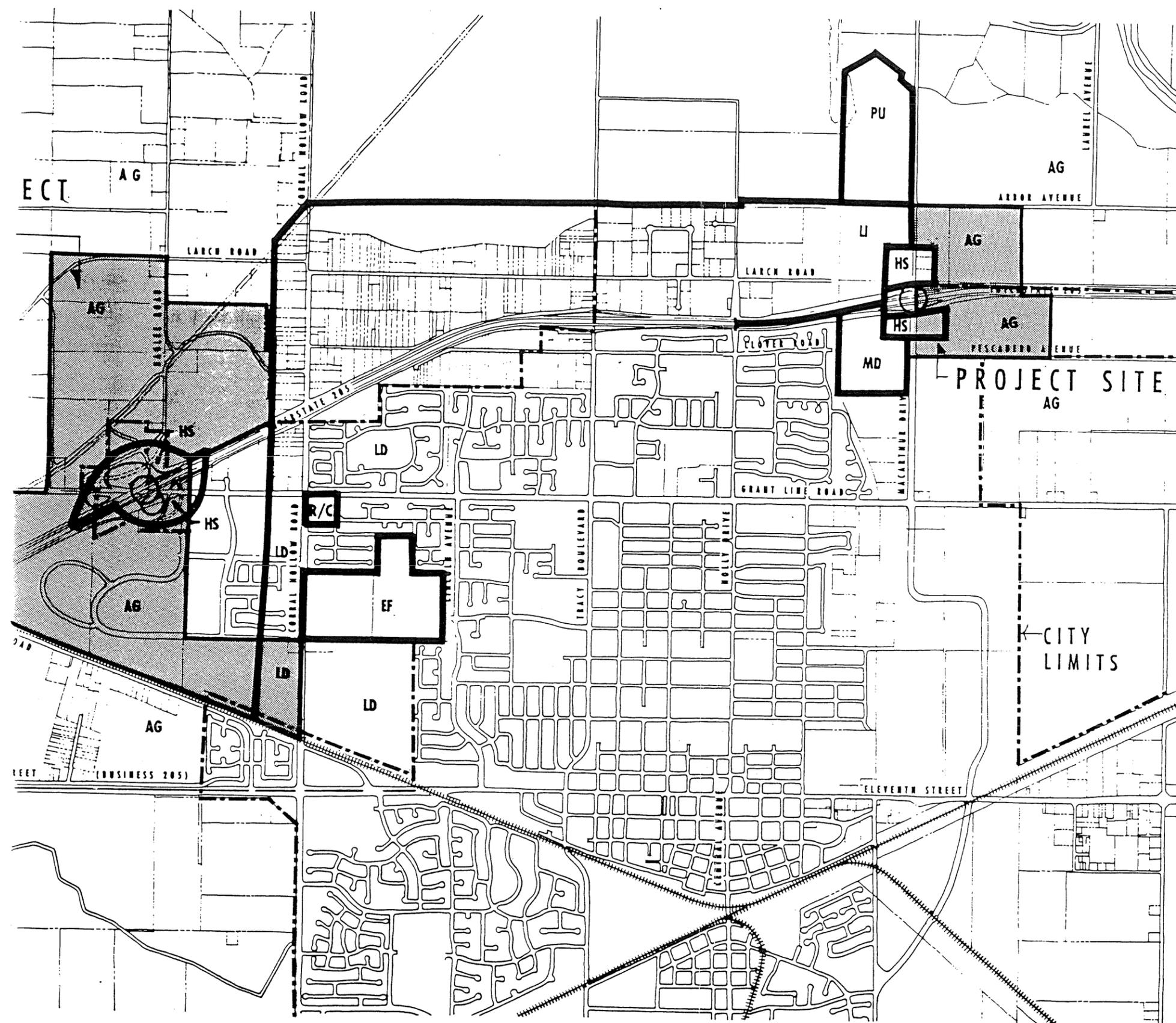
David L. Gates & Associates
The Sword Company
Mills Associates

FIGURE 3-5

MAY 1990

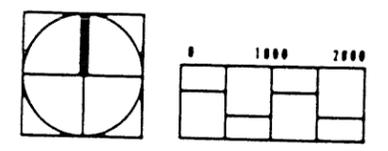


CURRENT COUNTY GENERAL PLAN



- AG Agriculture
- LD Low Density Residential
- MD Medium Density Residential
- HD High Density Residential
- R/C Retail/Commercial
- LI Limited Industrial
- GI General Industrial
- HS Highway Service
- EF Educational Facilities
- PU Public Utilities
- Interchange

Source: San Joaquin County General Plan



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FIGURE 3-6

MAY 1990

The objectives of this category are: (page 36)

1. To conserve soil resources to provide a continuing base for agricultural productivity and the county's economy.
2. To preserve in agriculture those soils capable of producing a wide variety of valuable crops.
3. To minimize disruption to viable agricultural areas.

Principles guiding development in this designation include the following:

1. The resources upon which agriculture is based will be protected, and the utilization of these resources for agricultural purposes will be encouraged.
2. Intensive agriculture such as orchards, vineyards and row crops will be supported and protected where soils of high quality are found and water is or will be available.
5. Further fragmentation of agricultural land outside of areas designated for urban expansion will be permitted only in areas designated for rural residential development.

Highway Service

The county's highway service land use designation is defined as follows: (page A-3)

This category provides for clusters of commercial development oriented almost exclusively for the needs of travelers on freeways. (Height limit of 35 feet, maximum 60% lot coverage, no residential)

The Commercial principle which applies to this category states: (page 17)

9. Highway service areas, intended primarily for the highway traveler, should generally be separated from other commercial areas intended primarily for local residents.

Low Density Residential

The county Low Density Residential land use designation is defined as follows: (page A-2)

Permits one to six dwelling units per gross acre. The population density is approximately three to 18 persons per gross acre. These areas comprise the bulk of the urban centers and provide for single-family detached houses, duplexes, and occasional multi-family complexes

when part of a planned unit development. Convenience or neighborhood shopping centers which serve and complement residential uses are appropriate within this category.

The objectives of the residential category are: (page 13)

1. To maintain and promote the distribution of residential densities as prescribed by the General Plan map and by various community plans adopted by the county.
2. To maintain and promote economically, physically and socially viable residential neighborhoods.
3. To preserve viable agricultural land to the maximum extent possible in the development and expansion of residential areas.
4. To protect natural amenities from abuse and destruction resulting from poor design and development of residential areas.
5. To promote development of educational, recreational and other necessary public facilities contributing to desirable residential areas.

Principles guiding development in this designation include the following: (page 13)

1. The neighborhood will be utilized as the basic planning unit in maintaining and extending residential areas in all unincorporated urbanized communities and in areas surrounding those incorporated communities adopting the neighborhood-community structure.
2. The provision of a wide variety of housing types, and the use of new and more efficient residential design concepts, such as dwelling clusters and planned unit developments, will be encouraged.
3. Neighborhoods should be maintained through the use of a variety of methods, including:
 - a. support of neighborhood improvement programs;
 - b. encouragement of the provision of public facilities and improvements in areas where they do not now exist;
 - c. dispersment of low- and moderate-cost housing;
 - d. encouragement of both public and private participation and expenditures; and,
 - e. conservation of existing housing, whenever possible.
4. All possible means will be employed to avoid displacement of residents and elimination of neighborhoods; however, when necessary, relocation assistance will be provided to families and individuals who are displaced.

5. Intrusion of incompatible uses into residential areas will be prohibited, and adverse effects of adjacent uses will be minimized.
7. A maximum parcel size should be established for division of land and subdivision in suburban residential areas.
8. A parcel in suburban areas should have frontage on a public road and flag lots and private rights-of-way should be discouraged.

Zoning

As shown previously on Figure 2-1, the Specific Plan covers segments of unincorporated San Joaquin County as well as lands within the City of Tracy. County zoning applies to all lands outside Tracy's limits and city zoning applies to lands within the city limits. The current county and city zoning districts of the Specific Plan area are shown on Figure 3-7. Zoning for the entire project area is proposed to be Planned Unit Development (PUD). The Specific Plan will serve as the PUD's concept plan and properties will be pre-zoned as a PUD, consistent with the land uses identified in the Specific Plan. (Note that the Tracy Planning Commission has recommended adoption of the revised PUD Ordinance to the city council which will require applicants to submit concept plans when applying for a PUD.) (See Appendix B for permitted and conditionally permitted uses within the proposed PUD.) Specific projects will require approval of preliminary and final development plans.

As stated in the Tracy Municipal Code,

"The Planned Unit Development (PUD) Zone is designed to allow flexibility and creativity in site planning for residential, commercial, or industrial uses to achieve greater efficiency in land use by maximizing open space, preserving natural amenities, and creating additional amenities." (Article 13, Section 10-2.1300.)

State law requires that,

No local public works project may be approved, no tentative map or parcel map for which a tentative map was not required may be approved, and no zoning ordinance may be adopted or amended within an area covered by a specific plan unless it is consistent with the adopted specific plan. (California Government Code Section 65455.)



Specific Plan

COUNTY ZONING DISTRICTS / CITY ZONING DISTRICTS

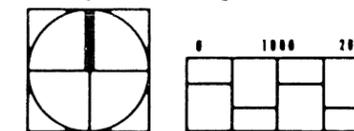
County Zoning Districts

- GA-1 General - Min. 1 acre
- GA-10 General Agriculture - Min. 10 acres
- GA-40 General Agriculture - Min. 40 acres
- RA-30 Single Family Residential Min. 30,000 SF
- RA-20 Single Family Residential Min. 20,000 SF
- HS Highway Service
- C-1 Neighborhood Commercial

City Zoning Districts

- LDR - Low Density Residential
- MDR - Medium Density Residential
- HDR - High Density Residential
- PUD - Planned Unit Development
- GHC - General Highway Commercial
- HS - Highway Service
- MI - Light Industrial
- RMH - Residential Mobile Home
- MDC - Medium Density Cluster

Source: San Joaquin County Zoning and Subdivision Regulations and City of Tracy Zoning.

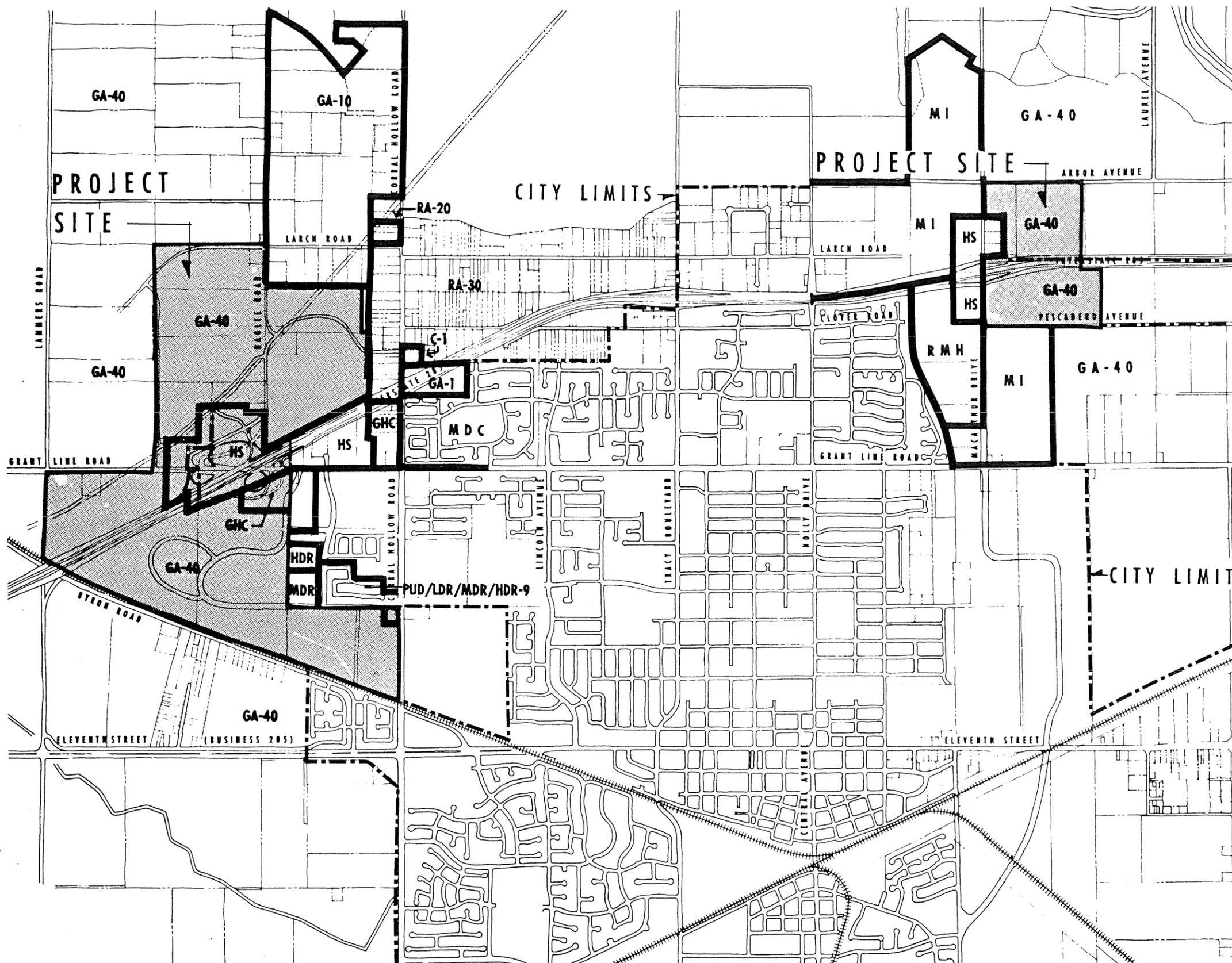


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FIGURE 3-7

MAY 1990



C. Environmental Impacts

Impacts of the proposed project on planning policy deals with consistency, changes in population, pattern of settlement, the use of land and cumulative effects of the plan's policies and proposals. All planning documents allow for amendments and variety of solutions if the proposal is consistent with the basic premise or rationale of the document.

Sphere of Influence

The proposed project requires the expansion of Tracy's sphere of influence (SOI). The San Joaquin County Local Agency Formation Commission (LAFCO) must consider and prepare a written statement with respect to, among other things, an area's present and planned land uses and its existing and probable need for public facilities and services.

The Specific Plan proposes annexation of approximately 625 acres to the city. This is approximately a nine percent increase in the geographical size of Tracy. In reviewing annexation proposals, LAFCO considers, among other things, the proposal's consistency with city or county general plan and specific plans.

Expansion of Tracy's sphere of influence and annexation and development of the I-205 Corridor study area will reduce the unincorporated area of San Joaquin County. This would eliminate the county's zoning jurisdiction over these agricultural lands. Tracy's SOI was recently expanded by the Industrial Specific Plan. This expansion was also limited to the boundaries of the proposed project. Part of the purpose of establishing an SOI is to aid in coordinated land use decisions at urban edges.

The buffer area within the SOI, but outside the city limits, is guided by land use designations from the city. Zoning control, however, remains with the county which can act as a form of development phasing. The city is currently initiating a General Plan revision that would extend its SOI to an area of approximately 170 square miles.³

Tracy General Plan

Section 15126(a) of the California Administrative Code requires that the EIR for a general plan amendment contain an evaluation of the significant environmental effects of the proposed amendment.

The proposed General Plan text amendments described in Section 2 will result in changes in population, pattern of settlement, the use of land as well as in cumulative effects.

The proposed amendments to the text dealing with the General Plan map will lead to development of a regional shopping complex in the I-205 corridor. This will expand the urbanized area of the City of Tracy and will increase growth-related impacts dealing with traffic, air quality, etc., as discussed in Section 4 of this EIR. The major commercial center as proposed contains approximately 332 acres and is expected to create approximately 9,767 jobs. Section 4 identifies mitigation measures as well as impacts which are not mitigable.

The proposed text amendment entitled "Specific Plan" establishes that "land use designations [in specific plans] may be distinct from those listed on the General Plan, provided the specific plan sets forth the definitions of such designations." The amount of definition or guiding policy is not specified. There is also no statement requiring the new Specific Plan designations be discussed in the context of the General Plan land use designations. The impact of this amendment could be significant if the new designations are not well defined, thereby allowing or perhaps even encouraging inconsistent or haphazard planning decisions in the future.

The proposed amendment to Implementing Policy 2-2 will have a significant impact on allowed growth patterns in the City of Tracy. It eliminates the previously existing requirement for a certain amount of infill development before additional growth (Phase II) is allowed. It also "commits the I-205 Corridor area to regional-oriented commercial-industrial urban expansion." The size of this area is undefined. Should the city expand its SOI to 170 square miles, this policy could be applied to the full length of I-205 within this new SOI. If so, impact on population changes and urban expansion will be significant and unavoidable.

The proposed amendments to Policy Area 5, Commercial Development, expand the allowable areas for commercial development and introduces the goal of providing for regional market serving commercial facilities. This would result in significant impacts related to the growth of the City of Tracy. These are discussed in Section 4 where mitigation measures are proposed when possible. These same impacts result from the proposed amendments to the office and industrial development policies. These amendments serve to expand Tracy's focus from locally serving commercial, industrial and office uses to regionally service uses. This will have growth-inducing impacts discussed in Section 4.19.

Specific Plan Consistency with Amended General Plan

If adopted as written, the Specific Plan will be consistent with the General Plan as amended in all but a few areas. Pertinent sections of the General Plan are discussed below. For purposes of this analysis, it is assumed the proposed amendments have been adopted as written.

A Specific Plan must be consistent with the general plan (California Government Code Section 65451) and must include a statement of the relationship of the Specific Plan to the general plan (Section 65451(b)). The 1987 General Plan Guidelines set forth the following general rule for determining consistency: "An action, program or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment."

The Tracy General Plan's guiding policies regarding land use are as follows:

- 1) Maintain a balance between growth of the residential population and an increase in local jobs.

The balance between growth of the residential population and an increase in local jobs is analyzed more fully in the jobs/housing balance section 4.7.

- 2) Preserve agricultural land to the extent that is feasible without restricting the amount of urban growth.

The proposed plan is acceptable under this policy and is not in conflict with it. Subsequent implementing policies, however, point out the general plan's direction for this urban growth.

Implementing Policy 2-1 - Direct urban residential growth, except for infill, to the south and west as shown on the general plan map.

- 2-2 Now, in the 1990s, the city has determined that it is most beneficial to commit the I-205 Corridor area to regional-oriented commercial-industrial urban expansion. This determination was made based on the following urban expansion and agricultural land preservation factors - 1) outside of the I-205 Corridor area exists agricultural lands of better quality that are more worthy of preservation; 2) freeway, commercial and industrial urban land uses have already intruded into the I-205 Corridor area; 3) urban residential development lacking in site planning and architectural design quality is encroaching on the I-205 Corridor area; 4) a local need exists for regional shopping opportunities that can best be provided by urban expansion on large sites in the I-205 Corridor area.

The proposed plan provides for the fulfillment of this policy by allowing for regional-oriented commercial-industrial urban expansion.

- 3) Encourage a moderate overall increase in urban residential density, but provide for a variety of dwelling types and densities.

The proposed project is supportive of this policy in that it provides a range of residential densities of from 5.5 to 20 units per acre in a variety of settings.

Guiding Policy: Commercial development includes land uses planned for several activities, such as neighborhood convenience markets; retailing, convenience, and service commercial activities in the downtown area as well as in community centers and freeway-oriented regional centers; thoroughfare and freeway interchange commercial; and small, individual offices up to major regional office complexes. Commercial development in the 1990s may locate, depending on its requirements, in downtown Tracy, in neighborhood and community centers dispersed throughout town, and in the I-205 Corridor in community-wide and regional oriented shopping centers.

5-3 Encourage the development of regional market-serving commercial facilities in the I-205 Corridor area in order: 1) to take advantage of the transportation network inviting to regional marketers; 2) to stop the drainage of sales tax dollars from Tracy residents to other communities causing insufficient tax funds for Tracy's on-going service level requirements; 3) to provide Tracy residents with wider shopping opportunities than are currently available in the immediate area; and 4) to provide an area with the proper access, parcel sizes and freeway visibility to encourage commercial users in need of such factors to locate in Tracy.

The Specific Plan is consistent with and supportive of these policies.

6) Provide separate locations for local, region-serving and medical office development.

The pertinent implementing policies are:

6-1 Locate local-serving business and professional offices downtown and along Eleventh Street.

6-2 Encourage the location of large, region-serving offices, data processing centers, or research and development firms in the I-205 Corridor where both the firms and Tracy can benefit from the views of handsome buildings and grounds as seen from the freeway and commuter traffic will not use city streets.

The proposed PUD zone permits offices (including small, local-serving offices) in the I-205 Corridor study area. There is no minimum site area specified. The Specific Plan proposes to amend the general plan by eliminating the minimum site area for offices. (It should be noted that according to the PUD zone, offices are to be permitted in commercial land use designations which contain no reference to office use in their definition.)

- 7) Provide an adequate supply of industrial land appropriately buffered from residential uses.

The 1988 Industrial Areas Specific Plan designated over 600 acres for industrial development. This acreage did not include all of the Phase II growth area identified on the General Plan Map. The project area is not within either area.

- 7-7 In the 1990s, encourage industrial growth north into the I-205 Corridor area. Such growth shall also be encouraged in the Industrial Areas Specific Plan and in the I-205 Specific Plan. Specifically, Light Industrial uses shall be planned for the Grant Line Road and MacArthur Drive areas.

The proposed Specific Plan will encourage industrial growth north into the I-205 Corridor area and, therefore, is consistent with this policy.

Regional Demand

Although aspects of the I-205 Specific Plan are indeed consistent with Tracy's General Plan, adoption of this Specific Plan may obstruct the attainment of several of the General Plan objectives and policies, such as the goal to revitalize downtown.

There is a potential adverse impact on downtown retailing by the proposed I-205 commercial (see discussion of the impact on downtown, Section 3.3). Whether the plan's proposed mitigation will provide sufficient assistance and stimulus to avoid this impact remains to be tested. Assuming the Tracy General Plan is amended to include goals and objectives promoting the development of regional commercial or industrial centers, the proposed Specific Plan would be a fulfillment of these goals but possibly be in conflict with the goal to encourage downtown development. This points out a potential internal inconsistency between the Specific Plan and the General Plan.

County General Plan

The County General Plan includes policies designed to discourage premature and unnecessary conversion of prime agricultural land to urban development and other incompatible uses. Although it is recognized that most of the existing urban centers in San Joaquin County are located on and surrounded by highly productive soils, it is assumed that urban expansion will occur.

The proposal would remove prime agricultural lands from county jurisdiction and agricultural use and would transfer them to city jurisdiction and urban development. (See next section for further discussion.) Consistency of the Specific Plan with other existing county land use designations in the study area is varied. Related to the county Highway Service designation, the project is in direct conflict with Principle 9 which directs these areas be

separated from commercial areas intended primarily for local residents. The project includes commercial areas intended primarily for both local residents and highway travelers.

The Specific Plan is consistent with the county residential designation near Corral Hollow.

Land Use Designations

Another area of required consistency concerns land use development policy. Each proposed land use designation is discussed below. The designations are described in Table 2.2.

Commercial Designations

All five of the commercial land use designations in the Specific Plan are new to Tracy. They are different from the designations in the General Plan, Residential Plan and Industrial Plan. Direction is needed in the Specific Plan regarding the city's general development policies that respond to these new designations. This will "provide a basis for judging whether private development proposals and public projects are in harmony with the policies. [It also will] allow other public agencies and private developers to design projects that are consistent with city policies." (Tracy General Plan, page 4.) It is also necessary for determining this Specific Plan's consistency with the general plan.

The writers of this Specific Plan are relying on the list of permitted or conditionally permitted uses included in the Specific Plan to guide future development decisions. (See Appendix B.) Difficulties arise when new uses develop (i.e., video shops are a new use that have unique demands) or when apparent conflicts are questioned. Bookstores are permitted in the commercial center but not in General Commercial even conditionally. Yet General Commercial is described as "an all purpose zone suitable for most retail commercial use." It is permitted, however, to sell music books in the General Commercial category. Policies are needed to help future decision makers understand the plan and to achieve consistency as day-to-day decisions come up.

Light Industrial

This designation is also new for Tracy. The land use most similar is Limited Industrial, but their definitions are slightly different. Limited Industrial is defined in Tracy's General Plan as:

"Suitable for business parks with high design standards. It can serve as a transition between general industry and residential development because tenants occupy low buildings on relatively small sites, generating less heavy truck traffic than general industry and no rail traffic." (page 8)

The Specific Plan expands the allowed uses to include heavy service, warehouse uses and some light manufacturing. Again, there are no guiding policies accompanying the new designation to help in understanding its purpose.

Reserve

As mentioned earlier, Urban Reserve (UR) has been used in the supplement to the Industrial Specific Plan EIR (Yellow Freight EIR) but it was not defined since it is unclear in terms of its development. The I-205 Corridor Specific Plan defines UR as "land set aside for future urbanization. Land for present retains agricultural zoning." It is unclear how this designation differs from any land use within the city's sphere of influence. Development standards for this land use have apparently been assumed to be the same as those for Light Industrial in this Specific Plan. The basis for this is unclear.

General Commercial Reserve (GCR) is completely new to Tracy. It is similar to UR but the definition states that it "may be appropriate for a General Commercial designation at some future date. Neither of these reserve categories have any guiding policies. The need for policies or guidance is of added importance when the future land use designation is not decided.

Residential

The residential designations are a reduced version of the existing city land uses Low-Medium Density Residential, Medium Residential and High-Medium Residential. The General Plan densities are based on gross acreage. Utilizing gross acreage figures, the number of units would be as follows:

702 units LDR
396 units MDR
459 units HDR
1557 units total

The Specific Plan stipulates a maximum of 1342 units, however, the plan should clearly state how the proposed designations differ in any way with existing designations.

Regarding the definition of development policies as required for a Specific Plan, the Governor's Office of Planning and Research directs preparers to the 1987 General Plan Guidelines which state:

A policy is a specific statement that guides decision making. It indicates a clear commitment of the local legislative body. A policy is based on a general (or specific) plan's goals and objectives as well as the analysis of data.

A policy is effectuated by implementation measures. Consequently, a realistic policy is one that is adopted by local legislators who are mindful of a general (or specific) plan's implementation.

For a policy to be useful as a guide to action it should be clear and unambiguous. The practice of adopting broadly drawn and vague policies is unacceptable. Clear policies are particularly important when it comes to judging whether or not zoning decision, subdivisions, public works projects, etc., are consistent with a general plan.

Without complete policies to accompany the new land use designations it is impossible to assess their consistency with the General Plan.

A separate zoning issue deals with the proposed reserve designations. Lands identified as urban reserve and general commercial reserve are slated for future urbanization in the Specific Plan but are to retain agricultural use at present. The agriculture zone is not consistent with the Specific Plan designations of planned urbanization and does not appear to meet the requirement of State Code Section 65455.

D. Suggested Mitigation Measures

Sphere of Influence

The city should consider expanding the sphere of influence boundaries beyond the edge of the Specific Plan area or establish a city limit boundary within the Specific Plan area, reducing the acreage to be annexed. This would result in continuing the buffer area around the urban edge of Tracy. This may not be necessary given the city's upcoming General Plan revision and expansion of the SOI, subject to approval by LAFCO.

Tracy General Plan

- 1) Define the I-205 Corridor area geographically in the General Plan amendment so that the extent of the proposed amendments are clear.
- 2) The Specific Plan must include development policies which clearly establish the rationale behind each of the proposed land use designations in order for consistency with the general plan to be completed.
- 3) Definitions of all new land use designations should refer to the development policies and should explain how they relate to existing land use designations.

4) There is no mitigation for the loss of prime agricultural soils.

County General Plan

There is no direct mitigation to offset the loss of prime agricultural land or the growth-inducing impact of the project on adjacent agricultural land.

Upon the study area's annexation to the City of Tracy, the County General Plan should be amended to reflect the adopted Specific Plan for the area.

Zoning

The Specific Plan should include development policies for and the rationale behind each of the proposed land uses.

The Specific Plan should include an explanation of how the proposed land use designations relate to the city's existing designations.

The zoning must be consistent with the Specific Plan. Uses allowed within the urban and general commercial reserve land use designations should be established in the same manner as other land use designations in the Specific Plan or leave the land use designations for these lands as agriculture.

1

Mike Locke, Tracy City Manager, personal communication,
March 5, 1990.

2

Memo from Local Agency Formation Commission of San Joaquin
County to city managers and city planners, August 30, 1983.

3

ibid., Mike Locke.

3.3 Effects on Downtown

A. Introduction

In order to judgmentally evaluate the potential fiscal impacts of retail development in the I-205 Corridor on Tracy's downtown, Gruen Gruen + Associates conducted the following research tasks. Historic retail sales patterns were reviewed in the City of Tracy and compared with historic trends in the Cities of Manteca, Stockton, Lodi, Modesto and Pleasanton and San Joaquin County. The make-up of retail sales in the downtown (the Main Street program area) was analyzed and compared to sales outside the downtown in order to obtain insights as to the type of retail tenancies most important to the economic well-being of the downtown and the city as a whole. Finally, comments are included on some general shifts taking place within the retailing industry, particularly the kind of locational and agglomeration shifts taking place in the automotive field.

The above components have been synthesized in order to draw inferences concerning the impacts that the kind of developments proposed to take place in the I-205 Corridor are likely to have on the downtown. Some of these potential impacts primarily relate to the downtown, but others are likely to effect not only the downtown but the city's retail tax base as well.

B. Environmental Setting

A Comparison of Tracy's Per Capita Taxable Sales by Retail Category With the Per Capita Sales in Manteca, Stockton, Lodi, Modesto, Pleasanton and San Joaquin County

Table 3.1 presents the change in per capita sales (in 1988 constant dollars) of retail sales by category for the 1980 and 1988 time periods. The per capita sales activity in Tracy can be compared with the change in sales for the nearby communities of Manteca, Stockton, Lodi, Modesto and Pleasanton and for San Joaquin County. Table 3.2 shows the percentage change and annualized rate of change in the per capita sales for the same two years and locations.

Tracy and Pleasanton are the only two communities that experienced a positive increase in their retail sales totals for all outlets (refer to the bottom row). Tracy experienced a 14 percent increase or an annualized rate of growth of 1.66 between 1980 and 1988. Pleasanton had a 153 percent increase, or an annualized increase of 12.30. Much of Pleasanton's increase in retail sales dollars can be attributed to the Stoneridge Shopping Center. This hypothesis tends to be confirmed by looking at those retail categories experiencing high rates of growth in Pleasanton between 1980 and 1988. Apparel store sales grew at an annualized rate of almost 18 percent, general merchandise by almost 13 percent, other retail stores, a

category which includes specialty stores, by 20 percent, and home furnishings and appliances by 14 percent. The dramatic increase in per capita automobile sales has also made a significant contribution to the increase in the City of Pleasanton's total retail sales. The per capita 1980 expenditure for auto dealers and supplies is \$74.62 (in 1988 dollars). By 1988, the per capita sales for auto dealers and services had climbed to \$1,618.72. Pleasanton is obviously attracting major retail sales dollars from those who live outside the city boundaries. The significant increase in Pleasanton's employment growth during these same years has been a significant factor in the generation of these additional sales dollars for the types of goods purchased in regional centers and at automobile dealerships. We know, for example, that the free bus service that is provided by major Pleasanton employers are used heavily in the noon hours as employees are transported back and forth from the Stoneridge Center.

Tracy's major sales increase has also been auto dealer related. In 1980, the per capita expenditure for auto dealers and supplies was \$540.67 (in 1988 dollars), but by 1988, had climbed to \$1,413.78. Thus, this retail category experienced a 161 percent increase between 1980 and 1988. Tracy has also experienced significant increases in the other retail sales category and in their general merchandise sales. General merchandise sales grew at an annualized rate of 4.5 percent. K-Mart is a major factor in the 1980-1988 increase in the general merchandise sales category that has been experienced by the City of Tracy.

A Comparison of Retail Sales in Downtown Tracy With Sales Outside the Downtown

Figure 3-8 delineates the Main Street program area which has been used as the boundary for downtown Tracy in Tables 3.3 and 3.4. In order to obtain these geographic breakdowns, a computer program developed by GG+A was utilized to geocode data from the State's Franchise Tax tapes.

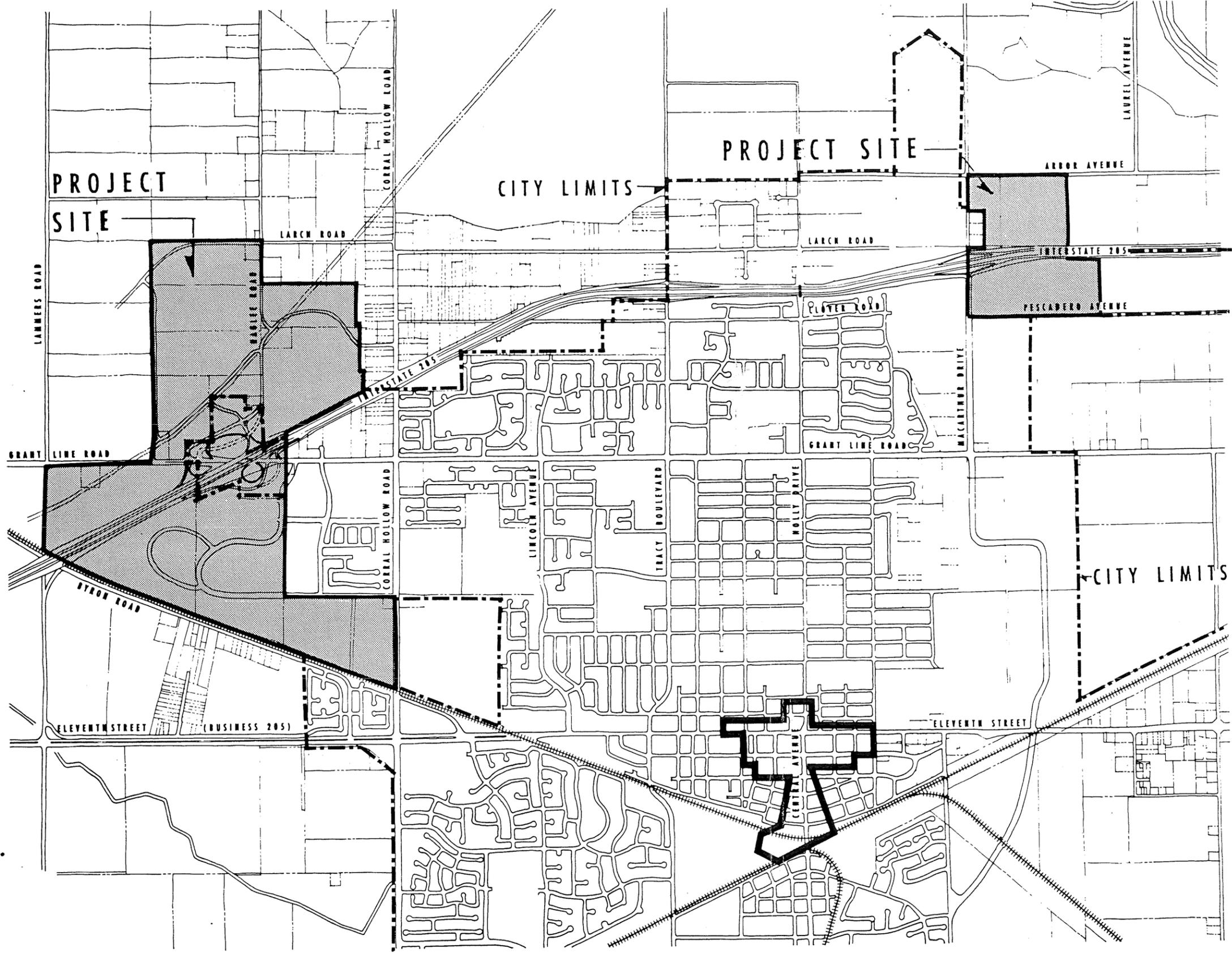
Table 3.3 presents the taxable sales dollars for the downtown (the Main Street program area), all other retail locations, and for the city as a whole. The sales dollars generated for the general merchandise, drug store and packaged liquor store category has been suppressed to prevent disclosure. Instead, the sales tax dollars generated by these three categories have been added to the "other retail" category.

The retail sales tax data shown in both Tables 3.3 and 3.4 are for the 12-month period beginning July 1, 1988, and ending June 30, 1989. As shown in Table 3.5, downtown Tracy contributed about 20 percent of the city's total sales during this 12-month period. Auto dealerships account for approximately one-third of these sales, or almost \$12 million out of the somewhat over \$34 million total. The next most important retail sales category in downtown Tracy is the other retail stores, which includes the

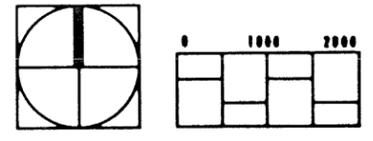


CITY OF TRACY
MAIN STREET PROGRAM AREA

-  Project Boundary
-  Main Street Program Area



Source: Main Street Tracy Group



City of Tracy

David L. Gates & Associates
The Sword Company

FIGURE 3-8

MAY 1990

TABLE 3.3

Taxable Sales, July 1988 - June 1989
 Tracy Main Street District, Other Tracy, and City as a Whole

AREA SUBAREA	TAXABLE SALES BY SUBAREA BY TYPE WITHIN CITY		Tracy		City		Main Street		Other Tracy		City
	\$	#	\$	#	\$	#	\$	%	\$	%	
TAXABLE SALES											
Apparel Stores	1,027,940	2,614,795	3,642,735				0.62		1.58		2.20
General Merchandise Stores							N/A		N/A		N/A
Drug Stores	758,025	16,654,640	17,412,665				0.46		10.05		10.51
Food Stores							N/A		N/A		N/A
Packaged Liquor Stores	4,044,924	19,568,402	23,613,326				2.44		11.81		14.25
Eating and Drinking Places											
Home Furnishing and Appliances	1,689,819	1,271,290	2,961,109				1.02		0.77		1.79
Blldg. Materials and Farm Implements	812,387	7,076,300	7,888,687				0.49		4.27		4.76
Auto Dealers and Auto Supplies	11,759,344	24,976,913	36,736,257				7.10		15.08		22.18
Service Stations	3,195,465	15,930,920	19,126,385				1.93		9.62		11.55
Other Retail Stores	6,586,531	27,517,426	34,103,957	#			3.98		16.61		20.59
Retail Stores Totals	29,874,435	115,817,969	145,692,404				18.03		69.92		87.95
All other Outlets	4,201,485	15,756,110	19,957,595				2.54		9.51		12.05
Totals All Outlets	34,075,920	131,574,079	165,649,999				20.57		79.43		100.00

Note: # Sales included with "Other Retail Stores" to prevent disclosure of confidential information.

Sources: California State Board of Equalization;
 Gruen Gruen + Associates.

TABLE 3.4

Percent of Taxable Sales by Retail Category
Within and Between City of Tracy Subareas

AREA	SALES DISTRIBUTION WITHIN SUBAREAS				SALES DISTRIBUTION BETWEEN SUBAREAS			
	Main Street		Tracy		Main Street		Tracy	
	%	#	%	#	%	#	%	#
Apparel Stores	3.02	1.99	28.22	71.78	28.22	71.78	100.00	
General Merchandise Stores	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Drug Stores	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Food Stores	2.22	12.66	4.35	95.65	4.35	95.65	100.00	
Packaged Liquor Stores	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Eating and Drinking Places	11.87	14.87	17.13	82.87	17.13	82.87	100.00	
Home Furnishing and Appliances	4.96	0.97	57.07	42.93	57.07	42.93	100.00	
Bldg. Materials and Farm Implements	2.38	5.38	10.30	89.70	10.30	89.70	100.00	
Auto Dealers and Auto Supplies	34.51	18.98	32.01	67.99	32.01	67.99	100.00	
Service Stations	9.38	12.11	16.71	83.29	16.71	83.29	100.00	
Other Retail Stores	19.33	20.91	19.31	80.69	19.31	80.69	100.00	#
Retail Stores Totals	87.67	88.02	20.51	79.49	20.51	79.49	100.00	
All other Outlets	12.33	11.98	21.05	78.95	21.05	78.95	100.00	
Totals All Outlets	100.00	100.00	20.57	79.43	20.57	79.43	100.00	

Note: # Sales included with "Other Retail Stores" to prevent disclosure of confidential information.

Sources: California State Board of Equalization;
Gruen Gruen + Associates.

general merchandise category. Other retail stores contributed approximately \$6.5 million, or about 18 percent of the downtown's total. Eating and drinking establishments is the third most important retail sales tax category. This category accounted for almost 12 percent of downtown Tracy's July 1988-June 1989 sales tax dollars.

Table 3.4 presents the percent of sales by retail category within and between the City of Tracy subareas. The left-hand side columns show the internal contribution of the retail sales categories to the three respective locations: downtown (the Main Street program area); all other locations; and for the city as a whole. Once again, to forecast disclosure the general merchandise, drug store and packaged liquor store sales have been added to the other retail sales category. The data in the three left-hand columns permit the reader to see the degree to which each of the retail categories contributes to the specific subarea and how the percentage distribution of the downtown sales compares with the distribution of sales outside the downtown. The following retail categories are more important in percentage terms to the retail tax base of the downtown than they are to retail purchased outside of the downtown; apparel stores, home furnishings and appliances, and auto dealers and supplies. The home furnishings and appliances category is not just more important in percentage terms, but also contributes more in actual dollars than is collected from all other City of Tracy locations. Referring back to Table 3.3, home furnishings and appliances sales generated \$1,689,819 in the downtown and \$1,271,290 in taxable retail sales outside the city between July 1, 1988 and June 30, 1989.

The three right-hand columns in Table 3.4 show the percentage distribution between subareas and are, therefore, percentaged across rows instead of down columns. The downtown contributes 57 percent of the city's taxable home furnishings and appliance sales dollars. The downtown contributed almost one-third of the auto dealership taxable sales, 28 percent of the city's apparel tax dollars and about one-fifth of Tracy's other retail stores taxable sales (including the general merchandise category).

C. Fiscal Impacts

The Potential Impact of Retailing Activities in the I-205 Corridor on Downtown Tracy and the City of Tracy

There are several significant retailing projects currently proposed for the I-205 Corridor. If implemented, each would be expected to have a regional draw. Together, the proposed projects would create a major agglomeration with an extended market draw. The proposed I-205 Corridor projects include an 800,000+-square-foot regional shopping center anchored by four or five department stores, and a four to five auto dealership center. The Grant Line planning area has sufficient holding capacity to accommodate an

off-price and/or a home improvement center as well as major free-standing discounters.

The project with the greatest potential impact on the downtown's retail tax base is the proposed I-205 auto mall. Present trends dictate the development of multiple dealerships that typically (but not always) locate at accessible freeway locations. Auto malls with less than five dealerships are becoming increasingly vulnerable to larger competitive centers.

In an era in which retail tax dollars are fought for by financially-strapped municipalities, a proliferation of auto malls (many of which receive public subsidies) is the wave of the future. Therefore, over time, auto malls with too few dealerships and free-standing dealerships are increasingly being placed at a competitive disadvantage.

If a five-dealership mall is created somewhere in the I-205 Corridor, there is every likelihood that the current downtown auto dealerships will eventually want to relocate at this new freeway location. In such an eventuality, there would be a major retail tax shift from the Main Street program area to the I-205 Corridor. More importantly, since auto dealerships typically utilize more space than the average retail store and/or restaurant, the downtown could expect to experience a significant increase in available space. One potential use for this space would be other major space users like home furnishing and appliance stores. The nature of the inventory, for this retail goods category, typically requires low-cost showroom and storage space. The likelihood of such a reuse, however, is dependent upon the ability of those home furnishing and appliance stores that are currently located downtown to find acceptable low-cost space in the I-205 Corridor.

On the other hand, if an auto center does not locate in the I-205 Corridor, it is highly likely that sometime in the future such a center will locate outside the city limits but within Tracy's hinterland. Should this situation occur, the auto dealerships currently located in downtown Tracy are still likely to relocate at this new freeway-related auto center. In this second instance, the city would still be faced with the possibility of losing their downtown auto dealerships but without the retail sales tax benefit that would be generated from an auto mall located somewhere within the I-205 Corridor.

The Main Street program area's home furnishings and appliance stores could be vulnerable to the types of regional retailing being proposed for the I-205 Corridor. For example, if a large-scale home improvement center was to offer competitive rents to these presently-downtown-located tenancies inducing their move from the Main Street program area, the agglomerative strength of this retail category in downtown Tracy would be weakened. Currently, downtown Tracy is the city's strongest agglomeration of home furnishings and appliance stores.

Unlike the auto center prognosis, it is unlikely that all or the majority of the home furnishings and appliance stores now located in the downtown core would or could elect to move to the I-205 Corridor. There is the possibility, however, that the agglomerative strength of this retail category could be weakened if it is split between the two locations - the downtown and the I-205 Corridor. Since such tenancies also tend to be larger-sized space users, if some of these larger-sized space users elect to move to the I-205 Corridor, their vacated space may be difficult to lease up, particularly if such space becomes available at the same time the downtown experiences an exodus of auto-related tenancies.

If the downtown's home furnishings and appliance store agglomeration is broken up by some of these tenancies moving to the I-205 Corridor, the city, at best, would be equally well-off in terms of its retail tax base. But, it is also possible that the remaining downtown tenancies in this retail category will suffer some loss of business as a result of the weakening of this agglomeration. If this loss is not made up by the additional sales tax base that would be generated by those home furnishings and appliance stores locating in the I-205 Corridor, the city would be somewhat less well-off.

With the addition of a four to five major regional shopping center, the downtown may also lose some of its apparel and general merchandise tenancies. Many, however, will elect to remain in the downtown as long as employment in this general area remains strong. Further, some of these apparel and general merchandise merchants will not want to accept the type of reciprocal easement agreements and higher rents associated with regional shopping center locations.

Eating and drinking establishment tenancies are less likely to move from the downtown because they primarily cater to those who work and visit the downtown for a variety of reasons. These establishments typically cannot afford the higher rents that are charged by shopping centers or at free-standing highway frontage locations.

D. Impacts

The development of retail in the I-205 Corridor can be expected to have an impact on retail tenancies in the downtown. A primary impact is the potential exodus of major space users that was discussed in the previous section, namely, the auto dealerships and appliance and furniture tenancies. There is a need to anticipate potential replacement uses in advance of the expected vacancies.

E. Suggested Mitigations

An important mitigation, therefore, would be the funding of an economic development plan for the Main Street program area that would consider the reuse potential of existing major space users. Both private and public sector reuses should be incorporated in this plan. For example, the city will want to consider their own future governmental and cultural facility needs. Some of the larger vacated spaces could be converted to office, a small theatre or museum complex, for example. As Tracy continues to grow, the demand for such uses can be expected to expand.

Once the economic development plan for the Main Street program area has been completed, the downtown will continue to require funding for implementation and promotional activities. A one-time-only per-square-foot charge on all retail space built in the I-205 Corridor could form the basis for this ongoing funding need.

**ENVIRONMENTAL SETTING, IMPACTS
AND MITIGATION MEASURES**

SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4.1 Geology and Soils

A. Environmental Setting

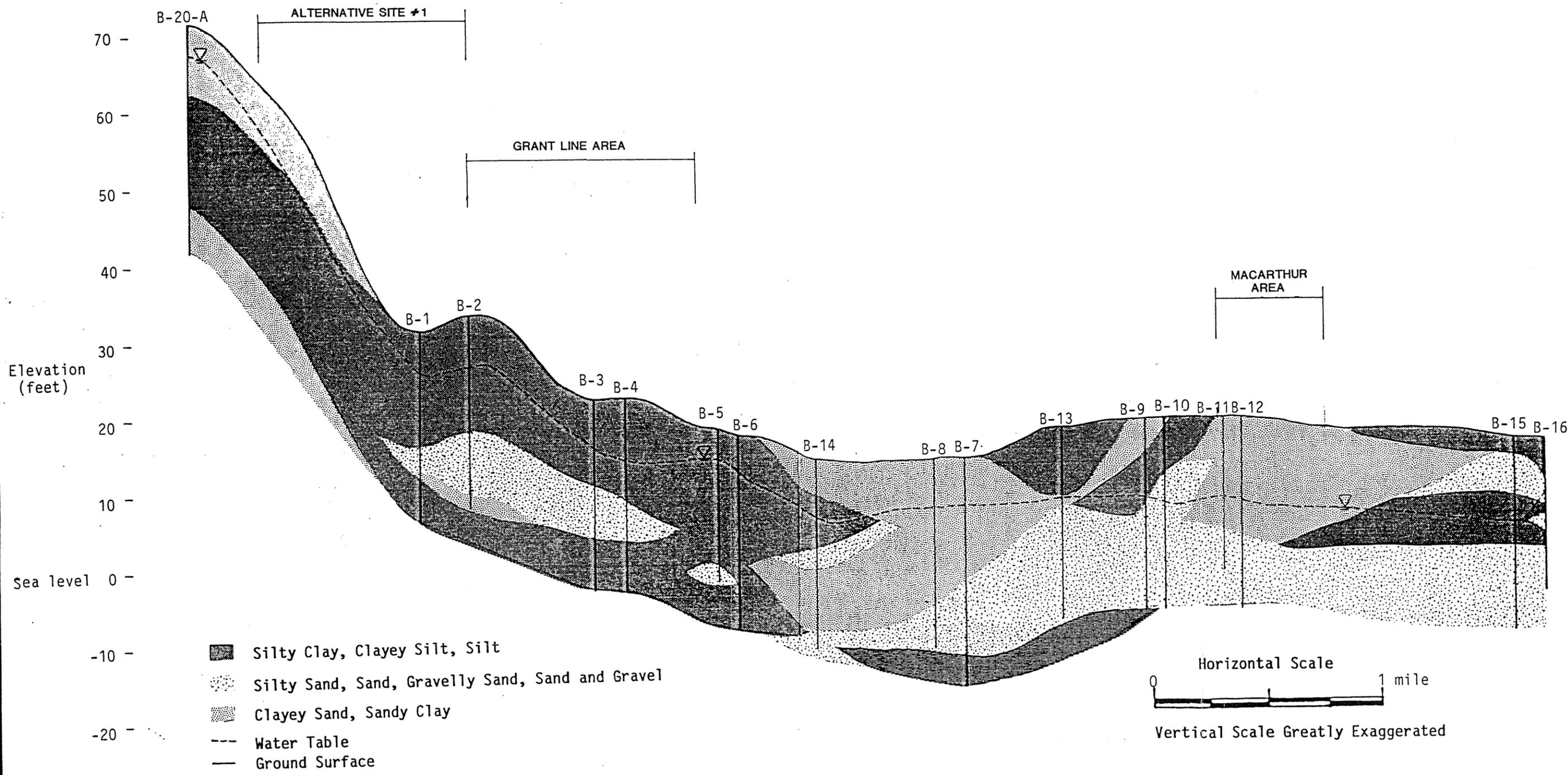
Geologic Features

The planning area is underlain by alluvial and fluvial deposits of undetermined depth. These deposits, which extend over most of the Central Valley, are generally from 100 to 2,000 feet deep. Borings made by Caltrans, the California Department of Water Resources and private consultants have revealed the nature and thickness of the near-surface sediments in the site vicinity. (Refer to Figure 4-1) The locations of some of these borings are shown relative to this site on Figure 4-2, and their sources are listed at the end of this section of the report.

Figure 4-2 also shows the groundwater table to be at about five to seven feet beneath Grant Line area parcel, and at about 10 feet beneath most of the smaller parcel.

Interpretation of stereo aerial photographs of the site vicinity dated June 3, 1987, at a scale of 1:9,600 revealed the presence of a number of surface features on the project sites that are not visible from the ground. There are several areas in the northern portion of the Grant Line Road area that are darker than the surrounding areas and appear to support a more lush vegetation. These are probably areas where groundwater is very shallow or where water ponds at the surface. They may also be the locations of working water wells. There are also two relic drainage channels visible on the Grant Line area parcel between I-205 and Byron Road (refer to Figure 4-3). These channels may contain shallow groundwater and loose, poorly sorted sediments. It appears that drainage entering the area from the southwest tends to pond against I-205 and along the railroad right of way along Byron Road (refer to Figure 4-3).

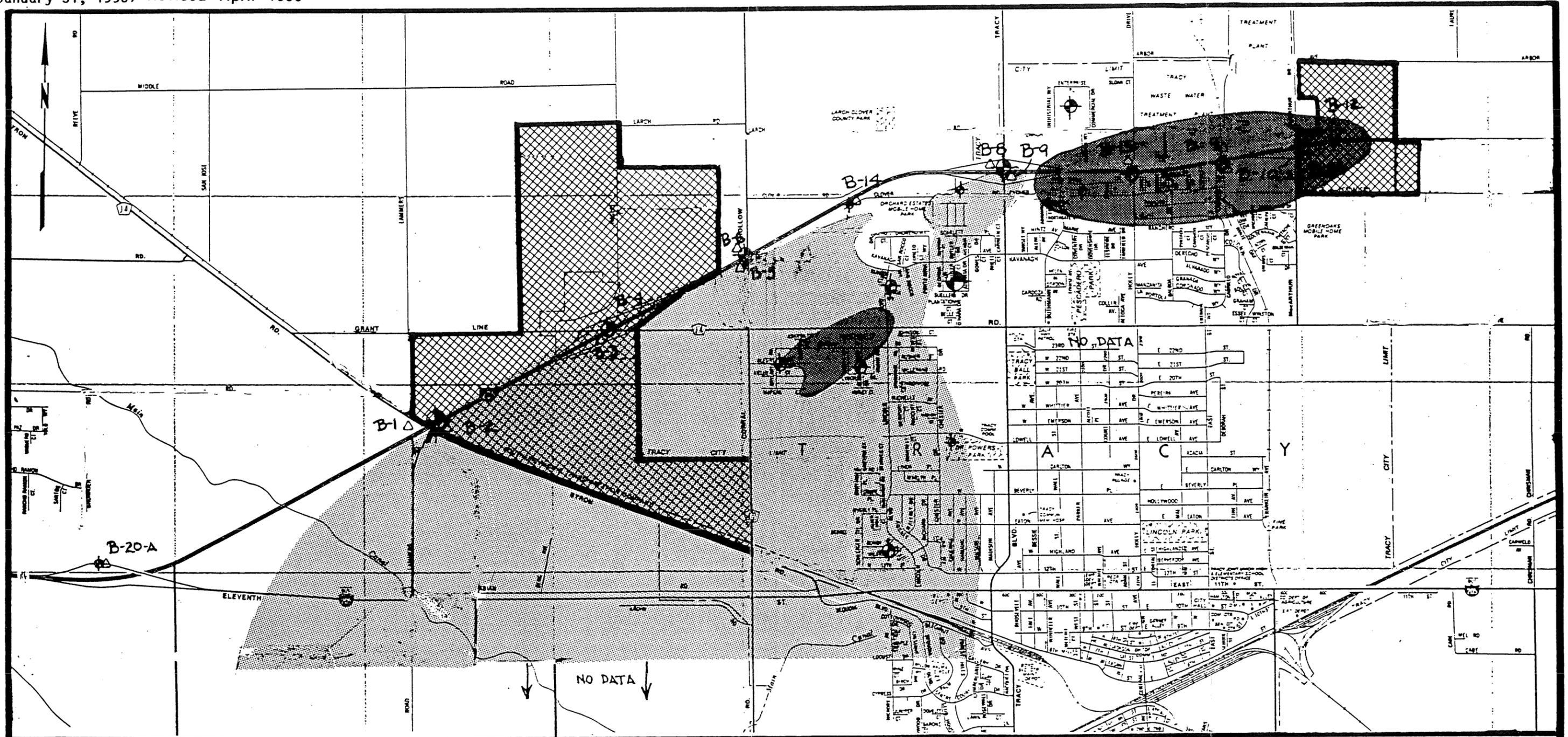
The U.S. Department of Agriculture (1987) has identified two agricultural soil types in the project area (refer to Figure 4-3). The southeastern corner of the Grant Line Road area is underlain by the Stomar clay loam, which has a moderate to high shrink/swell potential. The remainder of the project area is underlain by Capay clay, which has a high shrink/swell potential. These soils were both formed on alluvium derived from mixed rock sources, and are found in nearly level inter-fan basins of zero to two percent slopes. The liquid limit for Capay clay lies between 40 and 60, and its plasticity index ranges from 25 to 35. The Stomar clay loam has a liquid limit ranging from 30 to 45, and a plasticity index of from 10 to 20.



SCHMATIC CROSS SECTION
 BASED ON CALTRANS INFORMATION

I-205 Corridor Study
 Tracy, California

FIGURE 4-1



Groundwater

-  Less than 5 feet Below Ground Surface
-  6 - 8 feet Below Ground Surface
-  8+ feet Below Ground Surface

Boring Locations

-  1 to 5 Borings
-  6 to 10 Borings
-  11 to 15 Borings
-  Caltrans Borings used for Schematic Cross Section

 I-205 Project Area

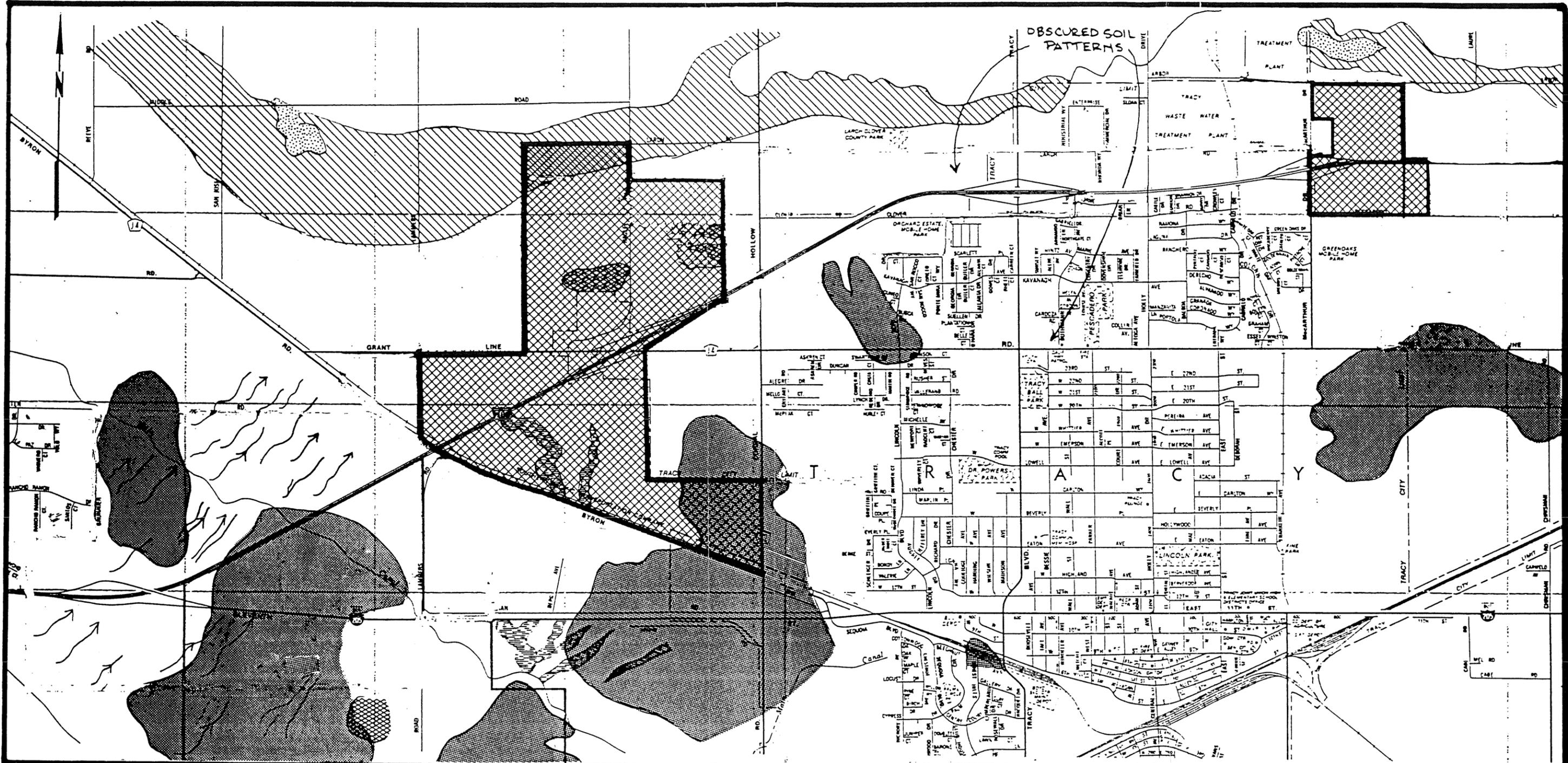
DEPTH TO GROUNDWATER AND BORING LOCATIONS

I-205 Corridor Study
 Tracy, California

APPROXIMATE SCALE

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 MILE

FIGURE 4-2



* Soils		† Drainage Features	‡ Data interpreted from Aerial Photographs (1987)
	Capay Clay; High Shrink/Swell Potential		Possible Old Stream Drainage Channels
	Stomar Clay Loam; Moderate to High Shrink/Swell Potential		High Moisture Area
	Willows Clay; High Shrink/Swell Potential		Medium High Moisture Area
	Pescadero Clay Loam; High Shrink/Swell Potential		Drainage Patterns
*Soil data from U.S. Dept. of Agric. Soil Conservation Service (1987)			

I-205 Project Area

SOILS AND DRAINAGE FEATURES

I-205 Corridor Study
 Tracy, California

APPROXIMATE SCALE
 MILE 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7

FIGURE 4-3

Subsidence in the Tracy area has been measured at a rate of 0.02 feet per year (from 1958 to 1966) (Newmarch, 1986). This rate was determined from data obtained relative to deep benchmarks. This subsidence is considered to be caused by a combination of factors, including the oxidation of subsurface peat, soil shrinkage, and wind erosion. The amount of subsidence caused by water withdrawal from wells is unknown, but it may be significant in some areas.

Seismicity

The nearest identified active fault is the Greenville, which trends northwestward through the hills northeast of Livermore, about 14 miles southwest of the City of Tracy. Faults mapped closer to this site include the Midland, Tracy-Stockton, Black Butte and Patterson Pass Faults (refer to Figure 4-4). These structures are not described as active by the City of Tracy General Plan Seismic Safety Element (Blayney-Dyett, 1982). Jennings (1975) describes the Midland Fault to be Quaternary, or one that has moved between 200 and two million years ago. Jennings shows the Tracy-Stockton, Black Butte and Patterson Pass Faults to be pre-Quaternary, not having displayed movement within the last two million years. None of the faults near the City of Tracy have been zoned by the California Division of Mines and Geology under the provisions of the Alquist-Priolo Special Studies Zones Act of 1972 (Hart, 1985).

There is an extensive northwest-trending fault system in the Sierran foothills, about 50 miles northeast of Tracy. The activity status of this system, which includes the Melones and Bear Mountain Faults, has not been determined. None of these faults have been zoned by the California Division of Mines and Geology (Hart, 1985).

B. Environmental Impacts

Based on information acquired and analyzed during this study, the potential geotechnical hazards that could generate potentially significant impacts on future development in the project area include the presence of expansive and compressible soils, local ground subsidence, shallow groundwater, seismic ground shaking and several forms of seismically-induced ground failure. These impacts are as follows:

- 1) Future development occurring within the project area could be affected by seismic hazards resulting from an earthquake on any of the active faults in Central California, including those in the Sierra Nevada and those in the San Andreas Fault zone. A major earthquake on any of these faults could cause moderate to severe ground shaking at the site;

- 2) The presence of granular sediments fairly close to the surface within the groundwater table (see Figure 4-2), suggests that there is a potential for seismically-induced liquefaction to occur

within the project area. If the granular materials were to liquefy, local subsidence could also occur;

3) The surficial materials on both of the project area parcels have been classified as having a high shrink/swell potential;

4) The rate of ground subsidence in the Tracy area appears to be rapid. Withdrawal of groundwater from wells may increase local subsidence. Groundwater beneath the parcels in the Grant Line Road area is generally from five to 10 feet below the surface. Shallow groundwater can reduce soil strength and adversely affect foundations and other structures; and,

5) Because of the agricultural use of the land in this area, pesticides or other potentially toxic materials may have contaminated the groundwater and/or the soil.

Other Factors

The Tracy area is considered to have a low flooding risk, even from a 100-year flood event (Limerinos, Lee and Lugo, 1973). However, as stated in the City of Tracy General Plan Seismic Safety Element, failure of any of the dams located in the Sierran foothills to the east could cause flooding in the north part of the City of Tracy and may affect the project sites. If the New Melones Dam, the San Luis Dam or the North Comanche Dikes were to fail, the northern portion of Tracy would be inundated (Blayney-Dyett, 1982).

D. Suggested Mitigation Measures

The following mitigation measures are recommended to reduce or avoid potentially significant geotechnical impacts on future development proposed in the I-205 Specific Plan area to a less than significant level. Further site specific geotechnical studies would be required for individual projects occurring within the project area. As a part of these future studies, additional mitigation measures would be recommended by the soils and foundation engineers to mitigate potentially significant geotechnical impacts to a less than significant level.

1) The latest edition of the Uniform Building code (UBC), and the grading and building ordinances of the City of Tracy and San Joaquin County should be used as a minimum guideline for all development occurring within the planning area.

2) Surface erosion should be controlled through the installation of erosion-control landscaping.

3) The effects of highly expansive soils should be mitigated by their removal, by covering them with a blanket of non-expansive materials, by the control of surface water, and through the use of specialized foundation systems that are designed to accommodate shrink/swell activity in soils.

- 4) All structures developed within the planning area should be designed to withstand dynamic forces induced by strong seismically-induced ground shaking.
- 5) Fills should be constructed of high-quality materials and to standards as required in the appropriate city, county and state grading ordinances.
- 6) All structures and improvements to structures should be designed to accommodate anticipated local ground settlement.
- 7) The presence of shallow groundwater and saturated surficial materials should be investigated and considered in the final design of structures.
- 8) Surface drainage should be controlled for all future development and conveyed away from all structures and foundations. Shallow groundwater should be controlled through the installation of subdrains.
- 9) An environmental assessment to test for contamination of soils must be conducted prior to tentative map approval.

4.2 Climate and Air Quality

A. Environmental Setting

Climate and Meteorology

The climate of the San Joaquin Valley is characterized by hot, dry summers and cool, rainy winters. Temperatures in Tracy exhibit large seasonal and diurnal variations which are typical of inland locations. Mean maximum and minimum temperatures vary from 57°F/34°F in January to 94°F/56°F in July. Tracy receives about 10 inches of precipitation annually, 85 percent of which falls from November through April.

Tracy is located at the northern end of the San Joaquin Valley Air Basin. Although many other counties are also included in this basin, the prevailing meteorological setting is such that emissions in other counties are not expected to significantly influence air pollution levels in Tracy. During "typical" summer daytime conditions, emissions generated in Tracy would likely be transported southeastward toward the southern end of the San Joaquin Valley (sea breeze). During nighttime hours, the southeastward sea breeze subsides and, at times, a land breeze directed northwestward out of the valley is observed. Typical summer residence time for airflow through the basin is two to three days. In the winter, airflow is much lighter and directionally varying. Temperature inversions are commonly caused by nighttime radiational cooling of the land surface in contact with the overlying air which cools more slowly. Ground-based inversions, which result in limited vertical dispersion of pollutants, occur much more often in the winter than in the summer.

The meteorological conditions that exist in the northern San Joaquin Valley are conducive to high ozone and carbon monoxide concentrations in Tracy. During the winter, the combination of cool weather, atmospheric temperature inversions, and low wind speeds causes peak carbon monoxide concentrations in the vicinity of congested intersections. In the summer, the high temperatures and prevailing winds maximize the extent to which Tracy experiences high ozone levels caused by emissions occurring in upwind areas (i.e., Bay Area).

Historical Air Quality Summary

Ozone is the air pollutant of greatest concern in the Tracy area. Violations of the health-based air quality standards for ozone have been significant, and recent trends indicate that the standards will not be attained in the immediate future. There have also been a number of particulate violations recorded. Although violations of the state carbon monoxide standard occur on occasion in the larger congested metropolitan areas of the San

Joaquin Valley, it is very unlikely that carbon monoxide violations are occurring in Tracy, although monitoring would be required to confirm this.

All other pollutant levels are well below the state and federal air quality standards. Table 4.1 lists the annual peak concentrations measured for each criteria pollutant. Values shown in boldface indicate violations of the ambient air quality standard shown.

Table 4.1
Maximum Pollutant Levels in Tracy Area*

Year	Ozone (ppm) 1-hour	CO (ppm) 8-hour	NO ₂ (ppm) 1-hour	SO ₂ (ppm) 1-hour	PM ₁₀ (ug/m ³) 24-hour	Lead(ug/m ³) 30-day
1977	0.16	6.30	--	--	--	--
1978	0.08	6.30	--	--	--	--
1979	0.14	6.10	--	--	--	0.89
1980	0.14	8.00	0.13	0.04	--	0.88
1981	0.14	3.80	0.14	0.03	--	0.45
1982	0.12	4.80	0.19	0.03	--	0.49
1983	0.15	4.40	0.10	0.04	--	0.35
1984	0.14	4.30	0.09	0.03	78	0.45
1985	0.12	5.30	0.11	0.03	114	0.22
1986	0.12	4.90	0.16	0.03	196	0.16
1987	0.12	3.60	0.10	0.04	158	0.08
1988	0.13	4.40	0.11	0.06	153	0.06
State Std.	0.10**	9.00***	0.25	0.25	50****	1.50

* Measured in Livermore (CO) and Stockton (all other pollutants).

** The California standard for Ozone changed to 0.09 ppm in 1988.

*** The California standard for CO (8-hour) came into effect in 1982.

**** The National standard for PM₁₀ came into effect in 1987.

Sources of Emissions

Because ozone is the most significant air pollution problem in the Tracy area, emissions of hydrocarbons and oxides of nitrogen in upwind areas are critical to Tracy air quality. Fine particle emissions in upwind areas contribute to elevated levels of suspended particulate matter in Tracy. Local emissions of fine particles are also likely to significantly affect particulate levels. CO emissions would also be a local concern if traffic congestion becomes substantially worse.

Table 4.2 provides a detailed summary of the sources of emissions in San Joaquin County. The columns heading "TOG" and "ROG" stand for "total organic gases" (i.e., hydrocarbon emissions) and "reactive organic gases" (i.e., hydrocarbon emissions, excluding methane), respectively. All data shown in the table are for calendar year 1988.

Air Pollution Control Program Overview

There are three levels of governmental air pollution control in the Tracy area:

- Federal (EPA) - EPA's activities vis-a-vis the California air pollution control program focus principally on reviewing California's submittals for the State Implementation Plan (SIP). The SIP is required by the Clean Air Act to demonstrate how all areas of the state will meet the national ambient air quality standards by specified deadlines.
- State (California Air Resources Board, or CARB) - The CARB's primary responsibilities are to develop, adopt, implement and enforce the state's motor vehicle pollution control program; to administer and coordinate the state's air pollution research program; to adopt and update as necessary the state's ambient air quality standards; to review the operations of the local air pollution control districts; and to review and coordinate preparation of the State Implementation Plan.
- County (San Joaquin County Air Pollution Control District) - Air pollution control districts (APCDs) are the most local form of air pollution control agencies. The APCDs have principal responsibility for developing plans for meeting the state and federal ambient air quality standards; for developing control measures for stationary sources of air pollution necessary to achieve and maintain both state and federal air quality standards; for implementing the permit programs established for the construction and modification of new sources of air pollution; and for enforcing air pollution statutes and regulations governing stationary sources.

Through the involvement of local planning agencies, local governments are expected to participate in the air pollution control planning process and to implement land use and transportation control measures that minimize air pollution. The City of Tracy is a member of the San Joaquin County Council of Governments, and is thus expected to implement land use and transportation-related control strategies that are recommended by the COG.

TABLE 4-2

1988 INVENTORY - SJV AIR BASIN - SAN JOAQUIN COUNTY (85 POINT, 85 AREA)
AVERAGE DAILY EMISSIONS

SOURCE CATEGORY	EMISSIONS (TONS/DAY)						
	TOG	ROG	CO	NOx	SOx	PM	PM10
--- STATIONARY SOURCES ---							
----- FUEL COMBUSTION -----							
AGRICULTURAL	0.00	0.00	0.05	0.00	0.04	0.00	0.00
OIL AND GAS PRODUCTION	0.32	0.07	0.13	0.43	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.02	0.00	0.00	0.00
OTHER MANUFACTURING/INDUSTRIAL	0.20	0.13	1.19	9.22	2.33	0.34	0.31
ELECTRIC UTILITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER SERVICES AND COMMERCE	0.06	0.03	0.14	0.72	0.00	0.08	0.08
RESIDENTIAL	0.35	0.18	1.80	1.63	0.02	0.27	0.18
OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL FUEL COMBUSTION	0.93	0.42	3.31	12.03	2.40	0.69	0.57
----- WASTE BURNING -----							
AGRICULTURAL - DEBRIS	5.45	2.12	30.18	0.00	0.00	3.80	3.77
RANGE MANAGEMENT	0.02	0.01	0.12	0.00	0.00	0.02	0.02
FOREST MANAGEMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	0.48	0.19	4.67	0.00	0.00	0.62	0.62
TOTAL WASTE BURNING	5.95	2.31	34.94	0.00	0.00	4.45	4.40
----- SOLVENT USE -----							
DRY CLEANING	0.44	0.44	0.00	0.00	0.00	0.00	0.00
DEGREASING	1.25	0.69	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATING	1.88	1.81	0.00	0.00	0.00	0.00	0.00
OTHER SURFACE COATING	4.57	4.56	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING	1.91	1.91	0.00	0.00	0.00	0.00	0.00
PRINTING	0.93	0.93	0.00	0.00	0.00	0.00	0.00
DOMESTIC	3.54	3.54	0.00	0.00	0.00	0.00	0.00
INDUSTRIAL SOLVENT USE	0.29	0.26	0.00	0.00	0.00	0.00	0.00
OTHER	0.11	0.09	0.00	0.00	0.00	0.00	0.00
TOTAL SOLVENT USE	14.90	14.22	0.00	0.00	0.00	0.00	0.00
----- PETROLEUM PROCESS, STORAGE & TRANSFER -----							
OIL AND GAS EXTRACTION	5.22	1.48	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.03	0.01
PETROLEUM MARKETING	1.41	1.41	0.00	0.00	0.00	0.00	0.00
OTHER	0.06	0.06	0.00	0.00	0.00	0.01	0.00
TOTAL PETROLEUM PROCESS, STORAGE & TRANSFER	6.69	2.95	0.00	0.00	0.00	0.04	0.02
----- INDUSTRIAL PROCESSES -----							
CHEMICAL	0.39	0.38	0.00	0.00	0.24	0.36	0.32
FOOD AND AGRICULTURAL	0.89	0.85	0.00	0.00	0.00	1.36	0.58
MINERAL PROCESSES	0.00	0.00	0.00	0.00	0.70	2.09	0.57
METAL PROCESSES	0.00	0.00	0.04	0.00	0.00	0.02	0.02
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.27	0.18
OTHER	0.33	0.24	0.00	0.00	0.00	0.00	0.00
TOTAL INDUSTRIAL PROCESSES	1.60	1.48	0.04	0.00	0.94	4.09	1.66
----- MISCELLANEOUS PROCESSES -----							
PESTICIDE APPLICATION	18.31	18.31	0.00	0.00	0.00	0.00	0.00
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	32.89	19.74
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	21.34	13.66
ENTRAINED ROAD DUST - PAVED	0.00	0.00	0.00	0.00	0.00	63.56	24.79
ENTRAINED ROAD DUST - UNPAVED	0.00	0.00	0.00	0.00	0.00	8.26	3.80
UNPLANNED FIRES	0.09	0.05	0.74	0.01	0.00	0.11	0.10
SOLID WASTE LANDFILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL MISCELLANEOUS PROCESSES	18.40	18.36	0.74	0.01	0.00	126.15	62.09
TOTAL STATIONARY SOURCES	46.48	37.74	39.03	12.04	3.33	135.42	68.74
--- MOBILE SOURCES ---							
----- ON ROAD VEHICLES -----							
LIGHT DUTY PASSENGER	11.82	10.79	87.04	9.52	0.49	1.00	0.70
LIGHT AND MEDIUM DUTY TRUCKS	6.14	5.60	48.89	5.57	0.34	0.00	0.31
HEAVY DUTY GAS TRUCKS	1.29	1.23	25.73	2.52	0.14	0.00	0.08
HEAVY DUTY DIESEL TRUCKS	2.14	2.04	6.72	14.48	2.68	2.00	2.30
MOTORCYCLES	0.21	0.20	0.80	0.08	0.00	0.00	0.00
TOTAL ON ROAD VEHICLES	21.61	19.86	169.17	32.17	3.65	5.06	3.40
----- OTHER MOBILE -----							
OFF ROAD VEHICLES	6.30	6.10	24.22	1.19	0.12	0.04	0.04
TRAINS	0.89	0.85	1.18	3.05	0.32	0.20	0.19
SHIPS	0.01	0.01	0.02	0.09	0.37	0.03	0.03
AIRCRAFT - GOVERNMENT	0.26	0.26	0.57	0.15	0.02	0.01	0.01
AIRCRAFT - OTHER	0.18	0.18	3.92	0.07	0.01	0.01	0.01
MOBILE EQUIPMENT	1.67	1.61	16.97	5.95	0.55	0.91	0.88
UTILITY EQUIPMENT	0.61	0.59	6.28	0.10	0.01	0.02	0.02
OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL OTHER MOBILE	9.93	9.59	53.17	10.59	1.41	1.22	1.18
TOTAL MOBILE SOURCES	31.54	29.45	222.34	42.76	5.06	8.28	4.58
TOTAL	78.02	67.19	261.37	54.80	8.39	141.70	73.32

California Clean Air Act - With the 1988 adoption of the California Clean Air Act, districts are now required to adopt attainment plans by December 31, 1990, which must provide for attaining and maintaining the state ambient standards by the earliest practicable date. Any district which is either a receptor or contributor of transported air pollutants has until June 30, 1991, to submit a plan.

All district plans must achieve a minimum reduction of five percent per year for each nonattainment pollutant or its precursors, unless the CARB agrees to the use of an alternative, equally effective emission reduction strategy, or the district is unable to achieve a five percent annual reduction despite the inclusion of every feasible control measure in the plan. APCDs are grouped into categories of air pollution according to how quickly the district can attain and maintain the applicable state standard. These categories and their respective threshold attainment dates are: moderate, by December 31, 1994; serious, by December 31, 1997; and severe, after December 31, 1997. Each category of nonattainment has certain required control measures which must be included in the district's plan. At this time, it is not certain into which category the San Joaquin APCD will be grouped. However, air quality projections indicate that near-term attainment of ambient O and PM₁₀ standards in the Tracy area, as well as elsewhere in the district, will be very difficult.

Air Quality Standards - National ambient air quality standards (NAAQS) are adopted by the Environmental Protection Agency. Areas that exceed the standard for a particular pollutant twice or more during a year are designated as "nonattainment" areas for that pollutant. (The only exceptions to the one violation allowance are standards which are based on an annual average concentration of a pollutant. For annual average standards, a violation in a single year's average results in a nonattainment designation.) The nonattainment designation subjects an area to more stringent planning and control requirements. (The Tracy area is currently designated as non-attainment for ozone and suspended particulate matter.)

California ambient air quality standards are goals for clean air established by the CARB. Local districts are now required to achieve these standards at the earliest practicable date, although there are no specific deadlines for attainment of the standards. However, there are specific control technology requirements that must be included in a district's plan depending upon the area's air pollution category.

The federal Clean Air Act requires that areas of the country exceeding the applicable national ambient air quality standards (NAAQS) prepare plans showing how those air quality standards will be attained. The responsibility for developing these plans rests on local air pollution control districts and planning agencies. The state is responsible for approving the plans and submitting them to EPA for final approval.

Control Strategies - Control strategies are the final element in an air pollution control program. They consist of a collection of pollution control requirements, applied to specified categories of sources, designed to achieve the air quality objectives set forth during the planning process. Control strategies generally consist of retrofit rules designed to reduce emissions from existing industrial sources of pollution; emission limits and permit requirements for new industrial sources; emission limits for new motor vehicles; fuel specifications for both mobile and stationary sources, and land use and transportation control measures. Depending upon the attainment status of the region, the pollutant involved, the type of source, and the nature of the requirement, a particular control measure may be adopted by EPA, CARB, the local APCD, or a local government, such as the City of Tracy.

Emissions and Air Quality Projections

Based on air pollution control measures that have been adopted, and on forecasts of population and industrial growth, the CARB has estimated future year emissions for San Joaquin County. CARB's official forecasts were updated using the board's own estimates of the effectiveness of the new I/M program requirements being implemented by 1991. The forecasts have not been updated to include the effects of the new vehicle emission standards that take effect starting in 1993. The emissions forecasts are shown on Table 4.3.

Table 4.3
Future Emissions in San Joaquin County
(Tons/Day)

Year	HC	CO	NOx	PM10
1989	65.1	242.8	54.3	74.3
1993	63.3	210.2	53.7	78.9
1997	64.9	206.2	55.7	83.6
2000	67.1	208.1	57.9	87.3

As shown on Table 4.3, the minimum hydrocarbon emission rate is estimated to occur in the early 1990s when total HC is expected to be about three percent lower than current levels. After that emissions are projected to rise again, due primarily to growth in emissions from off-road vehicles and stationary sources. These projections indicate that the change in total HC emissions over the next ten years is not large enough to be associated with significant reductions in ozone levels. However, because of the

exclusion of certain additional control measures from these projections (e.g., the adopted more stringent NSR rule and the possible implementation of an ISR rule), they should be considered "worst case."

Carbon monoxide emissions show an overall 15 percent reduction by the year 1997. Based on recent air quality trends in other areas (e.g., Sacramento), this will be sufficient to maintain compliance with the air quality standard provided that the level of traffic congestion is no worse than current congestion levels in Sacramento. Additional congestion will result in higher emissions. A slight decrease in NOx emissions is forecast between 1989 and 1993. After that NOx levels are projected to rise. However, the projected increase does not account for expected further reductions in motor vehicle emissions that ARB is currently pursuing. As with HC, it also does not account for the benefits of either the recently adopted NSR rule or the possible implementation of a district-wide ISR program. The projections for fine particles do not appear to be realistic. They appear to result from the application of general growth factors to all categories, including farming operations. It would seem more reasonable to conclude that such activities have peaked.

Based on these projections, it appears that the current air quality forecasts for the Tracy area indicate continued violations of the ozone and particulate standards and continued attainment of the CO standards.

B. Environmental Impacts

Analysis Methodology

The CARB emissions projections shown in Section A above represent a "worst-case" situation under which all emissions growth is exempt from both New Source Review (NSR) and possible Indirect Source Review (ISR). Using this emissions forecasting approach, it is clear that the potential unmitigated impact of the proposed I-205 Specific Plan is already accounted for in the "baseline" forecast of the emissions inventory outlined in Section A. As such, the gross emissions impact of the I-205 Plan is more correctly viewed as a portion of the region-wide growth that has already been forecast.

To assess the specific impact of the I-205 Plan, air quality impacts resulting from buildout of existing and proposed development plans for the City of Tracy (Residential Areas Specific Plan [RASP], Industrial Area Specific Plan [IASP] and the residential portion of Phase II of the General Plan [GPII]), and for the Tracy/I-205 Specific Plan were assessed for four analysis years (1989, 1993, 1997, and 2000). Impacts were determined using two different methodologies, depending upon the pollutant and the available data.

Carbon monoxide (CO) impacts, which are highly localized along roadways, were modeled using a combination of the CALINE4 roadway dispersion model and the PAL (Point Area and Line source) dispersion model. Motor vehicle traffic along local roadways was modeled with CALINE4. On-site emissions from the parking lot of the proposed shopping mall were modeled as area sources with the PAL model. Impacts for the vehicle hydrocarbon (HC) and oxides of nitrogen (NOx) emissions from incremental emission changes from the Existing Condition (1989) to the future year (1993, 1997 and 2000) scenarios were evaluated on a regional basis, as were fine particulate matter (PM₁₀) and oxides of sulfur (SOx) emissions.

Emissions changes associated with the buildout of the various General and Specific Plans (GPII, RASP and IASP) were computed exclusively from estimates of motor vehicle emission changes. Stationary source emissions were ignored because the existing New Source Review rules of the San Joaquin County Air Pollution Control District require that significant emission increases from stationary sources be "offset."

Motor Vehicle Emissions - Two CARB models were used to develop an estimate of motor vehicle emissions from the buildout scenarios shown above. "EMFAC7D" is the latest version of CARB's motor vehicle emission factor model. It provides estimates of the rate at which motor vehicles emit pollutants, commonly called emission factors. A companion model "BURDEN" contains data on current and projected travel trends for each county and air basin in the state. BURDEN combines the travel estimates with the emission factors produced by EMFAC7D to produce mobile source emission inventories.

CO "Hot Spot" Dispersion Modeling - Carbon monoxide emissions originate largely from on-road motor vehicles (64 percent in San Joaquin County in 1989). Furthermore, peak CO impacts historically occur during calm, wintertime conditions when horizontal and vertical air movement is severely restricted, and are therefore highly localized along roadways.

To accurately assess the CO impacts of motor vehicle-related growth in Tracy, a series of likely worst-case impacts were evaluated through mathematical dispersion modeling. These cases were designed to represent CO "hot spots" along major roadways throughout the city. Several areas in which high incremental CO impacts were likely to occur as a result of forecasted growth under the buildout of the I-205 Specific Plan were selected for hot spot modeling. Modeling receptors were placed around and in the vicinity of these intersections in close proximity (~10 meters) to the roadway.

Inputs to CALINE4 were chosen to reflect conditions under which the highest CO concentrations could occur. In San Joaquin County, historical air quality data indicate that peak CO concentrations are measured during the winter evening hours. Therefore, modeling of CO impacts was performed for wintertime, worst-case PM peak traffic and meteorological conditions.

An extensive review was conducted of all available development plans for this EIR. Based on that review, and subsequent related discussions with City of Tracy staff, full buildout of the Residential Areas Specific Plan is expected by 1993, with 100 percent buildout of both the Industrial Area Specific Plan and the residential portion of the upcoming Phase II of the General Plan expected by 2000. (Since completion of this analysis, consideration of Phase II has been set aside by the city council in favor of an overall general plan review in the future.) Interpolation of these buildout rates to the 1993 and 1997 intermediate analysis years provides the percentages of buildout used to generate the required traffic data. Commercial development projections for Tracy, based on best available information provided by the I-205 project developers, were used to provide project buildout percentages for the relevant analysis years (1993, 1997 and 2000). Based on the developers' projection that the I-205 Specific Plan will reach full buildout by the year 2000, project buildout percentages of 56 and 81 were calculated for 1993 and 1997, respectively.

Regional Emission Increments Analysis - For the vehicle emissions examined other than CO, impacts are not localized along roadways. Because these compounds are not chemically inert like CO, precise determination of the air quality impacts would require the application of a gridded photochemical model. Insufficient meteorological data for a photochemical modeling analysis are available for Tracy and the surrounding area. For this reason, a more simplistic analysis of the incremental changes in emission levels in Tracy and San Joaquin County among each of the evaluated scenarios was performed.

Emissions estimates for all of San Joaquin County were prepared for calendar years 1989, 1993, 1997 and 2000 corresponding to the existing condition, and the three buildout scenarios. These estimates were developed for 1989, 1993, 1997 and 2000 by applying growth and control data to the 1985 base year inventory for San Joaquin County.

Emissions estimates for motor vehicle traffic related to planned growth in the City of Tracy were developed by applying travel estimates (i.e., VMT) for added Tracy traffic to projected motor vehicle emission factors. Baseline VMT data were also projected, in order to compare the relative impact of the I-205 development to other projected growth in both the City of Tracy and San Joaquin County.

The data show that the increase in traffic due to full buildout of the I-205 development is projected to total 982,104 VMT/day. This represents an increase in estimated county-wide VMT levels for the year 2000 of 6.1 percent. Table 4.4 provides a complete overview of projected VMT.

Table 4.4
I-205 Development Traffic Estimates
(Daily Added VMT)

Planning Area	-----I-205 Project-----		
	1993	1997	2000
Grant Line N.	288,600	448,200	613,926
Grant line S.	88,700	137,800	188,768
MacArthur N.	15,100	23,500	32,183
MacArthur S.	<u>69,200</u>	<u>107,500</u>	<u>147,227</u>
Total Added VMT	461,600	717,000	982,104
Tracy Base VMT	1,827,900	2,335,600	3,015,900
San Joaquin County VMT	12,911,600	13,813,200	16,067,200

Note: 1989 Existing includes 50% RASP.

1993 Tracy Base = existing + remaining (50%) RASP and 25% IASP.

1997 Tracy Base = existing + remaining (50%) RASP and 50% GPII & IASP.

2000 Tracy Base = existing + remaining (50%) RASP, GPII and IASP.

Potential Impacts

Ambient air quality impacts resulting from the proposed mixed residential, commercial and light industrial development in the two planning areas (Grant Line and MacArthur) along the I-205 Corridor through Tracy, are presented in this section. Ambient impacts were estimated for each of the following "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂) and fine particulate matter (PM₁₀). Impacts predicted in this analysis are presented in comparison to the most stringent averaging time for each pollutant, which is known from historical ambient air monitoring data. For NO₂ and SO₂ only a one-hour averaging time was addressed. For CO, detailed data were available only for worst-case one-hour conditions. However, modeled hourly CO was also extrapolated to the more stringent eight-hour averaging time and impacts for both averaging times were computed.

Projections of cumulative residential, commercial and industrial growth slated to occur in the Tracy area over the next 11 years were used to construct the project scenario and its scheduled development. The buildout schedules selected represent the consultant's best judgment, after thorough review of all known development plans, regarding the most probable timing of those plans. The result of this review effort is a forecast of extremely rapid growth. In the absence of more specific data to forecast the level of buildout which will occur between now and the year 2000, total (baseline + added) impacts shown under these scenarios will be conservative (i.e., overpredictive).

The calendar year associated with a particular level of land use activity or growth is important in projecting future air quality impacts because of the California Air Pollution Control Program, in particular the motor vehicle emission control program. Newer vehicles are being required to meet more stringent emission standards. Therefore, as time goes on, the emissions per vehicle averaged over the on-road fleet are decreasing as new, "cleaner" technology vehicles replace older, high-emitting vehicles.

Before proceeding to a discussion of the results of the analysis, a few words of caution are appropriate. First, in all cases where there was a choice between competing possible assumptions, the assumption which resulted in maximizing the possible impacts was used. This is a standard modeling technique. It is used because when modeling analyses do not reflect the worst case, they are always subject to the charge that real impacts could be higher. The impacts discussed below are true worst-case impacts.

Second, the air quality in the Tracy area for the two pollutants of most concern, O₃ and CO, is largely related to motor vehicle emissions in the region. As described in the previous section, reductions in motor vehicle emissions are expected to occur over time as emission control technology improves and vehicle fleet turnover of older high-emitting vehicles to new cleaner models occurs. Since on-road vehicle emission standards will be tightened beyond currently forecasted levels, future year emissions would be even lower.

The following sections discuss the findings for each pollutant separately.

Carbon Monoxide

The highest predicted increase in one-hour CO will occur in the Grant Line planning area at the intersection of Grant Line Road and Corral Hollow Drive. By 2000, worst-case one-hour CO is predicted to reach 13.2 ppm, which is still below (66 percent of) the California standard. In the MacArthur planning area, the highest one-hour CO concentrations are predicted to occur along the I-205/MacArthur interchange. Peak one-hour CO in the MacArthur planning area is expected to be comfortably below (less than or equal to 50 percent of) the California standard.

The effect of the I-205 development is calculated by subtracting the estimated CO concentrations due to baseline buildout from the project CO concentrations. At the Grant Line receptor, the incremental CO increase due to local traffic in 2000 is 8.2 ppm, 4.7 ppm of which would result not from I-205 project traffic, but from traffic growth from other development (RASP/GP/IASP).

Impacts from the shopping mall parking lot are only expected to increase ambient CO levels in the immediate vicinity of the parking lot. Peak modeled incremental increases in one-hour CO were found to be 0.5 ppm and occurred adjacent to the proposed mall at the Corral Hollow/I-205 undercrossing.

As stated earlier, the ambient CO eight-hour standard is more stringent than the one-hour standard. Insufficient data were available to develop diurnal traffic and meteorological inputs for a multi-hour CALINE4 analysis. Instead, eight-hour impacts from local traffic were conservatively extrapolated from modeled one-hour local traffic impacts using a factor of 0.6 for the Central Valley as suggested by CALINE guidance developed by Caltrans. Background concentrations, as for one-hour averaging times, were estimated from existing ambient monitoring data.

The worst-case eight-hour impacts are also predicted to occur at the Grant Line/Corral Hollow receptor, with concentrations forecast to approach (but not exceed) the ambient standard by 2000. Of the total ambient eight-hour CO concentration predicted in 2000 (7.9 ppm), contributions from background, I-205 project and other development sources are 3.0 ppm, 2.1 ppm and 2.8 ppm, respectively. In the absence of further traffic mitigation to reduce congestion and increase future peak hour speeds above the modeled levels, violations of the eight-hour standard could occur with additional growth beyond 2000.

In the MacArthur planning area, peak concentrations from the combination of both I-205 and other development would still comfortably meet the ambient standard through 2000 (at 66 percent or less).

As discussed above, projections indicate that worst-case ambient one-hour and eight-hour CO concentrations for the planned growth addressed in this analysis would be below all applicable ambient air quality standards. In addition, impacts at the modeled hot spots, located a few meters from the edge of the roadway, would rapidly decrease with distance from the roadway. Predicted local impacts are expected to drop by up to a factor of three as the receptor distance from the roadway increases from 15 to 50 meters. This decline in concentration with distance from the roadway is highest during worst-case conditions. Therefore, ambient impacts at locations further from the roadway links than the modeled hot spots would approach the assumed background levels.

Nitrogen Dioxide

Total NO_x emissions in the county (assuming complete conversion to NO₂) are expected to change from a baseline of 54.3 tons/day under existing conditions to as high as 63.7 tons/day at 100 percent buildout of existing development plans, including the I-205 project, in 2000. These maximum future year emissions represent an increase of 17 percent over current levels. Some of this increase (nine percent) is the result of forecasted growth throughout the county. The emission change from growth of vehicle-related traffic due to growth in Tracy accounts for the remaining 10 percent. Of this remaining 10 percent, less than four percent is due to I-205 related development. The highest ambient one-hour nitrogen dioxide concentration measured in the Stockton/Tracy area during the last five years was 0.16 ppm. A 17 percent increase based on forecasted county-wide emissions in the future year would result in worst-case concentrations in the Tracy area of 0.19 ppm. The state one-hour standard is 0.25 ppm. Therefore, under all levels of buildout (baseline and I-205) examined, NO_x in Tracy would remain comfortably below (76 percent of) the California standard.

Ozone

Since ozone is formed by reactions involving both reactive hydrocarbons (RHC) and oxides of nitrogen (NO_x), the emission changes for both pollutants were assessed. Hydrocarbon emissions are projected to increase between 1989 and 2000 (4.86 tons/day). This seven percent increase over current levels is partly the result of forecasted growth in county-wide emissions (three percent), as well as Tracy's baseline emissions growth (two percent), and the I-205 project (two percent). The added RHC emissions increment in 2000 due to the Tracy (I-205 plus other) development is estimated to be 2.9 tons/day, representing a four percent increase over 2000 baseline emission levels. As stated earlier, the highest Tracy growth-related NO_x change is 10 percent, four percent of which would result from I-205 project traffic.

Due to the complex atmospheric processes which control the formation of ozone, no reliable models or techniques exist for accurately predicting the incremental ozone impacts of a single project such as I-205 traffic emissions. In fact, CARB recognizes this "technical deficiency" in single project ozone modeling and recommends that ozone precursor emission increments be identified but that ozone scaling calculations based on these increments are meaningless. Sophisticated photochemical models which have been developed and employed in predicting ozone impacts would require spatially detailed precursor emissions and meteorological data for the entire San Joaquin Valley, which are unavailable. Therefore, the impacts of the project on ambient ozone levels in the region are uncertain.

As stated earlier, precursor emission increases due to the project are four percent for NOx and two percent for reactive hydrocarbons (RHC) over projected San Joaquin County baseline emissions in 2000. To place these impacts into perspective, it is important to remember that San Joaquin County is currently violating ambient ozone standards. Thus, the emission increase of ozone precursors, HC and NOx, will place an increased burden on the ability of the county to attain the ambient standards. Unfortunately, the available information is insufficient to support a finding as to whether the increase in ozone resulting from the project will be measurable.

Fine Particulate Matter

San Joaquin County PM emissions are forecasted to increase by seven percent in 1991, 13 percent in 1997 and 19 percent in 2000 over the 1989 baseline level of 74.3 tons/day. However, these emission increases are due almost entirely to forecasted county-wide growth; the incremental PM₁₀ emissions associated with Tracy vehicle-related growth (up to 0.65 tons/day) are nominal (less than one percent) compared to county-wide emission levels. Therefore, I-205 and/or RASP/GP/IASP buildout will not cause measurable impacts on ambient PM levels monitored throughout San Joaquin County.

Sulfur Dioxide

Forecasts of ARB's San Joaquin County emissions inventory indicate county-wide SO₂ emissions of 10.2 tons/day in 2000. This represents an increase of 19 percent over the 1989 base level of 8.6 tons/day. As a worst-case, assuming this entire increase resulted from Tracy growth-related emissions, an increase in ambient SO₂ concentrations beyond 19 percent is not anticipated. The highest one-hour ambient SO₂ concentration measured in Stockton during the last five years was 0.06 ppm. A 19 percent increase to 0.071 ppm would still not approach the state standard of 0.25 ppm. No violations of the sulfur dioxide standards are expected to result from planned growth in Tracy, including I-205 buildout.

C. Suggested Mitigation Measures

During the development of the I-205 Specific Plan, numerous suggestions regarding potential air quality mitigation measures were received from city officials, interested parties (e.g., the San Joaquin County Air Pollution Control District and COG, Caltrans), and the consultant team. Additionally, mitigation measures contained in numerous EIRs prepared for shopping center complexes across the state during the past year were also reviewed. These efforts led to the preparation of a comprehensive set of mitigation measures to offset the emissions associated with the development of the I-205 project.

Construction Phase

Although construction activities are temporary, emissions generated may be substantial if proper controls are not implemented and monitored during the construction phase to minimize dust. Thus, the following mitigation measures must be implemented during construction. Separate measures aimed at minimizing ozone precursor emissions are also specified. The measures planned for implementation are:

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day.
- All clearing, grading, earth moving or excavation activities should cease during periods of high winds greater than 20 mph averaged over one hour. (This will occur approximately five percent of the time.)
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, earth moving or excavation activities should be minimized at all times.
- Instead of disking for weed control, the developer should mow, thereby leaving the ground undisturbed and with a mulch covering.

After clearing, grading, earth moving, or excavation operations, fugitive dust must be controlled using the following methods:

- All inactive portions of the construction site should be seeded and watered until grass growth is evident.
- All active portions of the site should be sufficiently watered to prevent excessive amounts of dust.

At all times, fugitive dust emissions must be controlled using the following procedures:

- On-site vehicle speed shall be limited to 15 mph.
- All areas with vehicle traffic will be watered periodically for stabilization of dust emissions.
- Use of petroleum-based dust palliatives shall meet the road oil requirements of San Joaquin County Rule 409.5, Cutback Asphalt Paving Materials.

- Streets adjacent to the project site shall be swept as needed to remove silt which may have accumulated from construction activities.

At all times, ozone precursor emissions will be controlled using the following methods:

- Equipment engines should be maintained in good condition and in proper tune as per manufacturer's specifications.
- During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time.

Project Phase

Because the impacts of the project vary by pollutant, it is important that the mitigation measures focus on reducing those pollutants determined to have the greatest effect on ambient air quality. Based on the impacts discussion, the mitigation requirements should be driven by the following findings:

- CO hot spot modeling indicated that while peak concentrations were significantly influenced by the project, no standards were violated; however, it is impossible to confirm this without a CO monitoring station.
- Existing peak ozone levels are in violation of the ambient standards. Peak increases in emissions of ozone precursors, HC and NOx, will produce higher ambient ozone levels, the extent of which cannot be precisely predicted.
- Increases in PM₁₀ and SO₂ are projected to be quite modest: no measurable impacts are predicted and no standards violations are expected.

Because San Joaquin County continues to violate ozone standards and since incremental increases in RHC and NOx precursor emissions for the project have been identified, mitigation measures should be focused on reducing emissions of HC and NOx. A careful review of the costs, benefits and effectiveness of alternative measures on HC and NOx led to the selection of the following for implementation:

- an expansion of the San Joaquin County Smog Check program to include testing for NOx emissions; and
- a reduction in VMT through the enhancement of ridesharing opportunities.

A description of each measure is presented below.

Addition of NOx Testing to the Smog Check Program

The current Smog Check program does not include any measurement of NOx emissions. Nevertheless, the CARB analysis has indicated that 20 percent of excess NOx emissions are identified "by accident" because some vehicles with high HC and CO emissions also have high NOx emissions. CARB has estimated that incidental repairs to these vehicles produce a 13 percent reduction in NOx emissions.

In 1988 the Smog Check program was reauthorized by Senate Bill 1997 (Presley, Chapter 1544, Statutes of 1988). Under the new bill, the minimum emission reductions to be achieved by the program have been increased from 10 percent to 25 percent (for hydrocarbons and carbon monoxide). These reductions combined with the above-referenced NOx reductions from incidental repairs represent the baseline Smog Check program benefits. All program impact calculations incorporate these benefits.

While no NOx measurements are mandated in the new bill, an option is available that allows air pollution control districts to request the addition of NOx testing and repair to Smog Checks performed within their boundaries. That option is specified Section 44003 of the Health and Safety Code.

Implementation of the NOx testing requirement would provide increased reductions not only in NOx, but also in HC. This option will affect all vehicles registered in the county and provide the following emission reductions: 15 percent for HC (40 percent minus 25 percent), 0 percent for CO (25 percent minus 25 percent) and 7 percent for NOx (20 percent minus 13 percent). It will reduce the emissions of those vehicles that are causing the projected increase in emissions.

As described above, the request for NOx testing is either at the option of the district or "upon a determination by the state board, after a hearing held within the district, that testing for oxides of nitrogen will contribute to improved air quality." In either case, Tracy and/or the San Joaquin County Air Pollution Control District (APCD) will be required to produce the analysis to justify the need to implement the program on a county-wide basis. The funds for this effort will be financed jointly, using a formula developed by the city/APCD and applied to the developers. These funds will be paid directly to the City of Tracy.

Enhanced Ridesharing Opportunities

The goal of enhanced ridesharing is to shift travel from single-occupant vehicles to those carrying two or more persons when commuting to and from work. Ridesharing entails prearranged shared rides by people traveling at similar times from

approximately the same origin to the same destination. The primary ridesharing arrangements for work trips are carpools, vanpools and buspools.

Ridesharing

Two primary ridesharing measures will be implemented. The first will require employers in new facilities governed under the project to collect and distribute ridesharing information and promote the ridesharing concept among their employees. The second will require the developer to enter into a joint use agreement with Caltrans to allow part of the mall parking lot be used for a park and ride lot. The formation of park-and-ride facilities will foster the formation of carpools and vanpools for Tracy residents commuting to other communities within the air basin. The characteristics of each measure are specified below.

Employer Requirements

All employers with more than 50 employees at a common business location and all mall employers will be required to:

- Designate a rideshare coordinator;
- Provide all employees with written information regarding a carpool match service on an annual basis;
- Encourage employees to use the matching service;
- Provide preferential parking facilities for carpools, vanpools and bicycles; and
- Provide an annual report of mode shares (carpool, transit, solo drivers, etc.) and program activities to the Tracy ridesharing coordinator and the San Joaquin County Council of Governments for review and monitoring.

The goal of this program will be to reduce commute vehicle trips and miles so that 15 percent of the commute trips occur in non-single occupant vehicles.

Park-and-Ride Facilities

The City of Tracy recently agreed to add ridesharing coordination responsibilities to Tracy Trans starting in 1991. That position will have two primary responsibilities: (1) coordinate the development of vanpooling and carpooling opportunities associated with the park-and-ride facility for commuters leaving Tracy, and (2) monitor employer ridesharing program activities specified in the above measure.

The program used to promote ridesharing opportunities for commuters leaving Tracy should be expanded to take advantage of the increased park-and-ride facilities that will be available at the mall. The goal of the mall park-and-ride facility should be to provide space for 200 participants at the time of full project buildout in the year 2000.

The funds for the park-and-ride facility will be financed jointly, using a formula developed by the city and applied to developers.

Additional Measures

Tracy officials will also continue to monitor the growth of employment centers and monitor the opportunities for fixed route transit service. The services of Tracy Trans will continue to be maintained at existing levels and expanded as the demand for the service warrants.

Emission Reductions

The approach used to estimate the emission reductions associated with the above mitigation measures was to (1) quantify the impact of the goals on projected travel levels in 1993, 1997 and 2000 and (2) quantify the incremental Smog Check reductions associated with NOx testing. Table 4.5 provides a summary of the total reductions produced by the planned TCMS. It provides a breakdown of the reductions that can be expected from three separate categories of travel within the county: the project, other Tracy, and the rest of the county. While the breakdown in the reductions associated with the individual TCMS is not shown, it should be clear that the addition of the NOx test is responsible for most of the listed reductions. There are several reasons for this finding. First, the ridesharing TCMS affect only a small portion of the travel from Tracy. Second and more importantly, the NOx testing reductions come from vehicles that produce well over 70 percent of the travel in the county.

The NOx and RHC reductions estimated from the planned TCMS shown in Table 4.5 reduce the project NOx increment to 1.17 tons per day and eliminate the project RHC increment (a 0.32 tons per day net benefit is predicted). The net incremental NOx (1.17 tons per day) represents a 2.9 percent increase in the 2000 baseline NOx inventory for the county. Assuming that ozone responds linearly to precursor emission increases, a very conservative assumption, a 2.9 percent increment would increase the highest existing ambient ozone level in Stockton (0.14 ppm) to 0.144 ppm. Hourly ozone is reported to the nearest 0.01 ppm. Therefore, this upper bound estimate of the ozone impact of the project is below the threshold of ambient measurement. Thus, the emission benefits of the mitigation measures listed above will be sufficient to ensure that no worsening of existing violations in the area can be measured as a result of the project.

Table 4.5
Emission Reductions From Planned TCMs
(tons/day)

Affected Category of Travel	RHC	NOx
1993		
I-205 Project	0.07	0.03
Other Tracy	0.08	0.03
Other County	1.31	0.83
Total	1.46	0.89
% Reduction	2.3%	1.7%
1997		
I-205 Project	0.08	0.04
Other Tracy	0.12	0.07
Other County	1.11	0.78
Total	1.31	0.89
% Reduction	1.7%	1.6%
2000		
I-205 Project	0.11	0.05
Other Tracy	0.19	0.09
Other County	1.06	0.79
Total	1.36	0.93
% Reduction	2.0%	1.6%

4.3 AESTHETICS

A. Environmental Setting

The City of Tracy is located at the western edge of the wide agricultural Central Valley region, and in the triangular area defined by Interstates 5, 205, and 580. The San Joaquin River, to the north, and the hills of the Diablo Range to the east, form the natural visual edges for the region. (See Site Context Map, Figure 4-5). In general, the visual character of the region is made up of agricultural and rural land occasionally interrupted by cities or development. Established residential, commercial, and industrial development abuts the edges of the Specific Plan area.

The visual and urban design setting of the I-205 Specific Plan area consists of agricultural lands at the edge of a flat suburban city. Scattered pockets of industrial, freeway-related commercial, and single-family residential uses are located throughout the area. The visual appearance of these developed areas is varied and not organized with a uniform setback or lotting pattern. Numerous utility poles line the street, signage is visually chaotic and highly prominent, and architectural quality greatly varies.

Views From I-205

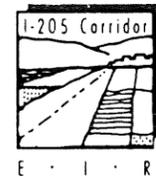
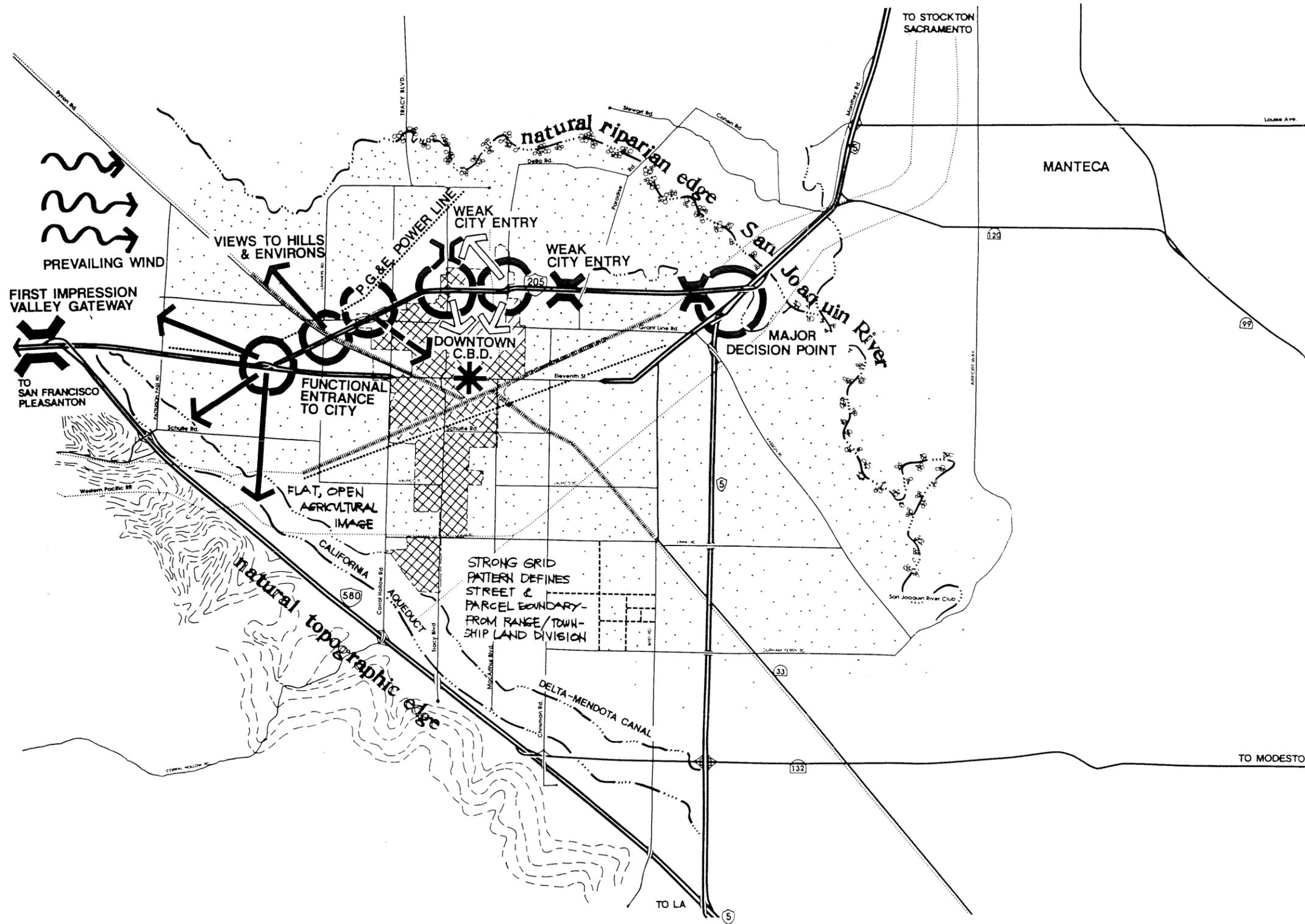
Interstate 205 acts as the dominant visual element in the planning area landscape. The freeway generally creates a sharp division between established developed suburban areas to the south, and the agricultural lands with scattered development to the north. Linkages between the north and south are made only on major arterial roads.

Moving east or west through Tracy on I-205 provides a strong sense of immediacy with the adjacent corridor, but due to the high speed of travel, the view from the road is a broad brush sweep, with the eye unable to focus on specific details. The general lack of consistent, tall freeway planting on I-205 affords tremendous visibility to the entire community, thus making the views from I-205 an important source of Tracy's perceived image. Currently the view is a patchwork of agriculture, soundwalls, building roofs, freeway-related signage, and backyards.

Brief orienting views to the rest of Tracy can be obtained from the raised overpass crossings at major arterials. Distant scenic views to the Diablo Range can be obtained while traveling along I-205 westbound.

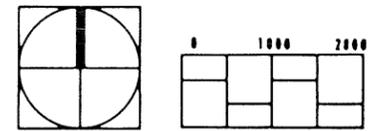
The following narrative describes the existing visual character of the corridor as viewed from the freeway, moving eastbound.

- Initial views approaching Tracy along I-205 are of a rural and agricultural landscape. Open fields, flat expansive terrain, and distant foothills predominate.



VISUAL CONTEXT

- Promontory
- Distant View
- Internal View
- Partial View
- Gateway
- Focal
- Topographic Edge
- Existing Riparian Corridor
- PG&E Powerline
- Flat, Open Agriculture Lands
- Tracy City Limits



City of Tracy

David L. Gates & Associates
The Sword Company

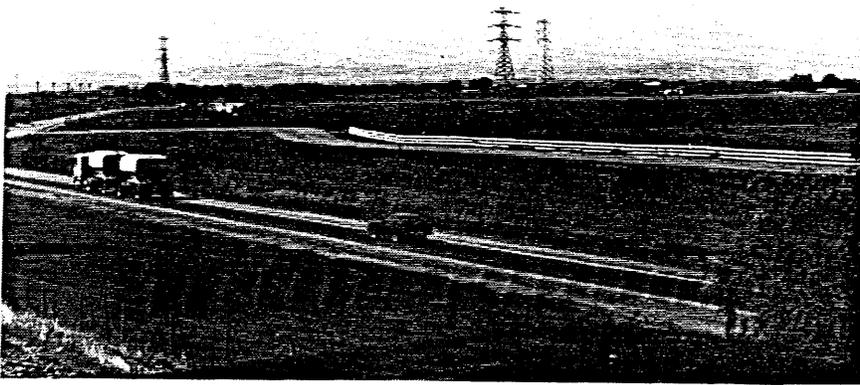
FIGURE 4-5

MAY 1990

- The Eleventh Street overpass acts as a visual gateway to Tracy; one perceives a first impression of the city after passing through.
- High voltage transmission lines are a powerful vertical element, rising 60 to 70 feet high, spreading 200 to 300 feet apart and cutting diagonally across the highway. (Figure 4-6a)
- The elevation of the highway above the Southern Pacific Railroad and Byron Road provides a promontory to view over the adjacent lands. Water towers in town act as distant visual landmarks.
- Approaching the Grant Line Road exit, high signage, large trailer trucks, auto and boat sales, service stations, and other visually chaotic freeway-related commercial services become the primary visual image.
- Descending the Grant Line Road overpass reveals a distant view of the vertical mass of the Holly Sugar industrial complex, which acts as a distant landmark.
- At the Corral Hollow Road overcrossing the first short-range views of the city landscape can be seen.
- Approaching the Tracy Boulevard exit, housing becomes the dominant visual image. Upper stories and roofs are visible over the soundwall to the south. Views penetrate into the rear yards and livestock pens of the Larch-Clover neighborhood to the north. (Figure 4-6b)
- At the MacArthur Drive exit, the sewage treatment plant, Holly Sugar, and other large industrial plants act as dominant vertical elements in the intermediate views to the north. These views form the final impression heading eastbound and the visual gateway to Tracy on westbound I-205. (Figure 4-6c)

Views Within The Planning Area

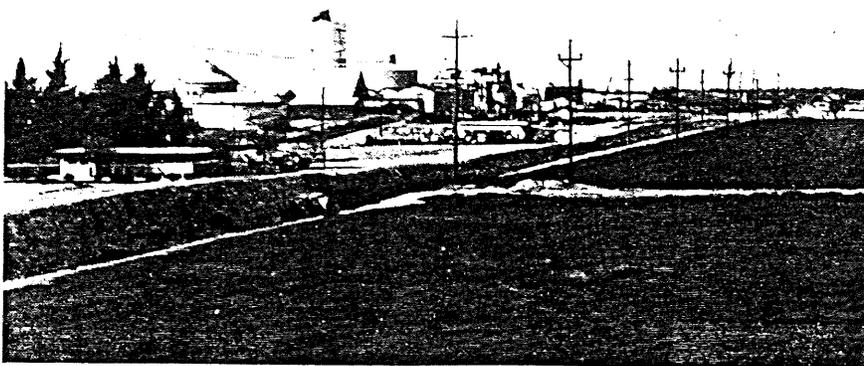
Development areas as shown in the I-205 Specific Plan focus on two discrete portions of the freeway corridor, each with their own unique characteristics and potential impacts on visual resources and urban design. These lands provide an opportunity to create memorable gateways to Tracy, as well as transition between the rural appearances to the north and the developed appearances to the south of the freeway.



4-6a



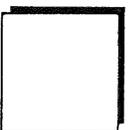
4-6b



4-6c

FIGURE 4-6
VISUAL ANALYSIS

1-205 CORRIDOR E.I.R.



Grant Line Planning Area

The Grant Line planning area is adjacent to the northwestern edges of the City of Tracy, bordered by residential uses. It is bisected by I-205, thus forming two halves that are not visually contiguous.

The south side is undeveloped and presently under cultivation, with the exception of the commercial facilities along Toste Road. The Southern Pacific Railroad tracks and Byron Road run along the southern boundary of the planning area. (Figure 4-7d)

The area north of the freeway is also undeveloped and under cultivation. A 150-foot wide Pacific Gas and Electric transmission corridor cuts through the planning area, running east-west. These tall, visually prominent structures provide a sense of orientation. North and west of the planning area are open farmlands with few trees. The Larch-Clover neighborhood, consisting of large-lot, older single-family homes, is located immediately to the east.

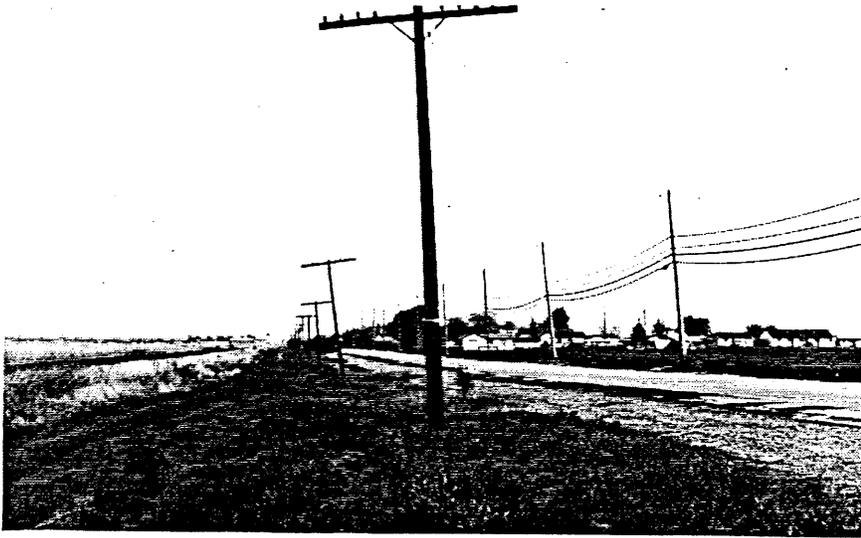
The following narrative describes the existing visual character of the Grant Line planning area, as viewed from two major arterials.

Grant Line Road

- West of I-205, Grant Line Road is predominantly agricultural, with scattered single-family homes.
- At the freeway overcrossing, freeway-related services such as truck stops and car/boat dealerships are the dominant image, with the urban image of Tracy in the distant background. (Figure 4-7e)
- The open appearance changes without transition to single-family housing. (Figure 4-7f)

Corral Hollow Road

- North of the freeway underpass the mature vegetation and scattered single-family homes line the road. This vista of agricultural areas has no visual terminus. (Figure 4-8g)
- At the freeway overcrossing, the predominant image is that of older large-lot housing and a tree-lined street.
- South of the freeway, Corral Hollow Road acts as the edge between the open agricultural space to the west and new single-family homes to the east.
- The Southern Pacific Railroad and Byron Road serve as a strong visual edge to the planning area. (Figure 4-8h)



4-7d



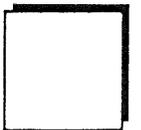
4-7e



4-7f

FIGURE 4-7
VISUAL ANALYSIS

I-205 CORRIDOR E.I.R.



MacArthur Planning Area

In contrast, the MacArthur planning area lies adjacent to the northeastern edge of Tracy, in the industrial area of the city. It is also bisected by I-205, forming two halves that are not visually contiguous. Development that exists within view of the area is dominated by the image of large industrial complexes, such as the Leprino Foods Plant, Holly Sugar (Figures 4-8i and 4-9j), and the municipal wastewater treatment plant. All boundaries currently consist of open, uncultivated lands with expansive views. Views across the lands to the west are of existing residential development. (Figure 4-9k).

B. Environmental Impacts

Impacts are reviewed and mitigation measures discussed within this analysis section based upon illustrative site plans and design guidelines included in the I-205 Specific Plan.

The following criteria form the basis of the review of visual impacts of the Specific Plan:

City-Wide Form and Image Considerations

- Gateway role of I-205 Corridor.
- Transition between rural and urban appearances at city edges.

Site Specific Image Considerations

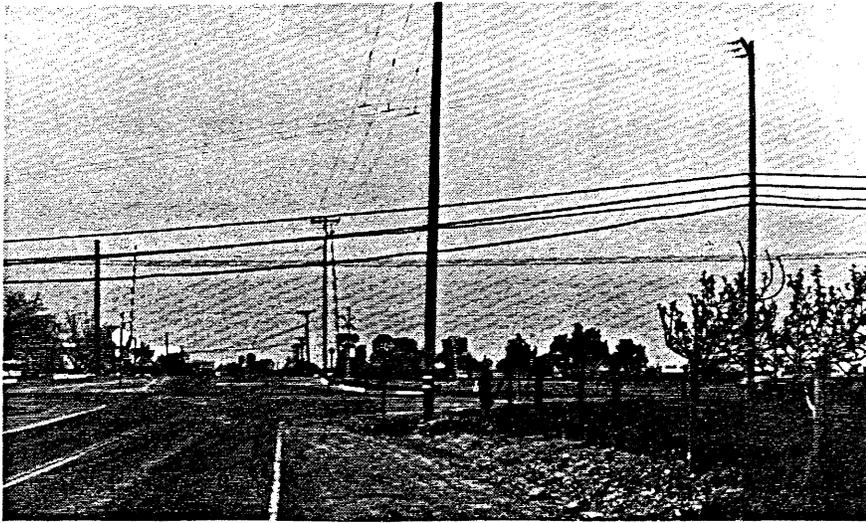
- Visual compatibility of new development in the existing context.
- Image of new development from existing city landscape.
- Invisibility of undesirable site elements.
- Coordinated signage image.

Impacts On City Form and Image

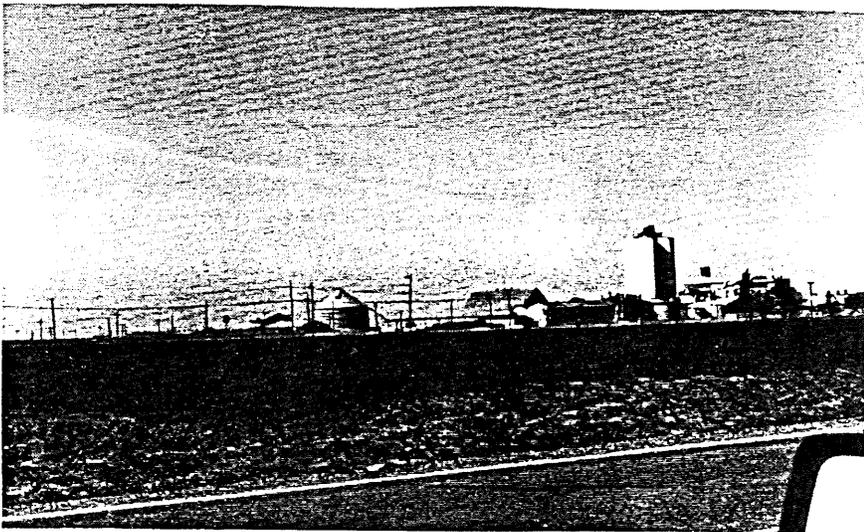
Specific Plan development would involve large-scale conversion of the rural, visually-open agricultural lands at the edge of the city to commercial/industrial residential uses. This may be a potentially significant visual impact. The vast open, flat terrain would be altered to reflect a suburban development pattern. Because of the prominent location, the project would visually impact the I-205 corridor. New soundwalls and on-site development would impact the first impression of Tracy as perceived by travelers on I-205. New landscape elements would be created which would be visible and discernable at a distance.



4-8g



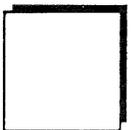
4-8h

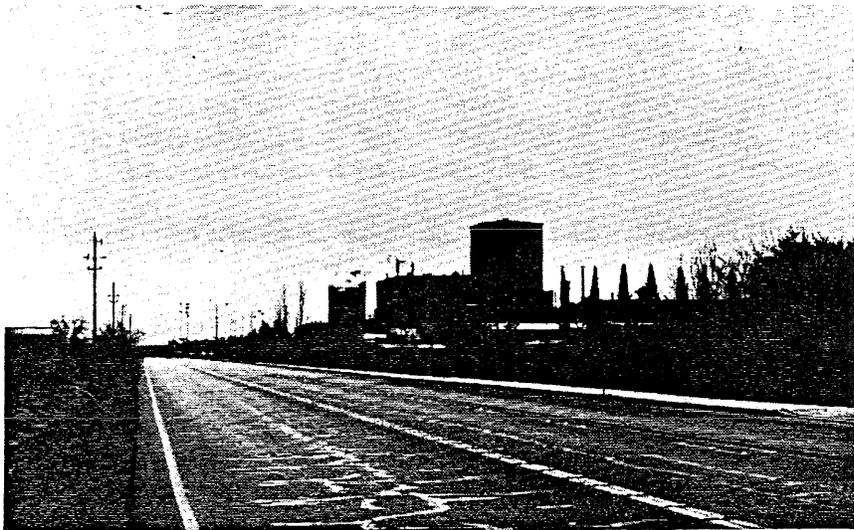


4-8i

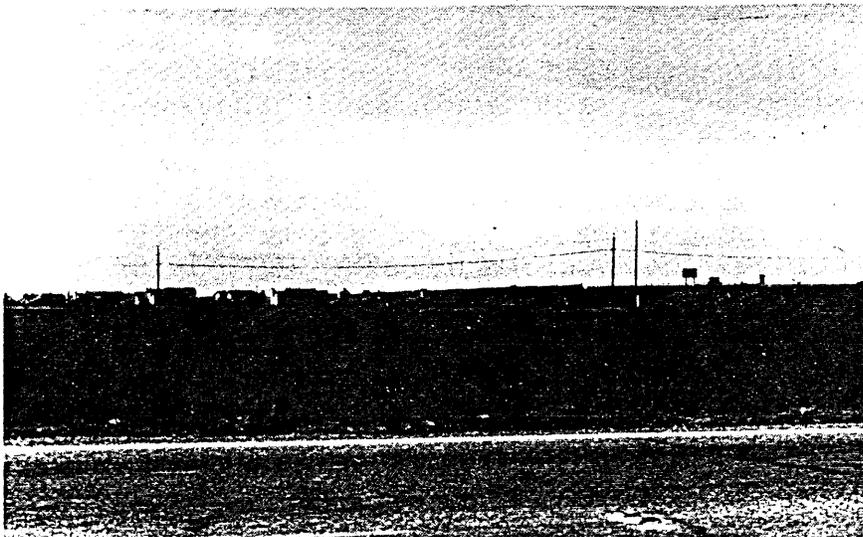
FIGURE 4-8
VISUAL ANALYSIS

I-205 CORRIDOR E.I.R.





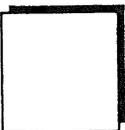
4-9j



4-9k

FIGURE 4-9
VISUAL ANALYSIS

I-205 CORRIDOR E.I.R.



Site Specific Impacts

Site development may be visually incompatible with existing development. This may be a potentially significant visual impact. Certain residential densities designated in the Specific Plan would be visibly more dense than nearby existing development. Commercial mall architecture, parking and on-site development would be visually out of scale with the existing adjacent Larch-Clover residential neighborhood. Within the planning areas, the existing access routes (Grant Line Road, Corral Hollow Road, Naglee Road, etc.) would be widened to four to six lane divided arterials with landscaped medians and strips along both sides of the right-of-way zone. These roadways, at full buildout, would be visibly wider than that which currently exist.

New site development would also result in a wide variety of visually uncoordinated images and forms, as seen from the existing city landscape. Given that new development would be implemented over time in an incremental fashion, the visual result may potentially be an uncoordinated variety of architecture, landscaping, parking configurations, and streetscape treatments.

Undesirable site elements may be visible from the existing city landscape, thus creating a significant visual impact. Utility areas, such as waste or equipment storage facilities, are a necessary, but visually unattractive, site appurtenance.

Site development may result in a wide variety of signage forms, which could be a potentially significant visual impact. Commercial land uses, in particular, rely heavily upon the visibility of signage from major roadways. Each developer generally has a different preference as to the design and location of signage; a tendency which may lead to a visually chaotic variety of sign styles and heights.

Development of parcels within the 100-year floodplain (mostly parcels north of the freeway near Larch Road) would require the elevation of building pads to a level one foot above the flood elevation. Some sites will require as much as five feet of fill in order to achieve this requirement. Thus, portions of flat landscape of the study area would be modified to a more "rolling" landform. The configuration of these elevated pads will have to be carefully designed in order to avoid creating a negative visual impact.

C. Suggested Mitigation Measures

1) The Specific Plan would designate 11.1 acres at the southwest corner of the Grant Line South planning area as parks/open space for the purpose of developing a gateway and open space feature at the western edge of Tracy. It is planned that this park be developed to include a variety of sports fields as well as a visible gateway symbol. As these fields may be lighted for evening use, the Specific Plan should require that if lighted,

such features as cut off light fixtures, be installed so as to avoid glare impacts to motorists on I-205 and adjacent neighborhoods.

In addition, the Specific Plan sets forth a number of guidelines and standards regarding soundwall design, and on-site development as they relate to I-205 views, thus mitigating the potential adverse visual impact. These may eventually result in an upgrade in the visual quality of existing commercial facilities within the study area, thus positively impacting the visual environment.

2) The Specific Plan should incorporate guidelines and standards regarding soundwall design and buffering between commercial land uses and the homes along Corral Hollow and Larch Road.

3) The design guidelines contained in the Specific Plan would positively contribute to the aesthetic quality of the new development and generally soften the short range visual impacts. The guidelines include concepts for streetscape planting and lighting, and development guidelines for each land use, which cover issues such as architectural form, signage, parking and landscaping. These measures would discourage the creation of any aesthetically offensive site open to public view.

These guidelines and standards include provisions to:

- Encourage high quality design that can provide a desirable first impression.
- Coordinate and visually enhance the freeway edge, including treatment of soundwalls and fencing.
- Ensure the appropriate design and screening of undesirable site elements, such as storage and service areas, attempting to minimize their visual impact on public streets.
- Develop a sense of visual continuity and unity for future development with tree planting, landscape and setbacks, and entry features.
- Encourage design that complements the existing visual character of Tracy.
- Address potential visual incompatibilities with nearby existing development.
- Aesthetically unify signage in the study area.
- Ensure the appropriate design of parcels within the 100-year floodplain, defining appropriate pad and grading configurations.

These measures would mitigate the potential adverse site specific visual impacts.

4.4 BIOTICS

A. Environmental Setting

Both the MacArthur and the Grant Line planning areas are dominated by alfalfa fields. Alfalfa is the principal crop of the greater Tracy farm community. It is a moderately stable crop which remains in place from three to five years after which time it is plowed under and replanted. Often a one-year planting of barley or tomatoes or both are inserted between alfalfa rotations in order to reduce soil insect and nematode pests before the next planting.

Because of the high protein content of alfalfa and the fact that ground surface is never disturbed during the three to five year period that a planting is in place, native burrowing rodents which normally are found in the valley grassland plant community thrive in this environment. Dominant among these are the California meadow vole (Microtis californicus) and Bottae's pocket gopher (Thomomys bottae). The meadow vole is particularly well adapted to alfalfa stands since it normally undergoes a three to four year population cycle which can occur during the existence of any one alfalfa planting. During the peak years of this cycle, mouse numbers are extremely high and act as a biological magnet for a number of mammalian, avian and reptilian predators.

Although the pocket gopher does not undergo cyclic population changes, it is the more persistent of the two rodents since the land tilling practices during the crop rotation year rarely kills this deep burrowing species. It is normally present in moderate to good numbers during the first few years of the meadow mouse cycle when that species may be relatively scarce. Thus, it affords local wild predators constant foraging opportunities throughout the life span of an alfalfa field. For both species the alfalfa provides nutrition which is usually beyond that which they could acquire under natural grassland conditions. Litter size is usually at or near maximum for these two species.

This is a unique situation where human activity in the form of alfalfa farming has actually promoted the natural food chain rather than hinder it. The alfalfa fields have long been recognized by vertebrate zoologists as highly productive "mouse factories," thereby attracting several species of predators. Vertebrate predators which have been observed in both planning areas include the black-shouldered kite (Elanus caeruleus), northern harrier (Circus cyaneus), red-tailed hawk (Buteo jamaicensis), rough-legged hawk (Buteo lagopus), red-shouldered hawk (Buteo lineatus), Swainson's hawk (Buteo swainsoni), American kestrel (Falco sparverius), great egret (Casmerodius albus), great blue heron (Ardea herodias), barn owl (Tyto alba), opossum (Didelphis virginiana), long-tailed weasel (Mustela frenata), striped skunk (Mephitis mephitis), coyote (Canis latrans), and the Pacific gopher snake (Pituophis melanoleucus catenifer).

Endangered and Threatened Plant and Animal Species

Because of the long history of land disturbance in both planning areas, essentially most native plant species have been replaced by introduced forms. The only exception of this trend are the few remaining valley oaks (Quercus lobata) which persist in the greater Grant Line area.

One animal species, the Swainson's hawk, is a state-listed threatened species. Up to the beginning of this century it was estimated that over 35,000 adult Swainson's hawks occupied the greater Central Valley area. Today, this number has been reduced to a little over 1,000. One reason for this reduction has been the loss of valley grassland to crops such as rice, cotton, corn, orchards and vineyards which afford poor rodent foraging opportunities to this avian predator. The other major factor for its decline has been the near complete loss of the once extensive mature riparian woodland habitat in which it roosts and nests. Only scattered remnants of this plant community persist today along the edges of sloughs and streams. Such areas within the known foraging range of this hawk (18 miles) in the project area includes Tom Paine Slough, Paradise Cut, Sugar Cut, and the segment of Old River near the Heinbockle Harbor area. Thus, the combination of these woodland remnants and alfalfa-dependent rodent populations in the northern Tracy agricultural community continue to support a small population of this threatened species in this area.

B. Environmental Impacts

MacArthur Planning Area

The loss of the alfalfa foraging sites for native predators, including the threatened Swainson's hawk, due to the development of this area would be a significant unavoidable impact. This is due in part to the fact that over 100 acres of prime rodent habitat would be removed from the greater Tracy agricultural area. Of further significance is that this planning area adjoins a large alfalfa field to the north which in turn borders on an irrigation ditch that joins Tom Paine Slough and Sugar Cut. These small waterways and their bank riparian vegetation serve as wildlife corridors which enable a variety of mammalian predators to move to and from alfalfa foraging sites. The presence of suitable tree nesting and roosting sites along Tom Paine Slough also suggests that the MacArthur planning area may receive heavy use by resident avian predators.

Grant Line Planning Area

The loss of approximately 600 tillable acres of actual or potential alfalfa rodent habitat in which native predators, including the threatened Swainson's hawk, forage would be a significant impact.

C. Suggested Mitigation Measures

The loss of several hundred acres of foraging habitat is a significant impact for which there is no adequate mitigation.

4.5 Cultural Resources

A. Environmental Setting

The majority of the I-205 project area is agricultural land under cultivation. A records search was conducted at the Central California Information Center of the California Archaeological Inventory at California State University, Stanislaus. The records search indicated there are no recorded archaeological or historical cultural resources recorded within the I-205 project area.

It should be noted that there are three recorded archaeological sites located within a one-mile radius of the project area. These sites are all Native American Indian burial and occupation locations.

B. Environmental Impacts

No direct significant impacts on known archaeological resources would result from implementation of the Specific Plan. However, this does not preclude the possibility that subsurface or buried materials may be present. The disturbance of subsurface or buried materials during grading and trenching activities is a potentially significant impact which can be mitigated.

C. Suggested Mitigation Measures

Due to possible area deposition, it is recommended that if buried archaeological materials are found during the course of any future grading or trenching, then work should stop immediately until a qualified archaeologist has recorded the cultural remains, examined the site, and determined that work can continue without damaging any cultural or historical resources. An archaeological monitor should then be present during future grading operations.

4.6 Jobs/Housing

A. Environmental Setting

The economy of the Tracy area has historically been based upon agribusiness and the distribution industry. From the expansion of the railroads in the late 1800s through about 1980, Tracy's economic activity was aligned with Central Valley agriculture, as evidenced by the opening of plants by such large food processors as Holly Sugar (1917), H.J. Heinz (1945), Laura Scudder's (1964) and Leprino Foods (1975).

Tracy's strategic location, 60 miles east of the Altamont Pass, led to the establishment of a U.S. military distribution center in Tracy during the Second World War. The Tracy Defense Depot remains one of the largest military commissaries on the West Coast, employing about 1,600 workers in Tracy. In the 1980s, warehousing, distribution and local service and retail firms accounted for the majority of Tracy's economic growth. This trend may be expected to continue, as wholesale and distribution firms that service Northern California markets locate facilities in Tracy to take advantage of Tracy's central position between San Francisco and Sacramento. Tracy is within 90 minutes driving time of these two major metropolitan areas, and of San Jose and Oakland, and is well located to serve the nearby East Bay growth centers of the Tri-Valley.

Tracy's household population as of January 1, 1988, has been estimated at 27,677 residents occupying 9,661 households (California Department of Finance Demographic Research Unit). Employment in the City of Tracy at that time was estimated at 8,400 employees. Assuming a factor of 1.6 employees per household, consistent with recent ABAG projection series for the nearby Tri-Valley and with GG+A interviews of recent home buyers in the Tracy area, the 9,661 households occupied in January 1988 housed an estimated 15,450 workers, an employed labor force almost 85 percent greater than the estimated total employment in the City of Tracy at that time. In other words, the city's existing households were approximately 4,400 more than the minimum estimated number needed to accommodate locally-employed workers:

8,400 employees working in Tracy/1.6 employees/household
= 5,250 households

9,661 households in Tracy - 5,250 household demand
= 4,411 "extra"

These figures indicate Tracy's current status as a source of labor to the region; like many small to medium-sized cities in the vicinity of large metropolitan areas, Tracy is currently a net contributor of housing (and, thus, labor) in the regional jobs/housing equation.

This does not mean Tracy employment centers do not employ significant numbers of workers commuting from homes located outside the city's jurisdiction. Tracy was identified as the city of residence of only about 22 percent of the employees of the Tracy Defense Depot in the summer of 1987; the remaining 78 percent commuted into Tracy from Stockton, Manteca, Modesto or other communities. However, DKS Associates indicate in their December 1988 final report of the I-580/I-205 Corridor Study Origin Destination Survey that Tracy was the destination of 32.8 percent of home-bound work trips of respondents to a survey of vehicles traveling eastbound on I-580 at the North Flynn overpass between 3:30 and 6:30 PM on May 24, 1988. Of all respondents reporting a home-bound work trip, 16 percent were reported as originating from work sites in Santa Clara County. This significant percentage of Tracy-bound commuters from the South Bay provides a measure of the current attraction of affordable Central Valley dwellings to employees of the San Francisco Bay Area.

Extensive cross-commuting, that is, the situation in which large numbers of workers travel to work in communities other than where they reside, is not unusual in an automobile-intensive economy. Ideally, a balance between jobs and housing permits the development of new dwellings affordable to the new labor force demanded by the regional economy, within feasible commute distances of the employment growth centers, so that an overall match of housing prices and household incomes can be maintained. To the degree that affordable dwellings can be built proximate to the work site, long-distance commuting can be reduced and congestion of inter-city transportation corridors may be decreased (if intra-city or "cross-town" journey-to-work patterns do not heavily burden inter-city routes).

As the population of the City of Tracy grows, it will reach threshold levels which make feasible the location and/or significant expansion of basic industries providing local employment. Local-serving and secondary industries can also be expected to increase, to supply local residents and businesses with goods and services which must presently be sought in other communities. As these trends occur, it is to be expected that the city will encompass proportionately fewer "bedroom" households supplying labor to remote work sites, and that the ratio of resident work force to local employment will decrease, that is, become more balanced than it is today. This process may at the same time exacerbate jobs/housing imbalances elsewhere in the region, which are currently being cushioned to some extent by the availability of Tracy-area dwellings. The Central Valley is currently absorbing some "overflow" of housing demand from Bay Area employment growth, but this cannot be expected to continue indefinitely; both the physical constraints of the Bay Area transportation system and competition from Central Valley economic and employment growth will work to constrain future overflow to some extent.

B. Environmental Impacts

Development within the Specific Plan can be expected to add a maximum of 1,332 dwelling units to Tracy at build-out (see Table 4.6). Assuming that at any time five percent of these dwelling units are vacant, 95 percent or 1,275 dwelling units are estimated to be occupied. These occupied dwelling units are projected to house, on average, 1.6 employees each, a figure based upon ABAG projections for Tri-Valley communities and supported by survey research of recent Tracy home buyers. Total resident employees housed within the I-205 Specific Plan area at build-out is estimated at 2,025 workers:

$$1,332 \text{ d.u.} \times .95 \text{ occupancy} \times 1.6 \text{ employees/household} = 2,025 \text{ workers}$$

At build-out, development of nonresidential land uses in the Specific Plan area are estimated to generate a direct demand for approximately 9,767 employees. This demand has been calculated using the acreages, "holding capacity," and employment densities shown in Tables 4.6 and 4.7.

For the purpose of this build-out projection, it has been assumed that land in the Urban Reserve is eventually developed in Light Industrial (business park and light manufacturing) uses, and the General Commercial Reserve in retail commercial uses. It is assumed that the Commercial Center site is built out as a major shopping center, and the General Commercial and Freeway Commercial lands are developed primarily in retail, lodging and auto mall uses. Light manufacturing and office development has been assumed for Light Industrial sites, and a mixture of retail, office, distribution and light industrial development for Service Commercial sites.

Of the 9,767 employees estimated at build-out, 3,960 are projected to work in new office space, 1,257 in new industrial space, 99 in new hotel/motel development, 3,998 in retail space, 357 in an assumed 30-acre auto mall and 96 in warehouse space. These projections assume a "maximum" build-out, and presume a very ambitious and sustained pattern of development for Tracy's future. In particular, the retail and auto mall employment estimates are based upon an assumption that development in the Specific Plan area occurs at such a pace and under such conditions that it "preempts" much of the market for regional shopping and auto malls.

Within this extremely optimistic scenario for development, housing demand from employees at build-out of nonresidential land in the I-205 Specific Plan area is estimated at 6,426 dwelling units:

TABLE 4.6
 PROJECTED MAXIMUM DWELLING UNIT
 CAPACITY OF RESIDENTIAL LAND IN
 THE I-205 STUDY AREA, AT BUILDOUT

<u>Land Use</u>	<u>Acres</u>	<u>Units/Acre</u>	<u>Maximum</u>
LDR	114.6	5.5	630
MDR	31.0	10.0	310
HDR	19.6	20.0	392
Total	165.2		1,332

TABLE 4.7

Projected Employment Capacity
of Nonresidential Land in the
I-205 Study Area, at Build-out

<u>Land Use</u>	<u>Acres</u>	<u>Projected Building Space</u>	<u>Projected Occupied Space</u>	<u>Sq. Ft. per Employees</u>	<u>Projected Employees</u>
Office	69	1,100,000	990,000	250	3,960
Industrial	141	1,676,500	1,508,850	1,200	1,257
Warehouse	12	160,500	144,450	1,500	96
Auto Mall	30	178,700	160,830	450	357
Hotel	16	187,000	168,300	1,700	99
Retail	228	1,999,000	1,799,100	450	3,998
TOTAL	495	5,301,700	4,771,530		9,767

Notes: Estimates assume 90 percent occupancy at build-out.
Holding capacity assumes .85 net-to-gross acreage ratios, and following Floor Area Ratios:

Office: 0.43
Industrial: 0.32
Warehouse: 0.37
Auto Mall: 0.16
Hotel: 0.32
Retail: 0.24

Source: David L. Gates & Associates;
Gruen Gruen + Associates.



9,767 employees/1.6 employees/household/.95 occupancy
= 6,426 d.u.

The difference between the estimated number of units required to accommodate all employees of all nonresidential space at build-out of the I-205 Specific Plan area, and the maximum estimated dwelling unit holding capacity of residential land in the project area is approximately 5,100 dwelling units:

6,426 d.u. demand - 1,332 d.u. supply = 5,094 d.u.
needed elsewhere

If full development of nonresidential lands in the project area were to occur in the manner and at the magnitudes estimated in Table 4.8, the area will provide employment opportunities for a labor force requiring at least 5,100 more housing units than the I-205 Specific Plan study area alone is projected to supply at build-out.

At least three important factors should be considered in evaluating the likely impact of the estimated difference between housing demand and housing supply presented immediately above. First, if the Specific Plan is approved and development proceeds, it is anticipated housing development and build-out of available residential land in the study area would occur at a faster pace than nonresidential development. Thus, the additional housing would be available in advance of the full development and absorption of nonresidential space. Secondly, as the city has historically supplied a "surplus" of housing, relative to its local employment base, the additional employment projected for the study area would offer local work opportunities to existing city residents.

As discussed above, in January of 1988, Tracy had approximately 4,400 net households supplying workers to work sites outside the city limits. Again assuming 95 percent occupancy, approximately 4,640 more dwelling units existed than were needed to house employees working in the city. The Tracy planning area of San Joaquin County, which comprises the city and its unincorporated vicinity in the southwest corner of San Joaquin County, had an estimated average employment of 10,215 in 1988, while 12,150 dwelling units were in existence. Using the same factors described above, 5,429 more units were available (ignoring any attempt to match householders' occupations and income levels with job opportunities) than were required for a simple numerical balance of local labor force with local employment:

10,215 employees/1.6 employees/household/.95 occupancy
= 6,720 d.u.

12,150 d.u. - 6,720 = 5,429 d.u.

TABLE 4.8
 PROJECTED JOBS/HOUSING BALANCE
 OF I-205 STUDY AREA, AT BUILDOUT

Housing Demand from Local Employees:

<u>Projected Employment</u>	<u>Employees per Household</u>	<u>Projected Occupied Households</u>	<u>Occupancy Rate</u>	=	<u>Housing Units</u>
9,767	1.6	6,104	0.95		6,426
Projected maximum allowed housing in Study Area at buildout:					1,332
Additional dwelling units needed to accommodate future workers at buildout:					5,094

Source: David L. Gates & Associates
 Gruen Gruen + Associates

It may be seen, but again solely in terms of a simple numerical exercise, that build-out of the projected nonresidential land uses of the proposed I-205 Specific Plan area would create an additional demand for labor which is slightly less than the estimated labor force currently commuting out of the Tracy planning area.

A third factor to be considered is the extreme optimism of the build-out scenario itself in terms of the pace of development; while the housing market is such that we believe the 1,332 dwelling units could be developed and occupied if the plan is approved, a significant portion of the projected retail and auto mall employment may be delayed or indefinitely postponed if interested developers are not able to move quickly to co-opt regional markets. If the proposed regional shopping center and auto mall are not feasible in the early 1990s in time to forestall competition from other communities, then much of the estimated 4,355-worker potential employment in retail and automotive sales space will not materialize soon. Full development of these land uses could, in fact, be delayed for more than 20 years, as retail development of such magnitude would not be demanded by a Tracy area market alone. As retail and automotive firm employees are 45 percent of the total employment estimate, the projected demand for housing of excess of planned residential development of the I-205 Specific Plan is an extreme-case impact.

C. Suggested Mitigation Measures

It is likely the net demand for housing by employees of a build-out I-205 Specific Plan area could be met by residential development of lands in close proximity to the study area. In addition to the 1,342 dwelling units proposed for the Specific Plan Area itself, the 84-1 Residential Specific Plan Area is anticipated to provide approximately 7,500 units at build-out.

Landowners of several large tracts of land outside the existing city limits are likely to make application to the city in the near future for General Plan amendments and annexations to allow for the development of new residential projects. It seems unlikely that potential increases in local employment from development and absorption of the nonresidential land uses proposed for the I-205 Specific Plan area will of themselves create a housing demand which would exceed future Tracy area housing supply. However, this will depend upon whether the development of the necessary water and wastewater treatment and delivery facilities can be funded and built accordingly.

4.7 Traffic

A. Environmental Setting

Street Network

The study areas are adjacent to I-205, in the vicinity of Grant Line Road and MacArthur Drive. The surface streets are characterized by a grid pattern. Major roadways serving the study area include I-205, Grant Line Road, 11th Street, Corral Hollow Road, Tracy Boulevard, Holly Drive, MacArthur Drive and Clover Road.

Interstate 205 is a four-lane freeway which connects I-580 in east Alameda County with I-5 in San Joaquin County northeast of the City of Tracy. I-205 runs just north of the Tracy urban area, and primarily serves interregional recreation and commuter traffic between the San Francisco Bay Area and the Stockton-Central Valley Area. Three I-205 diamond interchanges at Grant Line Road, Tracy Boulevard and MacArthur Drive fall within the study area. The interchange at 11th Street only serves movements to/from the west on I-205.

Grant Line Road is a major two-lane, east-west arterial street which serves Tracy through connections with I-205, Corral Hollow Road, Tracy Boulevard and MacArthur Drive. It is one of two principal east-west thoroughfares in the city. This County Road (J4) widens to four lanes between O'Hara Drive and MacArthur Drive.

11th Street (Business 205) is a major four-lane, east-west arterial street which serves downtown Tracy south of Grant Line Road. It functions as a parallel route to I-205 and joins I-5 in the northeast corner of the City of Tracy.

Corral Hollow Road is a major two-lane, north-south arterial street across Larch Road, Byron Road, Grant Line Road and 11th Street. It connects with Tracy Boulevard about 1.5 miles north of I-205. It also extends south through the city, passes the I-580 interchange and curves west into Alameda County.

Tracy Boulevard is a north-south arterial street east of Corral Hollow Road. It extends north of the city as a two-lane road (to Highway 4 midway between Brentwood and Stockton). South of I-205, it widens to four lanes to accommodate traffic in downtown Tracy and continues south to terminate at I-580.

Holly Drive is a two-lane, north-south collector road which runs east of Tracy Boulevard and intersects with Grant Line Road and 11th Street.

MacArthur Drive is a two-lane, north-south arterial street which runs east of Holly Drive and intersects with I-205, Grant Line Road and 11th Street. MacArthur Drive is not connected between Grant Line Road and East 11th Street.

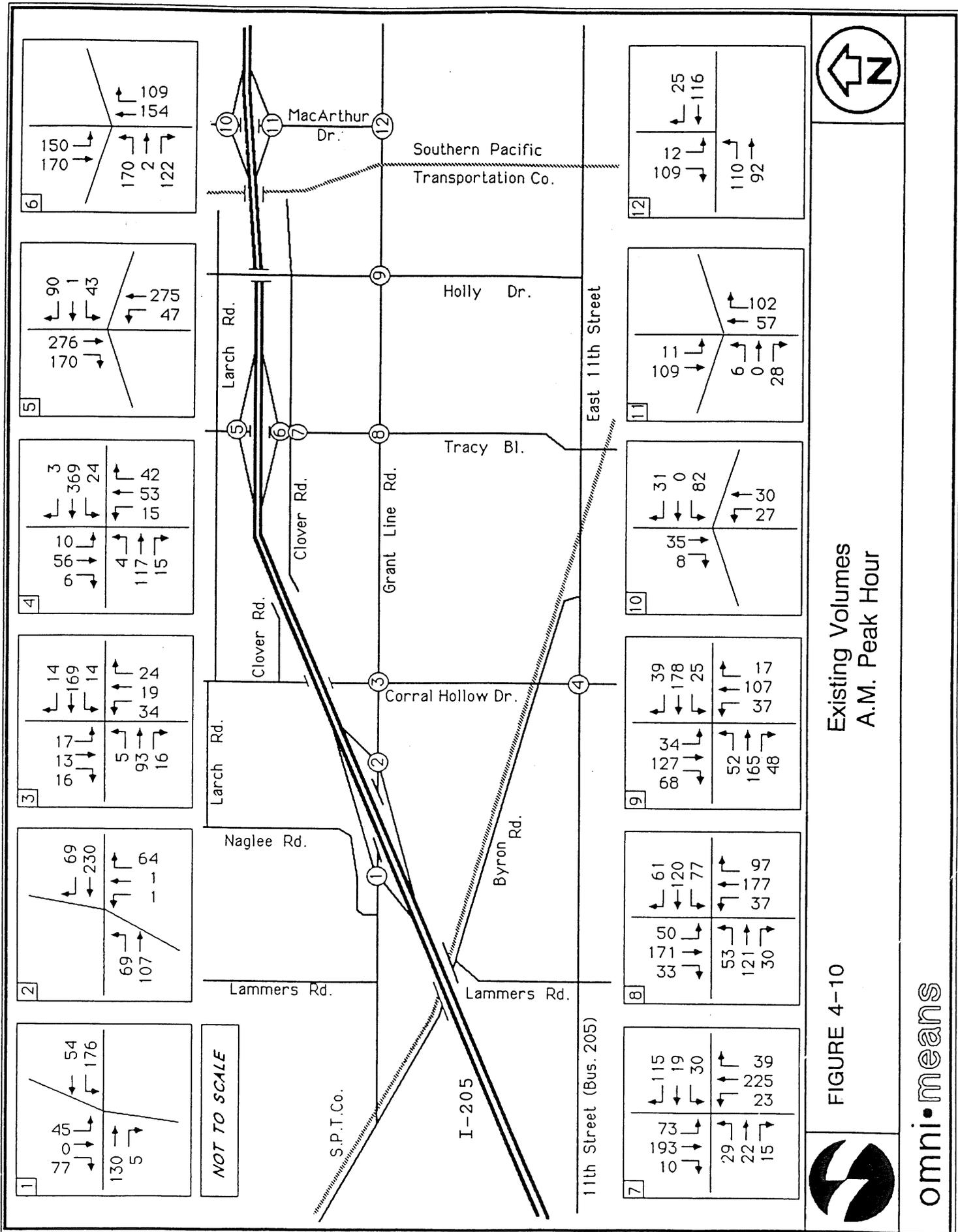
Clover Road is a two-lane, east-west frontage road adjacent to I-205. It intersects with Corral Hollow Road, Tracy Boulevard and Holly Drive. This collector road is not connected between Corral Hollow Road and Tracy Boulevard.

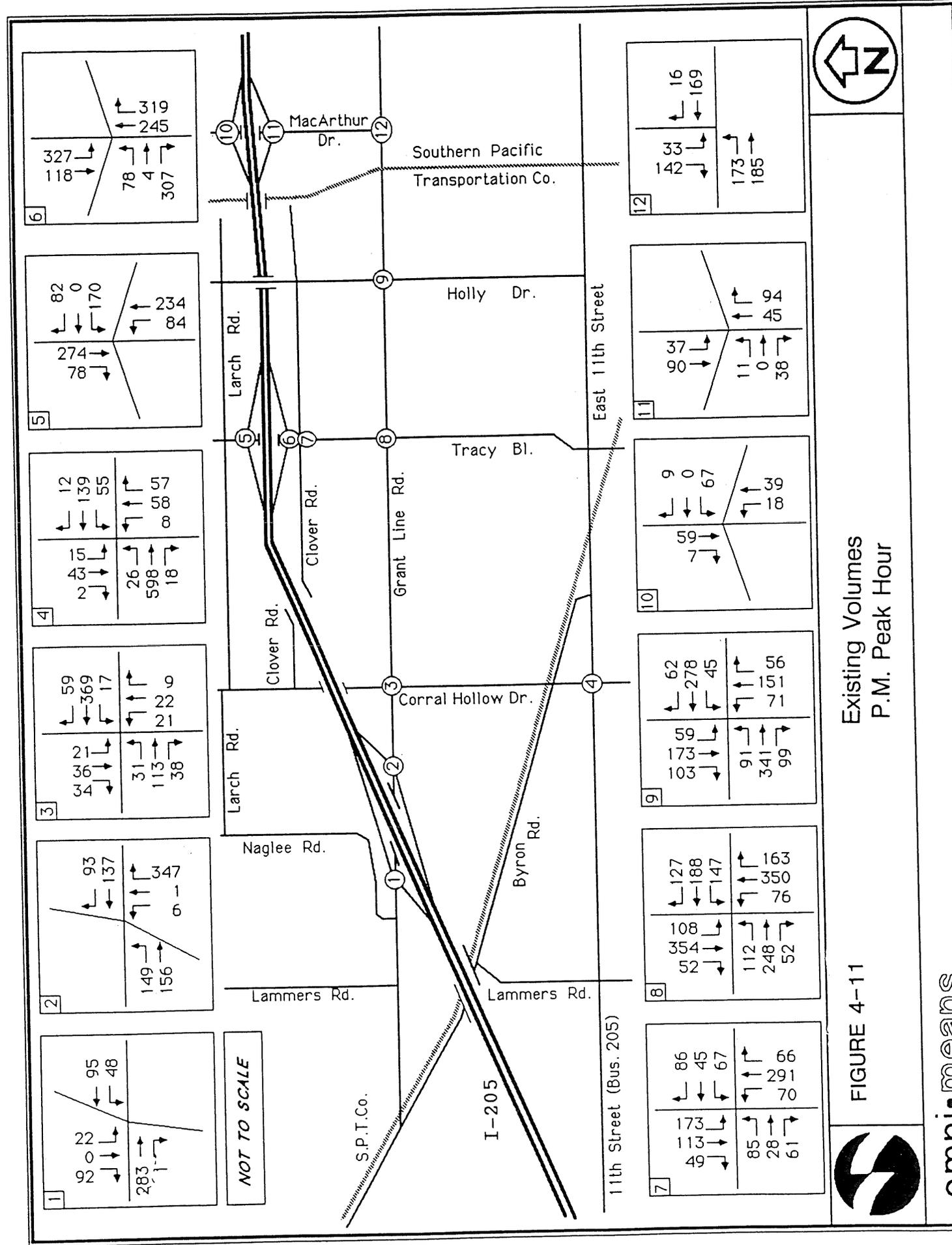
Traffic Flow Conditions

AM and PM peak hour turning movement counts have been evaluated at 12 key intersections to establish the existing operating conditions.¹ Intersections were first analyzed considering the actual traffic controls. Stop-sign controlled locations were analyzed by using the Highway Capacity Manual: Special Report 209.² The three signalized intersections were analyzed by using Circular 212 Planning Method.³ All intersections were then analyzed assuming signalized control to provide for a common base for assessing future conditions. The common base provides a representation of the overall intersection delay. (Traffic calculations are on file with the City of Tracy.)

Using existing traffic control, vehicles on the side street approaches to four of the stop-sign controlled intersections experience very long delays equivalent to Level of Service (LOS) "E" to "F" (during at least one of the peak hours). (See Appendix F for Level of Service Concept and Definitions.) These locations are at Grant Line/I-205 eastbound ramps, 11th/Corral Hollow, Tracy/I-205 westbound ramps and Tracy/I-205 eastbound ramps. At each of these four locations, through vehicles on the main approaches are not required to stop and hence experience minimal delays. The remaining five stop-sign controlled locations experience stable conditions (LOS "C" or better). All three signalized intersections are operating at very stable conditions (LOS "A").

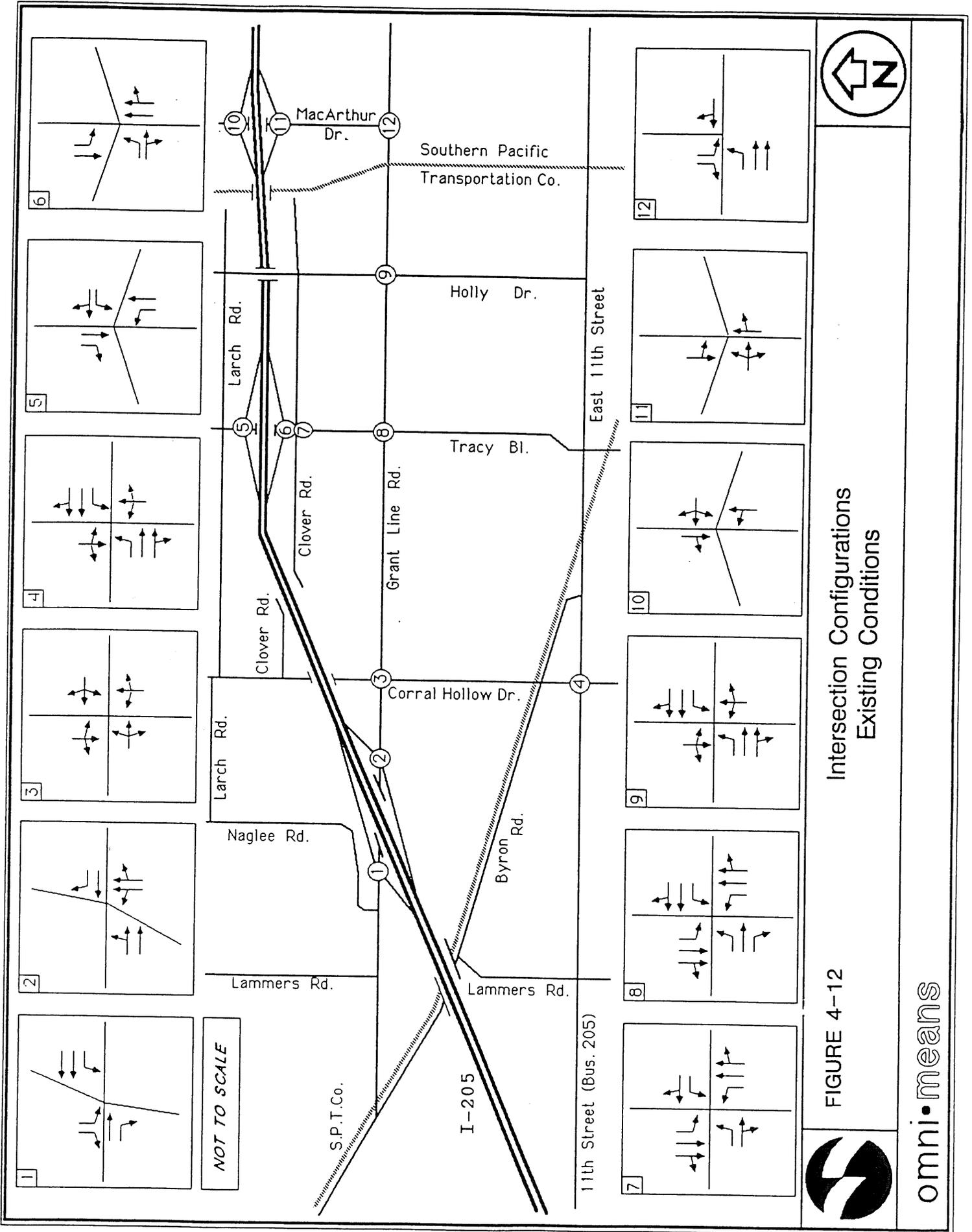
With signal control assumed at the stop-sign controlled intersections, the overall operating conditions would be stable (LOS "B" or better). Table 4.9 summarizes the existing LOS and V/C ratio results under both actual and "common base conditions." Common base conditions refers to the assumed signalization of all existing intersections which are currently not signalized. This is done for comparing peak hour LOS at intersections. (It is difficult to compare non-signalized LOS with signalized LOS.) See Figures 4-10 and 4-11 for existing peak hour volumes and Figure 4-12 for intersection configurations.





1

92	22	95	48
↓	↓	↓	↓
113	↓	137	↓
↓	↓	↓	↓
283	↓	347	6
↓	↓	↓	↓
49	283	156	↓
↓	↓	↓	↓
173	↓	147	↓
↓	↓	↓	↓
85	↓	66	↓
↓	↓	↓	↓
28	291	70	↓
↓	↓	↓	↓
61	↓	76	↓
↓	↓	↓	↓
112	↓	163	↓
↓	↓	↓	↓
248	↓	350	↓
↓	↓	↓	↓
52	↓	56	↓
↓	↓	↓	↓
108	↓	71	↓
↓	↓	↓	↓
354	↓	151	↓
↓	↓	↓	↓
59	↓	45	↓
↓	↓	↓	↓
173	↓	56	↓
↓	↓	↓	↓
103	↓	71	↓
↓	↓	↓	↓
62	↓	94	↓
↓	↓	↓	↓
278	↓	45	↓
↓	↓	↓	↓
45	↓	38	↓
↓	↓	↓	↓
9	↓	0	↓
↓	↓	↓	↓
67	↓	39	↓
↓	↓	↓	↓
59	↓	18	↓
↓	↓	↓	↓
7	↓	0	↓
↓	↓	↓	↓
37	↓	94	↓
↓	↓	↓	↓
90	↓	45	↓
↓	↓	↓	↓
11	↓	0	↓
↓	↓	↓	↓
33	↓	173	↓
↓	↓	↓	↓
142	↓	185	↓
↓	↓	↓	↓
16	↓	169	↓
↓	↓	↓	↓
327	↓	319	↓
↓	↓	↓	↓
118	↓	245	↓
↓	↓	↓	↓
78	↓	307	↓
↓	↓	↓	↓
4	↓	4	↓
↓	↓	↓	↓
307	↓	84	↓
↓	↓	↓	↓
82	↓	234	↓
↓	↓	↓	↓
0	↓	84	↓
↓	↓	↓	↓
170	↓	82	↓
↓	↓	↓	↓
274	↓	82	↓
↓	↓	↓	↓
78	↓	0	↓
↓	↓	↓	↓
12	↓	57	↓
↓	↓	↓	↓
139	↓	58	↓
↓	↓	↓	↓
55	↓	8	↓
↓	↓	↓	↓
15	↓	26	↓
↓	↓	↓	↓
43	↓	598	↓
↓	↓	↓	↓
2	↓	18	↓
↓	↓	↓	↓
59	↓	22	↓
↓	↓	↓	↓
369	↓	0	↓
↓	↓	↓	↓
17	↓	21	↓
↓	↓	↓	↓
21	↓	38	↓
↓	↓	↓	↓
34	↓	113	↓
↓	↓	↓	↓
36	↓	31	↓
↓	↓	↓	↓
34	↓	113	↓
↓	↓	↓	↓
93	↓	347	↓
↓	↓	↓	↓
137	↓	6	↓
↓	↓	↓	↓
149	↓	156	↓
↓	↓	↓	↓



Intersection Configurations
Existing Conditions

FIGURE 4-12



omni•means

TABLE 4.9
LOS & V/C SUMMARY
EXISTING CONDITIONS

No.	Int. N-S Street	E-W Street	LOS & V/C					
			Existing		Control		Assumed Signalization	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	I-205 WB Ramps	Grant Line	C	-	C	-	A 0.27	A 0.30
2	I-205 EB Ramps	Grant Line	C	-	E	-	A 0.24	A 0.42
3	Corral Hollow	Grant Line	A	-	B	-	A 0.17	A 0.37
4	Corral Hollow	West 11th	C	-	E	-	A 0.20	A 0.33
5	Tracy	I-205 WB Ramps	D	-	E	-	A 0.28	A 0.35
6	Tracy	I-205 EB Ramps	E	-	F	-	A 0.33	B 0.67
7	Tracy	Clover	A	0.27	A	0.41	A 0.27	A 0.41
8	Tracy	Grant Line	A	0.28	A	0.55	A 0.28	A 0.55
9	Holly	Grant Line	A	0.29	A	0.45	A 0.29	A 0.45
10	MacArthur	I-205 WB Ramps	A	-	A	-	A 0.12	A 0.11
11	MacArthur	I-205 EB Ramps	A	-	A	-	A 0.14	A 0.15
12	MacArthur	Grant Line	B	-	C	-	A 0.24	A 0.33

Legend: LOS - Level of Service (See Appendix E)
V/C - Volume to capacity ratio

Existing Control = Intersections analyzed according to current traffic control. LOS for stop-sign controlled locations represents side street operation only. V/C ratios not available for stop-sign controlled intersections.

Assumed Signalization = Assumes all intersections to have signal control. LOS shown better represents overall delays.

Freeway Ramp Conditions

Existing LOS have been calculated at six on-ramp locations in the project study area. These calculations have been based on existing ramp volumes as well, one-way peak hour volumes on I-205. Using the 1985 Highway Capacity Manual, these LOS calculations are shown in Table 4.10.

As shown in Table 4.10, all six I-205 on-ramps in the project study area are experiencing some congestion during one of the peak hours (LOS "D" to "F"). In all cases, the on-ramps experience congestion problems during peak directional traffic flow on I-205. Commute traffic in the study area has a peak westbound flow during the AM peak hour and a peak eastbound flow during the PM peak hour.⁴

B. Future Base Conditions

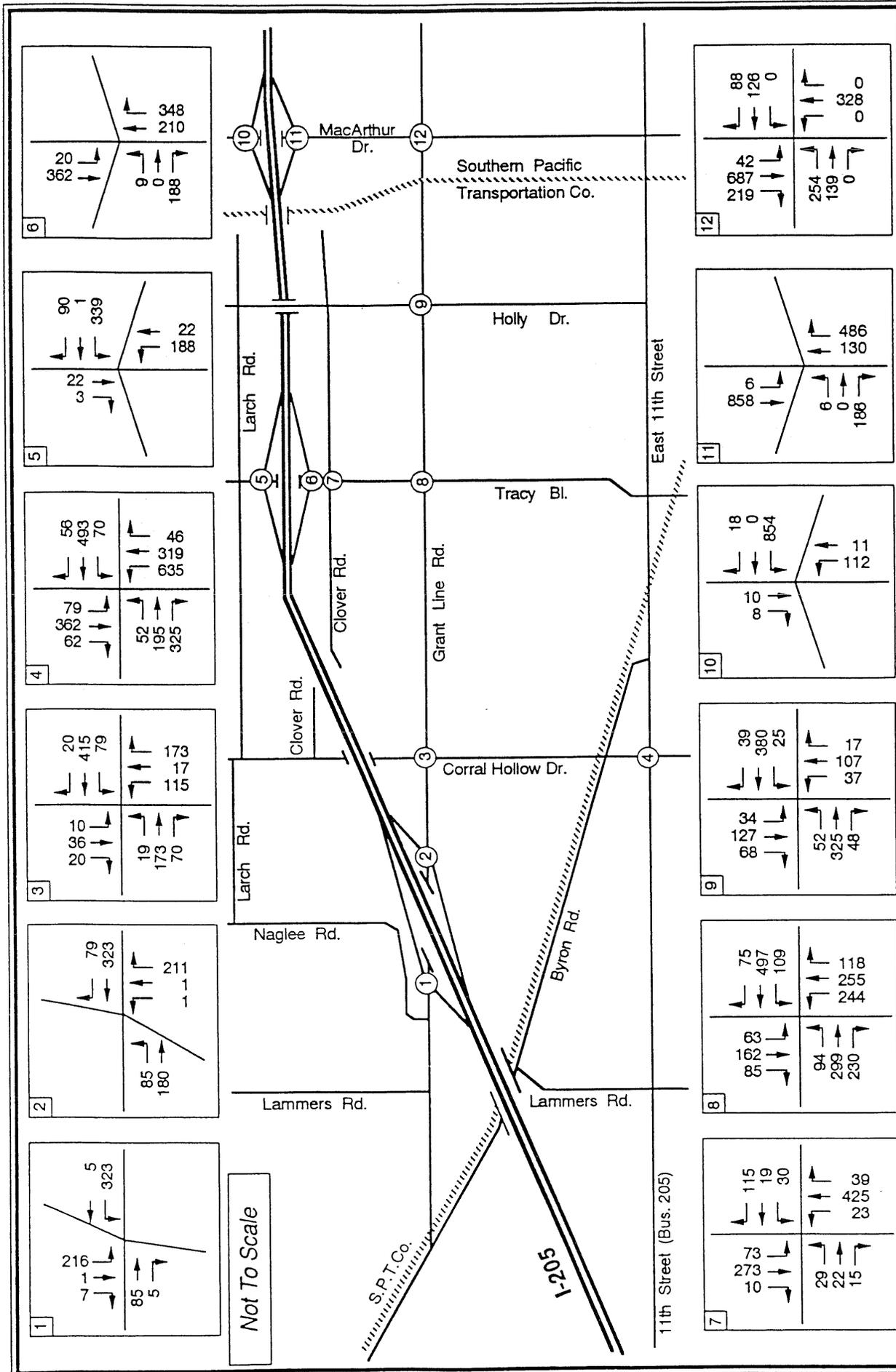
Land Use Development

The future base conditions represent buildout of the cumulative developments identified in the Tracy Specific Plans. The Phase I Residential Specific Plan (Assessment District 84-1)⁵ include residential dwelling units and community facilities. Residential uses are further categorized under low density (4,642 units), medium density (2,678 units) and high density (429 units). Community Facilities include commercial use (53 acres) and school (167 acres). Buildout of Phase I Residential Specific Plan would be complete in 1995. The commercial portion of the plan is expected to be completed in 10 years. Most (70 percent) of the areas designated under the Residential Plan are located between Corral Hollow Road and Tracy Boulevard. All projects are located south of I-205.

In addition to future base development from Tracy Specific Plans, six additional projects have added to future base traffic at the city's request. These projects are either approved or proposed at the time of this study and are listed as follows:

- A. Seecon Annexation - 475 single-family dwelling units.
- B. Kaufman & Broad GPA - 148 single-family dwelling units, 198,198 square feet of General Commercial.
- C. Tracy Shopping Center - 54,800 square feet of General Commercial.
- D. Bogetti Properties
- E. Boswell Properties 25 acres of General
- F. Tracy/Grant Line Properties Commercial

Where possible, AM and PM peak hour vehicle trips were taken directly from previous studies conducted for the projects.^{6,7,8} In the case of Bogett, Boswell, and Tracy/Grant Line properties, vehicle trips were generated using the same trip rates and distributions described for the proposed project. It should be noted that all six projects are located between I-205 and West 11th Street in the Grant Line Road-Corral Hollow Road area. Peak hour vehicle trips from these six projects have been added to future base traffic shown in Figures 4-13 and 4-14.



Future Base Volumes
A.M. Peak Hour



FIGURE 4-13

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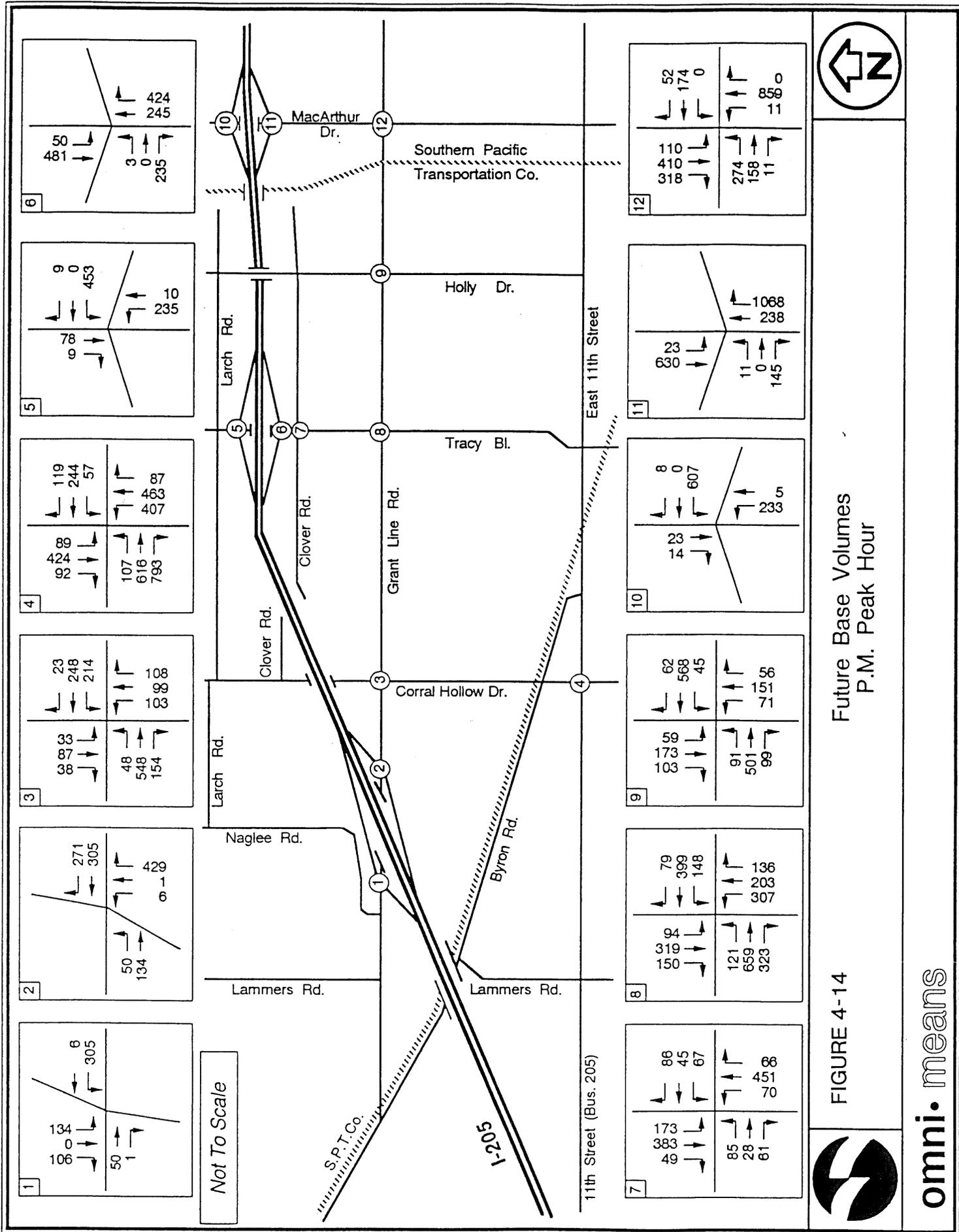


TABLE 4.10
EXISTING I-205 ON-RAMP MERGE LOS*

LOCATION	EXISTING	
	AM LOS	PM LOS
I-205 WB On-Ramp/Grant Line	F	B
I-205 EB On-Ramp/Grant Line	B	F
I-205 WB On-Ramp/Tracy	E	B
I-205 EB On-Ramp/Tracy	C	F
I-205 WB On-Ramp/MacArthur	D	A
I-205 EB On-Ramp/MacArthur	B	E

* TRB, Highway Capacity Manual - Special Report 209, 1985.

The Phase I Industrial Specific Plan⁹ includes 0.60 million square feet of office space, 4.97 million square feet of industrial space, and 5.96 million square feet of warehousing space. It is expected to be completed in 20 years. Approximately 45 percent of the area designated under the Industrial Plan is concentrated near MacArthur Boulevard in the vicinity of Grant Line Road and 11th Street. The remaining 55 percent is located near Tracy Boulevard in the vicinity of Valpico Road and Linne Road. Through discussions with city staff, 50 percent of the Phase I Industrial Specific Plan land uses have been assumed for future base trip generation.

The city has determined that Phase II development would not proceed independently of a general plan revision.¹⁰ For this reason, traffic impacts relating to Phase II development would be addressed in the future general plan revision and are, therefore, not addressed in this analysis.

Travel Forecasts

This analysis' traffic projections for future residential and industrial developments are consistent with those used in the Specific Plans. Trip distribution assumed for the different land uses are as follow:

	<u>Residential</u>	<u>Retail/ Industrial</u>
I-205 (east to/from Stockton/Manteca)	10%	25%
I-5 (south to/from Patterson/Modesto)*	5%	15%
I-205 (west to/from Alameda County)	25%	10%
Internal to/from Tracy	60%	50%

* It is assumed that I-205 would serve two-thirds of the retail/industrial trips to/from Patterson/ Modesto. The remaining one-third would use I-580 via MacArthur Drive.

The residential trip distribution suggests that local residents would constitute the majority (60 percent) of the future employment in Tracy. Twenty-five percent of the remaining work force would live in Alameda County and Contra Costa County. Only 15 percent of the work force would live east of Tracy in San Joaquin County and Stanislaus County. The industrial trip distribution has a higher portion of trips travelling to/from outside the city limits. (See Figures 4-13 and 4-14 for Future Base Volumes AM and PM Peak.)

Planned Improvements

Planned future improvements within the study area have been compiled from several sources including the City of Tracy, San Joaquin County Council of Government (SJCCOG) and Caltrans. Most of the improvements have not received commitment for actual construction, but represent a compilation of the latest planning efforts.

City Improvements

Significant street improvements currently planned within the study area are recommended in the Tracy Specific Plans.^{11,12} They are summarized below:

Roadway Standards

The circulation elements of the specific plans have been designed to meet future traffic demands and to link with the city's existing street network. It is noted that these design standards are current with the city. With respect to future I-205 corridor development, street right-of-ways may require enlargement for future expansion. The design standards are as follows:¹³

Major arterial:	four-lane, 80-foot travel way including 16-12 foot median or left-turn lane.
Minor arterial:	four-lane, 64-foot travel way including 14-foot median or 2-way left-turn lane.
Major collector:	two-lane, 48-foot travel way including 16-foot median or left-turn lane.
Minor collector:	two-lane, 36-foot travel way.
Residential street:	two-lane, 36-foot travel way.
Industrial Collector:	four-lane, 44-foot travel way. ¹⁴

Roadways

Grant Line Road - Upgrade to major arterial status from I-205 to Chrisman Road (east of the study area).¹⁵ Construction is currently underway.

Corral Hollow Road - Upgrade to major arterial status from Grant Line Road to Schulte Road (south of the study area), and also to minor arterial status north of Grant Line Road.¹⁶

MacArthur Drive - Widen to six lanes from I-205 to Grant Line Road, and extend it as a new six-lane roadway south of Grant Line Road to East 11th Street.¹⁷

Intersections

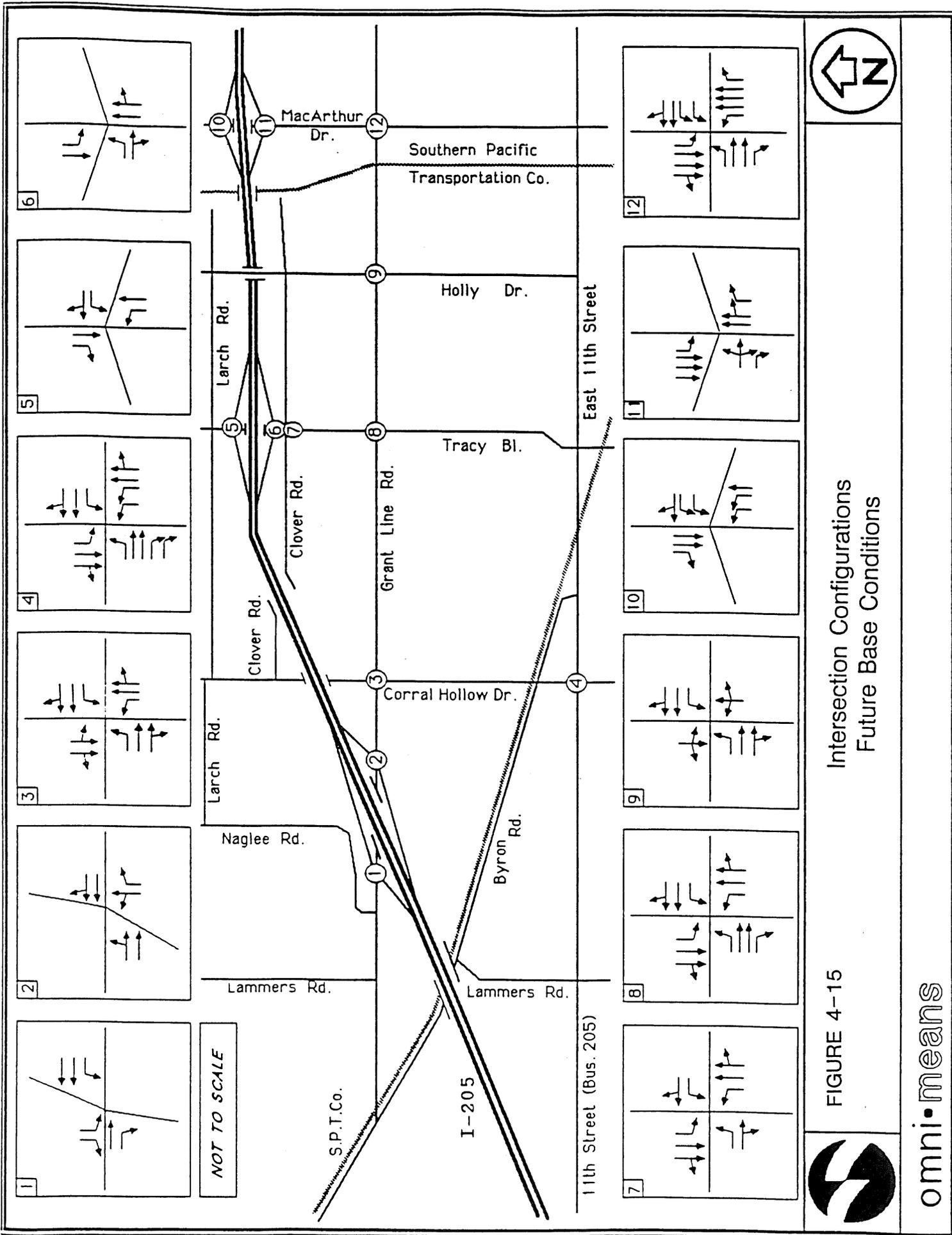
Many of the major street improvements cited in previous plans would also involve intersection modifications. The intersections to be modified are listed as follows:

- Grant Line/I-205 eastbound ramps
- Grant Line/Corral Hollow
- Grant Line/Tracy
- West 11th/Corral Hollow
- MacArthur/I-205 westbound ramps
- MacArthur/I-205 eastbound ramps
- MacArthur/Grant Line

All intersection improvements (see Figure 4-15) were incorporated in the future street network in establishing the "future base" operating conditions. Traffic volumes at all nine studied stop-sign controlled intersections would exceed the minimum level at which traffic signalization is warranted.

Public Facilities Improvement Fees

Public facilities improvement fees generated by future development would be determined on the basis of potential traffic impacts of individual projects. As specified in the 84-1 Tracy Specific Plans, one method for funding circulation improvements would be for the project sponsor to enter into an "improvement agreement" with the city. In this way the developer would assist in funding such improvements as the grading and paving of streets, construction of curbs and sidewalks, railroad crossings, street



Intersection Configurations
Future Base Conditions

FIGURE 4-15



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trees, street lighting, and street landscaping. Another method of funding circulation improvements would be to charge a one-time development fee on new construction at the time development takes place. Such improvement fees would provide for part of the total cost of the planned street improvements.

I-205 Improvements

The San Joaquin County Council of Governments has recently adopted the I-205 Capacity Study Report¹⁸ which examines the future need of freeway capacity on I-205 under growing population and travel demands.

Based on traffic projections and capacity needs, the I-205 corridor is divided into three segments. Segment I (rural) is from the I-580 junction in Alameda County to West 11th Street in San Joaquin County. Segment II (urban) is from West 11th Street to MacArthur Drive in the City of Tracy. Segment III (rural) is from MacArthur Drive to the I-5 junction in San Joaquin County. Segment I will continue to carry the heaviest volumes in the future.¹⁹

Previous traffic projections used to substantiate these planned improvements were shown to have severely underestimated the current growth trends. At the Alameda County line, the revised daily volume projections on I-205 for 1990 is 74 percent higher than the forecast previously made in 1982. Similarly, the revised projections for year 2000 is 92 percent higher.²⁰

The Tracy Specific Plans and I-205 Capacity Study Report²¹ call for I-205 expansion to eight travel lanes (ultimately) within the existing right-of-way. However, no funding is committed for any widening beyond the current four lane section. Improvements to segments I and II of I-205 will be given priority over segment III. Actual road widening may need to be completed in stages depending on the funding mechanism. With six travel lanes, I-205 would be expected to reach LOS "D" by 1992, LOS "E" by 1997, and LOS "F" by 2000. This indicates the need for further widening before year 2000.

Other Caltrans Improvements

One project would involve upgrading Byron Road to expressway status (State Route 239)²² from the City of Brentwood to I-205 near the I-580 junction. State Route 239 will be improved to a 2-lane expressway on the entire 17 miles of Byron Road with right-of-way provision for four travel lanes (ultimately) on the 12-mile section within Contra Costa County. The proposed alignment would provide a link between the I-580 and the East Contra Costa area.

A similar facility would be the extension of State Route 84²³ north of I-580 in the City of Livermore. The project would include a four-lane freeway or expressway with right-of-way provision for six travel lanes (ultimately). The alignment would be generally parallel to the existing Vasco Road and serve as a regional connection to the proposed Highway 4 bypass west of Brentwood.

These improvements, once implemented, could measurably change the travel patterns between the central San Joaquin Valley and the east Contra Costa area including Brentwood, Oakley, Antioch, and Pittsburg.

C. Environmental Impacts of Future Base Traffic Impacts

Traffic generated by future developments were added to the existing volumes to establish the future base conditions. Levels of service and volume/capacity ratios were also recalculated for all studied intersections. Modifications to existing roadways and intersections (outlined above) were incorporated in the future street network.

Peak Hour Flow Conditions

Under future base conditions, all intersections would operate at stable conditions (LOS "C" or better) during both peak hours. The impacts of future peak hour traffic demands would be partly offset by the planned improvements for the future street network. It is noted that travel demands during the PM peak hour would be generally much higher than the demands in the AM peak hour. See Tables 4.11 and 4.12 for LOS and V/C ratio summary.

Freeway Ramp Conditions

Future base conditions for the I-205 corridor have been based on discussions with Caltrans Staff.²⁴ Specifically, PM peak hour mainline volumes along I-205 were derived from Caltrans model projections for the year 2020. These future mainline projections reveal that existing traffic would likely double with cumulative growth in the Tracy area.

Future base LOS have been calculated for the six on-ramp locations and are shown in Table 4.13. All merge locations would be functioning at congested levels (LOS "D"-"F") with the exception of the I-205 WB on-ramp/Tracy. The merge LOS here would be functioning at LOS "C."

TABLE 4.11
LOS AND V/C RATIOS (AM PEAK HOUR)
FUTURE BASE CONDITIONS

Int. No.	N-S Street	E-W Street	LOS & V/C	
			Existing	Future Base
1	I-205 WB Ramps	Grant Line	A 0.27	A 0.44
2	I-205 EB Ramps	Grant Line	A 0.24	A 0.34
3	Corral Hollow	Grant Line	A 0.17	A 0.28
4	Corral Hollow	West 11th	A 0.20	B 0.65
5	Tracy	I-205 WB Ramps	A 0.28	A 0.37
6	Tracy	I-205 EB Ramps	A 0.33	A 0.39
7	Tracy	Clover	A 0.27	A 0.31
8	Tracy	Grant Line	A 0.28	A 0.53
9	Holly	Grant Line	A 0.29	A 0.36
10	MacArthur	I-205 WB Ramps	A 0.12	A 0.38
11	MacArthur	I-205 EB Ramps	A 0.14	A 0.28
12	MacArthur	Grant Line	A 0.24	A 0.48

TABLE 4.12
LOS AND V/C RATIOS (PM PEAK HOUR)
FUTURE BASE CONDITIONS

Int. No.	N-S Street	E-W Street	LOS & V/C	
			Existing	Future Base
1	I-205 WB Ramps	Grant Line	A 0.30	A 0.34
2	I-205 EB Ramps	Grant Line	A 0.42	A 0.48
3	Corral Hollow	Grant Line	A 0.37	A 0.50
4	Corral Hollow	West 11th	A 0.33	B 0.62
5	Tracy	I-205 WB Ramps	A 0.35	A 0.51
6	Tracy	I-205 EB Ramps	B 0.67	A 0.51
7	Tracy	Clover	A 0.41	A 0.43
8	Tracy	Grant Line	A 0.55	C 0.74
9	Holly	Grant Line	A 0.45	A 0.55
10	MacArthur	I-205 WB Ramps	A 0.11	A 0.33
11	MacArthur	I-205 EB Ramps	A 0.15	A 0.44
12	MacArthur	Grant Line	A 0.33	A 0.57

TABLE 4.13
FUTURE BASE I-205 ON-RAMP LOS: MERGE*

LOCATION	FUTURE BASE	
	AM LOS	PM LOS
I-205 WB On-Ramp/Grant Line	D	F
I-205 EB On-Ramp/Grant Line	D	F
I-205 WB On-Ramp/Tracy	F	C
I-205 EB On-Ramp/Tracy	D	F
I-205 WB On-Ramp/MacArthur	F	E
I-205 EB On-Ramp/MacArthur	E	F

* TRB, Highway Capacity Manual - Special Report 209, 1985.

Project Trip Generation

Trip generation rates for each land use category were derived from a number of sources and these rates considered the size, intensity and purpose of use in each Planning Area. These sources include Institution of Transportation Engineers (ITE),²⁵ San Diego Association of Government (SANDAG),²⁶ Caltrans,²⁷ City of San Jose,²⁸ and a similar mixed use project assessed for a Cordelia area EIR.²⁹ Trip rates adopted for this analysis are listed in Table 4.14 and a comparison of these sources is included as an appendix.

The rates for freeway commercial (FC) designation reflect mixed use of quality restaurants, fast food restaurants, gas stations, motel/hotels, and truck stops. Similarly, rates for general commercial (GC) reflect the mixed use of department stores, specialty shops, recreational facilities, medical clinics, and offices. Rates for service commercial (SC) reflect potential mixed use of banking/financial services, auto service/supplies, equipment sales/rental, auto dealerships, mini-storage, and building material stores. Lastly, rates for a regional mall typically reflect mixed use of department stores, general/service retail, specialty shops, quality restaurants, fast food stores, recreational facilities, cinema, bank/financial services. Consistent with ITE research, about 30 percent of the mall traffic would represent "pass-by" trips merely diverted from the adjacent

streets and highways. Rates for urban reserve were the same as for Light Industrial (LI) and general commercial reserve rates were the same as for general commercial.

The Grant Line North Planning Area would generate a total of 98,300 daily trips with 3,900 trips (2,500 in, 1,400 out) occurring during the AM peak and 8,600 trips (3,700 in, 4,900 out) during the PM peak hour. The Grant Line South Planning Area would generate a total of 24,100 daily trips with 1,200 trips (400 in, 800 out) during the AM peak hour and 2,100 trips (1,200 in, 900 out) during the PM peak hour).

The MacArthur Planning Areas would generate a total of 23,500 daily trips with 1,300 trips (900 in, 400 out) during the AM peak hour and 2,100 trips (800 in, 1,300 out) occurring in the PM peak hour.

See Tables 4.15 to 4.18 for a trip generation summary.

Project Trip Distribution

The trip generation projections for all of the commercial land uses have been adjusted to reflect the fact that some retail trips are merely attracted from existing traffic on the adjacent streets. The incidence of these "pass-by" trips has been well documented through ITE research. Based upon this research, about 40 percent of the general commercial (does not include shopping mall) and service commercial traffic has been considered pass-by trips. This factor should be particularly true for these retail commercial developments near the freeway and major city streets and in close proximity to other land uses.

All pass-by trips destined for the Planning Areas were assigned to the access ramps and adjacent streets. A pass-by trip is one in which the immediate destination is just a secondary part of the primary trip, such as work-to-shopping-to-home. All freeway commercial (FC) trips were assumed freeway bounded and hence pass-by trips. No "new" project trips would be generated by FC use.

Trip distributions for all other land use categories closely resemble those discussed in Section B. Project traffic is typically composed of new trips and pass-by trips. All traffic generated by areas designated for light industrial (LI) and urban reserve (UR) would be employment oriented and hence new trips.

Approximately 25 percent of the traffic is assumed to gain access to/from the Grant Line North Planning Area through Clover Road and Larch Road (north of I-205). Final trip assignment on the future circulation network also depends on the parcel location, site access provisions, intersection geometry and intersection configurations.

Trip distribution for the regional mall would differ slightly from other proposed GC land uses. Distribution for the mall has been determined as follows:

- 55% on I-205 (east to/from San Joaquin County areas)
- 10% on I-205 east (via Tracy Boulevard and MacArthur Drive) to/from central and east Tracy
- 20% on I-205 west to/from Alameda County
- 10% on Corral Hollow Road to/from South Tracy
- 5% on Grant Line (west to/from East Contra Costa County)

Project Site Circulation

Beyond the future base network, roadway improvements planned as part of the project alternative design are as follows (consistent with the roadway standards listed in Section B above):

Grant Line Planning Area .

I-205/Grant Line Interchange

Modify the existing interchange into a partial cloverleaf configuration with loop on-ramps in the southeast and northwest quadrants. The eastbound off-ramp would be located just east of the loop-ramp while the eastbound on-ramp would be aligned to meet Toste Road. Westbound vehicles would have two sets of on/off ramps. One set of off-ramps would provide access to Grant Line Road. These would be located south of Grant Line Road and serve traffic to/from the arterial rather than shopping mall traffic. Naglee Road would be realigned to form Street "C" (a major arterial) and meet the southbound on/off ramps to form a full access four-way intersection. New westbound on/off ramps would connect to Street "C" north of Grant Line Road to provide major freeway access to/from the shopping mall.³⁰

North Planning Area

Construct "A" Street and "C" Street as major arterial streets. "D" Street would be constructed as a major collector north of "A" street and connect with Larch Road. Construct "B" Street as a minor arterial to travel between Streets "A" and "C." Realign Naglee Road to form Street "C" and align with new southbound off-ramps.

South Planning Area

Construct Orchard Parkway as a major collector street from Grant Line Road to Lowell Avenue. Construct Toste Road as a major arterial street south of Grant Line Road reducing this roadway to minor arterial and major collector streets as per the Specific Plan

The partial cloverleaf interchange would facilitate traffic flow by eliminating heavy left-turn volumes at on-ramp junctions.³¹ In the North Planning Area, the street network departs from the existing grid patterns to "loop" streets to better serve development while responding to the alignment of I-205 and the PG&E Transmission Easement.

Improve Grant Line Road to a major arterial between Tracy Boulevard and Street "A." Improve to major collector westerly.

In the South Planning Area, the Southern Pacific rail line which runs parallel to Byron Road presents a barrier to crosstown traffic and dictates the street layout and land use in the immediate vicinity. Additional railroad crossing along Byron Road would be tenuous and hence site access within the South Planning Area would occur through Corral Hollow Road or Grant Line Road. This constraint is further complicated by the planning goal of not mixing traffic from commercial and residential land use.

MacArthur Planning Area

The North Planning Area has access to the MacArthur interchange through Arbor Avunue which runs parallel to I-205 along the northern edge of the property.

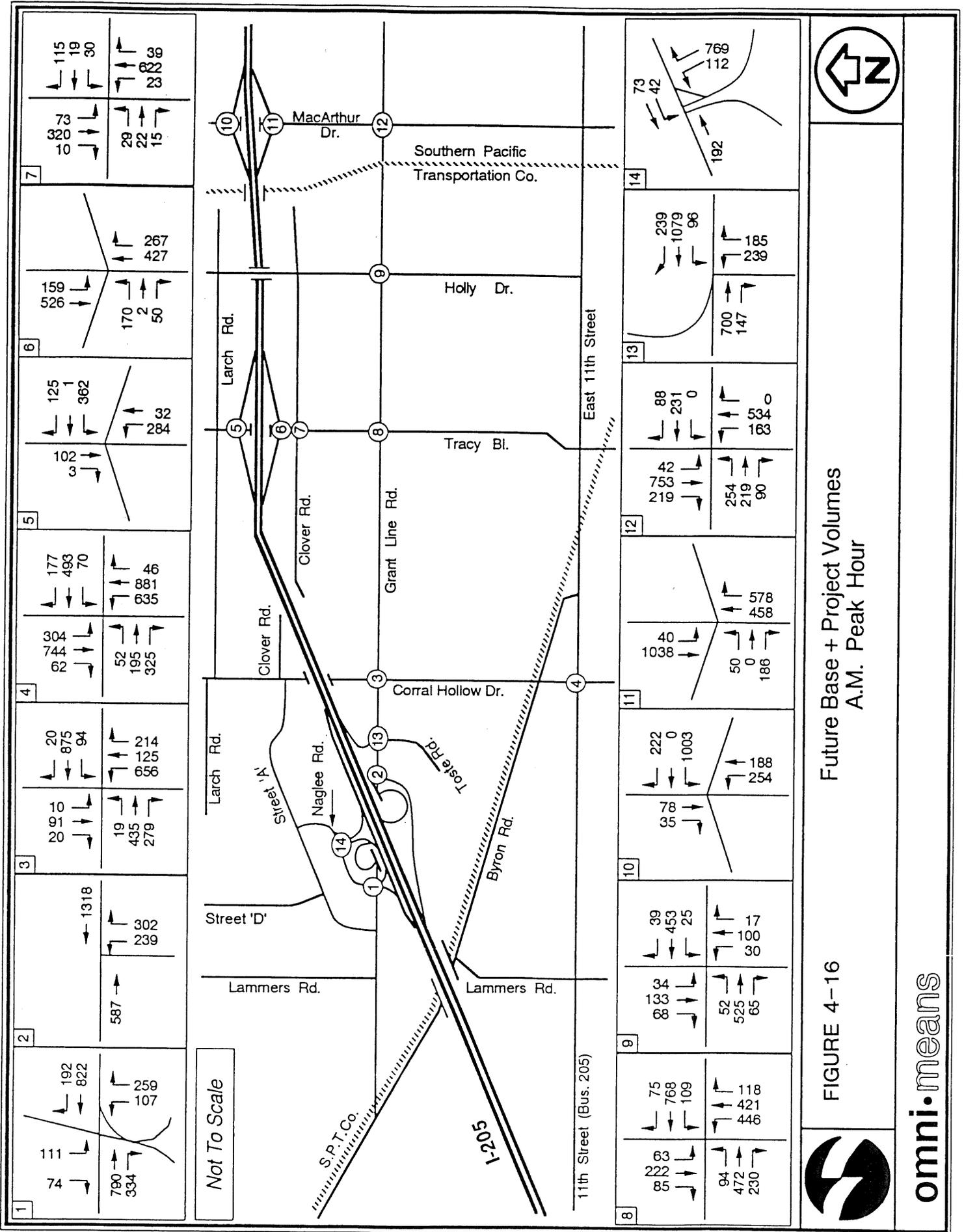
Access to the South Planning Area is on Pescadero Road which runs parallel to I-205 along the southern edge of the the property.

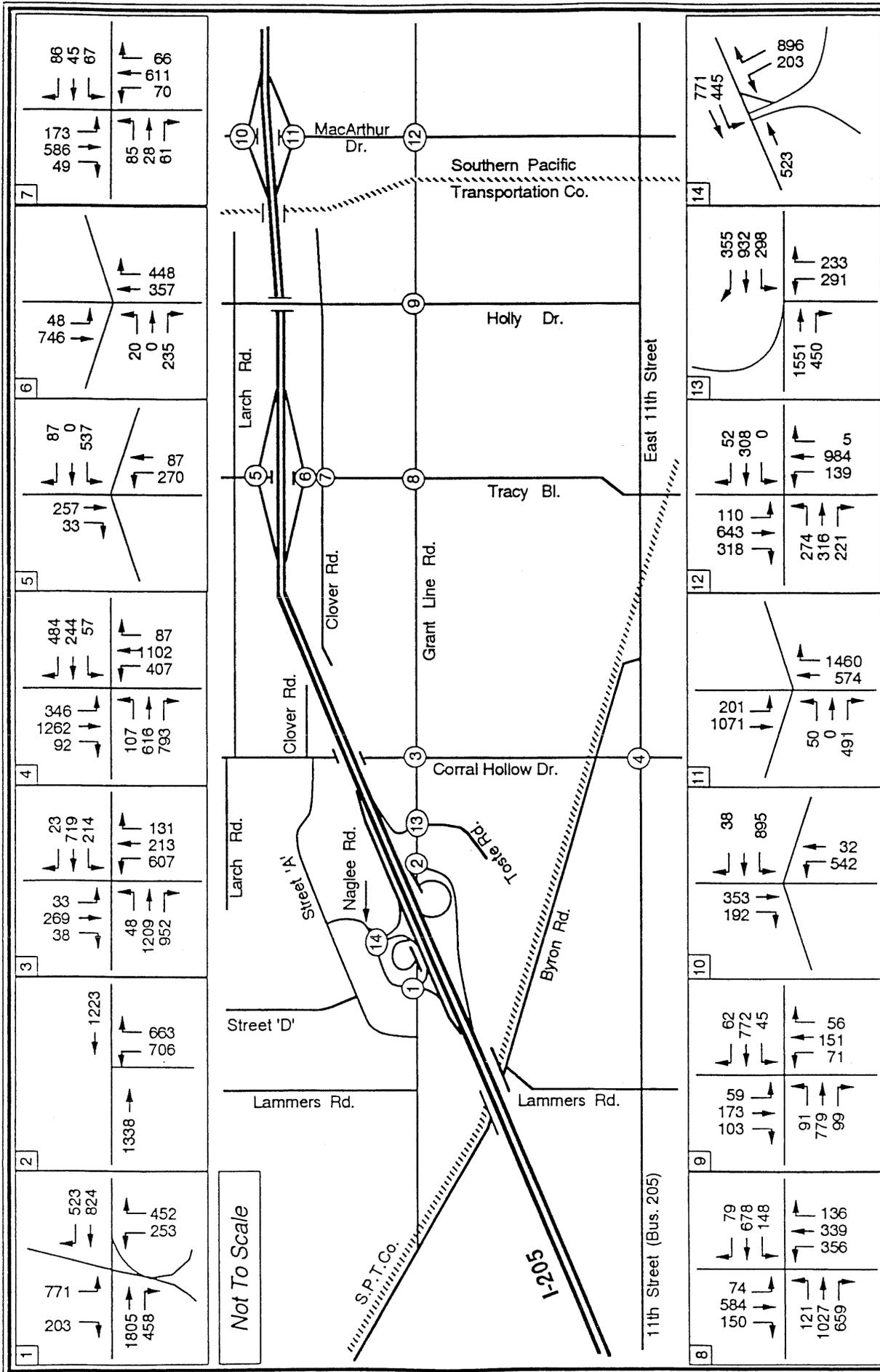
Many of the roadway improvements listed above for both the Grant Line and MacArthur Planning Areas involve intersection modifications as part of the overall plan. These intersection are listed as follows:

- Grant Line/I-205 southbound ramps
- Grant Line/I-205 northbound off-ramps
- Grant Line/I-205 northbound on-ramp
- MacArthur/I-205 westbound ramps
- MacArthur/I-205 eastbound ramps

The proposed project would also result in reassignment of existing and future base volumes onto the revised network. Figures 4-16 and 4-17 show volumes with future base traffic and the proposed project.

All intersection improvements (see Figure 4-18) have been incorporated in the street network in establishing the "future base plus project" operating conditions.





Future Base + Project Volumes
P.M. Peak Hour

FIGURE 4-17



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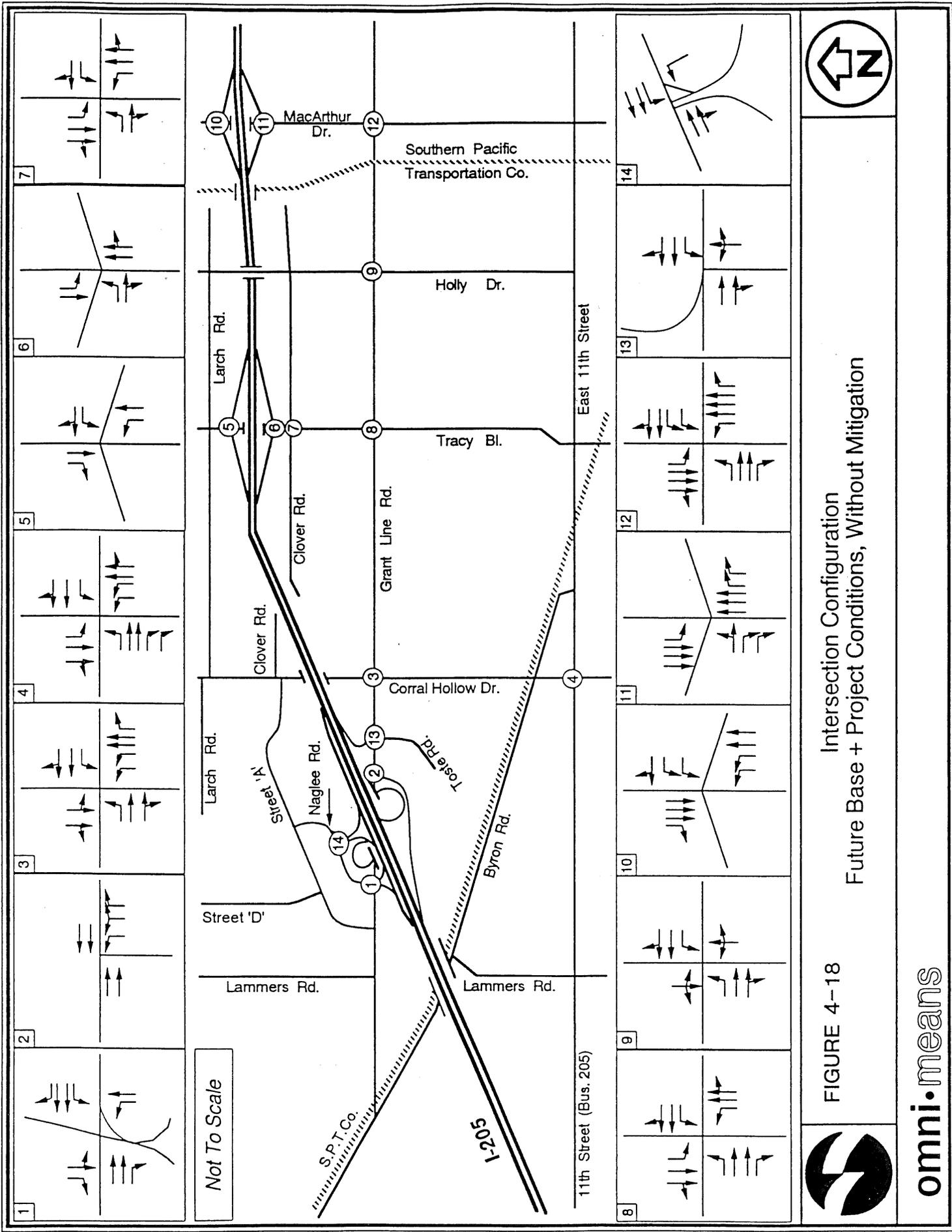


FIGURE 4-18

Intersection Configuration
 Future Base + Project Conditions, Without Mitigation



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TABLE 4.14
PROPOSED PROJECT TRIP GENERATION RATES

Land Use	Code	Daily Total		Peak Hours			
				AM (% In :Out)	PM (% In :Out)		
Commercial		% FAR					
Freeway	FC	25	59.5 /k.s.f.	3%	50 : 50	8%	50 : 50
General	GC	25	41.9 /k.s.f.	3%	50 : 50	8%	50 : 50
Service	SC	35	24.8 /k.s.f.	3%	50 : 50	8%	45 : 55
Light Industrial	LI	40	4.7 /k.s.f.	18.5%	85 : 15	16%	15 : 85
Urban Reserve	UR	40	4.7 /k.s.f.	18.5%	85 : 15	16%	15 : 85
Residential		d.u./acre					
Low Density	LDR	5.5	9.5 /d.u.	8%	30 : 70	10%	67 : 33
Medium Density	MDR	10	6.1 /d.u.	8%	20 : 80	10%	67 : 33
High Density	HDR	20	4.2 /d.u.	8%	20 : 80	10%	67 : 33
Park/School	PS	-	5.0 /acre	4%	50 : 50	8%	50 : 50
Freeway Interchange	FI	-	-	-	-	-	-
Shopping Mall	CC	25	34.5 /k.s.f.	2.2%	70 : 30	8.6%	47 : 53

Legend: FAR = floor-area ratio
d.u. = dwelling units
k.s.f. = 1,000 square feet

TABLE 4.15
PROJECT TRIP GENERATION SUMMARY
GRANT LINE NORTH PLANNING AREA

Land Use	Gross* Area	Daily Total	Peak Hours			
			AM (In / Out)		PM (In / Out)	
Commercial						
Freeway	21.24	14,215	426	213 / 213	1,137	569 / 569
General	35.96	16,408	492	246 / 246	1,313	656 / 657
Service	59.02	22,180	665	332 / 333	1,774	798 / 976
Shopping Mall	62.63	24,163	532	373 / 159	2,078	977 / 1,101
General Com. Reserve	30.06	13,716	411	205 / 206	1,097	548 / 549
Light Industrial	60.76	4,949	915	778 / 137	792	119 / 673
Freeway Interchange	13.71	0	0	0 / 0	0	0 / 0
Urban Reserve	32.05	2,611	483	411 / 72	418	63 / 355
Totals	315.42 acres	98,242 trips	3,924	2,558/1,366	8,609	3,730/4,880 trips

TABLE 4.16
PROJECT TRIP GENERATION SUMMARY
GRANT LINE SOUTH PLANNING AREA

Land Use	Area	Daily Total	Peak Hours					
			AM (In / Out)			PM (In / Out)		
General Commercial	31.64*	14,467	434	217 /	217	1,157	579 /	579
Residential								
Low Density	114.60	5,987	478	143 /	335	599	401 /	198
Medium Density	31.00	1,891	151	30 /	121	189	126 /	63
High Density	19.60	1,646	132	27 /	105	165	111 /	54
Park/School	17.00	85	3	2 /	2	7	3 /	3
Freeway Interchange	4.20	0	0	0 /	0	0	0 /	0
Totals	218.04 acres	24,076 trips	1,198	419 /	779	2,117	1,220 /	897

* Areas reflect gross acreage less 15 percent for infrastructure needs (right-of-way, easements, etc.)

TABLE 4.17
PROJECT TRIP GENERATION SUMMARY
MACARIHUR NORTH PLANNING AREA

Land Use	Gross* Area	Daily Total	Peak Hours					
			AM (In / Out)			PM (In / Out)		
Light Industrial	45.66 acres	3,739 trips	691	587 /	104	598	90 /	508

TABLE 4.18
PROJECT TRIP GENERATION SUMMARY
MACARIHUR SOUTH PLANNING AREA

Land Use	Gross* Area	Daily Total	Peak Hours					
			AM (In / Out)			PM (In / Out)		
Commercial								
Freeway	12.32	6,885	207	103 /	103	551	275 /	275
General	10.63	4,859	146	73 /	73	389	194 /	194
Service	21.25	7,986	240	120 /	120	639	287 /	351
Totals	44.20 acres	19,730 trips	593	296 /	296	1,579	576 /	823

* Gross Areas shown are already reduced by 15 percent for infrastructure needs.

Project Impacts

The future base volumes were reassigned to the street network under the improved I-205 interchanges at Corral Hollow Road and Grant Line Road. The project traffic was then added to the future base volumes to establish "future base plus project " conditions. Levels of service and volume/capacity ratios were also recalculated for all studied intersections.

Severe congestion (LOS "E"- "F") would occur at three intersections during the AM peak hour. During the PM peak hour, severe congestion would be experienced at six locations - Corral Hollow/Grant Line, and Corral Hollow/West 11th, I-205 WB Ramps/Grant Line, I-205 EB on Ramp/Grant Line, Tracy/Grant Line, and Toste/Grant Line. It is noted that with the proposed project, a greater portion of the traffic would be to/from I-205 (due to the regional shopping mall). As a result, congestion would be more pronounced near the freeway ramps but somewhat less severe along Grant Line Road. See Tables 4.19 and 4.20 for LOS and V/C ratio summary.

TABLE 4.19
LOS AND V/C RATIOS (AM PEAK HOUR)
FUTURE BASE + PROJECT CONDITIONS (WITH REGIONAL MALL)

Int. No.	N-S Street	E-W Street	LOS & V/C		
			Future Base	Project	Proj+Mit.
1	I-205 WB Ramps	Grant Line	A 0.44	A 0.46	A 0.26
2	I-205 EB Off-Ramp	Grant Line	A 0.34	A 0.60	A 0.45
3	Corral Hollow	Grant Line	A 0.28	D 0.83	A 0.43
4	Corral Hollow	West 11th	B 0.65	D 0.84	B 0.65
5	Tracy	I-205 WB Ramps	A 0.37	A 0.50	A 0.50
6	Tracy	I-205 EB Ramps	A 0.39	A 0.49	A 0.49
7	Tracy	Clover	A 0.31	A 0.38	A 0.38
8	Tracy	Grant Line	A 0.53	D 0.81	A 0.51
9	Holly	Grant Line	A 0.36	A 0.40	A 0.40
10	MacArthur	I-205 WB Ramps	A 0.38	A 0.48	A 0.48
11	MacArthur	I-205 EB Ramps	A 0.28	A 0.29	A 0.29
12	MacArthur	Grant Line	A 0.48	B 0.66	B 0.66
13	Toste	Grant Line	- -	A 0.48	C 0.76
14	I-205 WB Ramps	Naglee	- -	A. 0.18	A 0.18

TABLE 4.20
LOS AND V/C RATIOS (PM PEAK HOUR)
FUTURE BASE + PROJECT CONDITIONS (WITH REGIONAL MALL)

Int. No.	N-S Street	E-W Street	LOS & V/C		
			Future Base	Project	Proj+Mit.
1	I-205 SB Ramps	Grant Line	A 0.34	F 1.40	C 0.74
2	I-205 NB Off-Ramp	Grant Line	A 0.48	E 0.92	C 0.74
3	Corral Hollow	Grant Line	A 0.50	F 1.46	C 0.78
4	Corral Hollow	West 11th	B 0.62	F 1.11	C 0.78
5	Tracy	I-205 WB Ramps	A 0.51	C 0.71	C 0.71
6	Tracy	I-205 EB Ramps	A 0.51	B 0.64	B 0.64
7	Tracy	Clover	A 0.43	A 0.49	A 0.49
8	Tracy	Grant Line	C 0.74	F 1.01	C 0.77
9	Holly	Grant Line	A 0.55	B 0.62	B 0.62
10	MacArthur	I-205 WB Ramps	A 0.33	B 0.66	B 0.66
11	MacArthur	I-205 EB Ramps	A 0.44	B 0.62	B 0.62
12	MacArthur	Grant Line	A 0.57	B 0.66	B 0.66
13	Toste	Grant Line	- -	F 1.12	C 0.76
14	I-205 WB Ramps	Naglee	- -	B 0.64	B 0.64

* Urban interchange proposed by city would return operation to LOS "C" or better.

D. Suggested Mitigation Measures

Future Base

No additional mitigation measures are necessary except those already planned for in the 84-1 Tracy Residential Specific Plan.

Proposed Project

Six intersections would experience congestion (equivalent to LOS "D" to "F") during at least one of the peak hours. The proposed project would add proportionally to future traffic demand on the street network. With mitigation, all of the studied intersections would operate at LOS "C" or better during both peak hours. See Figure 4-19 for street network with mitigation.

It should be noted that a manual assignment approach is used in this analysis in distributing the future base volumes and proposed project volumes. This approach tends to be less sensitive to alternative route choice which is a function of the interaction between land use and circulation. Hence, projection results can overstate traffic on certain routes. As an example, the future base conditions (taken from previous studies) project extremely heavy northbound left-turns from Corral Hollow Road onto West 11th Street.

Both the projected northbound left-turn volumes (and eastbound right turn volumes) are unrealistically high in relation to the through volumes on West 11th Street during both peak hours. The extreme delays at these individual turning movements as well as the intersection as a whole would cause traffic to divert to alternative routes e.g., detour via Tracy Boulevard. If it is assumed that a portion of these turning volumes would be diverted to through movements on 11th Street, the intersection operation would return to more reasonable levels.

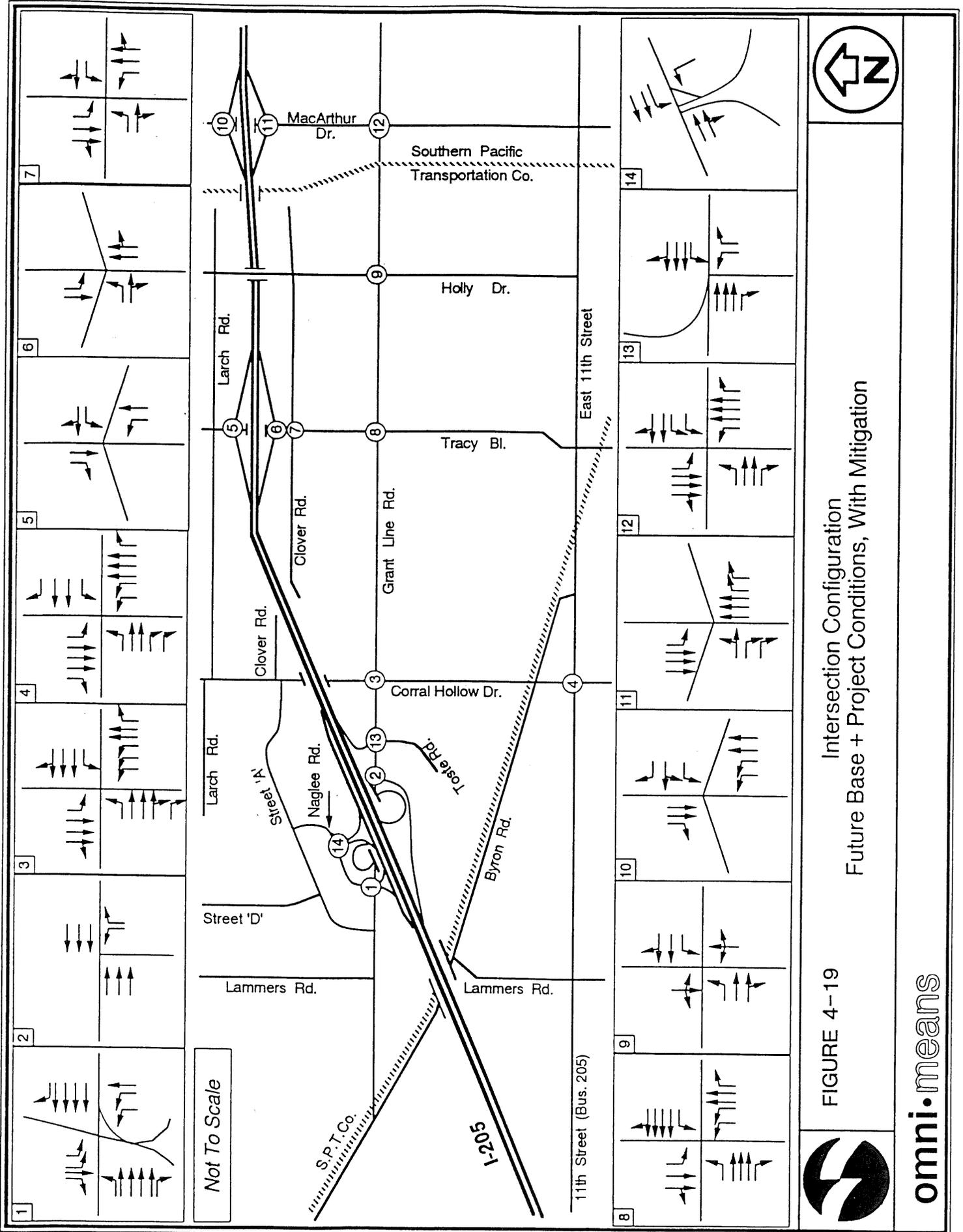
Mitigation measures for the project are recommended as follows (see Tables 4.19 and 4.20 for mitigation effects on LOS conditions)

Intersections:

All fourteen study intersections would require signalization with future base and I-205 traffic.

I-205 WB Ramps/Grant Line/Naglee

- Widen Grant Line Road (eastbound) approach to include a left-turn lane, four through lanes, and a right-turn lane.
- Widen Grant Line Road (westbound) approach to include four through lanes, and a right-turn lane.
- Widen Naglee Road (southbound) approach to include two left-



Not To Scale



FIGURE 4-19

Intersection Configuration
Future Base + Project Conditions, With Mitigation



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- turn lanes, a through lane, and a right-turn lane.
- Widen the I-205 off-ramp (northbound) approach to include two left-turn lanes and a through lane (right turn would be free flow).

I-205 EB Off-Ramp/Grant Line

- Widen the I-205 off-ramp (northbound) approach to include one left-turn lane and one right-turn lane.

Corral Hollow/Grant Line

- Widen Grant Line Road (eastbound) approach to include a left-turn lane, two through lanes, a through/right-turn lane, and a right-turn lane.
- Widen Grant Line Road (westbound) approach to include a left-turn, two through lanes and a through/right-turn lane.
- Widen Corral Hollow Road (northbound) approach to include three left-turn lanes, two through lanes, and a right-turn lane.
- Widen Corral Hollow Road (southbound) approach to include a left-turn lane, two through lanes, and a through/right-turn lane.

Corral Hollow/West 11th

- Widen West Eleventh Street (eastbound) approach to include a left-turn lane, two through lanes, and two right-turn lanes.
- Widen West Eleventh Street (westbound) approach to include a left-turn lane, two through lanes, and a right-turn lane.
- Widen Corral Hollow Road (southbound) approach to include a left-turn lane, three through lanes, and a right-turn lane.
- Widen Corral Hollow Road (northbound) approach to include two left-turn lanes, three through lanes, and a right-turn lane.

Tracy/Grant Line

- Widen the Grant Line Road (eastbound) approach to include a left-turn lane, three through lanes, and a right-turn lane.
- Widen the Grant Line Road (westbound) approach to include a left-turn lane, three through lanes, and a through/right-turn lane.
- Widen Tracy Boulevard (northbound) approach to include two left-turn lanes, two through lanes, and a right-turn lane.

I-205 EB On-Ramp/Grant Line/Toste

- Widen Grant Line Road (eastbound) approach to include three through lanes and a right-turn lane.
- Widen Grant Line Road (westbound) approach to include a left-turn lane, two through lanes, and a through-right turn lane.

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1. Omni-Means, Ltd., Traffic Counts, July, 1987.
 2. Transportation Research Board, Highway Capacity Manual, Special Report 209, 1985.
 3. Transportation Research Board, Interim Material on Highway Material, Circular 212, January, 1980, pages 5 to 14.
 4. Ken Baxter, Caltrans Transportation Planner, Personal Communication on September 27, 1989.
 5. EDAW, Inc., Tracy Residential Areas Specific Plan, June, 1987.
 6. Engineering Science, ADEIR Seecon Annexation, City of Tracy, February 1990.
 7. Omni-Means, Ltd., Traffic Planning for Proposed Grant Line Area Development, City of Tracy, 1990.
 8. Omni-Means, Ltd., Traffic Study for the Tracy Shopping Center, City of Tracy, May 1989.
 9. EDAW, Inc., Tracy Industrial Areas Specific Plan, May, 1988.
 10. Consultation with Mike Locke, City Manager, March 1990.
 11. EDAW, Inc., Tracy Residential Areas Specific Plan, June 1987.
 12. EDAW, Inc., Tracy Industrial Areas Specific Plan, May 1988, page 3-4.
 13. *ibid.*, EDAW, Inc., page 4-16.
 14. *ibid.*, EDAW, Inc., Tracy Residential Areas Specific Plan, page 3-12.
 15. *ibid.*, EDAW, Inc., Tracy Industrial Areas Specific Plan, pages 4-6 and 4-16.
 16. *ibid.*, EDAW, Inc., Tracy Industrial Areas Specific Plan, pages 4-6 and 4-16.
 17. *ibid.*, EDAW, Inc., page 4-6 and 4-16.
 18. San Joaquin County Council of Government, I-205 Capacity Study Report, January, 1988.

19. *ibid.*, page II-1.
20. *ibid.*, page III-17.
21. *ibid.*, page VIII-1.
22. Caltrans, Route Concept Report, Route 84, July 22, 1985.
23. Caltrans, Route Concept Report, Route 239, November 5, 1985.
24. *ibid.*, Ken Baxter.
25. Institution of Transportation Engineers, Trip Generation, 4th edition, 1987.
26. San Diego Association of Government, Traffic Generator, March, 1985.
27. Caltrans, 16th Progress Report on Trip Generation, December, 1986.
28. City of San Jose, Public Works Department, Trip Generation Rates, September, 1986.
29. DKS Associates, Cordelia EIR, 1988.
30. Correspondence with Dennis Neuzil, Entranco Engineers, Inc., November 11, 1988.
31. Entranco Engineers, Inc., Proposed Corral Hollow Road Partial Interchange (Interstate 205), Preliminary Report, November 29, 1988.

4.8 Noise

A. Introduction

The purpose of this report is to determine the traffic generated noise level at receptors along the roadways within the designated project area and to determine if the predicted traffic noise levels will substantially exceed the existing levels. This report also proposes possible mitigation measures for receptors where the noise level is above the noise abatement criteria established in the Federal Highway Programs Manual(1), Caltrans Design Bulletin(2), and the standards set by the City of Tracy in its Noise Element, or where the present levels are substantially exceeded.

The Federal Guidelines state that the noise abatement criteria level for areas in activity Category B, which includes residences, churches, and libraries located along the project route, is Leq (h) 67 dBA. The applicable criteria (see Table 4.21) is category E for evaluating the interior noise levels of residences, churches, and libraries. In this case category B criteria are used as a primary basis for evaluation because FHPM 7-7-3 states that primary consideration is to be given to exterior areas. However, since standard residential building construction with windows closed produces a sound transmission loss of at least 15 dBA, the 67 Leq (h) exterior noise contour is equivalent to locations where interior levels would be 52 Leq (h), the category E standard. In effect, the present and predicted noise level contours are applicable for determining both interior and exterior compliance with the standards.

Noise levels are described in terms of Leq which is the equivalent steady-state noise level containing the same acoustic energy as the varying noise level over a stated period of time, usually taken as one hour unless otherwise indicated. Common outdoor noise levels are shown on Table 4.22.

The City of Tracy uses a different standard for noise evaluation and planning, termed Ldn or Level; day/night. This is an average of daily sound conditions with weighting given to evening and nighttime noises because there is more annoyance at these times. The adopted Tracy standard for residential land uses is 65 dBA Ldn exterior. The City General Plan Noise Element states, "Avoid siting new residential land uses within present and future 65 dBA Ldn contours, unless effective shielding can be provided so that exterior noise levels will not exceed 65 dBA Ldn".

B. Environmental Setting

The environmental setting information presented here is taken from the I-205 Corridor Study, Phase I Appendix, October 1987. Existing conditions were compared with those outlined in the 1987 study and updated where appropriate.

TABLE 4-21

NOISE ABATEMENT CRITERIA

Hourly A-Weighted Sound Level - decibels (dBA)¹

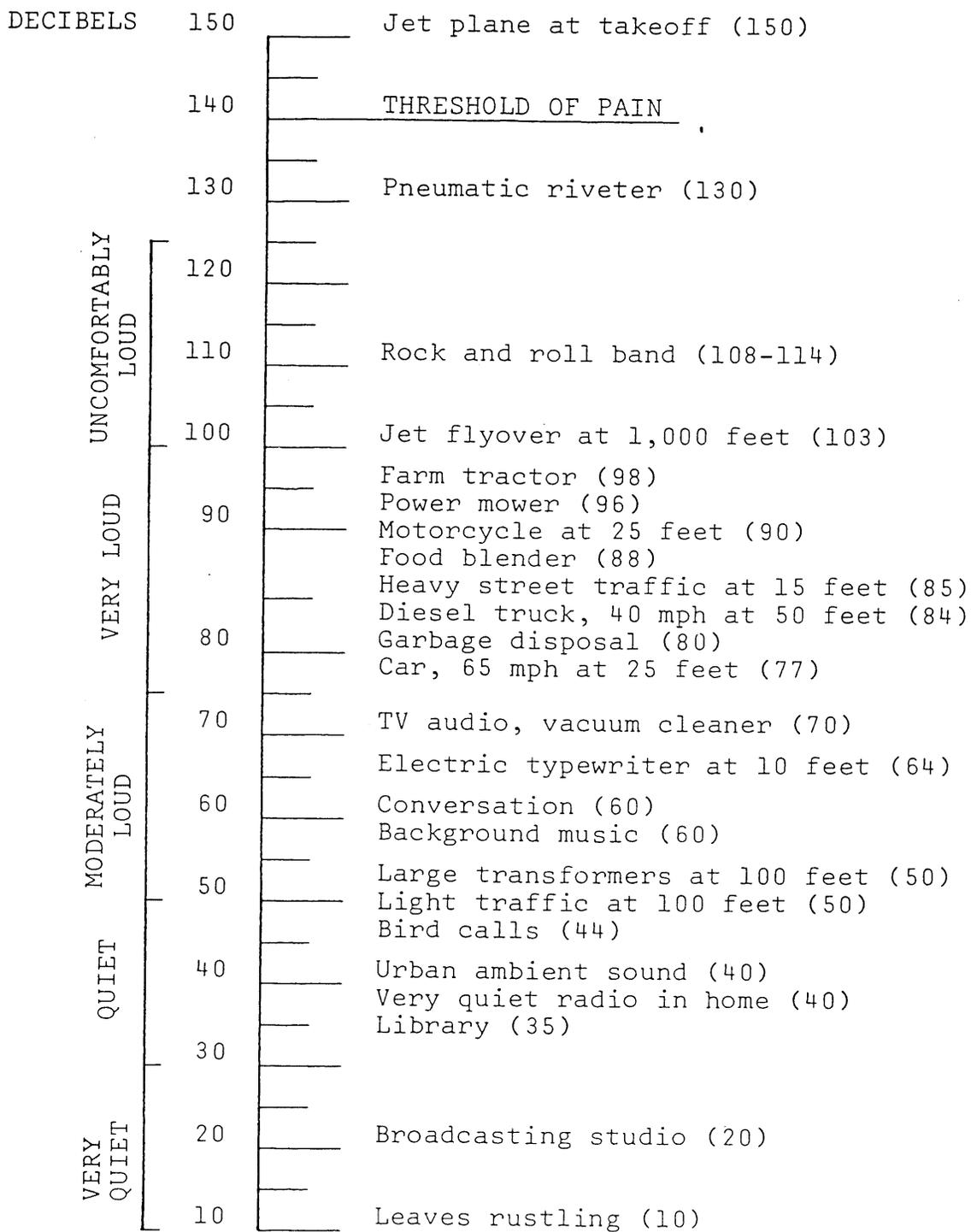
Activity Category	Leq(h)	L10(h)	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

¹ Either L10(h) or Leq(h) (but not both) may be used on a project

SOURCE: Federal-Aid Highway Program Manual, Vol. 7, Ch. 7, Sec. 3, Attachment, Transmittal 348, August 9, 1982.

Table 4.22

APPROXIMATE SOUND LEVELS OF COMMON NOISES

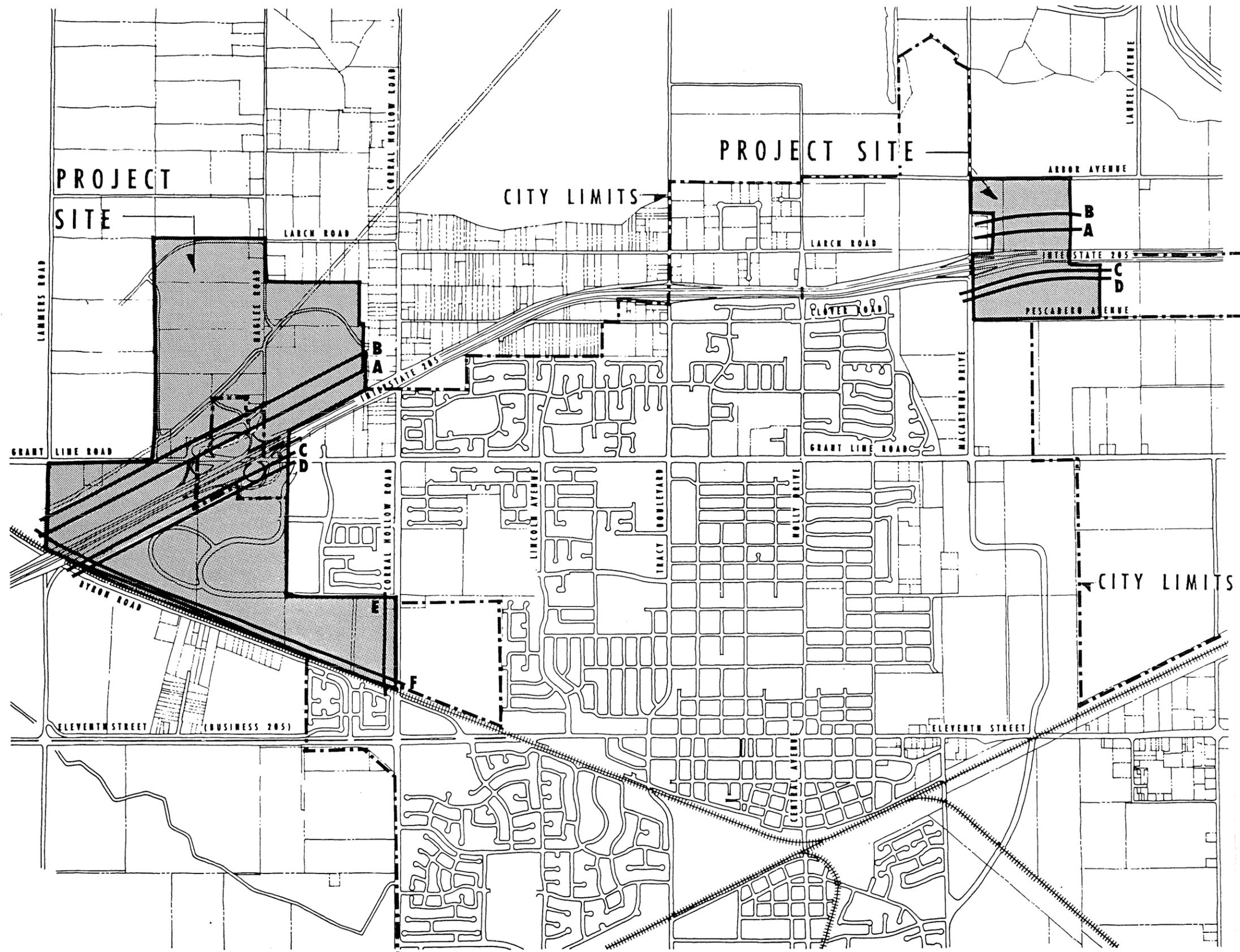


There are two distinct areas involved in the study as shown in Figure 4-20. The Grant Line Road study area has potential residential, park and school development. The MacArthur Drive study area has potential industrial and commercial development outlined, but no residential development stated. Thus, the Grant Line Road project area is analyzed due to the planned development of sensitive receptors such as residences, parks and schools.

As the noise contours shown on Figure 4-20 indicate, The dominating source of noise in the Grant Line study area is automobile and truck traffic on I-205. Current traffic on this freeway is estimated by the California Department of Transportation to average between 37,500 and 43,000 vehicles per day (1988 data) with twenty (20) percent of the traffic being heavy trucks(3). Although most of the study area is flat, the segment of the freeway that crosses over Byron Road and the Southern Pacific Railway line is elevated 25 feet above the ground. There are no on or off ramps at the Byron Road overcrossing to add to the freeway generated noise. The existing noise level generated from I-205 is 70 Ldn at 150 feet from the center of I-205. Roadways within the study area which produce significant levels of noise from traffic are Grant Line Road, Tracy Boulevard, Corral Hollow Road, 11th Street, and Byron Road. The most significant of these are Byron Road and Corral Hollow Road where medium and high density residences are planned. The current traffic generated noise for both roads is well under the Ldn 65 dBA standard. At night noise from local traffic decreases but still dominates environmental noise in the study area.

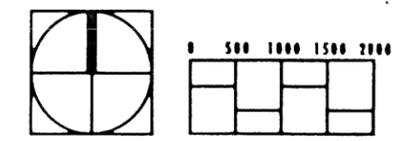
The I-205 Specific Plan for residential properties shows the locations of proposed low density, medium density, and high density land uses as well as park and school land use designations for the Grant Line Study area, see Figure 2-4.

The following is a brief description of proposed sensitive receptors that would most likely be impacted by excessive noise levels due to nearby transportation related noise generators. At the south-western boundary of the project, along I-205 and the Southern Pacific Railway line is a neighborhood park land designation consisting of 11.1 acres. To the north of the neighborhood park is 10.5 acres of High Density Residential land use, parallel to I-205. To the south-east of the park designation is 9.1 acres of High Density Residential land use, parallel to the Southern Pacific Railway Line and Byron Road. Continuing east along Byron Road and the railway line is 93.2 acres of Low Density Residential land use that terminates at the Byron Road/Corral Hollow Road intersection. The remaining Low Density Residential land uses and Medium Density Residential land uses are located in the interior of the Residential Specific Plan and will be buffered from excessive noise levels by the peripheral development. (See Figure 2.4, Land Use Map.) Land uses adjacent to the proposed CC and GCR plan designations (shopping center) are single-family



NOISE CONTOUR MAP

- A** 65 db Ldn (Year 2010)
410' from edge of Freeway
- B** L_{eq} (h) 67 Contour (Year 2010)
680' to centerline of Freeway
- C** 65 db Ldn (Existing)
280' to edge of Freeway
- D** L_{eq} (h) 67 Contour (Year 1990)
450' to centerline of Freeway
- E** 65 db Ldn (Year 2010)
140' to edge of Road
- F** 65 db Ldn (Existing and Future)
185' from center of Railroad



City of Tracy

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The Sword Company
Mills & Associates

FIGURE 4-20

MAY 1990

residential lots and homes. Homes are located more than 300 feet from their rear property line which abuts the project area. Present noise levels are below 60 dB(A) Ldn.

In September of 1987, Mills Associates recorded noise levels at nine locations within the project area. Table 4.23 lists the locations of the measurements. A General Radio Company sound level meter, model 1565-A, was used. The microphone was covered by a wind screen to minimize the effects of wind on the measured noise signal. These measurements appear on Table 4.24.

In October of 1989, Mills Associates verified the field measurements of 1987 by retesting the noise levels at locations one through nine. No significant increases in noise levels were found.

The federal standards of the Leq (h) 67 dB for hourly peak traffic volumes were applied to the existing traffic volumes for I-205. Calculations performed using peak hour traffic volume of 4,950 peak hour trips showed that the Leq (h) 67 dB contour line is 450 feet from the center of I-205.

TABLE 4.23
NOISE MEASUREMENT LOCATIONS
SEPTEMBER 1987

<u>Number</u>	<u>Location</u>
01	11th Street at Lammers
02	Byron Road at Lammers
03	Grant Line Road near Lammers
04	Corral Hollow Road at I-205
05	Clover Road near I-205
06	Tracy Boulevard at Clover Road
07	Holly at I-205
08	Grant Line Road east of MacArthur Drive
09	I-205 east of MacArthur Drive

**TABLE 4.24
PRESENT NOISE LEVELS**

Location No.	Distance from the Edge of Roadway (in feet)			
	dB 75 Ldn	dB 70 Ldn	dB 65 Ldn	dB 60 Ldn
01	0	18	31	65
02	4	74	170	340
03	0	0	19	40
04	15	34	70	150
05	30	64	140	290
06	75	160	360	750
07	60	130	280	600
08	12	27	60	120
09	58	125	270	590

Mills Associates, September 1987.

Southern Pacific Railroad's Tracy-Martinez line runs parallel to Byron Road through the Grant Line Road study area. According to the Yard-Master in Martinez, (4) there is an equal number of commuter trains and freight trains passing along the line; approximately seven or eight trains each for a total of 14 to 16 trains a day. The average number of cars per train is approximately 75 with three to four engines pulling the train. The average speed of the train is 25 mph due to a sharp turn near the intersection of Byron Road and Corral Hollow Road which necessitates slow speeds to negotiate. The track along the study area is bolted instead of welded, which increases the noise produced from railways significantly.

Table 4.25 shows the projected Ldn contour distances for the railroad as analyzed in 1989. Figure 4-45 is a contour map of the noise levels from the railroad. These contours do not include the effect of whistle blowing at the existing at-grade crossing at Corral Hollow Road. The city has expressed a desire to construct a grade separated crossing which would eliminate the need for whistle blowing, however, there are no plans currently under consideration. Since Southern Pacific does not anticipate a significant change in activity along this track, the contours along the railroad represent both existing and future noise levels. A supplemental study of railroad noise conditions by Illingworth and Rodkin, Inc., was reviewed and incorporated by reference into this study.

TABLE 4.25
 PROJECTED LDN CONTOUR DISTANCES IN 1989
 FOR SOUTHERN PACIFIC TRACY-MARTINEZ RAILROAD LINE

DISTANCE FROM RAILROAD CENTER TO LDN CONTOUR
 (FEET)

75 dB Ldn	70 dB Ldn	65 dB Ldn	60 dB Ldn
60	95	185	215

C. Environmental Impacts

As reported by the California Department of Transportation(5), future traffic levels on I-205 are expected to reach 102,500 Average Daily Trips by the year 2005; with 9,200 peak hour trips and 20,500 of the 102,500 ADT being heavy trucks. With no sheilding of traffic from I-205 this future traffic volume would generate noise levels of over 75 Ldn at 150 feet from the edge of I-205. The specific plan includes high density residential land uses and neighborhood park land uses adjacent to the I-205 boundary line. The noise level generated by future traffic volumes without a buffer zone would be in the unacceptable category for residential, park and school land uses and would require mitigation to comply with the City of Tracy's Noise Element. For outdoor active recreation and sports areas, 75 decibels is the upper limit of conditionally acceptable noise exposure according to Land Use Campatibilities Standards published by the State Office of Noise Control. If the park site is designated as an active recreation and spectator facility, no mitigation measure will be required.

As reported by the City of Tracy's planning staff, Corral Hollow Road is projected to have approximately 14,500 ADT by 1995. This volume of traffic would generate noise levels of approximately 72 db Ldn at 50 feet from the center of the roadway and would experience conditionally acceptable noise levels, with mitigation.

No future counts were available for Byron Road according to the City of Tracy's planning staff. Since the Southern Pacific Railway line runs parallel to Byron Road and is nearest to the proposed development, traffic generated noise levels from Byron Road would be negligible.

The Southern Pacific Railway line is expected to carry the same number of trains as it does presently along the Tracy-Martinez run, according to Southern Pacific Railway's Yardmaster in Martinez. The 65 dB Ldn contour line would be approximately 200 feet from the center of the railway. The proposed site plan has

lots backing up to the property line, with homes potentially located about 95 feet from the railroad. At this distance, the Ldn would be 70 dB and ground vibration could be a problem(6).

The federal standards for Leq (h) 67 dB was applied to the future traffic volumes along I-205 for the year 2010. Traffic volumes of 9,200 peak hour trips were used in the calculation of the Leq (h) 67 dB contour line. The Leq (h) 67 dB contour line is located 680 feet from the center of I-205.

Ambient exterior noise levels in commercial areas, such as shopping centers, is about 70 dB(A). A distance of 300 feet without a barrier would reduce this level to approximately 64 dB(A). With an eight foot barrier at the property line the exterior sound level at the residences would be below 60 dB(A).

D. Suggested Mitigation Measures

Mitigation requirements for the proposed high density residential development along I-205 could be met with the construction of a continuous, masonry wall located at the property boundary line adjacent to I-205. Calculations show that this barrier would have to be 12 - 14 feet in height to be effective. This is consistent with the existing mitigations for residential development along I-205. This type of noise attenuation can be attained because I-205 is only 3 - 5 feet above grade at this particular segment. This mitigation would only be effective for the first level of the proposed structures. If multi-story structures are planned, the second level of the homes would be required to have STC-40 rated windows and special wall constructions to meet the State of California requirements for interior noise levels. Effective wall and window specifications for meeting noise attenuation requirements can be provided when architectural plans for the new homes are drawn and submitted for approval.

Mitigation requirements for the proposed neighborhood park located at the southwest corner of the parcel would involve the cooperation of the California Department of Transportation and the City of Tracy if noise attenuation is going to be effective. This is due to the elevated nature of the freeway in this particular area. The freeway overcrossing is approximately 25 - 30 feet in height, where no ground-based barrier could be cost-effectively built. As long as the park facility remains in active sports activity uses, no noise attenuation measures will be required. However, if the land use is changed at the park site to a more passive form of recreation, such as picnicing, or another land use is proposed, then the full mitigation of constructing a sound barrier would be required.

Mitigation requirements along Corral Hollow Road would involve the construction of a sound barrier of approximately six to eight feet in height located at the parcel boundary line for the entire length of the proposed development, approximately 1,200 feet long from Byron Road to the proposed Lowell Road. Aesthetic value can

be achieved by using an offset style of construction and various texturing techniques for the barrier to eliminate the appearance of a "walled-like" city. Although, these techniques are not required for noise attenuation purposes.

Mitigation for the Southern Pacific Railway line would be necessary if the at-grade separation remains and if the proposed residences were built within 200 feet of the railroad. Since the proposed site plan shows homes located approximately 95 feet from the railway and there are no plans to change the crossing in the near future, a sound barrier would be required if the project were approved. The railway is elevated three to four feet above the ground and locomotives are a high noise source, thus calculations indicate that a sound barrier of approximately 12 feet in height relative to the property line would be required.

This can be achieved two ways: construct a solid masonry wall 12 feet in height with no gaps, holes or breaks (unless the design included overlapping), or construct a six-foot earthen berm from excess grading materials and a six foot masonry wall to achieve the required 12 foot barrier height.

Before areas proposed for commercial development are approved for such a use, a site specific acoustical analysis of the site plan and surrounding properties should be conducted. The study should evaluate placement of loading facilities and waste disposal for noise impacts and should consider the effectiveness of a barrier between the shopping center and the surrounding properties to the north and east. Vehicular entry for such a plan should be from the east or from Naglee Road.

If future adjacent land uses are proposed for residential development, a complete acoustical study should be performed to assess the potential impact of noise levels on sensitive receptors.

Construction Impacts

Noise levels generated by construction vehicles should not have a significant impact on surrounding land uses, since there is no residential development adjacent to the proposed development. There are agricultural-related structures located adjacent to the proposed development, but no sensitive receptors. Therefore, no construction mitigation will be required.

1 Federal Highway Programs Manual, Volume 7, Chapter 7, Section 3.

2 State Caltrans Design Bulletin, #58.

- 3 Mr. Bill Zeker, Caltrans Traffic Division, personal
communication.
- 4 Southern Pacific Railways' Martinez Switching Yard.
- 5 ibid., Zeker.
- 6 Illingworth & Rodkin, Inc., Toste-Schwilke-Dividend Property,
Tracy, CA, Acoustical Consulting, September 29, 1989.

4.9 Municipal Water System

A. Environmental Setting

City of Tracy

The City of Tracy provides water to areas within the city limits using a combination of water from the Delta-Mendota Canal and well water. Water from the Delta-Mendota Canal is treated at the Tracy water treatment plant near the airport. The water from the Delta-Mendota Canal is generally low in total dissolved solids (TDS). During the late summer months, TDS levels climb in the Delta-Mendota water, however recommended secondary TDS standards are still attained. The Delta-Mendota water is augmented by water pumped from ten wells. Water from four of the ten wells is blended with Delta-Mendota water prior to distribution. The other six wells pump directly into the distribution system. When any of these six wells are pumping, consumers receive well water in direct proportion to their distance from the pumping well(s), with consumers near the pumping well(s) receiving well water exclusively. Thus, the taste of water distributed in the City of Tracy varies depending upon location and time.

The city's well water is high in total dissolved solids (TDS), averaging 750 milligrams per liter (mg/l). This exceeds the state recommended secondary drinking water standard for TDS of 500 mg/l. Although this does not pose a health hazard, high levels of TDS often result in taste complaints from customers.

Table 4.26 shows the water use of the City of Tracy for the years 1985 through 1989. As shown, the average water use per person per day has remained relatively constant since 1985, with total water use increasing in proportion to the population. The marked decrease in the use of Delta-Mendota water in 1988 and 1989 was due to shutdowns during the expansion of the Tracy water treatment plant. The expansion increased the plant's capacity from 7.5 million gallons per day (mgd) to 15 mgd and now permits the city to utilize its full allotment of 10,000 acre-feet per year (3,258 million gallons per year) from the Delta-Mendota Canal.

As noted above, the City of Tracy is entitled to 3,258 million gallons per year (mgy) from the Delta-Mendota Canal. In years of severe drought, however, the Federal Bureau of Reclamation reduces the allotments of the various users. For example, in 1990, the City of Tracy requested the entire 3,258 mgy allotment but was only granted half, or 1,629 mgy. Tracy's allotment was reduced because the city's ten water wells are considered a reliable alternative water supply. In future years, the city expects to obtain a larger portion of its total water supply from the Canal.

TABLE 4-26

CITY OF TRACY WATER USE AND PRODUCTION 1984 - 1989

YEAR	1985	1986	1987	1988	1989
ANNUAL WELL PRODUCTION (Millions of Gallons)	816	610	600	968	1,559
ANNUAL DELTA-MENDOTA TREATED (Millions of Gallons)	1,931	1,940	2,092	1,934	1,604
TOTAL ANNUAL PRODUCTION (Millions of Gallons)	2,737	2,550	2,692	2,902	3,163
AVERAGE ANNUAL PRODUCTION RATE (Millions of Gallons per Day)	7.499	6.986	7.375	7.929	8.666
POPULATION SERVED (Millions of Gallons)	23,381	25,436	28,376	29,000	32,000
AVERAGE ANNUAL UNIT USE (Millions of Gallons per Year per Person)	.1171	.1003	.0949	.1001	.0988
TOTAL PRODUCTION CHANGE (Millions of Gallons)	(187)	142	210	261	
TOTAL PRODUCTION CHANGE (Percent)	-7.33%	5.27%	7.24%	8.25%	
MAXIMUM DAY	JUL 23	SEP 23	AUG 4	JUL 29	AUG 2
MAX DAY WELL PRODUCTION RATE (Millions of Gallons per Day)	4.650	4.628	8.362	7.642	7.745
MAX DAY DELTA-MENDOTA TREATMENT RATE (Millions of Gallons per Day)	9.154	8.892	7.495	7.208	7.756
TOTAL MAX DAY PRODUCTION RATE (Millions of Gallons per Day)	13.214	13.720	15.857	14.850	15.501
MAX DAY PEAKING FACTOR (1)	1.76	1.96	2.15	1.87	1.79
PEAK HOUR	JUN 26	AUG 20	SEP 2	JUL 29	-
PEAK HOUR WELL PRODUCTION RATE (Millions of Gallons per Day)	7.92	11.20	7.20	9.36	-
PEAK HR DELTA-MENDOTA TREATMENT RATE (Millions of Gallons per Day)	10.08	8.78	11.52	11.52	-
TOTAL PEAK HOUR PRODUCTION RATE (Millions of Gallons per Day)	18.00	19.98	18.72	20.88	-
PEAK HOUR PEAKING FACTOR (1)	2.40	2.86	2.54	2.63	-

NOTES: (1) BASIC DATA PROVIDED BY JOHN JONES, CITY OF TRACY WATER PRODUCTION SUPERVISOR.

(2) PEAKING FACTOR IS THE RATIO OF MAXIMUM DAY OR PEAK HOUR PRODUCTION RATE TO THE AVERAGE ANNUAL PRODUCTION RATE.

The maximum long term sustainable yield of the aquifer which stores water pumped by the City of Tracy's wells is not known. Kennedy/Jenks/Chilton Engineers (K/J/C) is currently conducting a study to determine the maximum long term sustainable yield, but the findings of this study will not be available until June 1990. Table 4.27 shows estimates of the total annual well production (i.e., the amount of water pumped) from the city's wells between 1973 and 1979. According to City of Tracy personnel,¹ except in the drought years of 1976 and 1977, pumping from the City of Tracy wells has caused only temporary and local reductions in ground water levels. Although ground water levels fell during this period, when the drought ended in 1978, the ground water level quickly rose to historical levels. It is unclear whether the widespread fall of the ground water elevation in 1976-77 was the result of increased pumping or reduced rainfall in the areas where recharge of the aquifer occurs.

Although the decline of the ground water elevation did not severely impair the ability of the City of Tracy wells to draw water, after the drought the city extended the wells an additional 20 feet to ensure adequate well capacities in the event of future drops in ground water elevation. The fall in ground water elevation during the drought indicates that water was drawn from the aquifer faster than it was replenished. Such a condition is acceptable if the aquifer can return to historical levels in the periods between droughts. In Tracy, following the 1976-77 drought, the aquifer was restored to pre-drought levels within one year. Thus, it seems safe to assume that the pumping rates in Tracy have not exceeded the maximum long-term sustainable yield of the aquifer.

For this report, the reliable water supply from city wells was estimated as at least 1,549 mgd. This estimate corresponds to 90 percent of the maximum annual pumping rate (not including 1976 and 1977 when pumping rates were much higher than normal). This is a conservative estimate which may be supplanted by a more reliable estimate based on the forthcoming K/J/C report. It is possible that since the aquifer underlying Tracy has a very high rate of water movement, the K/J/C study may find that the maximum long-term sustainable yield of the aquifer is significantly greater than this estimate.

Grant Line Road

The Grant Line Road study area lies near the northwest boundary of the existing water service area of the City of Tracy. Figure 4-21 shows the location of the study area and the approximate location and size of the existing water pipelines in the vicinity. The study area is served by two irrigation districts: the Naglee Burk Irrigation District encompasses all of the study area north of Grant Line Road; and the Westside Irrigation District encompasses the portion of the study area south of Grant Line Road.

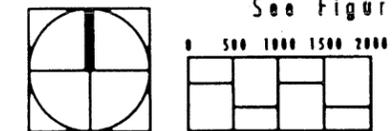


EXISTING AND PROPOSED WATER DISTRIBUTION SYSTEM

- 18" Existing Pipeline and Diameter
- 12" Proposed Pipeline and Diameter
- Dead End
- Diameter Change
- Pipeline Continues
- Pipeline to be Abandoned

Note: Pipeline locations, lengths and diameters are approximate and are based on the best information available at time of preparation.

Note: In addition to mains shown, plan includes approximately 17,000' of 18" diameter and 4,000' of 16" diameter mains necessary to provide service from treatment plant along Delta Mendota Canal and north on Corral Hollow Rd. to SPRR tracks. Additional Off-Site Water System Improvements. See Figure



City of Tracy

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FIGURE 4-21

MAY 1990

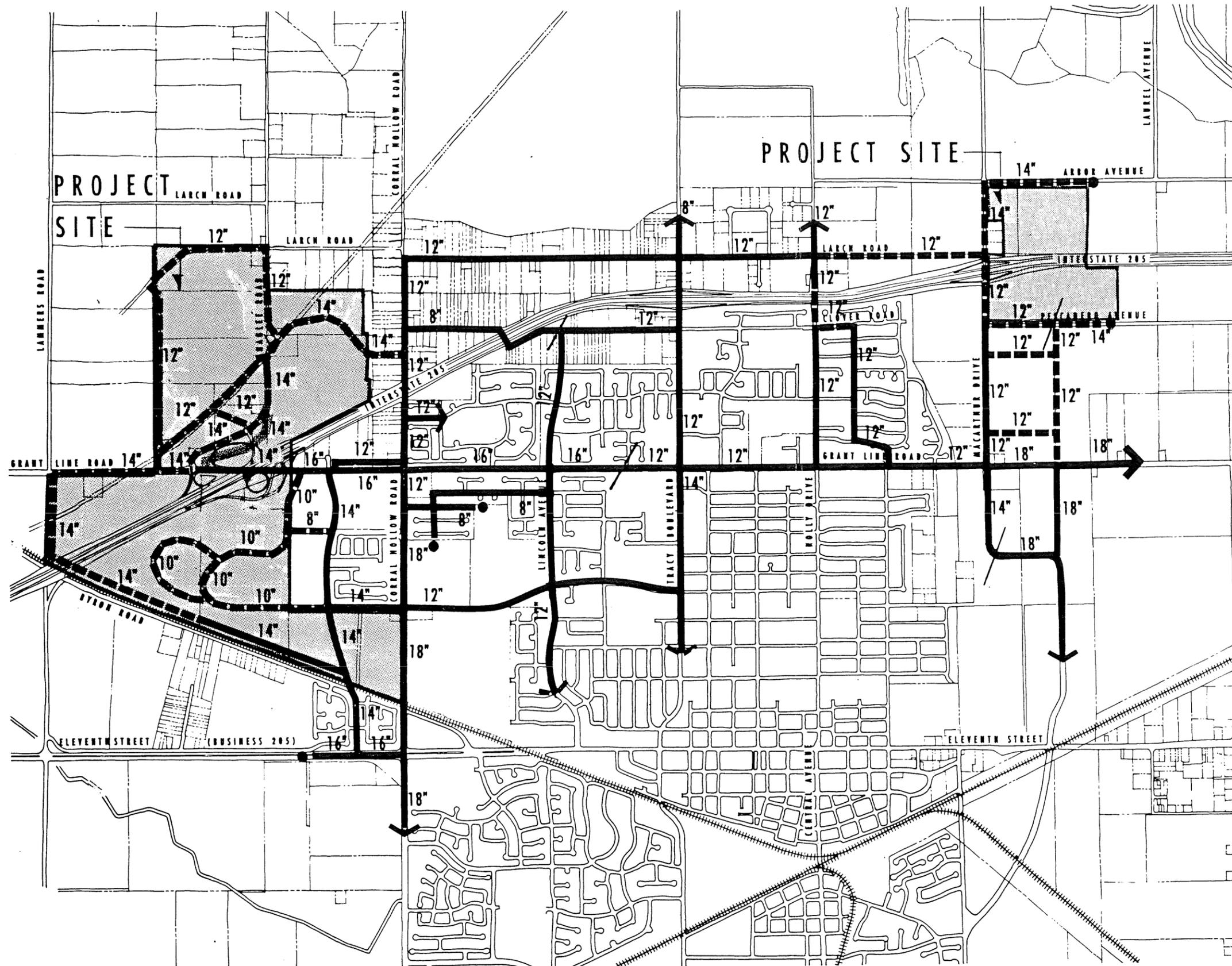


TABLE 4-27

CITY OF TRACY WELL WATER
PUMPING 1973 - 1979

YEAR	TOTAL ANNUAL WELL PRODUCTION (mg)
1973-74	1,721
1974-75	1,615
1975-76	1,906
1976-77	1,643
1977-78	1,559
1978-79	1,644

NOTES: (1) BASIC DATA PROVIDED BY JOHN JONES,
CITY OF TRACY WATER PRODUCTION
SUPERVISOR, WHO CAUTIONED THAT
THESE PRODUCTION NUMBERS ARE
ESTIMATES ONLY.

mg - Million Gallons

With the exception of the Dividend parcel, The land within the Grant Line Road study area is currently in agricultural use. Based on an assumed irrigation rate of 3.2 acre-feet per year (ac-ft/yr) per acre (1.04 mgy per acre), the annual water use was approximately 637 mgy. The Naglee-Burk Irrigation District supplies approximately half of the water (314 mgy) and the Westside Irrigation District provides the remaining 323 mgy. Since 1976, the "Dividend" parcel, located south of I-205 and containing 62 acres in the Westside Irrigation District, has not been irrigated. This reduced the overall irrigation demand of the Grant Line Road study area by 65 mgy to 572 mgy and, consequently, the Westside Irrigation District supplied only 248 mgy to the study area between 1976 and the present.

MacArthur Boulevard

The MacArthur Boulevard study area lies near the northeast boundary of the existing water service area of the City of Tracy. Figure 4-22 shows the location of the project area and the approximate location and size of the existing water pipelines in the vicinity of the project area. The land is currently in agricultural production. Assuming an irrigation demand of 1.04 mgy per acre, the MacArthur Boulevard study area presently uses approximately 108 mgy. The Pescadero Reclamation District provides irrigation water to this area from the Tom Paine Slough.

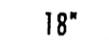
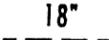
Water Use Factors

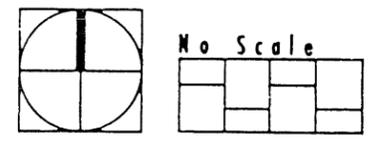
Table 4.26 shows the peak water use rates and the associated peaking factors (the ratio of the demand during the peak period to the average demand). To ensure an adequate level of service, the water supply system should be designed based on peaking factors at least as high as the highest peaking factor observed in previous years. A maximum hourly peaking factor of 3.0 and a maximum day peaking factor of 2.2 are used in this report. These factors are slightly higher than the highest observed values from 1985 through 1989 (2.86 peak hour and 2.15 maximum day). Higher peaking factors are not justified as Tracy is growing and larger areas tend to have lower peaking factors. Also, increased use of drought tolerant landscaping may lower the peaking factors since the irrigation requirements for such landscaping do not vary significantly throughout the year.

Table 4.28 shows the derivation of the water use rates for various land uses discussed in this report. The rates are based on "normal" landscaping (not using drought tolerant species) and development typical in Tracy for each land use. Possible reductions in water use due to conservation and use of drought tolerant landscaping are discussed in a later section of this report.



ADDITIONAL OFF-SITE WATER SYSTEM IMPROVEMENTS

-  18" Existing pipeline and diameter
-  18" Proposed pipeline and diameter
-  Possible new Booster Pump
-  New Pump Station
-  Tracy Water Treatment Plant



City of Tracy

David L. Gates & Associates
The Sword Company
Bissell & Karn

FIGURE 4-22

MAY 1990

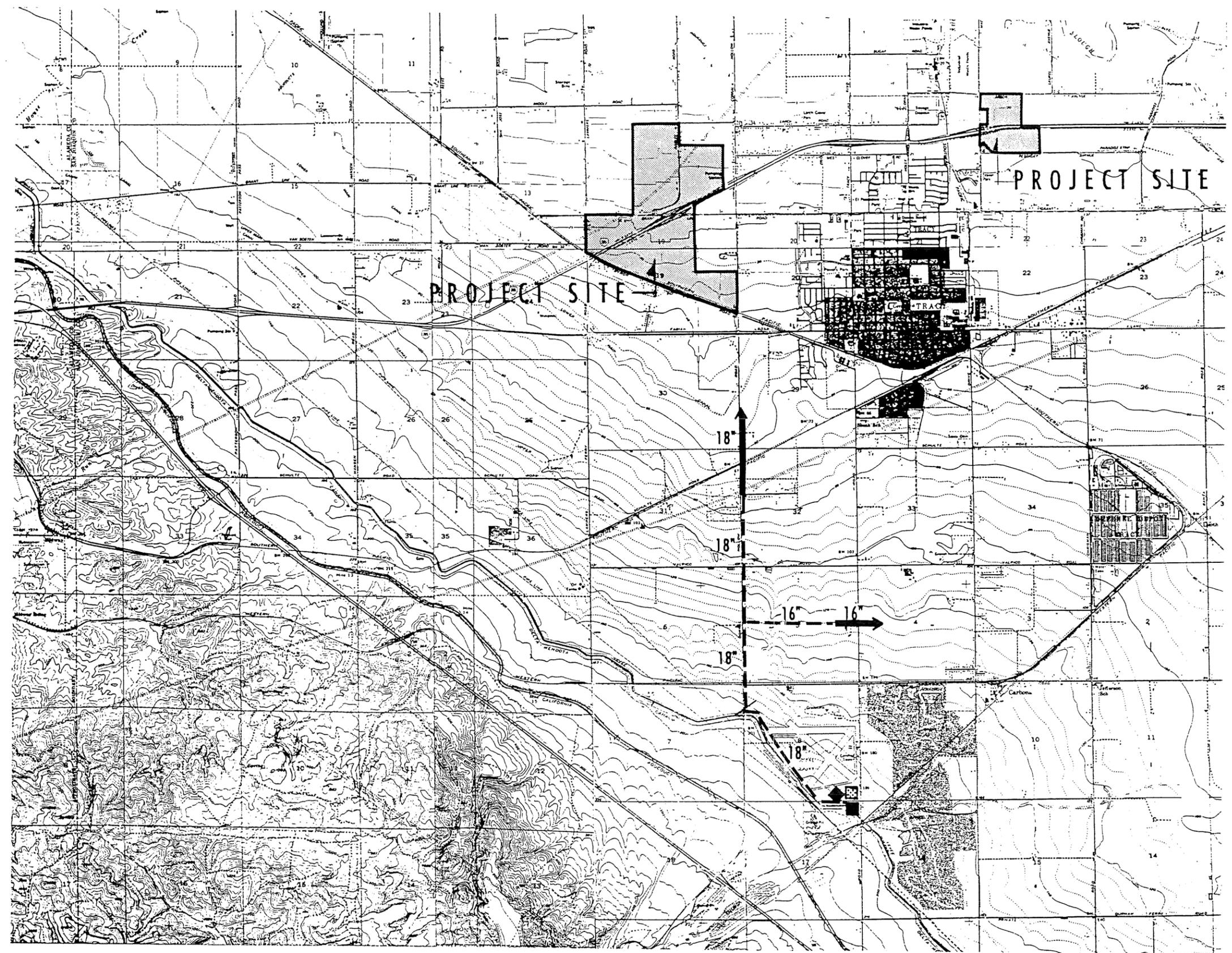


TABLE 4-28

ASSUMED WATER USE RATES FOR LAND USES WITHIN TRACY

LANDUSE	PORTION LANDSCAPING (%)	AVERAGE LANDSCAPE USE (1) (gpad)	AVERAGE WASTEWATER GEN. RATES (2)	AVERAGE DOMESTIC USE RATE (3)	UNIT DENSITY (4)	AVERAGE DOMESTIC USE (gpad)	AVERAGE TOTAL USE (gpad)	AVERAGE TOTAL USE (gpd/du)
HDR	25	600	100 gpcd	105 gpcd	42.40 capita/ac	4,452	5,052	252.60
MDR	35	840	100 gpcd	105 gpcd	30.40 capita/ac	3,192	4,032	403.20
LDR	50	1,200	100 gpcd	105 gpcd	17.27 capita/ac	1,813	3,013	547.88
GC	25	600	3,000 gpad	3,150 gpad		3,150	3,750	
SC	25	600	2,000 gpad	2,100 gpad		2,100	2,700	
LI	20	480	2,875 gpad	3,019 gpad		3,019	3,499	
PS	90	2,160	300 gpad (5)	315 gpad		315	2,475	
FC	25	600	.70 gpd/sf	.735 gpd/sf	10,000 sf/ac	7,350	7,950	
EI	45	1,080	0	.000		0	1,080	
CC	25	600	.10 gpd/sf	.105 gpd/sf	21,800 sf/ac	2,289	2,889	

- NOTES:
- (1) LANDSCAPING USE IS BASED ON THE ASSUMPTION THAT ONE ACRE OF LANDSCAPING REQUIRES AN AVERAGE OF 2,400 gpad.
 - (2) EXCEPT AS NOTED, WASTEWATER GENERATION RATES ARE TAKEN FROM TABLE 2-1 OF THE DRAFT 'WASTEWATER FACILITIES FOR I-205 CORRIDOR STUDY', JUNE 1989 BY CH2M-HILL.
 - (3) DOMESTIC USE RATE IS ASSUMED TO BE 105 % OF THE WASTEWATER GENERATION RATE.
 - (4) RESIDENTIAL DENSITIES ARE BASED ON THE FOLLOWING HOUSING DENSITIES AND OCCUPANCY RATES FROM THE CH2M-HILL REPORT IN NOTE (2).

LAND USE	HOUSING DENSITY (du/ac)	OCCUPANCY RATE (persons/du)	UNIT DENSITY (capita/ac)
HDR	20.0	2.12	42.40
MDR	10.0	3.04	30.40
LDR	5.5	3.14	17.27

- (5) ASSUMES THAT EACH ACRE OF PARK OR SCHOOL ATTRACTS 30 VISITORS PER DAY AT 10 gpcd.

gpad - Gallons Per gross Acre per Day
 gpcd - Gallons Per Capita per Day
 gpd/sf - Gallons Per Day per Square Foot of building
 capita/ac - persons per gross Acre
 sf/ac - Square Feet of building per gross Acre
 gpd/du - Gallons Per Day per Dwelling Unit
 du/ac - Dwelling Units per Acre
 persons/du - persons per Dwelling Unit

B. Environmental Impacts

Grant Line Road

As shown in Table 4.29, the proposed development of the Grant Line Road study area would result in an estimated average daily water demand of 2.07 mgd (757 mgy) and a maximum demand of 4.56 mgd. This is approximately 120 mgy higher than the average agricultural demand for the Grant Line Road area (637 mgy). Future demands of development in the area would be added to the overall demands placed on the City of Tracy water supply system. The impacts of providing the additional water are addressed below in the Water Supply section. Developing the area would also require constructing extensions to the water distribution system. Figures 4-21 and 4-22 show the locations and sizes of the proposed additions to the system.

The Naglee Burk Irrigation District encompasses a total of 2,500 acres and is the smallest irrigation district impacted by the I-205 project. Each acre in the Naglee-Burk Irrigation District is assessed an annual fee of \$45 for maintenance of facilities. It is possible that as a result of the I-205 project, the removal of the +300 acres within the District would reduce maintenance revenues to the point where the facilities could not be maintained.

MacArthur Boulevard

As shown in Table 4.29, developing the MacArthur Boulevard study area would result in an estimated average demand of 0.42 mgd (152 mgy) and a maximum day demand of 0.92 mgd. The average developed demand is approximately 44 mgy higher than the average agricultural demand (108 mgy). Once developed, water demands from the MacArthur Boulevard area would be added to the overall demands placed on the City of Tracy water supply system. The impacts of providing the additional water are addressed below in the Water Supply section. Developing the area would require constructing extensions to the water distribution system. Figures 4-21 and 4-22 show the locations and sizes of the proposed additions to the system.

Water Supply

The total projected average water demand for both study areas is 2.49 mgd (910 mgy), resulting in a maximum demand of 5.48 mgd. With the adoption of the Residential Areas Specific Plan and the Industrial Areas Specific Plan, the city has committed to providing water to the undeveloped areas within the current city limits. Five additional properties, all located within the city but not previously included in either Specific Plan, and one change in land use in the Residential Specific Plan have also been included in the projections. Table 4.30 shows that this infill as called out in the approved specific plan, plus the changes described above, will require an estimated average of 7.10 mgd

TABLE 4-29

WATER DEMANDS CREATED BY DEVELOPMENT
OF THE PREFERRED ALTERNATIVE FOR THE
I-205 CORRIDOR STUDY AREAS

STUDY AREA	LANDUSE	AREA (ac)	AVERAGE AREAL USE (1) (gpd/ac)	AVERAGE TOTAL USE (mgd)	MAXIMUM DAY DEMAND (mgd)(4)
GRANT LINE					
	HDR	19.60	5,052	.09902	.21784
	MDR	31.00	4,032	.12499	.27498
	LDR	114.60	3,013	.34533	.75973
	GC (2)	112.44	3,750	.42165	.92763
	SC	68.32	2,700	.18446	.40582
	LI (3)	109.20	3,499	.38206	.84054
	PS	34.20	2,475	.08465	.18622
	FC	24.04	7,950	.19112	.42046
	FI	23.67	1,080	.02556	.05624
	CC	74.80	2,889	.21610	.47541
	SUBTOTAL	611.87		2.07494	4.56487
MACARTHUR					
	GC	12.50	3,750	.04688	.10313
	SC	25.00	2,700	.06750	.14850
	LI	53.72	3,499	.18795	.41350
	FC	14.49	7,950	.11520	.25343
	SUBTOTAL	105.71		.41752	.91855
GRAND TOTAL		717.58		2.49247	5.48342

- NOTES: (1) AVERAGE USE IS TAKEN FROM TABLE 2
(2) GC INCLUDES GCR FOR PURPOSES OF PROJECTING
WATER DEMAND.
(3) LI INCLUDES UR FOR PURPOSES OF PROJECTING
WATER DEMAND.
(4) BASED ON A PEAKING FACTOR OF 2.2.

ac - ACres
gpd/ac - Gallons Per Day per ACre
mgd - Million Gallons per Day

TABLE 4.30

WATER DEMAND CREATED BY INFILL IN TRACY

Land Use	Number of Units (1)	Unit Type	Average Unit Use (2) (gpd/unit)	Average Total Use (mgd)	Maximum Day Demand (mgd) (3)
HDR	429	du	252.60	.10837	.23840
MDR	2,652	du	403.20	1.06929	2.35243
LDR	4,817	du	547.88	2.63915	5.80612
GC	84	ac	3,750.00	.31500	.69300
GI	568	ac	3,498.75	1.98729	4.37204
LI	114	ac	3,498.75	.39886	.87749
PS	234	ac	2,475.00	.57915	1.27413
			Total	7.09710	15.61361

Notes: (1) Expected infill is from Table 3.1 of the Tracy Residential Areas Specific Plan, June 1987, Table 3.1 of the Tracy Industrial Areas Specific Plan, June 1988. 5 properties within the city not previously included in either specific Plan and 1 property in Specific Plan Area that has amended its land use.

New changes are:
 Plus 475 du LDR
 Minus 26 du MDR
 Plus 31 ac GC

(2) Average use is taken from Table 4.27

(3) Based on a peaking factor of 2.2

du - dwelling unit

ac - acre

gpd/unit - gallons per day per unit (du or ac)

mgd - million gallons per day

(2,590 mgy) with a maximum day demand of 15.61 mgd. The average total demand for the City of Tracy in the "build out" condition (when all the infill called out in the Residential Area Specific Plan, the Industrial Area Specific Plan and the additional properties noted above is complete) is estimated to be 14.47 mgd (5,282 mgy) with a maximum day demand of 31.84 mgd. When the additional demand generated by proposed development in the I-205 corridor study area is added to the buildout condition, the total projected demands would be 16.96 mgd (6,192 mgy) average and 37.32 mgd maximum day.

Based on the estimated reliable ground water supply from city wells (1,549 mgy) and the full Delta-Mendota Canal allotment (3,258 mgy), the city's reliable water supply is at least 4,807 mgy. This estimate assumes that drought-year shortages in Delta-Mendota allotments would be infrequent and could be compensated for by increased ground water pumping.

The estimated reliable water supply is approximately 475 mgy (1.30 mgd) less (9.9 percent) than the projected average water demands at full buildout of the City of Tracy (5,282 mgy) and approximately 1,385 mgy less than the projected average demand for buildout of the city and the I-205 corridor development. It is important to note that these projections are based on conservative assumptions regarding the reliable ground water supply. The maximum long term sustainable yield determined in the forthcoming K/J/C report should be substituted for these estimates when it becomes available.

If no shortfalls in the reliable supply are predicted based on the K/J/C maximum long term sustainable yield of the aquifer, the potential impacts of future development would include only those impacts relating to increased pumping of ground water, meeting the peak demands of the system, and transporting and distributing the water to the I-205 Corridor Study Area.

If the reliable water supply calculated with the K/J/C maximum long term sustainable yield of the aquifer is less than the projected demands, development in and around Tracy would produce a shortfall in water supply. If it is necessary to mitigate this impact, the City of Tracy would need to limit demand, obtain more surface water rights, build facilities to store water in wet years, use reclaimed water or employ some combination of these methods.

Increasing the water supply above that required by the built out City of Tracy and I-205 Corridor Study Area, and expanding the distribution system, could reduce barriers to growth in the Tracy area. If the City wishes to restrict additional growth by ensuring that water is unavailable for new development, it can expand its supply just enough to meet current commitments.

System Supply and Delivery Capacity

The projected maximum daily demand of the built out City of Tracy plus the I-205 project is 37.32 mgd. The maximum amount of water that can be supplied by the system is 40.2 mgd. This includes 15.0 mgd which can be processed by the water treatment plant and 25.2 mgd which can be pumped by the wells. To meet the projected maximum demand, it would be necessary for all wells to pump and the plant to operate at full capacity. If any portion of the system were to break down, the maximum water supply rate could be reduced to less than the maximum daily demand. To mitigate this impact, standby supply and/or storage capacity should be provided. At this time, the city has approximately 6 million gallons of storage which is used to help meet the peak hour demand and provide a fire flow reserve. In general, unless the storage available is over one quarter of the total maximum day demand, it is unwise to use storage to meet maximum day demand. If the city chooses not to build additional storage, it can drill a new well(s) or expand the water treatment plant capacity and build a new transmission main(s) to move the treated water from the plant.

Determining whether the production, storage, transmission system and distribution system will safely provide the peak hour demand would require an extensive analysis beyond the scope of this report. If the peak hour system capacity is insufficient, either additional transmission lines between the water treatment plant and the city will need to be built or, additional wells will need to be constructed near the point of use. If built, the pipelines shown in Figure 4-22 would provide additional transmission capacity and mitigate potential impacts on peak hour demand resulting from development of the I-205 corridor.

C. Suggested Mitigation Measures

To offset the potential loss in revenue to the Naglee Burk Irrigation District, the land currently within the district should remain, as long as downstream agricultural users require the use of the irrigation facilities.

The Specific Plan should provide for a standby supply and/or increased storage capacity to meet the peak hour demand and fire flow reserve. This can be achieved by increasing the existing storage, drilling new wells or expanding the water treatment plant capacity and building a new transmission main to convey the treated water.

If the K/J/C report indicates a shortfall in reliable water supply due to city-wide development and development in the Specific Plan area, the Specific Plan shall identify one (or more) of the following water supply options as mitigations and require its implementation. If it is necessary for the city to develop any one of the following options, an environmental analysis will be necessary at the time an option is selected.

Surface Water

The city has entered into negotiations to obtain a new surface water supply which would meet additional demands created by infill in the City of Tracy and development of the I-205 Specific Plan area. According to city personnel, there are no regulatory barriers to obtaining this water. No further information regarding this possible supply is available at this time.

Obtaining additional surface water supplies raises several potential issues. To obtain entitlements from other agencies or water users, the City would need to negotiate contracts with the agencies/users and the Federal Bureau of Reclamation. Revisions to water service boundaries and changes to permit conversion from agricultural to municipal and industrial uses may be necessary. Additional water storage may also be required to allow the Bureau to continue the current schedule of deliveries while accounting for seasonal differences in the peak demands of agricultural versus municipal and industrial uses. Additional surface water supplies may also require construction of water treatment facilities and possibly construction of transport facilities.

The city's reliable surface water supply could also be expanded by developing above ground or ground water recharge facilities for storage of water during years of excess rainfall. Additional studies would be necessary to determine the feasibility of this option.

Ground Water

Increased pumping of ground water resources to meet increased demand could result in water quality impacts relating to the high levels of TDS in the aquifer. Wells close to Tracy that draw water from the same aquifer pump lower quality water (higher TDS). This increased pumping may cause water of similar quality to be drawn into city wells. If the state's maximum long-term secondary drinking standard of 1,000 mg/l is exceeded, the State Department of Health Services will investigate to determine if corrective action is needed. Potential water quality impacts can be reduced by continuing to blend well water with treated water, as is currently done by the City of Tracy. Drilling new wells near the water treatment plant would permit a larger amount of treated well water to be blended prior to distribution. It may also be possible to improve the quality of well water by recharging the aquifer with water low in TDS.

Water Conservation

A water conservation program could reduce water consumption thereby reducing the rate of increase of the overall water demand. Potential conservation measures include: requiring drought tolerant landscaping in all new development; banning large

expanses of lawn; requiring low-flow plumbing fixtures in all new development; offering water use audits to customers; providing low-flow showerheads and other water conserving devices; structuring water use rates to reward low use and discourage high use; and encouraging conservation through public education programs.

Tables 4.31, 4.32 and 4.33 show the projections of potential water conservation which would result from initiating a drought tolerant landscaping requirement for all new development. A comparison of Table 4.29 and Table 4.32 indicates that drought tolerant landscaping could reduce the average water demand of the I-205 project from 2.49 mgd to 2.29 mgd, representing an 8.3 percent reduction. The average demand from infill throughout the City of Tracy could be reduced from 7.10 mgd to 6.28 mgd, representing an 11.5 percent reduction (see Tables 4.30 and 4.33). Thus, the total average demand of the City of Tracy at buildout with the I-205 development could be reduced from 16.96 mgd to 15.94 mgd. This represents a 6.0 percent reduction and a savings of approximately 5,820 mgy.

The East Bay Municipal Utilities District (EBMUD) estimates that they can achieve voluntary water use reductions of 15 percent in drought years without significant damage to the local economy. EBMUD can achieve this reduction in part because they have, over the years, worked very hard to make their customers aware of the need for water conservation and to maintain a positive public image. These factors are critical to gaining the widespread cooperation necessary to implement a successful conservation program. In EBMUD's "Water Supply Management Program, Technical Report and Appendices," (January 1989), the agency states that "the intended results of a water conservation program are not reliable and cannot be predicted. Public acceptance is an important factor."

A more conservative estimate of potential demand reductions due to water conservation efforts is provided by the State Department of Water Resources (DWR). The DWR estimates that "a combined public information and school children education program can reduce municipal water demand on the average by about five percent."³

Water Reclamation

Water reclamation (the use of treated wastewater) could meet the irrigation requirements of certain users within the city, thereby reducing the demand for potable or fresh water. Parks, roadside landscaping and other large areas of landscaping are possible sites for use of reclaimed water. Reclaimed water is generally treated to a higher level than the typical effluent, with the exact level dependent on the possibility of human contact and the planned use for the reclaimed water.

TABLE 4-31

ASSUMED WATER USE RATES FOR LAND USES WITHIN TRACY WITH DROUGHT TOLERANT LANDSCAPING

LANDUSE	PORTION LANDSCAPING (%)	AVERAGE LANDSCAPE USE (1) (gpad)	AVERAGE WASTEWATER GEN. RATES (2)	AVERAGE DOMESTIC USE RATE (3)	UNIT DENSITY (4)	AVERAGE DOMESTIC USE (gpad)	AVERAGE TOTAL USE (gpad)	AVERAGE TOTAL USE (gpd/du)
HDR	25	375	100 gpcd	105 gpcd	42.40 capita/ac	4,452	4,827	241.35
MDR	35	525	100 gpcd	105 gpcd	30.40 capita/ac	3,192	3,717	371.70
LDR	50	750	100 gpcd	105 gpcd	17.27 capita/ac	1,813	2,563	466.06
GC	25	375	3,000 gpad	3,150 gpad		3,150	3,525	
SC	25	375	2,000 gpad	2,100 gpad		2,100	2,475	
LI	20	300	2,875 gpad	3,019 gpad		3,019	3,319	
PS	90	1,350	300 gpad (5)	315 gpad		315	1,665	
FC	25	375	.70 gpd/sf	.735 gpd/sf	10,000 sf/ac	7,350	7,725	
FI	45	675	0	.000		0	675	
CC	25	375	.10 gpd/sf	.105 gpd/sf	21,800 sf/ac	2,289	2,664	

- NOTES:
- (1) LANDSCAPING USE IS BASED ON THE ASSUMPTION THAT ONE ACRE OF LANDSCAPING REQUIRES AN AVERAGE OF 1,500 gpad.
 - (2) EXCEPT AS NOTED, WASTEWATER GENERATION RATES ARE TAKEN FROM TABLE 2-1 OF THE DRAFT 'WASTEWATER FACILITIES FOR I-205 CORRIDOR STUDY', JUNE 1989 BY CH2M-HILL.
 - (3) DOMESTIC USE RATE IS ASSUMED TO BE 105 % OF THE WASTEWATER GENERATION RATE.
 - (4) RESIDENTIAL DENSITIES ARE BASED ON THE FOLLOWING HOUSING DENSITIES AND OCCUPANCY RATES FROM THE CH2M-HILL REPORT IN NOTE (2).

LAND USE	HOUSING DENSITY (du/ac)	OCCUPANCY RATE (persons/du)	UNIT DENSITY (capita/ac)
HDR	20.0	2.12	42.40
MDR	10.0	3.04	30.40
LDR	5.5	3.14	17.27

- (5) ASSUMES THAT EACH ACRE OF PARK OR SCHOOL ATTRACTS 30 VISITORS PER DAY AT 10 gpcd.

gpad - Gallons Per gross Acre per Day
 gpcd - Gallons Per Capita per Day
 gpd/sf - Gallons Per Day per Square Foot of building
 capita/ac - persons per gross Acre
 sf/ac - Square Feet of building per gross Acre
 gpd/du - Gallons Per Day per Dwelling Unit
 du/ac - Dwelling Units per Acre
 persons/du - persons per Dwelling Unit

TABLE 4-32

WATER DEMANDS CREATED BY DEVELOPMENT
OF THE PREFERRED ALTERNATIVE WITH
DROUGHT TOLERANT LANDSCAPING

STUDY AREA	LANDUSE	AREA (ac)	AVERAGE AREAL USE (1) (gpd/ac)	AVERAGE TOTAL USE (mgd)	MAXIMUM DAY DEMAND (mgd)(4)
GRANT LINE	HDR	19.60	4,827	.09461	.20814
	MDR	31.00	3,717	.11523	.25350
	LDR	114.60	2,563	.29376	.64627
	GC (2)	112.44	3,525	.39635	.87197
	SC	68.32	2,475	.16909	.37200
	LI (3)	109.20	3,319	.36241	.79730
	PS	34.20	1,665	.05694	.12527
	FC	24.04	7,725	.18571	.40856
	FI	23.67	675	.01598	.03515
	CC	74.80	2,664	.19927	.43839
	SUBTOTAL	611.87		1.88934	4.15655
MACARTHUR	GC	12.50	3,525	.04406	.09694
	SC	25.00	2,475	.06188	.13613
	LI	53.72	3,319	.17828	.39222
	FC	14.49	7,725	.11194	.24626
	SUBTOTAL	105.71		.39616	.87154
GRAND TOTAL		717.58		2.28550	5.02810

- NOTES: (1) AVERAGE USE IS TAKEN FROM TABLE ___6___
(2) GC INCLUDES GCR FOR PURPOSES OF PROJECTING
WATER DEMAND.
(3) LI INCLUDES UR FOR PURPOSES OF PROJECTING
WATER DEMAND.
(4) PEAKING FACTOR OF 2.2 USED.

ac - ACres
gpd/ac - Gallons Per Day per ACre
mgd - Million Gallons per Day

TABLE 4-33

WATER DEMANDS CREATED BY INFILL IN TRACY
WITH DROUGHT TOLERANT LANDSCAPING

LANDUSE	NUMBER OF UNITS (1)	UNIT TYPE	AVERAGE UNIT USE (2) (gpd/unit)	AVERAGE TOTAL USE (gpd)	MAXIMUM DAY DEMAND (mgd)(3)
HDR	429	du	241.35	.10354	.22779
MDR	2,652	du	371.70	.98575	2.16865
LDR	4,817	du	466.06	2.24503	4.93906
GC	84	ac	3,525.00	.29610	.65142
GI	568	ac	3,318.75	1.88505	4.14711
LI	114	ac	3,318.75	.37834	.83234
PS	234	ac	1,665.00	.38961	.85714
			TOTAL	6.28341	13.82351

- NOTES: (1) EXPECTED INFILL IS FROM TABLE 3.1 OF THE TRACY RESIDENTIAL AREAS SPECIFIC PLAN JUNE, 1987, TABLE 3.1 OF THE TRACY INDUSTRIAL AREAS SPECIFIC PLAN JUNE, 1988, AND INFORMATION FROM CAROLYN MILLS OF MILLS & ASSOC. NEW INFORMATION IS ON 5 NEW PROPERTIES BEING ANNEXED AND 1 PROPERTY IN SPECIFIC PLAN AREA THAT HAS AMENDED IT'S LANDUSE. NEW CHANGES ARE:
PLUS 475 du LDR
MINUS 26 du MDR
PLUS 31 ac GC
- (2) AVERAGE USE IS TAKEN FROM TABLE ___6___.
- (3) BASED ON A PEAKING FACTOR OF 2.2

du - Dwelling Unit

ac - Acre

gpd/unit - Gallons Per Day per UNIT (du or ac)

mgd - Million Gallons per Day

Additional studies would be necessary to identify the appropriate waste water treatment techniques and the distribution systems required.

It is possible that the City could trade reclaimed water for the surface water rights of agricultural properties. Use of reclaimed water for agricultural irrigation may require a higher level of wastewater treatment.

It might also be possible to use effluent from the wastewater treatment plant for ground water recharge. Again, the effluent may require a much higher level of treatment than is currently provided and would be extremely costly for the city to implement.

-
1. Jones, John. Water Production Supervisor, City of Tracy, personal communication, April 1990.
 2. *ibid.*
 3. Department of Water Resources, Office of Water Conservation, "Water Conservation Reference Manual," March 1984.

4.10 Municipal Wastewater

A. Environmental Setting

Wastewater Treatment

Wastewater treatment is provided at the City of Tracy's wastewater treatment facilities (WTF) located at Holly Drive and Larch Road. This facility provides secondary treatment to wastewater generated within the incorporated areas of the city (with the exception of a few low density areas which are not currently served).

The WTF has recently been expanded and upgraded to a treatment capacity of 9.0 million gallons per day (mgd). This facility currently treats approximately six mgd of wastewater during the summer months, or canning season, and approximately four mgd during the noncanning season. Treatment plant effluent flows into an effluent pump station where it is pumped and discharged through an outfall pipeline to the Old River. The effluent from the WTF must meet an average monthly discharge requirement of 20 mg/l of biochemical oxygen demand (BOD) and 30 mg/l of total suspended solids (TSS) and a daily maximum of 50 mg/l BOD and 50 mg/l TSS. In the event the effluent does not meet permitted discharge standards, it can be diverted to an emergency storage pond.

Wastewater Collection

Wastewater from the city is transported to the WTF through a wastewater collection system. A portion of this wastewater requires pumping by means of the Larch Road Pump Station or five other lift stations. The collection system consists of approximately 110 miles of pipeline ranging from 6 to 33 inches in diameter and serves an area of approximately 6,641 acres.

The Corral Hollow Trunk is part of this existing collection system. This trunk line originates at Linne Road and extends northward along Corral Hollow Road to the Grant Line Road area of the project site. From here, the trunk line proceeds eastward by gravity to the Larch Road Pump Station, where the wastewater is then pumped to the WTF. This trunk line is approximately 35,100 feet long and ranges in pipe size from 10 to 33 inches.

The East Side Trunk, constructed by Assessment District 84-1(AD 84-1) in 1984, is also part of the existing collection system. This gravity pipeline originates at Eleventh Street and travels northward to the WTF. This trunk line is approximately 10,900 feet long and ranges in pipe size from 15 to 33 inches.

Grant Line Road

The majority of the project area along Grant Line Road is in agricultural or agriculturally-related use. There is no existing wastewater collection system in the area. Annexation of this land would result in the development of mixed land uses consisting of commercial, industrial, park and open space, and residential uses all requiring utility services.

MacArthur Drive

The project area along MacArthur Drive is in agricultural or agriculturally-related use. Development of this area will require utility services to serve the anticipated commercial and industrial development.

B. Environmental Impacts

Grant Line Road

The proposed project plan requires that services be available to accommodate the development of the project area. This will require the construction of new wastewater facilities and potential upgrade of some existing city facilities. The WTF is not currently at capacity, however the remaining unused capacity has already been committed to other future development. Therefore, the development of the Grant Line Road area would require an increase in the city's current wastewater treatment capability. In addition, most of the Grant Line Road area is beyond the service boundary of the existing gravity collection system, therefore, new sewer pipelines must be constructed to serve this area.

Using the design flows presented in Table 4-34, the estimated average wastewater flow from the Grant Line Road area is 1.10 mgd. The proposed collection system for the Grant Line Road area is shown in Figure 4-23. These gravity pipelines range in size from 6 inches to 21 inches in diameter. This system is designed to accommodate flows generated from the project area only. This system would collect and convey wastewater from the project area northward to Corral Hollow Road and Larch Road. Due to the relatively flat terrain, wastewater generated from the project area is unable to flow by gravity to its treatment destination, therefore, a new pump station and force main is required at Corral Hollow Road and Larch Road to pump the wastewater to its treatment site.

The city must increase their current wastewater treatment capability if the Grant Line Road area is to develop. This can be accomplished by an expansion at the wastewater treatment facility. During the previous expansion, some provisions were made for a future Phase VI expansion of the plant. An incremental expansion to treat wastewater from the Grant Line Road area only is a feasible wastewater treatment alternative. An expansion of

TABLE 4.34
 AVERAGE WASTEWATER FLOW RATES
 FOR I-205 CORRIDOR STUDY

<u>Land Use</u>	<u>Unit Density</u>	<u>Person Density^a</u>	<u>Estimated Average Flow</u>
Low density residential	5.5 units/ac	3.14 persons/du	100 gpcd
Medium density residential	10 units/ac	3.04 persons/du	100 gpcd
High density residential	20 units/ac	2.12 persons/du	100 gpcd
General commercial			1,850 gpad
Service commercial			2,150 gpad
Freeway commercial			0.70 gpd/ft ²
Light industrial			2,150 gpad
Schools (K-5)			15 gpcd
Commercial Center			0.10 gpd/ft ^{2b}

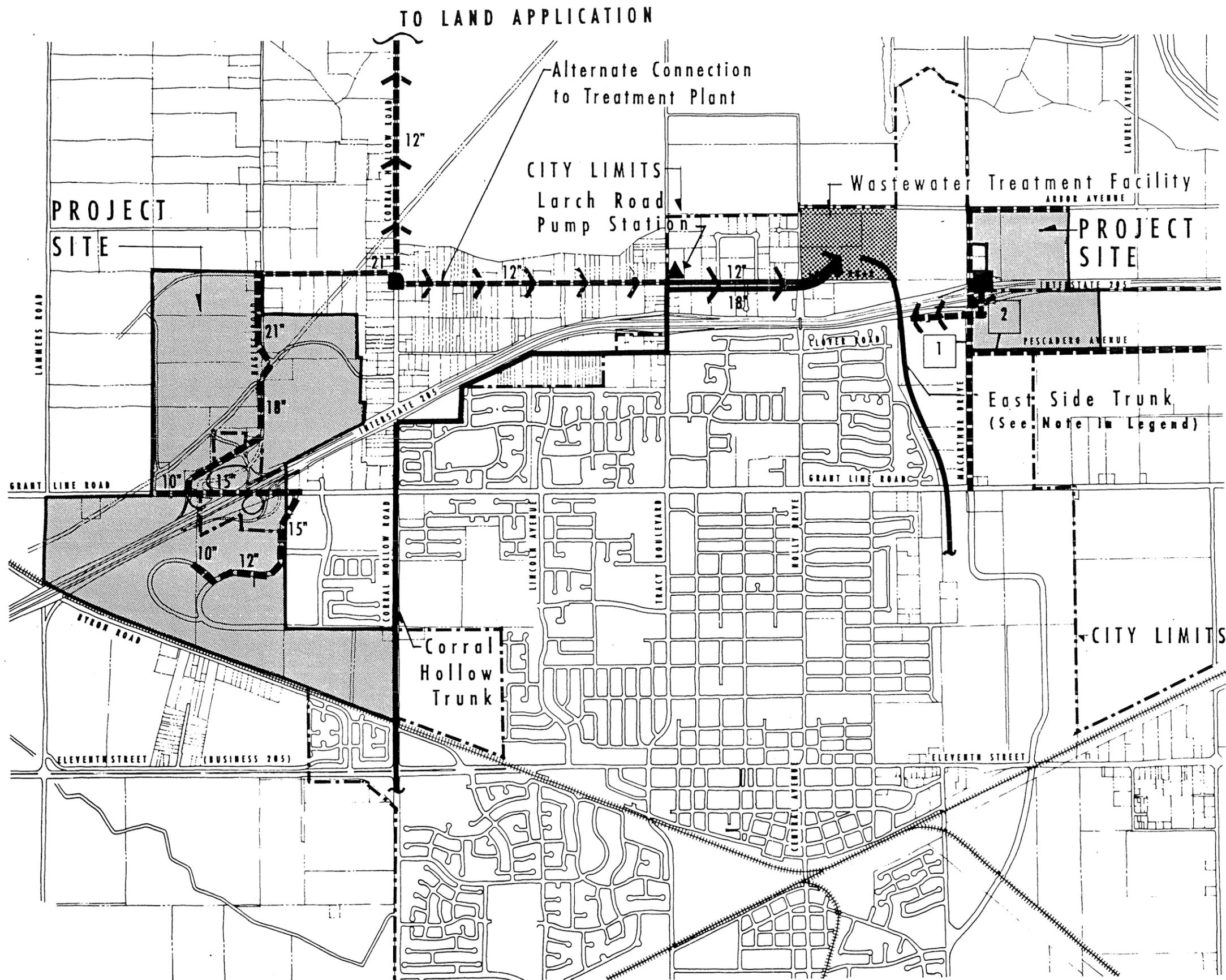
gpcd = gallons per capita, per day

gpad = gallons per net acre per day

gpd/ft² = gallons per day per square foot of building

^aPer Department of Finance/Population Research, City of Tracy.

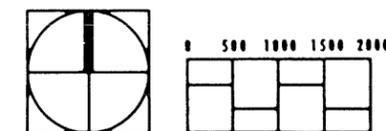
^bPer transmittal letter from General Growth of California, Inc., May 16, 1989.



WASTEWATER SYSTEM

- Project Boundary
- Existing Gravity Sewer Line
- Existing Force Main
- Proposed Gravity Sewer Line
- Proposed Force Main
- Existing Pump Station
- Proposed Pump Station
- Key to Cost Estimate

Note: Existing sewer line to treatment plant to be upgraded from I-205 to Wastewater Treatment Plant.



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FIGURE 4-23

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the WTF would include the following improvements: headworks modifications, an additional primary clarifier, increased primary sludge pumping, an additional trickling filter, trickling filter pump station modifications, dissolved air flotation thickener, additional anaerobic digester, additional chlorine contact basin, additional secondary clarifier, additional sand drying bed and an outfall pipeline to the Old River. If the city decides to proceed with an expansion of the plant, wastewater would be pumped from the new pump station at Corral Hollow Road and Larch Road, through a new force main easterly to the Larch Road pump station. From this pump station, the wastewater would then be pumped directly to the plant for treatment. Modifications to the Larch Road Pump Station are required to augment its current pumping capacity to accomodate this additional flow from the Grant Line Road area.

Another potential treatment alternative is land application. This type of treatment system would pretreat the raw wastewater from the Grant Line Road area at a separate site and dispose of the wastewater by land application. Wastewater would be treated by a system that consists of an aeration pond and a settling pond. The treated pond effluent will flow to a storage pond and then be pumped to the land application area for final treatment by a soil/crop system. Wastewater will be pumped by the new pump station at Corral Hollow Road and Larch Road through a new force main to the land treatment site.

When the city decides which treatment alternative to implement for the Grant Line Road area, further environmental documentation will be required.

MacArthur Drive

Using the design flows presented in Table 4-34, the estimated average wastewater flow from the MacArthur Drive area is 0.26 mgd. The proposed wastewater improvements for the MacArthur Drive area are shown in Figure 4-23 and consist of a new gravity collection system, a pump station located on the northeast corner of the intersection of MacArthur Drive and I-205, a force main, and some modifications to the east side trunk line. Wastewater would be collected by the proposed collection system and pumped westerly via a force main to the east side trunk line. From there, wastewater will flow by gravity to the WTF. Modifications are required to the east side trunk line downstream of where the proposed force main discharges into to the trunk in order to accomodate the additional flow. An expansion of the WTF would be required to accomodate the additional wastewater generated from the MacArthur Drive area. Since the MacArthur area can only be reasonably served by the WTF, any land application alternative for the Grant Line Road area should include capacity for diversion of 84-1 flows equivalent to those flows coming from the MacArthur area which are outside the 84-1 boundary. This flow transfer is required to preserve the treatment capacity of 84-1.

Short-Term Impacts

Short-term impacts to the environment as a result of construction activities include noise, dust, disruption of traffic, and other factors associated with the construction of pipelines, pump stations and the treatment plant expansion. Additional impacts would occur if the proposed pipelines were to cross a wetland area or area of significant archeological or historical resource. Based upon available information, none of the proposed collection pipelines crosses either wetland or archeological/historical resource areas. The expansion of the treatment plant or construction of a land application system would be a separate project. Site specific effects would be addressed when the design alternatives have been developed.

Long-Term Impacts

The development of the Grant Line Road area would result in no long term impacts to the Corral Hollow trunk line or any other part of the existing gravity collection system since new pipelines to serve the area are anticipated. If the city decides to expand the wastewater treatment facility to accomodate flow from the Grant Line Road area, modifications to the Larch Road Pump Station would be necessary to augment the pump station's present pumping capacity. The development of the MacArthur Drive area would require modifications to the East Side Trunk to accomodate the additional flow. Development of the entire I-205 project area will require an increase in the current wastewater treatment capability of the city. The additional wastewater generated from the project area is not expected to affect the treatment facility's ability to meet current federal and state discharge requirements, given an appropriate expansion of that facility.

C. Suggested Mitigation Measures

To meet the sewage treatment demands created by the proposed development in the specific plan area, it will be necessary to construct new collection system pipelines, new pump stations and force mains, upgrade the Larch Road pump station, and expand the city's wastewater treatment capability. To mitigate any growth iducing effects that may result from the construction of new facilities and the upgrade of existing facilities, these facilities should be sized to accommodate wastewater only from the project area.

4.11 STORM DRAINAGE/WATER QUALITY

A. Environmental Setting

Existing land uses within the I-205 project area are predominantly agriculture. Surface and subsurface runoff within the area is generated from storm water runoff as well as flood irrigation runoff from the irrigated fields. Volumes of runoff are not excessive given the pervious nature of the undeveloped land areas within the proposed district.

Within the project area existing irrigation canals and drainage systems are the sole source of conveyance of storm and irrigation water runoff. The existing topography for the City of Tracy and surrounding areas generally creates drainage patterns whereby storm runoff flows to the north or northwest and ultimately discharges into the Old San Joaquin River to the north of the City. Due to the recent adoption of the City of Tracy Storm Drainage Master Plan, as well as the Residential and Industrial Area Specific Plans, there is no inflow of surface runoff to the project site from immediately surrounding areas.

B. Environmental Impacts

West Side Storm Drain

Land areas within the I-205 project area that are located to the south of I-205 and west of Corral Hollow Road were included in the previously adopted Residential Area Specific Plan in the City of Tracy. As these areas develop, irrigation services will be terminated and storm water will be the sole source of surface runoff. As the impervious surface area of land is increased due to development, there will be a significant increase in the volume of storm water runoff generated from the project area.

Storm water runoff from these areas is planned to be discharged via the storm drainage network designated in the Specific Plan and in the Storm Drainage Master Plan, adopted by the city in 1989 (refer to Figure 4-24). The Storm Drainage Master Plan specifies design guidelines for the storm drainage conveyance systems outlined in the Specific Plan. Areas in the I-205 study area located to the north of I-205 and west of Corral Hollow Road were not included in the Residential Area Specific Plan or the Storm Drainage Master Plan, resulting in the need to develop a separate analysis addressing storm water runoff in those areas.

Two alternative concepts have been evaluated for storm drainage systems to serve the area north of I-205 and west of Corral Hollow Road. Alternative 1 is to utilize the outfall system suggested in the Residential Specific Plan and the Storm Drainage Master Plan. This system discharges storm water into an open channel which runs north along Corral Hollow Road to a point north of Larch Road. At Larch Road it turns to the northeast, ultimately connecting to the Sugar Cut on the east side of the Holly Sugar Plant northeast of

Tracy (refer to Figure 4-24). The second alternative considers using existing facilities of the Naglee Burk Irrigation District. There are several existing tailwater ditches networking their way through the I-205 study area which are currently operated and maintained by the irrigation district (refer to Figure 4-25). Preliminary discussions with the irrigation district have been held and the district is willing to allow joint use of their tailwater facilities assuming a mutually acceptable agreement with the City of Tracy can be reached to share operation and maintenance costs. The ultimate discharge point of these ditches is the Old San Joaquin River north of Tracy. Both of these alternatives would require modifications to be made to the existing or proposed storm drainage facilities insuring sufficient capacity for the additional storm runoff generated from development of the I-205 project area.

Alternative 2 is the preferred alternative based on the following criteria:

1. The natural slope of the existing terrain falls to the northwest. Alternative 2 follows this direction of flow while Alternative 1 is directed to the northeast, against grade.
2. Alternative 2 consists of several reaches of existing drainage ditches while Alternative 1 will require the complete new construction of drainage ditches, thereby significantly increasing the ultimate construction costs.
3. The interim cost of Alternative 2 is much less than that of Alternative 1. Should it become necessary to provide storm drainage conveyance prior to the completion of the City of Tracy west side outfall system, Alternative 2 would be the only feasible drainage option due to the fact that several of the necessary drainage systems are already in place and need only to be upgraded.
4. If the timing of drainage system construction becomes critical, the improvements under Alternative 2 could be constructed in a much shorter time than those of Alternative 1.

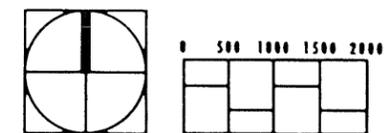
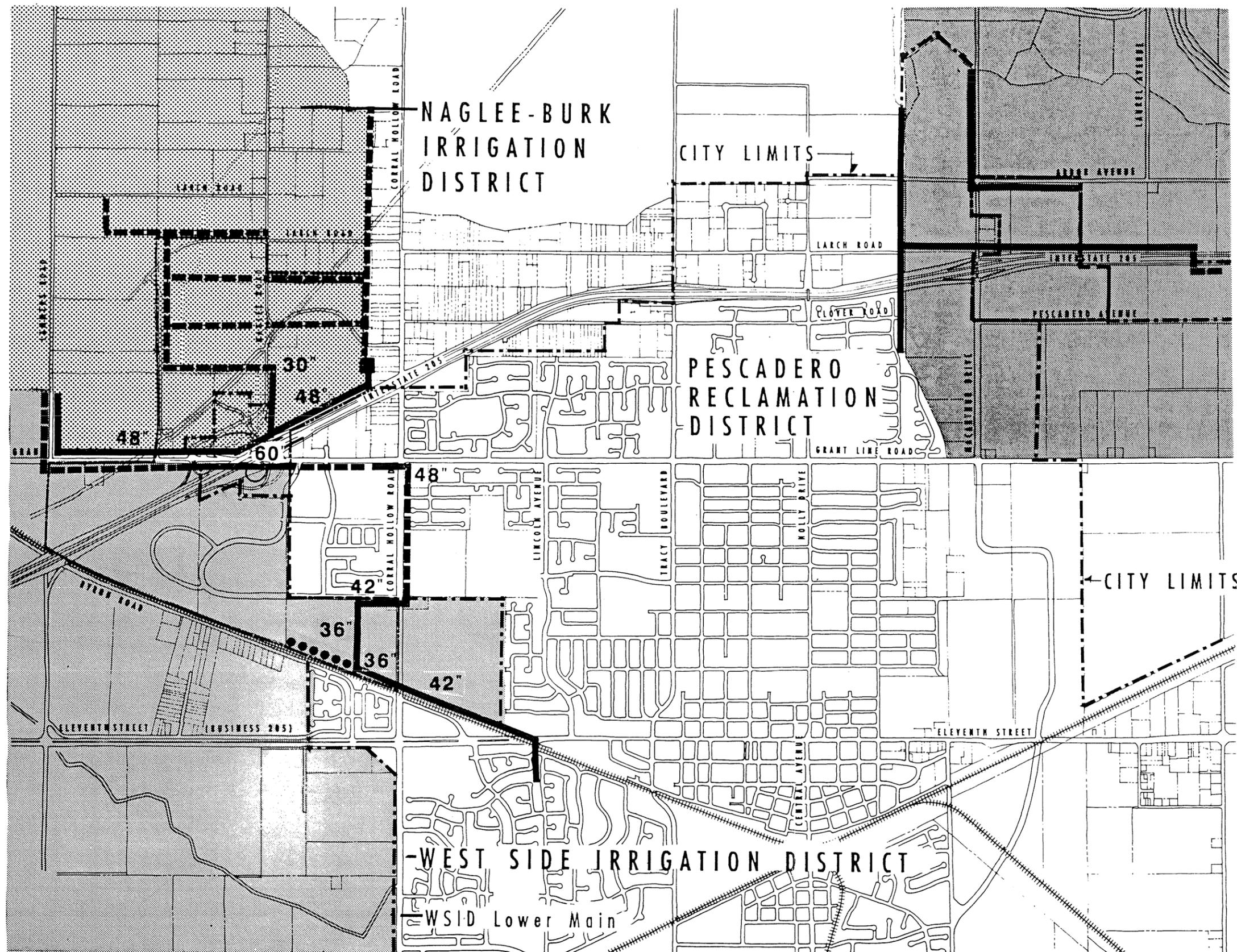
East Side Storm Drainage

In June 1988, the City of Tracy adopted an Industrial Area Specific Plan for the industrial areas located along MacArthur Drive between I-205 and Eleventh Street in Northeast Tracy. As in the case with the Residential Specific Plan, the later adopted Storm Drain Master Plan provides specific design guidelines for storm drainage facilities suggested in the Industrial Specific Plan. Some of the recommended alignments of storm drainage facilities have been modified slightly with the development of the Community Facilities District 1989-1 in the city. Figure 4-24 identifies the current anticipated alignment of storm drainage facilities in the northeast section of Tracy.



IRRIGATION DISTRICT BOUNDARIES
IRRIGATION FACILITIES

-  Existing Supply Line
-  Existing Open Ditch
-  Existing Pipeline to be Abandoned
-  Lift Pump No. 5
-  Irrigation Districts



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FIGURE 4-25

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Land areas within the I-205 project and located east of MacArthur Drive are currently in agricultural usage. Surface and subsurface runoff is generated from a combination of storm water and irrigation water flows. As the sites develop, the irrigation water runoff will be eliminated and the storm water runoff will be increased due to the increase in impervious surface area of the developments. Diversion of storm water runoff will be required from the developed sites to the storm drainage system being improved under Community Facilities District 1989-1. This diversion of runoff may result in the need to expand the downstream drainage facilities between the point of discharge into the system and the ultimate outfall in the Sugar Cut.

Erosion & Sedimentation

Erosion and sedimentation impacts from the project could occur during grading of the site or at the storm drain discharge points along the Old San Joaquin River and Sugar Cut. Construction-related impacts could be minimized by limiting the grading to the summer months, when flows and runoff potential are the lowest.

Water Quality

The conversion of the project sites from agricultural use to commercial and residential use will alter the quality of the surface runoff. Depending upon the current farming practices in the project area, tailwaters are likely to contain suspended solids (silt) fertilizers (nitrogen and phosphorus) and pesticides associated with agricultural irrigation. Conversion to commercial and residential use will likely result in a reduction in mass emissions of these pollutants from the sites, although they are often present in lower levels in urban runoff.

Conversion of the land to commercial and residential use will result in increased urban runoff from rooftops and impervious paved surfaces. The increased urban runoff will likely contain significant levels of hydrocarbons (oil and grease), heavy metals and oxygen demanding substances. Bacteria and viruses may also be present. The impact of these pollutants is most noticeable during the first major storm following an extended dry spell. The impact of these pollutants on the receiving waters is dependent upon the assimilative capacity of the slough or river into which the urban runoff is discharged. The assimilative capacity is dependent upon the background (or ambient) water quality and the volume and velocity of flow in the receiving water. It is unlikely that the increase in urban runoff from the project would have a significant adverse impact on the existing water quality in Sugar Cut or the existing drainage ditches of the Naglee Burk Irrigation District, providing proper mitigation measures are taken.

To minimize water quality impacts it will be necessary to implement the following mitigations:

Minimize the amount of paved surfaces consistent with traffic circulation and parking needs of the project.

Provide silt traps in the bottoms of storm drain catch basins.

Inspect industrial and commercial activities (auto service station, restaurants, etc.) to ensure businesses are not illegally discharging wastewater into the storm drain system.

Clean out storm drain catch basins, particularly just before the rainy season.

FEMA Flood Plain Encroachment

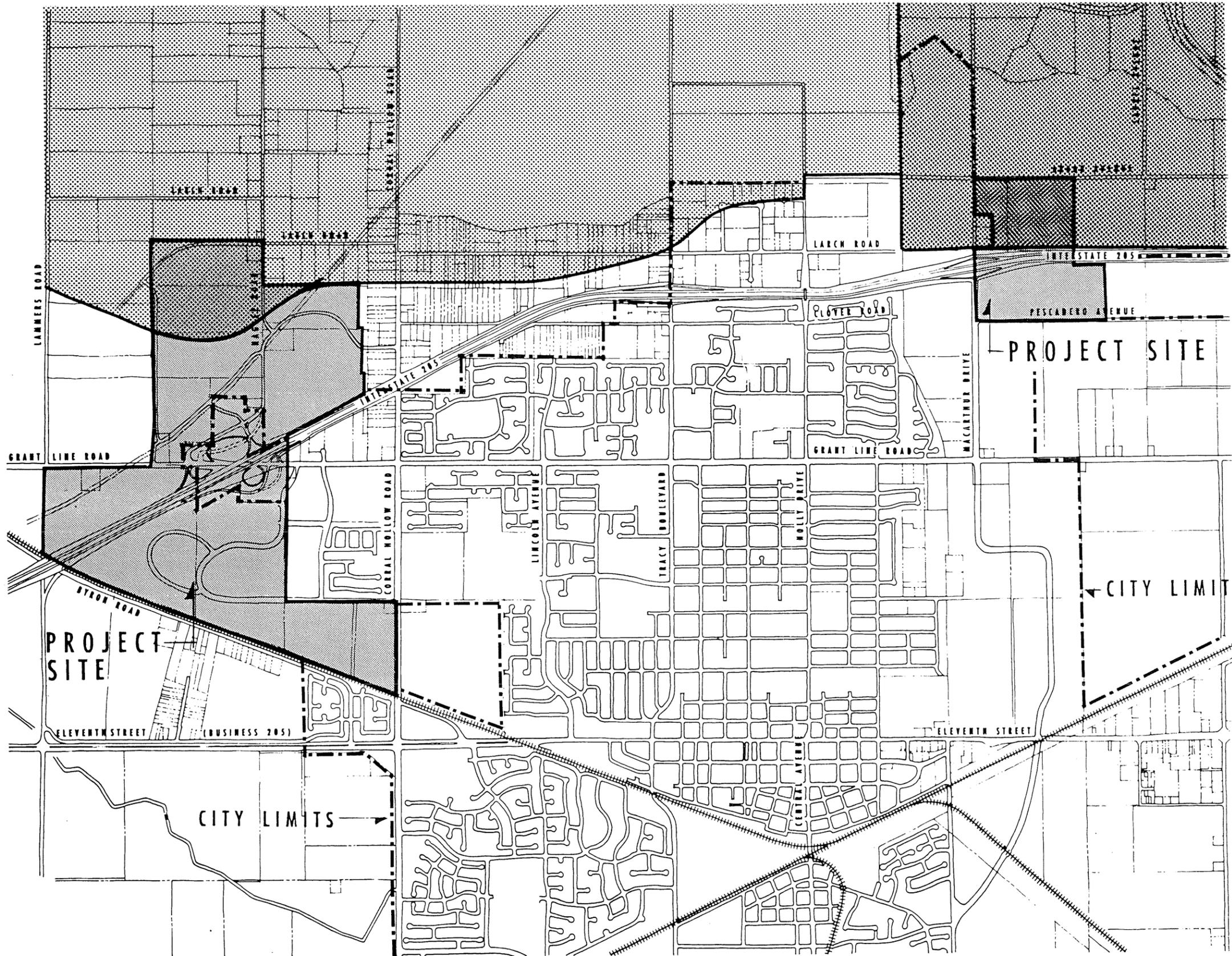
Some areas of land within the I-205 Corridor Study Area are impacted by the 100 year flood plain elevation as designated by the Federal Emergency Management Agency (FEMA) on their most recently published flood maps of the area (refer to Figure 4-26). For lands west of Corral Hollow Road the FEMA designated flood elevation of eleven feet above mean sea level results in flooding from 0 feet in depth at the south end of the flood plain to approximately 6.5 feet in depth at the northerly limits of the project area. The sites to the east of MacArthur Drive and north of I-205 will also be inundated in the event of a 100 year storm. The depth of flooding in these areas will range from one foot at the south end of the site (adjacent to I-205) to approximately five feet at the north end of the site (adjacent to Arbor Road). The FEMA designated flood elevation for lands to the north of I-205 and east of MacArthur Drive is 20 feet above mean sea level.

C. Suggested Mitigation Measures

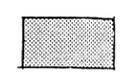
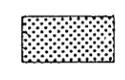
West Side Storm Drainage

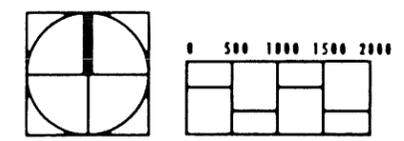
Alternative 1

In order to utilize the planned storm drainage outfall channel to the Sugar Cut as the discharge system for the west side area, a hydrologic analysis of the system will need to be prepared addressing possible system improvements or expansions required to convey the additional storm water. If the outfall channel has not been constructed at the time of development within the I-205 project area, sufficient downstream improvements to the system would need to be made to insure a positive flow from the developing areas to the Sugar Cut outfall. Alternately, if downstream channel improvements are not made, storm water runoff could be retained on site in temporary holding basins. These retention basins could then be eliminated at such time as the channel outfall is constructed.



FEMA FLOOD ZONES

-  Project Boundary
-  FEMA Flood Zone A21 (Elev = 11) Limit of 100 Year Flood Plain
-  FEMA Flood Zone A25 (Elev = 20) Limit of 100 Year Flood Plain



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FIGURE 4-26

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Alternative 2 - Preferred Option

A second option for storm drainage conveyance is to develop a system separate from the planned open channel system of the Residential Specific Plan. In this case it would be possible for the City of Tracy to enter into an agreement with the Naglee Burk Irrigation District whereby existing facilities, currently operated and maintained by the irrigation district, become joint use facilities to be used by the district and the city for storm water and irrigation water runoff alike. Prior to selecting this drainage option, an engineering analysis of the existing facilities must be performed. The study must address increased runoff from developing areas and identify required improvements to create sufficient capacity.

In addition to operation and maintenance agreements between the city and the irrigation district, it may be necessary to place monitoring stations at critical locations along the outfall system to isolate source locations should unacceptable levels of pollutants be found in the water.

The Regional Water Quality Control Board of the State of California is currently in the process of developing new permit requirements for storm drain discharge. It is expected that these new requirements will be specifically defined and become effective during 1990. Prior to the final design of storm drainage systems for the I-205 project area, the Regional Water Quality Control Board should be contacted to determine the impact of new permit requirements on the project.

East Side Storm Drainage

Storm runoff generated from sites to the east of MacArthur Drive will be required to be discharged into the open channel storm drainage system being constructed under Community Facilities District 1989-1 (refer to Figure 4-24). Prior to finalizing development plans for the area, a hydrology study of the developing areas must be performed identifying the increase in flows expected in the channel due to the increase in impervious surface and the increased runoff draining into the system. The findings of this study may identify the need for additional downstream improvements to the system in order to accommodate the additional flows. A possible alternate to downstream improvements would be to collect and hold storm runoff onsite until the peak flow in the channel has passed. The water would then be released from the holding basin to the channel in a controlled flow rate so as not to exceed the capacity in the channel.

Erosion and Sedimentation

On-site erosion and downstream sedimentation impacts should be controlled by restricting grading for the project area to the dry weather months coinciding with the normal construction season. Further erosion projection should be provided by appropriate

revegetation of all disturbed areas with approved native species. The erosion control plans should be subject to review by the City of Tracy and other regulatory agencies. Erosion at the storm drain discharge points can be controlled by properly designed energy dissipating structures.

FEMA Flood Plain Encroachment

Proposed developments in areas inundated by a 100-year flood may be accommodated in several different ways. The primary criteria for development in these areas is that the finish floor elevation of buildings be at or above the 100-year flood elevation as designated by FEMA and that the existing 100-year flood elevation is not increased by more than 12 inches as a result of the proposed development. In the case of commercial or industrial development, there is a provision whereby floor elevations may actually be below the 100-year flood elevation if the buildings are sufficiently waterproofed to protect against flooding within the building walls during the occurrence of a 100-year storm event. In the case where building pads are raised, local governing agencies will determine the allowable level of flooding within areas immediately surrounding the buildings. In general, it is required that the level of permissible flooding be controlled to the extent that emergency vehicles can maintain access to and from flooded areas.

In many cases the depth of flooding on a given site is too great to simply raise building floor elevations above the flood elevation. In these cases it becomes necessary to either remove the site from the flood plain through the construction of engineered berms or to raise the ground elevation of the site by importing fill material so as to enable building pads to be constructed sufficiently high to protect against flooding. Removing a particular site from the flood plain through the construction of engineered levees is a long and complicated process. A complete hydrologic analysis must be submitted to FEMA stating the reasons that the proposed engineered levees will remove the subject site from the flood plain. FEMA will then review the documents submitted and approve or disapprove the application. The FEMA processing can be expected to take from 12 to 18 months. All levees must be constructed to the Army Corp of Engineers Standards, which may not be economically feasible, due to existing ground conditions. If poor subsurface soils are encountered, the construction of approved levees becomes excessive due to over-excavation and soil replacement costs.

If it is determined that an economically feasible alternative of removing a site from the flood plain is to raise the existing grade by importing fill material, the processing with FEMA becomes much more simplified. For areas such as the I-205 project area, which are located at the extreme fringes of the flood zones, FEMA requires only that "as-built" drawings be submitted reflecting the constructed site grades. As long as the as-built grades are above the elevation of the 100-year flood, FEMA will revise their maps

to reflect the removal of these sites. In this case, it is not necessary to submit a detailed engineering analysis of the site hydrology for review and approval.

In any case, development of land areas within the I-205 project area will not increase the remaining floodplain elevation by 12 inches. The incremental increase in flood elevation due to proposed plan development will be negligible due to the vast area covered by flood waters in relation to the small area being developed and removed from the flood plain.

4.12 Irrigation and Reclamation Districts

A. Environmental Setting

Irrigation services for agricultural lands in portions of the City of Tracy and in the outlying San Joaquin County are provided by a series of irrigation and reclamation districts. These districts provide a network of supply and discharge systems to convey irrigation flows to the irrigated fields and to carry tailwater to ultimate discharge points in the Old San Joaquin River to the northwest and to the Sugar Cut or Tom Paine Slough northeast of Tracy.

The general topography of the City and County in the vicinity of the I-205 Corridor Study Area slopes from the southeast to the northwest. (See Figure 2-2.) The general pattern of irrigation flows is from south to north. Irrigated fields are generally supplied via canals along the south property lines. The fields are flooded and excess tailwater is discharged through a system of drainage ditches along the north property lines.

There are three districts which will be impacted by development within the I-205 Corridor Study: West Side Irrigation District, Naglee Burk Irrigation District and Pescadero Reclamation District.

West Side Irrigation District

The West Side Irrigation District serves several thousand acres of agricultural land to the south and west of Tracy (refer to Figure 4-25). Irrigation water is pumped from the Old San Joaquin River northwest of Tracy to the Upper and Lower Main Canals which flow in a southeasterly direction, functioning as the supply systems for all irrigated land within the district. Excess runoff from irrigated fields is collected in the main drain canal which flows to the northwest, discharging tailwater back into the river.

Naglee Burk Irrigation District

The Naglee Burk Irrigation District, the smallest of the affected districts, encompasses approximately 2500 acres of agricultural land to the northwest of the City of Tracy. Refer to Figure 4-25 for a description of district boundaries. Irrigation water is pumped from the Old San Joaquin River to supply a network of canals and pipes which provide irrigation flows to the fields. Tailwater ditches then discharge excess flows back to the river.

Pescadero Reclamation District

The Pescadero Reclamation District currently serves agricultural lands north of Grant Line Road and east of the Holly Sugar spur track to the northeast of Tracy (refer to Figure 4-25). The district provides irrigation flows and tailwater systems to agricultural lands within the district boundaries. The Tom Paine

Slough is privately owned and maintained by the district and is the source point and discharge point for irrigation flows. Water is pumped from the Old San Joaquin River into the slough, as necessary, to supply the district needs. The slough also acts as a natural collection point for groundwater which is typically high in the region.

B. Environmental Impacts

West Side Irrigation District

The I-205 Corridor project area to the south of Grant Line Road and west of Corral Hollow Road is located within the West Side Irrigation District. It has been the past policy of the district that as properties are annexed into the City of Tracy, they will automatically be detached from the irrigation district. As detachment occurs, there is a responsibility of the developing properties to perpetuate irrigation flows to "downstream" users so as not to interrupt the irrigation conveyance system to actively irrigated fields. Irrigation systems which become obsolete as a result of land detachment and ultimate development may be abandoned after securing approval from the irrigation district. Refer to Figure 4-25 for identification of existing irrigation district facilities.

The West Side Irrigation District operates and maintains the main drain canal extending from the intersection of Lammers and Grant Line Roads in a northeasterly direction to the Old San Joaquin River. The canal serves as the outfall for irrigation district tailwater conveyance. The Storm Drain Master Plan for the City of Tracy has identified an available capacity of approximately 22 cfs which can be diverted from the City storm drainage system into the main drain canal.

Naglee Burk Irrigation District

The Naglee Burk Irrigation District currently levies an assessment of \$45 per acre per year for repair and maintenance of facilities. As land areas are removed from the district, the reduction in revenue will impact the district's ability to provide the same levels of service as in the past. In addition to the reduction of income, there are many district facilities which will be impacted by the proposed development in the I-205 project area. The I-205 Corridor Study area north of Grant Line Road and west of Corral Hollow Road are in the Naglee Burk Irrigation District. These properties are bordered to the east by the main pumping station supplying irrigation flows to the entire district. The pump station and supply lines must be protected as development of the area occurs. Refer to Figure 4-25 for location of existing facilities.

Pescadero Reclamation District

Lands lying within the I-205 Corridor project area and east of MacArthur Drive are in the Pescadero Reclamation District. As these sites annex to the City of Tracy, they are not removed from the reclamation district. The district currently levies an assessment of \$20 per acre per year for maintenance of Tom Paine Slough, various tailwater ditches and for levee maintenance and repair. This maintenance is critical to developed and non-developed land alike and is therefore assessed regardless of the developed condition of the parcels. This maintenance is required due to high groundwater elevations in the region. As siltation occurs in the tailwater systems, groundwater infiltration is prohibited. This results in higher groundwater elevations in surrounding areas, thus deteriorating developed surfaces as well as excessive flooding in agricultural land.

As development of parcels within the district occurs, the volumes of stormwater runoff will increase due to an increase in the impervious surface area of the improved property. This increase in storm runoff must be accommodated by diverting it through a storm drainage system which would ultimately discharge into the Sugar Cut. Storm water runoff from the I-205 area would not be allowed to discharge into the Tom Paine Slough.

C. Suggested Mitigation Measures

West Side Irrigation District

Irrigation supply lines and tailwater systems bordering or traversing through the I-205 Corridor Study Area and servicing areas outside the project area must remain intact. This can be accomplished by the following: 1) Facilities must be either protected in their existing condition and location; or 2) redesigned and relocated with the approval of the irrigation district. If relocation of facilities is anticipated, the relocation must take place so as not to interfere with flows during the irrigation season, which generally extends from April to October during normal years. Variations in the irrigation season are likely to occur as a result of annual rainfall volumes.

Naglee Burk Irrigation District

Reconstruction or relocation of the Naglee Burk Irrigation District facilities may be necessary to accommodate development of the I-205 area. These improvements would be permitted by the district as long as their ability to provide irrigation flows to existing users is not interrupted. Any improvements to the system must take place in the winter months, so as not to conflict with the irrigation season. Preliminary discussions with the Naglee Burk Irrigation District have taken place and the district will consider allowing the storm water runoff from the I-205 area to discharge into existing tailwater ditches. For this to be an acceptable drainage alternative, the City of Tracy would have to assist in the repair and maintenance of the tailwater systems.

Engineering studies would also have to be prepared to evaluate the existing capacity of the ditches and determine the level of improvements required to provide sufficient discharge capacity. In addition to physical improvements and maintenance agreements, it may be a requirement of the district that provision to monitor the quality of storm water runoff be made. There is growing concern by all of the affected districts that industrial accidents may discharge contaminants into the irrigation supply systems.

Pescadero Reclamation District

Existing supply lines and tailwater ditches necessary for irrigation service to properties surrounding the I-205 area must remain intact. (Refer to Figure 4-25 for location of existing facilities.) Some of the facilities are old, in a deteriorated condition and may need to be upgraded at the time of adjacent development. Relocation of existing facilities is possible upon approval of the district. Sufficient access easements would be required to allow accessibility of district equipment for repair and maintenance purposes. Relocation or improvement of existing facilities must take place in the "off season" so irrigation flows to agricultural fields is not interrupted.

Stormwater runoff from developed sites will not be allowed to discharge into existing tailwater facilities discharging to the Tom Paine Slough. All industrial and commercial stormwater must be conveyed to the City of Tracy main storm drainage channel, west of MacArthur Drive. The ultimate discharge point of this channel is the Sugar Cut, which flows to the Old San Joaquin River.

4.13 Solid Waste

A. Environmental Setting

Solid waste collection and disposal service in the project area are provided by Tracy Delta Disposal which has been franchised by the City of Tracy for many years. The present landfill site is located seven miles south of the Tracy city limit boundary at Corral Hollow Road and I-580. This site is expected to reach peak capacity by the year 1992 and close by early 1993. Discussions between the city and county are now underway concerning where to send solid wastes once the existing landfill is closed. Locations under consideration include the Foothill landfill located in eastern San Joaquin County and the Altamont landfill located on Vasco Road in Alameda County. While the Altamont site is closer to Tracy, the Foothill landfill is apparently the most promising alternative as it is located within the county. Both landfill sites have extensive remaining landfill capacity.¹ Consideration is being given to converting the existing landfill for a transfer station when the landfill closes. The landfill is owned jointly by San Joaquin County and the City of Tracy and is operated by the city. The city and the county are presently negotiating for the county to take over the entire operation due to the complications and regulations for day-to-day solid waste operations.²

Tracy Delta Disposal has recently filed an application for the construction of a transfer station site within the City of Tracy at 3880 Holly Drive.³ The application is currently under review by the City of Tracy Planning Department and the Planning Commission. The proposed transfer station will consist of an enclosed facility with safety, sanitation and public health inspections conducted on a monthly basis by city, county and state officials. According to a Tracy Delta Disposal representative this station is expected to manage the anticipated growth for the next 20 years.⁴ In the event the in-town transfer station proves unfeasible, the county is considering a potential transfer station at the site of the current landfill.

Tracy Delta Disposal operates a recycling program which consists of newspaper and cardboard bailing, and a buy-back center for glass, aluminum and PET (plastic) containers in a local shopping center.⁵

B. Environmental Impacts

The proposed project is anticipated to increase waste collection by approximately 150 tons per day.⁶ This estimate is based on Tracy Delta Disposal's 1989 daily collection rate. Tracy Delta Disposal estimated that the proposed project upon buildout would generate five, 20-yard trucks for residential waste collection or 94 tons per day, and four commercial trucks for the industrial and commercial collection or 56 tons per day. Total waste generation by the project would be 150 tons per day. According to

Tracy Delta Disposal this estimate would be less when the city implements a recycling program as mandated by state law AB 939.⁷ This increase in solid waste collection would not have an adverse impact on the collection company. However, solid waste generated by the first phase of the I-205 development would contribute to the reduction of the available capacity at the Tracy landfill if the city's recycling program is not in effect.⁸

C. Suggested Mitigation Measures

The city is mandated by AB 939 to implement a recycling program by 1995. If the city's recycling program is not in effect at the time final plans are approved for the first phase of development, applicants should be required to establish a recycling program. This is particularly relevant for large commercial projects that would generate large quantities of solid waste, e.g., cardboard, paper, etc.

In order to mitigate the impact on the existing landfill site the city should accelerate their efforts to find a new waste disposal site. Final selection of the site should be made at least one year prior to the existing site reaching its capacity.

-
1. Kevin Tobek, City of Tracy (landfill), personal communication, March 1990.
 2. *ibid.*
 3. Michael Repetto, Owner, Tracy Delta Disposal Company, written communication, December 1989.
 4. *ibid.*, Repetto
 5. *ibid.*, Repetto
 6. *ibid.*, Repetto
 7. *ibid.*, Repetto
 8. *ibid.*, Repetto

4.14 Other Utilities

A. Environmental Setting

Other utilities such as electric power, natural gas and telephone would be provided to the specific plan area by Pacific Gas and Electric Company (PG&E), Pacific Telesis Company (Pac Bell), and American Telephone and Telegraph Company (AT&T). Because a majority of the study area is undeveloped, there is presently a limited amount of existing infrastructure in place.

B. Environmental Impacts

Future development in the I-205 Specific Plan area would increase the demand for all utilities and would require the extension of new utility infrastructure to the area. Increases in demand would occur incrementally, as specific properties, or individual areas within the study area, are developed.

Electric Supply

PG&E has forecasted a maximum of 5.0 MW annual increase for the study area, assuming full buildout under the proposed specific plan and the potential additional development of surrounding properties. The increased electric demand would require that approximately two new circuits be installed and a new substation located at the southwest corner of Lammers and Grant Line Roads. Figure **** indicates the locations of the new circuits and the projected time frames for their installation. Extension of electrical services to the specific plan area would not significantly impact PG&E's ability to provide services to the area.

Natural Gas

Future development within the specific plan area will increase the demand for natural gas supplied by PG&E. The majority of the I-205 area has a natural gas system in place. However, this system would have to be upgraded as development occurs to meet future demand. According to PG&E, the necessary upgrading would not constitute a significant impact on their ability to provide services to the area.

Telephone/Television

Future development in the specific plan area will increase the demand for telephone services provided by Pac Bell and AT&T. This will require that a significant amount of new telephone infrastructure be extended to the area. As development occurs, the city would also require that existing overhead lines be placed in new underground substructures which could result in temporary disruption of the existing lines and service. Of particular concern is the AT&T transcontinental trunk line located at Grant Line Road. This line, which is made up of fibre optic lines and

conventional phone cables, is a major east-west telephone connection containing "secured" lines for defense usage. New construction along Grant Line Road could necessitate the relocation or modification to this line. Since fibre optic cable cannot be readily spliced, any damage or modification would require replacing the disturbed cable.

C. Suggested Mitigation Measures

No significant impacts on utilities are expected to be generated as a result of implementation of the specific plan. Some less-than-significant impacts on existing utilities could result from necessary modifications or relocations during construction. It is anticipated that these less-than-significant impacts would be addressed in more detail on a project specific basis as development is proposed. For purposes of this EIR it is recommended that new construction occurring within the specific plan area be designed to eliminate modifications or relocations to existing utility substructures wherever possible.

PUBLIC SERVICES

4.15 Fire

A. Environmental Setting

With the majority of the study area currently located in the county, the Tracy Rural County Fire Protection District (TRCFPD) provides service to the project site. The district consists of four stations. Fire Station 3 located at Byron Road and Grant Line Road and Station 1 located at Seventh Street and Grant Line Road are the primary and secondary response stations to the project area.¹ Station 1 is manned on a 24-hour basis, operating in three shifts by one captain and one fireman engineer. Station 3 is manned also on a 24-hour basis operating in three shifts by one lieutenant and one fireman engineer.² The study area currently receives approximately 30 calls per month. The majority of the type of calls received for the study area consists of emergency medical vehicle injury calls and vehicle fire calls.³

Upon annexation of the study area to the City of Tracy fire protection services to the proposed Specific Plan area would be provided by the City of Tracy Fire Department. The department currently has three city fire stations.⁴ Station 1 is located at 835 Central Avenue (corner of Ninth Street and Central Avenue). Station 2 is located at 301 West Grant Line Road (corner of West Grant Line Road and Parker Avenue). Station 3 is located at 595 West Central Avenue (corner of West Central and Tracy Boulevard). Fire Station 2 would provide primary response to fire and medical emergencies for the proposed project area. Stations 1 and 3 would provide secondary response to the area.⁵

The anticipated average response time from Station 2 to the proposed project sites would be calculated as follows: Two minutes for receipt and dispatch of call, four to five minutes driving time for the unit from its station to the project site, for a total response time of approximately seven minutes. If units are allowed to be constructed without sprinklers, additional resources such as pumpers and manpower must be used in the calculation to assure the minimal effective initial and sustained fire attack capability exists. These additional resources could add an additional five to eight minutes to the response time as indicated.⁶ Station 2 currently has a district area which encompasses Lowell Avenue north, extending west from the city limit line to the east city limit line. The proposed project area will increase this area by approximately 715 acres of residential, commercial and light industrial development.

The Tracy Municipal Code presently requires all new buildings with a total floor area of 6,000 square feet or more, or constructed of three or more stories, to have fire sprinkler systems installed. The Tracy Municipal Code has also been amended to prohibit the use of combustible roofing materials. The fire hydrants for the city are required to be spaced every 500 feet for residential

development and every 300 feet for commercial industrial development. However, according to a representative of the fire department, these distances are negotiable if the buildings contain sprinkler systems.⁷

The Tracy Fire Department has a mutual aid agreement with all 21 San Joaquin County Fire Departments. Tracy Rural Fire Protection District would be the most likely to respond first to a mutual aid request.⁸

B. Environmental Impacts

Buildout of the Specific Plan would significantly impact the Tracy Fire Department. According to the fire department representative, emergency medical and rescue calls would increase by 10 to 15 percent in the project area. Fire calls are also expected to significantly increase, however, the percentage of increase is not known at this time.⁹ Fire calls are not expected to increase by more than one to two percent provided the entire proposed project includes fire sprinklers.¹⁰ In order to provide the current level of service it is anticipated that initially at least three additional fire personnel, including equipment and facilities would be required. This estimate is based on the assumption that the entire project is sprinklered.¹¹

Officials of the fire department pointed out that if the entire buildout was equipped with sprinkler systems, the fire service impact would be insignificant.¹² The fire department and city planning staff are currently amending the Tracy Municipal Code to require all new buildings to be equipped with fire sprinkler systems.

The proposed project would include areas of open space which would be susceptible to grass and brush fires, posing a potential fire hazard to abutting development. The Fire Department has suggested that a weed abatement program or other methods of reducing the risk of fire hazard in the open space areas, such as the use of fire retardent landscape materials and greenbelt planting, would be adequate fire prevention.

C. Suggested Mitigation Measures

The Specific Plan should incorporate the following measures to reduce the risks of fire hazard:

- 1) All development in the I-205 Specific Plan area should include fire sprinkler systems. This would considerably reduce the impact on the fire department impact to a less than significant level.
- 2) The fire department should be included in all development review to determine compliance with the Tracy Municipal Code fire standard as well as uniform fire code standards.

3) Landscape plans for all new development should include "fire retardant" landscaping, such as a greenbelt planting, for the open areas including areas slated for later development. The final landscape plan and plans for the perpetual control and abatement of grass and brush in the open space areas should be submitted for approval by the fire department. Such plans may include disced fire breaks and/or greenbelt planting.

4.16 Law Enforcement

A. Environmental Setting

The majority of the proposed project site is served by the San Joaquin County Sherriff's Department. The project area is located in District 8 which is patrolled by twelve individual district deputies on a 24 hour basis.¹³ The district is also served by two community car deputies. The community car district was established by the sheriff's department for purposes of responding to routine, non-emergency calls. Response by the community car typically occurs after considerable time has elapsed from the occurrence of the crime or nuisance as opposed to "in-progress" calls.

District deputies operate on 10-hour shifts with planned overlap for peak service periods. In 1988 the number of subject service area calls was 1,842. This was 4.1 percent of the county-wide total of 44,546.¹⁴ The California Highway Patrol provides traffic law enforcement on I-205.

Upon annexation to the City of Tracy, law enforcement to the project area would be provided by the City of Tracy Police Department. The department has no substation, but operates its patrolling program city-wide.

The police department currently consists of 29 sworn personnel assigned to patrol, and provides service at a rate of .96 law enforcement officers per 1000 population. The department has 42 total sworn personnel which provides a level of service of 1.4 per 1000 population based on a population of 30,000.¹⁵ The department currently receives approximately 23,000 calls per year for the entire city.

B. Environmental Impacts

Annexation of the study area would significantly increase the demand for law enforcement services in the City of Tracy and would contribute to the growing need for staff and equipment created by cumulative development throughout the city as a result of the anticipated increase in service calls.¹⁶ It is expected that additional personnel and equipment would be required to achieve the department's desired level of 1.5 sworn officers per 1000 people.¹⁷ Although this level of service is not a city policy, it is the department's desired goal. The proposed project would

also create the need for implementing the City of Tracy General Plan Policy 32-2 which reads as follows:

The City of Tracy Community Development Department and Police Department shall develop guidelines for crime prevention design of buildings and subdivisions and shall report on compliance prior to project approval.

C. Suggested Mitigation Measures

The following mitigation measures should be incorporated in the Specific Plan.

1) The financing plan should make provisions for the funding of increased police services to serve the project area, such as requiring developers to pay impact fees at the time of issuing a building permit.

2) Design guidelines should incorporate crime prevention measures which would help to supplement the department's services. Such measures would include well-lighted streets, entrances and house numbers, as per city standards, and landscaping which permits surveillance of open space areas and entryways and does not provide places for concealment.

3) The police department should participate in all design review throughout the Specific Plan area in order to insure appropriate crime prevention measures have been incorporated in the building design.

4.17 Schools

A. Environmental Setting

The proposed project is located within the Tracy School District and Tracy Joint Union High School District. Students in grades K thru 8 would attend the Tracy School District and those in grades 9 thru 12 would attend the Tracy Joint Union High School District.¹⁸ The Tracy Joint Union High School District will be constructing a new high school on the future extension of Lowell Avenue between Lincoln Avenue and Corral Hollow Road. The Specific Plan calls for a new elementary school to be located on Lowell Avenue. Students in the I-205 project area would initially need bus service to the schools which serve the area. It is estimated three new buses would be required to provide this service. Upon completion of the two schools it is anticipated that many children may not continue to need bus service.¹⁹

The Specific Plan calls for residential development only in the Grant Line Road planning area, south of I-205. Students from the Grant Line Road planning area would be assigned to Jacobson Elementary School, located at 1750 Kavanagh Avenue, or McKinley Elementary School, at Lowell Avenue; Monte Vista Middle School,

located at Lowell Avenue and Tracy Boulevard; and Tracy High School, at Eleventh Street and East Street.²⁰

Both Jacobson and McKinley Elementary are below their pupil capacity. However, planned residential development in their attendance area will produce enough students to exceed both of the school's capacity.²¹ Monte Vista Middle School is currently 50 students over enrollment capacity, therefore additional residential development to the area would exacerbate the schools' capacity problem.²²

The City of Tracy has established Community Facilities District 1987-1. This district includes all the Residential Specific Plan development in Assessment District 1984-1 and the related infill properties. This taxing authority was implemented to provide funding for the additional schools planned for in the City of Tracy. The schools which are most likely to be affected by the I-205 project would be the new elementary school in the I-205 project area and the new high school located on the Lowell Avenue extension between Lincoln Avenue and Corral Hollow Road. These facilities will, by design, accommodate the growth already planned in the 1984-1 residential development area.²³ If the new residences in the I-205 corridor are to be included in Assessment District 1984-1, or are to acquire sewer allotments created by 1984-1, they either will be a part of Community Facilities District 1987-1 or will be annexed at the time of final map approvals.²⁴

Beyond this funding the school districts currently collect the allowed state school impact fees from each new project. The fees are currently \$1.58 per square foot for residential development and \$0.26 per square foot for commercial and industrial development.

The proposed Specific Plan project has designated ten acres in the Grant Line South planning area as school land. The plan calls for an elementary school, grades K-5.

B. Environmental Impacts

The project would add a maximum of 1,332 residential units based upon the student generation rate:²⁵

K - 5	= .44 pupil	x 1332.00 units	= 586 pupils
6 - 8	= .20 pupil	x 1332.00 units	= 266 pupils
9 - 12	= .30 pupil	x 1332.00 units	= 400 pupils

Total pupils = 1252

The increase in student population would significantly impact the Tracy school system as development of any new residences would necessitate the addition of facilities and staff.²⁶

The existing middle schools and high schools affected by development in the I-205 Specific Plan area are currently operating beyond their maximum capacity. The proposed middle school and high school would also experience overcrowding as a result of the proposed development not originally planned for under 84-1 residential development. The elementary schools that are not currently at capacity are planned to be at maximum capacity once buildout of the Residential Specific Plan is completed. The proposed project would further exacerbate the middle schools' and high schools' existing overcrowded conditions. The I-205 corridor project proposes a new elementary school which would ease the overcrowding of K-8 grade students produced by the I-205 residential development. The plan will fund school facilities and the land use map designates ten acres for a school site.

The plan proposes establishing a new community facilities district for all residences not developed as a part of the 84-1 Assessment District described above. This district, along with the state \$1.58 and \$0.26 per square foot impact fees will provide funding for the development of elementary school and the appropriate share of new middle school and high school facilities.

C. Suggested Mitigation Measures

1) No further mitigation is required as a result of the new community facilities district tax for the proposed residential development along with the state maximum fees which would adequately provide funding for the new and proposed schools.

4.18 Parks and Recreation

A. Environmental Setting

There are currently 65 acres of developed parkland within the Tracy city limits with parks ranging in size from 8 to 10 acres distributed throughout the city.²⁷ (Refer to Table 4.35 for park names, locations and primary users.) Two of these parks, which contain baseball diamonds, soccer fields and picnic areas, are maintained by the city's Parks and Recreation Department and are part of the school grounds. It is the practice of Tracy to locate parks next to schools, however, the facilities are often designed and maintained separately.²⁸

The City of Tracy's Residential Specific Plan indicates the existing ratio of population to parkland equals 3.5 to 1,000 residents. I-205 Corridor Specific Plan indicates a current ratio of population to parkland of 4.0 to 1,000 population to be maintained. The city currently has two additional five-acre parks under design. These parks are identified as Kenner Park, located next to Jacobson Elementary School on Kavanagh Avenue, and Ceciliani Park, located adjacent to Loma Vista Elementary School at Cypress Street and Lathrop Road.²⁹

The proposed project has designated an 11.1-acre neighborhood park adjacent to I-205 to be used for active recreation purposes, and 2.5 acres of mini parks that are proposed to be dispersed throughout the residential development areas. The plan also will provide park facilities which have not yet been specified. The mini-parks are planned to be one-half acre areas located within the subdivisions. A bikeway system has been proposed to achieve and encourage connection to various parts of the city by way of bicycles and walking.

The Specific Plan has addressed the following guidelines which shall apply to the development of all parks in the area.

- Minimize substitution of private recreation facilities for public parks in order to ensure permanent availability for use by the entire community.
- Require contributions to development of a park system by both residential and non-residential developers.
- Plan for park improvements maintaining a balance between active and passive recreation activities.
- Coordinate park acquisition, development, and recreation programs with the school district.
- Design outdoor spaces to accommodate many events. This makes a park more versatile and dynamic while supporting a diversity of individual needs.

- Create a strong spatial frame for outdoor spaces with trees, flat ground plane and pathways, thereby allowing the space to adapt to varying activities and densities of people.
- Encourage opportunities for both public gathering and intimate private spaces.
- Provide a variety of lighting conditions - sunny, dappled or shady.
- Utilize program matrix, park layout concepts, and standard details contained in the City of Tracy Parks and Parkway Design Manual in the design development and construction of parks.
- Enhance safety in parks by:
 - Safety and security in design
 - Adequate lighting
 - High visibility from roads for surveillance
 - Safe access to parks

B. Environmental Impacts

The city currently requires park land to be dedicated at the rate of 4 acres of park for each one thousand new residents.³⁰ Based on 2.75 persons per dwelling unit approximately 14.6 acres of parks would be required by the number of units in this plan. As noted above the plan provides 13.6 acres of parkland, therefore following slightly under the City of Tracy's parkland standards.

The impacts of growth on the existing park facilities is anticipated to be on the community park and recreation facilities.³¹ (Refer to Table 4-35 for impacts.) Most neighborhood parks would not be affected by the increased population. Growth as a result of the proposed project would generate increased use of the pool, community park, recreation centers, youth sports facilities and bikeway systems.³²

The park system proposed for the project area directly responds to future neighborhood parkland demand. However, the proposed project does not address the community facilities impacts that the increase in growth would have on the parks and recreation facilities. Additionally, the Specific Plan park standards and guidelines do not provide a description of the park facilities the plan will offer. Thus, evaluation of such park facilities at this time is not possible.

C. Suggested Mitigation Measures

The Specific Plan should incorporate the following measures:

- 1) The residential neighborhood park should be expanded to accommodate ballfields as well as a passive recreational area.

TABLE 4.35
 PARK/RECREATION FACILITIES IMPACT ANALYSIS
 I-205 SPECIFIC PLAN STUDY

PARK/FACILITY	LOCATION	PRE-SCHOOL	PRIMARY USER			ADULT	IMPACTED BY I-205
			ELEMENTARY	MIDDLE	HIGH		
Tracy Ball Park	Tracy Blvd./Grant Line			X	X	X	Yes
Lincoln Park	Eaton/Holly	X	X	X	X	X	Yes
Dr. Powers Park	Tracy Blvd.	X	X	X	X	X	Yes
El Pescadero Park	Parker/Grant Line	X	X	X	X	X	No
Alden Park	Sequoia/Willow	X	X				No
MacDonald Park	Central/South	X	X	X			No
Fine Park	Eaton/Franklin					X	No
Monte Vista School	Tracy Blvd./Lowell		X		X		Yes
South School	Mt. Diablo/Tracy Blvd.	X	X				No
Community Center	300 E. 10th					X	Yes
Recreation Center	1141 Adam	X	X		X	X	Yes
Swimming Pool	Tracy Blvd./Lowell	X	X		X	X	Yes

Source: City of Tracy Parks and Recreation Department

This transformation would create a park more suitable for the high level of noise along I-205 and alleviate the impacts on existing recreational facilities.

2) Development fees from residential developers shall be required for the construction of the proposed future parklands.

3) A Lighting and Landscaping Maintenance District should be created for the open space areas.

4) The plan shall meet the City of Tracy parkland standard of 4 acres per 1,000 resident population. Therefore, increasing the Specific Plan park dedication by one acre.

1 James Hughes, Chief, Tracy Rural County Fire Protection District, personal communication, January 1990.

2 *ibid.*, Hughes.

3 Mr. Ovalle, Captain, Tracy Rural County Fire Protection District, personal communication, February 1990.

4 Bud Halford, Captain, City of Tracy Fire Department, written communication, November 1989.

5 *ibid.*, Halford.

6 *ibid.*, Halford.

7 *ibid.*, Halford.

8 *ibid.*, Halford.

9 Ken Lavoie, Chief, City of Tracy Fire Department, personal communication, January 1990.

10 *ibid.*, Halford.

11 *ibid.*, Lavoie.

12 *ibid.*, Lavoie.

13 Michael Esau, Sergeant, San Joaquin County Sheriff's Department, personal communication, November 1989.

14 *ibid.*, Esau.

15 Larry Kissell, Chief, City of Tracy Police Department, written communication, November 1989.

- 16 ibid., Kissell.
- 17 ibid., Kissell.
- 18 Tony Bernakis, Facilities Development Director, Tracy Joint
Union High School District, written communication, November
1989.
- 19 ibid., Bernakis.
- 20 ibid., Bernakis.
- 21 ibid., Bernakis.
- 22 ibid., Bernakis.
- 23 ibid., Bernakis.
- 24 ibid., Bernakis.
- 25 ibid., Bernakis.
- 26 ibid., Bernakis.
- 27 James Raymond, Director, Park and Recreation Department,
written communication, December 1989.
- 27 ibid., Raymond.
- 28 ibid., Raymond.
- 29 ibid., Raymond.
- 30 Bob Conant, Acting Community Facilities Director, phone
conversation, May 1990.
- 31 ibid., Raymond.
- 32 ibid., Raymond.

4.19 Growth Inducing Impacts

The California Environmental Quality Act (CEQA) requires that EIRs discuss the potential for a proposed action to stimulate additional economic or population growth in an area. Growth-inducing impacts can result from direct actions associated with a project, such as the construction of housing or commercial uses, or from indirect actions which would remove obstacles to growth. Examples of indirect actions which may induce additional growth include expansion of roadway and infrastructure capacity beyond what is necessary to serve the project.

A distinction can be made between actions which are "growth accommodating" and those which are growth-inducing. Growth accommodating actions are those which accommodate planned growth in a community. Growth-inducing actions stimulate growth beyond what is planned for in the land use plans for an area. On a broad level, the I-205 Specific Plan and all of the actions necessary for its implementation can be considered growth-inducing, since the plan represents a significant change from planned land uses for the area.

Adoption of the Specific Plan and annexation may encourage the conversion and early cancellation of Williamson Act contracts of adjacent and nearby agricultural lands. The Specific Plan has not identified the geographic limits of the I-205 corridor. This could lead to uncontrolled development of commercial and industrial development along the freeway, thereby converting additional agricultural land.

The proposed I-205 Specific Plan includes several related actions which would permit residential, commercial, and light industrial development on 717 acres of land. Approximately 625 acres in the proposed Specific Plan area are currently located in unincorporated San Joaquin County. These lands, which are presently planned for agricultural uses by the County, would be annexed to the City. The City of Tracy's sphere of influence and urban service district boundaries would be adjusted and amendments to the City of Tracy's General Plan, Industrial Areas Specific Plan and Residential Specific Plan would be required prior to development under the I-205 Specific Plan. All of these actions are growth-inducing, insofar as they enable urban development to occur in areas which were previously planned for less intensive land uses.

The growth-inducing impacts of the I-205 Specific Plan include indirect impacts resulting from the economic and population growth which would occur. The plan provides for development of 1,332 residential units, a 75-acre shopping mall with 170 acres of surrounding commercial uses, and an elementary school and park uses in the Grant Line Road planning area. An additional 125 acres of light industrial development and 52 acres of commercial development are planned in the MacArthur Road area.

Assuming an average household population of 2.59 persons/unit,¹ the project would accommodate approximately 3,450 additional residents. As discussed in Section 4.6 ("Jobs/Housing"), the commercial and light industrial uses in the I-205 Specific Plan area would generate a direct demand for approximately 9,770 employees. The increased population would generate demands for additional goods and services, and could induce future commercial development in the City of Tracy. Similarly, the employment generated by commercial and light industrial uses in the Specific Plan area would be accompanied by increased demands for housing in the city. A total demand for approximately 6,425 dwelling units would be generated by the estimated 9,770 employees. Approximately 1,332 dwelling units would be developed in the Specific Plan area, the remaining demand for 5,094 units would be accommodated elsewhere in the city and the region.

While the direct and indirect increases in the City of Tracy's growth and development resulting from the I-205 Specific Plan may result in economic benefits to the City (see "Fiscal" section of EIR), such growth will place additional demands on the City's public services and facilities and the local and regional transportation systems. As discussed in Sections 4.6 and 4.9-4.18, several improvements to existing infrastructure and public facilities are necessary to mitigate the direct impacts of development in the I-205 Specific Plan area. If these improvements increase the capacity of the municipal water, wastewater and storm drainage systems and roadways beyond what is necessary to accommodate projected development in the Specific Plan area, these actions can be considered growth-inducing since they would remove constraints to further development in the area.

1. City of Tracy, General Plan Housing Element, 1988-1992, October 1987, p. 25.

ALTERNATIVES

5.0 ALTERNATIVES

This section discusses alternatives to the proposed project. They are A) No project - remaining as agriculture and thoroughfare commercial; B) No mall alternative - more light industrial and other commercial designations replacing commercial center; (Refer to Figure 5-1) C) Modified project - each land use reduced by 50 percent in density; D) Alternative Site 1 - a 709-acre portion of the Remington site; and, E) Alternative Site 2 - a 715-acre portion of the Gruppe/Sassco site. (Refer to Alternative Site Map, Figure 5-2)

5.1 No Project Alternative

As stated above, the no project alternative assumes the 717-acre project area would remain in agricultural use with some commercial activity. With the exception of agricultural-related changes and the commercial activity which could occur in the future, such as a change in crops grown or commercial development changes, on-site conditions are expected to remain the same. These conditions are described in the preceding sections of this EIR.

The constraints and advantages to implementing this alternative are discussed below.

Land Use and Planning Policy

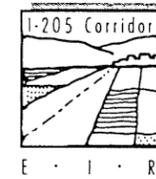
Under the no project alternative, land use designations and zoning would remain the same. Also Tracy's Sphere of Influence and the city limits would not be expanded. Prime farmland soils would not be converted to urban uses and the current agricultural activities could continue. Commercial activity would remain in the downtown and in small pockets throughout the city. Areas designated for commercial use in the Tracy General Plan are not geared to capturing regional commercial demand due to their size and location. Under the no project alternative, the option to develop such a regional commercial/industrial area on the I-205 corridor at this time would be lost.

Geology & Soils

The No Project alternative involves no development of the site, which is primarily agricultural land. On-site conditions would remain the same, except for agriculture-related changes that could occur over time.

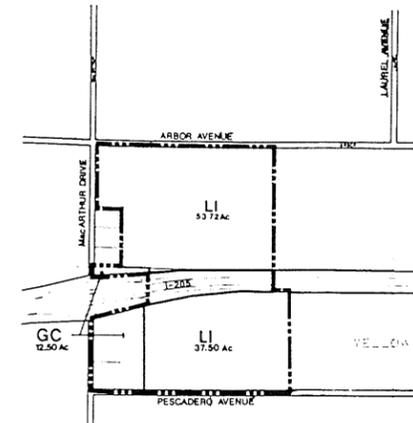
Air Quality

The No Project alternative would not contribute additional vehicle emissions, thus predicted ambient air quality levels would be essentially the same as present levels. Or, air quality would improve due to advances in vehicle emissions controls and improved County-wide air quality.

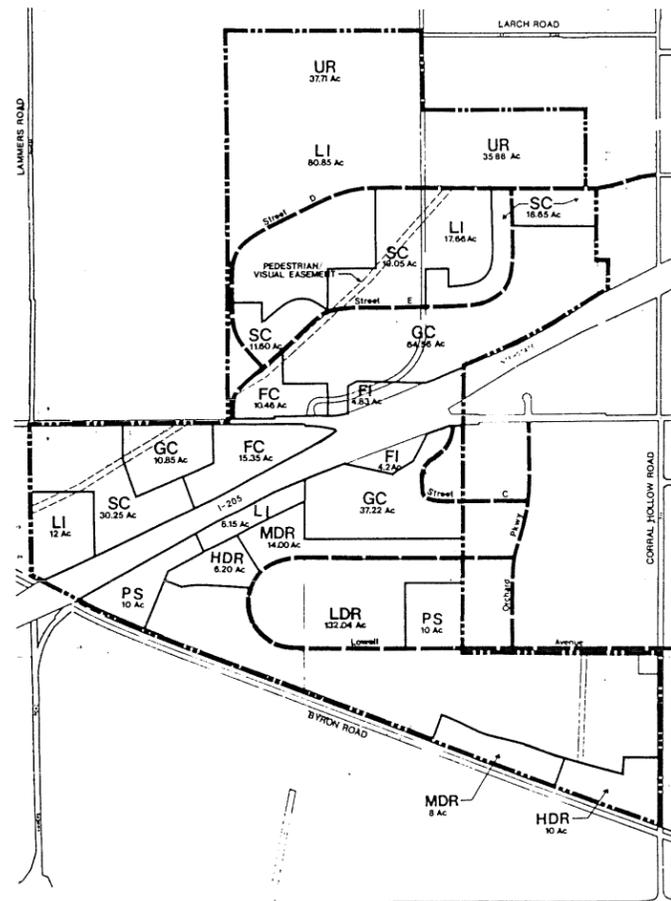


**NO MALL LAND USE
ALTERNATIVE MAP
(ALTERNATIVE C)**

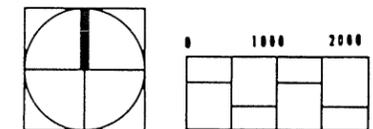
- HDR High Density Residential
- MDR Medium Density Residential
- LDR Low Density Residential
- GC General Commercial
- SC Service Commercial
- LI Light Industrial
- PS Park/School/Open Space
- FC Freeway Commercial
- FI Freeway Interchange
- UR Urban Reserve



**STUDY AREA AT
MACARTHUR DRIVE**



STUDY AREA AT GRANT LINE ROAD



City of Tracy

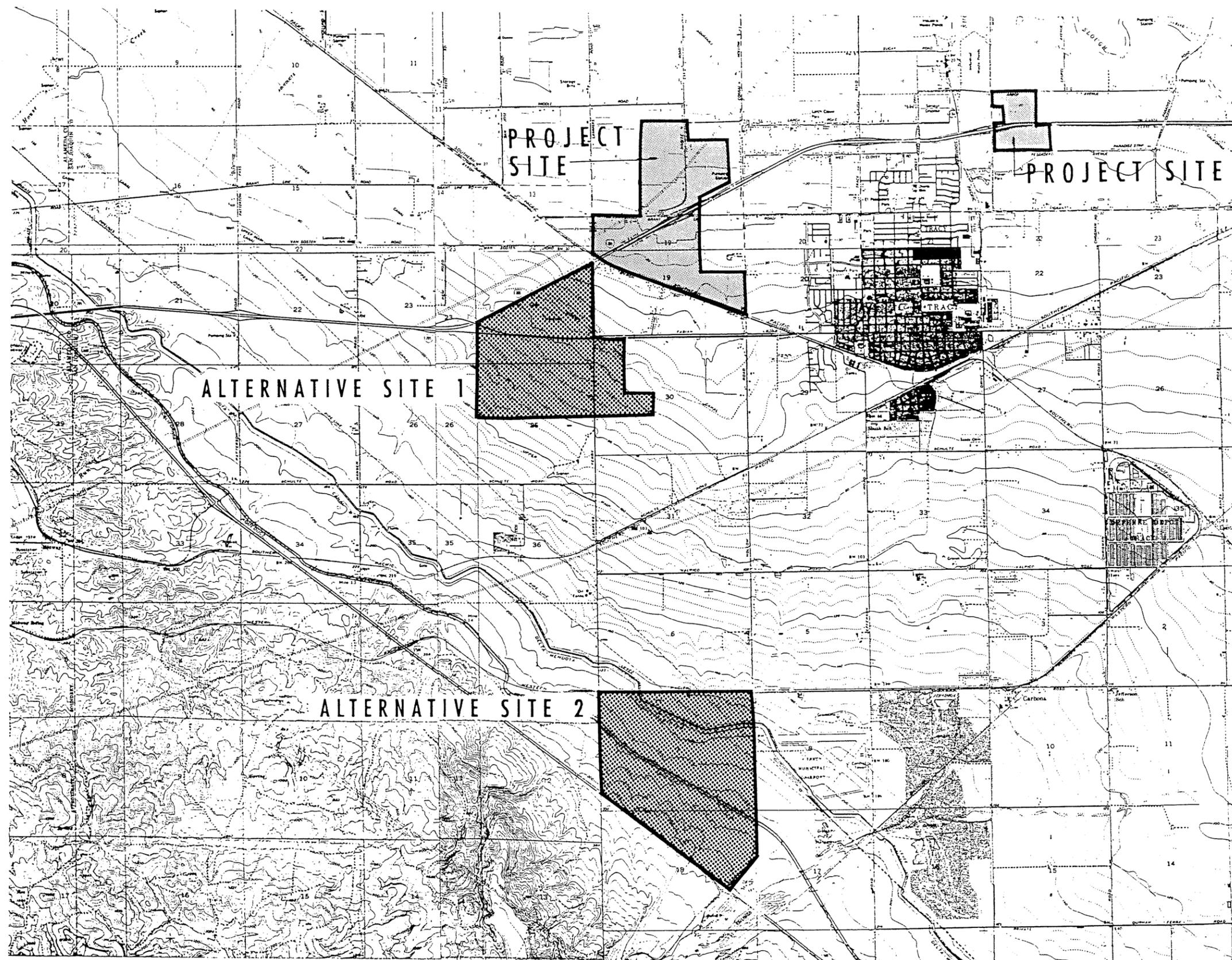
David L. Gates & Associates
The Sword Company

FIGURE 5-1

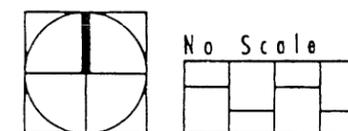
JANUARY 1990



ALTERNATIVE SITE LOCATIONS



Source - USGS,
Tracy (1981), Midway (1980)
Clifton Court Forebay (1978)
and Union Island (1978)
Quadrangles



City of Tracy

David L. Gates & Associates
The Sword Company

FIGURE 5-2

MAY 1990

Aesthetics

This alternative reflects the level of development currently existing in the study area, thus, views of the project area would remain as they are now. Roadways would not be widened, design guidelines would not be implemented, and large scale conversion of agricultural landscapes would not occur. Existing commercial development areas would not be visually upgraded.

Biology

Retaining the project area in its present state, the numbers and variety of vertebrate predators presently utilizing these areas would remain constant throughout the foreseeable future.

Cultural Resources

Since there are no known identified cultural resources within the project area, existing conditions would remain as they are currently.

Jobs/Housing

Tracy would continue as a net contributor of housing in the regional jobs/housing equation under this alternative.

Transportation

Except for regional traffic passing through on I-205, transportation in the project area would remain the same as the current level of traffic.

Noise

Noise levels in the study area would increase with the increase of traffic on I-205.

Public Facilities

Municipal Water

Under the no project alternative, the water demand for the study areas will remain effectively the same as current demand.

Municipal Wastewater

This alternative would not increase the amount of wastewater over what currently exists.

Drainage/Irrigation and Reclamation Districts

Drainage conditions would not change; the agricultural land would continue to absorb runoff and existing drainage facilities would continue to convey excess storm runoff and irrigation water. The three districts would continue to serve the area.

Solid Waste

The generation of solid waste would not increase over what has been projected with buildout of the two existing specific plans.

Public Services

The existing and projected demand for services, including police and fire protection, schools, and parks and recreation will continue to increase as projected buildout occurs.

5.2 No Mall Alternative

This alternative would differ from the proposed project in the following ways:

Grant Line Road Planning Area

The commercial center designation is eliminated.

The residential uses in the Grant Line planning area south of I-205 are rearranged slightly and the total number of units is reduced to 1,270.

A small amount of Light Industrial is located south of I-205 in the Grant Line area.

The Light Industrial areas are increased in the Grant Line area north of I-205.

Mac Arthur Planning Area

South of I-205 the commercial uses are reduced and Light Industrial increased. (Refer to Figure 5-1.)

This no mall alternative replaces the commercial center with other commercial uses and light industrial use. However, the general commercial designation, which replaces the mall, allows uses typically found in a mall, such as department stores, clothing, shoes and accessory stores, banks, drugstores, gift shops, etc. This alternative is actually a reconfiguration of the proposed assorted land uses.

The constraints and advantages to implementing this alternative are discussed below.

Land Use and Planning Policy

Impacts associated with the loss of prime farmland soils would be the same as with the proposed project. The sphere of influence boundaries would be expanded to include the same area as the proposed project. The mall would be replaced by an increase in light industrial uses and other commercial uses. Many of the uses allowed in Commercial Center (or the mall designation) are also permitted under General Commercial. This alternative would not result in development of a regional mall, however, for the following reasons:

- 1) a mall is considered to require a minimum of 70 acres. The largest single General Commercial site in this alternative is 64.56 acres.
- 2) If this alternative is selected, conditions prohibiting development of a mall would be developed.

Without a mall, the regional response could decrease, placing a greater reliance on local demand. This could have a greater impact on the downtown since the I-205 commercial area and downtown could be competing for the same market. This is particularly true if office space is allowed to develop in the General Commercial areas as is proposed. If, as originally planned, the no mall alternative provides the location for an automobile sales center, the impact on the downtown may not be as significant.

This alternative would also provide more light industrial than the proposed project in both the Grant Line and MacArthur areas.

Geology and Soils

The geotechnical condition would remain the same as with the proposed project.

Air Quality

This alternative would result in slightly higher concentrations of carbon monoxide at the Grant Line /Corral Hollow intersection due to higher traffic volumes along each roadway. Impacts under the proposed project are higher than this alternative for each of the pollutants discussed in Section 4.2.

Aesthetics

The development pattern and visual impacts of this alternative would be substantially the same as the proposed project, with the exception of the elimination of potential adverse scale juxtaposition between the mall and the adjacent Larch-Clover neighborhood.

Biology

Biotic impacts would remain the same as with the proposed project. The loss of native predator foraging habitat would be the same as with the proposed project.

Transportation

With this alternative, four intersections would experience severe congestion (equivalent to LOS "D" to "F") during one or both of the peak hours. The project alternative would add proportionally to future traffic demand on the street network. Mitigation would be required which would differ from that already recommended for the proposed project. With mitigation, all studied intersections could be improved to operate at LOS "C" or better during both peak hours. See Figure 5-3 for street network with mitigation. Mitigation measures (where measures differ from those cited for the proposed project) are recommended as follows:

I-205 WB Ramps/Grant Line

- Widen Grant Line Road (westbound) approach to include three through lanes.
- Widen Grant Line Road (eastbound) approach to include three through lanes and one right-turn lane.

Tracy/Grant Line

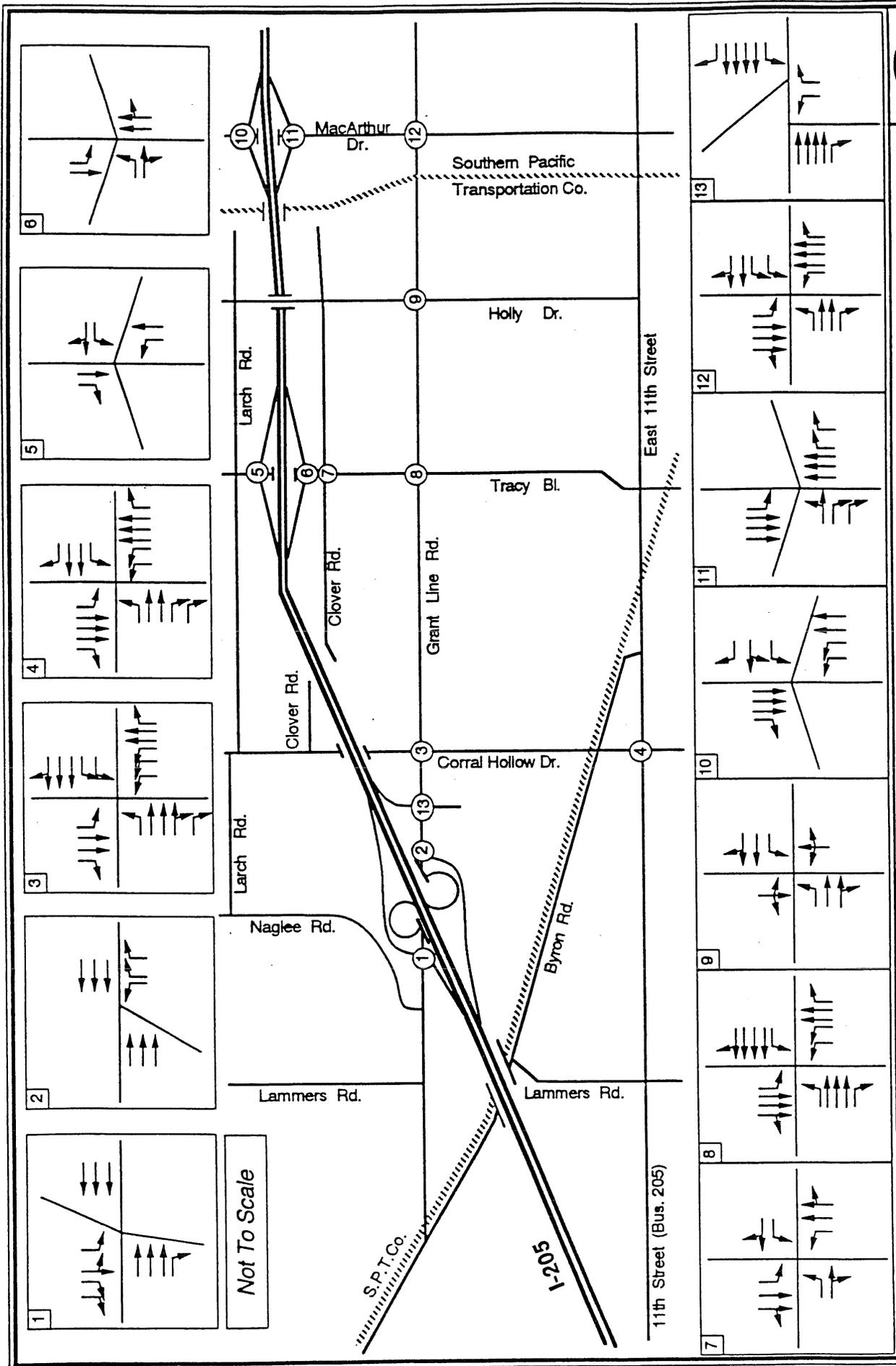
- Widen Grant Line Road (eastbound) approach to include a left-turn, three through lanes, and a right-turn lane.
- Widen Grant Line Road (westbound) approach to include a left-turn, three through lanes, and a through/right turn lane.
- Widen Tracy Boulevard (northbound) approach to include two left-turn lanes, two throughlanes, and a right-turn lane.
- Widen Tracy Boulelvard (southbound) to include a left-turn lane, two through lanes and a through/right-turn lane.

I-205 EB Offramp/Grant Line Road

- Widen offramp (eastbound) to include a left-turn lane, and two right-turn lanes.

Corral Hollow/Grant Line Road

- Widen Corral Hollow Road (southbound) approach to include a left-turn lane, two through lanes, and a right-turn lane.
- Widen Grant Line Road (Westbound) to include two left-turn lanes, two through lanes, and a through right-turn lane.



Intersection Configuration
 Future Base + Project Alternative Conditions, With Mitigation

FIGURE 5-3



Noise

Noise impacts would be the same as with the proposed project.

Public Facilities

Municipal Water

Developing the study area under the no mall alternative would increase the projected water use from 2.49 mgd to 2.58 mgd. (Refer to Tables 4.29 and 5.1.) This situation arises because the land uses replacing the mall have higher water usage rates per acre. Considering the uncertainty inherent in the water use estimates, the difference is insignificant and all impacts would be the same.

Wastewater

The impacts on the wastewater system associated with the no mall alternative are similar to those impacts associated with the proposed project. The estimated average flow of wastewater from the Grant Line Road Area is 1.39 mgd for the no mall alternative. The proposed collection system pipelines range in size from six inches to 21 inches, similar to the proposed project. This system would also collect and convey wastewater to a proposed pump station located at Corral Hollow Road and Larch Road but the pumping capacity of this pump station will be slightly higher than the pumping station for the proposed project. An interim connection could also be made to the Corral Hollow trunk to utilize its excess capacity, however, this action may require city council approval prior to implementation. Modifications to the Larch Road Pump Station are necessary and an expansion to the WTF is also required as with the proposed project.

Drainage

Drainage impacts would be similar as those identified for the proposed project. The amount of impervious surface would not change significantly to effect a change in runoff.

Irrigation and Reclamation Districts

Impacts upon the three districts would not change.

Solid Waste

Solid waste disposal would not change significantly in comparison to the proposed project. The mitigation measures suggested for the proposed project would apply for this alternative.

TABLE 5.1

WATER DEMANDS CREATED BY DEVELOPMENT
OF ALTERNATIVE 'C' FOR THE
I-205 CORRIDOR STUDY AREAS

STUDY AREA	LANDUSE	AREA (ac)	AVERAGE AREAL USE (1) (gpd/ac)	AVERAGE TOTAL USE (mgd)	MAXIMUM DAY DEMAND (mgd)(4)
GRANT LINE					
	HDR	16.20	5,052	.08184	.18005
	MDR	22.00	4,032	.08870	.19515
	LDR	132.04	3,013	.39788	.87534
	GC (2)	112.63	3,750	.42236	.92920
	SC	79.55	2,700	.21479	.47253
	LI (3)	190.25	3,499	.66564	1.46440
	PS	20.00	2,475	.04950	.10890
	FC	25.81	7,950	.20519	.45142
	FI	9.03	1,080	.00975	.02146
	CC	.00	2,889	.00000	.00000
	SUBTOTAL	607.51		2.13566	4.69844
MACARTHUR					
	GC	12.50	3,750	.04688	.10313
	SC	.00	2,700	.00000	.00000
	LI	91.22	3,499	.31916	.70214
	FC	.00	7,950	.00000	.00000
	SUBTOTAL	103.72		.36603	.80527
GRAND TOTAL		711.23		2.50169	5.50371

- NOTES: (1) AVERAGE USE IS TAKEN FROM TABLE ___2___.
- (2) GC INCLUDES GCR FOR PURPOSES OF PROJECTING WATER DEMAND.
- (3) LI INCLUDES UR FOR PURPOSES OF PROJECTING WATER DEMAND.
- (4) PEAKING FACTOR OF 2.2 USED.

ac - ACres
gpd/ac - Gallons Per Day per ACre
mgd - Million Gallons per Day

Public Services

Development of this alternative would require the same level of police and fire services as for the proposed project.

Schools and parks would also require the same improvements and mitigations. The following generation numbers have been calculated in order to determine the change in the number of students per dwelling since this alternative proposes a decrease in residential acreage:

$$\begin{aligned} \text{LDR } 5.5 \text{ units per acre} \times 132.04 \text{ acres} &= 726.22 \text{ units} \\ \text{MDR } 10 \text{ units per acre} \times 22 \text{ acres} &= 220 \text{ units} \\ \text{HDR } 20 \text{ units per acre} \times 16.20 \text{ acres} &= 324 \text{ units} \\ &= 1270 \text{ total units} \end{aligned}$$

This results in 62 fewer units for the no mall alternative.

$$\begin{aligned} \text{K-5} &= .44 \text{ pupils} \times 1270 \text{ units} = 559 \text{ pupils} \\ \text{6-8} &= .20 \text{ pupils} \times 1270 \text{ units} = 254 \text{ pupils} \\ \text{9-12} &= .30 \text{ pupils} \times 1270 \text{ units} = 381 \text{ pupils} \\ & \\ &.94 \text{ pupils} \times 1270 \text{ total units} = 1194 \text{ pupils} \end{aligned}$$

This alternative would result in 58 less pupils than the proposed project.

These figure changes are not significant considering the current and projected overcrowded school conditions. However, a reduction in pupils would ease the burden on the school district and community park facilities.

5.3 50% Reduction Alternative

The purpose of this alternative would be to provide a project similar to that proposed, but with a reduced density and a corresponding reduction in the potential environmental impacts identified for the proposed project. This alternative considers a 50 percent reduction in the intensity of the development while the acreage and uses for the project site shall remain the same.

The constraints and advantages to implementing this alternative are discussed below.

Land Use and Planning Policy

The same loss of agricultural lands would occur with this alternative, however there would be the opportunity to develop a buffer between urban and neighboring agricultural uses, thereby reducing rural/urban conflicts. A fifty percent density reduction would preclude the development of a mall, which is considered to require a minimum of 70 acres. Commercial development would therefore not create as strong a regional draw and would depend

more on the local market. This would be in competition with the downtown, particularly if office space is allowed to develop in the General Commercial and Commercial Center areas as is proposed.

Geology and Soils

The geotechnical conditions for this development apply equally as for the proposed development plan.

Air Quality

Under this scenario, project travel volumes would be reduced by 50 percent. In terms of the air quality impacts presented for the proposed project, this scenario would result in a reduction of 50 percent of the incremental project impacts. For example, in Table 3.21, worst-case one-hour CO impacts in 2000 are 13.2 ppm for the project and 9.7 ppm for the "base" (existing travel with forecasted no project growth). Therefore, peak CO impacts under the 50% density reduction scenario would be 11.5 ppm ($0.5 \times [13.2 - 9.7] + 9.7$). In reality, the above methodology would overestimate the impact under this scenario because it does not account for the emissions benefit of reduced volumes causing higher vehicle speeds.

Aesthetics

The development pattern and visual impacts of this alternative would be similar to the proposed project. However, the opportunity to achieve a high degree of visual quality may not occur because the reduced development intensity may not support the cost of the visual improvements. Mitigation measures would be scaled down from the proposed project.

Biology

This alternative would allow for greater flexibility in developing buffer areas between the farmland and the urban development, thereby retaining some foraging habitat for the predator species currently utilizing the project area.

Transportation

With a 50 percent reduction in proposed project trips, four of the 13 study intersections would be operating below LOS "C" during the AM or PM peak hour. The intersection of I-205 WB Ramps/Grant Line would operate at LOS "F" (1.17) during the PM peak hour. The intersection of Corral Hollow/Grant Line would operate at LOS "D" (0.83) during the PM peak hour. The intersections of Tracy/Grant Line and MacArthur/Grant Line would operate at LOS "D" during the PM peak hour with v/c ratios of (0.80) and (0.81), respectively.

The following mitigation measures would enable congested intersections to operate at LOS "C" or better. Overall a 50 percent reduction in project trips would lessen the need for intersection mitigation in the I-205 Corridor study area. As analyzed, only the most congested intersections (near freeway or providing freeway access) would require mitigation with the 50 percent reduction in project and alternative trips.

I-205 SB Ramps - Naglee/Grant Line (Mitigated LOS: "C" 0.77 PM peak hour

- Widen Grant Line Road (eastbound) approach to include a left-turn lane, three through lanes and a right-turn lane.
- Widen Grant Line Road (westbound) approach to include a left-turn lane, three through lanes, and a right-turn lane.
- Widen Naglee Road (southbound) approach to include two left-turn lanes, a through/left-turn lane and a right-turn lane.

Noise

This alternative would reduce noise levels. It would allow for larger buffer zones between the residential and commercial areas and between I-205 and the urban development, thus reducing the opportunity of noise complaints. Additionally, reduced traffic levels would reduce the noise impacts expected from the proposed project.

Public Facilities

Municipal Water

Reducing the overall building density by 50 percent would reduce the water demand but not by 50 percent. A significant portion of the building area would be replaced by landscaping which also requires water. The water demand would be reduced by 10 to 40 percent depending on the exact land uses selected. This reduction would reduce the impacts described in the analysis of the proposed project but none of the impacts would be reduced to the point of insignificance without the additional mitigation measures.

Wastewater

A 50 percent overall reduction in density would result in less wastewater generated from the project area. A new gravity collection system is still needed to serve the area but the overall pipe sizes will be smaller. A pump station is still necessary at Corral Hollow Road and Larch Road but the pumping capacity will be lower than for the proposed project and the no mall alternative.

Modifications to increase the pumping capacity of the Larch Road Pump Station are required but would not be as extensive as for the proposed project and the no mall alternative. Expansion of the WTF is still required but construction does not have to be completed as early as for the proposed project and the no mall alternative.

Drainage

Surface runoff would be reduced due to a decrease in impervious surface. However, drainage facilities would be required similar to the proposed project.

Irrigation and Reclamation

Impacts would be similar as with the proposed project.

Solid Waste

Solid waste created by this alternative would continue to impact the existing landfill site. Mitigation measures would be applied the same as for the proposed project.

Public Services

Development of the site would increase the demand for police and fire services, however there would be fewer service calls than for the proposed project. The police will continue to require additional personnel and equipment in order to maintain the city's desired level of 1.5 sworn officers per 1000 people. However, this level of personnel may be less than the proposed project as a result of the reduction in development. The fire department would require the same mitigations as for the proposed project.

The schools and park demand would be reduced as a result of the reduced residential densities, however any increase to these currently overcrowded facilities would have an adverse impact on the area.

5.4 Alternative Sites

The City of Tracy planning staff reviewed an array of potential alternative sites that could be developed to meet the goals, objectives and purposes of the proposed development without regard to the jurisdiction, pattern of land ownership or current plans for development.

The staff defined the purposes of the I-205 Corridor Specific Plan as development of a significant commercial and light industrial project area located to take advantage of the growing regional market and regional traffic passing near and through the City of Tracy on the interstate freeway system. In addition the site must be available to bring additional shopping and commercial opportunities to Tracy residents not otherwise supportable by the

Tracy population base. Any site selected would be of a size that would support a regional mall, auto center and regional oriented off-price shops, as well as other development, to share the costs of infrastructure for the project.

The staff initially narrowed the alternatives to sites around interstate highway interchanges, accessible to regional shoppers and visible to potential regional shoppers travelling on the interstate. Staff then eliminated those sites that 1) were too distant from existing infrastructure to be feasible; 2) were too far from existing population centers to provide additional shopping and commercial opportunities; 3) would create a significant land use conflict with existing or planned uses; or 4) were subject to significant environmental constraints.

Various sites which have been or are considered for development were considered by staff. Two were selected as feasible for the purposes of the I-205 Specific Plan. All seven are discussed below.

a) Alternative Site 1 - the Remmington site southwest of the Grant Line area of the project, north and south of Eleventh Street at its connection to I-205. (See Figure 5-2.)

Staff selected the Remmington site as one of the sites to be further studied due to its relative closeness to planned and existing population centers in the City of Tracy; its location along I-205; the potential for a reconfigured interchange at I-205 and Eleventh Street that would allow for good access to regional shopping and the relative proximity to existing infrastructure.

b) Alternative Site 2 - which is north of I-580 and west of the Tracy Airport south of the City of Tracy. (See Figure 5-2.)

Despite the greater distance of this site from the bulk of Tracy's residential population, this site allows for access to Tracy water, sewer and drainage facilities due to its elevation and proximity to the City of Tracy airport and water plant. Staff believed that a regional commercial development was feasible at this site.

c) The MacArthur Road area. A portion of the I-205 Specific Plan of approximately 105 acres is north and south of the I-205 on the east side of MacArthur Road. A locational alternative was considered in which the other 600 plus acres of the proposed development at Grant Line Road (Grant Line Area) would be planned for the north site of I-205 at MacArthur. The south side already contains the 84-1 Industrial Specific Plan area and the recently approved Yellow Freight development.

On the positive side, the area borders I-205 allowing for access and visibility, and has most of the infrastructure.

However, this potential alternative was rejected as infeasible due to the environmental constraint of potential flooding. The area north of I-205 in this area is affected by the 100-year flood according to the newest FEMA maps, to a much greater extent than the Grant Line area property. Of equal or greater concern to staff was the potential for land use conflicts with the existing Tracy sewer plant due west of MacArthur along the north side of I-205. Planning staff indicated that it would oppose introducing significant commercial and residential population to the lands adjacent and down wind from the city's only current sewage treatment facility.

d) The Paradise Road area. East of the MacArthur portion of the I-205 Specific Plan area is the area north and south of I-205 at Paradise Road. A locational alternative was considered in which the development at Grant Line Road (Grant Line area) would be planned for the north or south of I-205 at Paradise. The south side is east of the 84-1 Industrial Specific Plan and the recently approved Yellow Freight facility.

On the positive side the area borders I-205 for access and visibility. However, this site was rejected as an infeasible alternative due to its distance from the existing residential base of the City of Tracy; a greater distance for providing infrastructure; the need for full interchange where none now exists, and potential land use conflicts with the future Banta community. It failed to meet the objective of the project because of the distance from the existing Tracy population upon which the regional market would build. It was also too far from the downtown area of Tracy to develop any relationship between downtown and the regional mall and other facilities to help mitigate the impact of regional-serving commercial development.

The staff felt strongly that this proposed alternative would have a significant adverse environmental effect by inducing growth in a "leap frog" manner to the east of the City of Tracy into prime agricultural land.

e) Interstate 5 sites east of Tracy:

I-5/Highway 33. Located seven to eight miles east of Tracy, this is an interchange in a rural, unurbanized agricultural district along I-5. This site was rejected by staff because it is too far from the existing residential population base; it lacks basic infrastructure; and land use conflicts would occur with existing agricultural uses.

I-5/Caisson Road. This site is located four to five miles from Tracy, and is similar to the site above. This alternative site was rejected for the same reasons.

I-5/Mossdale exit, near the "Fruit Stand." This site was rejected because of the distance from the Tracy population base and lack of infrastructure. This site also is in the 100-year floodplain according to recent FEMA maps.

f) Holdner-Gateway area located at the triangle created by the intersection of I-205 and I-580/Patterson Pass Road. The area contains significant interstate frontage for access and visibility. The Gateway Industrial Park application is being processed and a 40-acre truck stop has been approved.

On the positive side the interstate access is good and traffic impacts could be mitigated. However, the site was rejected from further review due to its distance from existing infrastructure including water and sewer; distance from an urban population base; and constraints created by the area's two major canals (Delta-Mendota and California Aqueduct). Development of this alternative site as major commercial with attendant uses would be growth inducing, and create leap frog development.

g) Mountain House (north of I-580 and I-205 interchange). This site was rejected as it lacks major visibility and access for the regional market center. The majority of the Mountain House land available for development is not located in close proximity to I-580 and I-205. Also the site is too distant from existing development for the infrastructure connection and too distant from an existing population base to serve the purposes of the project to provide additional shopping opportunities to Tracy residents.

Alternative Site 1 (Remington)

This alternative site contains approximately 709 acres immediately west of the City of Tracy. The site is irregular in shape, and is bounded on the north by I-205 and the south west and east by farmland. (See Figure 5-2)

The constraints and advantages to locating the project at this site are discussed below.

Land Use and Planning Policy

Alternative Sites 1 and 2 were selected for analysis for the following reasons:

- 1) their size - both are similar in size to the combined acreage of the I-205 Corridor study areas.
- 2) their proximity to major transportation corridors -site 1 is near I-205 and site 2 is near I-580.
- 3) they contain large parcels with a limited number of property owners.

4) there is currently interest in development of these sites.

Both sites are adjacent to, but beyond, the city's sphere of influence and would require adjustment of the Sphere of Influence boundaries prior to annexation. These actions would require LAFCO approval. Both alternative sites are located farther from existing development in Tracy than the proposed sites. Each site represents more of an intrusion into undeveloped areas and the establishment of isolated city service areas.

Geology and Soils

Alternative Site 1 is underlain by alluvial and fluvial deposits of undetermined depth. Borings made by various agencies in this area have revealed the nature and thicknesses of the near-surface sediments in the site vicinity. Borings show the groundwater table is generally less than five feet below the surface at this site.

Flooding risk at this site is considered to be the same as for the project site.

The U.S. Department of Agriculture (1987) has identified two agricultural soil types on this site. The central portion of the site and the eastern corner are underlain by the Stomar Clay Loam, which has a moderate to high shrink/swell potential. The remainder of the site is underlain by the Capay clay, which has a high shrink/swell potential.

Based on information acquired and analyzed during this study, the potential geotechnical hazards that could impact development of the site include the presence of expansive and compressible soils, local ground subsidence, shallow groundwater, seismic ground shaking and several forms of seismically induced ground failure. These are the same as those described for the project site.

The impacts of placing the project on this site would not significantly impact the geological or seismic conditions in this area. The nature and configuration of the surface materials and surface drainage could be altered by grading and subsequent development. Access to groundwater requires only a very small area, and the proposed development includes enough open space to allow for this.

Air Quality

The site adjoins I-205 similar to the proposed project site, therefore no net change in additional emissions due to accessibility from the freeway would be anticipated. From the available data, no change from impacts predicted at the primary site could be identified at this site. Qualitatively, construction-related emissions at this site would likely be higher

than at the primary site due largely to construction of a completely new freeway interchange (as opposed to modification of the existing interchange at Grant Line Road).

Aesthetics

The visual impacts of this alternative project site would be substantially the same as the proposed project. It would also involve large scale conversion of the rural and visually open lands at the edge of the City. The mitigation measures contained in the Design Guidelines would be the same as for the proposed project.

Biology

The loss of native predator foraging habitat would be similar to that which would occur if the project planning area was developed. Whereas the loss of the planning area would occur at the present edges of the greater Tracy development area, development of this alternative site would occur in the midst of what is presently extensive prime predator foraging land. This in turn could create an "avoidance zone" around this site in which a number of predator species would be discouraged from foraging by numerous human activities and by-products.

Transportation

Roadways serving the project site include West 11th Street (business 50), Byron Road, Lammers Road and Fabian Road. All of these streets are two-lane facilities. A limited access interchange is located at I-205/West 11th Street that provides westbound access only to/from the City of Tracy. West 11th Street travels in an east-west direction from I-205 and is a four-lane facility. Byron Road is oriented in a northwest-southeast alignment under I-205 from West 11th Street. Lammers Road is oriented in a north-south direction and connects with Byron Road just south of I-205. Fabian Road is an east-west two-lane street that runs between Lammers Road and Corral Hollow.

Based on the location and size, daily project trips generated in the ADEIR would be approximately the same for this site - 146,000 vehicles. Future base traffic from the City of Tracy would have a greater effect on critical project intersections (i.e., Lammers/West 11th, Lammers/Byron, Corral Hollow/West 11th, Fabian/Lammers, and West 11th/I-205 interchanges). Project land uses would likely be clustered close together adding to increased congestion and delays. Eastbound vehicles would either travel up Byron Road or Corral Hollow Road to gain access to eastbound I-205.

Noise

Noise levels for this alternative site would be similar to the proposed project site due to its proximity to I-205. The citizens of Tracy, however, would not experience the same level of construction and related development noise as a result of the distance between Alternative Site 1 and the city.

Public Facilities

Municipal Water

The only difference in impacts on the municipal water system caused by relocating the project to this site is a changed distribution system. A different layout of pipelines would be necessary to transport the water to this location. The water demand and impacts of meeting the demand would not change.

Wastewater

Development of Alternative Site 1 would produce the same impacts as the proposed project with the addition of the extra pipeline required to convey the wastewater to the Larch Road pump station.

Drainage/Irrigation and Reclamation Districts

There is no encroachment into the 100-year flood plain designated by the Federal Emergency Management Agency (FEMA) at this site. The surface characteristics are much the same as the preferred site, being predominantly agricultural lands gently sloping to the northeast. The entirety of the site lies within the West Side Irrigation District (WSID) which utilizes the West Side Main Drain as the primary outfall for irrigation and storm water runoff. The WSID has stated that only a very limited capacity is available in the main drain for additional runoff generated from developing areas. This excess capacity has already been designated for the City of Tracy Storm Drain Master Plan and is, therefore, not available for use by properties located within the boundaries of this site. It would, therefore, be necessary to accommodate storm runoff from this alternate site via the use of on site detention basins with a controlled outlet to the main drain so as not to increase existing flow rates. In lieu of the detention basin option, a separate storm drain outfall system could be constructed to the Old San Joaquin River which is located approximately 2.6 miles to the north of Alternative Site 1.

In general, storm drainage conveyance systems serving this alternate site would be somewhat more difficult to achieve than those for the preferred site. The reason for this is primarily the physical location of the site with regard to existing or proposed storm drainage facilities. Lengthy off-site extensions are likely to be required as well as the need for on-site detention basins.

Solid Waste

Solid waste collection for this alternative site would remain the same as for the proposed project. This site would not create any additional impacts for the disposal company, therefore, mitigation measures would remain the same as for the proposed project.

Public Services

The development of this alternative site would increase the demand for fire protection to the same extent as with the proposed project. The response time to the alternative site would increase slightly due to the location of the existing fire stations. The mitigations would remain the same as for the proposed project site.

Utilization of Alternative Site 1 would significantly increase demand for law enforcement services. The site would increase response time and would require the same mitigation as are necessary for the proposed project.

Schools and parks would experience the same impacts as for the proposed project. The development would create the demand for additional school and park facilities. Mitigation measures would be the same as for the proposed project.

Alternative Site #2 (Signature)

This alternative considers the proposed project at a 715 acre site south of the City of Tracy. The site is bounded to the north by Linne Road, to the east by Corral Hollow Road/Tracy Municipal Airport, to the south by I-580 and to the west by Lammers Road.

This site consists of farmland used for row crops and grazing and a portion of the area is located in the airport overlay zone. Therefore the site is susceptible to the restrictions of that zone. The Delta Mendota Canal and California Aqueduct traverse the site. (See Figure 5-2.)

The constraints and advantages to implementing this alternative are discussed below.

Land Use and Planning Policy

Development of this site would require the same planning approvals as with the proposed project. The site is not contiguous to the City of Tracy and annexation would encompass several hundred acres between the site and existing city boundaries. This would create leap frog development causing the eventual development of lands in between. Many parcels are under Williamson Act contract and annexation of Alternative Site 2 would encourage property owners to request cancellation of the contracts. Development of this

site would also be inconsistent with several county policies regarding encroachment into agricultural lands and extension of urban services.

Geology and Soils

This site is underlain by Quaternary alluvium with the slightly older Tulare formation existing along the base of the hills, immediately southwest of the site. North of the large alluvial fan formed at the mouth of Corral Hollow the site is underlain by non-marine Tertiary valley sediments. The depth to pre-Tertiary bedrock at the site is estimated to be an average of 2,200 feet below the ground surface.

Four soil types have been identified on this site. The Altamont adobe clay and the Denverton adobe clay predominate, with smaller amounts of the Ambrose clay and the Rincon gravelly clay loam. These soils are characterized by a high clay content. The Tracy General Plan shows the soils in the site vicinity to be potentially highly expansive.

A series of discontinuous geologic faults have been mapped in the foothills west of the site. The nearest active fault to the site is the Greenville, approximately 10 miles east of the site.

The potential geotechnical hazards that could impact development of this site include the possible presence of expansive and compressible soils, seismic ground shaking and several forms of seismically induced ground failure. The potentials for secondary seismic ground failures such as liquefaction, slope failure or lateral spreading to occur will depend upon the depth of groundwater and the nature of the subsurface materials at this site.

The proposed use of Alternative Site 2 would not significantly impact the geological or seismic conditions in this area. The nature and configuration of the surface materials could be altered by grading and subsequent development. Surface drainage would also be affected by grading and development of this site. Access to groundwater requires only a small area and the proposed development includes enough open space to allow for this.

The mitigation measures recommended for the proposed project would be adequate for this site.

Air Quality

This alternative site adjoins I-580, therefore no net change in additional emissions due to accessibility from the freeway would be anticipated. In fact this site might lessen carbon monoxide "hot spot" impacts over those predicted at the proposed site. To the extent that development at this site would attract trips

"normally" traveling along I-205, increased emissions due to higher vehicle miles travelled may occur at Alternative Site 2.

Aesthetics

The visual impacts of this alternative project site would be somewhat greater than the proposed project. It would involve the introduction of a suburban landscape in an otherwise agricultural area. Constraints in the form of adjacent uses, such as the Tracy Airport, and existing industrial uses, may reduce the opportunity to achieve the aesthetic and urban design goals expressed in the Specific Plan. Implementation of development on this site would produce an intense residential and commercial visual form not now visible from the I-580 corridor. Mitigation measures would need to focus more on creating a visual transition between rural and suburban development patterns.

Biology

Although this site is comparable in size to the project planning area, it contains a greater proportion of crops which are not conducive to high rodent production and, therefore, native predator foraging. However, one rodent species, the California ground squirrel (Spermophilus beechevi) is present in good numbers in this area. This rodent is the major food item of the state and federally-listed endangered San Joaquin kit fox (Vulpes macrotis nutica). Over a dozen sightings of live and road-killed San Joaquin kit foxes have been made along the I-580 corridor adjacent to this site within the past two decades, and it is probable that in addition to the threatened Swainson's hawk, this endangered mammal may utilize this site for feeding and denning.

Transportation

Regional access is provided by I-580 which borders the southern edge of the site. I-580 travels in a northwest-southwest direction and provides access west to Livermore and south where it connects with Interstate 5. Currently, the only full access interchange serving the project site is located at I-580/Corral Hollow Road at the southern end of the site.

Roadways serving the project site include Corral Hollow Road, Lammers Road, and Linne Road. All of these streets are two-lane facilities which serve the Tracy area. Corral Hollow is oriented in a north-south direction and would likely provide the major access to the project site from downtown Tracy proper. Lammers Road parallels Corral Hollow Road to the west ending at the project site's northern boundary. Lammers Road provides access north to Schulte Road. An east-west two-lane facility, Schulte Road allows access west out to the I-580/Patterson Pass interchange.

Based on the proposed project for the I-205 Corridor, the number of daily trips generated would likely be higher than projected, approximately 150,000-155,000. Project trips attributable to retail-commercial development may increase due to a farther proximity from downtown Tracy. The "pass-by" factor would be reduced for these types of land uses. However, overall vehicle trips passing through critical intersection would be reduced due to the reduction or lack of future base traffic from the City of Tracy. Overall, project traffic for proposed land uses could substantially increase congestion and delays along Corral Hollow Road and Lammers Road. Similarly, project traffic at the I-580/Corral Hollow interchange would result in larger delays for both northbound and southbound vehicles. It should be noted that ultimate plans for this alternative project site call for the extension of Lammers Road across I-580 and construction of a new interchange. This new interchange would divert project traffic away from the I-580/Corral Hollow interchange causing less congestion.

Noise

Noise levels at this alternative site would be similar to the proposed project due to its proximity to I-580. The project would also experience airport related noise impacts as a result of the adjacent municipal airport. Construction and related development noise would not impact current residents as the site is isolated from the city.

Public Facilities

Municipal Water

The only difference in impacts on the municipal water system caused by relocating the project to Alternative Site 2 is a different distribution system. Because the site is at a higher elevation, a different layout of pipelines, a pump station and appropriately located storage would be necessary to service the project. The water demand and impacts of meeting the demand would not change.

Wastewater

Development of Alternative Site 2 would produce the same impacts as the proposed project. Because of its location being so far removed from the WTF, this site would require the largest amount of pipeline to convey the wastewater northward to the Larch Road pump station.

Drainage

This alternate site consists of existing agricultural land sloping moderately to the north. Traversing the site are the California Aqueduct and the Delta Mendota Canal, presenting major obstacles to surface drainage patterns. Costly storm drainage facilities would need to be constructed to convey storm water runoff through the site and across the canal. Additionally, a significant volume of storm water runoff should be expected to enter the proposed site along the southerly and westerly property lines.

In general, the drainage solution for the site would be to discharge storm runoff into existing natural water courses without increasing the peak flow in these waterways above existing levels. This could be accommodated through the utilization of on-site detention basins to hold storm water and discharge at a controlled rate into the existing drainage systems.

The drainage solution for this alternate site would be minimal in terms of off-site improvements required but could have a significant on-site impact due to the addition of detention basins.

Solid Waste

Solid waste collection would not change over the proposed project. The travel distance to transport waste across town from this site to the transfer station located north of the city would be increased slightly. Mitigations would remain the same as for the proposed project.

Public Services

Development of this site would increase the demand for fire protection similar to the proposed project site. The response time may increase slightly due to the new site location and the extended area coverage. The mitigations would remain the same as for the proposed site.

Demand for law enforcement services would significantly increase because the alternative site would increase response time as a result of the additional patrol area for the city. The same mitigation measures are necessary as for the proposed project. Development of this site may require a patrol substation because of the distance to the police station at city hall.

Schools and parks would experience similar impacts however, different schools would be affected. Impact on park facilities would be the same as for the proposed project. The mitigation necessary for the proposed project would apply to this alternative site as well. In addition, it may be necessary to provide greater park and recreation opportunities at Alternative Site 2 over what is proposed because of the distance to existing facilities.

- 19 **ibid.**, Bernakis.
- 20 **ibid.**, Bernakis.
- 21 **ibid.**, Bernakis.
- 22 **ibid.**, Bernakis.
- 23 **ibid.**, Bernakis.
- 24 **ibid.**, Bernakis.
- 25 **ibid.**, Bernakis.
- 26 **ibid.**, Bernakis.
- 27 James Raymond, Director, Park and Recreation Department,
written communication, December 1989.
- 27 **ibid.**, Raymond.
- 28 **ibid.**, Raymond.
- 29 **ibid.**, Raymond.
- 30 **ibid.**, Raymond.
- 31 **ibid.**, Raymond.

IMPACT OVERVIEW

6.0 IMPACT OVERVIEW

6.1 Significant Unavoidable Adverse Impacts Which Cannot Be Mitigated to Acceptable Levels

CEQA Section 15126(s) requires a discussion of significant environmental changes which would result from the proposed project. Significant adverse impacts include large commitments of non-renewable resources or permanent degradations in the quality of the physical or social environment of an area. Potentially significant adverse environmental effects have been identified throughout this EIR and, where possible, mitigation measures have been identified which would enable the potential impacts to be avoided or reduced to a level of insignificance.

The loss of agricultural land which would accompany development of the I-205 Specific Plan would result in two related unavoidable adverse impacts. As discussed in Section 3.1, future development under the Specific Plan would result in the permanent removal of approximately 600 acres of prime soils from agricultural use. Prime agricultural soils, as designated by the U.S. Soil Conservation Service, are a limited natural resource and once converted to urbanized uses, future agricultural activity on these lands is highly unlikely. Conversion of farmlands on prime soils to urban uses is a significant and unavoidable adverse effect of the proposed I-205 Specific Plan.

The loss of agricultural land would also result in a reduction in the amount of foraging habitat available to native predators in the Tracy area, including the threatened Swainson's hawk. This is a significant impact which cannot be avoided or mitigated.

As discussed in the Fiscal section of this EIR, downtown retail uses are likely to be adversely affected by retail development on the I-205 corridor. While relocation of some businesses may occur, businesses remaining in the downtown core are likely to experience a decline in sales. The potential exodus of major space users in downtown (auto dealerships and appliance and furniture stores) may further weaken the viability of Tracy's downtown retail district. The fiscal study recommends that retail space built on the I-205 corridor be assessed a one-time linkage fee to help fund an economic development plan for downtown and future revitalization activities. Depending on the success of future economic development activities in downtown Tracy, the significant adverse effects of I-205 development may or may not be mitigated. If policies and programs aimed at assisting downtown retail uses are not successful, this would be a significant and unavoidable adverse impact associated with the I-205 Specific Plan.

6.2 Beneficial Impacts

The proposed I-205 Specific Plan would have the following beneficial effects on the City of Tracy:

- Residential development under the Specific Plan would provide a diverse mix of housing, contributing to the regional housing supply. Lower-priced, affordable housing would be developed.
- Commercial development, including development of a regional shopping mall, would generate a direct demand for approximately 9,770 employees. This would have a positive effect on employment opportunities in the area and would help to offset the current imbalance between jobs and housing in the area.
- The project would have a positive effect on the tax base in Tracy. The increase in retail sales tax revenues generated by the regional mall, outlet mall and commercial space would have a positive impact on the city's fiscal base. In addition, the increased employment opportunities and the "multiplier effect" of new revenues flowing into the city would have beneficial effects on the local and regional economy.
- The TSM measures included in the Specific Plan (ride-sharing, van-pooling, etc.) would result in a reduction in motor vehicle emissions, thereby resulting in incremental improvements in regional air quality conditions. Additionally, the Specific Plan would provide two park-and-ride sites which would help to facilitate carpooling and vanpooling activities, thereby improving regional traffic conditions.
- The Specific Plan would result in aesthetic improvements along portions of the I-205 corridor. At present, the scattered residential development near the freeway is lacking any coordinated design features. The Specific Plan would institute architectural and site design guidelines and standards for landscaping and visual screening which would improve the aesthetic quality of the I-205 approaches to the City of Tracy.
- The Specific Plan designates sites for more than 11 acres of additional parkland. Neighborhood parks and a sports field would be developed. Development fees for improvements to parks and recreation facilities would also be assessed.
- The Specific Plan provides for a 10-acre site for an elementary school. The finance plan includes funds for development of an elementary school facility, 40 percent of a middle school and 22 percent of a high school.

6.3 Cumulative Impacts

The proposed I-205 Specific Plan would contribute incrementally to the cumulative environmental impacts resulting from existing and future development in the Tracy area. Cumulative impacts are defined as those project-related impacts, which when considered in the context of other reasonably foreseeable future development, are considered significant. Under CEQA, an EIR is required to evaluate the cumulative effects of all future development which is proposed, approved or under construction in the vicinity of the project.

For the I-205 Specific Plan, cumulative development has been identified as buildout of the Tracy Specific Plans. The Phase I Residential Specific Plan (Assessment District 84-1) includes residential dwelling units and community facilities. Residential uses are further categorized under low density (4,642 units) medium density (2,678 units) and high density (429 units). Community Facilities include commercial use (53 acres) and school (167 acres). The Residential Specific Plan is expected to be completed in 10 years. Most (70%) of the area designated in the Plan is located between Corral Hollow Road and Tracy Boulevard. All projects are located south of I-205.

The Phase I Industrial Specific Plan includes 0.60 million square feet of office space, 4.97 million square feet of industrial space, and 5.96 million square feet of warehousing space. It is expected to be completed in 20 years. About 45% of the area designated under the Industrial Plan is concentrated near MacArthur Boulevard in the vicinity of Grant Line Road and 11th Street. The remaining 55% is located near Tracy Boulevard in the vicinity of Valpico Road and Linne Road.

Land Use and Planning Policy

The cumulative change in land uses in Tracy and the surrounding region from rural to urban development is an attempt to accommodate pressure created by the region's growth and Tracy's location on a major transportation network. The impact of this cumulative development would alter the character of Tracy, transforming it into an increasingly urban community. In addition, the conversion of agricultural lands to urban uses could result in the cumulative pressure for conversion of adjacent farmlands and removal of agricultural lands from Williamson Act contracts.

Air Quality

The cumulative impacts of growth and development in Tracy and the San Joaquin Valley will contribute to regional air quality impacts and violations of ambient air quality standards in the San Joaquin Valley air basin. The two primary pollutants of concern in Tracy are ozone and suspended particulates (TSP). At present, the City

of Tracy is considered a non-attainment area for ozone standards. Emissions of hydrocarbons (HC) and nitrogen oxides (NOx), the major contributors to ozone (O3), are of particular concern. Several violations of suspended particulate standards have also occurred in recent years in the Tracy area. Motor vehicle emissions are the primary source of TSP, HC and NOx.

The incremental increase in motor vehicle traffic resulting from development under the I-205 Specific Plan, in addition to traffic resulting from development under the Residential Specific Plan, the Phase I Industrial Specific Plan, and future development throughout San Joaquin County will result in cumulative increases in regional emissions of air pollutants. The air quality analysis for the EIR modelled potential future air quality impacts resulting from cumulative development using the EMFAC7D model (HC, NOx and TSP), CALINE4 and PAL models (localized CO). Regional emissions were estimated based on emission inventory data compiled by the California Air Resources Board (CARB).

The modelling analysis indicated that cumulative development would not result in violations of CO standards. Future NOx emissions are projected to increase by 17 percent countywide, 10 percent of this would be due to development in Tracy. The worst-case NOx emissions for Tracy, at buildout, would remain well below the California standard. Cumulative development is expected to result in a seven percent increase in ozone, over current levels. Approximately three percent of the increase would be due to countywide growth, two percent to baseline development in Tracy, and two percent to I-205 development. HC levels are projected to increase about four percent over baseline conditions due to cumulative development in Tracy. Prediction of ozone impacts requires spatially detailed precursor emissions and meteorological data which is not available for San Joaquin County and therefore, cumulative ozone impacts could not be estimated for this analysis. Incremental increases in TSP emissions resulting from cumulative development in Tracy are not expected to result in measurable impacts on ambient PM10 levels throughout the County.

The project-specific mitigation measures recommended in Section 4.2 of this EIR will help to reduce potential emissions associated with I-205 development, resulting in an incremental reduction in potential air quality impacts. To the extent that development under the Specific Plan results in increased emissions of air pollutants over existing levels, the project would contribute incrementally to cumulative air quality impacts.

Aesthetics

Development of the I-205 Specific Plan, in combination with other proposed future development in the Tracy area, would result in the cumulative loss of agricultural lands. Agricultural lands are an important contributor to the scenic quality of Tracy and San Joaquin County. Farmlands serve as visual "open space" and also contribute to the rural character of the community. As

development occurs along the I-205 corridor and in other locations in Tracy, the character of the community will be altered to a more densely developed, urbanized area.

Biotics

As discussed above, development under the I-205 Specific Plan and other development in the area would contribute to the cumulative loss of agricultural land. Agricultural cropland supports a wide variety of rodent species which serve as prey for several raptors, including the threatened Swainson's hawk. The cumulative loss of foraging habitat due to the project and other agricultural land conversions in the area is considered an unavoidable adverse effect of the proposed Specific Plan.

Jobs/Housing

At present, Tracy functions as a "bedroom community" for the employment centers of the Tri-Valley area and the South Bay. The proposed I-205 Specific Plan would result in a significant increase in employment opportunities in Tracy. The development of non-residential land uses in the Specific Plan area would generate a demand for approximately 9,770 employees. Approximately 2,040 workers would reside in the residential units proposed in the Specific Plan area. The net addition of employment opportunities resulting from development in the I-205 corridor would help to offset the potential adverse impacts associated with future cumulative development of residential uses elsewhere in Tracy.

Traffic and Circulation

The traffic impact analysis presented in Section 4.7 includes a thorough evaluation of potential future cumulative impacts due to traffic generated by development under the I-205 Specific Plan and buildout of the Tracy Specific Plans. In addition, the "future base conditions" identified in the traffic study include six other projects which have been proposed or approved in the City.

Figures 4-13 and 4-14 indicate the "future base" (i.e., cumulative) traffic volumes for the A.M and P.M peak hour periods in Tracy. Subsection C of the Traffic and Circulation section discusses the potential adverse effects of cumulative traffic. Figures 4-16 through 4-18 indicate cumulative traffic volumes on the local road network which would result from cumulative development in addition to project-generated traffic. The traffic study does not identify any mitigation measures for cumulative traffic other than those required by the 84-1 Tracy Residential Specific Plan. Improvements to several intersections are recommended to offset the increase in traffic congestion due to I-205 development. Please refer to Section 4.7 for a detailed discussion of potential cumulative traffic impacts.

Noise

Increased traffic generated by the project and cumulative development in the Tracy area would result in a cumulative increase in noise levels, particularly along the I-205 corridor. Cumulative traffic volumes on I-205 would generate noise levels in excess of 75 Ldn at 150 feet from the roadway. Mitigation measures to attenuate noise volumes resulting from cumulative traffic on I-205 are recommended in Section 4.9 of this EIR.

Public Facilities

Future proposed development in Tracy under the I-205 Specific Plan, the Residential Specific Plan and the Phase I Industrial Specific Plan would result in cumulative increases in the demand for public facilities such as water, wastewater treatment, storm drainage and solid waste disposal. The cumulative increase in demands would result in a decrease in the available capacity of these public facilities, and a need for future expansions of the infrastructure serving the community.

Cumulative demands for water are estimated at 16.96 mgd (6,192 mgy) with a maximum day demand of 37.32 mgd. This projected demand exceeds the estimated reliable water supply by approximately 5,282 mgy. Section 4.9 identifies potential mitigation measures to remedy cumulative shortfalls in water supply.

The City of Tracy Wastewater Treatment Facility (WTF) currently has approximately 3 mgd of excess treatment capacity during the peak season. Development of the I-205 area would contribute to the cumulative demands for treatment capacity at the facility. Additional treatment capacity must be provided at the WTF to accommodate development under the Specific Plan. Future incremental expansions would be necessary to accommodate projected cumulative development.

The increase in impervious surfaces resulting from cumulative development would result in an increase in the volume of storm water runoff generated in Tracy. Modifications to the existing storm drainage facilities would be required to accommodate the increased flows resulting from cumulative development. In addition, future storm water runoff could result in cumulative impacts on water quality in storm drainage facilities.

Projected future cumulative development in Tracy, including development under the I-205 Specific Plan, would contribute to the cumulative demand for solid waste disposal facilities. The City of Tracy's existing landfill is expected to reach peak capacity by the end of 1992, at which time solid waste will be disposed at either the Foothill landfill in Stockton or the Altamont landfill in Alameda County until such time the city selects a permanent site.

Mitigation measures to offset the incremental contribution of the I-205 Specific Plan to cumulative impacts on public facilities in Tracy are presented in Sections 4.9-4.14 of the EIR.

Public Services

Proposed future development under the I-205 Specific Plan, the Residential Area Specific Plan and the Phase I Industrial Specific Plan would place cumulative demands on public service providers within the City of Tracy. Cumulative development would result in decreases in the emergency response times for fire and police services. The Tracy School District and Tracy Joint Union High School District would experience increased enrollment due to cumulative development. Additional school facilities, teaching and administrative personnel, and buses may be necessary to accommodate future development. Similarly, increased development would place additional demands on parks and recreation facilities within the city.

Mitigation measures, including parkland and school site dedication requirements and development fees, are recommended in Sections 4.15-4.18 to offset the incremental contribution of development under the I-205 Specific Plan.

6.4 Relationship Between Short-term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The following are the cumulative and long-term effects of development under the I-205 Specific Plan which would limit the range of long-term beneficial uses of the environment:

Approximately 600 acres of prime farmland would be converted to urban use. Agricultural activities would be permanently replaced by residential, commercial and industrial land uses. In the short-term, the project would provide housing and employment opportunities for the City of Tracy and the surrounding region. In order to position the City to capture regional, freeway-oriented commercial and industrial demand, the Specific Plan sponsors believe the plan should be approved rather than delaying the process to some future date.

6.5 Irreversible Environmental Changes

Significant and irreversible environmental changes which would result from development under the I-205 Specific Plan relate primarily to the conversion of prime agricultural land to urbanized uses. The conversion of farmland would result in a reduction in local and regional agricultural productivity and would reduce regional wildlife habitat.

REPORT PREPARATION

7.0 REPORT PREPARATION

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Reimer Associates, Storm Drainage, Irrigation, Reclamation
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Sierra Research, Climate and Meteorology, Air Quality.

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