

Fontana Star Community Plan

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1.0 Introduction

1.0 INTRODUCTION

1.1 Purpose Of The Fontana Star Community Plan

The Fontana Star Community Plan document is designed to ensure an integrated, well-planned, high quality environment for the development of residential use within a master-planned community. Timely and efficient processing for the development of the property can be ensured through the Community Plan; which, when adopted by City legislative action as an ordinance serves as both a planning and regulatory function. This document fulfills the planned community requirements of the State of California and the City of Fontana.

The Fontana Star Community Plan is also herein referred to as a planned community and a project. Within this document, community plan, planned community, and project shall be synonymous.

This Community Plan contains an environmental assessment (Section 6.0). The environmental assessment has been combined into the Community Plan for ease of review and reference.

1.2 Background

The **Fontana Star Community Plan** was previously filed as **The Pacific Summit Planned Community/Specific Plan** in 1990. In 1997, significant changes were made to the land use plan, leading to a decision to make a revised Community Plan filing. In 1997, the project name was changed to **Fontana Star**. All of the technical reports, contained within the Appendix, refer to the project name as The Fontana Star. However, all of these reports were reviewed and updated to present 1997 and are applicable to the current land use plan and proposed Community Plan.

1.3 Authority

The Fontana Star Community Plan has been prepared pursuant to the provisions of California Government Code Section 65450, which grants local planning agencies the authority to prepare Specific Plans. It has also been prepared pursuant to the City of Fontana Development Code, Division 9, which specifies requirements for Specific Plans and Community Plans. Division 9 considers Community Plans to be a modified form of a specific plan, with characteristics unique from a specific plan. The environmental assessment has been prepared pursuant to the environmental review requirements of the City of Fontana and the State of California. Standards contained in this document shall govern all areas within the project.

1.4 Project Location

The project site is located in southwest San Bernardino County, in the northwestern portion of the City of Fontana (see Figures 1-1, Regional Map and Figure 1-2, Local Area Map). Surrounding jurisdictions include the cities of Rancho Cucamonga, Rialto, Ontario, and unincorporated areas of San Bernardino and Riverside Counties.

Regional access to the site is provided by the San Bernardino (Interstate 10) and the Devore (Interstate 15) Freeways. The San Bernardino Freeway is a major east-west route connecting the Fontana area with the Los Angeles metropolitan area to the west and the desert areas to the east. The Devore Freeway is a major north-south route, connecting Fontana with Corona and San Diego to the south, and Barstow and Las Vegas to the north.

The project site consists of 30.08 gross acres located south of Walnut Avenue and west of Beech Avenue in the City of Fontana. The site is bounded by Hemlock Avenue to the west, Beech Avenue to the east, Walnut Avenue to the north.

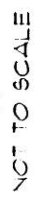
Fontana Star is within the boundaries of the North Fontana Redevelopment Project Area, which encompasses approximately 14 square miles of North Fontana. Figure 1-3, North Fontana Planned Communities, shows the location of existing and proposed specific plans and community plans in the north Fontana area.

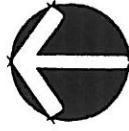
Several major development projects have been approved and are partially developed in the vicinity of Fontana Star. These include:

Village of Heritage (1,478 acres) is located 1 mile southwest of the project site north of Foothill Blvd. At buildout, Heritage will consist of 2,955 single family residences, 294 multi-family residences, 31 acres of commercial, 110 acres of office park, 448 acres of business park, open space/parks, and two school sites.

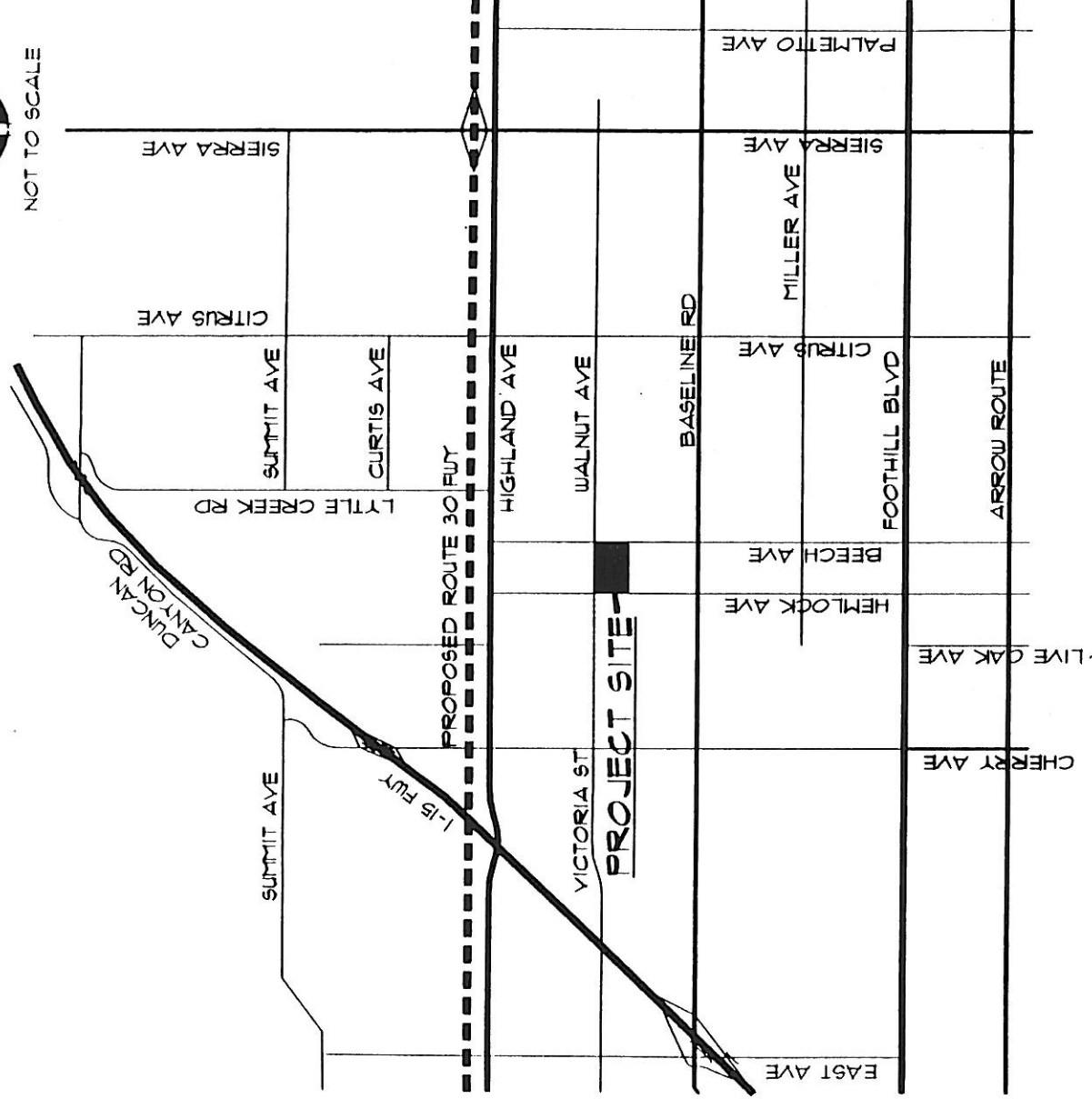
Walnut Village (342 acres) is located 2 miles east of the project site, south of Highland Avenue and east of Sierra Avenue. At buildout, Walnut Village will consist of 1,644 residential units, 39 acres of commercial uses, together with community facilities and park/open space.

Hunter's Ridge (570 acres) is located 2 miles north of the project site, above the I-15 Freeway. At buildout, Hunter's Ridge will consist of 1,501 single family residences, 620 multi-family residences, 5.5 acres of neighborhood commercial uses, park/open space and a school site.





NOT TO SCALE





LEGEND :

- A HUNTER'S RIDGE (A)
- B SUMMIT HEIGHTS (P)
- C SIERRA LAKES (A)
- D WESTGATE (A)
- E HERITAGE (WEST END) (A)
- F RANCHO FONTANA (A)
- G CALIFORNIA LANDINGS (A)

- (A) APPROVED
- (P) PROPOSED

- H WALNUT VILLAGE (A)
- I CLURMAN (P)
- J NORTHGATE (A)
- K MORNINGSIDE (A)
- L FONTANA STAR (P)

Fontana Star
L & L (USA), INC.

Morningside (120 acres) is located 1 mile west of the project site, north of Baseline Avenue and east of Cherry Avenue at build out, Morningside will consist of 440 residential units, 10 acres of commercial uses.

Sierra Lakes (700 acres) is located 2 miles northeast of the project site, at Citrus Avenue and Highland Avenue. At buildout, Sierra Lakes will consist of 2,100 single family residences, 64 acres of commercial and business park, a golf course, parks, and a school site.

Stratham Homes, Inc. (40 acres) is located adjacent to the south of the project and will consist of 133 residential units and a detention basin.

California Landings (223 acres) is located adjacent to the north of the project site, south of Highland. At buildout, California Landings will consist of 750 single family residences, 15 acres of commercial, a park, and a school site.

Westgate (954 acres) is 1 mile west of the project site. Westgate consists of residential, commercial/business park, parks, and other public uses.

Other development projects are proposed near the Fontana Star project site, including:

Summit Heights (316 acres) is located 2 miles north of the project site, north of Highland Avenue, west of Lytle Creek Road, and south of Summit Avenue. Summit Heights consists of residential, commercial/office, park and other public uses.

1.5 Planning Goals

Prior to the preparation of this Community Plan document, numerous meetings were held with City Staff to discuss goals for development of the Fontana Star project. The following goals were identified:

- Develop a community with all single family detached homes on lots of 7,200 square feet and larger in order to help achieve the City's goal of providing additional larger lots in North Fontana.
- Provide a master planned community in conformance with the spirit and intent of the City General Plan Land Use Map and Policies and in conformance with the Development Code, thereby allowing fast-tracking of the planning process via the Community Plan process.
- Encourage enhancement of an upscale North Fontana image.
- Create a high quality, unique community design.
- Develop a community of larger homes with 70% larger than 2,000 square feet.

- Provide a entry accentuated by planting, creating a enhanced gateway to the planned community.
- Provide an efficient and attractive system of arterial highways, collector streets and local streets.
- Support the city in achieving its newly revised vision statement. "The City of Fontana is dedicated to being a safe, well-maintained, family oriented community supported by a diverse, job rich economy, capitalizing on the City's superior location and accessibility".
- Provide for adequate infrastructure, public facilities and services.

2.0 Project Overview

2.0 PROJECT OVERVIEW

2.1 Ownership

The 30.08 acre Community Plan site area is owned by one ownership. The project site consists of three parcels. The Assessor's Parcel Numbers of these parcels are 228-102-01, 228-102-02 and 228-102-09. These parcels are all owned by L. & L. (U.S.A.), Inc., a California Corporation.

2.2 Existing Land Use and Conditions

The 30.08 acre site is an undeveloped vacant land. The primary natural feature on the site is abandoned dried grasses. There is no man-made structures nor buildings present on the site. Existing land uses are shown on Figure 2-1.

Existing terrain of the site is flat and gently sloping. The slope is at approximately 3% with the high point located approximately in the northeast corner and low point located approximately in the southwest corner.

2.3 Project Description

The Fontana Star Community Plan consists 111 lots of 7,200 square feet and larger for residential single family detached (SFD). A summary of land use of the project is listed below:

TABLE 2-1
LAND USE STATISTICAL SUMMARY

Land Use Summary	Net Acres	# of DU
Residential SFD (7,200 s.f. min.)	20.64	111
Perimeter R.O.W.	3.34	
Internal R.O.W.	5.92	
(Neighborhood Circulation)		
Landscape Easement	0.18	
Total Community Plan	30.08	
Residential Density 5.38 D.U./Net Acre		
Residential Density 3.69 D.U./Gross Acre		

2.4 General Plan Land Use Map Conformance

A. Existing General Plan

The current general plan land use designations for the Community Plan area are Planned Community Residential (R-PC). The General Plan specifies that R-PC is to provide master planned residential development.



VACANT LAND

CALIFORNIA LANDINGS DEVELOPMENT

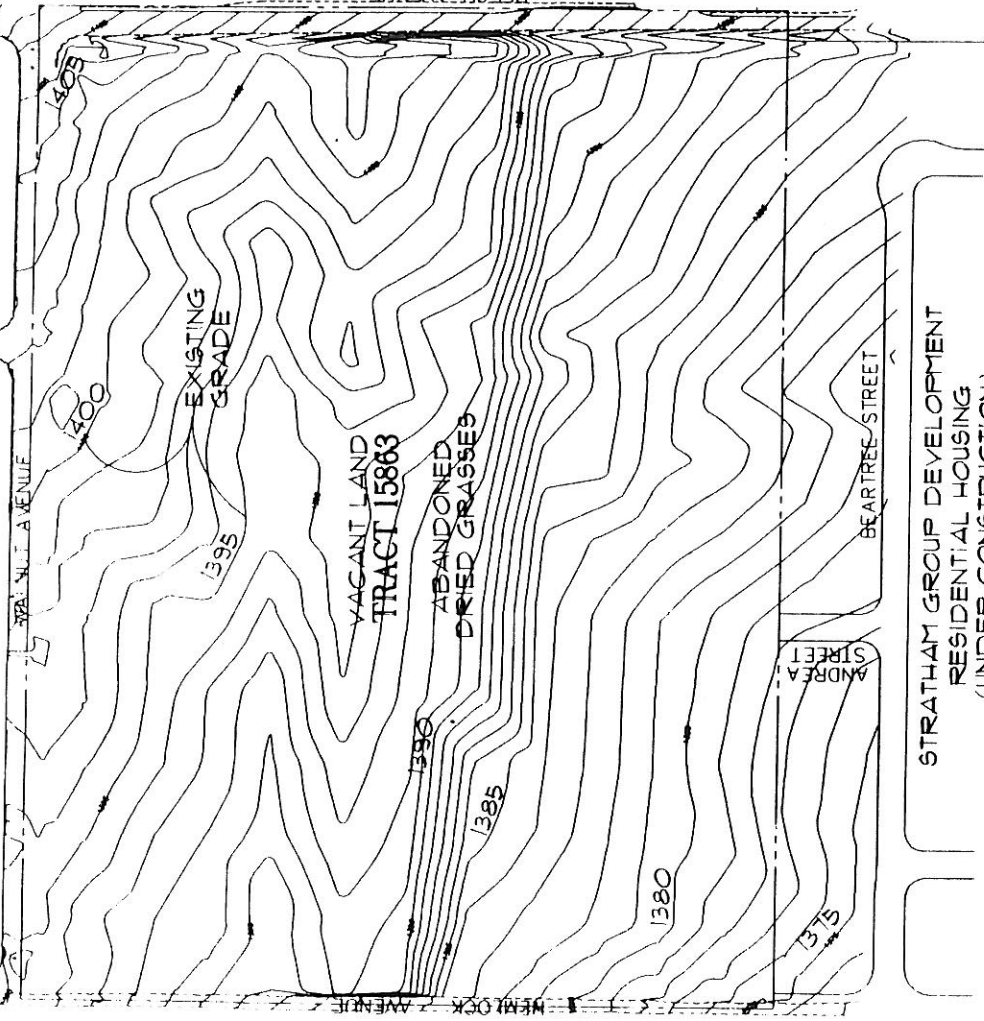
RESIDENTIAL HOUSING
(UNDER CONSTRUCTION)

FUTURE SCHOOL SITE

EXISTING DETENTION BASIN

TRACT 15655

FUTURE
PARK SITE



VACANT LAND

TENT TRACT 14775
VACANT LAND

VACANT LAND

STRATHAM GROUP DEVELOPMENT
RESIDENTIAL HOUSING
(UNDER CONSTRUCTION)

TRACT 14293



Pontana Starr
L & L (USA), INC.

PAGE 2-2

EXISTING LAND USE
FIGURE 2-1

2.5 General Plan Policy Consistency

Community Plans are intended to provide a site specific, detailed description of standards and guidelines for implementing General Plan goals and policies. To achieve this, the Community Plan must be in conformance with and be consistent with the General Plan.

The Fontana Star Community Plan is designed to implement the goals and policies of the City of Fontana's General Plan. An element by element discussion of General Plan conformance pertaining to goals and policies is provided below. (See Figure 2-2).

A. Land Use

Goal: Provide a balance of residential, commercial, industrial, educational, open space and recreational land uses which will provide diverse economic, social and cultural opportunities. (See Figure 2-2)

Consistency: Fontana Star is a Planned Community that will contain lots of 7,200 square feet and larger and will therefore help achieve General Plan Policy 3.1.3 to support more upscale single family housing. Fontana Star will provide a variety of single family detached house plan types with a range of sizes. The project will enhance the image of the North Fontana area.

Goal: Provide for a logical, orderly and environmentally sound land use strategy which establishes Fontana as a unified and economically sound community.

Consistency: This Community Plan has been developed in accordance with the General Plan's land use strategy and creates logical and orderly development. This development does not burden the City's existing infrastructure, rather, it will provide additional public facilities for the North Fontana area. Furthermore, the project contributes new sources of revenue generated by enhanced property values.

Goal: Protection and enhancement of community values by affecting land use patterns that are compatible with the local and regional environment.

Consistency: The Fontana Star project responds to both local and regional issues by utilizing land uses which respond to the existing and proposed development in the local area. These land uses reflect community values, as expressed by the Fontana General Plan Land Use Map, as the community plan land uses are consistent with the General Plan Map.

B. Circulation

Goal: Promote greater efficiency in transportation through the logical placement of land uses and intensities.

Consistency: The Fontana Star Community Plan is consistent with the Circulation Element of the General Plan. It provides for the half street improvement of Beech Avenue, Walnut Avenue, and Hemlock Avenue. The development also provides a roadway network of local streets consistent with City standards.

Goal: Promote the use of other modes of transportation to reduce dependency on the automobile.

Consistency: The project promotes the use of alternative modes of transportation by providing:

- A safe pedestrian walkway system to encourage pedestrian movement.
- Strategically placed transit stops designed to promote the use of public transit both within the project and in the North Fontana area.

C. Housing

Goal: Encourage the provision of a wide range of housing by location, type of unit, and price to meet the existing and future needs of Fontana residents.

Consistency: Fontana Star Planned Community will provide a variety of quality single family detached housing sizes and price ranges.

Goal: Provide equal opportunity for all residents to reside in the housing of their choice.

Consistency: The variety of housing sizes and prices provided within Fontana Star will accommodate families with differing housing needs and socio-economic levels.

D. Community Design

Goal: Reduce/prevent conflicts between land uses in existing and future developments.

Consistency: Fontana Star Land Use Plan is compatible with existing and proposed surrounding land uses by its proposed land use design.

Goal: Improve the image and appearance and promote the functional efficiency of the City.

Consistency: Fontana Star has been designed to enhance the North Fontana image. Theme entries and monumentation at major and secondary entries and key street intersections will incorporate landscaping, decorative walls and attractive signage.

Goal: Preserve the unique character of neighborhoods throughout the City.

Consistency: The project site is presently vacant. No unique or historical features exist on the site warranting preservation or identification of the project site as a unique neighborhood.

Goal: Maintain a balance between job opportunities, housing opportunities and supporting commercial uses.

Consistency: The Fontana Star project is consistent with the City's goal of a jobs/housing balance and increased tax revenue.

E. Infrastructure and Public Services/Facilities

Goal: Provide facilities to meet the needs for education, culture, entertainment, protection of public safety/health, and civic pride.

Consistency:

- Proposed infrastructure extension and improvements will provide area-wide enhancements and utility access.
- The proposed circulation system improvements will facilitate area-wide access to local and regional schools, theaters and entertainment facilities, consistent with the City's public services requirements.

Goal: Provide facilities to meet the needs of all segments of the community for recreational activities, relaxation, and social interaction.

Consistency: Fontana Star provides active and passive opportunities in the form of off street bikeways/walkways for the use of community residents of adjacent properties.

Goal: Provide appropriate pedestrian and offsite bicycle trails as linkages between open space and recreational facilities within the area.

Consistency: The Fontana Star Circulation Plan has been designed to provide safe, efficient, and aesthetically pleasing offsite pedestrian walkways with landscaping consistent with the City's Circulation and Open Space requirements.

F. Safety

Goal: Minimize potential hazards to public health, safety and welfare.

Consistency:

- Adequate police and fire protection will be made available to the site by the City of Fontana and the San Bernardino County Fire Department.
- The Fontana Star site design incorporates appropriate grading and development design standards to protect the community from geological and flood hazards.
- The circulation system for Fontana Star has been designed to facilitate emergency access consistent with the City's Public Services requirements.

G. Noise

Goal: Provide an acceptable noise environment for existing and future residents of the City.

Consistency: State of California and City of Fontana interior and exterior noise standards for the development of residential areas will be followed in the designs for Fontana Star. Proper sound attenuation will be provided by a combination of building setback, sound wall construction and building type location throughout the site.

2.6 Zoning

A. Existing Zoning

The current zoning designation for the Community Plan site is R-1-10000. The R-1-10000 allows for 1 dwelling unit per 10,000 square feet lot. (See Figure 2-3).

Per the City code, upon adoption of the Community Plan, 7,200 square foot lots will be allowed within the R-1-10000 zone, and R-1-7200 zoning standards will apply. The zoning will be R-1-7200 for the Fontana Star Community Plan.

2.7 Existing Infrastructure

Existing water and sewer facilities are located adjacent to or near the Fontana Star Planned Community (see Figure 2-4). Detention basins were constructed for the adjacent development at the north and south of the Fontana Star Planned Community.

A. Water

Existing water facilities (see Figure 2-4) consist of a 12 inch water line along Walnut Avenue and another 12 inch water line along Beech Avenue. Fontana Water Company currently provides service to North Fontana.

B. Sewer

Existing sewer facilities (see Figure 2-4) consist of a 15 inch sewer line in Beech Avenue and an 8 inch sewer line in Walnut Avenue. A proposed 8 inch sewer line in Andrea Street started at south property line going south ward. The proposed 8 inch sewer line in Andrea Street is part of the Infrastructure improvement by The Stratham Group, which is anticipated to start the construction before Fontana Star Planned Community.

C. Drainage

Existing storm drain facilities (see Figure 2-4) consist of main lines along Walnut Avenue and terminate at the intersection of Walnut/Hemlock Avenue. An interim 24" PVC pipe was installed by the California Landings Development along Hemlock Avenue for the purpose of detention basin drainage. Currently, this 24" PVC pipe is owned and maintain by Landings. A detention basin is currently under construction at the northeast corner of Hemlock Avenue and Baseline Road by the Stratham Group. According to the hydrology study done by Bonadiman Engineers, Inc. the detention basin had taken 2/3 of the drainage or (17.5 acres) from the proposed Fontana Star Community into consideration.

2.8 Tentative Tract Map 15863

Tentative Tract Map 15863 will be processed concurrently with this Community Plan.

2.9 Phasing Plan

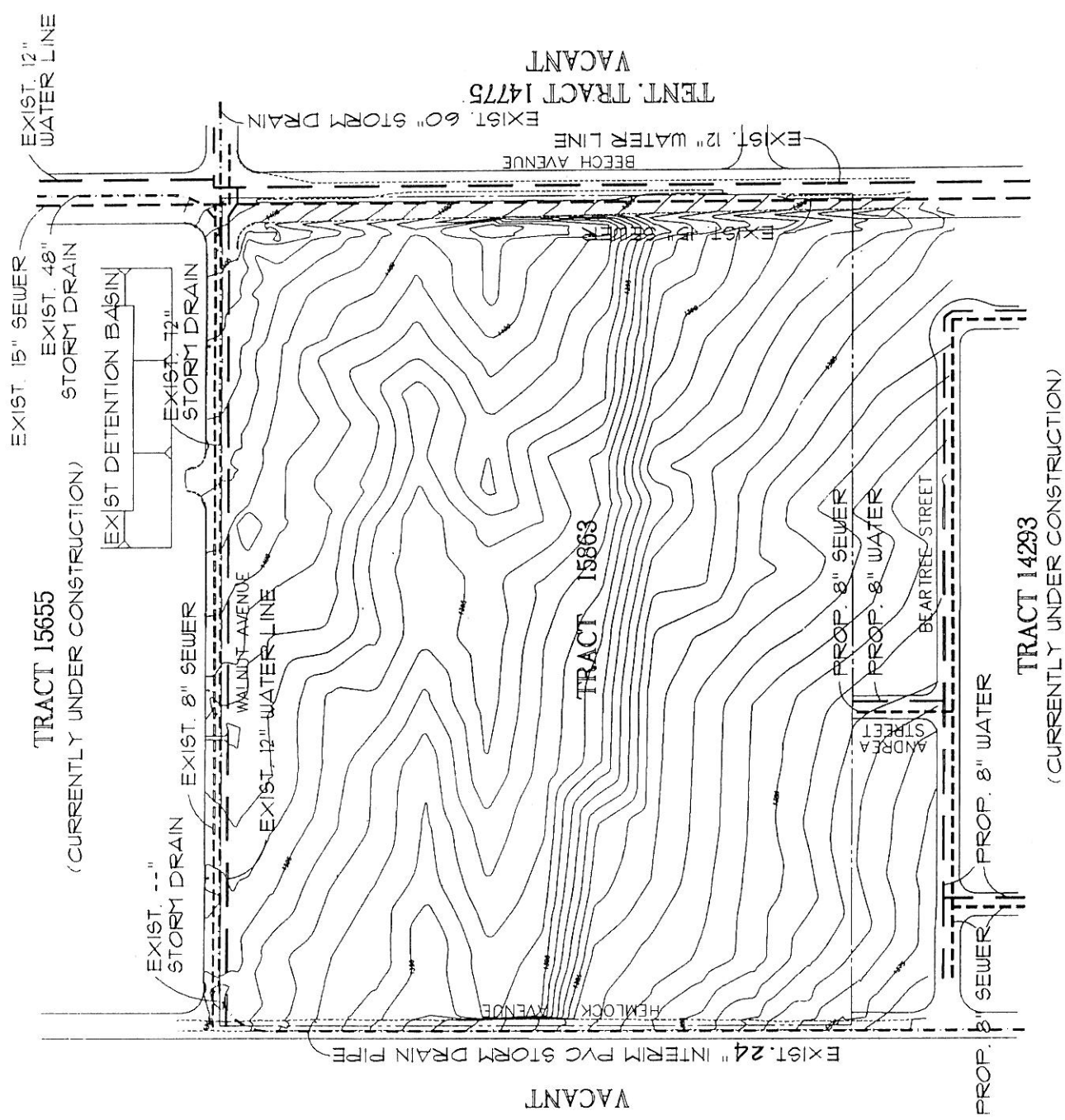
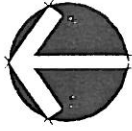
There will be (5) *five* phases for the project. The proposed phasing plan is shown on the Figure 2-5. Development is expected to last over a two to three year period. Development is expected to start at the southwest quadrant as phase one and progress to the north and east direction for phases *two and remaining phases*. The surrounding roadways, interior roadways and the related utilities will be constructed in *two* phases as well.



NOTES:

UPON ADOPTION OF THE COMMUNITY PLAN,
1200 SQUARE FOOT LOTS WILL BE ALLOWED
WITHIN THE R-1-10000 ZONE; AND R-1-1200
ZONING STANDARDS WILL APPLY.

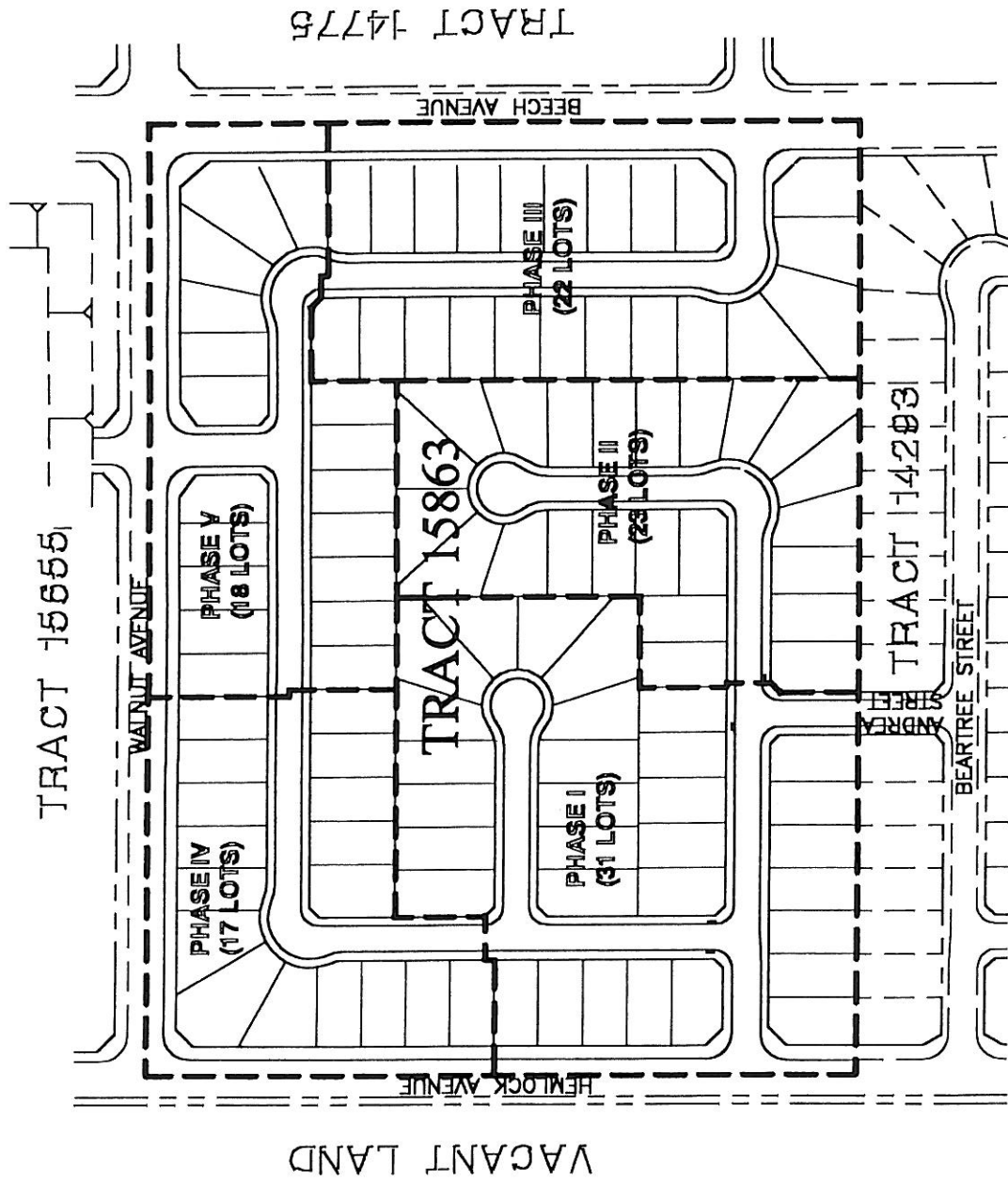




LEGEND :

- STORM DRAIN
- WATER LINE
- 15" SEWER LINE
- 8" SEWER LINE





NOTES :

STREETS AND OTHER INFRASTRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE TENTATIVE TRACT MAP CONDITIONS OF APPROVAL.

3.0 Community Plan Components

3.0 COMMUNITY PLAN COMPONENTS

The following descriptions and graphics define the overall framework for development within the Fontana Star Community Plan. The components describe the various planning concepts for an orderly and attractive development within the planned community area. The Community Plan components include: **Land Use, Circulation, and Landscape Master Plan and Guidelines, Streetscape Design Concepts, Entry Monumentation/Signage, Community Walls, and Infrastructure.** Architectural Design Guidelines are contained within Community Plan Section 4.2.

3.1 Land Use Plan

Proposed land use for the Fontana Star Community Plan is exclusively residential (see Figure 3-1). The land use elements will be linked by a unifying landscape theme and consistent architectural treatments.

A. Residential Planning Areas

All residential areas will be developed with single family detached homes on lots with a minimum size of 7,200 square feet. Residential development will occur on 30.08 gross acres, with an overall density of 3.69 dwelling units per gross acre. A network of off-street and on-street bike paths and sidewalks will provide safe access throughout the residential development.

3.2 Circulation

The Circulation Plan (See Figure 3-2) illustrates the proposed Fontana Star roadway and bikeway system. Street sections are shown on Figure 3-3. Streetscape landscaping concepts and designs are provided within Community Plan Sections 3.3 and 3.4.

Primary access will be via Walnut Avenue, Beech Avenue and Hemlock Avenue. These three streets form the eastern, northern and western boundaries of the planned community. Beech Avenue is designated a primary highway with a 104 foot right-of-way and Walnut Avenue is designated a divided collector with an 86 foot right-of-way. Hemlock Avenue forms the western boundary of the planned community. Hemlock Avenue is designated a collector street with a 82 foot right-of-way.

Circulation within the planned community area features internal roadways (Streets A, B, C, D, E, F, G and H). The internal roadways have primarily right-of-way of 60' with all entrance roads having a **64' R.O.W on Street E and 68' R.O.W. on Street A**. The southern boundary of the planned community is bordered by the adjacent residential development, which is connected by a **60' R.O.W.**

VACANT LAND



RESIDENTIAL - SFD
(UNDER CONSTRUCTION)

TRACT 15655

EXISTING DETENTION BASIN

FUTURE SCHOOL SITE

WALNUT AVENUE

PA-1

RESIDENTIAL - SFD
AP#228-102-01

HEMLOCK AVENUE

PA-2

RESIDENTIAL - SFD
AP#228-102-02

PA-3

RESIDENTIAL - SFD
AP#228-102-03

VACANT LAND

ANDREA STREET

RESIDENTIAL - SFD
(UNDER CONSTRUCTION)

BEARTREE STREET

TRACT 14293

TENT. TRACT 14775

BEECH AVENUE

VACANT LAND

FUTURE PARK SITE

OWNERSHIP SUMMARY

L & L (USA), INC. OWNS 100%

LAND USE SUMMARY

RESIDENTIAL-SFD (1200 sq.ft. min.)
(PLANNING AREA 1, 2, 3)

PERIMETER R.O.W.

INTERNAL R.O.W.
(NEIGHBORHOOD CIRCULATION)

LANDSCAPE EASEMENT

TOTAL COMMUNITY PLAN

RESIDENTIAL DENSITY 5.45 D.U./ NET ACRE
RESIDENTIAL DENSITY 3.69 D.U./ GROSS ACRE

NOTES:

- Gross Site Area includes area up to center line of Perimeter R.O.W.
- Perimeter R.O.W. acreage = 1/2 of R.O.W. of adjacent perimeter street.
- Neighborhood circulation includes all community entry streets and local streets.
- R.O.W. = Right-of-way (road, parkway, and where applicable, center median)

ACRES D.U.'S

20.36 III

3.34

6.20

0.18

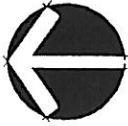
30.08 III



Pontana Starr
L & L (USA), INC.

PAGE 2-3

LAND USE PLAN
FIGURE 2-2



VACANT LAND

TRACT 15655
FUTURE SCHOOL SITE
RESIDENTIAL - SFD
(UNDER CONSTRUCTION)
EXISTING DETENTION BASIN

FUTURE
PARK SITE

WALNUT AVENUE

PA-1
RESIDENTIAL - SFD
AP#228-102-01

HEMLOCK AVENUE

PA-2
RESIDENTIAL - SFD
AP#228-102-02

PA-3
RESIDENTIAL - SFD
AP#228-102-03

VACANT LAND

ANDREA
STREET

RESIDENTIAL - SFD
(UNDER CONSTRUCTION)

BEAR TREE STREET

TRACT 14293

TENT, TRACT 14775
VACANT LAND

BEECH AVENUE

VACANT LAND

OWNERSHIP SUMMARY

L4L (USA), INC. OWNS 100%

LAND USE SUMMARY

RESIDENTIAL-SFD (7200 sq.ft. min.)
(PLANNING AREA 1, 2, 3)

PERIMETER R.O.W.

INTERNAL R.O.W.
(NEIGHBORHOOD CIRCULATION)

LANDSCAPE EASEMENT

TOTAL COMMUNITY PLAN

RESIDENTIAL DENSITY 5.45 D.U./ NET ACRE

RESIDENTIAL DENSITY 3.69 D.U./ GROSS ACRE

ACRES D.U.'S

20.36 III

3.34

6.20

0.18

30.08 III

NOTES.

- Gross Site Area includes area up to center line of Perimeter R.O.W.
- Perimeter R.O.W. acreage = 1/2 of R.O.W. of adjacent perimeter street.
- Neighborhood circulation includes all community entry streets and local streets.
- R.O.W. = Right-of-way (road, parkway, and where applicable, center median)

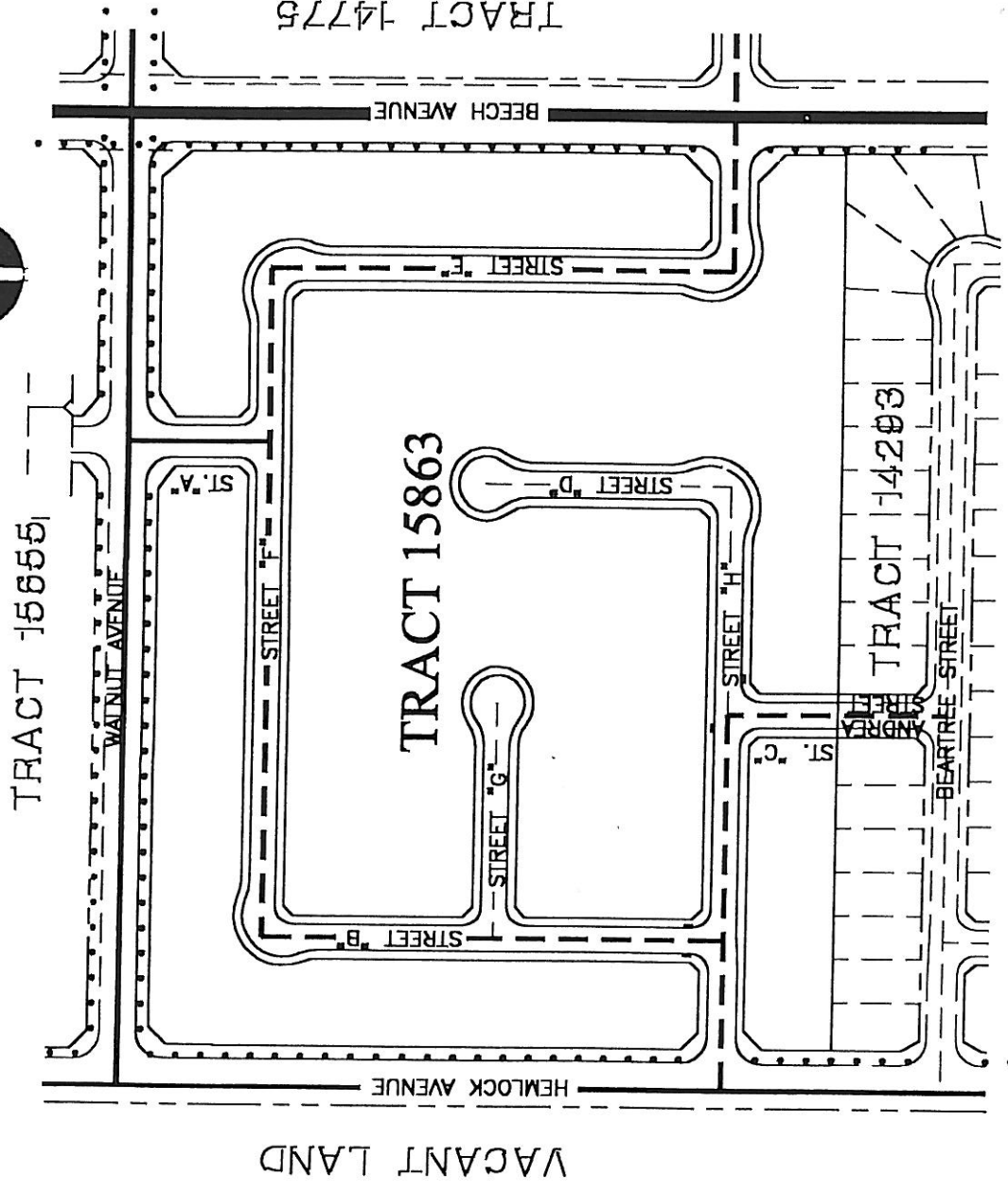


Fontana Starr
L & L (USA), INC.

PAGE 3-2

LAND USE PLAN

FIGURE 3-



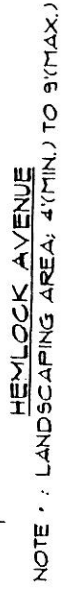
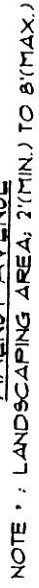
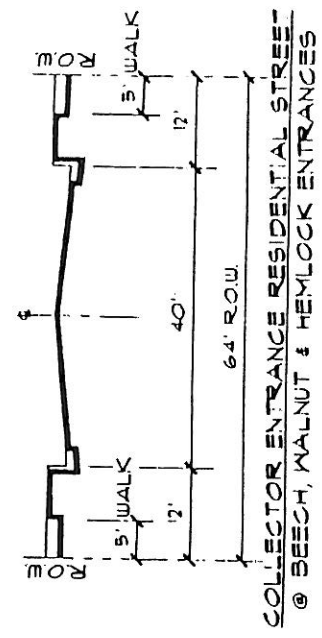
LEGEND :

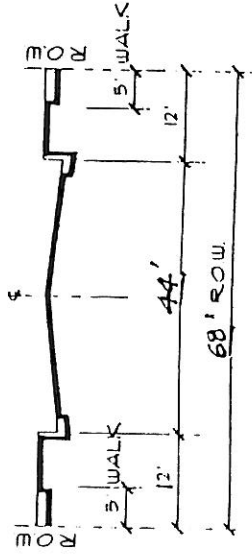
- MAJOR HIGHWAY
- COLLECTOR STREET
- COMMUNITY THROUGH STREET
- LOCAL INTERNAL STREET
- OFF-STREET BIKE WAY
- ON-STREET BIKE WAY

NOTES :

- LOCAL STREET LOCATIONS ARE CONCEPTUAL ONLY. EXACT LOCATIONS WILL BE DETERMINED VIA THE TENTATIVE TRACT MAP. SEE FIGURE 3-3, STREET SECTIONS.







COLLECTOR ENTRANCE RESIDENTIAL STREET "A"
 @ WALNUT AVENUE ENTRANCES.

Along Beech Avenue a bike path (Class II) is proposed with on-street design at 5' wide (one way). On Walnut Avenue an off-street combined bike path/sidewalk (10' wide) is proposed and a 8' wide off street combined bike path/sidewalk is proposed along Hemlock Avenue.

3.3 Landscape Master Plan, Guidelines, and Tree Palette

A. Landscape Master Plan

The Landscape Master Plan is shown on Figure 3-4. The landscape architectural theme for the Fontana Star community creates an identifiable "signature" streetscape and community landscape character, along with a hierarchy of landscaped entries and intersection treatments.

B. General Landscape Guidelines

The individuality, as well as the cohesion, between the various land uses in the planned community area will be enhanced by the Landscape Master Plan and design concepts. The overall project identity and character is defined by the continuity of attractive landscaping along publicly visible areas. Conversely, individual parcel identity can be established through variations in landscaping at the major entry point and along smaller streets within the community.

The development of the overall project character and the individual parcels will be controlled and restricted by these guidelines, as well as applicable governmental codes and restrictions. All development plans, landscape plans, and graphic designs shall conform to these guidelines and shall be subject to a review and approval process by the City of Fontana.

- Major circulation corridor shall be emphasized and featured by landscape treatments. The development shall be wrapped in an evergreen "envelope" consisting primarily of broadleaf evergreen trees and pines, accented with deciduous flowering trees.
- Focal points shall be emphasized: especially at entries and key intersections.
- A hierarchy of theme signage, from project monumentation to individual parcel identity, shall be provided.
- Historical agricultural/landscape elements found in the City of Fontana should be integrated into the overall landscape design when ever possible.
- Plant materials shall be selected which will tolerate the local climatic conditions. The tree palette for the Fontana Star Community Plan area is in Community Plan Section 3.3.C.

- Plant material should be used to integrate the architectural form with the landscape. Expansive horizontal and vertical surfaces should be modulated or interrupted by foliage masses.
- Streetscapes should be designed to promote community character and complement the form of the various roadways. Trees should be selected from the Tree Palette for each streetscape.
- Landscape setbacks along the site's perimeter should selectively buffer off-site views.
- Entries into Fontana Star should be accent points, providing view corridors into developments and introducing the theme and character of the community through use of vertical trees and accent shrub plantings.
- Landscaping details, including plantings, community walls and entry monuments should enhance the theme of the community.

C. Tree Palette

The following is a listing of trees identified for use in the key streets, community entries, and other special areas of Fontana Star.

Key: (E) = Evergreen
(D) = Deciduous
(E) = Flowering

Hemlock Avenue

Lagerstroemia indica	Crape Myrtle	(D)(F)
Magnolia grandiflora	Southern Magnolia	(E)(F)
Pinus pinea	Italian Stone Pine	(E)

Walnut Avenue

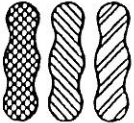
Cinnamomum camphora	Camphor Tree	(E)
Pistachia chinensis	Chinese Pistache	(D)

Beech Avenue

Pinus pinea	Italian Stone Pine	(E)
Pyrus calleryana "Bradford"	Bradford Pear	(D)(F)

LANDSCAPE MASTER PLAN TRACT 15863

LEGEND



WALNUT AVENUE STREETSCAPE TREATMENT - SECTION A-A (FIGURE 3-5)
STREET TREE: CINNAMOMUM CAMPHORA
BEECH AVENUE STREETSCAPE TREATMENT - SECTION B-B (FIGURE 3-6)
STREET TREES: PINUS PINEA/PYRUS CALLERYANA BRADFORD
HEMLOCK AVENUE STREETSCAPE TREATMENT - SECTION C-C (FIGURE 3-7)
STREET TREES: LANGERSTROEMIA INDICA/MAGNOLIA GRANDIFLORA/PINUS PINEA
INTERNAL LOCAL STREETSCAPE TREATMENT - SECTION D-D (FIGURE 3-8)
STREET TREES:



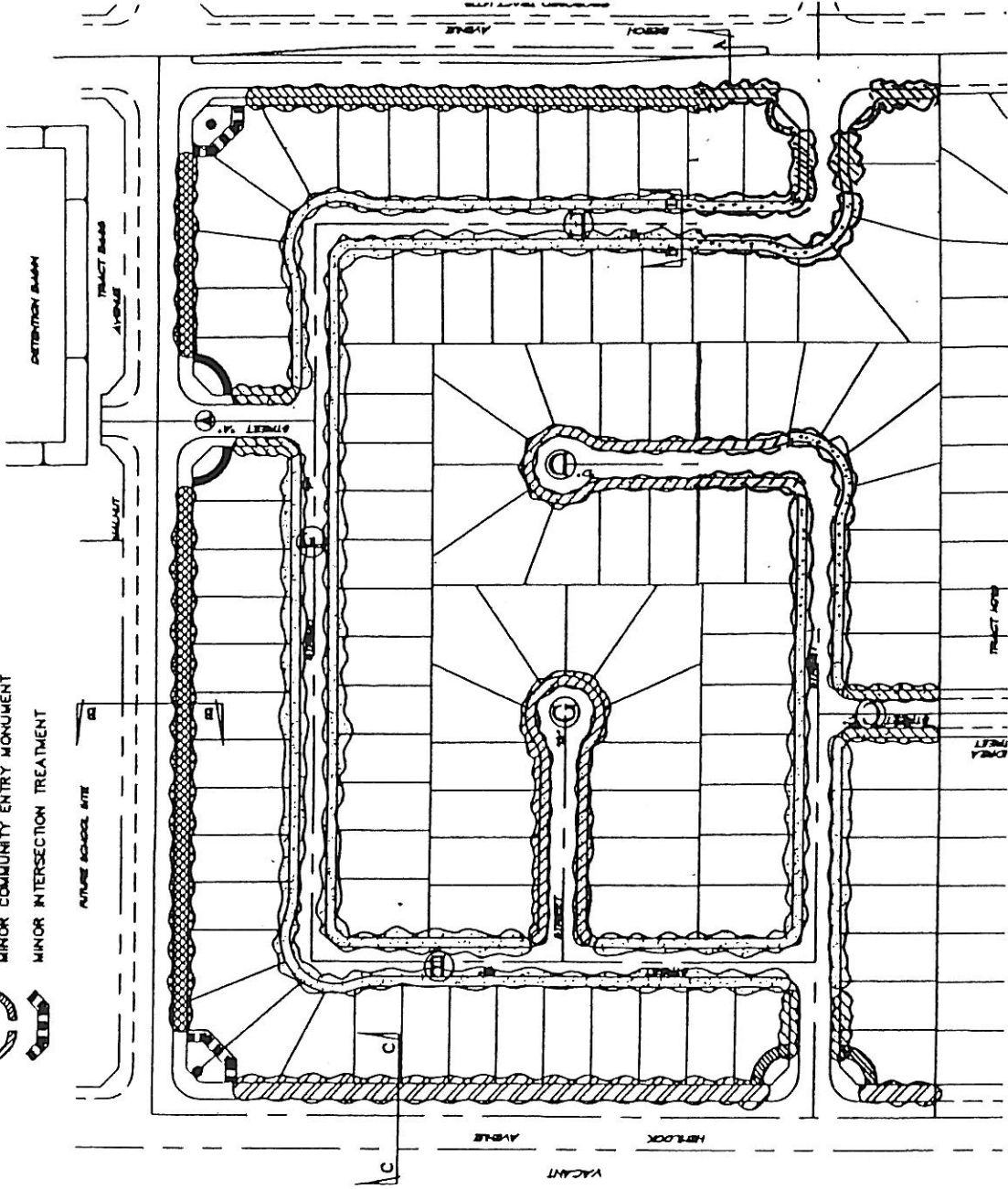
QUERCUS VIRGINIANA
PLATANUS ACERIFOLIA
PINUS ELDERICA



MAJOR COMMUNITY ENTRY MONUMENT
MINOR COMMUNITY ENTRY MONUMENT
MINOR INTERSECTION TREATMENT



NORTH



Internal Local Streets

Pinus elderica	Mondell Pine	(E)
Platanus acerifolia	London Plane Tree	(D)
Quercus virginiana	Southern Live Oak	(E)

3.4 Streetscape Design Concept

The streetscape design concepts, as illustrated in Figures 3-5 through 3-8 (Typical Plans and Sections) are the primary streetscape landscape framework for Fontana Star. They are intended to unify the project and provide landscaping amenities to enhance the community. The streetscape components consist of a combined walk/bike path or sidewalk with on-street bike path: an identifying street tree pattern consisting primarily of broadleaf evergreen trees and pines accented with deciduous flowering trees, turf or a low groundcover; and low shrubs and walls where appropriate. The various levels of streetscape categories are:

A. Perimeter Streets

1.) Primary Highway:

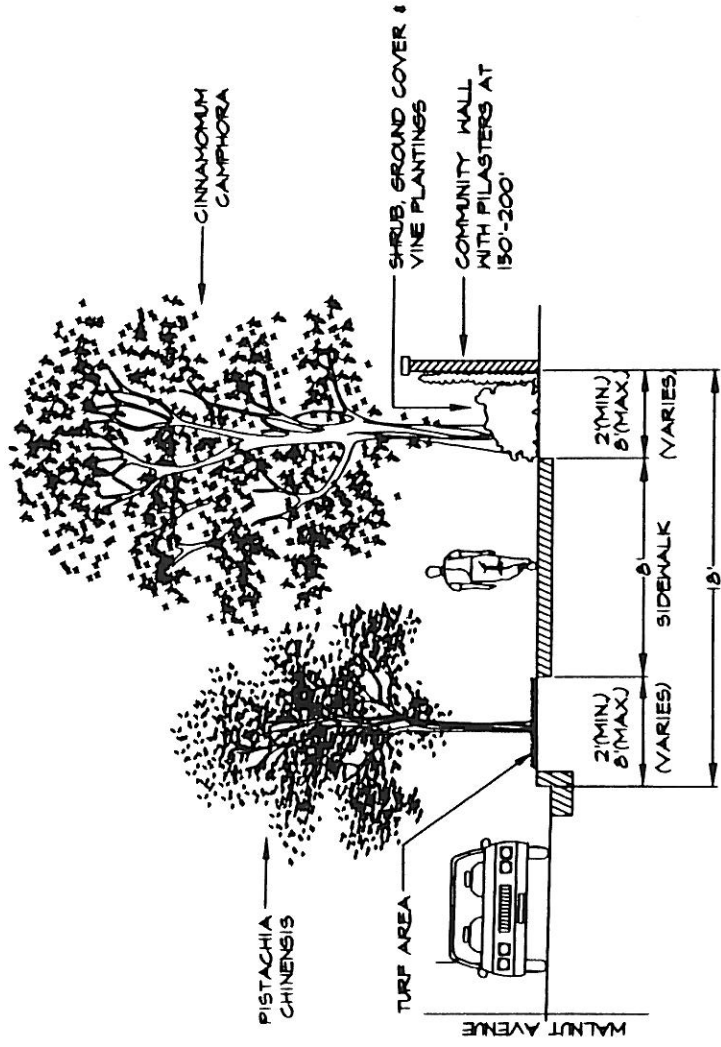
Beech Avenue (See Figure 3-6) is designated as a primary highway and borders the east side of Fontana Star. Beech Avenue has a landscape right-of-way of 12' with parkways which vary from 2'-5' based on the location of the meandering sidewalk.

Beech Avenue has altering tree types with Italian Stone Pines and Bradford Pears. Each tree type will be located in conjunction with the 6' meandering sidewalk. Each tree type may be located in turf between the curb and sidewalk. Those trees located between the sidewalk and the community wall will be combined with shrubs, ground covers and vines.

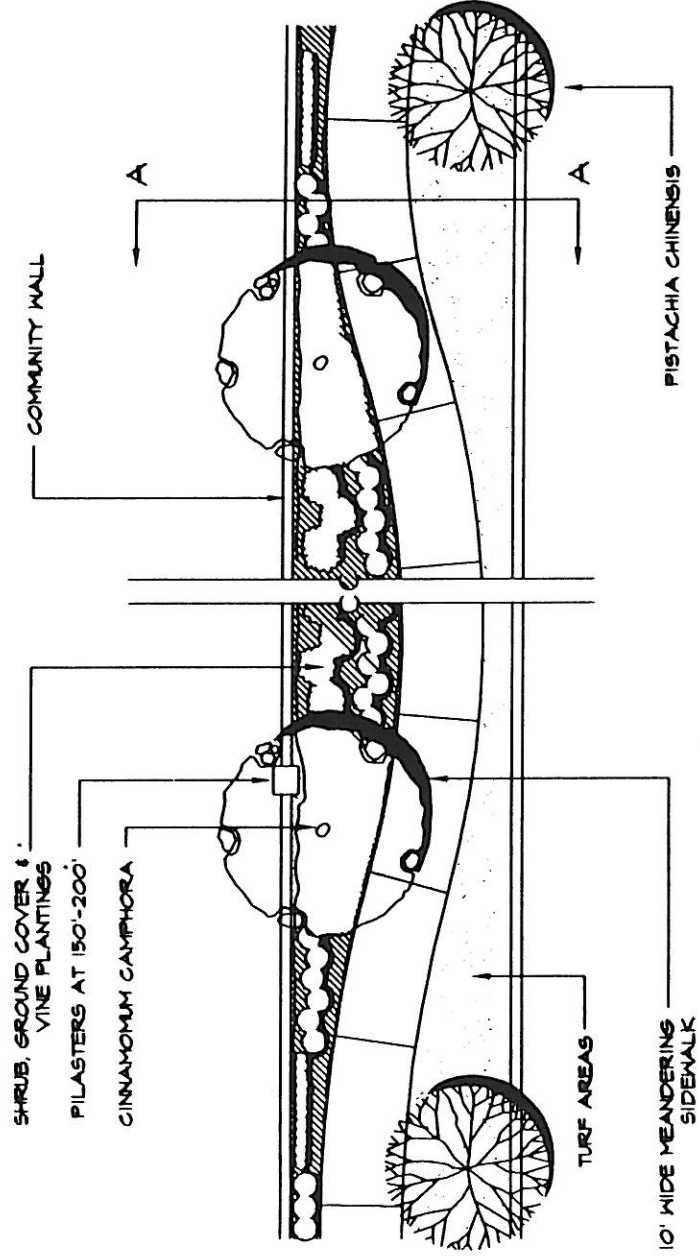
2.) Collectors:

Walnut Avenue (see Figure 3-5) and Hemlock Avenue (see Figure 3-7) are the north and west collector streets bordering Fontana Star. Walnut Avenue is considered a divided modified collector street and has a landscape R.O.W. of 18' with parkways which varies from 2'-6' based on the location of meandering sidewalk/bikeway path. Hemlock Avenue has a landscape R.O.W. of 21' with parkways which varies from 4'-11' based on the meandering sidewalk location.

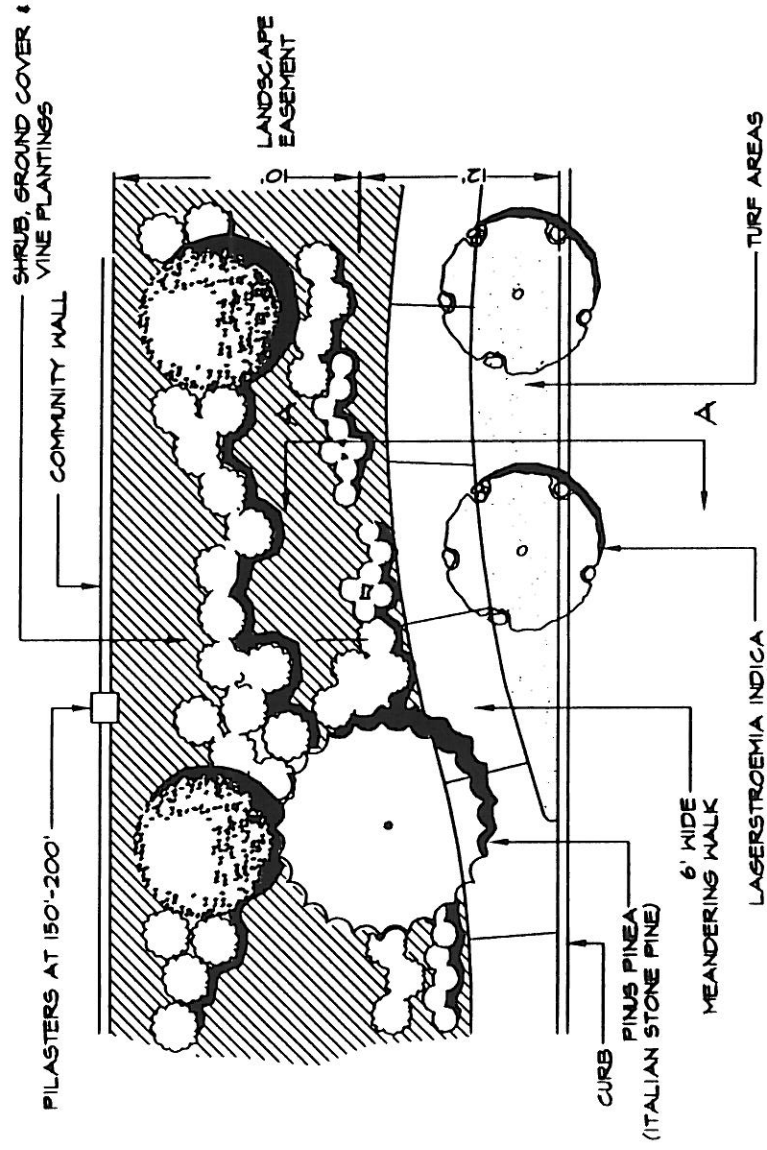
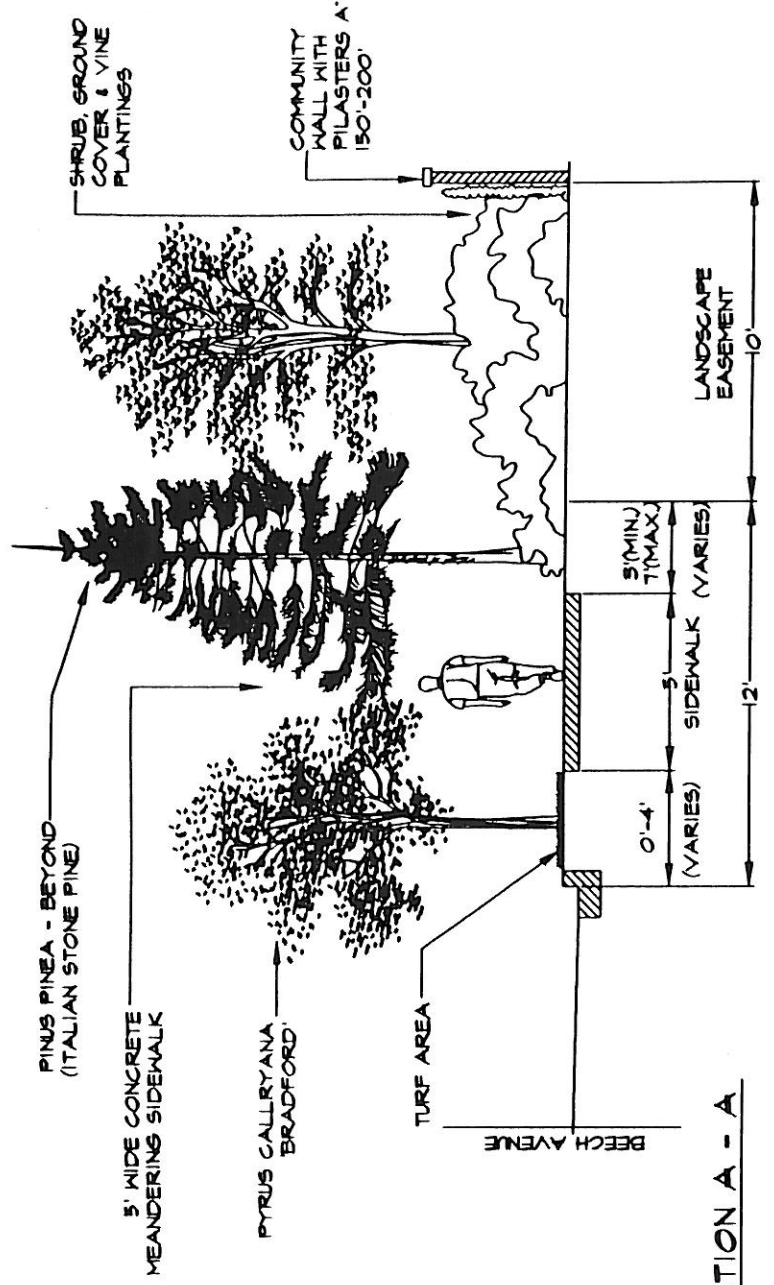
Walnut Avenue has a staggered, double row of street trees with Camphor trees, a canopy evergreen tree and Chinese Pistache, a deciduous tree. The Chinese Pistache trees will be combined with turf within the parkway between the curb and the sidewalk, providing fall color. Camphor trees, planted in the parkway between the sidewalk and community wall, combined with shrubs, groundcover

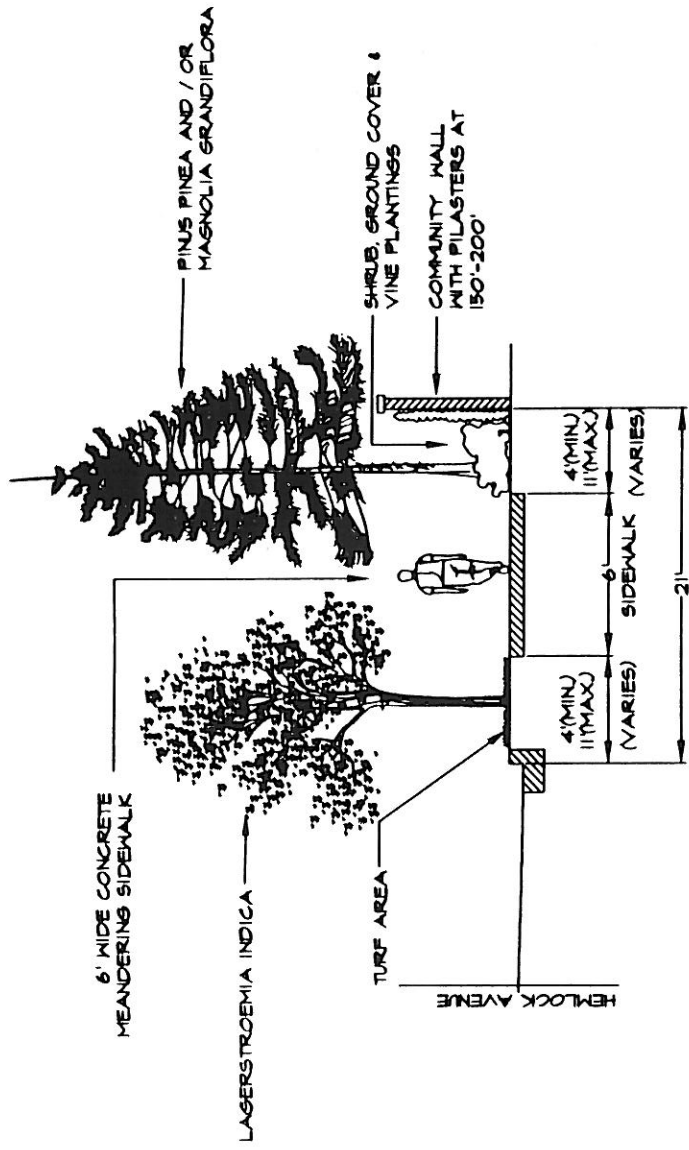


SECTION A - A
NTS

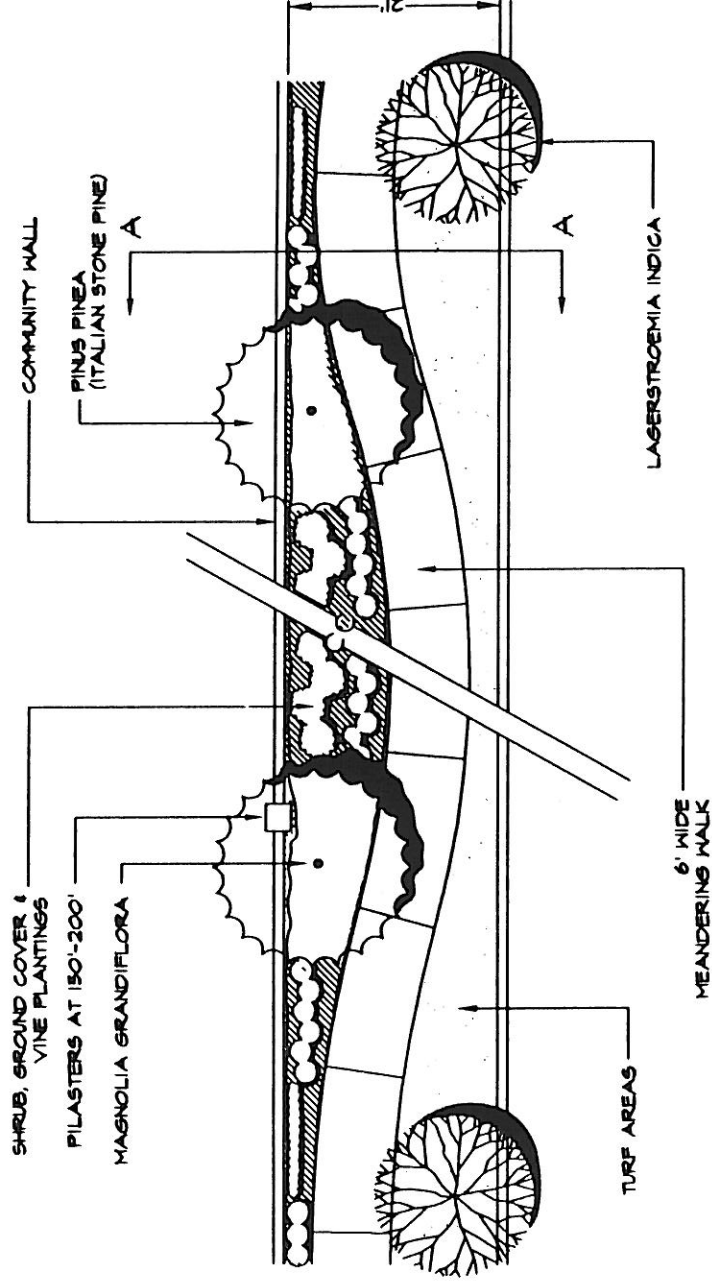


PLAN VIEW
NTS





SECTION A - A
NTS



PLAN VIEW
NTS

and vines, will complete the planting plan. An 10 foot meandering, combined off-street walk/bike path is part of the Walnut Avenue design program.

Hemlock Avenue has a three tree planting concept introducing a row of meandering trees Grape Myrtle between the curb and sidewalk and alternating rows of Magnolia and Italian Stone Pines in the parkway within the sidewalk and the community wall. The Grape Myrtle trees will be combined with turf within the parkway between the curb and sidewalk. The Magnolia and Italian Stone Pines planted between the sidewalk and the community wall shall be combined with shrubs, ground covers and vines.

B. Local Internal Streets

Local streets (See Figure 3-8) with right-of-ways of 60 feet will carry lower volumes of vehicular traffic and be more conducive to pedestrian movement. Lower scale evergreen and deciduous canopy street trees emphasize this condition.

3.5 Entry Monumentation & Signage Character

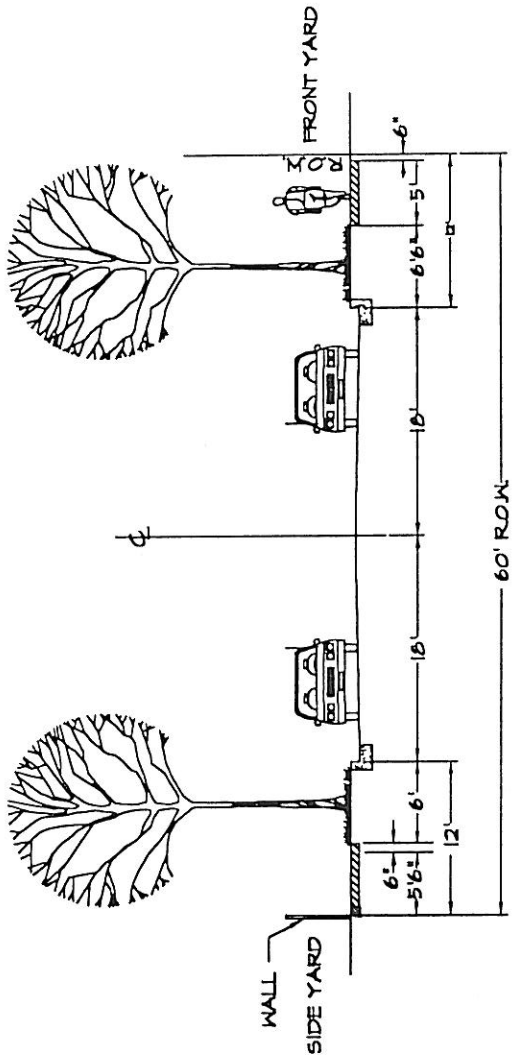
A hierarchy of community entries with generous landscaping, signage, and community walls with wide pilasters is provided a part of the Fontana Star Development, reflecting the architectural theme and providing the residents and visitors with beauty and community identification. The Landscape Master Plan, (See Figure 3-4), shows the location of the hierarchy of entries and key intersections. Figures 3-9 through 3-11 illustrate entries in both plan view and elevation view.

A. Major Community Entry: Walnut Avenue

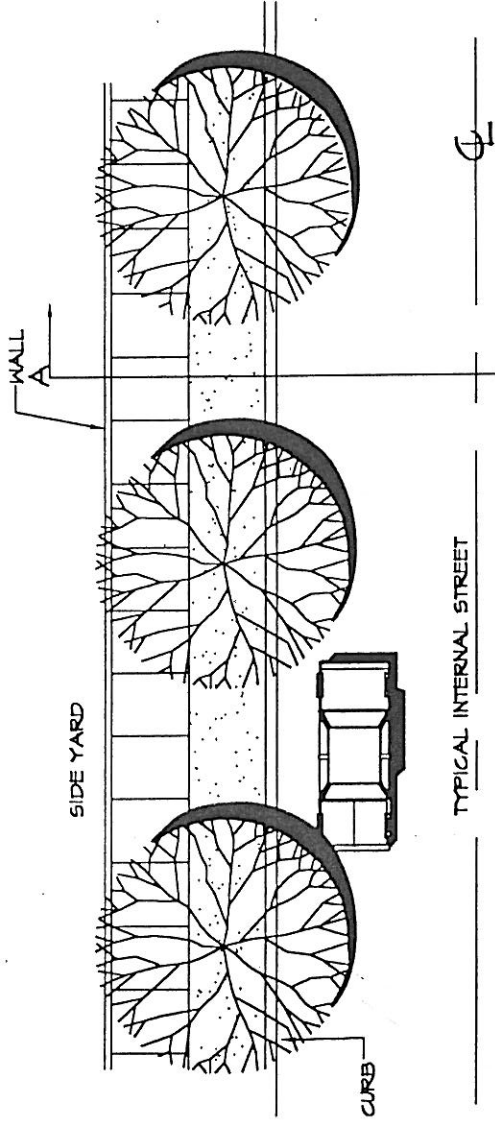
The Major Community Entry at Walnut Avenue (See Figure 3-9) provides the major gateway into the Fontana Star project with accent trees and the open bermed turf areas providing good vehicular intersection visibility. Specimen evergreen and deciduous trees, flowering trees, and accent paving are used to enhance the entry. Low entry walls with wide pilasters accent the entry. The low entry walls are designed to match the Fontana Star community theme walls. Signage identifying the community of Fontana Star is located on the curved low wall at the central part of the entry.

B. Minor Community Entry: Beech Avenue & Hemlock Avenue

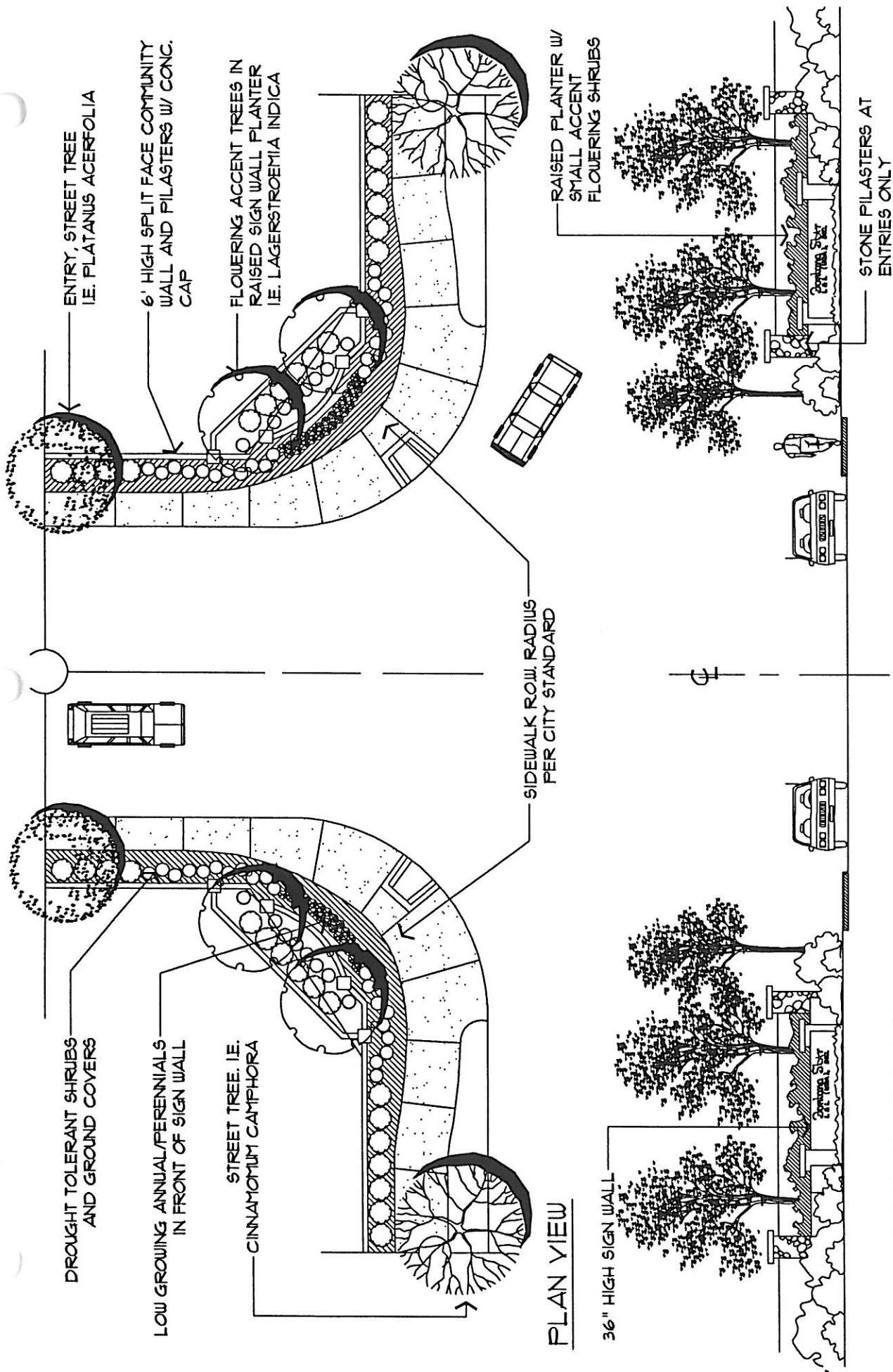
The Secondary Community Entry at Beech Avenue and Hemlock Avenue(See Figure 3-10) provides the east and west access to the main internal roadway through Fontana Star. This Community Entry is a smaller scale version of the Major Community Entry, with a smaller planting area and signage wall.



SECTION A - A
NTS

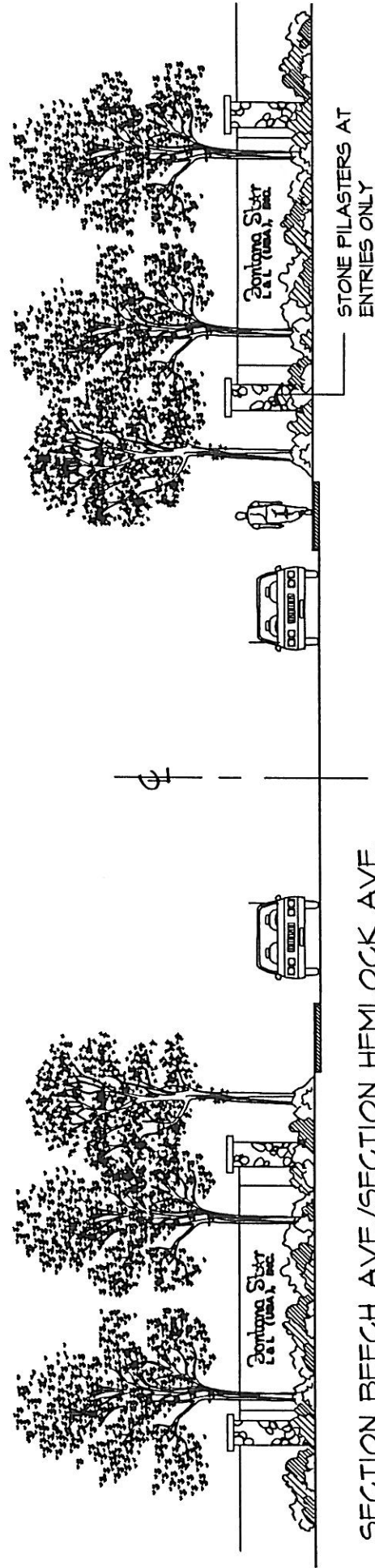
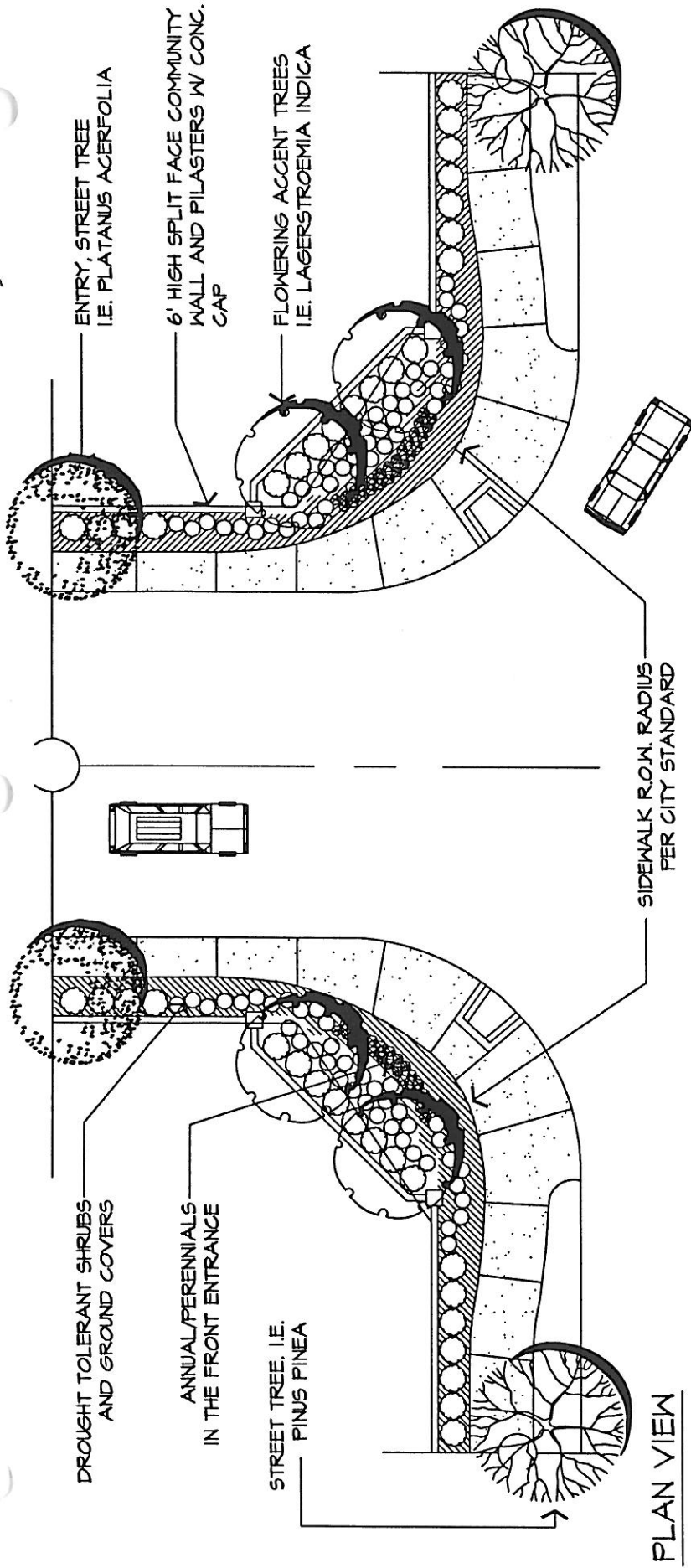


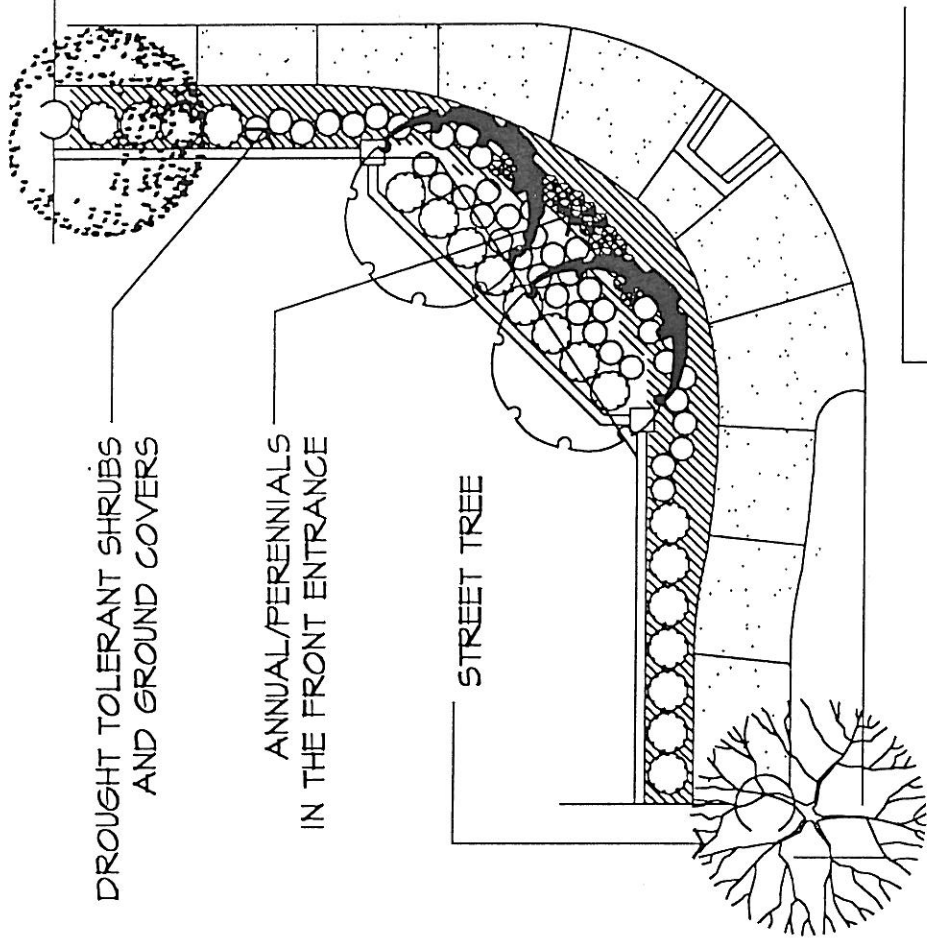
PLAN VIEW
NTS



SECTION WALNUT AVENUE

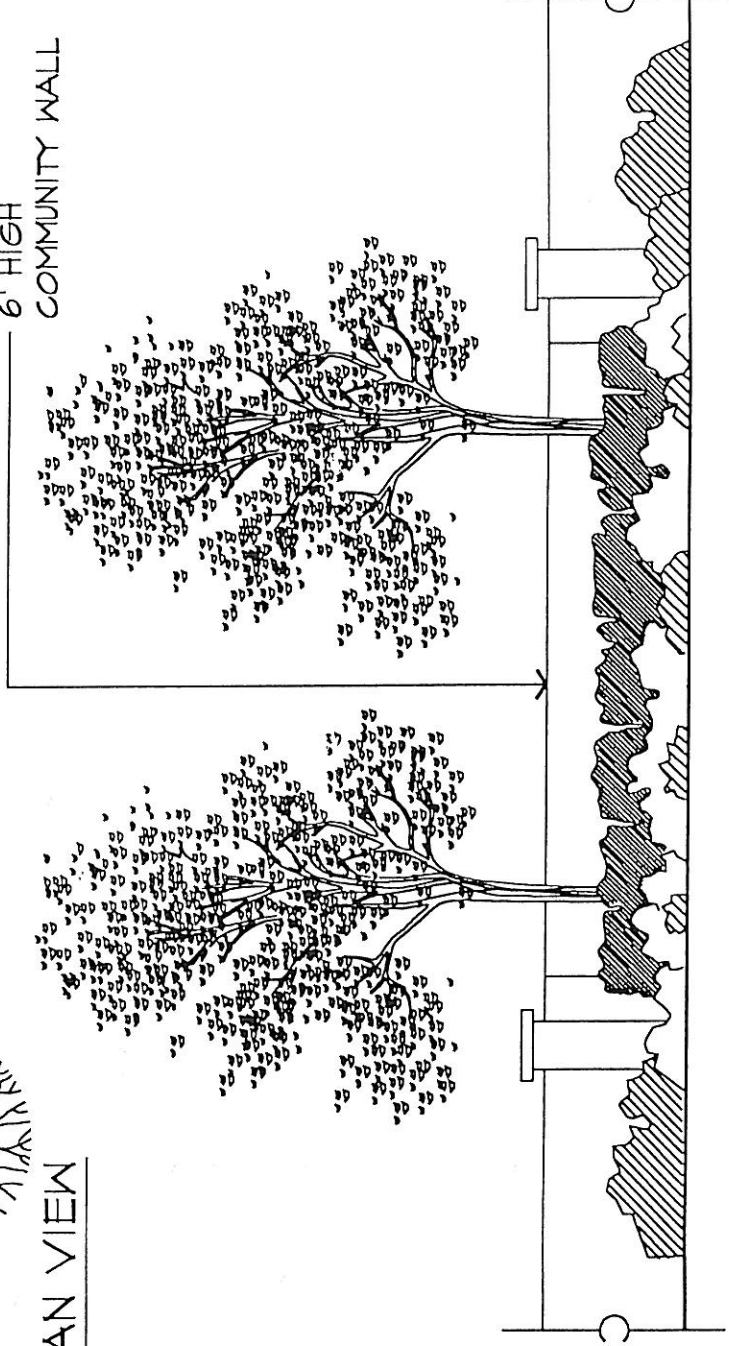
Fontana Star
L & L (USA), INC.





PLAN VIEW

6' HIGH
COMMUNITY WALL



SECTION: WALNUT/BEECH AVENUE-
HEMLOCK/WALNUT AVENUE INTERSECTIONS
(WILL MEET CITY STANDARD DWG. 140)

C. Minor Intersection Treatments: Walnut Avenue and Hemlock Avenue/Walnut Avenue and Beech Avenue

The Minor Intersection Treatment at Walnut Avenue and Hemlock Avenue/Walnut Avenue and Beech Avenue (See Figure 3-11) provides a theme entry at the northwest and northeast corners of Fontana Star. The foreground of the landscaped entry consists of several groupings of flowering Crape Myrtle with mounded turf, annual color flowers, and flowering shrubs. The backdrop consists of Camphor trees and community theme wall with pilasters.

3.6 Community Walls

Community walls should be utilized to provide privacy screening and noise buffering for residential land uses, define the outer limits of the entire project, and act as a contributing design element to an overall landscape theme. The Community Wall Plan, (See Figure 3-12), shows the location of a hierarchy of walls used within the planned community. The Community Wall and Pilaster Elevations, (See Figure 3-13), illustrate design detail for each type of wall.

General Wall Guidelines

- Walls should be a minimum six feet high and be 6" minimum split face block with a cap block. Wall pilasters will occur approximately every 150 to 200 feet minimum and be constructed from split face block. Masonry walls will be used in limited locations where not visible from major roadways, as illustrated in Figure 3-13.
- Wall materials and patterns shall be compatible with adjacent building and community development materials.
- Walls shall be treated as extensions of the structures.
- The softening of wall and fence surfaces with vines and other plantings is strongly encouraged.

3.7 Proposed Infrastructure Plan

The development of the Fontana Star Planned Community will include the installation of a number of infrastructure improvements to serve the residential uses:

COMMUNITY WALL PLAN TRACT 15863

LEGEND

- COMMUNITY PERIMETER WALL
- MASONRY WALL



TRACT 15555

WALNUT AVENUE

VACANT LAND

HEMLOCK AVENUE

TRACT 14775

BEECH AVENUE

ST. "A"

STREET "F"

STREET "E"

STREET "B"

STREET "G"

STREET "D"

STREET "H"

ST. "C"

ANDREA STREET

TRACT 14283

BEARTREE STREET

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COMMUNITY WALL PLAN
FIGURE 3-12

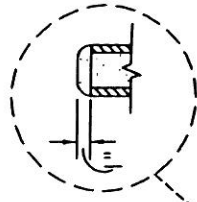
PRE-FAB CONCRETE CAP

8" SPLIT FACE BLOCK (ONE SIDE)

6" SPLIT FACE BLOCK (ONE SIDE)

RESIDENTIAL
BACKYARD

STREET SIDE



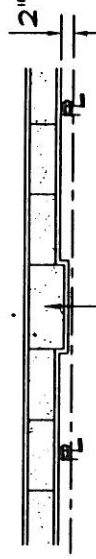
1" CONCRETE
CROWN

6" PRECISION
BLOCK - W/ 1"
CONC. CROWN
CAP

SECTION A-A
NTS

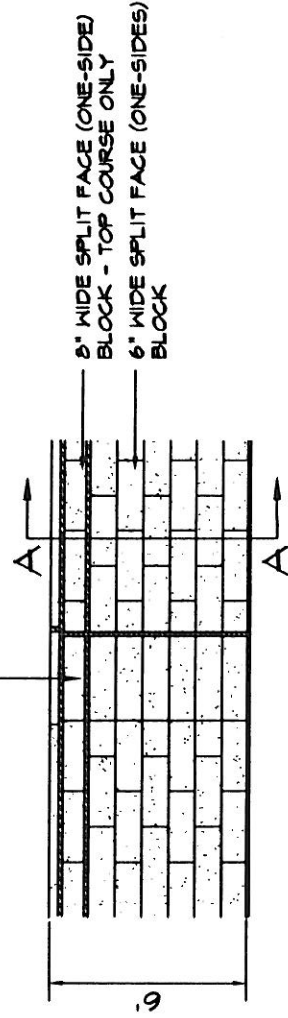
SECTION A-A
NTS

PLAN VIEW
NTS



← PILASTER POP-OUT
10"X16" BLOCK
SPLIT FACE ONE-SIDE
LOCATE PILASTERS
EVERY 150'-200' AND AT
ALL CORNER AND/OR
ANGLES

TYPICAL PRECISION BLOCK WALL



ELEVATION
NTS

TYPICAL SPLITFACE WALL

A. Water

The development of the planned community area will require the installation of water lines to serve the residential areas. It is anticipated that the site will be serviced by the Fontana Water Company. A 12" inch water line's exist in Walnut Avenue and Beech Avenue. The proposed water system is illustrated in Figure 3-14. Final determination of line sizes and water system design will be determined by Final Engineering Plans and will be based on fire flow and/or domestic requirements.

B. Sewer

The proposed sewer plan is shown in Figure 3-15.

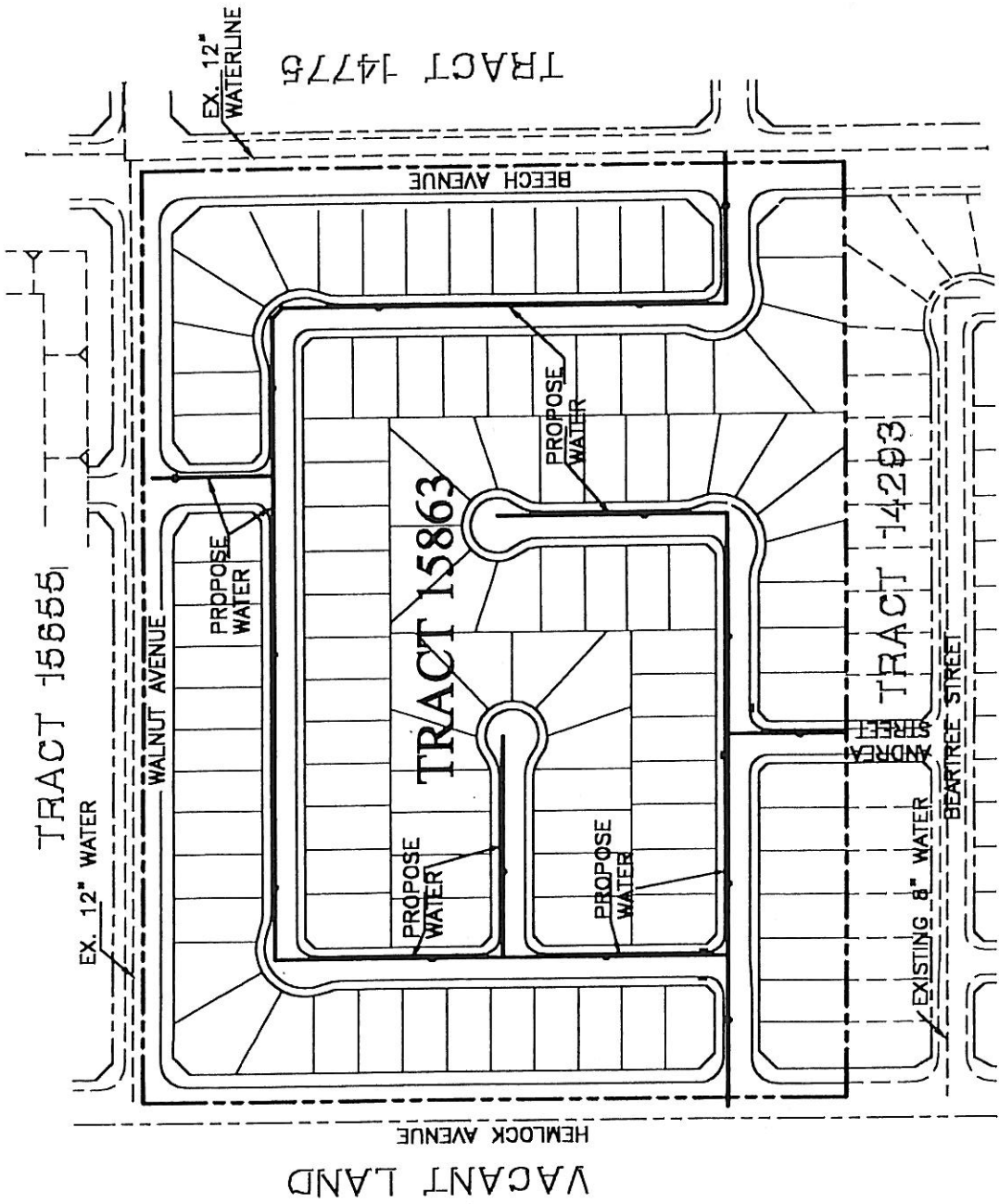
The serving agencies are the Chino Basin Municipal Water District (CBMWD) and the City of Fontana. CBMWD is responsible for the construction and maintenance of the wastewater treatment facilities and the sewer interceptor lines. The City of Fontana is responsible for constructing and maintaining the collection system within the City limits.

The on-site sewage from the residential planning areas will be collected and conveyed through proposed 8 inch sewer lines. The on-site 8 inch lines will join the adjacent proposed sewer system for the south property (Tract 14293) at the property line.

C. Drainage

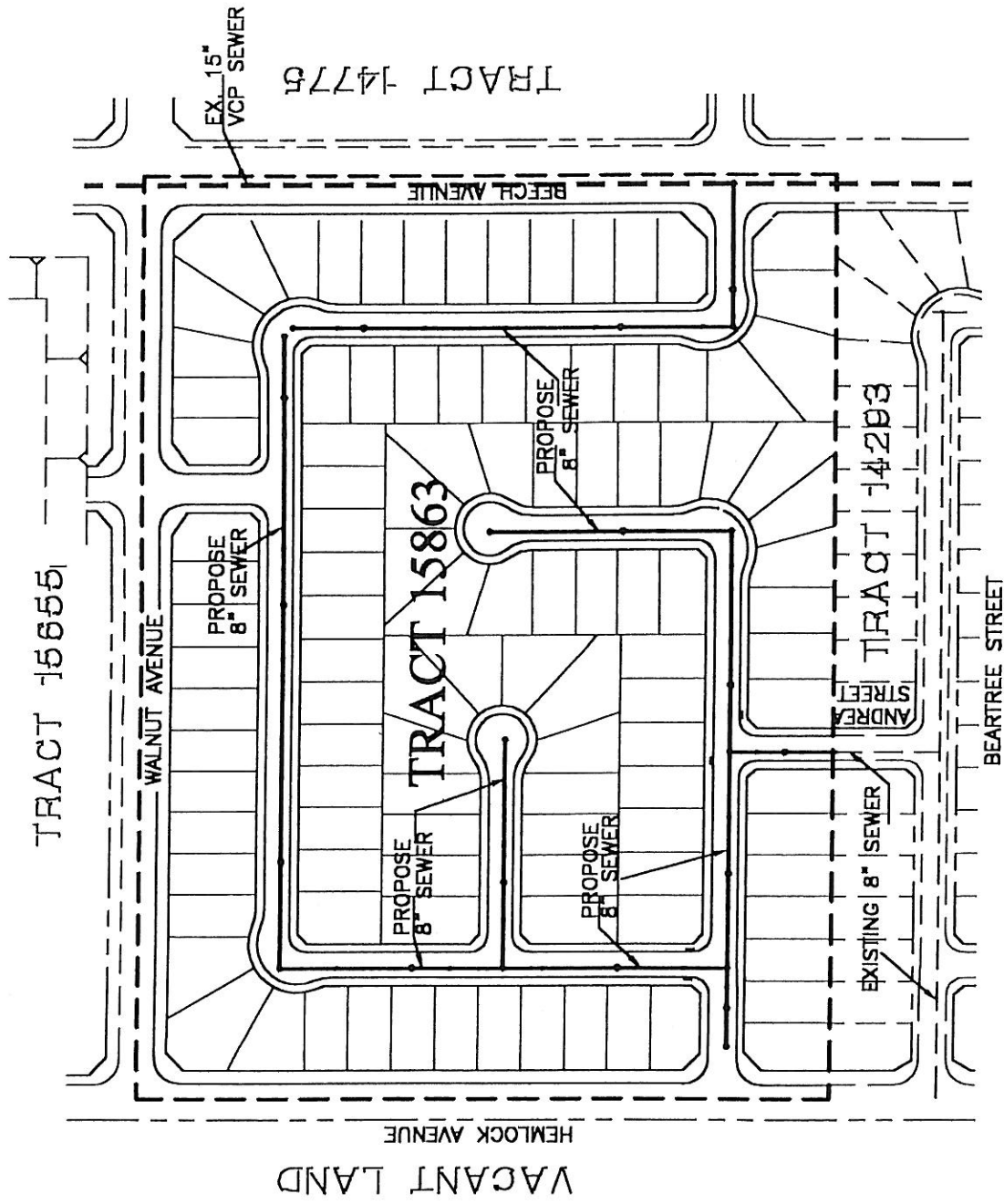
Local drainage systems are the responsibility of the City of Fontana. The proposed drainage system for the project is part of the North Fontana Master Storm Drain Plan, as modified by the proposed "Draft Project Report for the Baseline Storm Drain", dated October, 1997, by Allard Engineering. The Baseline Road storm drain system currently ends as a double 10 foot by 8 foot box culvert at the railroad crossing on Baseline Avenue, approximately 1,900 feet west of the intersection of Baseline Avenue and Cherry Avenue. This double box culvert will ultimately be extended to Citrus Avenue. The extension will consist of a double 10 foot x 8 foot box culvert.

Financing alternatives for the double 10 foot x 8 foot box culvert construction are: (1) a joint agreement with several other developments in the area, (2) through the formation of a Community Facilities District.



LEGEND :

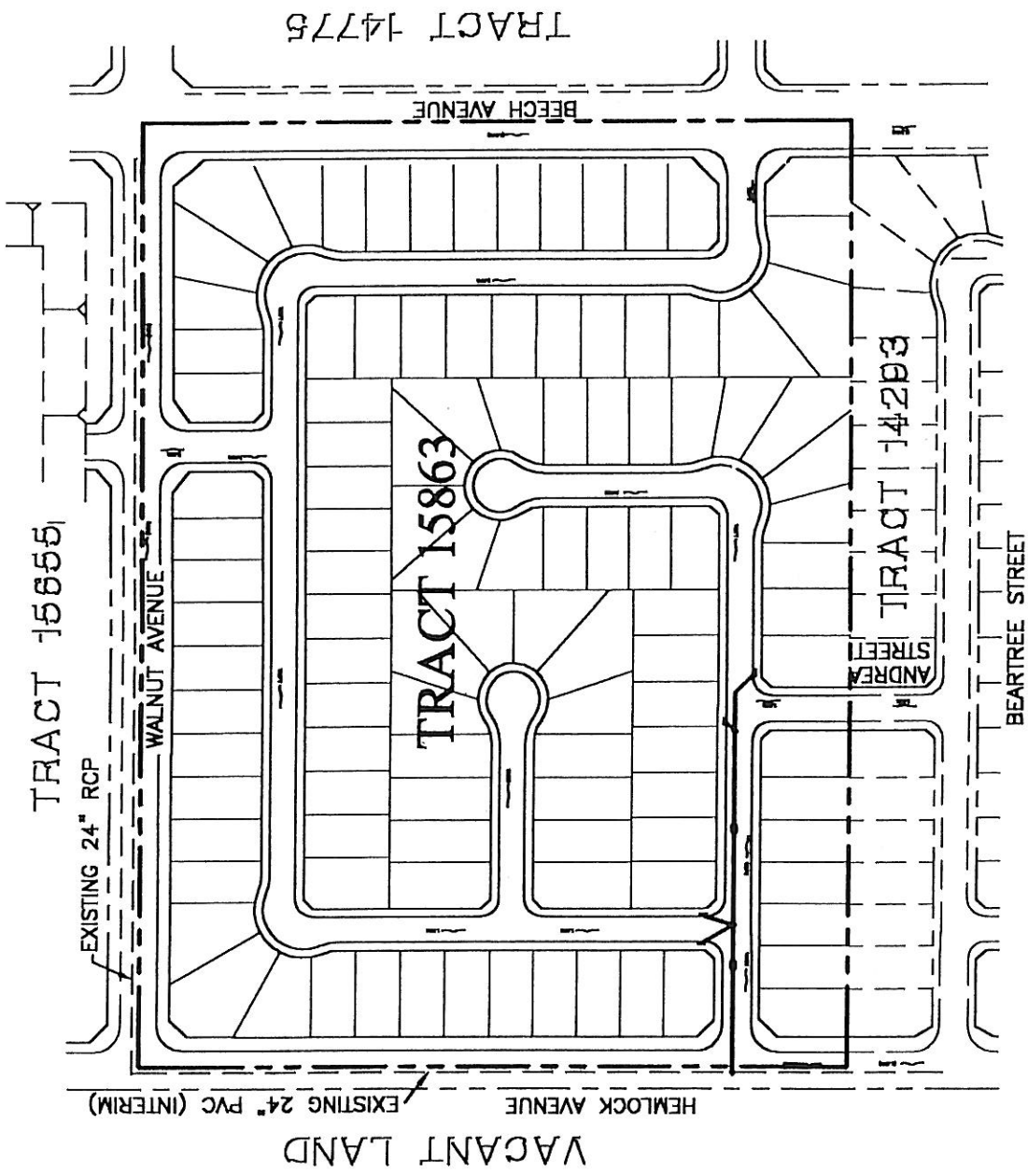
- PROPOSED WATER LINE
- - - EXISTING 12" WATER LINE
- - - EXISTING 8" WATER LINE



LEGEND :

- PROPOSED 8" SEWER LINE
- - - EXISTING 8" SEWER LINE
- EXISTING 15" SEWER LINE
- FLOW DIRECTION





LEGEND :

- CATCH BASIN
- EXISTING STORM DRAIN
- ~ FLOW DIRECTION
- HP HIGH POINT
- PROPOSED STORM DRAIN

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The on-site residential storm runoff will be handled by the roadways and an on-site storm drain system, as shown on Figure 3-16. The street improvements proposed for Hemlock Avenue and Beech Avenue will serve to convey storm runoff from north of the property through the storm drain pipes constructed by the adjacent project at the south to the Baseline road drainage system.

Final determination of storm system design and financing will be determined by the Final Engineering Plans.

D. Solid Waste Disposal

The proposed project will require the expansion of an existing waste removal service route to include the planned community area. No offsite landfill construction will be required as a result of the proposed project.

E. Energy Systems

The planned community area will require the extension of electrical, telephone and natural gas service.

4.0 General Development, Site Planning and Architectural Standards

4.0 GENERAL DEVELOPMENT, SITE PLANNING, AND ARCHITECTURAL STANDARDS

4.1 General Development Standards: Community Plan Conformance with the City Development Code

A Community Plan must generally conform to the development regulations of the Fontana Development Code. Therefore, regulations such as allowed uses in each zone; setback requirements; etc., will be per the City Development Code requirements. Additionally, all signage must be in compliance with Chapter 3 of the Municipal code.

Many of the benefits of this Community Plan include:

- All lots will be 7,200 square feet or larger.
- The landscaped parkways on Beech Avenue (See Figure 3-6), on Walnut Avenue (See Figure 3-5), and on Hemlock Avenue (See Figure 3-7).
- The Primary Entry at Walnut Avenue and the Secondary Entries at Beech Avenue and Hemlock Avenue will be upgraded, with landscaping, enhanced paving, and other visual amenities (See Figure 3-4 Through Figure 3-13).

4.2 Site Planning, Architectural/Design Guidelines and Standards

The purpose of this section is to provide site planning and architectural design criteria that will promote quality development and an aesthetically pleasing environment within the Fontana Star Community. The guidelines, when combined with the landscape designs presented in this Community Plan, provide the overall framework for establishing a sense of community identity, land use character, scale and environmental sensitivity in the planning and design of development with the Fontana Star Community.

The following guidelines express “intent” rather than “absolutes”, thereby allowing flexibility in fulfilling the intended design goals and objectives. Moreover, these guidelines are intended to promote creativity and innovation as well as consistent quality in the implementation of land uses.

A. Site Planning

Residential

- Buildings and other improvements should be located to compliment the site on which they are placed.
- 70% percent of the lots will be plotted with houses over 2,000 square feet in size.
- Where feasible, consideration should be given to building elements as they relate to the environment.
- Design should maximize utilization of visual amenities.
- Local street system design should consider ease of auto traffic movement and provide opportunities for pedestrian, bicycle, and other alternative transportation modes.
- Local street layouts should promote compatibility with building sites and lot arrangements to ensure consistent streetscape character.
- The "Dynamic Plotting" criteria which will be applied to this development are provided below.

The following are basic, flexible plotting and design criteria for development under new Design Reviews. Variations and possibly additional criteria may be added by the Commission to individual Design Reviews based upon Commission consideration of individual circumstances.

1. *A floor plan shall not be used consecutively more than three times in a row (whether reversed or not).*
2. *If the same floor plan is used for adjacent homes, one shall be the reverse of the other and have a different elevation.*
3. *No more than 65% of any one floor plan shall be used on any cul-de-sac or along any street between intersecting streets.*
4. *No two adjacent homes using the same floor plan shall have the same exterior color scheme/treatment.*
5. *Adjacent homes shall have varying setbacks. Minimum variation shall be four (4) feet unless located on a curvilinear street, which provides a varied street scene, and then the variation shall be three (3) feet. When one and two story homes are adjacent, the two-story home shall have the larger front setback.*
6. *Floor plan maximum and minimum percentages for each model type shall be established*

DESIGN CRITERIA

A variety of enhanced architectural features and materials shall be provided on every front elevation. This can include, but is not limited to, porches, bay windows, pop-outs, veneers, rock, brick, wood siding, etc. or such other features approved by the Planning Commission.

- 1. At least two out of every three models shall provide general architectural relief at the rear elevation of each home in order to avoid one continuous wall or flat surface on the rear of the home. Fireplaces, rear yard trellises, and media niches may be considered in this requirement.*
- 2. A variety of designs shall be used on garage doors, with no two adjoining homes that have the same floor plan and elevation using the same garage door pattern. In no case shall more than three homes of any floor plan or elevation have the same garage door pattern in a row. At least two models shall be provided with windows or patterns in a variety of designs.*
- 3. All garage doors shall be metal, sectional and roll-up. The applicant shall provide a color board indicating proposed garage door colors for Planning Commission approval.*
- 4. Trim with a stucco covering may be painted in a contrasting color. The contrasting color should be color compatible with the trim color.*
- 5. Sufficient decorative trim shall surround vents and windows to enhance the natural architecture of the unit(s).*
- 6. Homes with a trim (band) feature, which distinguishes the first and second floors, should have the band on the front and rear elevation of the homes. The band will only be required on side elevations on corner lots where the elevation is visible from the street.*
- 7. Two story homes with a second story elevation facing a public right-of-way shall be provided with design features which could include pot shelves, shutters, wood siding under roof peaks, color contrasting paint under roof peaks and/or windows, etc. or such other features approved by the Planning Commission.*
- 8. The Community Development Director, or his/her designee, shall have the authority for minor architectural changes focusing around items such as window treatments, color combinations, facade treatments, and architectural reliefs. Questions on the interpretation of this provision or changes not clearly within the scope of this provision shall be submitted to the Planning Commission for consideration under a Revision to the Design Review.*
- 9. Architectural treatment shall be provided on each chimneystack.*

10. *When used, mullions shall be provided on first, second and third story windows, as approved by the Planning Commission. The mullions shall be provided in a variety of shapes.*
11. *Wall-mounted decorative lighting fixtures shall be provided at the front porch area as well as on each side of the garage door. A sample of lighting types to be used shall be provided for Planning Commission review and approval.*
12. *All front doors shall provide a window or other decorative treatment. A sample of door treatments shall be provided for Planning Commission review and approval.*
13. *Each lot shall be provided with four (4) phone lines to the house.*
14. *At least two out of every three models shall upgrade the hardscape used within the concrete walkways leading to the house in order to complement the home's exterior architectural elements. (Example: use of decorative troweled bands; decorative patterned scoring; exposed aggregate finishes; stamped concrete, etc.)*
15. *All utility boxes shall be undergrounded or camouflaged.*
16. *Steel gates with privacy screening (defined as a material used on the steel gate to obscure the view of the back yard from the street) shall be required for side yards.*
17. *All block walls shall be capped with a concrete cap.*

The Community Development Director, or his/her designee, shall have the authority for minor architectural changes focusing around items such as window treatments, color combinations, facade treatments, and architectural relief s. Questions on the interpretation of this provision or changes not clearly within the scope of this provision shall be submitted to the Planning Commission for consideration under a Revision to the Design Review.

B.

Architecture

Residential

- Exact sizes for the various home plans will be approved at the time of architectural approval of the specific development project. The minimum house square footage shall be 1,700 square foot.
- For each floor plan in residential areas, varying complimentary elevations shall be provided to create visual interest and a varied neighborhood streets scene.

- Material, colors and general style should be integrated through each development area to achieve continuity in design.
- The height and bulk of buildings should be approximate in scale to the size, shape and topography of the site and should be harmonious with the setting, verified through grading concept plans and site plan review.
- Two foot projections, no more than five feet in width, shall be permitted into setback areas for fireplaces, chimneys, entertainment alcoves, -and other features.
- Roof protrusions such as vents or flashing should be positioned away from the street side of the house or finished to match the roof color in order to minimize visual impact.
- Bare metallic surfaces (vents, pipes, gutters, flashing, etc.) shall be painted or covered from view in a manner harmonious with the general exterior architectural treatment of the building.
- Architectural screens, walls and accessory structures should be compatible in material, color and texture to the main buildings.
- Patio covers, room additions, swimming pools, spas and any other accessory structures attached or detached shall be subject to the requirements in the municipal code.

5.0 Implementation

5.0 IMPLEMENTATION

The following documents shall be prepared for approval by the City at Fontana to ensure that development of the Community plan area proceeds in an orderly manner.

5.1 Environmental Review

An initial study and environmental assessment is included as part of this Community Plan document (Section 6.0). Based upon a review of both documents, it is anticipated that the City of Fontana will issue a negative declaration for the proposed project in accordance with the California Environmental Quality Act (CEQA) Guidelines and Regulations and local guidelines to implement CEQA.

5.2 Community Plan Approval

This Community Plan will be reviewed and approved by the City of Fontana Planning Commission. It is intended to provide land use, design, and other controls for the proposed project in conformance with the City's General Plan, Development Code, and California Government Code Section 65450.

5.3 Tentative Tract Map 15863

Tentative Tract Map 15863 will be reviewed and approved pursuant to applicable provisions of the Subdivision Map Act (Government Code Section 66410 through 66499) and City of Fontana applicable rules and procedures.

5.4 Amendments and Changes

A. Major Changes

The developer/or property owner may initiate an amendment if substantial changes are required in the project during the development process. Any amendment to the Fontana Star Community Plan shall be in accordance with City requirements and will be reviewed for approval by the Planning Commission. Revisions to the tentative tract map shall be in accordance with the Subdivision Map Act (Government Code Section 66410 through 66499) and applicable City of Fontana procedures. The Fontana Star Community Plan will incorporate the in-place Community Facilities District (C.F.D.) to include a cost share of the California Landings Park.

B. Minor Changes

Minor revisions and or modifications to approved components of this community Plan may be approved by the Community Development Director. Minor revisions and/or modifications shall include, but are not necessarily limited to the following:

- 1) Minor boundary shifts (lot line adjustments).
- 2) Minor changes in design concepts included within the Community Plan; including but not necessarily limited to access points, streetscape designs, entry designs, design guidelines, etc. The design guidelines within the Community Plan are intended to be conceptual in nature only and are intended to be flexible in implementation.

5.5 Appeals

Appeal(s) from any determination of the Community Development Director shall be made to the Planning Commission and appeal(s) from any determination, decision, or condition of approval by the Planning Commission shall be made to the City Council in accordance to the appeal procedures established by the City of Fontana Municipal Code.

5.6 Maintenance

Maintenance responsibilities with The Fontana Star Planned Community area will be divided between the City of Fontana, special districts, service community facilities districts, and individual property owner(s). Covenants, conditions, and restrictions (CC&R's) will be prepared prior to the recordation of the first subdivisions with the project to guarantee maintenance of facilities within the site.

- 1) Streets

All streets within the Fontana Star Community Plan will be maintained by the City of Fontana.

- 2) Parkways and Entries

Maintenance of parkway landscaping, median landscaping, plantings along public streets (except on local roads), project entry monumentation, landscaping along major and secondary intersections, and the pedestrian/bike access will be by a service community facilities district.

3) Drainage Facilities

The maintenance and liability for drainage improvements which are defined as "interim" will remain the responsibility of the project sponsor unless specifically accepted by the City of Fontana for maintenance by another agency. The City shall retain, at its sole discretion, the option to accept or not accept for maintenance any improvement initially constructed as interim facilities, but which are to be incorporated into the future permanent drainage system prior to the time such facility is upgraded to permanent status.

Permanent drainage improvements within the Fontana Star Planned Community area will be constructed to the standards of the City of Fontana, and will be dedicated to the City for maintenance.

Where it is necessary to construct drainage improvements outside of public rights-of-way, drainage easements will be dedicated to the City of Fontana. Upon dedication, the City will assume responsibility for maintenance of the underground facilities only; maintenance responsibility for surface improvements within drainage easements will not be transferred.

Drainage facilities on private property in the absence of an easement will be considered to be private drains. Maintenance of such private drains will be the sole responsibility of the landowner or the association charged with the general maintenance of the landscaping and other common improvements of the area in question.

4) Water and Sewer

The City of Fontana will assume responsibility for the maintenance and monitoring of sewer facilities and the Fontana Water Company will assume responsibility for maintenance and monitoring of water facilities constructed within public rights-of-way within Fontana Star.

Water and sewer facilities located on private property in the absence of an easement will be considered to be private facilities. Maintenance of such private facilities will be the responsibility of the landowner or tenants charged with the general maintenance of the landscaping and other common improvements.

5) Signage

All owner(s)/tenants(s) shall be responsible for the proper maintenance of all their signs.

On notice by the City of Fontana, an owner/tenant will be required to restore or repair any sign which is not properly maintained.

6) Other Facilities

The Southern California Gas Company will maintain natural gas lines within the project site. Southern California Edison will maintain onsite electrical facilities. Pacific Bell will maintain telephone facilities.

6.0 Initial Study and Environmental Assessment

6.0 INITIAL STUDY AND ENVIRONMENTAL ASSESSMENT

6.1 Introduction

Approval of the proposed Fontana Star Community Plan and attendant entitlements which collectively constitute the “proposed project” will be at the discretion of the Fontana Planning Commission. However, before any decision to approve the proposed Community Plan can be made, it must first undergo environmental review pursuant to the provisions of the California Environmental Quality Act (CEQA) of 1970, associated state CEQA Guidelines, and City of Fontana Local CEQA Implementation Guidelines and Procedures, all as amended. The environmental review process is the responsibility of the agency with greatest discretionary approval authority over a project. Under CEQA, such an agency is designated and referred to as the “Lead Agency”. The Lead Agency for the proposed Fontana Star Community Plan project is the City of Fontana.

The following comprises the City’s environmental review documentation and presents a formal record of the findings and determinations made based thereon. All documentation found herein has been developed to: 1) ensure the City of Fontana’s full compliance with the legal and procedural environmental review provisions of CEQA; and, 2) demonstrate that the resultant required findings and/or determinations made were based entirely on substantial evidence generated during the environmental review process.

The key initial phase of the environmental review process is to conduct an Initial Study. Section 6.0 of this document constitutes the City’s Initial Study and presents the findings/determinations based thereon for the proposed project. However, all analyses conducted, conclusions reached, and findings/determinations made, fully represent and reflect the City’s independent judgment.

This Initial Study evaluates the potential for significant environmental impacts to occur from the approval and implementation of the proposed Fontana Star Community Plan. The evaluation considers potential direct, indirect, project-specific and cumulative effects associated with the planning, construction, and operation of up to 111 dwelling units.

Section 15063 of the State CEQA Guidelines, as amended, articulates a variety of purposes for an Initial Study. With regard to the proposed project, the main purpose of this Initial Study is to determine whether an EIR is required or whether the proposed project qualifies for a Negative Declaration because all potentially significant impacts can be mitigated to a level of insignificance.

6.2 Project Description

A. Location and Environmental Setting

Project Location

The site of the proposed Fontana Star Community Plan is located in northwestern Fontana. The City of Fontana is located within the hub of the Inland Empire, situated in the southwestern portion of San Bernardino County, between the foothills of the San Gabriel Mountains on the north and Jurupa Hills on the south. The city is located 9 miles west of the City of San Bernardino, immediately east of the Devore Freeway (I-15) and north and south of the San Bernardino Freeway (I-10). The City of Fontana is bounded by the cities of Rancho Cucamonga, Rialto, Ontario, and unincorporated land in San Bernardino and Riverside counties. Figure 1-1 depicts the City of Fontana in a regional context.

More specifically, the project site is bounded by Beech Avenue to the east, Hemlock Avenue on the west and Walnut Avenue to the north. Roadway improvements needed to serve the site include the construction of Walnut Avenue to the north, Beech Avenue to the east, and Hemlock Avenue to the west. Please see Figure 1-2 for a vicinity map of the project site.

Environmental Setting

The site currently consists of vacant land.

The total land area of the City of Fontana is approximately 23,040 acres, or 36.0 square miles. The City was once part of a major agricultural area where citrus groves, wine grapes, and other field crops were grown. Rapid urbanization and residential development in the Inland Empire has led to a mix of old and new developments in Fontana. Today, the City's older developments may be found in the east-central section, with industrial uses on the southwest, and vacant land and new residential subdivisions on the north and south. More than one-third of the City's land area remains undeveloped, with the majority of vacant land in North Fontana.

The North Fontana area comprises approximately 7,608 acres generally located north of Baseline Avenue. This area remained largely vacant until the 1980s, when demand for residential units and the availability of inexpensive land in the City led to significant growth pressures. As indicated in Figure 2-1, the project site itself is vacant. However, it is adjacent and/or proximal to several approved and proposed planned communities in the North Fontana area including, but not limited to: the Westgate Specific Plan, California Landings, Rancho Fontana, the Village of Heritage (West End) Planned Community, Summit Heights and Sierra Lakes. Figure 1-3 depicts the location of the site of the

proposed Fontana Star Community Plan in relation to the aforementioned approved and proposed developments.

B. Project Characteristics

Project Background

The Fontana Star Community Plan, as currently proposed, constitutes the latest refinement of master planning efforts for the subject property since the initial applications for approval of the then "The Pacific Summit Planned Community/Specific Plan" were filed in 1990.

Project Development Parameters

The Fontana Star Community Plan will comprise the ultimate development of 111 dwelling units in accordance with the Community Plan. The proposed land use plan is shown in Figure 2-2. Also shown on the land use plan are various Planning Areas within the overall Community Plan. Table 6-1 presents a statistical summary of the development proposed within the Fontana Star Community Plan. The net residential density of the project will be 3.69 dwelling units per gross acre.

TABLE 6-1 CHARACTERISTICS OF THE FONTANA STAR COMMUNITY PLAN			
Land Use/Property Owner/planning Area(PA)	Acreage	Units	Description
Residential Uses Total	20.64	111	Single-family detached units on min. 7,200 s.f. lots
Internal/External Roadway R.O.W.	9.26		Public right-of-way for internal streets, perimeter streets and bikeways
Cross Land Area	30.08		

With regard to circulation, the Fontana Star residential area of the proposed project will be accessed by four entry roadways; 1) a primary community entry road from Walnut Avenue; 2) a secondary entry road from Beech Avenue and Hemlock Avenue; 3) an extension of Andrea Street from Tract 14293 at the south.

Project site development will also include the installation of a variety of hard- and soft-scapeland improvements along the site perimeter and at roadway entry points to the site. An overview of the landscape improvements planned as part of the proposed project is shown on Figure 3-4. All infrastructure improvements required for site development shall be completed in accordance with Tentative Tract Map conditions of approval. The proposed Fontana Star Community Plan's Water, Sewer, and Storm Drain Systems are depicted in Figures 3-14, 3-15, and 3-16, respectively. All other infrastructure components of the community plan including solid waste disposal and energy systems will be developed with full cooperation with the appropriate service/utility provider.

Development Phasing

The project will be phased and is expected to be developed within a 2 to 3-year time frame. Residential development is proposed to be initiated by L & L Homes on the north-east portion of the site. Development will then proceed to the northwest corner. The proposed project's implementation phases are summarized on Table 6-2 below and illustrated in Figure 2-5.

TABLE 6-2 PHASING OF DEVELOPMENT			
Phase (Planning Area)	Land Use	Units	Average Size (Units/Sq. Feet)
Phase I P.A. 1	Residential	31	8256
Phase 2 P.A. 2	Residential	23	8244
Phase 3 P.A. 3	Residential	22	8185
<i>Phase 4</i> <i>P.A. 4</i>	<i>Residential</i>	<i>17</i>	<i>8071</i>
<i>Phase 5</i> <i>P.A. 5</i>	<i>Residential</i>	<i>18</i>	<i>7997</i>

Property Maintenance

Perimeter roadway improvements to be implemented as part of the proposed project will be maintained by the City of Fontana via a Community Facilities District. This includes perimeter roadway improvements along Beech Avenue, Walnut Avenue, and Hemlock Avenue, including the parkways, medians, and plantings along these streets. Internal roadways within the planned community will be dedicated to, and maintained by, the City of Fontana. Individual property owners will maintain landscape areas fronting their lots, side yards and on local streets.

The proposed project will be annexed into a Community Facilities District which will maintain a variety of other on-site development-related improvements including, but not limited to, the following: community entries; walls, internal landscaping, irrigation, lighting, signage, monumentation, perimeter landscaping and a local park withing the California Landings.

On-site infrastructure facilities will be the responsibility of the developer until they are dedicated to the City of Fontana, the Fontana Water Company, or their agency. These Include roadways, storm drain facilities, sewer facilities, and water lines. Power lines will be the responsibility of Southern California Edison (SCE); natural gas lines will be the responsibility of Southern California Gas (SCG); telephone lines will be the responsibility of Pacific Bell; and cable television lines will be the responsibility of Comcast Cable Company.

C. Project Objectives

The applicant seeks to accomplish the following objectives with the proposed project:

- Develop a community with all single-family detached homes on lots of 7,200 square feet and larger in order to help achieve the City's goal of providing additional larger lots in North Fontana.
- Provide a master-planned community in conformance with the spirit and intent of the City's General Plan Land Use Map and Policies, and in conformance with the Development Code, thereby allowing fast-tracking of the planning process via the Community Plan process.
- Encourage enhancement of an upscale North Fontana image.
- Create a high-quality community design.
- Provide a entry way accentuated with landscaping to creating an enhanced gateway to the planned community.
- Provide for adequate infrastructure, public facilities, and services.
- Support the City in achieving its newly-revised Vision statement: "The City of Fontana is dedicated to being a safe, well-maintained, family-oriented community supported by a diverse, jobs-rich economy, capitalizing on the City's superior location and accessibility."
- Ensure the future development is consistent with the City's General Plan and other environmental, planning, and land use regulations;

- Promote development which will contribute to the economic well-being of the City and the region;
- Ensure that the future development will not lead to conditions that will be environmentally unsound.

D. Discretionary Actions

A discretionary action is one taken by a public agency (for this project it is the Fontana Planning Commission) that calls for the exercise of judgment in deciding whether to approve a project. In order to be implemented, the proposed Fontana Star Community Plan will first require the following specific discretionary approvals from the City of Fontana.

- **Environmental Review** - Pursuant to the provisions of CEQA, the City of Fontana, acting as Lead Agency, is required to conduct the environmental review process for the proposed project, ensure that the decision-making body with approval authority over the proposed project has reviewed and considered same prior to reaching a decision regarding that project's approval, and ensure that the decision-making body either adopts and/or certifies the CEQA document prepared for the proposed project.
- **Community Plan** - The City of Fontana will review and approve the proposed Fontana Star Community Plan to regulate land uses, design, and development on-site. The City of Fontana Zoning Map presently shows the project site with zoning designations of Single Family Residential; R-1-10,000; Upon adoption of the Community Plan, zoning standards associated with Residential R-1-7,200 will be applied to site development.
- **Tentative Tract Map No. 15863** - The City of Fontana will review and approve a tentative tract map for the project pursuant to the Subdivision Map Act and the City's regulations.

Implementation of the proposed project will also require the approval of a variety of other subsequent applications from the City of Fontana. These include, but may not be limited to, the following:

- Site Plan Approval
- Building Permit
- Grading Permit
- Demolition Permit
- Tree Removal Permit

Public and quasi-public agencies which may use this Initial Study in their decision-making process or for informational purposes include, but may not be limited to, the following:

- South Coast Air Quality Management District (SCAQMD)
- County of San Bernardino Agricultural Commissioner
- California Integrated Waste Management Board
- California Regional Water Quality Control Board, Santa Ana Region
- Etiwanda Unified School District
- Chaffey Joint Union High School District
- Southern California Edison Company
- Southern California Gas Company
- Comcast Cable Company
- Pacific Bell
- San Bernardino County Flood Control District
- Central Valley Fire Protection Agency
- San Bernardino County Library System
- Fontana rubbish Collectors
- Omnitrans
- San Bernardino Association of Governments

6.3 Summary of Findings and Mitigation Measures

A. Findings

The environmental analysis Initial Study indicates that all impacts associated with implementation of the proposed project are mitigable to less than significant levels. Prior to mitigation, the identified significant effects associated with the proposed project concerned Traffic and Air Quality. Potentially significant Noise, Public Services (Police, Schools, Other Governmental Services), Utilities and Service Systems (Storm Water Drainage) and Recreation effects were also identified.

Based on the environmental impact assessment, with the implementation of the mitigation measures listed below, the following determinations can be made:

- The proposed project will not degrade the quality of the environment;
- The proposed project will not achieve short-term goals to the disadvantage of long-term environmental goals;
- The proposed project will not result in environmental impacts which are individually limited but cumulatively considerable when considering planned or proposed development in the immediate vicinity; and,

- The proposed project will not result in environmental impacts which have adverse effects on humans, either directly or indirectly.

B. Mitigation Measures

The following mitigation measures require implementation in order to ensure the avoidance or reduction to insignificant levels of any impacts associated with the proposed project.

Earth and Geology: The following mitigation measure will reduce hazards associated with groundshaking to insignificant levels:

1. Prior to the issuance of building permits, the developer shall submit building plans showing compliance with Uniform Building Code Seismic Zone 4 building construction standards.

Water and Hydrology: The following mitigation measures will minimize adverse impacts on water and hydrology:

1. The developer shall comply with National Pollutant Discharge Elimination System (NPDES) requirements regarding the implementation of Best Management Practices (BMPs) during construction.

Air Quality: The following mitigation measures in combination with various design and operational features already incorporated into the proposed project will reduce impacts on air quality to insignificant levels:

1. During project construction, the developer shall comply with SCAQMD Rule 403 regarding fugitive dust control. Measures shall be applied as appropriate and include, but not be limited to, the following: regular watering of exposed areas; truck wheel washing; suspension of earth-moving activities during high winds and smog alerts; use of well-tuned equipment; etc.

Traffic and Circulation: The following mitigation measures will preclude the occurrence of significant traffic impacts:

1. Prior to the issuance of occupancy permits for the homes adjacent to the construction and for which the permit is being requested, the developer shall construct the adjacent roadway improvements in accordance with the Tentative Map Conditions of Approval as noted.
 - **Beech Avenue** - Widen Beech Avenue from Walnut Avenue to the south boundary of this project. The widening will provide full half street with width of 33' of pavement, west curb and gutter, and 22 feet of parkway improvements (12' within right-of-way and 10' of landscape easement).
 - **Walnut Avenue** - Widen Walnut Avenue from Beech Avenue to Hemlock Avenue. The widening will provide full half street with width of 20', south curb and gutter, and 18 feet of parkway improvements.
 - **Hemlock Avenue** - Hemlock Avenue from Walnut Avenue to the south boundary of this project will be constructed with 36 feet minimum of pavement, east curb and gutter, and 21 feet of parkway improvements.

This section provides the framework of the off-site circulation improvements. If it is determined prior to approval of the final map that minor modifications to this framework are necessary, either to the components of the roadway improvements which will be constructed with each phase or to the off-site construction phasing itself, such modifications may be approved by the City Engineer and/or the Community Development Director, as appropriate.

2. The developer shall install traffic signs needed to control traffic flow to and from the site, as warranted.
3. The developer shall participate in the City's circulation fee program through the payment of appropriate fees.

Noise: The following mitigation measures will ensure that all identified adverse noise impacts will be reduced to within the limits of the City's established indoor and outdoor noise thresholds:

Prior to issuance of building permits, the developer shall submit plans showing the incorporation of energy conservation measures into the project in accordance with Title 24 of the California Administrative Code. Prior to the issuance of certificates of occupancy, the developer shall extend existing power and gas lines into the site in coordination with SCE and SCG, and in accordance with PUC regulation.

1. Prior to the issuance of building permits, water system plans shall be designed by the Fontana Water Company. Water system improvements shall be constructed prior to issuance of certificates of occupancy as required by the City of Fontana.
2. Prior to the issuance of certificates of occupancy, the developer shall submit plans showing: 1) the implementation of water conservation measures such as the use of automatic irrigation valves and controllers and site-appropriate drought tolerant plant materials; and, 2) compliance with Title 24 of the California Administrative Code regarding water-efficient appliances.
3. Prior to the issuance of certificates of occupancy, the developer shall either pay fees or complete construction in lieu of fees under Ordinance 1021 for sewer service to the site, and shall construct local sewer lines to serve the proposed development, as approved by the City of Fontana.
4. Prior to the issuance of certificates of occupancy, the developer shall pay fees or construct in-lieu facilities, join a community facilities district, or make interim arrangements if the facilities are not ready for construction, for the construction and maintenance of master-planned and regional storm drain facilities.

Recreation: The following mitigation measure will ensure that adequate parks and recreational facilities are available to future residents:

1. The developer shall either pay in-lieu parkland requirement fees or enter into an agreement with the City of Fontana to construct an off-site park and/or recreational facility as may be determined by the City and the developer.

6.4 Environmental Checklist Form and Determination

The following Environmental Checklist Form presents a roster of all issues assessed in this document and specifically identifies those issues for which there exists the potential for significant impacts to occur as a result of implementing the proposed Fontana Star Community Plan. The checked responses to each question on the checklist are based on the detailed preliminary environmental analyses conducted for the proposed development in Section 6.5 which follows. Also included within Section 6.5 are the sources employed to obtain information, conduct analyses, and make determinations regarding the nature, extent and significance of the respective impact under consideration. For ease of reference the sequence of the issues displayed on the checklist below closely corresponds to the organization of the impact assessment provided in Section 6.5, *Environmental Impact Assessment*, which follows.

- 1). **Project Title:** Fontana Star Community Plan
- 2). **Lead Agency Name and Address:** City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
- 3). **Contact Person and Phone Number:** Mike Norton, Associate Planner
(909) 350-6724
- 4). **Project Location:** 30.08 acre site on the southwest corner of Walnut Avenue and Beech Avenue in North Fontana
- 5). **Project Sponsor's Name and Address:** L & L (U.S.A.), Inc., Stanley Shih
2510 Regata Place
Diamond Bar, California, 91765
- 6). **General Plan Designation:** R-PC
- 7). **Zoning:** Single Family Residential: R-1-1000 with R-1-7200 Standard's
- 8). **Description of Project:** The proposed Fontana Star Community Plan involves the ultimate development of 111 dwelling units.
- 9). **Surrounding Land Uses and Setting:**
 - **North:** Walnut Avenue, open grazing land with disked fire breaks and/or residential development by California Landings is under construction.
 - **East:** Beech Avenue, open grazing land with disked fire breaks.
 - **South:** Open grazing land with disked firebreaks. Residential development by Stratham Group is scheduled to start construction very soon.
 - **West:** Hemlock Avenue, open grazing land with disked fire breaks.
- 10). **Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** See Section 6.2.D. herein for agencies whose approval may be required.

Environmental Factors Potentially Affected:

The environmental factors checked below could potentially be affected by this project, involving at least one impact that is marked "Potentially Significant Impact" or "Potentially Significant Unless Mitigation Incorporated" on the checklist on the pages which follow.

- | | | |
|---|--|---|
| ☐ Land Use and Planning | ☒ Transportation/Circulation | ☒ Public Services |
| ☐ Population and Housing | ☐ Biological Resources | ☒ Utilities and Service Systems |
| ☐ Geological Problems | ☐ Energy/Mineral Resources | ☐ Aesthetics |
| ☐ Water and Hydrology | ☐ Hazards | ☐ Cultural Resources |
| ☒ Air Quality | ☒ Noise | ☒ Recreation |
| | ☐ Mandatory Findings of Significance | |

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
A.	Land Use and Planning. <i>Would the project:</i>				
1).	Conflict with general plan designation or zoning?	☐	☐	☒	☐
2).	Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☐	☒	☐
3).	Be incompatible with existing land use in the vicinity?	☐	☐	☒	☐
4).	Affect agricultural resources or operations (e.g., impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☐	☒	☐
5).	Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☐	☐	☒
B.	Population and Housing. <i>Would the project:</i>				
1).	Cumulatively exceed official regional or local population projections?	☐	☐	☒	☐
2).	Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	☒	☐
3).	Displace existing housing, especially affordable housing?	☐	☐	☐	☒
C.	Earth and Geology. <i>Would the project result in or expose people to potential impacts involving:</i>				
1).	Fault rupture?	☐	☐	☐	☒
2).	Seismic ground shaking?	☐	☐	☒	☐
3).	Seismic ground failure, including liquefaction?	☐	☐	☐	☒
4).	Seiche, tsunami, or volcanic hazard?	☐	☐	☐	☒
5).	Landslides or mudflows?	☐	☐	☐	☒
6).	Erosion, changes in topography or unstable soil conditions from excavation, grading or fill?	☐	☐	☒	☐
7).	Subsidence of the land?	☐	☐	☐	☒
8).	Expansive soils?	☐	☐	☒	☐
9).	Unique geologic or physical features?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
D. Water and Hydrology. <i>Would the project result in:</i>				
1). Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☐	☒	☐
2). Exposure of people or property to water-related hazards such as flooding?	☐	☐	☒	☐
3). Discharge into surface waters or other alteration of surface water quality (e.g., temperature, dissolved oxygen, or turbidity)?	☐	☐	☒	☐
4). Changes in the amount of surface water in any water body?	☐	☐	☒	☐
5). Changes in currents, or the course or direction of water movements?	☐	☐	☒	☐
6). Changes in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?	☐	☐	☒	☐
7). Altered direction or rate of flow of groundwater?	☐	☐	☐	☒
8). Impacts to groundwater quality?	☐	☐	☒	☐
9). Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	☒	☐
E. Air Quality. <i>Would the project:</i>				
1). Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒	☐	☐
2). Expose sensitive receptors to pollutants?	☐	☒	☐	☐
3). Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☐	☐	☒
4). Create objectionable odors?	☐	☐	☐	☒
F. Transportation/Circulation. <i>Would the project result in:</i>				
1). Increased vehicle trips or traffic congestion?	☐	☒	☐	☐
2). Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
3). Inadequate emergency access or access to nearby uses?	☐	☐	☒	☐
4). Insufficient parking capacity on-site or off-site?	☐	☐	☐	☒
5). Hazards or barriers for pedestrians or bicyclists?	☐	☐	☒	☐

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
6).	Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
7).	Rail, waterborne, or air traffic impacts?	☐	☐	☒	☐
G.	Biological Resources. <i>Would the project result in impacts to:</i>				
1).	Endangered, threatened, or rare species or their habitats (including, but not limited to, plants, fish, insects, animals, and birds)?	☐	☐	☐	☒
2).	Locally designated species (e.g., heritage trees)?	☐	☐	☐	☒
3).	Locally designated natural communities (e.g., oak forest, coastal habitat, etc.)?	☐	☐	☐	☒
4).	Wetland habitat (e.g., marsh, riparian, and vernal pool)?	☐	☐	☐	☒
5).	Wildlife dispersal or migration corridors?	☐	☐	☒	☐
H.	Energy and Mineral Resources. <i>Would the project:</i>				
1).	Conflict with adopted energy conservation plans?	☐	☐	☐	☒
2).	Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☐	☒
3).	Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☒	☐
I.	Risk of Upset/Human Health. <i>Would the project involve:</i>				
1).	A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals, or radiation)?	☐	☐	☐	☒
2).	Possible interference with an emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
3).	The creation of any health hazard or potential health hazards?	☐	☐	☐	☒
4).	Exposure of people to existing sources of potential health hazards?	☐	☐	☐	☒
5).	Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☐	☒

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
J.	Noise. Would the project result in:				
	1). Increases in existing noise levels?	☐	☐	☒	☐
	2). Exposure of people to severe noise levels?	☐	☒	☐	☐
K.	Public Services. Would the project have an effect upon, or result in a need for new or altered government services, in any of the following areas:				
	1). Fire protection?	☐	☐	☒	☐
	2). Police protection?	☐	☒	☐	☐
	3). Schools?	☐	☒	☐	☐
	4). Maintenance of public facilities, including roads?	☐	☐	☒	☐
	5). Other governmental services?	☐	☒	☐	☐
L.	Utilities and Service Systems. Would the project result in a need for new systems or supplies, or substantial alterations to the following utilities:				
	1). Power or natural gas?	☐	☐	☒	☐
	2). Communications systems?	☐	☐	☒	☐
	3). Local or regional water treatment or distribution facilities?	☐	☐	☒	☐
	4). Sewer or septic tanks?	☐	☐	☒	☐
	5). Storm water drainage?	☐	☒	☐	☐
	6). Solid waste disposal?	☐	☐	☒	☐
	7). Local or regional water supplies?	☐	☐	☒	☐
M.	Aesthetics. Would the project:				
	1). Affect a scenic vista or scenic highway?	☐	☐	☒	☐
	2). Have a demonstrable negative aesthetic effect?	☐	☐	☒	☐
	3). Create light or glare?	☐	☐	☒	☐
N.	Cultural Resources. Would the project:				
	1). Disturb paleontological resources?	☐	☐	☐	☒
	2). Disturb archaeological resources?	☐	☐	☒	☐
	3). Affect historical resources?	☐	☐	☐	☒
	4). Have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	☐	☒
	5). Restrict existing religious or sacred uses within the potential impact area?	☐	☐	☐	☒

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
O.	Recreation. <i>Would the project:</i>				
	1). Increase the demand for neighborhood or regional parks or other recreational facilities?	☐	☒	☐	☐
	2). Affect existing recreational opportunities?	☐	☐	☒	☐
P.	Mandatory Findings of Significance.				
	1). Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
	2). Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☒	☐
	3). Does the project have impacts that are individually limited, but cumulatively considerable? (<i>Cumulatively considerable</i> means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
	4). Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Mitigation measures have been developed to reduce the potentially significant impacts of the proposed project. The analysis of potential environmental impacts associated with construction and occupancy of the proposed project and recommended mitigation is provided in the following section, Section 6.5, *Environmental Impact Assessment*.

DETERMINATION:

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 6.3, *Summary of Findings and Mitigation Measures*, herein have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." AN "ENVIRONMENTAL IMPACT REPORT" is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.



Signature

12/18/97
Date

Debbie Brazill, Senior Planner
For the City of Fontana

6.5 Environmental Impact Assessment

This section comprises an environmental assessment of the proposed Fontana Star Community Plan. It discusses the results of, and conclusions drawn from, analyses employed to determine the nature, extent, and potential significance of any environmental impacts which may occur as a consequence of implementing the proposed planned community. The environmental factors evaluated in this regard include:

■	Land Use and Planning	■	Risk of Upset/Human Health
■	Population and Housing	■	Noise
■	Earth Resources	■	Public Services
■	Water and Hydrology	■	Utilities
■	Air Quality	■	Aesthetics
■	Transportation and Circulation	■	Cultural Resources
■	Biological Resources	■	Recreation
■	Energy and Mineral Resources	■	Mandatory Findings of Significance

The foregoing environmental factors are discussed in the same sequence as in the City's Environmental Checklist provided previously in Section 6.4. For each environmental factor, *thresholds of significance* are provided. These thresholds assist the Lead Agency in their efforts to preliminarily determine whether the potential exists for one or more significant effects to occur as a result of implementing a proposed project. Appendix G of the State CEQA Guidelines, as amended, offers some general guidance in this regard by listing various types of possible environmental consequences which would typically be considered potentially significant were they to occur as a result of a proposed project. Conceptually, the subject list could be construed as generalized significance thresholds for a variety of environmental factors. However, Section 15064.(a)(1)(b) of the State CEQA Guidelines, as amended, offers the following additional guidance when undertaking the impact identification and significance determination process:

"The determination of whether a project may have a significant effect on the environment calls for careful judgement on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not possible because the significance of an activity may vary with the setting..."

Given this, the environmental assessment of a project relative to the foregoing generalized significance thresholds requires analyses which employ measurable evaluative criteria in order to arrive at objective and supportable determinations of an impact's significance. Such evaluative criteria include, but are not limited to: 1) Federal, State, and Local regulatory, codified, or other performance standards, specifications and action levels; 2) widely-accepted scientific and/or industry-based quantifiable factors; and, 3) other supportable factual and

objective data. To the extent practicable, the previously-mentioned *thresholds of significance* discussions included in this document identify both generalized significance thresholds and the above specific evaluative criteria employed in the impact assessment process.

For each foregoing environmental factor, a set of questions regarding its various key attributes are posed. As mentioned above, each is identical to, and presented in the same sequence as, those in the City's Environmental Checklist. The various analyses conducted as part of the project's impact assessment are undertaken to appropriately respond to each question and will have considered the proposed project's potential short-term (construction-related), operational, direct, indirect, and cumulative effects, as applicable. It is the results of such analyses which determine the nature, extent, and potential significance of a potential impact. As such, one of four responses summarizing the conclusions drawn regarding the significance of any identified environmental effects within the scope of the environmental factor being evaluated are provided for each question. These are follows:

- **No Impact.** The proposed project will not measurably impact the environment.
- **Less Than Significant Impact.** The proposed project may cause one or more impacts upon the environment, but to an extent which is below established significance thresholds.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The proposed project may generate one or more potentially significant impacts, but mitigation measures are available, and/or changes to the proposed development's physical or operational characteristics can be made, to reduce such impacts to less than significant levels.
- **Potentially Significant Impact.** The proposed project may cause one or more potentially significant impacts, and additional analysis is required to identify mitigation measures that could reduce such impacts to less than significant levels.

A. Land Use and Planning

Environmental Setting

The project site is vacant. Previous Figure 2-1 depicts existing on- and off-site land uses. The project site is designated as *R-PC, Residential-Planned Community*, on the Fontana General Plan Land Use Policy Map and zoned *Single Family Residential: R-1-10,000*.

(Sources: Site Reconnaissance, Fontana Land Use Policy Map, Fontana Zoning and Development Code)

Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project will normally have a significant adverse environmental impact on land use if it results in any of the following:

- A conflict with the adopted environmental plans and goals of the community in which it is located;
- A disruption or division of the physical arrangement of an established community;
- A conflict with established recreational, educational, religious, or scientific uses of the area;
- Incompatibility with existing land uses in the vicinity; or,
- A conversion of prime agricultural land to non-agricultural use or impairment of the productivity of prime agricultural land.

Evaluation of Environmental Impacts

1. Would the project conflict with the general plan designation or zoning?

Less than Significant Impact. As indicated above, the project site is designated as *R-PC, Residential - Planned Community* in the Fontana General Plan. The *R-PC* designation calls for single-family detached units on 7,200 square foot lots. The proposed land use under the Fontana Star Community Plan corresponds with this designation.

The site is zoned as *Single Family Residential: R-1-10,000*. Per City Code, approval of the Community Plan will facilitate a subsequent site development pursuant to *R-1-7,200* zoning. A zone change application and approval is not necessary. The proposed zone designation will be consistent with adjacent designations and conforms with the intent of the Fontana General Plan and Fontana Zoning and Development Code. The proposed community plan conforms to the development parameters contained in the Fontana Development Code.

Given the foregoing, no significant project-related effects related to Fontana General Plan consistency or Fontana Development Code conformity are anticipated, and no further assessment of these Land Use and Planning attributes is warranted.

(Sources: Proposed Fontana Star Community Plan (November, 1997 Iteration), Fontana General Plan, Fontana Zoning and Development Code)

2. Would the project conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?

Less Than Significant Impact. The site is within the North Fontana Redevelopment Project Area. The Redevelopment Plan calls for redevelopment of the project area to remove blighted conditions and to improve the existing developments. The project will not conflict with the redevelopment goals of this plan. Also, the project will comply with pertinent provisions of local and regional plans for the area, and will not conflict with environmental plans such as the Caltrans State Route 30 Project, San Bernardino County Congestion Management Plan, SCAG Regional Comprehensive Plan and Regional Mobility Plan, the Regional Water Quality Management Plan, the North Fontana Area Water Management Plan, the San Bernardino County Hazardous Waste Management Plan, the San Bernardino County Solid Waste Management Plan, or the North Fontana Infrastructure Study.

It is noted that although the proposed project will contribute additional pollutants to an airshed currently in non-attainment, the proposed project's consistency with the site's Fontana General Plan land use designation in combination with its required adherence to air-quality related mitigation measures identified in Section 6.5.E, *Air Quality*, below, render the effects of the proposed project on the South Coast Air Quality Management District's Air Quality Management Plan (SCAQMD AQMP) and all related air-quality related and/or driven policy plans such as the San Bernardino Air Quality Plan less than significant. Given the foregoing, no significant conflicts with applicable environmental plans or policies to which the proposed project may be subject are anticipated, and as a result, no further assessment of this Land Use and Planning issue is warranted

(Sources: North Fontana Redevelopment Plan, North Fontana Infrastructure Study EIR, Specific Plan Status Report, Proposed Fontana Star Community Plan (November, 1997 Iteration))

3. Would the project be incompatible with existing land uses in the vicinity?

Less Than Significant Impact. The site is currently vacant. Adjacent land uses include, but are not limited to, the following - to the: 1) *North* - future school site and existing detention basin; 2) *East* - vacant land; 3) *South* - vacant land; and, 4) *West* - vacant. Under the City's General Plan, the site and adjacent areas to the north, east, south, and west are planned for residential or residential related development. In fact, the general project vicinity is comprised of either proposed, approved, or existing developments with characteristics comparable to those exhibited by the proposed Fontana Star Community Plan. Given this, any land use incompatibilities are expected to be nominal. As a consequence, no further assessment of this issue is warranted.

(Sources: *Site Reconnaissance, Fontana and Devore USGS Quadrangles, Fontana General Plan Land Use Policy Map, Phase 1 Environmental Assessment, Westgate Specific Plan, Proposed Fontana Star Community Plan (November, 1997 Iteration)*)

4. Would the project affect agricultural resources or operations (e.g., impacts to soils or farmlands, or impacts from incompatible land uses)?

Less Than Significant Impact. The City has 840 acres of agricultural land, consisting mostly of unproductive vineyards. The site was once used as a vineyard, but has been abandoned for the last nine years. As part of their Farmland Mapping and Monitoring Program, the project site is designated as *Other Land* by the California Department of Conservation (not *Prime Farmland* or of *Statewide Importance*). In that the site does not contribute to the agricultural productivity of either the immediate area, region or the state, development as proposed would be expected to have a negligible impact on either agricultural production or resources.

(Sources: *North Fontana Infrastructure Study EIR, Fontana General Plan, California Farmland Mapping and Monitoring Program*)

5. Would the project disrupt or divide the physical arrangement of an established community (including a low-income or minority community)

No Impact. The area surrounding the site of the proposed project is generally undeveloped. Additionally, just like the site of the proposed project, most of the surrounding lands are slated for future residential development by the City's General Plan. As a result, there exists no potential for the proposed project to disrupt or divide the physical arrangement of an established community.

(Source: *Site Reconnaissance, Fontana General Plan Land Use Element*)

B. Population and Housing

Environmental Setting

The City's 1990 population was estimated at 87,500 residents. As of January 1, 1995, the population was estimated to be 105,240 residents. This is an increase of 20.3 percent over a five-year period, or 4.0 percent annually. The housing stock in the City of Fontana was estimated at 29,100 units in 1990. In 1995, the housing stock had grown by 3,519 units, for a total housing stock of 32,619 units. The project site is vacant and, therefore, contains neither housing nor residents at this time

(Sources: *1990 Census, 1995 Department of Finance Estimates, Site Reconnaissance*)

Thresholds of Significance

According to Appendix G of CEQA, a project will normally have a significant adverse environmental impact on housing or population if it results in any of the following:

- Substantial growth or concentration of population;
- Displacement of a large number of persons; or,
- Exceedance of projections identified in adopted environmental plans or policies.

Evaluation of Environmental Impacts

1. Would the project cumulatively exceed official regional or local population projections?

Less than Significant Impact. Upon build out of the 111 single-family dwelling units comprising the Fontana Star Community Plan, based on the City's 1990 average household size of 3.48 persons, the estimated resident population will be 386 residents. SCAG estimates the City's 2010 population at 167,052 residents and 47,394 housing units. The proposed project will represent less than 1 percent of the total forecasted population and housing units in the City. As a result, the proposed project will not exceed official regional or local population and housing projections.

(Sources: Fontana General Plan, SCAG 2010 Projections)

2. Would the project induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?

Less than Significant Impact. Residential development is under construction proximal to the site of the proposed project. In addition, several other residential subdivisions have already been planned for the general area. The proposed Fontana Star Community Plan is also relatively smaller than other planned communities in the area. Thus, it is not expected to induce growth at significant levels.

(Sources: California Department of Finance, Specific Plan Status Report, North Fontana Infrastructure Study EIR, Site Reconnaissance)

3. Would the project displace existing housing, especially affordable housing?

No Impact. In that the site of the proposed project is vacant, no housing would be displaced as a consequence of project site development.

(Source: Site Reconnaissance)

C. Earth and Geology

Environmental Setting

Please refer to Appendix 8.1.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR, RMA Group - Soils Engineering Investigation, February 19, 1990 and 9/25/97 Update - See Appendix 8.1 herein)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse environmental impact on the environment if it results in:

- Exposure of people or structures to major geologic hazards; or,
- Damage or destruction of unique geologic features.

Evaluation of Environmental Impacts

1. Would the project result in or expose people to potential impacts involving fault rupture?

No Impact. No faults are known to pass through the site. Thus, fault rupture hazards are unlikely to occur on-site, and no further assessment of this issue is warranted.

(Sources: RMA Group - Soils Engineering Investigation)

2. Would the project result in or expose people to potential impacts involving seismic ground shaking?

Less Than Significant Impact. The project site is located within a seismically active region, and potential sources of ground shaking hazards on-site include the San Andreas fault, San Jacinto fault, Cucamonga fault, Red Hill fault, Rialto-Colton fault, and an unnamed fault running through the City. Each of these faults may generate an earthquake large enough to

cause significant damage in the area. The probability of an earthquake affecting the site is dependent on the magnitude of the earthquake and the distance of the epicenter to the site. Should a magnitude 7.0 earthquake occur along the Cucamonga fault, ground accelerations of 0.47 gravity may be expected on-site. Earthquakes from faults further away from the site would produce lower ground accelerations.

While the proposed development will increase the number of persons who will be exposed to seismic hazards associated with the site, this hazard is no greater than hazards present in other areas of the southern California region. The wood-frame construction that will be used in residential structures on-site generally performs well during earthquakes. Earthquake damage to wood-frame single-family residential structures from near-field sources will be slight to moderate, and limited to walls thrown out of plumb, fallen chimneys, and torsional racking of foundations and wall elements. However, project compliance with Uniform Building Code Seismic Zone 4 building construction standards is expected to reduce on-site groundshaking hazards to acceptable levels. Based on the foregoing, no significant groundshaking hazards are anticipated with the proposed project.

(Sources: Sierra Lakes FEIR, RMA Group - Soils Engineering Investigation, California Landings FEIR)

3. Would the project result in or expose people to potential impacts involving seismic ground failure, including liquefaction?

No Impact. Fracturing, cracking, and fissuring of the ground on-site in the event of a seismic event are not expected due to the absence of any known earthquake faults or steep slopes on or proximal to the site. Sediments that are susceptible to liquefaction are generally water-saturated, medium-dense to loose cohesionless soil materials within 50 feet of the surface in areas exhibiting groundwater at similar depths or depths even closer to the ground surface. Groundwater beneath the site is expected to be more than 200 feet below the ground surface. Thus, no liquefaction hazards are expected on-site, and no further assessment of this issue is warranted.

(Sources: RMA Group - Soils Engineering Investigation, CBMWD Groundwater Elevations in the Chino Basin)

4. Would the project result in or expose people to potential impacts involving seiche, tsunami or volcanic hazard?

No Impact. The project site is not located near the ocean where a tsunami may occur. Also, the site is not located near any large body of open water which may result in seiche, nor is it located near a volcano. Thus, no hazards involving tsunamis, seiche, or volcanic

eruptions are expected to affect future residents at the site, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, RMA Group - Soils Engineering Investigation)

5. Would the project result in or expose people to potential impacts involving landslides or mudflows?

No Impact. The site is relatively flat, with slopes of less than 2 percent. The nearest hillside areas are the foothills of the San Gabriel Mountains, approximately 5.7 miles to the north. Further, the general site vicinity is not subject to any known mudflow hazards. As a result, no landslide or mudflow hazards are anticipated, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, RMA Group - Soils Engineering Investigation)

6. Would the project result in or expose people to potential impacts involving erosion, changes in topography or unstable soil conditions from excavation, grading or fill?

Less than Significant Impact. The site is relatively flat. Proposed site grading to accommodate the project would not be expected to substantially modify the general landform prevalent on-site and in the site vicinity. With no steep slopes existing or proposed, no water erosion hazards are expected. However, unconsolidated alluvial soils found on-site have a moderate to high wind erosion potential. Given this, strong Santa Ana winds from the north may presently erode bare soils on-site (i.e., generate fugitive dust and PM_{10}). However, it is expected that such wind erosion potential will be reduced to less than significant levels by erosion control measures such as watering, use of soil binders, soil covering or revegetation, and other dust control measures during project construction. In fact, it is anticipated that when fully developed, the site's overall production of wind-eroded materials for transport to off-site areas will be reduced. Given the foregoing, no significant erosion or grading-related effects are anticipated as a consequence of project implementation. As a result, no further assessment of this issue is warranted.

(Sources: RMA Group - Soils Engineering Investigation, Fontana and Devore USGS Quadrangles)

7. Would the project result in or expose people to potential impacts involving subsidence of the land?

No Impact. The site has not been identified as subject to subsidence hazards by the Fontana General Plan. Such a hazard is typically the result of fluids extraction beneath surface geomorphic structures in part dependent upon such fluids for structural integrity and stability. The project area has not been subjected to oil drilling activities. Further, groundwater levels in the area have remained relatively stable over the last 16-17 years. Soil tests show a subsidence factor of 0.15 feet and a shrinkage factor of 20 percent during grading and soil compaction. This settlement will be accounted for in establishing final ground elevations and building pads, and is not considered a structural hazard. Recommendations of the geotechnical study will be followed to ensure ground stability and structural integrity.

(Sources: Fontana General Plan, RMA Group - Soils Engineering Investigation, CBMWD)

8. Would the project result in or expose people to potential impacts involving expansive soils?

Less Than Significant Impact. The soils within the project area were identified by the USDA Soil Conservation Service as Tujunga soils. Tujunga soils are somewhat excessively drained, nearly level soils that formed on alluvial fans in granitic alluvium. Vegetation on these soils consists of thin strands of chamise, big sagebrush, and annual grasses and forbs. Tujunga soils are brown loamy sand and pale-brown coarse sand that are 60 inches deep or more. They are slightly acid and rapidly permeable. These soils are mainly used for citrus, grapes, small grains, and potatoes.

The on-site soil is Tujunga gravelly loamy sand. This soil occurs on long, broad, smooth alluvial fans, such as the project area. It consists of 15 to 30 percent gravel. This soil has slow to very slow runoff potential, and slight water erosion hazard due to its gravel content. Tujunga soils are not subject to excessive expansion hazards. Soil tests conducted for on-site soils indicate a very low expansion potential. In accordance with standard practice, additional testing during grading activities will be performed to ensure the absence of expansive soils. If found, however, engineering and construction methods, including reinforced foundations, could be applied to prevent any significant expansive soils hazards exposure. As a result, no further assessment of this issue is warranted.

(Sources: USDA Soil Survey of San Bernardino County, RMA Group - Soils Engineering Investigation)

9. Would the project result in or expose people to potential impacts involving unique geologic or physical features?

No Impact. The site is mainly flat and does not contain any unique geologic feature. The nearest geologic features are the San Gabriel Mountains, located 5.7 miles to the north, the Jurupa Hills, located 9 miles to the south, and Lytle Creek, located 9 miles to the east. The proposed development will maintain the flat topography of the area and will not affect any unique geologic feature in the region. As a result, no further assessment of this issue is warranted.

(Sources: Site Reconnaissance, Fontana and Devore USGS Quadrangles, RMA Group - Soils Engineering Investigation), Proposed Fontana Star Community Plan (November, 1997 Iteration))

D. Water and Hydrology

Environmental Setting

Groundwater. The project site is underlain by the Chino groundwater basin. The boundaries of the Chino basin are defined by the San Jose and Red Hill faults in the north, the Rialto-Colton fault and Jurupa Mountains on the east, the Pedley Hills and Santa Ana River on the south, and the Chino Hills on the west. This basin provides the majority of the domestic water needs of the City of Fontana and the surrounding areas. The groundwater basin has an estimated storage capacity (amount of water the basin can hold) of 13 million acre-feet. Available water in the basin which may be withdrawn is limited to approximately 7.5 million acre-feet. The annual safe yield of the basin (amount of water that may be pumped without lowering the water table) is 140,000 acre-feet, and current pumping rights are limited to this amount. Groundwater flows are generally north to south, from the San Gabriel Mountains toward the valley floor. Recharge of the basin is primarily provided by rainfall and storm runoff, supplemented by imported water from Metropolitan Water District (MWD) and reclaimed water from the Chino Basin Municipal Water District (CBMWD) at several percolation basins throughout the area.

Based on well monitoring data from the Chino Basin Watermaster, groundwater levels at the site are found at approximately 775 feet msl. Groundwater is estimated to be below 200 feet beneath the ground surface. Water quality in the basin is good, although nitrates and dissolved solids are found at levels above safe drinking standards at several locations in the basin. Volatile organic compounds, including trichlorethylene (TCE) and perchlorethylene (PCE) from industrial solvents, have also been detected at various wells in the Basin. The Santa Ana Regional Water Quality Control Board, along with other agencies and potential responsible parties in the area, is trying to identify the source of groundwater contamination and those responsible for its cleanup.

Groundwater pumping without equivalent recharge has led to the over drafting of water resources. CBMWD has been appointed as watermaster for the basin, and it regulates the pumping of groundwater at the basin and oversees artificial recharge of the groundwater with imported waters. Imported water is also used to supplement the domestic water supply needs in the area. A total of approximately 280,000 acre-feet of water is used for the domestic needs of the basin area each year.

Hydrology. All areas west of Sierra Avenue, including the project site, ultimately drain into the San Sevaine Channel. Major stormwater flows have led to area flooding near the San Sevaine channel. The project site itself is outside the boundaries of the 100-year and 500-year floods associated with the San Sevaine channel. An assessment district for the North Fontana area has been established to finance improvements to the San Sevaine Channel. Improvements to the channel from Foothill Boulevard to Victoria Avenue have been completed, with other improvements slowly under construction.

(Sources: Chino Basin Municipal Water District, Fontana and Devore USGS Quadrangles, San Bernardino County Flood Control District, Fontana General Plan, California Landings FEIR, Phase 1 Environmental Assessment)

Thresholds of Significance

According to Appendix G of CEQA, a project will normally have a significant adverse environmental impact on water resources or water quality if it results in any of the following:

- Substantial degradation of water quality;
- Contamination of the public water supply;
- Substantial degradation or depletion of groundwater resources;
- Substantial interference with groundwater recharge;
- Use of water in a wasteful manner; or,
- Substantial flooding, erosion, or siltation.

Evaluation of Environmental Impacts

1. Would the project result in changes in absorption rates, drainage patterns, or the rate and amount of surface run off?

Less than Significant Impact. The proposed project will involve paving and construction on a vacant site. The increase in impervious surfaces on-site will lead to decreases in ground

absorption and an increase in the amount of surface runoff. Also, drainage currently occurs as surface flows move across the site in a southwest direction. Project implementation will lead to the controlled diversion of surface runoff toward on-site curbs and gutters, and into a drainage line in Hemlock Avenue.

The increase in impervious surfaces is estimated at around 24 acres. Thus, the decrease in ground absorption is relatively minor compared to the ground absorption area in the Chino basin (192,000 acres). The increase in the amount of surface runoff in the area is also minor compared to the hydraulic capacity of the San Sevaine Channel, which drains the majority of the City of Fontana.

Based on the foregoing, development of the proposed project is not expected to have a significant adverse effect on groundwater resources, on- and off-site drainage patterns, or surface runoff volumes. As a consequence, no further assessment of this issue is warranted.

(Sources: Site Reconnaissance, Proposed Fontana Star Community Plan (November, 1997 Iteration))

2. Would the project result in exposure of people or property to water-related hazards such as flooding?

Less Than Significant Impact. The project site is outside any identified 100-year and 500-year flood plain, and there are no flood hazards on-site. Overflow of the San Sevaine Channel has led to localized flooding near the western edge of the City, but this flooding has not affected the project site, which is approximately two miles to the east. Further, there are no nearby bodies of water or dams which pose an inundation hazard to the project site. Given the foregoing, no significant flooding exposure is anticipated for future residents and other occupants of the proposed project. As a consequence, no further assessment of this issue is warranted.

(Sources: Fontana General Plan, North Fontana Infrastructure Study EIR)

3. Would the project result in discharges into surface waters or other alteration of surface water quality (e.g., temperature, dissolved oxygen, or turbidity?)

Less Than Significant Impact. Construction of the proposed development will require grading and excavation activities which may facilitate pollutants entering the storm drain system. This could lead to the degradation of stormwater quality in San Sevaine Creek and

downstream channels. In accordance with the NPDES and as monitored by the Fontana Public Services Department, the developer shall comply with NPDES requirements regarding the implementation of Best Management Practices (BMPs) during construction. This will ensure that no impacts to stormwater quality occur during construction.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR)

4. Would the project result in changes in the amount of surface water in any water body?

Less than Significant Impact. The proposed project will increase the amount of surface runoff due to paving and construction on existing vacant areas. The runoff from the proposed project will be directed into drainage channels in the area and eventually be conveyed into the San Sevaine Channel, which drains an area of several thousand acres. Approximately 24 acres of the 30.08-acre project site will be paved over. The added impervious area is considered minor when compared to the watershed of the San Sevaine Channel and its hydraulic capacity. Thus, the increase in runoff that will be directed into the San Sevaine Channel is not considered to be significant, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR)

5. Would the project result in changes in currents, or the course or direction of water movements?

Less Than Significant Impact. Lytle Creek is located 8.6 miles northeast of the project site, and San Sevaine Channel is located 2 miles to the west. Runoff from the project site will be minor and would be incapable of measurably changing the current, course, or direction of waters in either of these drainages. Given this, no significant effects are expected in this regard, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR)

6. Would the project result in changes in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?

Less than Significant Impact. The proposed project does not involve the direct addition or withdrawal of groundwater resources, since no wells are planned on-site. Further, excavation activities on-site are not expected to exceed 10 feet below the ground surface. Since

groundwater beneath the project site occurs below 200 under the ground surface, the development will not intercept an aquifer.

On the other hand, development of residential uses will lead to the paving of ground surfaces and a reduction in the amount of rainfall that is absorbed through the ground. Areawide, groundwater recharge to the Chino basin is made through the San Sevaine and Rich recharge basins, as well as alluvial fans near Lytle Creek at the base of the San Gabriel Mountains. The basin receives recharge from a 192,000-acre area. The loss of 24 acres of pervious area for recharge due to project site development represents a 0.003 % loss of the total recharge area. As a consequence, this loss of groundwater recharge capability is not considered significant, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR, Chino Basin Municipal Water District, Fontana Water Company)

7. Would the project result in altered direction or rate of flow of groundwater?

No Impact. The proposed project does not include the use of on-site water wells. Also, as indicated previously, project-related earth movement activities are not expected to extend to a depth greater than 10 feet, and groundwater occurs at depths greater than 200 feet below the ground surface. Water consumption from the project is estimated at 57,498 gallons per day and will be provided by the Fontana Water Company, which derives its supply from groundwater wells in the area and surface water from Lytle Creek. The Fontana Water Company has indicated that the project's water demand can be met by the Company's supply. The Chino Basin Watermaster adjudicates the use of water resources in the basin and ensures that the amount of water pumped from the basin is replenished by rainfall or imported waters to prevent over drafting. Thus, the project is not expected to result in water consumption that could alter the direction or rate of flow of the groundwater, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, North Fontana Infrastructure Study EIR, Chino Basin Municipal Water District, Fontana Water Company)

8. Would the project result in impacts to groundwater quality?

Less Than Significant Impact. The proposed project will lead to the paving of approximately 24 acres of currently-vacant land. Thus, the ground absorption capabilities of the project site will decrease. Fertilizers which may be used in landscaping yards and other open areas are expected to be absorbed primarily by the plant materials. Trace amounts may remain on the surface soils, but these are not anticipated to reach the groundwater, which is estimated to be greater than 200 below the ground surface. Given this, no significant groundwater quality effects are anticipated to occur as a result of the proposed project, and no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, Chino Basin Municipal Water District)

9. Would the project result in a substantial reduction in the amount of groundwater otherwise available for public water supplies?

Less than Significant Impact. The proposed project is estimated to require approximately 57,498 gallons of water per day for domestic use and landscape irrigation. This water demand is minimal when compared to the amount of water pumped from the Chino Basin (140,000 acre-feet per year) and the service area of the Fontana Water Company (the majority of the City of Fontana). Given the foregoing, no further assessment of this issue is warranted.

(Sources: Fontana Water Company, Chino Basin Municipal Water District, Sierra Lakes FEIR)

E. Air Quality

Environmental Setting

The project site is located near the eastern edge of the South Coast Air Basin of California. This Basin is a 6,600-square-mile area encompassing Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is bounded by the Pacific Ocean on the south and west and by the San Gabriel, San Bernardino, and San Jacinto mountains on the north and east.

The strength and location of a semipermanent, subtropical high pressure cell over the Pacific Ocean primarily controls the climate of the Basin. Climate is also affected by the moderating effects of differential heating between the land area of California and the adjacent Pacific Ocean. Warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidities characterize local climatic conditions. The climate of the project area is mild and pleasant year-round, with maximum temperatures ranging between 44 and 65 degrees Fahrenheit in winter and 58 to 95 degrees Fahrenheit in summer.

Precipitation is highly variable on a seasonal basis. Summers are often completely dry, and there are frequent periods of four to five months with no rain. In the winter, an occasional storm from the high latitudes sweeps across the coast, bringing rain. Annual rainfall is lowest in the coastal plain and inland valleys, higher in the foothills, and highest in the mountains. Annual rainfall in Fontana averages 14 inches and occurs almost exclusively from November to April.

Winds in the vicinity of the project site control both the initial dilution rate of locally-generated air pollutant emissions as well as their regional trajectory. Wind patterns for the Fontana area are similar to those in the Basin. During the day, the on-shore flow reaches inland across the coastal plain. Winds are from the west and have an average speed of 13

miles per hour. During the night, surface radiation cools the air in the surrounding mountains and hills. The air then flows into the valleys and meanders to the coast, producing a gentle land breeze. During summer, the nighttime land breeze nearly disappears. Conversely, the daytime sea breeze is weaker and of shorter duration in the winter. Santa Ana winds are occasional winds blowing from the northeast between the months of October and March.

The air quality readings in the Fontana area for the past 5 years have not exceeded state and federal ambient air quality standards for carbon monoxide, nitrogen oxide, or sulfur oxides. The standards for ozone were exceeded 65 to 144 days per year between 1990 to 1995. The sources of ozone include nitrogen oxide emissions from areas southwest and west of the City.

Ambient levels of suspended particulates (PM_{10}) exceed the State standard between 56.7 percent to 72.9 percent of the samples in each year, with trends toward decreasing maximum concentrations. PM_{10} emissions in the immediate project area are principally generated by bare soils and grading and excavation activities, especially during periods of heavy winds.

Emissions in the immediate project area are principally from vehicles traveling on city streets and the Devore (I-15) Freeway, as well as those generated by area sources, such as adjacent industrial uses, and other heavy industries and equipment. Local emissions tend to disperse toward the northeast and east during the day, and slowly drift southwest or south at night. The project site is vacant, which may be contributing to particulate emissions during periods of heavy winds.

(Sources: *SCAQMD Air Quality Management Plan, Air Monitoring Station Data, Site Reconnaissance*)

Thresholds of Significance

According to Appendix G of CEQA, a project will normally have a significant adverse environmental impact on air quality if it results in any of the following:

- A conflict with adopted environmental plans and goals of the community where it is located; or,
- A violation of any ambient air quality standard, a significant contribution to an existing or projected air quality violation, or exposure of sensitive receptors to substantial pollutant concentrations.

The South Coast Air Quality Management District (SCAQMD) has also established emissions thresholds for a number of criteria pollutants. These thresholds apply to both short-term (construction-related) emissions and long-term (operational) emissions. They are:

- 550 pounds per day for carbon monoxide (CO)
- 55 pounds per day for nitrogen oxides (NO_x)
- 55 pounds per day for reactive organic gases (ROG)
- 150 pounds per day for sulfate oxides (SO_x)
- 150 pounds per day for particulates ten microns or less in size (PM₁₀)

Evaluation of Environmental Impacts

1. Would the project violate any air quality standard or contribute to an existing or projected air quality violation?

Potentially Significant Unless Mitigation Incorporated. Grading and excavation activities associated with construction of the proposed community plan will lead to fugitive dust, PM₁₀, and pollutant emissions from construction equipment, construction crew vehicle trips, and truck trips during construction. It is estimated that 100 pounds of fugitive dust per acre per day may be generated by grading and excavation activities, and 26.4 pounds of PM₁₀ may be generated per acre disturbed per day. Santa Ana winds may lead to the erosion of bare soils during grading and excavation. Based on SCAQMD's screening table for construction, the project is not expected to generate construction-related emissions that would exceed thresholds of significance (less than 1.3 million square feet of residential floor area and less than 177 acres of grading). The developer shall comply with SCAQMD Rule 403 regarding fugitive dust control. The measures may include regular watering of exposed areas; truck wheel washing; suspension of earth-moving activities during high winds and smog alerts; use of well-tuned equipment; etc.

The proposed Community Plan will lead to the development of 111 dwelling units. Air emissions that will accompany the use and occupancy of this development include mobile source pollutant emissions from vehicle trips, stationary source emissions from power and natural gas consumption, and stationary source emission from potential on-site activities such as barbecues and fireplaces. Table 6-1 presents estimates of the expected operational pollutant emissions from vehicular trips and energy consumption created by the project.

As shown, the project is expected to generate pollutant emissions which will exceed SCAQMD thresholds for carbon monoxide, nitrogen oxides, and reactive organic gases. The majority of these emissions will come from vehicle trips to and from the commercial uses at the southwest corner of the site. The project proposes the inclusion of the following components and measures by which to effect emissions reductions:

- Bus turnouts and bus stops
- Pedestrian walkways and facilities
- Bike facilities
- Synchronized traffic signals
- Residential uses adjacent to commercial uses
- Compliance with Title 24 energy conservation measures

TABLE 6-1
OPERATIONAL DAILY POLLUTANT EMISSIONS (lbs/day)

Emission Source	Number of Trips	CO	NO _x	ROG	SO _x	PM ₁₀
Residential Trips	1,060 trips	295.8	35.8	31.58	2.28	4.12
Electricity Consumption	1,735 kWh/day	0.54	3.14	0.03	0.33	0.11
Gas Consumption	24,661 cf/day	0.58	2.72	0.15	0.00	0.01
Total		296.9	41.66	31.76	2.6	4.24
Threshold		550.00	55.00	55.00	150.00	150.00

Source: SCAQMD MAAQI Computer Model.

To further reduce project-related air emissions, the proposed project shall comply with City of Fontana ARTICLE XIV, *Transportation Demand Management*, Division 1, *Transportation Demand Management*, Sections 30-383 through 30-386. These measures will reduce CO, NO_x, and ROG emissions from residential and commercial trips by up to 20 percent.

The proposed development conforms with the Fontana General Plan. As a consequence, its air quality impacts have been considered as part of the 1991 General Plan Update and the North Fontana Infrastructure Study EIR. Therefore, the City has already considered the potential impacts associated with the development of vacant areas in Fontana, including the project site. The proposed development would represent less than 1 percent of future development in the City, and less than 1.0 percent of the development anticipated in the North Fontana area alone. Thus, its air quality impacts would not be substantial or significant in the context of the estimated pollutant emissions from future development expected in North Fontana and in the City as a whole.

(Sources: SCAQMD Model for the Analysis of Air Quality Impacts, Fontana General Plan, Site Reconnaissance, Proposed Fontana Star Community Plan (November, 1997 Iteration))

2. Would the project expose sensitive receptors to pollutants?

Potentially Significant Unless Mitigation Incorporated. The proposed development would create short-term and long-term air quality impacts which may affect sensitive receptors.

Short-Term (Construction-Related)

During construction, fugitive dust and PM₁₀ particulate emissions may affect future adjacent residences. As much as 110 pounds of fugitive dust per acre per day can be generated,

including 26.4 pounds of PM₁₀. Measures to reduce impacts to sensitive receptors shall be implemented to ensure that fugitive dust nuisance is eliminated or reduced from adjacent properties. The developer shall comply with SCAQMD Rule 403 regarding fugitive dust control. The measures may include regular watering of exposed areas; truck wheel washing; suspension of earth-moving activities during high winds and smog alerts; use of well-tuned equipment; etc.

Long-Term (Operations-Related)

The nearest sensitive uses to the project site will be single-family homes presently under construction to the south. These homes would be exposed to vehicle emissions on Beech Avenue. However, since vehicle emissions will occur on roadways and freeways in the region that will be used by vehicles coming to and from the site and will not be limited to the site, air pollutants will not be concentrated in these adjacent residential areas. Also, intersections that will be affected by the project would operate at LOS D or better after implementation of roadway improvements and other measures discussed in the following section, *Traffic and Circulation*. Based on SCAQMD's Air Quality Handbook, the estimated CO concentration would be 12.5 ppm, which is less than the State standard of 20 ppm.

(Sources: Site Reconnaissance, SCAQMD CEQA Air Quality Handbook)

3. Would the project alter air movements, moisture, or temperature, or cause any change in climate?

No Impact. The proposed project will feature one- and two-story structures, typical of residential homes found in nearby areas. The project will not feature any structure large enough to alter air movement, or uses which may affect moisture or temperature in the area. Climate in the area is expected to remain the same with the proposed project.

(Sources: SCAQMD Air Quality Management Plan, Site Reconnaissance)

4. Would the project create objectionable odors?

Less than Significant Impact. There are no objectionable odors that are currently present on-site or in the adjacent areas, and none of the adjacent land uses have the potential to create objectionable odors. The proposed development will consist of residential uses, which are not expected to create objectionable odors. As a result, no significant effects upon air quality are anticipated in this regard.

(Source: Site Reconnaissance, Proposed Fontana Star Community Plan - November, 1997 Iteration)

F. Transportation/Circulation

Environmental Setting

Regional access to the site is provided by the San Bernardino Freeway (I-10) and the Devore Freeway (I-15). The I-10 Freeway is a major east-west route connecting Fontana with the Los Angeles metropolitan area on the west and the desert areas on the east. The I-15 Freeway runs north-south from San Diego on the south to Barstow and Las Vegas on the north.

A description of the local roadway system and its current operating characteristics are provided in Appendix 8.2 herein.

Omnitrans provides public transportation services to the City. Near the project site, Bus Route 74 runs on Foothill Boulevard and into the Village of Heritage development, west of the project site. The downtown Fontana TransCenter serves as a transfer station for several other intercity bus routes and Metrolink trains.

The nearest railroad is the Southern Pacific, located approximately 0.45 miles south and 0.75 miles west of the project site and running in a southeast to northwest direction. The nearest airport is the Rialto Airport, located 8 miles to the west. Rialto Airport is a general aviation airport owned by the City of Rialto. Ontario International Airport is a commercial airport owned by the City of Los Angeles and located approximately 14 miles from the project site. It presently serves nine passenger airlines and several freight companies (UPS, Federal Express, Airborne Express, Armory World Wide, DHL Express, and the U.S. Post Office). Fixed-base operators (auto instrument repair) and United Beachcraft West Wells Aviation (park and refuel aircraft) also have facilities on-site.

(Sources: RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2), Fontana General Plan, Fontana MEA)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse impact on traffic and circulation if it causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. The Circulation Element of the Fontana General Plan has established a minimum level of service standard for roadways in the City at LOS C. The City of Fontana considers a roadway improvement that may be required for a project, but is consistent with the Fontana General Plan Circulation Element, to be a *less than significant* impact provided the project contributes its fair share funding for the improvement. Any impact which cannot be mitigated by improvements consistent with the Circulation Element is considered significant. The San Bernardino County Congestion Management Plan has established LOS E as the minimum acceptable LOS standard for the CMP network.

Evaluation of Environmental Impacts

1. Would the project result in increased vehicle trips or traffic congestion?

Potentially Significant Unless Mitigation Incorporated. A detailed traffic impact analysis addressing the proposed project can be found as Appendix 8.2 herein. At build out, the proposed project is projected to generate approximately 1,060 daily vehicle trips. Of these, 80 and 115 are expected to occur during the AM and PM Peak Hours, respectively. The addition of these trips to the area circulation system will require project-specific mitigation. The measures to be implemented by the proposed project in this regard are listed below:

- The proposed project shall provide full access capabilities at all external project access points.
- The proposed project shall install stop signs at the external project access points.
- The proposed project shall provide minimum 35 foot radius curb returns at all external project access points.
- The proposed project shall construct Walnut Street adjacent to the project site at its ultimate half-section width as an enhanced Collector (86' ROW).
- The proposed project shall construct Hemlock Avenue adjacent to the project site at its ultimate half-section width as a Modified Collector Street (82' ROW).
- The proposed project shall construct Beech Avenue adjacent to the project site at its ultimate half-section width as a Primary Highway (104' ROW).

No other project-specific mitigation measures are required.

(Sources: RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 6B, Fontana General Plan)

2. Would the project result in hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. Project roadways will reflect designs and standards in full compliance with applicable City requirements. Given this, no sharp corners or dangerous intersections will be constructed on-site and no hazards to safety from project design features are expected.

(Sources: RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2, Fontana General Plan)

3. Would the project result in inadequate emergency access or access to nearby uses?

Less Than Significant Impact. The project site does not serve as an emergency route to nearby uses. In addition, the proposed project will be constructed in full compliance with all applicable City codes and ordinances. Based on the foregoing, no significant effects upon emergency access are anticipated as a result of the proposed project, and no further assessment of this issue is warranted.

(Sources:RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2, Fontana General Plan)

4. Would the project result in insufficient parking capacity on-site or off-site?

No Impact. The proposed project will provide on-site parking garages for individual dwelling units. In addition, on-street parking shall be allowed within residential streets. Given the foregoing, no significant parking-related impacts attributable to the proposed project are anticipated, and no further assessment of this issue is warranted.

(Sources:RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2, Fontana Zoning and Development Code)

5. Would the project result in hazards or barriers for pedestrians or bicyclists?

Less than Significant Impact. The site or adjacent area is currently not used as a bikeway or pedestrian trail, nor are bike routes or pedestrian sidewalks available near the site. The project will provide bikeways around and within the site to serve residents and employees. Sidewalks will also be provided along street rights-of-way to serve the public. The introduction of pedestrians and bicyclists to the area may increase the potential for accidents between vehicles and pedestrians, and/or bicyclists. Bike lane signage and crosswalks will be provided on street intersections and driveways to allow for safe pedestrian and bicyclist travel. Based on the foregoing, no significant hazards or barriers for pedestrians or bicyclists are anticipated as a result of the proposed project. As a result, no further assessment of this issue is warranted.

(Sources:RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2, Fontana General Plan, Fontana Star Community Plan - November 6, 1997 Iteration)

6. Would the project result in conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. Omnitrans provides public transportation services to the City. The nearest bus routes (Route 20, 73, and 74) run through the areas east, south, and west of the site. The residents and employees at the Fontana Star development may increase the demand for public transit in the area. The proposed project will provide opportunities for the use of alternative

transportation. Bike paths will be provided along the perimeter roadways and the main collector roadways at the site. The developer will also obtain Omnitrans approval of bus turnout/stop locations as mentioned above. The developer shall construct bus turnout/stop locations concurrent with adjacent street improvements. No adverse impacts on public transit are expected. As a result, no further assessment of this issue is warranted.

(Sources: RKJK - Traffic Impact Analyses, 11/14/97 - See Appendix 8.2, Omnitrans Bus Book)

7. Would the project result in rail, waterborne, or air traffic impacts?

Less Than Significant Impact. The nearest railroad is the Southern Pacific Railroad, located approximately 1.5 miles south of the site, and is oriented in a southeast-northwest alignment. The nearest airport is the Rialto Airport, located 8.5 miles west of the project site on Miro Way. Ontario International Airport is located to the west, approximately 14.5 miles from the site. The proposed residential development will not have a direct effect upon area air, rail, or waterborne transportation facilities, except perhaps as typical service consumers. As a result, any project-related effects on such facilities are considered negligible. Given this, no further assessment of this issue is warranted.

(Sources: Fontana and Devore USGS Quadrangles, Ontario International Airport)

G. Biological Resources

Environmental Setting

On-site vegetation consists of non-native grassland and disturbed/ruderal areas. Any habitat on the project site is extremely low quality. The site is devoid of any known sensitive species of either animals or plants.

(Source: Site reconnaissance)

Thresholds of Significance

According to Appendix G of CEQA, a project will normally have a significant adverse impact on biological resources if it results in any of the following:

- A substantial effect on a rare or endangered animal or plant species, or the habitat of the species;
- A substantial interference with the movement of any resident or migratory fish or wildlife species; or,
- A substantial reduction in the habitat for fish, wildlife, or plants.

Evaluation of Environmental Impacts

1. Would the project result in impacts to endangered, threatened, or rare species or their habitats (including, but not limited to, plants, fish, insects, animals, and birds)?

No Impact. In that no sensitive plant or animal species, or their habitat occurs on-site, no impacts in the foregoing regard are expected and no further assessment of this issue is warranted.

(Source: Fontana General Plan Update)

2. Would the project result in impacts to locally designated species (e.g., heritage trees)?

No Impact. The project site contains no locally designated species, including trees. Given this, no impacts in the foregoing regard are expected and no further assessment of this issue is warranted.

(Source: Fontana General Plan Update)

3. Would the project result in impacts to locally-designated natural communities (e.g., oak forest, coastal habitat, etc.)?

No Impact. The project site contains no locally designated natural communities. Given this, no impacts in the foregoing regard are expected and no further assessment of this issue is warranted.

(Sources: Fontana General Plan Update)

4. Would the project result in impacts to wetland habitat (e.g., marsh, riparian, and vernal pool)?

No Impact. The site does not contain any wetland habitat which may be impacted by future development. The proposed project will have no impact on wetland habitat, and as a result, no further assessment of this issue is warranted.

(Sources: Site Reconnaissance, USGS Quadrangles for Fontana and Devore)

5. Would the project result in impacts to wildlife dispersal or migration corridors?

Less than Significant Impact. The project site currently provides open space and could be used as a wildlife corridor. But the presence of paved roadways in the area has required animals to cross the streets to transfer between vacant areas. The project site in itself does not serve as a wildlife dispersal or migration corridor. Raptors may use the site for foraging, but

suitable nesting trees are not present on-site. Thus, construction of the proposed project will not obstruct wildlife migration and no further assessment of this issue is warranted.

(Sources: Site Reconnaissance)

H. Energy and Mineral Resources

Environmental Setting

The project site and surrounding area is within an area designated by the California Department of Conservation as containing regionally significant construction aggregate resources as defined under the Surface Mining and Reclamation Act (SMARA). However, no mineral extraction activities presently occur in the immediate project area, and none are anticipated to occur in the future. No other energy or mineral resources are known to occur in the project vicinity. Electrical energy in the region is provided by the Southern California Edison Company, which utilizes energy resources throughout the state.

(Sources: SCE, Site Reconnaissance, SMARA Designation Map 85-2)

Thresholds of Significance

According to Appendix G of CEQA, a project will normally have a significant adverse impact on energy and mineral resources if it results in any of the following:

- An encouragement of activities which result in the use of large amounts of fuel or energy; or,
- The use of fuel or energy in a wasteful manner.

Evaluation of Environmental Impacts

1. Would the project conflict with adopted energy conservation plans?

No Impact. The proposed project will consume approximately 1,735 kilowatt hours of electricity per day. This is not a significant amount of the electrical energy supplies of the Southern California Edison Company (SCE) or of the energy consumption in the City. The proposed development will not conflict with any adopted energy conservation plan by the City of Fontana or the SCE. As a result, no further assessment of this issue is warranted.

(Sources: SCE, City of Fontana)

2. Would the project use non-renewable resources in a wasteful and inefficient manner?

No Impact. The proposed project will utilize construction materials such as gravel, sand, wood, asphalt cement, steel bars, etc., for the residential structures and ancillary improvements proposed on-site. Energy in the form of fossil fuels and electricity will also be utilized by construction vehicles and light poles during construction, use, and occupancy of these structures. The project will comply with the State Building Energy Efficiency Standards under Title 24 of the California Administrative Code. The proposed development is not expected to use construction materials or energy in a wasteful or inefficient manner. As a result, no further assessment of this issue is warranted.

(Source: City of Fontana)

3. Would the project result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?

Less than Significant Impact. While the project site is designated as a regionally-significant source of aggregate resources, the site does not support ongoing sand or gravel extraction activities. The City has designated these areas for urban development and does not encourage their use for mining activities. Also, mining activities at the site could create impacts to nearby uses (such as dust, noise, truck traffic, etc.) which may affect future residents in adjacent residential areas. The Fontana General Plan allows mineral extraction activities only when all public health and safety hazards can be eliminated. Also, the loss of 30.08 acres is not considered significant in the face of 5.8 million acres of designated regionally significant resources areas in San Bernardino County, of which 29,605 acres are considered by the Division of Mines and Geology as worthy of preservation. Given the foregoing, no further assessment of this issue is warranted.

(Sources: Site Survey, Fontana General Plan, SMARA Designation Map 85-2, California Division of Mines and Geology)

I. Risk of Upset and Human Health

Environmental Setting

There are no industrial or agricultural uses found on or near the site. No surface evidence of any indiscriminate dumping of hazardous or toxic substances were observed during a walk-over of the project site.

The transportation of hazardous materials/wastes on freeways and major arterial roadways running through the City poses flash point (fire) and explosive potential. Restrictions placed on transporters of hazardous materials/wastes include the avoidance of heavily-populated areas unless no other satisfactory route exists; limitations on access to bridges and tunnels; and a

one-mile wide zone limitation along freeways for access to fuel and services. Regulating the gross vehicular weight is another limitation that restricts transporters from some public roads.

The transportation of hazardous materials is generally regulated by the issuance of permits, not by transportation route. Law enforcement agencies are empowered to strictly enforce regulations regarding the inspection of vehicles and the training and licensing of transportation personnel. The transportation of hazardous materials on interstate freeways is controlled by vehicle safety inspections.

The railroads are similarly regulated in that explosive materials are controlled within the train cars, but there are no controls regarding train routes. The only restriction is that potentially flammable or explosive materials cannot be any closer than six rail cars from the train locomotive. The SPRR railroad is 0.45 mile south of the site and carries potential hazards due to rail car derailment and hazardous material spills.

(Sources: Fontana General Plan)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse impact on risk of upset and human health if it creates a potential public health hazard or involves the use, production, or disposal of materials which pose a hazard to human, animal, or plant populations in the affected area.

Evaluation of Environmental Impacts

1. Would the project involve a risk of accidental explosion or release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation)?

No Impact. The proposed development will consist of 111 dwelling units. No land uses which will generate, use, or dispose of hazardous materials in quantities which could pose public health hazards are expected to be located on-site. As a result, no further assessment of this issue is warranted.

(Sources: Fontana Star Community Plan - November 6, 1997 Iteration)

2. Would the project involve possible interference with an emergency response plan or emergency evacuation plan?

No Impact. The project site does not contain a roadway designated as an emergency route. The proposed development will be bounded by public roadways on three sides, with several Community Entry Roadways and internal roadways which serve individual lots. Compliance with emergency access requirements of the San Bernardino County Fire Department will ensure that emergency response to the site will not be hampered by the proposed site plan or

other development features. Based on the foregoing, no project-related effects upon emergency access or response is anticipated. Given this, no further assessment of this issue is warranted.

(Source: Fontana Star Community Plan - November 6, 1997 Iteration, Fontana General Plan)

3. Would the project involve the creation of any health hazard or potential health hazards?

No Impact. The proposed residential development will not create any known health hazards.

(Source: City of Fontana - Personal Communication)

4. Would the project involve exposure of people to existing sources of potential health hazards?

No Impact. No known health hazards are known to exist either on or proximal to the site of the proposed project. Given the foregoing, no significant health hazards are expected as a result of the proposed project, and no further assessment of this issue is warranted.

(Source: Fontana Star Community Plan - November 6, 1997 Iteration)

5. Would the project involve increased fire hazard in areas with flammable brush, grass, or trees?

No Impact. The project site is located outside any wildfire area designated by the City. The site and surrounding areas are also essentially devoid of trees and brush. As a consequence, the project would not result in an increased fire hazard.

(Sources: Fontana General Plan, Site Reconnaissance)

J. Noise

Environmental Setting

Noise is referred to as unwanted sound. The annoyance produced by noise depends on its loudness, duration, time of day, impulse character, pure tone content, variability, season of the year, and the receiver. While individual annoyance created by noise is relative and variable, excessive disturbance can lead to problems with physical health, psychological stability, social cohesion, property values, and economic productivity.

Noise levels in the project area are created by a variety of sources. The major source is vehicular noise on the surrounding streets.

(Sources: Fontana MEA, Site Reconnaissance)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant impact on the environment if it results in a substantial increase in the ambient noise levels for the adjoining areas. The Noise Element of the Fontana General Plan has established the acceptable range of ambient noise levels for various land uses in the City. Interior noise levels shall be kept at 45 dB CNEL or lower for residential uses and exterior noise levels at 65 dB CNEL for all uses. The Fontana Noise Ordinance limits construction and demolition activities to weekdays from 7 a.m. to 6 p.m. Noise from stationary sources is also regulated to prevent public nuisance.

Evaluation of Environmental Impacts

1. Would the project result in increases in existing noise levels?

Less Than Significant. Development of the proposed project will result in increases in vehicles on local streets, thereby causing an increase in noise levels in the area. Assuming an average speed of 35 miles per hour, the increases due to vehicular noise from the project are expected to be no greater than 3 DBA, and will not be audible. Aside from vehicle noise, stationary activities on-site from residential uses will result in intermittent noise level increases.

(Sources: Site Reconnaissance, Fontana MEA, FHWA Noise Prediction Model)

2. Would the project result in exposure of people to severe noise levels?

Potentially Significant Unless Mitigation Incorporated. Construction can cause substantial noise. Estimates of construction activity noise are provided in Table 6-2. Certain activities are particularly sensitive to noise. These include sleeping, studying, reading, leisure, and other activities requiring intense concentration or relaxation. Hospitals and convalescent homes, churches, libraries, schools, and child care facilities are considered noise-sensitive uses and are best located away from noise sources. Residential areas are also considered noise-sensitive, especially during the nighttime hours. Residential development and a school are planned to be constructed adjacent to the site of the proposed project. As a consequence, project construction may expose people to severe noise levels. Given this, the following mitigation measure shall be implemented.

- During project construction, the developer shall implement construction noise control measures in accordance with the City's Noise Ordinance, including limiting construction activities to the hours between 7 a.m. and 6 p.m.

(Sources: Site Reconnaissance, California Landings Specific Plan FEIR, Fontana General Plan)

K. Public Services

Environmental Setting

Public services in the City of Fontana are provided by City and County agencies and other special districts. The Fontana Police Department provides law enforcement and police protection services to the City. The Police Station is located at 17005 Upland Avenue, approximately 6 miles southeast of the project area. There is an existing contact station at Southridge in the southern section of the City, and one is planned for the North Fontana area. The Police Department currently has 115 sworn police officers.

The San Bernardino County Fire Department provides fire protection services to the City of Fontana. Fire stations that would provide primary response to the project site include Station 78, located at 6262 Citrus Avenue, which is 4 miles northeast of the site, and Station 73, located at 14360 Arrow Highway, 3 miles south of the site. Both stations are each equipped with one pumper truck and one water tender and staffed by 3 firefighters at any time. The average response time citywide is from 4 to 5 minutes.

TABLE 6-2 TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS		
Equipment Type	Noise Level at 50 feet	Noise Level at 50 feet with Noise Control
Earth moving:		
Front Loaders	79	75
Backhoes	85	75
Dozers	80	75
Tractors	80	75
Scrapers	88	80
Graders	85	75
Trucks	91	75
Pavers	89	80
Material Handling:		
Concrete Mixers	85	75
Concrete Pumps	82	75
Cranes	83	75
Derricks	88	75
Stationary Equipment:		
Pumps	76	75
Generators	78	75
Compressors	81	75
Impact Equipment:		
Pile Drivers	101	95
Jack hammers	88	75
Rock Drills	98	80
Pneumatic Tools	86	80
Other Equipment:		
Saws	78	75
Vibrators	76	75
* Taken from Noise from Construction Equipment and operations, Building Equipment and Home Appliances, US EPA, December 1971. ** Estimated levels obtainable by selection of quieter procedures or machines and implementing noise control features requiring no major redesign or extreme cost. Source: California Landings FEIR, 1994.		

The project site is within the service boundaries of the Etiwanda Unified and Chaffey Joint Union High School Districts. The East Heritage Elementary School and the Etiwanda Intermediate School of the Etiwanda Unified School District will provide the project with elementary and junior high school services. Etiwanda High School of the Chaffey Joint Union High School District will provide high school services.

The San Bernardino County Library System provides library services to the City of Fontana through the Fontana Branch Library at 8334 Emerald Avenue. This library has 13,000 square feet of floor area and 81,000 book volumes. Plans for expansion of the Fontana library, a

branch library, bookmobiles, and an increase in library staff are being implemented. The City of Fontana also provides other civic and administrative services.

(Sources: Etiwanda School District, Chaffey Joint Union High School District, Sierra Lakes EIR, Fontana General Plan)

Thresholds of Significance

According to CEQA, a project will normally have a significant adverse impact on public services if it requires an alteration or expansion of public services.

Evaluation of Environmental Impacts

1. Would the project have an effect upon, or result in a need for new or altered government services in relation to fire protection?

Less Than Significant Impact. The proposed development will increase the demand for fire protection services in the area. However, the San Bernardino County Fire Department indicates that the proposed development would not have a significant effect on their current and projected level of service. In addition, the project will provide on-site and off-site fire hydrants, as well as adequate emergency access to all units, in accordance with the requirements of the San Bernardino County Fire Department. Prior to the issuance of building permits, the developer shall obtain site plan approval from the San Bernardino County Fire Department regarding the provision of on-site and off-site fire hydrants, adequate emergency access, and other fire district requirements. In order to reduce fire protection service demand, the project will comply with pertinent provisions in the Uniform Fire Code regarding building construction and design, and with any existing requirements for all new construction to provide fire sprinkler systems. Also, the developer shall pay fees under Resolution 92-161 for additional fire protection services to serve the proposed development, if required. Based on the foregoing, no significant impacts upon fire protection services are anticipated, and no further assessment of this issue is warranted.

(Source: San Bernardino County Fire Department)

2. Would the project have an effect upon, or result in a need for new or altered government services in relation to police protection?

Potentially Significant Unless Mitigation Incorporated. The proposed development will increase the number of residents and employees on-site. This in turn will increase the demand for law enforcement and police protection services. The Public Services and Facilities Element of the Fontana General Plan states a standard of 1.4 police officers and 0.6 personnel per 1,000 residents. On this basis, the proposed project's estimated 286 residents will generate a demand of approximately 0.4 police officers, and 0.17 unsworn employee will be required. Prior to the issuance of building permits, the developer shall comply with the City of Fontana

Police Department's Standard Building Security Specifications. Also, prior to the issuance of Certificates of Occupancy, the developer shall pay fees under Resolution 91-190 for additional police protection services required to serve the proposed development, if required. Based on the foregoing, no significant law enforcement impacts attributable to the proposed project are expected.

(Sources: Sierra Lakes EIR, Fontana Police Department)

3. Would the project have an effect upon, or result in a need for new or altered government services in relation to school services?

Potentially Significant Unless Mitigation Incorporated.

The site is within the service boundaries of the Etiwanda Unified School District for grades K-8 and the Chaffey Joint Union High School District for grades 9-12. The project will impact generate new students at all grade levels.

Etiwanda Unified School District

Student generation factors for this district are:

Grade K-5:	.4343/d.u.
Grade Level 6-8:	.1934/d.u.
Total:	.6277/d.u.

Therefore, assuming 111 dwelling units, it is anticipated that this project could generate 48 K-5 students and 21 students in grades 6-8. According to the District, this constitutes a significant adverse impact requiring mitigation.

Chaffey Joint Union High School District

The student generation factor for this District is: .2/d.u.

Therefore, assuming 111 dwelling units, it is anticipated that the proposed project will generate 22 students in grades 9-12.

Based on the foregoing, the proposed project will be required to adhere to the following mitigation measure:

- Prior to the issuance of building permits, the project proponent shall submit to the City of Fontana evidence of either an appropriate fee payment or an approved agreement with the Etiwanda School District and the Chaffey Joint Union High

School District. An approved agreement, if used, will identify the land to be dedicated to the districts for facilities, as well as delineate the responsibilities of the project proponent and the responsibilities of the project proponent and the School Districts in regard to the construction of the school(s), installation of adequate facilities and furnishings and any other school obligations.

(Sources: Fontana MEA, Eriwanda Unified School District, Chaffey Joint Union High School District)

4. Would the project have an effect upon, or result in a need for new or altered government services in relation to the maintenance of public facilities, including roads?

Less than Significant Impact. The proposed community plan will have to provide roadway improvements on Walnut Avenue, Hemlock Avenue and Beech Avenue. Public roadway rights-of-way will be dedicated to and maintained by the City of Fontana. The increase in public roadway area and length will require maintenance from the City of Fontana. The increase in roadways is not expected to represent a significant need for maintenance when considered with the overall roadway maintenance needs of the City (over 500 miles). Based on the foregoing, no significant impacts upon government services or maintenance of public facilities attributable to the proposed project are expected.

(Source: City of Fontana)

5. Would the project have an effect upon, or result in a need for new or altered government services in relation to other governmental services?

Potentially Significant Unless Mitigation Incorporated. The proposed development will increase the number of residents in the area which may require library services. Rapid population growth in the City has led to the inadequate availability of library facilities and services to serve all interested users. Plans for service expansion are currently being implemented to better serve residents and other users. Demand from the proposed development will add to existing service deficiencies. Using a national standard of 2 volumes per capita, the estimated population of the project will require approximately 372 book volumes. Prior to the issuance of certificates of occupancy, the developer shall pay impact fees to the City for expanded library services to serve the proposed development. Based on the foregoing, no significant impacts upon government services attributable to the proposed project are expected.

(Source: Fontana General Plan)

L. Utilities and Service Systems

Environmental Setting

Power service in the region is provided by the Southern California Edison Company (SCE), and natural gas service by the Southern California Gas Company (SCG). The Fontana Water Company provides water service to the area through groundwater wells and surface water from Lytle Creek. A treatment plant processes surface water prior to its distribution for domestic use. Groundwater pumping without equivalent recharge can lead to the over drafting of water resources. The Chino Basin Municipal Water District (CBMWD) has been appointed as watermaster for the basin. The CBMWD regulates the pumping of groundwater at the basin and oversees artificial recharge of the groundwater with imported waters. Imported water is also used to supplement the domestic water supply needs in the area. A total of approximately 280,000 acre-feet of water per year are used for domestic needs.

The CBMWD also provides industrial and municipal wastewater treatment services for the cities of Ontario, Chino, Chino Hills, Fontana, Montclair, and Upland, and to other districts and agencies in the area. Existing land uses and development in the City generate approximately 11 million gallons per day (mgd) of wastewater, which is treated at CBMWD's Regional Plant Number 1 (RP-1). RP-1 is located south of the Pomona (SR-60) Freeway, between Vineyard and Archibald Avenues, and treats an average of 37.8 mgd of wastewater annually. The plant has a design capacity of 44 mgd and provides primary, secondary, and tertiary treatment to reclaimable wastewater. Some of the effluent from RP-1 is used for irrigation at the Whispering Lakes Golf Course, El Prado Golf Course, and the lakes at Prado Park. Treated sewage effluent is also used for the recharge of the Ely Basins and discharge into the Santa Ana River. Industrial wastewater and other non-reclaimable wastewater are conveyed through the trunk lines of the Los Angeles County Sanitation Districts for treatment at the Harbor Island Treatment Plant.

Sewage from the surrounding area enters City of Fontana sewer mains and is conveyed through CBMWD interceptors to the CBMWD Plant 1 in Ontario. Plant 1 has a 44 mgd capacity and treats 34 mgd. RP-4, a new treatment plant with a 28 mgd capacity, is located at Etiwanda and 6th in Rancho Cucamonga and may open in 1997 or 1998.

Solid waste disposal in the area is provided by Fontana Rubbish Collectors and the Mid-Valley (Fontana) Landfill of San Bernardino County. The Mid-Valley Landfill accepts an average of 800 tons per day but has permits to accept as much as 3,900 tons. The maximum daily limit is in anticipation of the closing of other nearby landfills, such as the Colton, Milliken, Baker, Morongo Valley, and other county landfills. Mid-Valley Landfill has a remaining capacity of 2.67 million tons and is expected to remain open until June 1999. Expansion plans on the northeast section of the site are expected to provide the landfill with another 26 years of operating life.

(Sources: CBMWD, North Fontana Infrastructure Study EIR, Sierra Lakes EIR, San Bernardino County Solid Waste Department)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse impact on utilities if it results in any of the following:

- Activities that result in the use of large amounts of fuel, water, or energy;
- The use of fuel, water, or energy in a wasteful manner; and,
- The extension of a sewer trunk line with capacity to serve new development.

In addition, any project that would require a substantial modification or upgrading of existing infrastructure will have a significant impact on the environment in the absence of mitigation.

Evaluation of Environmental Impacts

1. Would the project result in a need for new systems or supplies, or substantial alterations to power and natural gas services?

Less Than Significant Impact. The proposed development will create a demand for power and natural gas services. An extension of power lines and gas lines will be needed to serve individual dwelling units and the commercial development proposed on-site. Estimates of power and gas consumption are provided in Table 6-3 below. In the face of dwindling energy resources in the region, SCE and SCG have offered programs and assistance to reduce power and natural gas demands from individual development.

Prior to issuance of building permits, the developer shall submit plans showing the incorporation of energy conservation measures into the project in accordance with Title 24 of the California Administrative Code. Prior to the issuance of certificates of occupancy, the developer shall extend existing power and gas lines into the site in coordination with SCE and SCG, and in accordance with PUC regulations.

(Sources: SCAQMD CEQA Handbook, SCE, SCG)

TABLE 6-3 PROJECTED POWER AND NATURAL GAS CONSUMPTION					
Land Use	Units/Area	Consumption Factor	Gas Consumption	Consumption Factor	Power Consumption
Residential	111 units	6,665 cf/unit/mo	24,661 cf/day	5,626.5 kWh/unit/yr	1,735 kWh/day
Based on factors in SCAQMD's CEQA Air Quality Handbook, 1993.					
<i>sf - square feet</i>		<i>kWh - kilowatt hour</i>		<i>cf - cubic feet</i>	<i>mo - month</i>
Source: City of Fontana, 1997.					

2. Would the project result in a need for new systems or supplies, or substantial alterations to communication systems?

Less than Significant Impact. The proposed development will be served by Pacific Bell Telephone Company for telephone services. Comcast Cable Company will provide cable television services to the site. These companies will provide service on demand by extending existing facilities from along the project site periphery. Coordination with these utility companies will ensure timely service.

(Sources: Comcast Cable Company, Pacific Bell)

3. Would the project result in a need for new systems or supplies, or substantial alterations to local or regional water treatment or distribution facilities?

Less Than Significant Impact. The proposed development will require water service from either the Fontana Water Company or City of Fontana. Water will be provided by surface water from Lytle Creek and groundwater wells in the area. Water consumption is estimated at approximately 57,498 gallons per day, as shown in Table 6-4. Implementation of water conservation measures such as drip irrigation, water-efficient appliances, drought-tolerant landscaping, timers, and automatic shut-off devices is expected to reduce water consumption and demand from the project.

TABLE 6-4 PROJECTED WATER DEMAND			
Land Use	Units/Area	Consumption Factor*	Daily Consumption (Gallons)
Residential	111 units	518 gallons/unit/day	57,498
* North Fontana Infrastructure Study EIR			
Source: City of Fontana, 1997.			

The proposed on-site water system for the project site was shown previously in Figure H. Final design of water lines and fire hydrant locations will be based on the fire flow requirements for the commercial and residential development proposed, as required by the San Bernardino County Fire Department.

The Fontana Water Company has indicated that it will be able to serve the proposed project with no adverse impact on existing services or facilities. The Company will provide the final design of on-site and off-site water systems. The proposed project will be subject to the following: 1) Prior to the issuance of building permits, water system plans shall be designed by the Fontana Water Company; 2) Water system improvements shall be constructed prior to issuance of certificates of occupancy as required by the City of Fontana and San Bernardino County Fire Department; 3) Prior to the issuance of certificates of occupancy, the developer shall submit plans showing the implementation of water conservation measures such as automatic irrigation valves/controllers and site-appropriate drought-tolerant plant materials; and, 4) compliance with Title 24 of the California Administrative Code regarding water-efficient appliances. Based on the foregoing, no significant impacts upon water systems or supplies attributable to the proposed project are expected.

(Sources: Fontana Water Company, Chino Basin Municipal Water District)

4. Would the project result in a need for new systems or supplies, or substantial alterations to sewer services or septic tanks?

Less Than Significant Impact. The proposed development will generate sewage which will require disposal and treatment. Sewage generation from the proposed project is estimated at 34,765 gallons per day, as shown in Table 6-5.

TABLE 6-5 PROJECTED SEWAGE GENERATION			
Land Use	Units	Generation Factor*	Daily Generation
Residential	386 residents	90 gallons/person/day	34,765 gallons
* North Fontana Infrastructure Study EIR			
Source: City of Fontana, 1997.			

Water conservation measures implemented as part of the project will help reduce sewage generation from the residential and commercial uses on-site. Sewer service to the site will be provided by the City of Fontana. The CBMWD is responsible for the construction and maintenance of the wastewater treatment facilities and sewer interceptor lines serving the area. The City of Fontana is responsible for the construction and maintenance of the collection system within the City limits.

The City of Fontana does not allow septic systems. As a result, sewage from the proposed development will be collected, conveyed and ultimately treated at the CBMWD's RP-1 in Ontario, which has a 44 mgd capacity and treats 34 mgd. Therefore, capacity exists at the RP-1 plant to serve the proposed project.

CBMWD collects a sanitary sewer facility expansion fee of \$3,350 per dwelling unit. In accordance with Sewer Ordinance 1021, the City collects a fee of \$600 per dwelling unit. Prior to the issuance of certificates of occupancy, the developer shall either pay fees or complete construction in lieu of fees under Ordinance 1021 for sewer service to the site, and shall construct local sewer lines to serve the proposed development, as approved by the City of Fontana. Sewer improvements needed to serve the proposed project were shown previously in Figure I. Based on the foregoing, no significant impacts upon sewer services attributable to the proposed project are expected.

(Sources: Chino Basin Municipal Water District,)

5. Would the project result in a need for new systems or supplies, or substantial alterations to storm water drainage?

Potentially Significant Unless Mitigation Incorporated. The proposed development will have to provide an on-site storm drain system to handle storm runoff, and will require storm drainage capacity from facilities serving the area. The proposed drainage plan was shown previously in Figure J.

Local drainage systems are the responsibility of the City of Fontana, which collects an I-10 North drainage fee of \$15,721 per net acre. The drainage system for the proposed project will reflect the plans in the North Fontana Drainage Master Plan, as modified in April 1995.

The project site currently ultimately drains into the San Sevaine Channel. The San Bernardino County Flood Control District has responsibility over this channel and collects a regional fee of \$4,405 per gross acre for development within the channel's drainage area.

Prior to the issuance of certificates of occupancy, the developer shall construct local drainage facilities in accordance with the requirements of the City of Fontana, and shall pay fees or construct in-lieu facilities, or join a community facilities district for the construction and maintenance of master-planned and regional storm drain facilities. Based on the foregoing, no significant storm water drainage impacts attributable to the proposed project are expected.

(Source: North Fontana Infrastructure Study EIR)

6. Would the project result in a need for new systems or supplies, or substantial alterations to solid waste disposal?

Less than Significant Impact. The proposed development will generate solid waste from use and occupancy of the residential and commercial structures on-site. Table 6-6 presents an estimate of the solid waste expected to be generated by the project. Approximately 1,255 pounds of solid waste per day are expected to be generated.

Fontana Rubbish Collectors will provide waste collection and disposal services to the site. The occupants of the development will be allowed to participate in the voluntary curbside recycling program provided by Fontana Rubbish Collectors, as well as other source reduction and recycling programs of the City. The landfill to be utilized for waste disposal of on-site wastes is the Mid-Valley Landfill. This landfill has excess daily capacity (3,100 tons) and remaining capacity (2.67 million tons) to serve the project without significant adverse impacts. As a result, no further assessment of this issue is warranted.

(Sources: North Fontana Infrastructure Study EIR, San Bernardino County Waste Management Department, Fontana Rubbish Collectors)

TABLE 6-6 PROJECTED SOLID WASTE GENERATION			
Land Use	Units	Generation Factor**	Daily Generation
Residential	386 residents	3.25 lbs/resident/day	1,255 lbs
* San Bernardino County Waste Management Master Plan			
lbs - pounds			
Source: City of Fontana, 1997.			

7. Would the project result in a need for new systems or supplies, or substantial alterations to local or regional water supplies?

Less than Significant Impact. The Fontana Water Company and City of Fontana have indicated that the water consumption of the proposed development is within their capacity to provide, considering existing and planned supplies. The estimated water consumption represents less than 1 percent of the water resources used in the Chino Basin and the supplies of the Fontana Water Company and City of Fontana. The Company will design on- and off-site water system improvements to ensure that they comply with the Company's standards and requirements. Thus, the project is not expected to have any significant impact on existing systems or supplies, or local and regional water supplies. Based on the foregoing, no significant impacts upon regional water supplies attributable to the proposed project are expected.

(Sources: Chino Basin Municipal Water District, Fontana Water Company)

M. Aesthetics

Environmental Setting

The project site consists of flat, vacant land. Adjacent areas are also primarily vacant and flat, although residential construction is occurring to the north and south. Panoramic northerly views of the San Bernardino Mountains are presently available from the site of the proposed project.

(Sources: Site Reconnaissance, Fontana General Plan, Fontana MEA)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have significant adverse aesthetic impacts if the proposal has a substantial, demonstrable negative aesthetic effect. The Fontana Zoning and Development Code contains development and design standards, and establishes a design review process by the Fontana Planning Commission to regulate site plan and architectural characteristics of new development.

Evaluation of Environmental Impacts

1. Would the project affect a scenic vista or scenic highway?

Less Than Significant Impact. The proposed dwelling units on-site are planned to be one- and two-story structures. They are not expected to block views of the ridges of the San Gabriel and San Bernardino Mountains. Roadways and building setbacks will continue to provide view corridors toward the mountains. Based on the foregoing, no significant impacts upon scenic vistas or highways attributable to the proposed project are expected.

(Sources: Fontana Star Community Plan - November 6, 1997 Iteration, Site Reconnaissance, Fontana General Plan)

2. Would the project have a demonstrable negative aesthetic effect?

Less than Significant Impact. The proposed community plan will lead to the development of 111 single-family detached homes on 7,200-square foot lots. The entrances to the project site will be landscaped and provided with monumentation to identify the development. Perimeter and internal streets will be landscaped, and block walls with slump block caps will surround the property.

In that the proposed project will be required to be developed in full compliance with the design guidelines in the Community Design Element of the Fontana General Plan and pertinent regulations in the City's Zoning and Development Code, the potential for the creation of

negative aesthetic impacts on-site is considered unlikely. Also, review by the Fontana Planning Commission will ensure that the physical and visual qualities of the proposed development are compatible with adjacent developments. Based on the foregoing, no significant aesthetic impacts attributable to the proposed project are expected.

(Sources: Site Reconnaissance, Fontana General Plan, Fontana Zoning and Development Code)

3. Would the project create light or glare?

Less Than Significant Impact. Light sources at the project site are currently non-existent. The proposed development will lead to the construction of 111 dwelling units. This will lead to the provision of light poles, street lights, and interior lights within the project site. Vehicles coming to and from the site may also create light and glare impacts in the area. Design review of the lighting plan for the proposed development is expected to reduce the potential for adverse light and glare impacts. Prior to obtaining development review approval, the developer shall submit site plans and building plans showing the project's compliance with the development and design standards contained in the City's Zoning and Development Code. Based on the foregoing, no significant impacts upon light or glare attributable to the proposed project are expected.

(Sources: Site Reconnaissance, Fontana General Plan)

N. Cultural Resources

Environmental Setting

The Fontana General Plan has identified archaeological resources at the foothills of the San Gabriel Mountains and at Jurupa Hills. No resources are known to exist in the valley area, since this area may have been disturbed by past agricultural activities and urban development. There are no known paleontological resources in the City, although area soils consist of Pleistocene or older alluvium of the San Timoteo Formation, which are highly sensitive for paleontological resources.

The project area is within the historic territory of the Gabrielino and Serrano Indians. The Gabrielino Indians are associated with the Mission San Gabriel and were descendants of the Shoshonean people, while the Serrano Indians are from the San Bernardino Mountains. These Indians were believed to have inhabited the area between 750 and 1000 A.D.

The Fontana area became part of the San Antonio Ranch during the early 1800s. In the early 1900s, A.B. Miller purchased land and established a farm and the town of Fontana. The area became a large agricultural region until 1942, when the Kaiser steel plant opened, leading to the industrialization and urbanization of Fontana.

Based on research and a brief site walk-over, no prehistoric or historic archaeological resources are believed to occur on the project site. In that the project site exhibits no unique characteristics with regard to land forms or location, no buried cultural remains are expected to occur on-site.

(Source: Morningside Community Plan Environmental Assessment, Site Reconnaissance)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse impact on cultural resources if it disrupts or adversely affects a prehistoric or historic archaeological site or a property of historic or cultural significance to a community, ethnic, or social group, or a paleontological site except as part of a scientific study.

Evaluation of Environmental Impacts

1. Would the project disturb paleontological resources?

No Impact. Archaeological studies for areas proximal to the site indicates that there is limited potential for paleontological resources to be present. Thus, development of the site is not expected to disturb any paleontological resources.

(Source: Morningside Community Plan Environmental Assessment, Site Reconnaissance)

2. Would the project disturb archaeological resources?

Less Than Significant Impact. Archaeological studies for areas proximal to the site indicates that there is limited potential for paleontological resources to be present. Thus, development of the site is not expected to disturb any paleontological resources. Since the area is considered to be the territory of the Gabrielino or Serrano Indians, excavation activities may uncover unknown resources. If previously-unidentified resources are discovered during excavation and grading activities on-site, all work shall stop and a qualified archaeologist shall be retained to evaluate their significance and the best course of action. Salvage operation requirements in Appendix K of the CEQA Guidelines shall be followed, and the treatment of discovered Native American remains shall comply with State codes and regulations of the Native American Heritage Commission.

(Source: Morningside Community Plan Environmental Assessment, Site Reconnaissance)

3. Would the project affect historical resources?

No Impact. There are no structures on-site which may be considered historic. As a consequence, no impacts upon historic resources attributable to the proposed project are expected.

(Source: Morningside Community Plan Environmental Assessment, Site Reconnaissance)

4. Would the project have the potential to cause a physical change which would affect unique ethnic cultural values?

No Impact. There are no unique ethnic or cultural values associated with the site. Thus, no impact on unique or ethnic cultural values will occur with the construction of the proposed community plan.

(Source: Morningside Community Plan Environmental Assessment, Site Reconnaissance)

5. Would the project restrict existing religious of sacred uses within the potential impact area?

No Impact. There are no religious or sacred uses on-site which may be affected by the proposed development. The nearest religious uses to the site are churches on Highland Avenue and on Citrus Avenue. These churches will not be affected by the proposed development. Based on the foregoing, no significant impacts upon cultural resources attributable to the proposed project are expected.

(Sources: Archaeological Study for the Site, Site Reconnaissance)

O. Recreation

Environmental Setting

The City of Fontana has 32 parks covering approximately 1,380 acres. Play fields at schools of the Fontana Unified School District are also available for public use after school hours. The nearest public park to the project site is the McDermott Sports Complex Community Park on Baseline Avenue. A future park is proposed on the northeast quadrant of the Walnut and Beech Avenues intersection catty corner from the project site.

(Sources: Fontana General Plan, Fontana MEA, City of Fontana, Sierra Lakes Specific Plan EIR, Site Reconnaissance)

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project will normally have a significant adverse impact on the environment if it is in conflict with the established recreational, educational, religious, or scientific uses of the area. In addition, the Fontana General Plan Open Space and Recreation Element has established a standard of 2 acres of community park per 1,000 residents and 3 acres of neighborhood park per 1,000 residents.

Evaluation of Environmental Impacts

1. Would the project increase the demand for neighborhood or regional parks or other recreational facilities?

Potentially Significant Unless Mitigation Incorporated. The occupancy of 111 dwelling units will lead to an increase in the demand for parks and recreation facilities in the area. As indicated previously, as many as 386 residents would occupy the site. Using the City's parkland requirement of 5.0 acres per thousand residents, the proposed development will require 1.93 acres of parkland to meet the City's standards. The developer shall pay fees or complete construction in lieu of the payment of fees under Resolution 1061 (Parks and Bikeways) to serve the proposed development at the City's direction.

(Sources: Site Reconnaissance, Fontana General Plan)

2. Would the project affect existing recreational opportunities?

Less Than Significant Impact. The site is currently vacant and no recreation activities occur on-site. The nearest park is McDermott Park. The development of the proposed community plan will increase, albeit insignificantly, existing recreational demand or opportunities at this park.

(Sources: Site Reconnaissance, Fontana General Plan)

6.6 Mandatory Findings of Significance

The Initial Study and Environmental Assessment for the proposed Fontana Star Community Plan indicates that the proposed project has the potential to generate significant Air Quality, Traffic, Noise, Public Services, Utilities and Service Systems, and Recreation impacts. However, the Lead Agency has determined that the mitigation measures required to be implemented by the proposed project will effectively reduce such potential impacts to insignificant levels. Given this, the mandatory findings of significance regarding the impacts of the proposed project are as follows:

- *The proposed Fontana Star Community Plan will not have the potential to degrade the quality of the environment, with the implementation of the recommended mitigation measures.*
- *The proposed Fontana Star Community Plan will not have the potential to achieve short-term goals to the disadvantage of long-term environmental goals, with the implementation of the recommended mitigation measures.*
- *The proposed Fontana Star Community Plan will not produce environmental impacts which are individually limited but cumulatively considerable when considering planned or proposed development in the immediate vicinity, with the implementation of the recommended mitigation measures.*
- *The proposed Fontana Star Community Plan will not have environmental impacts which may have adverse effects on humans, either directly or indirectly, with the implementation of the recommended mitigation measures.*

6.7 Mitigation Monitoring and Reporting Program

A. Statutory Authority

This Initial Study identifies the mitigation measures that will be implemented to reduce the impacts associated with the proposed Fontana Star Community Plan. The California Environment Quality Act (CEQA) was amended in 1989 to add Section 21081.6 (to implement Assembly Bill (AB) 3180), which requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to proposed developments. As stated in Section 21081.6 of the Public Resources Code,

"...the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment."

B. Mitigation Monitoring Program

The mitigation monitoring table below lists those mitigation measures that may be included as conditions of approval for the project. These measures correspond to those listed in Section 6.3 and discussed in Section 6.5. To ensure that the mitigation measures are properly implemented, a monitoring program has been developed in accordance with City requirements. The table below lists the recommended mitigation measures by time frame for implementation, and identifies the timing and responsible City agency for monitoring the implementation of each measure. The developer will have the responsibility for implementing these measures, and the City of Fontana will have the primary responsibility for monitoring and approving the implementation of the mitigation measures.

MITIGATION MONITORING PROGRAM

Mitigation Measure	Verification of Compliance			Mitigation Number
	Planning	Engineering	Building and Safety	
DURING DEVELOPMENT REVIEW				
1. The developer shall submit site plans and building plans showing the incorporation of acoustical design and features for residential and commercial structures located along perimeter roadways that would serve to maintain interior noise levels of 45 dB CNEL or less, and exterior noise levels of 65 dB CNEL or less.		Approved by: _____ on _____		
PRIOR TO ISSUANCE OF GRADING PERMITS				
1. The developer shall comply with NPDES requirements regarding the implementation of Best Management Practices (BMPs) during construction.		Approved by: _____ on _____	Approved by: _____ on _____	
2. The developer shall comply with SCAQMD Rule 403 regarding fugitive dust control. Measures shall be applied as appropriate and include, but not be limited to, the following: regular watering of exposed areas; truck wheel washing; suspension of earth-moving activities during high winds and smog alerts; use of well-tuned equipment; etc.		Approved by: _____ on _____	Approved by: _____ on _____	
PRIOR TO ISSUANCE OF BUILDING PERMITS				
1. The developer shall submit building plans showing compliance with Uniform Building Code Seismic Zone 4 building construction standards.	Approved by: _____ on _____			
2. The developer shall obtain site plan approval from the San Bernardino County Fire Department regarding the provision of on-site and off-site fire hydrants, adequate emergency access, and other fire district requirements. In order to reduce fire protection service demand, the project will comply with pertinent provisions in the Uniform Fire Code regarding building construction and design, and with any existing requirements for all new construction to provide fire sprinkler systems.		Approved by: _____ on _____		
3. The developer shall comply with the City of Fontana Police Department's Standard Building Security Specifications.			Approved by: _____ on _____	

MITIGATION MONITORING PROGRAM

Mitigation Measure	Verification of Compliance			Mitigation Number
	Planning	Engineering	Building and Safety	
4. Prior to the issuance of building permits, the project proponent shall submit to the City of Fontana evidence of either an appropriate fee payment or an approved agreement with the Etiwanda School District and the Chaffey Joint Union High School District. An approved agreement, if used, will identify the land to be dedicated to the districts for facilities, as well as delineate the responsibilities of the project proponent and the School Districts in regard to the construction of the school(s), installation of adequate facilities and furnishings and any other school obligations.	Approved by: _____ on _____			
5. The developer shall submit plans showing the incorporation of energy conservation measures into the project in accordance with Title 24 of the California Administrative Code.	Approved by: _____ on _____			
6. The developer shall either pay in-lieu parkland requirement fees or enter into an agreement with the City of Fontana to construct an off-site park and/or recreational facility as may be determined by the City and the developer.			Approved by: _____ on _____	
7. Water system plans shall be designed by the Fontana Water Company.			Approved by: _____ on _____	

MITIGATION MONITORING PROGRAM				
Mitigation Measure	Verification of Compliance			
	Planning	Engineering	Building and Safety	Mitigation Number
DURING CONSTRUCTION				
1. Prior to the issuance of occupancy permits for the homes adjacent to the construction and for which the permit is being requested, the developer shall construct the adjacent roadway improvements in accordance with the Tentative Map Conditions of Approval, as noted below: • The proposed project shall provide full access capabilities at all external project access points. • The proposed project shall install stop signs at the external project access points. • The proposed project shall provide minimum 35 foot radius curb returns at all external project access points. • The proposed project shall construct Walnut Street adjacent to the project site at its ultimate half-section width as an enhanced Collector (86' ROW). • The proposed project shall construct Hemlock Avenue adjacent to the project site at its ultimate half-section width as a Modified Collector Street (82' ROW). • The proposed project shall construct Beech Avenue adjacent to the project site at its ultimate half-section width as a Primary Highway (104' ROW).		Approved by: _____ on _____		
2. The developer shall contribute to the provision of a traffic signal at the intersections of Cherry/Walnut and Baseline/"A" Street on a fair share basis, and shall modify the existing signal at the Baseline/Cherry Avenue intersection.		Approved by: _____ on _____		
3. The developer shall install traffic signs needed to control traffic flow to and from the site, as warranted.		Approved by: _____ on _____		
4. The developer shall extend existing power and gas lines into the site in coordination with SCE and SCG, and in accordance with PUC regulations.		Approved by: _____ on _____		

MITIGATION MONITORING PROGRAM

Mitigation Measure	Verification of Compliance			
	Planning	Engineering	Building and Safety	Mitigation Number
5. The developer shall submit plans showing: 1) the implementation of water conservation measures such as the use of automatic irrigation valves and controllers and site-appropriate drought tolerant plant materials; and, 2) compliance with Title 24 of the California Administrative Code regarding water-efficient appliances.		Approved by: _____ on _____		
6. The developer shall either pay fees or complete construction in lieu of fees under Ordinance 1021 for sewer service to the site, and shall construct local sewer lines to serve the proposed development, as approved by the City of Fontana.	Approved by: _____ on _____			
7. The developer shall construct local drainage facilities in accordance with the requirements of the City of Fontana, and shall pay fees or construct in-lieu facilities, or join a community facilities district for the construction and maintenance of master-planned and regional storm drain facilities.		Approved by: _____ on _____		
8. Water system improvements shall be constructed as required by the City of Fontana and Central Valley Water District.			Approved by: _____ on _____	
PRIOR TO RECORDATION OF FINAL MAP				
1. The developer shall work with Omnitrans to confirm approval of currently recommended on-site bus turnout/stop locations along perimeter roadway intersections. The developer shall construct bus turnout/stop locations concurrent with adjacent street improvements.		Approved by: _____ on _____		
2. The developer shall participate in the City's circulation fee program through the payment of appropriate fees or construction in lieu of fees.	Approved by: _____ on _____			
3. The developer shall pay fees under Resolution 91-190 for additional police protection services to serve the proposed development.	Approved by: _____ on _____			
4. The developer shall pay impact fees to the City for expanded library services to serve the proposed development.	Approved by: _____ on _____			
5. The developer shall pay fees under Resolution 92-161 for additional fire protection services to serve the proposed development.	Approved by: _____ on _____			
Source: City of Fontana Planning, 1997				

List of Preparers/References/Organizations and Persons Consulted

A. List of Preparers

This document was prepared by the City of Fontana as Lead Agency for the proposed project and reflects its' independent judgment and position regarding the environmental consequences of the proposed project.

B. References

Cal/EPA, Hazardous Materials Data Management List, May 1994.

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SCAG, Regional Growth Management Plan, 1988.

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U.S.G.S., 7.5 minute Quadrangle for Fontana and Devore, 1981.

United States Census, 1990 Population, Housing, Social and Economic Characteristics, 1993.

United States Department of Agriculture Soil Conservation Service, Soil Survey of San Bernardino County, Southwestern Part, California, January 1980.

C. Organizations and Persons Consulted

Bea Martinez, L.A. Department of Airports

Carry Hyke, San Bernardino County Solid Waste Department

Cathy of Fontana Rubbish Collectors

Chino Basin Municipal Water District - Planning Division

Community Services Department, City of Fontana

Curtis Aaron, City of Fontana Public Services Department

Dean Libbey, City of Fontana Community Development Department

Ed Kiessling, California Division of Mines and Geology

Beckie Mora, Hazardous Materials Data Management Program, Cal/EPA

Fontana Police Department, Administration

Gary Taylor of California Division of Mines and Geology

Gloria Smith, Housing Division of City of Fontana

Jim Theirl, Field Inspector at Chino Basin Watermaster

Lewis Trine, Etiwanda School District

Liz of Comcast Cable Television Company

Lou Neeb of San Bernardino County Flood Control District

Norma Manning and Jim Bryson of Fontana Water Company

Pacific Bell

Ron Graham, County Department of Agriculture

Susan Dell, Fiscal Services of the Chaffey Joint Union High School District

U.S. Department of Transportation

Craig Bruorton, Planning Department, City of Fontana.

Paul Burton, Engineering Department, City of Fontana.

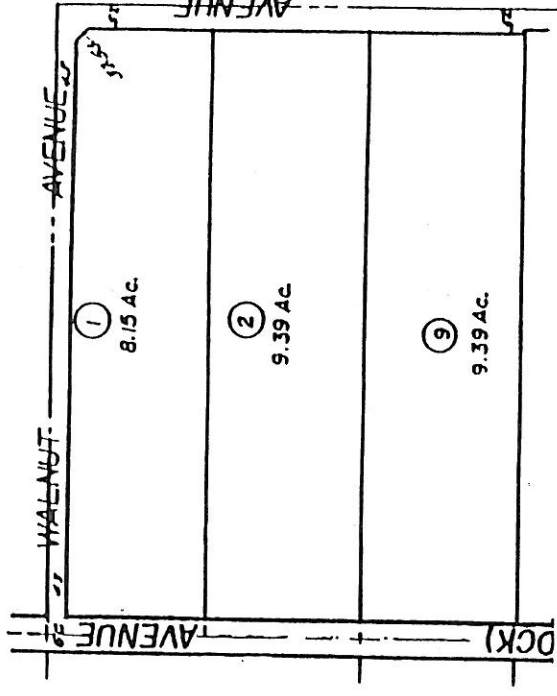
7.0 Appendix One

7.0 APPENDIX ONE

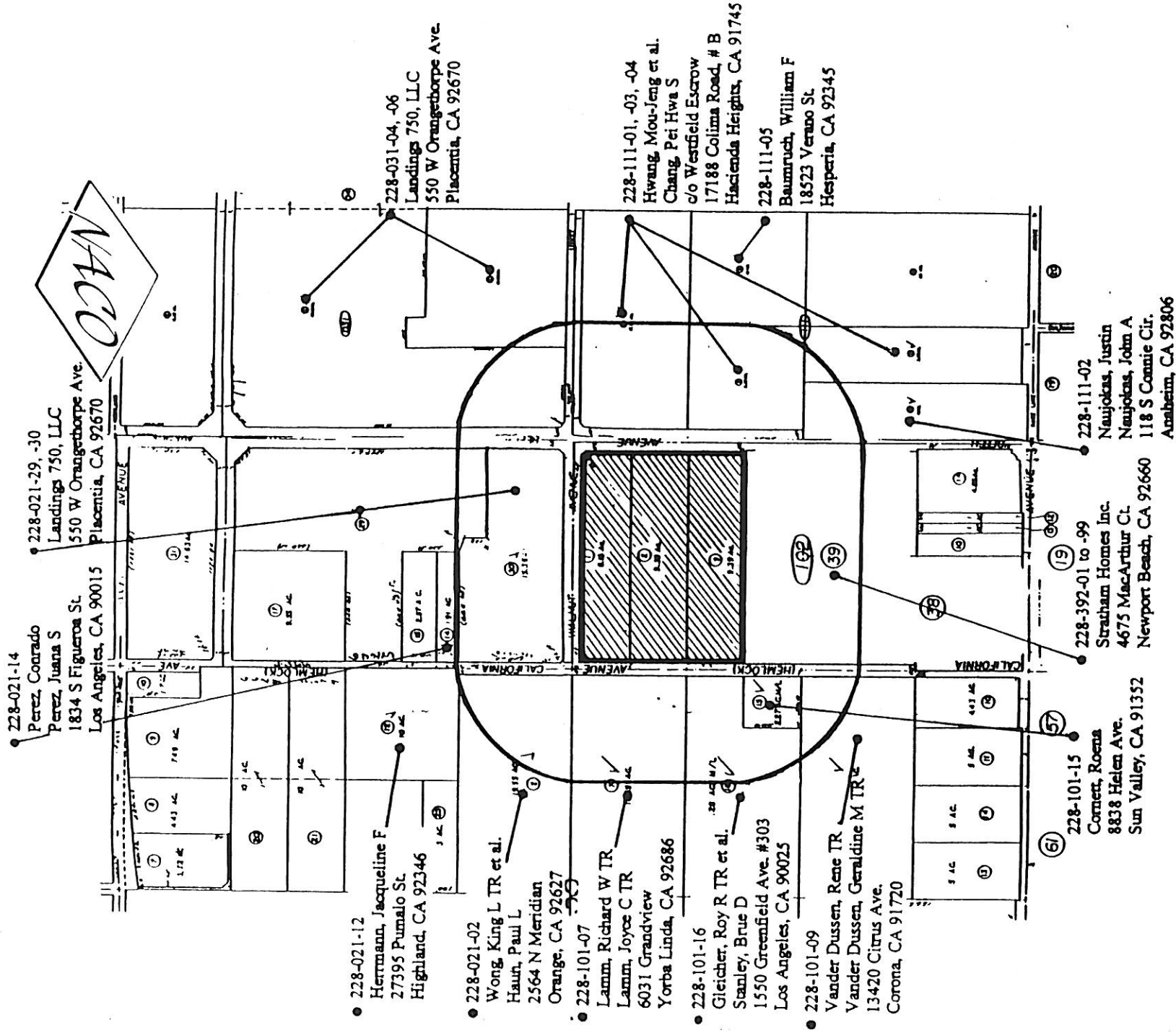
7.1 Ownership List and Map

One owner holds title to land within the Fontana Star boundary. This owner is identified on the ownership list and keyed to the assessor's parcel map, book 228, page 10, which follows on the next page.

<u>Ownership List</u>	<u>Assessor's Parcel Number</u>
L & L (USA), Inc.	AP #228-102-01
L & L (USA), Inc.	AP #228-102-02
L & L (USA), Inc.	AP #228-102-09



**PORTION OF ASSESSOR'S MAP
BOOK 228 PAGE 10
SAN BERNARDINO COUNTY**



PARCELS WITHIN 660' RADIUS

(Information acquired from County Assessor on 8/6/97)

7.2 Tentative Tract Map 15863

The Tentative Tract Map will be inserted following this page after it has been approved by the Fontana Planning Commission.

7.3 Approving Resolutions

The approving resolutions for the Fontana Star Community Plan will be inserted behind this page after the resolutions receive approval by the Fontana Planning Commission.

RESOLUTION NO. PC 98-01

**A RESOLUTION OF THE PLANNING COMMISSION OF
THE CITY OF FONTANA ADOPTING THE FONTANA
STAR COMMUNITY PLAN**

WHEREAS, URS International Consultants, Incorporated (“Applicant”) has applied for approval of the Fontana Star Community Plan (“Community Plan”) and prepared for adoption of a Mitigated Negative Declaration on the Community Plan; and

WHEREAS, at the meeting of January 12, 1998 the Planning Commission of the City of Fontana (the “Commission”) received public testimony concerning the Community Plan, and reviewed and considered all written and oral information presented to it; and

WHEREAS, as its meeting of January 12, 1998, the Commission received public testimony concerning the environmental documents and considered all written and oral information presented to it; and

WHEREAS, the Commission has reviewed and considered the requirements of Fontana Municipal Code Section 30-63 relative to community plans; and

WHEREAS, the Commission has reviewed and considered the documents and the statutes and Code regulations concerning the adoption of Community Plan; and

WHEREAS, the Community Plan will be consistent with the General Plan; and

WHEREAS, notice of the Commission’s public hearing was given pursuant to Government Code Sections 65090 and 65091; and

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Fontana that:

Section 1: The Commission hereby finds that:

- A. The Community Plan is consistent with the goals and policies of the Fontana General Plan.
- B. The adoption of the Mitigated Negative Declaration and the State of California Department of Fish and Game De Minimis Impact Finding has been prepared pursuant to the California Environmental Quality Act and the Community Plan and adequately addresses the environmental impacts of the Fontana Star Community Plan.
- C. The Fontana Star Community Plan substantially complies with the objectives of a community plan as identified in Section 30-63 of the Code of the City of Fontana.

8.0 Appendix Two

8.0 APPENDIX TWO

Appendix 8.1

**Soils Engineering Investigation
Residential Project
Hemlock Avenue and Baseline Avenue
Fontana, CA**

February 19, 1990

and

Update on November 5, 1997

by

RMA Group, Geotechnical Consultants



RMA Group

GEOTECHNICAL CONSULTANTS

10851 EDISON COURT, RANCHO CUCAMONGA, CA 91730 : (909) 989-1751 : FAX (909) 989-4287

September 25, 1997
Revised November 5, 1997

URSI International Consultants
20265 Valley Blvd., Suite B
Walnut, CA 91789

Attention: Mr. Tom Graeven

Subject: Update of Soils Engineering Report
Tract 15863 (Formerly Tract 14779)
E/o Hemlock Avenue, S/o Walnut Avenue
Fontana, CA

Reference: Soils Engineering Investigation Report by RMA Group, dated February 19, 1990
(Job No. 90-020-01)

Gentlemen:

In accordance with your request and authorization, this letter has been prepared to update the above referenced soils engineering report for the subject tract. The scope of our work consisted of reconnaissance of the site, review of our previous report, and preparation of this letter.

Site Conditions

Reconnaissance of the property was made on September 24, 1997. Site conditions observed on that date were essentially the same as those that were present in 1990, with the exception of minor amounts of trash along Hemlock Avenue, and minor amounts of fill in the northeast corner of the site. The area surrounding the site has changed considerably. Paved roads have been constructed along the eastern boundary (Beech Avenue) and along a portion of the northern boundary (Walnut Avenue). The property to the south has been rough graded for residential construction. Soil and rock stockpiles have been placed, and a storm water retention basin has been excavated into the property to the north.

Review of Report

On page 5 of the referenced report, we noted a typographical error. A subsidence factor of 15 feet is presented on that page. The subsidence factor should be 0.15 feet.

URSI International Consultants
Tract 15863 (Formerly Tract 14779)
Fontana, CA
September 25, 1997
Revised November 5, 1997

On page 6, the referenced report states that reinforcement of footings for expansive soils will not be necessary. While we still expect this to be the case, we do recommend that footings be nominally reinforced due to the seismic setting of the site (UBC Zone 4). The reinforcement should consist of one #4 bar within 3 inches of the top of the footings and another #4 bar within 3 inches of the bottom of the footings.

We recommend that seismic design of the structures be in accordance with the 1997 Uniform Building Code using the following parameters:

Seismic source: Cucamonga fault 3 km to the north-northwest.
Seismic source type = A (Cucamonga fault)
Soil profile type = S_D
Seismic zone = 4
Seismic zone factor (Z) = 0.40
Seismic coefficient (C_a) = $0.44N_a$
Near-source factor (N_a) = 1.4
Seismic coefficient (C_v) = $0.64N_v$
Near-source factor (N_v) = 1.9

We again recommend that grading and foundation plans be reviewed from a geotechnical perspective by this office when such plans are available.

Conclusion

It is our professional opinion that the above referenced report remains applicable for residential development of the property provided the above revised recommendations and requirements of the current Uniform Building Code are incorporated into design and construction.

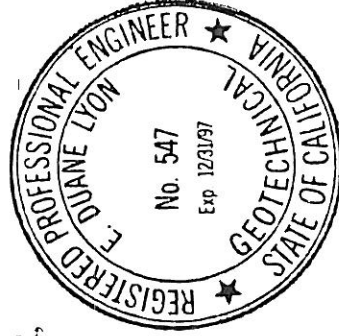
If you have any questions regarding this letter, please do not hesitate to contact us.

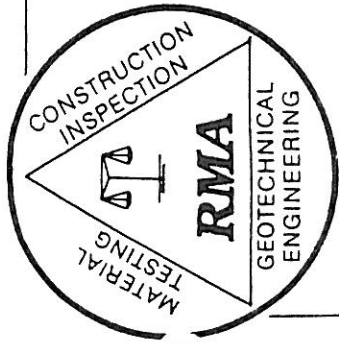
Respectfully submitted,

RMA Group



E. Duane Lyon, PE
President
GE 547





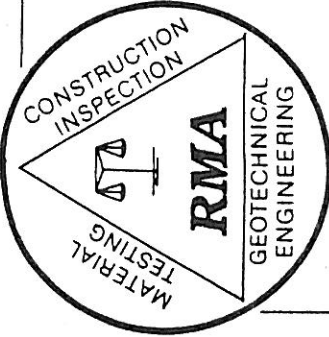
SOILS ENGINEERING INVESTIGATION
RESIDENTIAL PROJECT
HEMLOCK AVENUE AND BASELINE AVENUE
FONTANA, CA

FOR

L.A. CHANCO
22632 GOLDEN SPRING ROAD, #270
DIAMOND BAR, CA 91765

FEBRUARY 19, 1990

90-020-01



RICHARD MILLS ASSOCIATES, INC.
9624 HERMOSA AVE. - RANCHO CUCAMONGA, CA 91730
(714) 989-1751 FAX (714) 989-4287

February 19, 1990

L.A. Chanco
22632 Golden Spring Road, #270
Diamond Bar, CA 91765

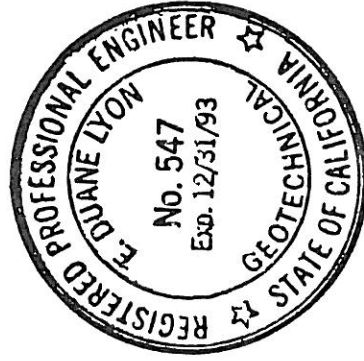
Subject: Soils Engineering Investigation
Residential Project, Hemlock Avenue &
Baseline Avenue Fontana, CA

Gentlemen:

In accordance with your request, a soil engineering investigation has been completed for the above-referenced site. The purpose of our investigation was to summarize the soil conditions onsite and assess their potential impact on the proposed development.

The accompanying report presents a description of our findings, as well as our conclusions and recommendations.

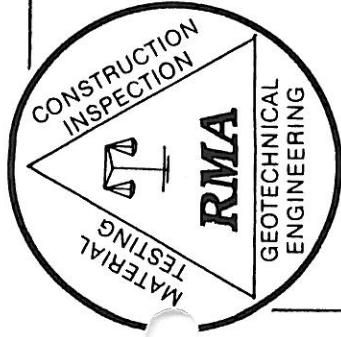
We appreciate this opportunity to be of continued service to you. If you have any questions regarding this report, please do not hesitate to contact us at your convenience.



Respectfully submitted,

RICHARD MILLS ASSOCIATES, INC.

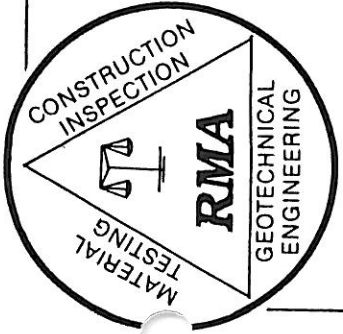
E. Duane Lyon, P.E.
President
GE 547



L.A. Chanco
Residential Project
Hemlock & Baseline
Fontana, CA
RMA Job# 90-020-01
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February 19, 1990

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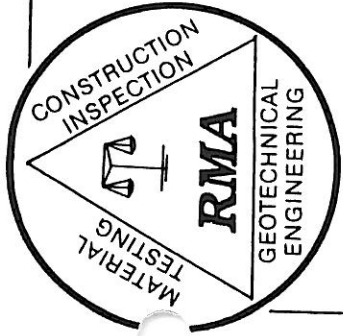
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L.A. Chanco
Residential Project
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Page 1

1.00 INTRODUCTION

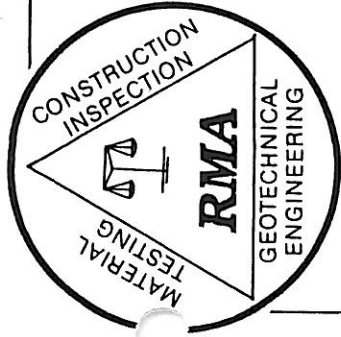
1.01 PURPOSE

The purpose of this investigation was to evaluate the soil conditions at the subject site, to assess their potential impact on the proposed development, and to provide recommendations to mitigate any potentially adverse soil conditions.

1.02 SCOPE OF THE INVESTIGATION

The general scope of this investigation included the following:

- o Review of pertinent published and unpublished reports prepared by this office and others (Appendix C).
- o Excavation, logging and sampling of 6 Test Holes (excavated by tractor-mounted backhoe) to assess the extent and characteristics of onsite materials.
- o Laboratory testing of representative samples of earth materials.
- o Preparation of this report providing recommendations on the following:
 1. Earthwork and grading procedures.
 2. Estimates of shrinkage (or bulking) and subsidence that will occur during grading.
 3. Allowable soil bearing pressure and types of foundations for the proposed structures.
 4. Types of floor slabs.
 5. Lateral earth pressures.



L.A. Chanco
Residential Project
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Page 2

1.03 SITE LOCATION AND DESCRIPTION

The subject property consists of approximately 30 acres in the City of Fontana. The site is rectangular in shape and bounded by Hemlock Avenue to the west. Topographically, the property is essentially planar in nature, sloping to the south at roughly a 2% grade. Plate 1 is an Index Map showing the location of the site.

1.04 CURRENT LAND USAGE

The site is currently vacant.

1.05 PLANNED USAGE

It is our understanding that the subject site is to be used as a single family residential development consisting of either one or two story wood frame structures. Structures will have concrete floor slabs on grade.

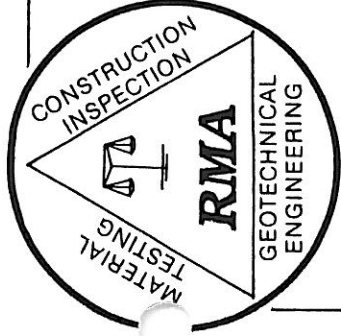
The site plan used in this report was provided by L.A. Chanco. This report has been prepared prior to completion of the grading and foundation plans.

For purposes of this report, we have made the following assumptions:

- 1) Foundation loadings of 3 kips per linear foot for wall footings and 12 kips for spread footings.
- 2) Cuts and fills will be less than 10 feet.

1.06 INVESTIGATION METHODS

Our investigation consisted of a field exploration, laboratory testing of typical soil types, a review of the information obtained in the exploration and testing phases, and preparation of this report. The conclusions and recommendations presented in this report have been prepared in accordance with generally accepted engineering principles and practices, and have incorporated federal, state and local laws, codes, ordinances and regulations which in our professional opinion are applicable at the time of preparation of this report.



L.A. Chanco
Residential Project
Hemlock & Baseline
Fontana, CA
RMA Job# 90-020-01
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Page 3

Appendix A, which is attached, contains a description of the methods and equipment used in performing the field exploration and laboratory testing, logs of each test hole, and the results of our laboratory tests. Definitions of technical terms and symbols used in this report are those of the American Society For Testing And Materials (ASTM D653). The stratigraphic lines presented on our test hole logs represent the approximate boundaries between soil types, and the transition may be gradual. The logs show subsurface conditions at the dates and locations indicated, and may not be representative of subsurface conditions at other locations and times. Should soil conditions be encountered during construction that appear different from those shown in this report, this office should be notified immediately so that our recommendations may be re-evaluated.

2.00 FINDINGS

2.01 SUBSURFACE SOIL CONDITIONS

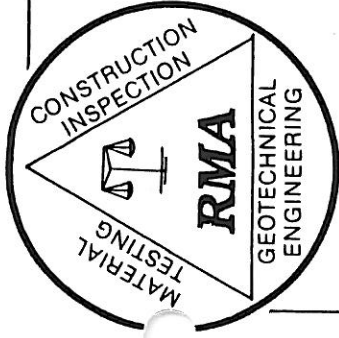
Soils encountered at the site are typical of the coarse grained alluvial soils common to the San Bernardino Valley. Specifically, the soils noted in our test holes consisted of silty sands, coarse sands, gravels, and cobbles. These materials are basically coarse grained, non-plastic, and non-expansive in nature.

2.02 SURFACE AND GROUND WATER CONDITIONS

Surface water was not noted on the subject site at the time of our investigation and no natural drainage courses were observed. Ground water was not encountered in any of the test holes. The subsurface soils have essentially uniform permeability characteristics.

2.03 SLOPE STABILITY

The site lies on a planar alluvial valley emanating from the San Gabriel Mountains and is not in the path or on any existing or potential landslide. The planar site has no significant slopes on it.



L.A. Chanco
Residential Project
Hemlock & Baseline
Fontana, CA
RMA Job# 90-020-01
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2.04 RIPPABILITY AND OVERSIZE MATERIALS

The earth materials on-site consist primarily of coarse grained alluvial soils with cobbles and boulders ranging in size to 18 in dimension. These materials are easily rippable with a medium weight bulldozer using two or more shanks.

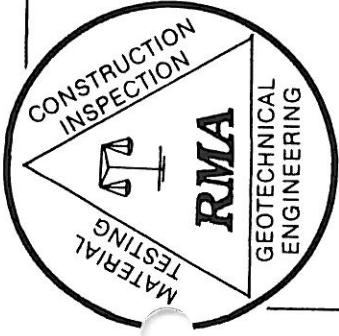
Oversize materials (materials with a maximum dimension greater than 12 inches) were encountered in our test holes. Based on the volumes and dimensions of over-size materials encountered in our test holes, and our experience in the general vicinity, we estimate approximately 5 per cent of the total volume of the excavation will consist of oversize material to a maximum dimension of approximately 18 inches.

2.05 EXPANSIVE SOILS

Expansion tests were performed on representative materials taken from the underlying soils during the field investigation. Results of these tests indicate these soils have an expansion classification of very low in accordance with UBC Standard 29-2. However, due to the preliminary nature of these tests, we recommend additional testing during the rough grading phase to verify the existence of these expansive soils.

2.06 FLOODING AND EROSION POTENTIAL

Soils at the site consist of coarse grained alluvial soils and are classified as SM, SP, or GP. These soil classifications are classified as having a low potential for erosion.



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3.00 CONCLUSIONS AND RECOMMENDATIONS

3.01 GENERAL CONCLUSION

Based on specific data and information contained in this report, our general understanding of the proposed construction, and general experience in the soils engineering field it is our professional judgement that the proposed development is geotechnically feasible provided the recommendations presented below are fully implemented during grading and construction.

3.02 GENERAL EARTHWORK AND GRADING

All grading should be performed in accordance with the General Earthwork and Grading Specifications outlined in Appendix B, and in accordance with all applicable City of Fontana requirements. The recommendations contained in Appendix B shall supersede the provisions contained here in after in case of conflict.

The native soils are suitable for placement as fill. Our recommendations for preparation of the existing soils and rough grading are presented in the attached Appendix B.

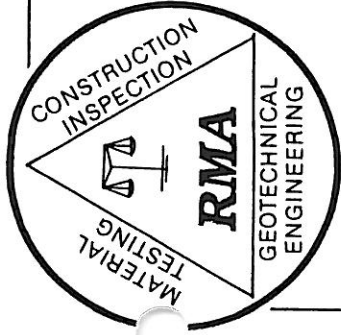
3.03 EARTH WORK SHRINKAGE, BULKING & SUBSIDENCE

Based on our field and laboratory density tests and observations, we have estimated the shrinkage and subsidence factors to account for losses of earth volumes that will occur during grading of on-site soils as follows:

Shrinkage factor = 20% for soil removed and replaced
as compacted fill.

Subsidence factor = 15 feet.

Although these values are only approximate, they represent our best estimate of lost yardage which will likely occur during grading.



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3.04 REMOVALS

Complete removal of compressible materials will be necessary during grading in areas to receive fill or which will support structures. The overexcavated materials may be moisture-conditioned and recompacted as structural fill.

The following removals should be anticipated as minimal:

The upper 2 feet of alluvium will require removal in areas of proposed building pads. Overexcavation of footing areas will be dependent on footing dimensions as outlined in Appendix B. The alluvium may be replaced as compacted fill.

3.05 RIPPABILITY AND ROCK DISPOSAL

The earth materials onsite consist primarily of coarse grained alluvial soils and should generally be rippable using conventional heavy equipment and earth moving methods.

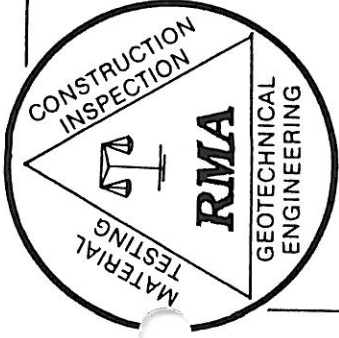
Oversize materials should be encountered during grading. Any oversize material generated by the cut or large boulders excavated during removals should be buried in deeper portions of the fill as directed by the soil engineer.

3.06 SURFACE AND GROUND WATER

Ground water was not encountered during our investigation. Our research indicates that ground water lies approximately 250 feet below the existing ground surface. Therefore, any water encountered should be perched, although none is anticipated.

3.07 FOUNDATIONS

Continuous wall footings are recommended to support the proposed residences. If the recommendations in the section on grading (Appendix B) are followed and footings are established in compacted fill materials, footings may be designed using the following soil bearing values:



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Footings having a minimum width of 1.0 foot and established a minimum of 1.0 foot below the lowest adjacent grade in compacted material - 1,500 pounds per square foot. This value may be increased by 20% for each additional foot of depth to a maximum value of 2,400 pounds per square foot.

These values represent an allowable net increase in soil pressure over existing soil pressure and may be increased by a value of one-third for considerations of short term wind or seismic loads.

The soils at the site are coarse grained, non-plastic, and expansive in nature. Therefore, reinforcement of the footings for expansive soil conditions will not be necessary.

3.08 SLABS ON GRADE

We recommend the use of Type I, unreinforced slabs on grade for residential floor slabs on the subject project. Type I floor slabs have a nominal thickness of 4 inches and are divided into squares or rectangles using weakened plane joints, each with maximum dimensions not exceeding 25 feet. If weakened plane joints are not planned, then the slabs shall be reinforced with 6x6-10/10 welded wire fabric.

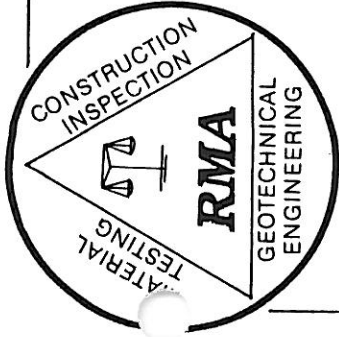
A base course capillary break is not required for slabs on grade at the subject project. However, it is recommended that a moisture barrier consisting of a one inch layer of sand underlain by an impermeable membrane, such as visqueen (6 mil in thickness), properly lapped and sealed be provided beneath all floor slabs with moisture sensitive floor coverings. It is further recommended that positive drainage away from all structures be provided.

3.09 LATERAL LOADS

Lateral loads may be resisted by soil friction and the passive resistance of the soil. The following parameters are recommended.

Passive Earth Pressure-equivalent fluid weight of 198 pcf.

Coefficient of Friction (Soil to footing) - 0.35



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Retaining structures should be designed to resist the following lateral active earth pressures:

Surface slope of Retained Material Horiz. to Vert.	Equivalent Fluid Weight (pcf)
Level	43
5 to 1	46
4 to 1	47
3 to 1	52
2 to 1	67

These active earth pressures are only applicable if the retained earth is allowed to strain sufficiently to achieve the active state. The required horizontal strain to achieve the active state is approximately 0.0025H. Retaining structures should be designed to resist an at rest lateral earth pressure if this horizontal strain can not be achieved.

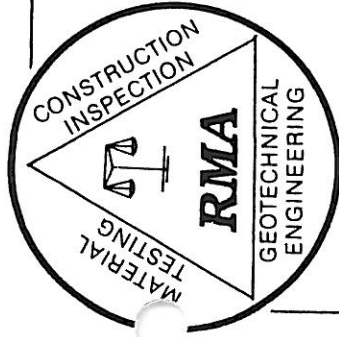
At rest lateral earth pressure - 63 pcf

The horizontal compression required to achieve the full passive earth pressure is approximately 4 times the horizontal strain required to reach the active state. The horizontal compression required to reach 1/2 the maximum passive pressure is approximately equal to the horizontal strain required to achieve the active state. The previously recommended passive pressure should be reduced accordingly if the required horizontal compression to achieve full passive pressures can not be achieved.

If any super-imposed loads are anticipated, this office should be notified so that appropriate recommendations for earth pressures may be provided.

3.10 PAVEMENT SECTIONS

Sand equivalent and R-values tests were performed on anticipated subgrade soils at the site in order to provide information on their soil properties for design of pavement structural sections.



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Structural sections were designed using the procedures outlined in "Design Procedures for Flexible Pavements", State of California Planning Manual - Part 7. This procedure uses the principle that the pavement structural section must be of adequate thickness to distribute the load from the design traffic index (TI) to the subgrade soils in such a manner that the stresses from the applied loads do not exceed the strength of the soil (R-Value).

Development of the design traffic index on the basis of a traffic study is beyond the scope of this report; however, our experience indicates that traffic indexes of 4 to 6 are typical for subdivision streets. We have provided structural sections for each traffic index. Selection of the final pavement structural section should be based on economic considerations which are beyond the scope of this investigation.

Recommended Structural Section

(T.I. = 4, R-value = 72)

3 inches of asphaltic concrete on
3 inches of crushed aggregate base.

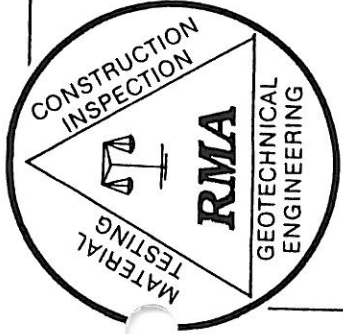
(T.I. = 5, R-value = 72)

3 inches of asphaltic concrete concrete
on 4 inches of crushed aggregate base.

(T.I. = 6, R-value = 72)

4 inches of asphaltic concrete on
4 inches of crushed aggregate base.

Prior to paving, the subgrade soils should be scarified and the moisture adjusted to within 2% of the optimum moisture content. The subgrade soils should be compacted to a minimum of 90% relative compaction if an aggregate base course is used, or 95% relative compaction if an aggregate base course is not used. All aggregate base courses should be compacted to a minimum of 95% relative compaction.



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3.11 UTILITY TRENCH BACKFILL

The on-site soils are expected to be suitable as trench backfill provided they are screened of organic matter and cobbles over 4 inches in diameter. Trench backfill should be densified to at least 90% relative compaction (ASTM D1557-78). On-site granular soils may be water densified initially. Supplemental mechanical compaction methods may be required in finer ground soils to attain the required 90% relative compaction.

3.12 PLAN REVIEW

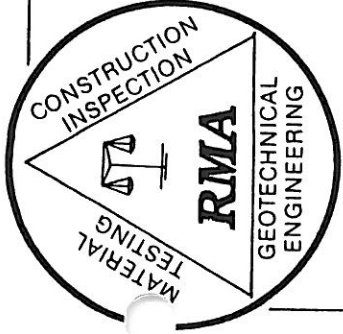
Once formal grading and foundation plans are prepared for the subject property, this office should review the plans from a soils engineering viewpoint, comment on changes from the plan used in this report and revise the above recommendations where necessary.

3.13 OBSERVATION AND TESTING DURING GRADING

Soils engineering observation and testing should be conducted during the following stages of rough grading:

- o Upon completion of clearing and grubbing.
- o During excavation and overexcavation in alluvial soil areas.
- o During all phases of rough grading, including overexcavation, precompaction, benching and filling operations and cut slope excavation.
- o When any unusual conditions are encountered during grading.

A final soils engineering report summarizing conditions encountered during grading should be submitted upon completion of grading.

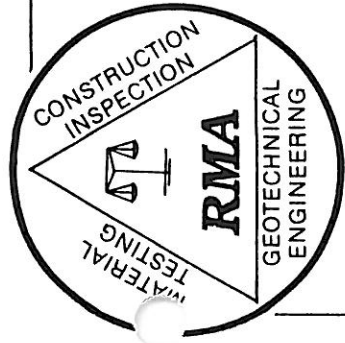


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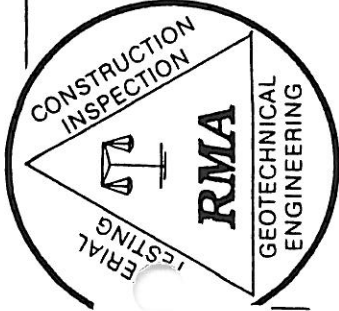
4.00 CLOSURE

The findings and recommendations in this report were prepared in accordance with generally accepted soil engineering principles and practices. No other warranty, either express or implied, is made. This report has been prepared for L.A. Chanco to be used solely for design purposes. Anyone using this report for any other purpose must draw their own conclusions regarding site conditions.

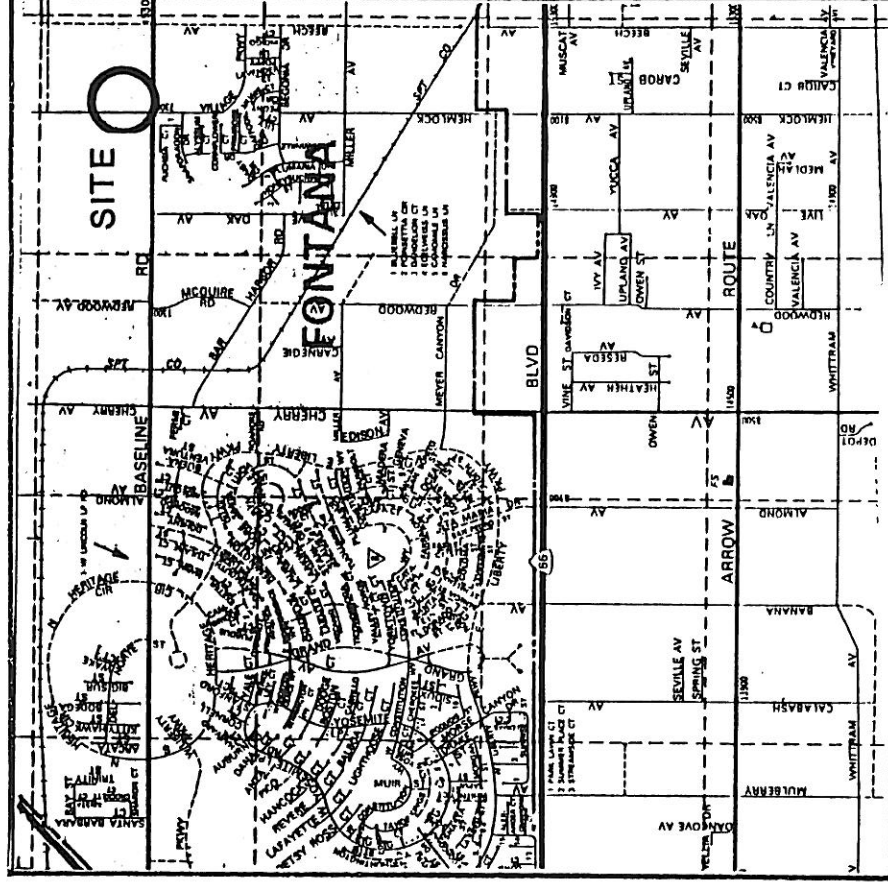
The geotechnical consultant should be retained during construction of the earthwork and foundation phases of the work to monitor compliance with the design concepts, or recommendations, and to provide recommendations in the event that the subsurface conditions differ from that anticipated prior to the start of construction.



PLATES

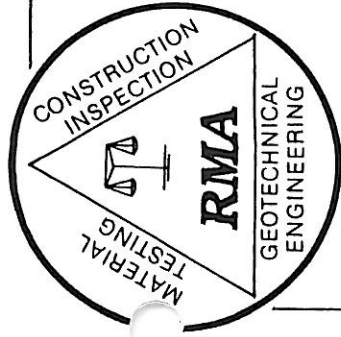


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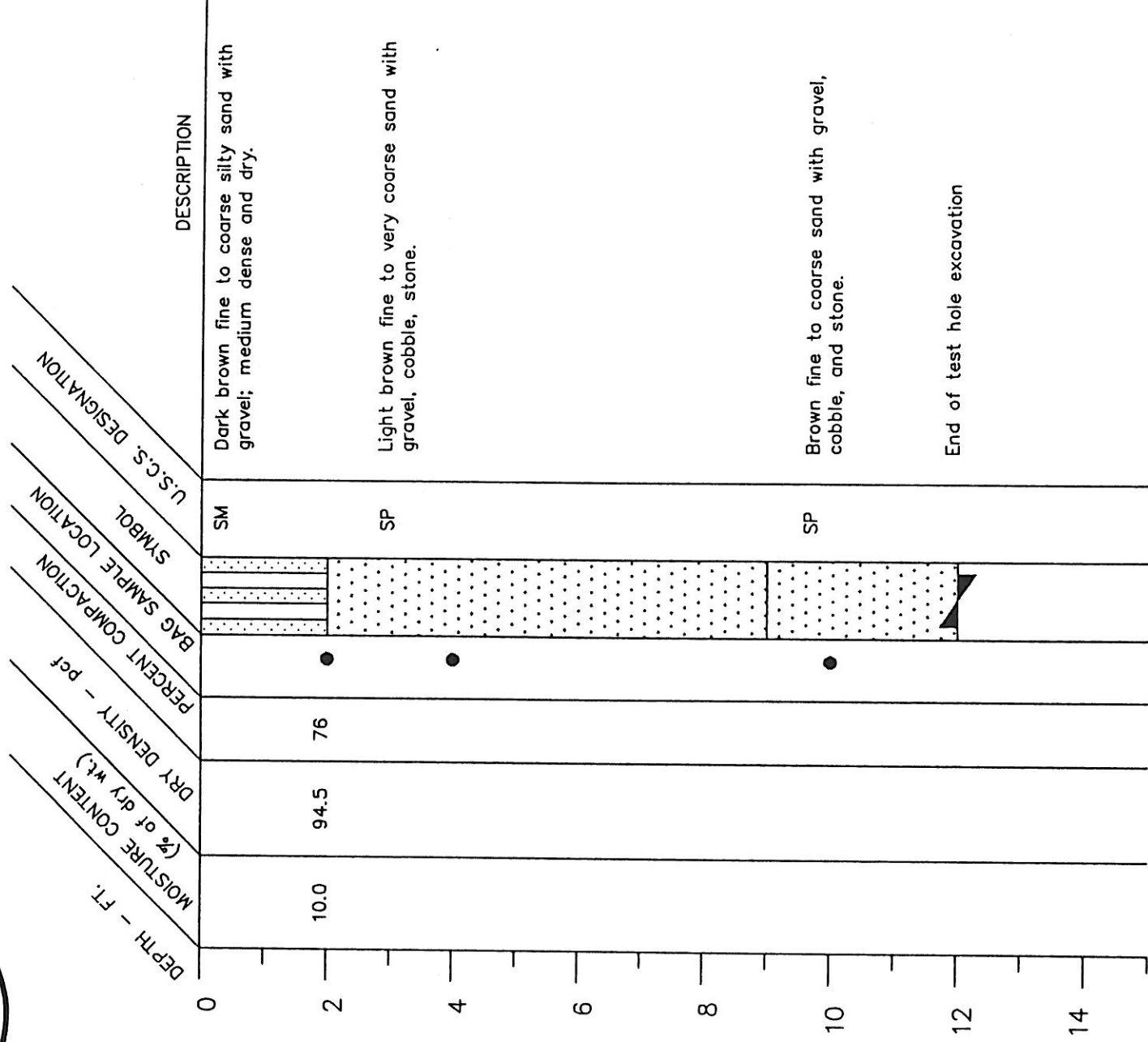


INDEX MAP
OF
HEMLOCK AVENUE AND BASELINE AVENUE

BASE MAP: Thomas Guide



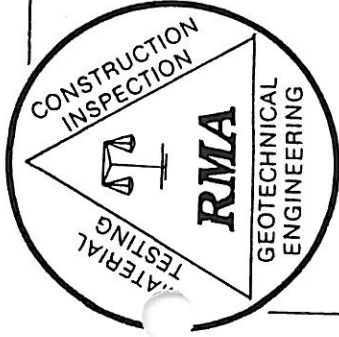
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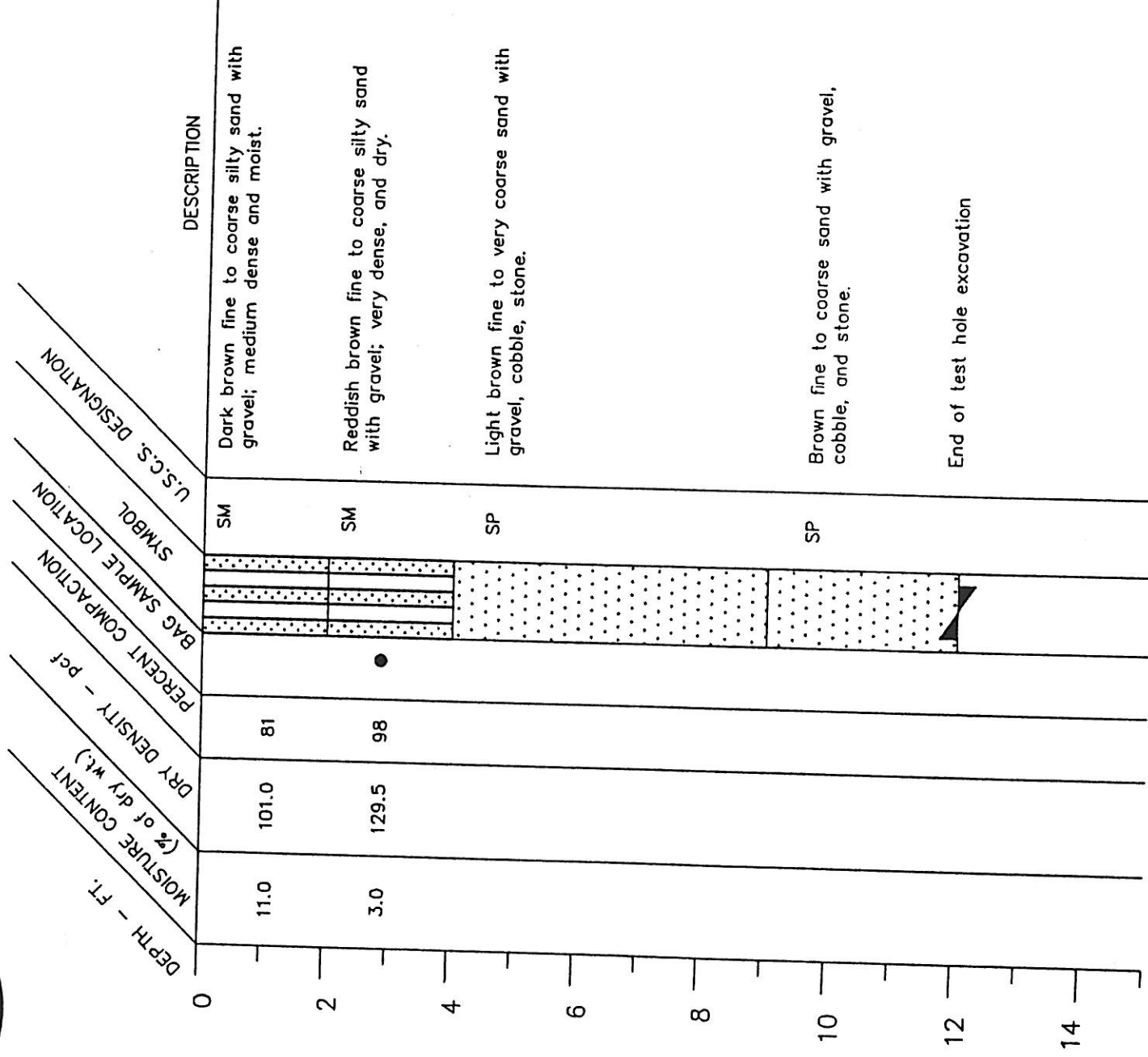
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Date Excavated: 1-18-90
Location: See Plot Plan
Elevation: ----

No Ground Water Encountered

TEST HOLE No. 1



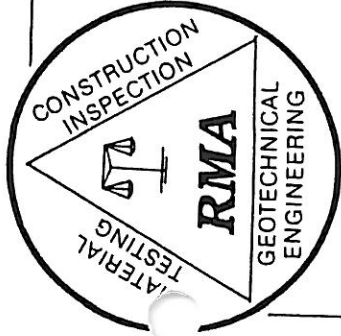
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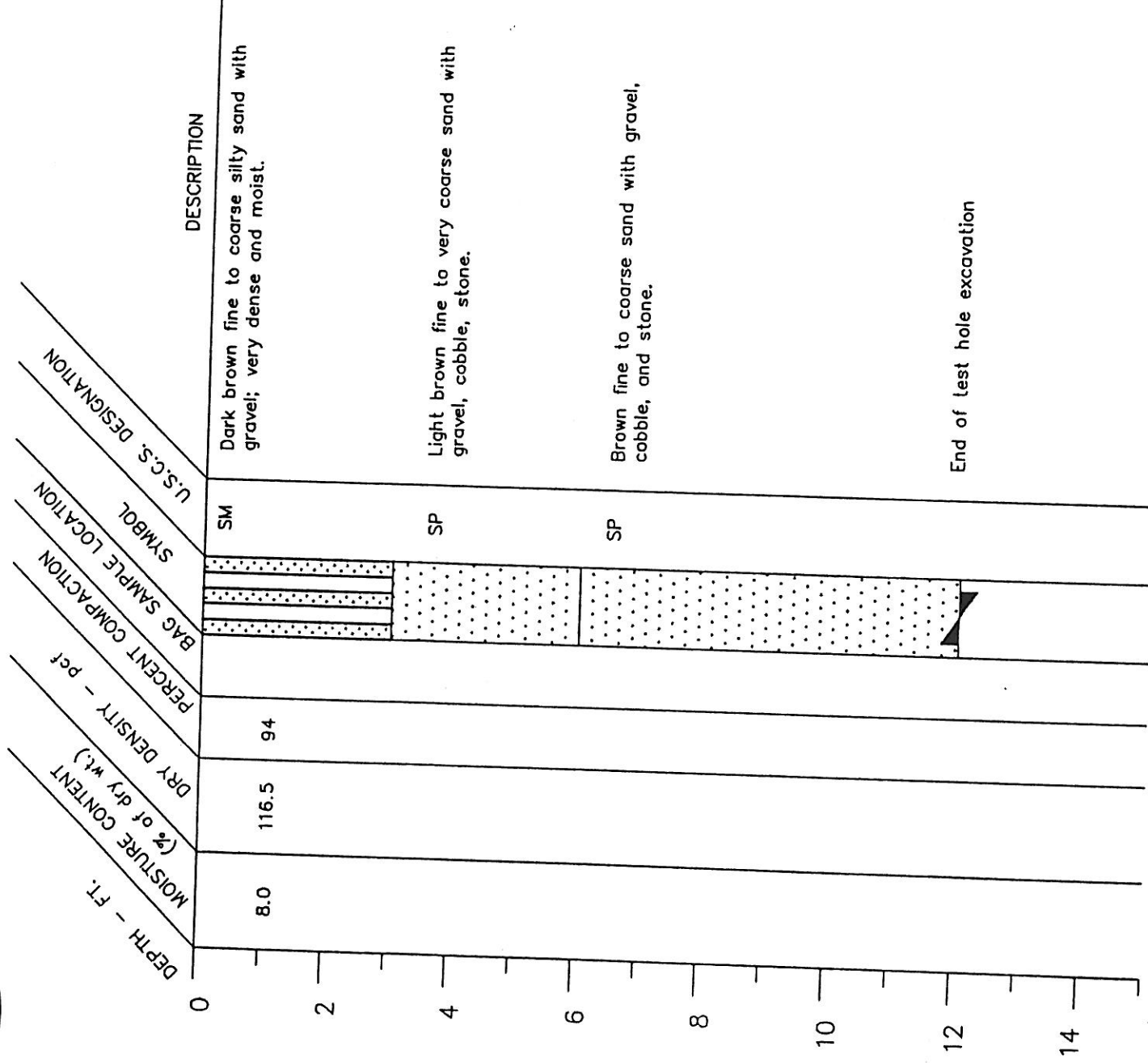
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Date Excavated: 1-18-90
Location: See Plot Plan
Elevation: ---

No Ground Water Encountered

TEST HOLE No. 2



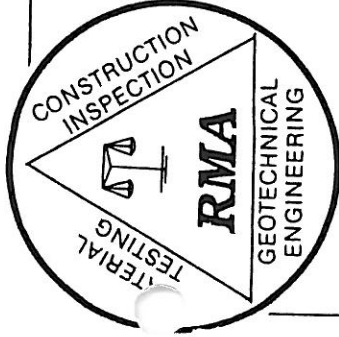
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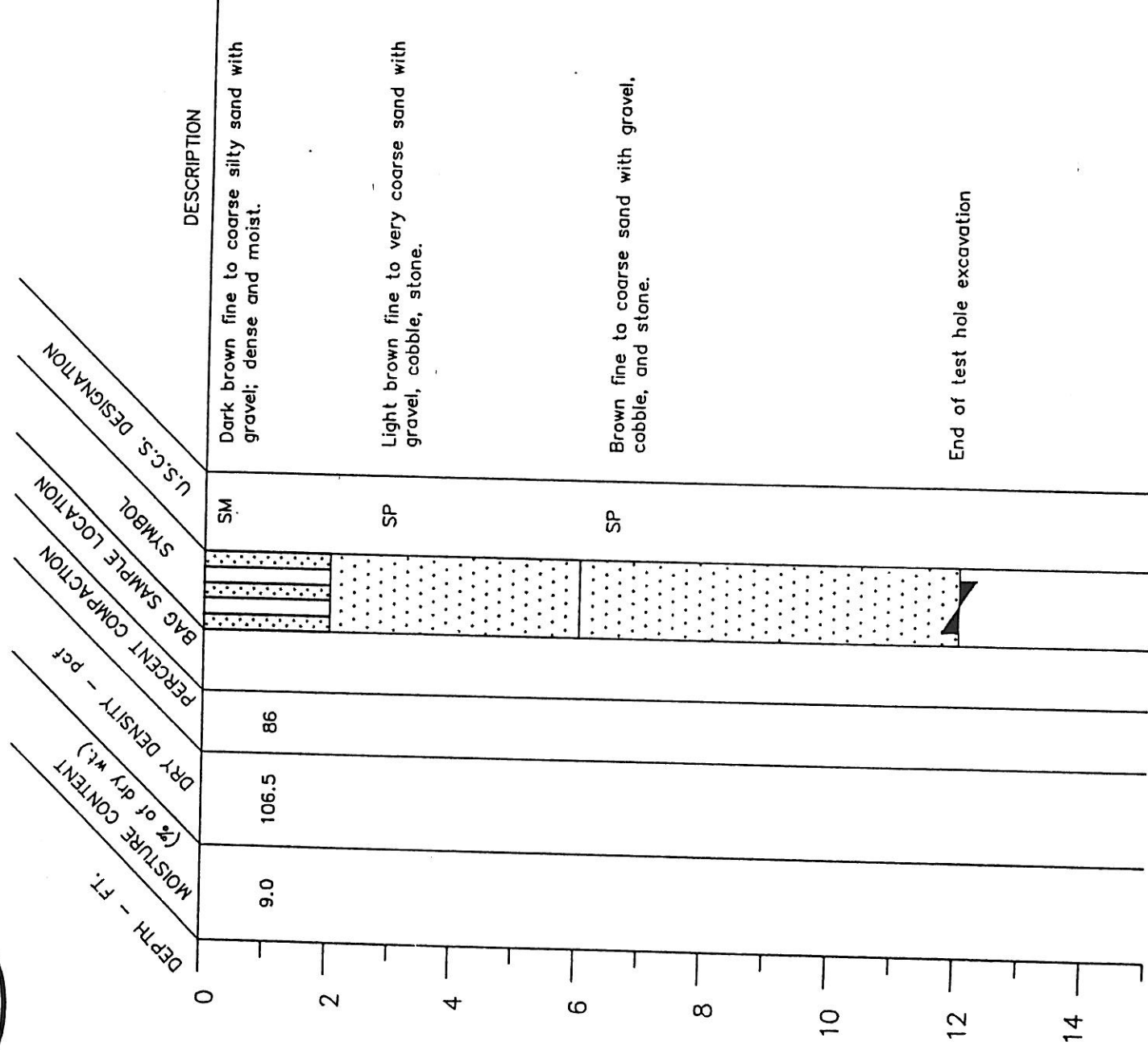
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Location: See Plot Plan
Elevation: ----

No Ground Water Encountered

TEST HOLE No. 3

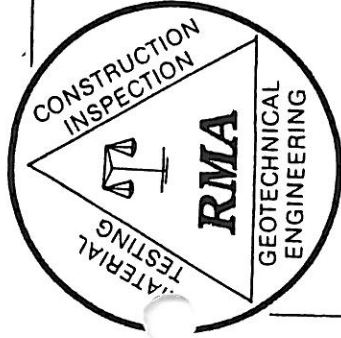


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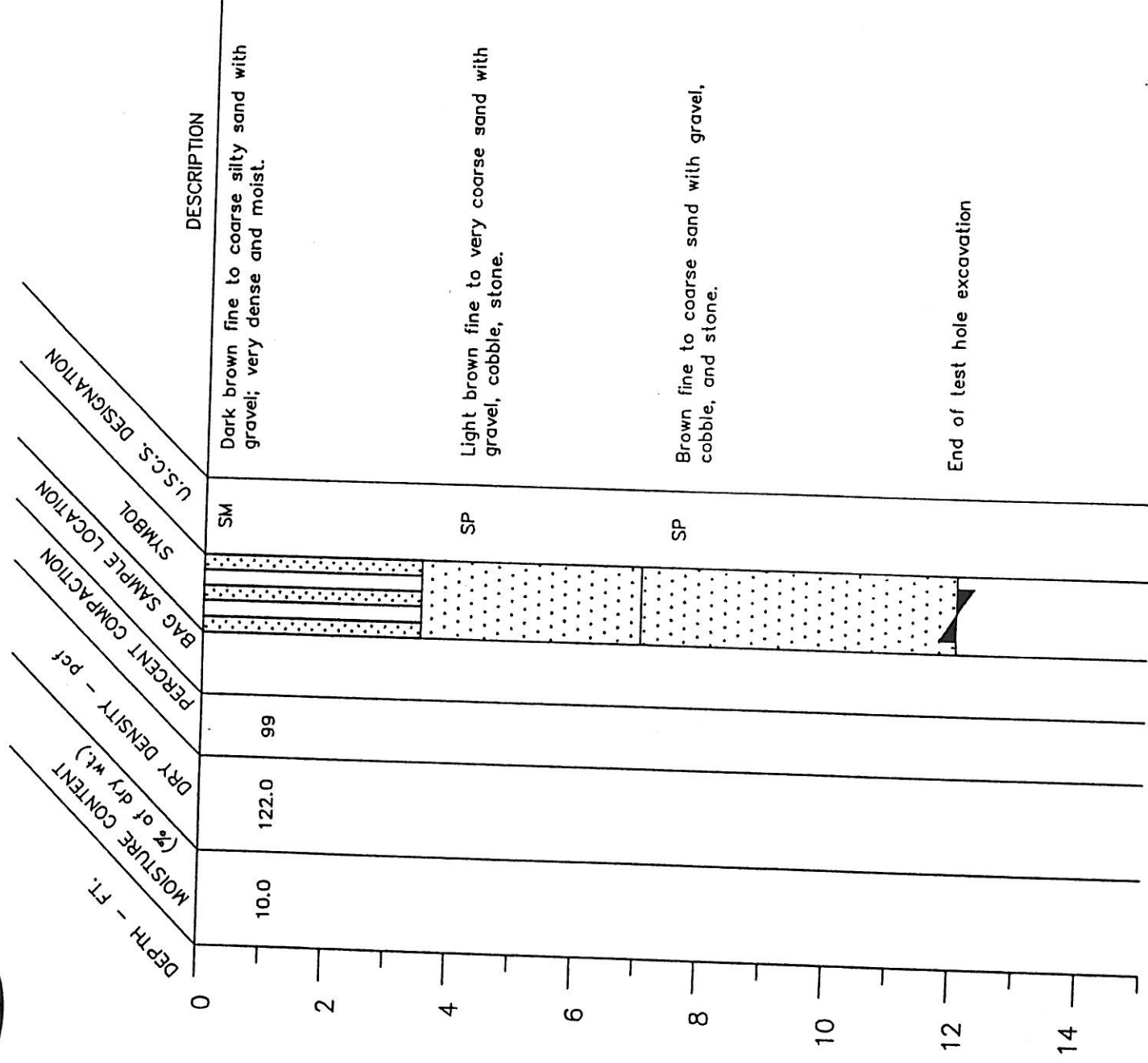


Excavated with: 24" Bucket
Date Excavated: 1-18-90
Location: See Plot Plan
Elevation: ---

No Ground Water Encountered
TEST HOLE No. 4



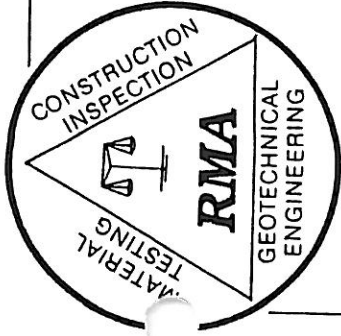
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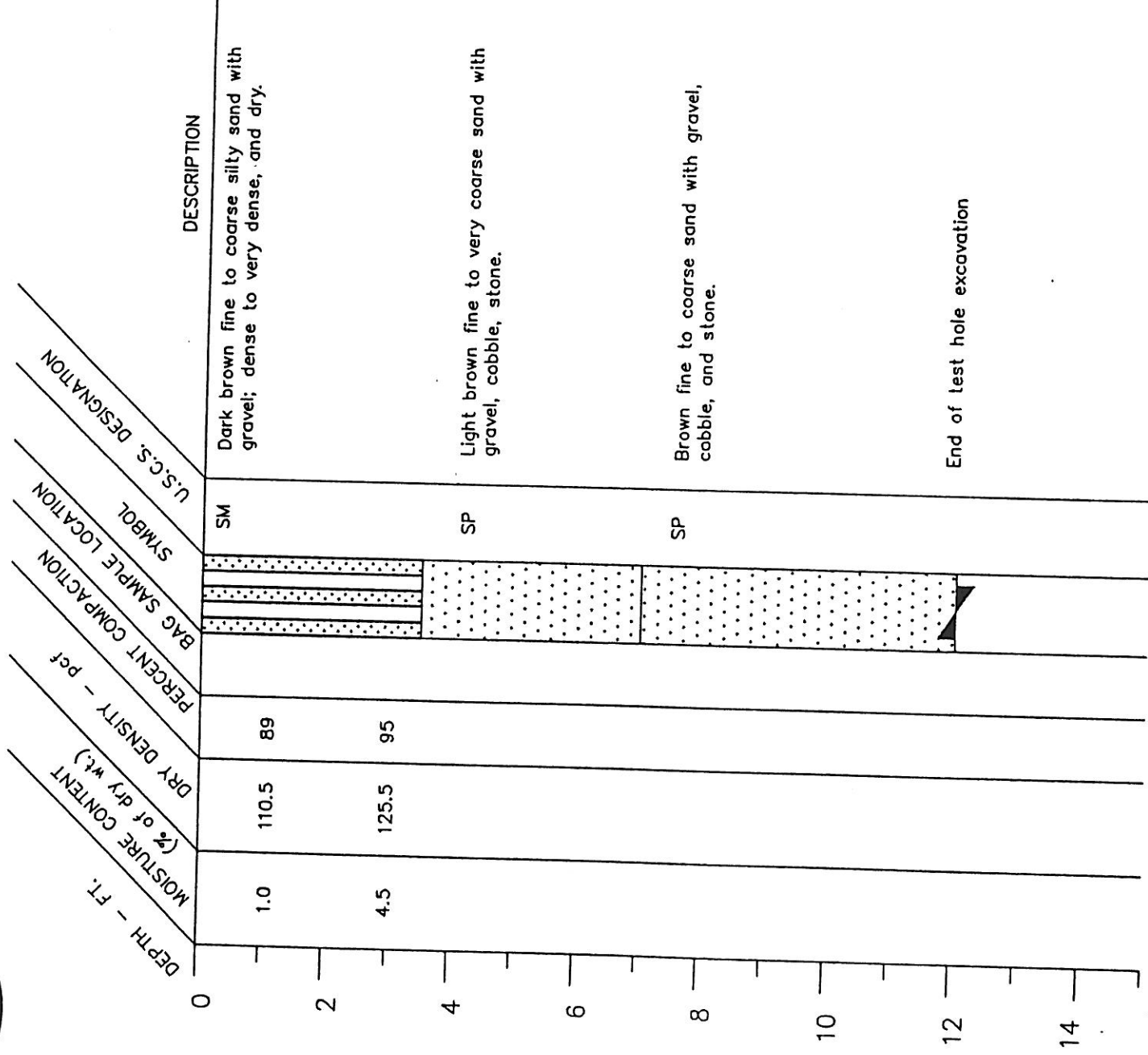
Excavated with: 24" Bucket
Date Excavated: 1-18-90
Location: See Plot Plan
Elevation: ---

No Ground Water Encountered

TEST HOLE No. 5

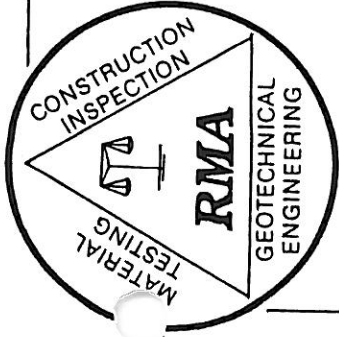


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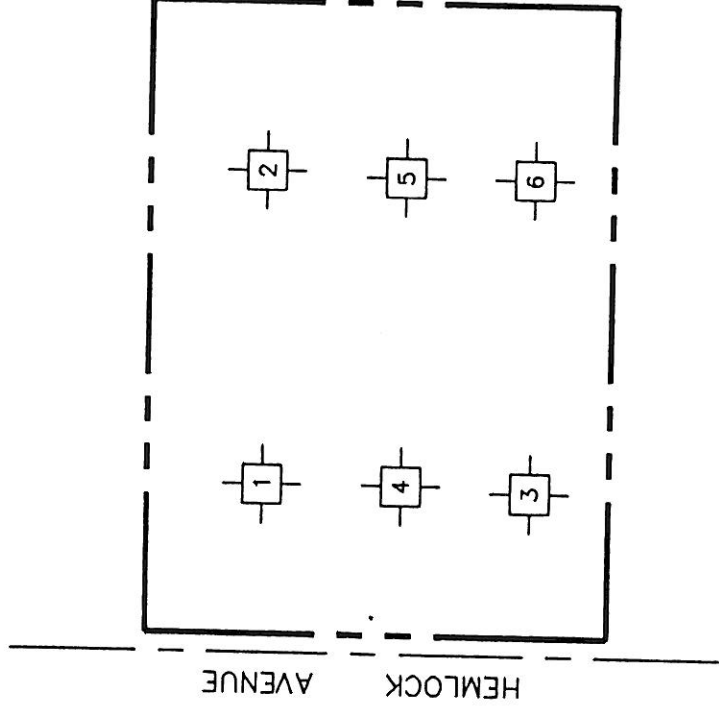


Excavated with: 24" Bucket
Date Excavated: 1-18-90
Location: See Plot Plan
Elevation: ----

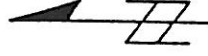
No Ground Water Encountered
TEST HOLE No. 6



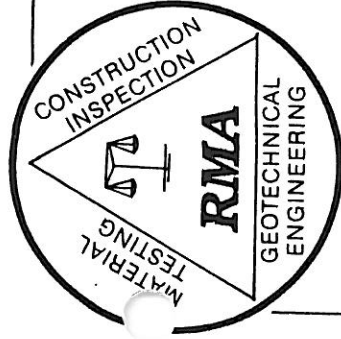
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INDICATES TEST HOLE LOCATION



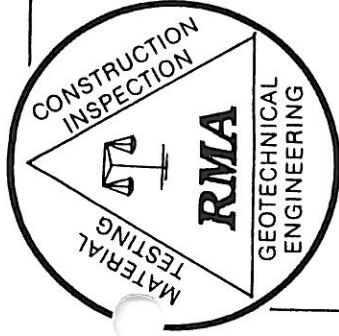
SCALE: 1" = 400'



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SAMPLE INFORMATION

Sample Number	Sample Description	Test Hole #	Location Depth (Ft)
1	Dark brown poorly graded sand with silt	1	2.0
2	Light-brown poorly graded sand	1	4.0
3	Brown poorly graded gravel	1	10.0
SE-1	Brown poorly graded gravel	1	1.0
SE-2	Dark-brown poorly graded	2	1.0
SE-3	Light-brown poorly sand	3	1.0
SE-4	Dark-brown poorly graded sand with silt	4	1.0
SE-5	Brown poorly graded gravel	5	1.0
SE-6	Brown poorly graded gravel	6	1.0



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SIEVE ANALYSIS

Test Method: ASTM D422

Sample Number:	1	2	3
Sieve Size	Percent Passing		
3"	100	100	100
2"	100	98	100
1 1/2"	99	96	88
1"	98	89	74
3/4"	95	84	66
1/2"	92	78	57
3/8"	90	73	51
#4	84	61	42
#8	81	53	36
#16	75	42	30
#30	65	29	22
#50	48	17	11
#100	24	8	4
#200	12	4	2

Unified Soil
Classification

SP/SM

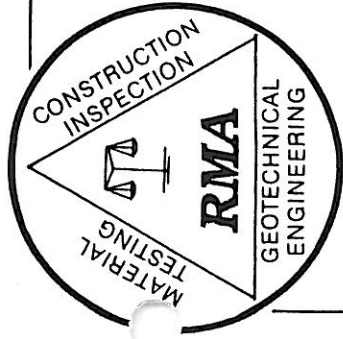
SP

GP

MAXIMUM DENSITY - OPTIMUM MOISTURE

Test Method: ASTM D1557 Method C

Sample Number	Optimum Moisture (Percent)	Maximum Density (Lbs./Cu. Ft.)
1	10.5	124.0
2	9.0	132.0
3	9.5	132.0



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DIRECT SHEAR

Test Method: ASTM D3080

Sample Number	Remolded Dry Weight (pcf)	Initial Moisture %	Friction Angle(deg)	Cohesion (psf)
2	118.8	9.0	21	215

EXPANSION TEST

Test Method: U.B.C. Standard No. 29-2

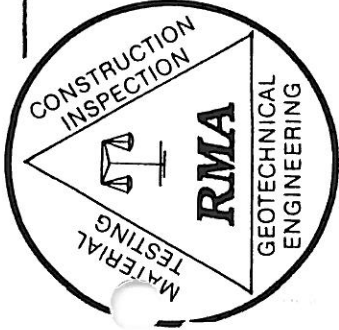
Sample Number	Molding Moisture Content (%)	Final Moisture Content (%)	Initial Dry Density (Pcf)	Expan sion Index	Expansive Classifi cation
------------------	---	---------------------------------------	--------------------------------------	------------------------	---------------------------------

1	9.2	18.1	112.3	0	very low
---	-----	------	-------	---	----------

SAND EQUIVALENT

Test Method: ASTM D2419

Sample Number	Sand Equivalent
SE-1	57
SE-2	44
SE-3	47
SE-4	40
SE-5	53
SE-6	55



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R - VALUE

Test Method: Calif. 301

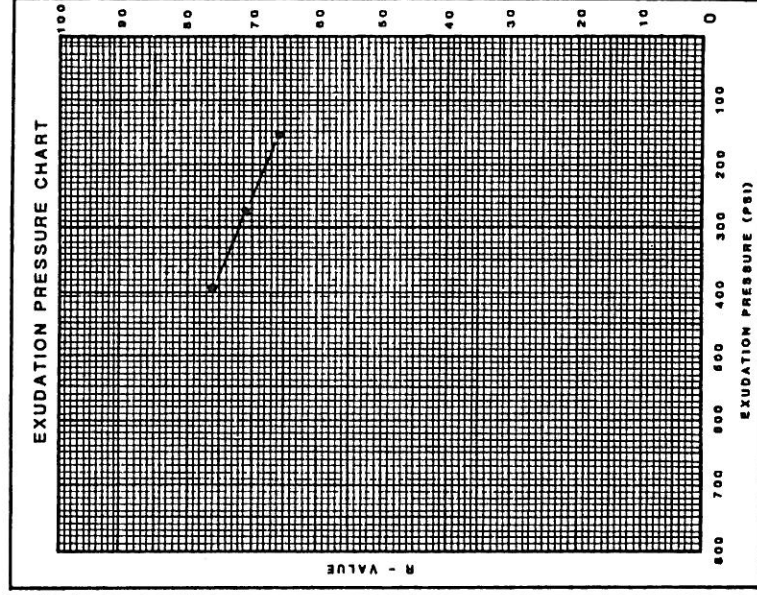
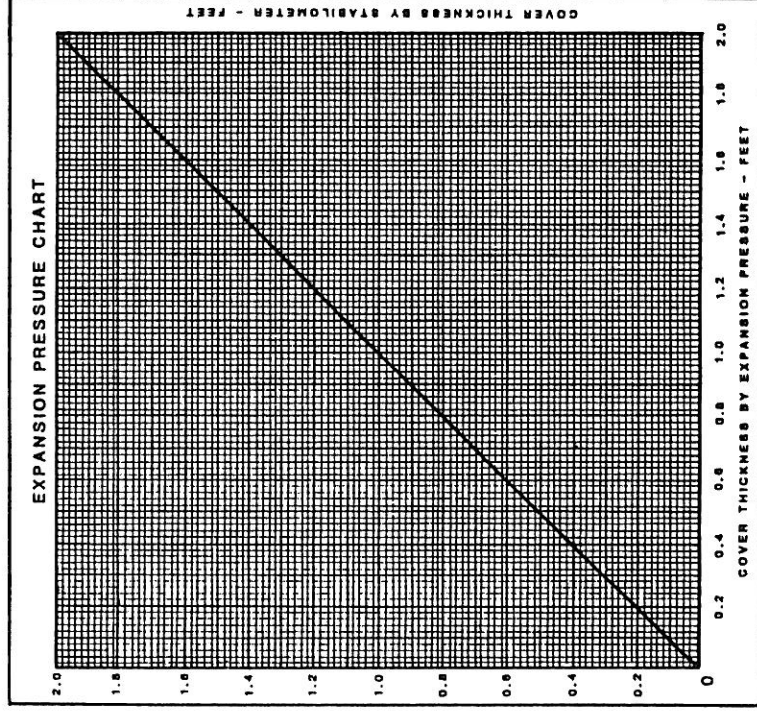
Sample Number: SE-4

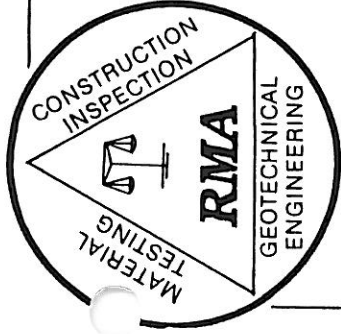
Specimen No.

Specimen No.	1	2	3
Moisture content, %	9.7	9.8	10.7
Exudation Pressure, psi	398	279	159
Dry density, pcf	122.7	122.4	120.2
Expansion Pressure, psf	0	0	0
Stabilometer "R" Value	76	71	66

Traffic Index : All

Equivalent "R" Value
by Exudation : 72





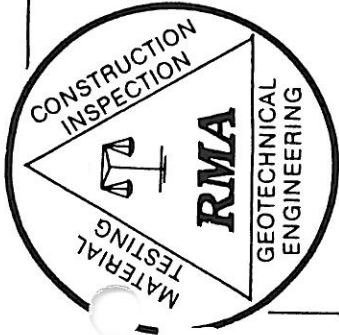
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P A R T I C L E S I Z E L I M I T S					
SILT OR CLAY	SAND	GRAVEL	U. S. S T A N D A R D S I E V E S I Z E		
			NO 200	NO 40	NO 10
			FINE	MEDIUM	COARSE
					FINE
					COARSE
					COBBLES
					BOULDERS

MAJOR DIVISIONS			GROUP SYMBOLS		TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)		GW	Well graded gravel, gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)		GP	Poorly graded gravel or gravel-sand mixtures, little or no fines.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)		GM	Silty gravels, gravel-sand-silt mixtures.
				GC	Clayey gravels, gravel-sand-day mixtures.
SANDS WITH FINES (Appreciable amount of fines)			SW	Well graded sands, gravelly sands, little or no fines.	
			SP	Poorly graded sands or gravelly sands, little or no fines.	
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)	SANDS WITH FINES (Appreciable amount of fines)		SM	Silty sands, sand-silt mixtures.
				SC	Clayey sands, sand-day mixtures.
		SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		OL	Organic silts and organic silty clays of low plasticity.	
			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
			CH	Inorganic clays of high plasticity, fat clays.	
	HIGHLY ORGANIC SOILS		OH	Organic clays of medium to high plasticity, organic silts.	
			Pt	Peat and other highly organic soils.	

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

UNIFIED SOIL CLASSIFICATION SYSTEM



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I. SOIL STRENGTH/DENSITY

BASED ON STANDARD PENETRATION TESTS

Compactness of sand		Consistency of Clay	
Penetration Resistance N (blows/ft)	Compactness	Penetration Resistance N (blows/ft)	Consistency
0-4	Very Loose	<2	Very Soft
4-10	Loose	2-4	Soft
10-30	Medium Dense	4-8	Medium Stiff
30-50	Dense	8-15	Stiff
>50	Very Dense	13-30	Very Stiff
		>30	Hard

N = Number of blows of 140 lb. weight falling 30 in. to drive 2-in OD sampler 1 ft.

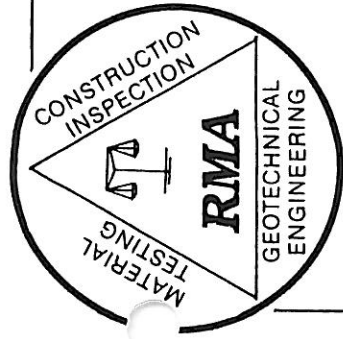
BASED ON RELATIVE COMPACTION

Compactness of sand		Consistency of Clay	
% Compaction	Compactness	% Compaction	Consistency
<75	Loose	<80	Soft
75-83	Medium Dense	80-85	Medium Stiff
83-90	Dense	85-90	Stiff
>90	Very dense	>90	Very Stiff

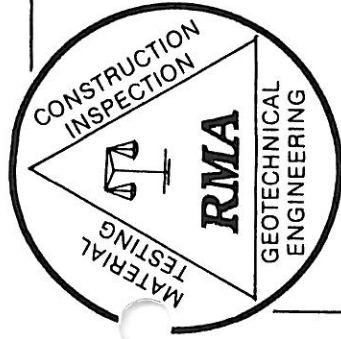
II. SOIL MOISTURE

Moisture of Sands		Moisture of Clays	
% Moisture	Description	% Moisture	Description
<5%	Dry	<12%	Dry
5-12%	Moist	12-20%	Moist
>12%	Very Moist	>20%	Very Moist, wet

SOIL DESCRIPTION LEGEND



APPENDIX A



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APPENDIX A

FIELD INVESTIGATION AND LABORATORY TESTING

1.0 FIELD EXPLORATION

1.01 NUMBER OF TEST HOLES

The field exploration consisted of 6 test holes excavated to a maximum depth of 12 feet. The test holes were excavated with a tractor-mounted backhoe.

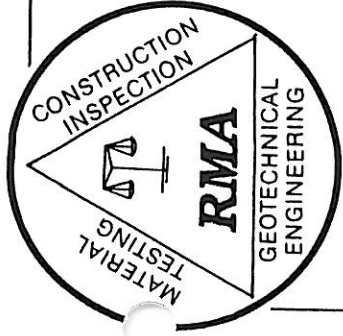
1.02 LOCATION OF TEST HOLES

The location of test holes was approximately located by using the topographic features noted on the plan indicated in section 1.05 of this report. The location of the test holes should be considered accurate only to the degree implied by the methods used.

1.03 TEST HOLE LOGGING

A log of each test hole was prepared by one of our staff. The log contains factual information and interpretation of the soil conditions between samples. The stratum indicated on these logs represent the approximate boundary between soil types and the transition may be gradual. The logs of the test holes are presented as plates A-1 through A-6 and a plot plan showing the approximate location of each test hole is attached as plate A-7.

Identification of the soils encountered during the exploration was made using the field identification procedure of the Unified Soils Classification System (ASTM D2488). A legend indicating the symbols and definitions used in this classification system is attached as Plate A-12 and a legend defining the terms used in describing the relative compaction, consistency or firmness of the soil is attached as Plate A-13. Bag samples of the major soil types were obtained for laboratory inspection and testing, and the in-place density of the various soil strata encountered in the exploration was determined by the standard procedures for the Direct transmission Nuclear Gauge Method, ASTM D2922.



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2.0 LABORATORY TESTS

2.01 PARTICLE SIZE ANALYSIS

Particle size analysis was performed on representative samples of the major soils types encountered in the test holes in accordance to the standard test methods of the American Society for Testing and Materials (ASTM D422). The hydrometer portion of the standard procedure was not performed and the material retained on the #200 screen was washed.

2.02 MAXIMUM DENSITY

Maximum density - optimum moisture relationships for the major soil types encountered during the field exploration were performed in the laboratory using the standard procedures of ASTM D1557.

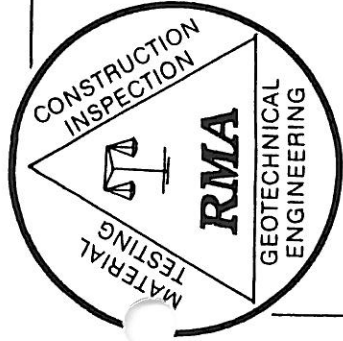
2.03 EXPANSION TESTS

Expansion index tests were performed on representative samples of the major soil types encountered by the test methods outlined in the Uniform Building Code Standard No. 29-2.

2.04 DIRECT SHEAR

Direct shear tests were performed on representative samples of the major soil types encountered in the test holes using the standard test method of ASTM D3080 (consolidated and drained). Tests were performed on remolded samples. Samples were tested at a relative compaction equal to the average in-situ density in order to stimulate field conditions.

Shear test were performed on a direct shear machine of the strain controlled type. To simulate possible adverse field conditions, the samples were saturated prior to shearing. Several samples were sheared at varying normal loads and the results plotted to establish the angle of the internal friction and cohesion of the tested samples.



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2.05 RESISTANCE VALUE (R-VALUE)

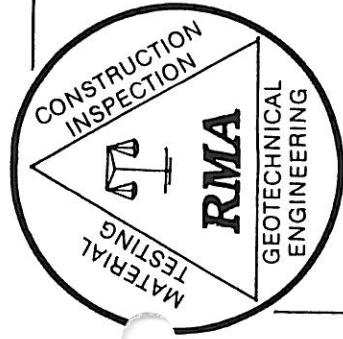
Resistance Value tests were performed on representative samples of the major soil types encountered by the test methods outlined in California 301.

2.06 SAND EQUIVALENCE

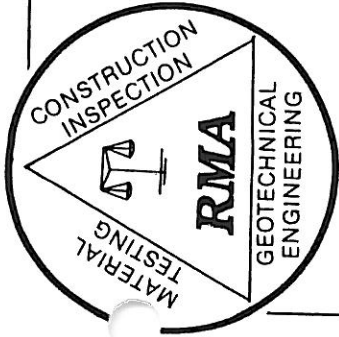
Sand Equivalent tests were performed on representative samples of the major soil types encountered by the test methods of ASTM D2419.

2.07 TEST RESULTS

Test results for all laboratory tests performed on the subject project are shown in the attached plates A-8 through A-11.



APPENDIX B



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APPENDIX B

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

1.0 GENERAL DESCRIPTION

1.01 INTRODUCTION

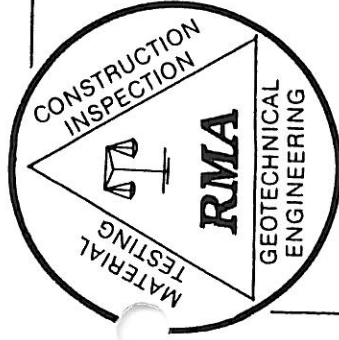
These specifications present our general recommendations for earthwork and grading as shown on the approved grading plans for the subject project. These specifications shall cover all clearing and grubbing, removal of existing structures, preparation of land to be filled, filling of the land, spreading, compaction and control of the fill, and all subsidiary work necessary to complete the grading of the filled areas to conform with the lines, grades and slopes as shown on the approved plans.

1.02 LABORATORY STANDARD

The laboratory standard used to establish the maximum density and optimum moisture shall be ASTM D1557. Method D shall be used if the amount of material passing the 3/4 inch size exceeds 10% by weight; otherwise, method C shall be used.

The in-site density of earth materials (field compaction tests) shall be determined by the sand cone method, ASTM D1556 or other test method as considered appropriate by the geotechnical consultant.

Relative compaction is defined, for purposes of these specifications, as the ratio of the in-place density to the maximum density as determined in the previously mentioned laboratory standard.



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2.0 CLEARING

2.01 SURFACE CLEARING

All structures marked for removal, timber, logs, trees, brush and other rubbish shall be removed and disposed of off the site. Any trees to be removed shall be pulled in such a manner so as to remove as much of the root system as possible.

All unsuitable materials, such as diesel contaminated soils, shall be properly disposed of.

2.02 SUB-SURFACE REMOVALS

A thorough search should be made for possible underground storage tanks and/or septic tanks and cesspools. If found, tanks should be removed and cesspools pumped dry.

Any concrete irrigation lines shall be crushed in place and all metal underground lines shall be removed from the site.

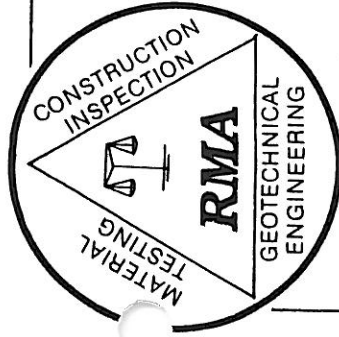
2.03 BACKFILL OF CAVITIES

All cavities created or exposed during clearing and grubbing operations or by previous use of the site shall be cleared of deleterious material and backfilled with native soils or other materials approved by the soil engineer. Said backfill shall be compacted to a minimum of 90% relative compaction.

3.0 ORIGINAL GROUND PREPARATION

3.01 STRIPPING OF VEGETATION

After the site has been properly cleared, all vegetation and topsoil containing the root systems of former vegetation shall be stripped from areas to be graded. Materials removed in this stripping process may be used as fill in areas



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designated by the soils engineer, provided the vegetation is mixed with a sufficient amount of soil to assure that no appreciable settlement or other detriment will occur due to decaying of the organic matter. Soil materials containing more than 3% organics shall not be used as structural fill.

3.02 REMOVALS OF NON-ENGINEERED FILLS

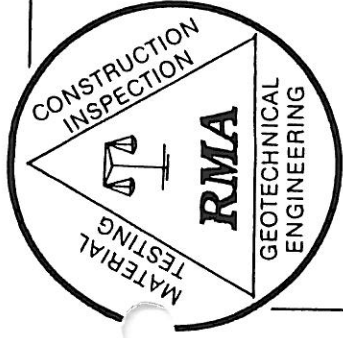
Any non-engineered fills encountered during grading shall be completely removed and the underlying ground shall be prepared in accordance to the recommendations for original ground preparation contained in this section. After cleansing of any organic matter the fill material may be used for engineered fill.

3.03 OVEREXCAVATION OF FILL AREAS

The existing ground in all areas determined to be satisfactory for the support of fills shall be scarified to a minimum depth of 6 inches. Scarification shall continue until the soils are broken down and free from lumps or clods and until the the scarified zone is uniform. The moisture content of the scarified zone shall be adjusted to within 2% of optimum moisture. The scarified zone shall then be uniformly compacted to 90% relative compaction.

Where fill material is to be placed on ground with slopes steeper than 5 (horizontal) to 1 (vertical) the sloping ground shall be benched. The lowermost bench shall be a minimum of 15 feet wide, shall be a minimum of 2 feet deep, shall expose firm material as determined by the geotechnical consultant. Other benches shall be excavated to firm material as determined by the geotechnical consultant and shall have a minimum width of 4 feet.

Existing ground that is determined to be unsatisfactory for the support of fills shall be overexcavated in accordance to the recommendations contained in the geotechnical report of which these general specifications are a part.



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3.04 OVEREXCAVATION OF BUILDING AREAS

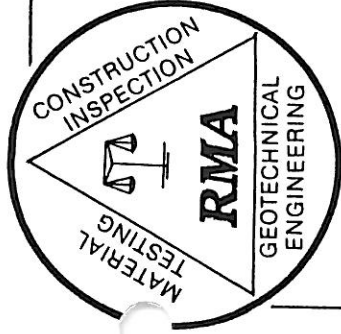
Building pad areas in cuts shall be undercut to a depth of 1.0 foot for single story structures, and 1.5 feet for two story structures. The exposed surface shall then be scarified or blade mixed an additional 1.0 foot, moistened as necessary, and compacted to a minimum of 90% relative compaction.

Building pad areas in fills less than 1.0 foot for single story structures and 1.5 feet for two story structures and building pad areas which are partially in cuts and partially in fills shall be undercut to a depth of 1.0 foot below finished grade for single story structures and 1.5 feet below finished grade for two story structures. The exposed surface shall then be scarified or blade mixed an additional 1.0 foot, moistened as necessary, and compacted to a minimum of 90% relative compaction.

Building pad areas in fills greater than 1.5 feet and fill outside the building pad areas shall be scarified or blade mixed to a depth of 1.0 foot below original grade, moistened as necessary, and compacted to a minimum of 90% relative compaction.

All areas to receive fill and building pad areas in cuts less than 1.0 foot below original grade shall be scarified or blade mixed to a depth of 1.0 foot below original grade or until the surface is free from ruts, hummocks, large clods, or other uneven features that would prevent uniform compaction by the equipment being used, moistened as necessary, and compacted to a minimum of 90% relative compaction.

Building pad areas which are partially in cuts and partially in fills shall have the cut portions tested by the soils engineer during the rough grading operations in order to determine the percent compaction of the natural materials. Cut areas that have less than 90% relative compaction shall be moistened and compacted as necessary to obtain a minimum of 90% relative compaction for a depth equal to 1.0 feet below the bottom of the proposed footings.



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4.0 FILL MATERIALS

4.01 GENERAL

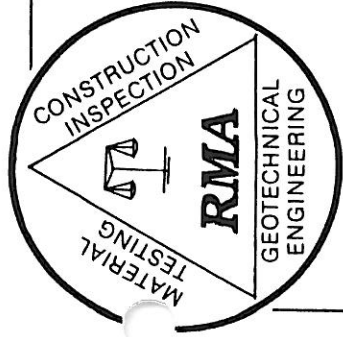
Materials for the fill shall be free from vegetable matter and other deleterious substances, shall not contain rocks or lumps of a greater dimension than is recommended by the geotechnical consultant, and shall be approved by the geotechnical consultant. Soils of poor gradation, expansion, or strength properties shall be placed in areas designated by the geotechnical consultant or shall be mixed with other soils providing satisfactory fill material.

4.02 OVERSIZE MATERIAL

Oversize material, rock or other irreducible material with a maximum dimension greater than 12 inches, shall not be placed in fills, unless the location, materials, and disposal methods are specifically approved by the geotechnical consultant. Oversize material shall be placed in such a manner that nesting of oversize material does not occur and in such a manner that the oversize material is completely surrounded by fill material compacted to a minimum of 90% relative compaction. Oversize material shall not be placed within 10 feet of finished grade without the approval of the geotechnical consultant.

4.03 IMPORT

Material imported to the site shall conform to the requirements of section 4.01 of these specifications. Potential import material shall be approved by the geotechnical consultant prior to importation to the subject site.



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5.0 PLACING AND SPREADING OF FILL

5.01 FILL LIFTS

The selected fill material shall be placed in nearly horizontal layers which when compacted will not exceed approximately 6 inches in thickness. Thicker lifts may be placed if testing indicates the compaction procedures are such that the required compaction is being achieved and the geotechnical consultant approves their use.

Each layer shall be spread evenly and shall be thoroughly blade mixed during the spreading to insure uniformity of material in each layer.

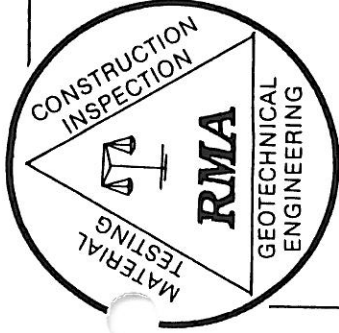
5.02 FILL MOISTURE

When the moisture content of the fill material is below that recommended by the soils engineer, water shall then be added until the moisture content is as specified to assure thorough bonding during the compacting process. When the moisture content of the fill material is above that recommended by the soils engineer, the fill material shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

5.03 FILL COMPACTION

After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted to not less than 90% relative compaction. Compaction shall be by sheepfoot rollers, multiple-wheel pneumatic tired rollers, or other types approved by the soils engineer.

Rolling shall be accomplished while the fill material is at the specified moisture content. Rolling of each layer shall be continuous over its entire area and the roller shall make sufficient trips to insure that the desired density has been obtained.



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5.04 FILL SLOPES

Fill slopes shall be compacted by means of sheepfoot rollers or other suitable equipment. Compacting of the slopes may be done progressively in increments of 3 to 4 feet in fill height. At the completion of grading the slope face shall be compacted to a minimum of 90% relative compaction. This may require track rolling or rolling with a grid roller attached to a tractor mounted side-boom.

Slopes may be over filled and cut back in such a manner that the exposed slope faces are compacted to a minimum of 90% relative compaction.

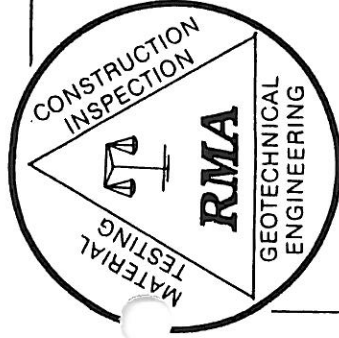
The fill operation shall be continued in six inch (6") compacted layers, or as specified above, until the fill has been brought to the finished slopes and grades as shown on the accepted plans.

5.05 COMPACTION TESTING

Field density tests shall be made by the geotechnical consultant of the compaction of each layer of fill. Density tests shall be made at locations selected by the geotechnical consultant.

Frequency of field density tests shall be not less than one test for each 2.0 feet of fill height and at least every one thousand cubic yards of fill. Where fill slopes exceed four feet in height their finished faces shall be tested at a frequency of one test for each 1000 square feet of slope face.

Where sheepfoot rollers are used, the soil may be disturbed to a depth of several inches. Density reading shall be taken in the compacted material below the disturbed surface. When these readings indicate that the density of any layer or fill or portion thereof is below the required density, the particular layer or portion shall be reworked until the required density has been obtained.



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6.0 EXCAVATIONS

6.01 GENERAL

Excavations and cut slopes shall be examined by the geotechnical consultant. If determined necessary by the geotechnical consultant, further excavation or overexcavation and refilling of overexcavated areas shall be performed, and/or remedial grading of cut slopes shall be performed.

6.02 FILL-OVER-CUT SLOPES

Where fill-over-cut slopes are to be graded the cut portion of the slope shall be made and approved by the geotechnical consultant prior to placement of materials for construction of the fill portion of the slope.

7.0 TRENCH BACKFILL

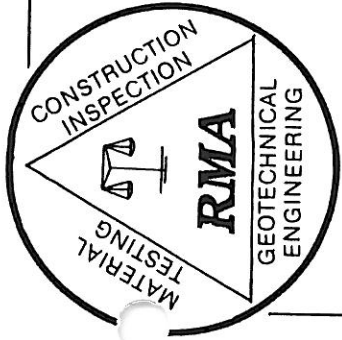
7.01 GENERAL

Trench backfill within street right of ways shall be compacted to 90% relative compaction as determined by the ASTM D1557 test method. Backfill may be jetted as a means of initial compaction, however, mechanical compaction will be required to obtain the required percentage of relative compaction. If trenches are jetted, there must be a suitable delay for drainage of excess water before mechanical compaction is applied.

8.0 SEASONAL LIMITS

8.01 GENERAL

No fill material shall be placed, spread or rolled while it is frozen or thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the soils engineer indicate that the moisture content and density of the fill are as previously specified.



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9.0 SUPERVISION

9.01 PRIOR TO GRADING

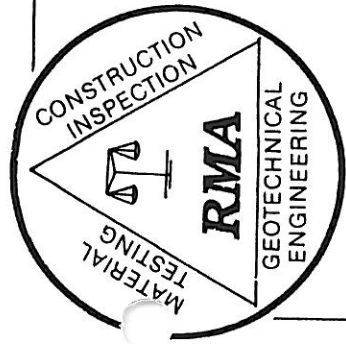
The site shall be observed by the geotechnical consultant upon completion of clearing and grubbing, prior to the preparation of any original ground for preparation of fill.

The supervisor of the grading contractor and the field representative of the geotechnical consultant shall have a meeting and discuss the geotechnical aspects of the earthwork prior to commencement of grading.

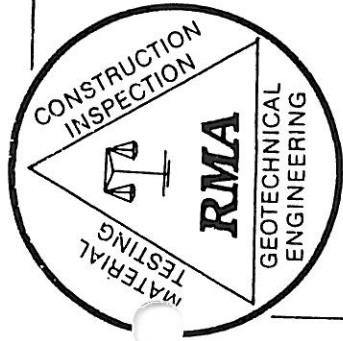
9.02 DURING GRADING

Site preparation of all areas to receive fill shall be tested and approved by the geotechnical consultant prior to the placement of any fill.

The geotechnical consultant or his representative shall observe the fill and compacting operations so that he can provide an opinion regarding the conformance of the work to the recommendations contained in this report.



APPENDIX C



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APPENDIX C

REFERENCES

1. Geologic Atlas of California by the California Division of Mines and Geology.
2. Special Report 113, Geologic Hazards in Southwestern San Bernardino County, California, prepared by the California Division of Mines and Geology, dated 1976.

Appendix 8.2

**Tentative Tract Map 15863
Traffic Impact Analysis
Fontana, California**

November 14, 1997

by

Robert Kahn, John Kain & Associates, Inc

**TENTATIVE TRACT MAP (TTM) 15863
(PREVIOUSLY CALLED TTM 14779)
TRAFFIC IMPACT ANALYSIS
FONTANA, CALIFORNIA**

Prepared for:

**URSI INTERNATIONAL CONSULTANTS, INC.
20265 Valley Boulevard, Suite B
Walnut, CA 91789**

Prepared by:

**ROBERT KAHN, JOHN KAIN & ASSOCIATES, INC.
1601 Dove Street, Suite 290
Newport Beach, CA 92660**

**Robert Kahn, P.E.
Tom Huang, EIT**

**June 11, 1997
July 23, 1997
November 14, 1997 (Revised)**

**JN:880-97-001
RK:TH:nam/7461**

RKJK

ROBERT KAHN • JOHN KAIN & ASSOCIATES INC.

June 11, 1997
July 23, 1997
November 14, 1997 (Revised)

Mr. Eric C. Chang
URSI INTERNATIONAL CONSULTANTS, INC.
20265 Valley Boulevard, Suite B
Walnut, CA 91789

Subject: Tentative Tract Map (TTM) 15863 Traffic Impact Analysis (TIA)
(Previously Called TTM 14779)

Dear Mr. Chang:

ROBERT KAHN, JOHN KAIN & ASSOCIATES, INC. (RKJK) is pleased to submit the Tentative Tract Map (TTM) 15863 (previously called TTM 14779) traffic impact analysis report. This report provides a summary of the findings, analysis procedures and evaluation of the proposed project with respect to on-site and off-site traffic impacts pursuant to City of Fontana and California Environmental Quality Act (CEQA) requirements.

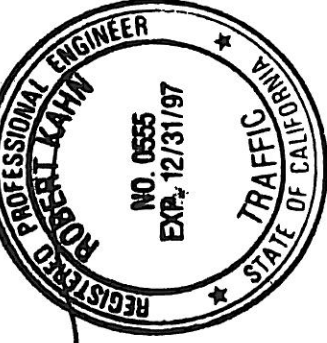
The project will generate fewer than 250 peak hour trips. Therefore, a full CMP traffic impact analysis (TIA) is not required.

This traffic impact analysis report includes an evaluation of traffic conditions based upon the existing, the Opening Year (1999), and the Year 2015 with and without the proposed project. A number of traffic recommendations are included in this analysis.

If you have any questions regarding this study, please do not hesitate to call at (714) 474-0809.

Sincerely,

ROBERT KAHN, JOHN KAIN & ASSOCIATES, INC.



Robert Kahn, P.E.
Principal

RK:TH:nam/7461
JN:880-97-001
Attachments

A handwritten signature in black ink, appearing to read "Tom Huang".

Tom Huang, EIT
Transportation Engineer

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**TENTATIVE TRACT MAP (TTM) 15863
(PREVIOUSLY CALLED TTM 14779)
TRAFFIC IMPACT ANALYSIS (TIA)
FONTANA, CALIFORNIA**

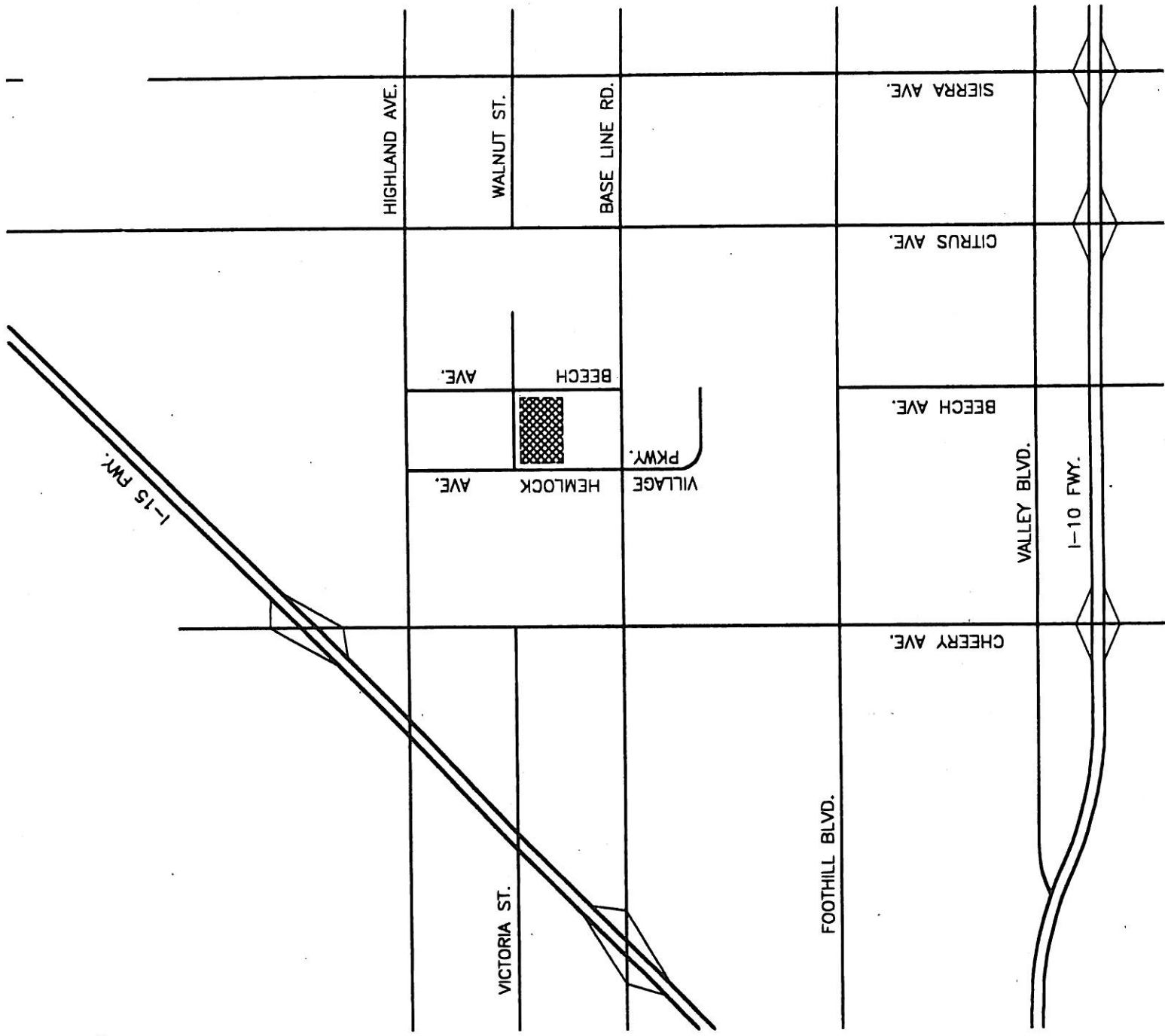
1. INTRODUCTION

This report summarizes the traffic analysis conducted to assess the impacts of the proposed Tentative Tract Map (TTM) 15863 (previously called TTM 14779) project on the roadway system in the vicinity of the project. The project is located in the City of Fontana, within San Bernardino County. The general location of the project site is presented on Exhibit 1-A.

The proposed project is located north of Base Line Road, south of Walnut Street, east of Hemlock Avenue and west of Beech Avenue in the City of Fontana. The project consists of 111 single-family dwelling units. The proposed site plan is presented on Exhibit 1-B.

A CMP (Congestion Management Program) TIA is not required for this project based on the project's trip generation. The proposed project is projected to generate a maximum of approximately 80 trips during the AM peak hour and 115 trips during the PM peak hour, which is less than the 250 trips per hour threshold necessary for requiring a CMP TIA. Enclosed is Appendix "A", which is the pertinent page from the latest CMP guidelines regarding the threshold required for a CMP TIA. The estimate of the project's trip generation is shown on Table 2-2. However, the City of Fontana does require a local TIA for the project.

EXHIBIT 1-A PROJECT LOCATION MAP



LEGEND.

 = PROJECT SITE LOCATION

N

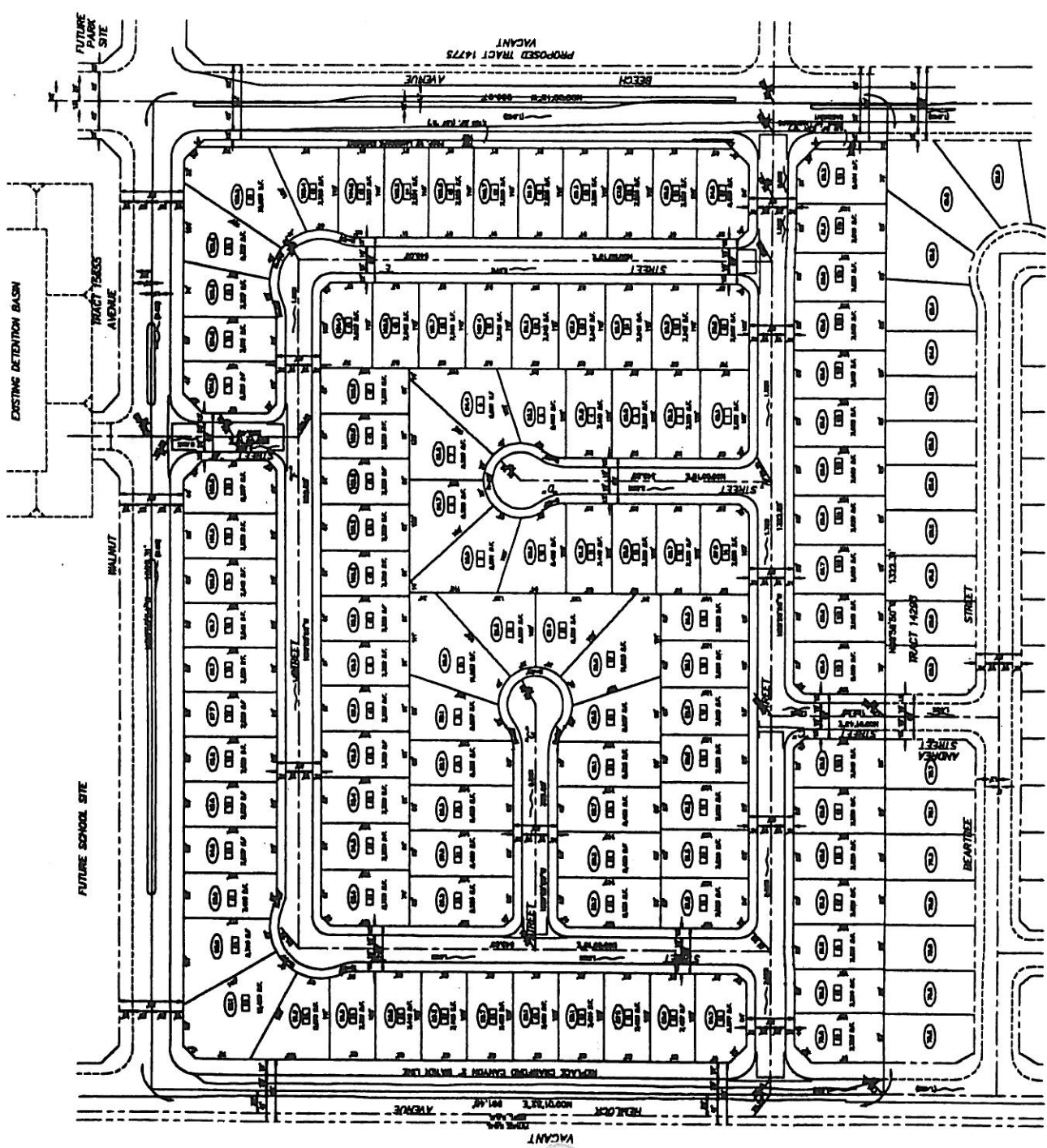
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TENTATIVE TRACT MAP 15863, Fontana, CA

RKJK

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EXHIBIT 1-B CONCEPTUAL SITE PLAN



The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act (CEQA) and the City of Fontana requirements. The City of Fontana is the lead agency responsible for preparation of the TIA, in accordance with CEQA authorizing legislation.

The introduction to this report presents an overview of the project and provides a brief description of the study area. The analysis methodologies used to evaluate the impacts of the project are described, and the definitions of roadway system deficiencies and significant project impacts are presented in the context of the City of Fontana and CEQA requirements.

Subsequent sections of the report will describe the project in detail and provide a complete description of existing and projected traffic conditions within the study area.

1.1 Project Overview

The project site is located in the City of Fontana. The project site is shown on Exhibit 1-A and is located north of Base Line Road, south of Walnut Street, east of Hemlock Avenue and west of Beech Avenue. The project has 3 external access driveways, which are located on Hemlock Avenue, Walnut Street and Beech Avenue. There is an internal access to the adjacent TTM 14293 south of the project. The project site is proposed to be developed with 111 single-family dwelling units. Exhibit 1-B illustrates the project site plan.

Additional detailed discussion of the project and its traffic characteristics will be provided in subsequent sections of this report.

1.2 Study Area

Regional access to the site is provided directly by the Interstate 15 (I-15) Freeway and State Route 30 (SR-30). Local access is provided by various arterial roadways in the vicinity of the site. The north-south arterials which will be most affected by the project include Cherry Avenue, Hemlock Avenue, Citrus Avenue and Beech Avenue. East-west arterials expected to provide local access include Highland Avenue, Walnut Street and Base Line Road.

For the existing traffic conditions, the following intersection is analyzed:

Hemlock Avenue (NS) at:

- Base Line Road (EW)

For the Opening Year and Year 2015 traffic conditions with and without the proposed project, the following intersections are analyzed:

Hemlock Avenue (NS) at:

- Base Line Road (EW)
- Walnut Street (EW)

Beech Avenue (NS) at:

- Base Line Road (EW)
- Walnut Street (EW)

1.3 Analysis Methodologies

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The following analysis years are considered in this study:

- Existing Conditions - 1997
- Project Opening Year - 1999
- Future Year - 2015

Both the overall methodologies used to develop future traffic volume forecasts, and the explicit traffic operations analysis methodologies are summarized herein.

1.3.1 Overall Analysis Methodology

As described previously, traffic conditions are evaluated in this report for both existing conditions and two future horizon years. Actual traffic count data were obtained from a variety of sources to quantify existing traffic conditions. Traffic count data was also collected by RKJK specifically for this study for study area intersections. This traffic data was supplemented by information obtained from the Traffic Volumes manual for San Bernardino County and the Traffic Volumes on California State Highways by Caltrans.

The Year 2015 traffic volumes without the project are based upon two traffic studies previously published by RKJK. These studies include the Summit Heights Specific Plan TIA and the California Landings TIA. The traffic forecast for these studies have been developed from the subregional travel

demand model currently being used for long range planning in San Bernardino County. This model is commonly referred to as the Comprehensive Transportation Plan (CTP) model. The CTP model is currently the only approved travel demand forecasting tool within the study area, as none of the locally developed travel demand models in the study area have received the necessary "finding of consistency" (with the CTP model) from SANBAG/SCAG.

Daily traffic volume forecasts have been determined using a growth increment approach based on the CMP Model Year 1990 and Year 2015 forecasts. The growth increment volume between 1990 and 2015 for each roadway has been determined and added to the existing average daily traffic (ADT) volume to determine the 2015 growth incremented volume. For the project Opening Year, a growth rate has been utilized on existing traffic volumes to the analysis year (1999).

It is nearly always necessary to refine travel demand model output data when utilizing such data for extremely detailed analysis, such as intersection peak hour operations analysis. The CMP explicitly requires that intersection peak hour operations analysis be performed. The level of refinement needed is typically greater than the level of refinement which is provided by the growth increment procedure used for refining average daily traffic volume forecasts. As described below, an ADT based peak hour forecasting procedure has been chosen for use in this study, because the available future forecasts are best suited to this approach.

A number of approaches to developing reasonable Year 2015 background peak hour turning movement forecasts have been considered for use in this study. Current peak hour turning movement traffic count data is a necessary input regardless of which approach is used. The existing traffic count data serves as both the starting point for any refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions.

The basic approaches differ in the type of model data which is used as input for developing refined peak hour forecasts. The RKJK approach is to use the refined ADT volume forecasts and existing ADT and peak hour turning movement volume data as initial inputs to the refinement process. This approach is most appropriate when the future forecast data is being extracted from a travel demand model with a relatively coarse traffic analysis zone structure relative to the roadway system elements being analyzed. It is also the best approach to use when peak hour model data is unavailable or has not been validated to within the tolerances recommended by nationally recognized publications. The report Highway Traffic Data for Urbanized Area Project Planning and Design (National Cooperative Highway Research Program Report 255, Transportation Research Board National Research Council, 1982) is the most commonly cited source of acceptable validation criteria.

Two other approaches both involve the use of peak hour data from the travel demand model. One approach utilizes peak hour directional segment volumes, while the other approach requires extracting peak hour turning movement forecasts directly from the model. In general, the peak hour

turning movement based approach requires a special model run to extract the necessary information.

The peak hour approaches both work best when a detailed travel demand model is being utilized in the analysis. A fine-grained traffic analysis zone structure, and more extensive validation of local arterial daily and peak hour traffic volumes are expected to result in future model forecasts which are relatively accurate. This minimizes the need for further refinement. A more detailed model is also capable of providing forecasts which are sensitive to such issues as unequal growth patterns or the provision of new travel routes within the study area.

It should be noted that the peak hour based approach breaks down completely whenever a traffic analysis zone's traffic is loaded directly into an intersection. This is a common practice at the regional level of travel demand modeling.

The ADT based peak hour refinement process has been chosen for use in this study. The primary reason for this decision is the fact that the CTP model is the only travel demand model which has been accepted for CMP analysis purposes within the study area. The ADT based refinement process is capable of "smoothing" the large changes in the growth forecasts which are caused by the large traffic analysis zones of a subregional model such as the CTP model. The growth in population and employment is also fairly consistent throughout the study area.

The ADT based approach can be summarized as follows:

1. Calculate the ratio of the refined future ADT volume forecast divided by the existing ADT volume, for each leg of the intersection.

EXAMPLE: Post-processed Future East Leg ADT = 20,000
vehicles per day

Existing ADT = 10,000 vehicles per day

Growth Ratio = $20,000/10,000 = 2.0$

2. For each turning or through movement calculate the average growth for the two legs of the intersection utilized by the movement in question.

EXAMPLE: Westbound through movement enters the intersection on the east leg and departs on the west leg.

East Leg Growth Ratio = 2.0 (per Step 1)

West Leg Growth Ratio = 1.5 (calculated separately and not shown here)

Average Growth = $(1.5 + 2.0) / 2 = 1.75$

3. Calculate the future westbound through movement volume forecast, for example, by multiplying the existing peak hour through movement volume by the average growth ratio calculated in step 2.

EXAMPLE: Existing peak hour westbound through movement traffic volume is 800 vehicles.

Future forecast = $800 \times 1.75 = 1,400$ vehicles

4. All other turning or through movements are calculated similarly, (using example methodology), using appropriate approach and departing ADT's.

This straightforward approach has several advantages. It tends to spread growth in a fashion very similar to Fratar or other factoring techniques. This balances the tendency of a subregional scale model to assign large increments of growth to one facility without reflecting the tendency for growth to be spread along all of the arterials in the study area. At the same time, it also results in forecasts which satisfy basic reasonableness tests, such as the conservation of traffic flow into and out of each intersection.

Following the initial application of the ADT volume based forecasting procedure, a comprehensive set of reasonableness tests have been applied to all of the forecasts. The existing turning movement count data and future turning movement forecasts have been compared to ensure that reasonable growth is projected for each individual turning movement. If growth of less than 10% has been forecast for any particular turning movement, the future forecast has been adjusted upward to provide at least 10% growth.

The relationship between the future ADT volume forecasts and the peak hour turning movement forecasts on each intersection leg and for each overall intersection has also been reviewed. Based on discussions with the Congestion Management Agency (SANBAG) staff, future AM peak hour

forecasts are expected to generally fall in the range of 8 - 10% of daily traffic. Similarly, PM peak hour forecasts are expected to fall in the range of 10 - 12%. Where the initial refined future forecasts fell outside these ranges, the overall intersection peak hour forecasts was adjusted upward or downward until this criteria was satisfied.

Finally, the conservation of flow between immediately adjacent intersections has been reviewed. The traffic flows at adjacent freeway on- and off-ramp intersections is a good example of this situation. When the initial refined future forecasts did not demonstrate reasonable conservation of flow at such immediately adjacent intersections, the flows were adjusted to satisfy this constraint. The result of this process is a set of future background peak hour turning movement forecasts suitable for peak hour intersection operations analysis.

Project traffic volumes for all future conditions projections were estimated using the manual approach described in the CMP guidelines. Trip generation has been estimated based on the regression equations contained in the Institute of Transportation Engineers (ITE) publication Trip Generation, 5th Edition (1991). The mixed use nature of the project (combining residential, commercial and park uses) is expected to result in some internal capture of trips generated by the project. The project trip distribution was developed based on other previously published traffic studies of similar development near the vicinity of the proposed project site. The titles of these traffic studies include the Morningside TIA, the Summit Heights TIA and the California Landings TIA. The trip distribution pattern was compared for reasonableness by a review of the existing traffic volumes and the surrounding roadway network.

Project traffic volumes were then added to the future year background volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

1.3.2 Traffic Operations Analysis

The current technical guide to the evaluation of traffic operations is the 1994 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209). The 1994 HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.

- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

Uninterrupted flow is generally found only on limited access (freeway) facilities in urban areas. The level of service is based on the HCM, Table 3-1.

The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The 1994 Highway Capacity Manual (HCM) methodology expresses the level of service at an intersection in terms of

delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The levels of service determined in this study are determined using the HCM methodology.

For signalized intersections, average delay per vehicle is used to determine level of service. Levels of service at signalized study intersections have been evaluated using the HCM intersection analysis program.

Study area intersections which are stop sign controlled with stop control on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at these locations, the level of service has been calculated.

Because some intersections are multi-way stop controlled, the ability of vehicles to enter the intersection is not controlled by the occurrence of gaps in the flow of the main street. All way stop controlled (AWS-C) intersections have been evaluated using the HCM methodology for this type of multi-way stop controlled intersection configuration. The level of service criteria for this type of intersection analysis are also based on average delay per vehicle.

The level of services are defined for the various analysis methodologies as follows:

LEVEL OF SERVICE	AVERAGE STOPPED DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	0 to 5.00	0 to 5.00
B	5.01 to 15.00	5.01 to 10.00
C	15.01 to 25.00	10.01 to 20.00
D	25.01 to 40.00	20.01 to 30.00
E	40.01 to 60.00	30.01 to 45.00
F	60.01 and up	45.01 and up

A level of service analysis must be conducted on all existing segments and intersections on the CMP network potentially impacted by the project or plan (as defined by the thresholds in Section 1B). Urban segments (i.e., segments on roadways that are generally signalized) do not require segment analysis. Segment requirements can normally be determined by the analysis of lane requirements at intersections. Freeway mainline must be analyzed, and ramp-weaving analysis may be required at local discretion, if a ramp or weaving problem is anticipated. The LOS analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of two seconds per phase in accordance with 1994 HCM recommended default values. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings have also been considered in the signalized intersection analysis. The following formula has been used to calculate the pedestrian minimum times for all HCM runs:

$$[(\text{Curb to Curb distance} - 6) / 4] + 7$$

Saturation flow rates of 1,800 vehicles per hour of green (vphg) have been assumed for all capacity analysis.

1.4 Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the City of Fontana General Plan requirements.

1.4.1 Definition of Deficiency

The definition of an intersection deficiency has been obtained from the City of Fontana General Plan. The General Plan states that peak hour intersection operations of LOS "D" or better are generally acceptable. Therefore, any intersection operating at LOS "E" or LOS "F" will be considered deficient.

1.4.2 Definition of Significant Impact

The identification of significant impacts is a requirement of CEQA. The City of Fontana General Plan and Circulation Element have been adopted in accordance with CEQA requirements, and any roadway improvements within the City of Fontana which are consistent with these documents are not considered a significant impact, so long as the project contributes its "fair share" funding for improvements.

For purposes of CEQA review, a significant impact has been defined in this study as any traffic volume increase attributed to the project which results in an operational deficiency which cannot be mitigated through the construction of roadway improvements which are consistent with the City of Fontana General Plan and Circulation Element. Any mitigation of such significant impacts must include identification of the feasibility of the proposed mitigation measures.

2. PROJECT DESCRIPTION AND CMP TRAFFIC CONTRIBUTION TEST

This section describes the project land uses and traffic characteristics for each of the future years analyzed. The CMP traffic contribution test used to determine the CMP Horizon Year analysis location is also presented in this section.

2.1 Project Description

The project site plan was previously presented on Exhibit 1-B. The project is proposed to be developed with single-family residential land use consisting of 111 dwelling units. The project has three (3) external access driveways, which are located on Hemlock Avenue, Walnut Street and Beech Avenue. There is an internal access to the adjacent TTM 14293 south of the project.

2.2 Project Traffic

The traffic related to the project has been calculated in accordance with the following accepted procedural steps:

- Trip Generation.
- Trip Distribution.
- Traffic Assignment.

These steps are described in detail below.

2.2.1 Project Trip Generation

The project trip generation has been calculated in accordance with the Institute of Transportation Engineers publication Trip Generation Manual (5th

edition, 1991). The average trip rate of single-family residential land use has been used in this analysis, and the trip generation rate is presented in Table 2-1.

Table 2-2 summarizes the trip generation for the proposed project. TTM 15863 is projected to generate a total of approximately 1,060 trip-ends per day with 80 vehicles per hour during the AM peak hour and 115 vehicles per hour during the PM peak hour.

2.2.2 Project Trip Distribution and Assignment

The trip distribution and assignment process represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial and recreational opportunities and the proximity to the regional freeway system.

The detailed trip distribution/traffic assignment process has been accomplished manually. The Opening Year project trip distribution is presented on Exhibit 2-A, and the Year 2015 project trip distribution is presented on Exhibit 2-B.

2.2.3 Project Only Traffic Volume Forecasts

The project only traffic forecasts have been developed by applying the trip generation and distribution calculations. The Opening Year traffic volumes attributable to the proposed project are presented on Exhibit 2-C. The Year 2015 traffic volumes attributable to the proposed project are presented on Exhibit 2-D.

TABLE 2-1

PROJECT TRIP GENERATION RATES¹

LAND USE	UNITS ²	PEAK-HOUR				DAILY
		AM		PM		
		IN	OUT	IN	OUT	
Single-Family Residential	DU	0.19	0.55	0.66	0.35	9.55

TABLE 2-2

PROJECT TRIP GENERATION

LAND USE	QUANTITY	PEAK-HOUR ³				DAILY ⁴
		AM		PM		
		IN	OUT	IN	OUT	
		IN	OUT	IN	OUT	
Single-Family Residential	111 DU	20	60	75	40	1,060

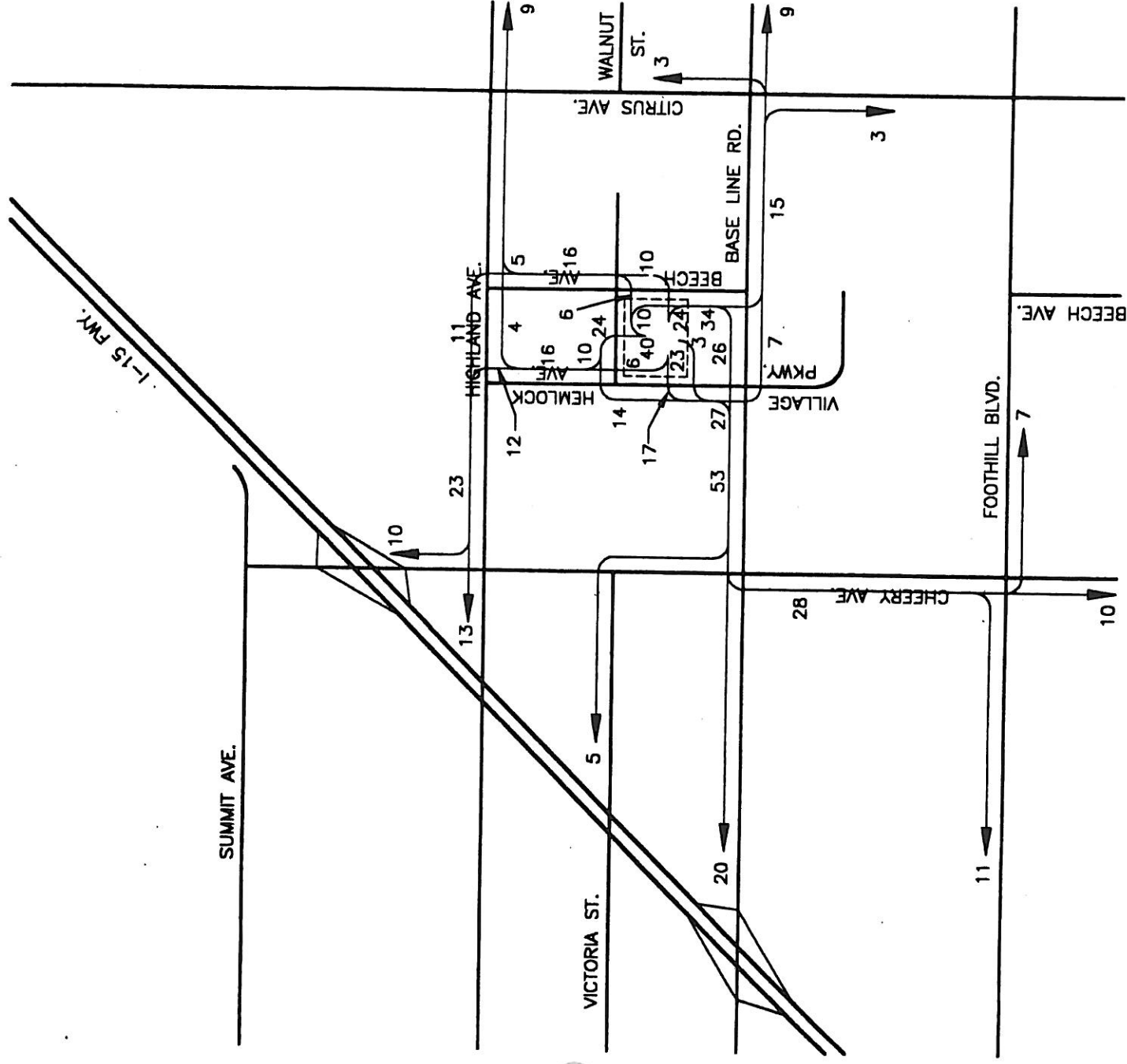
¹ Source: Institute of Transportation Engineers (ITE), Trip Generation, Fifth Edition, 1991, Land Use Category 210.

² DU = dwelling units

³ Peak hour trips rounded to the nearest 5.

⁴ Daily trips rounded to the nearest 10.

EXHIBIT 2-A OPENING YEAR PROJECT TRIP DISTRIBUTION



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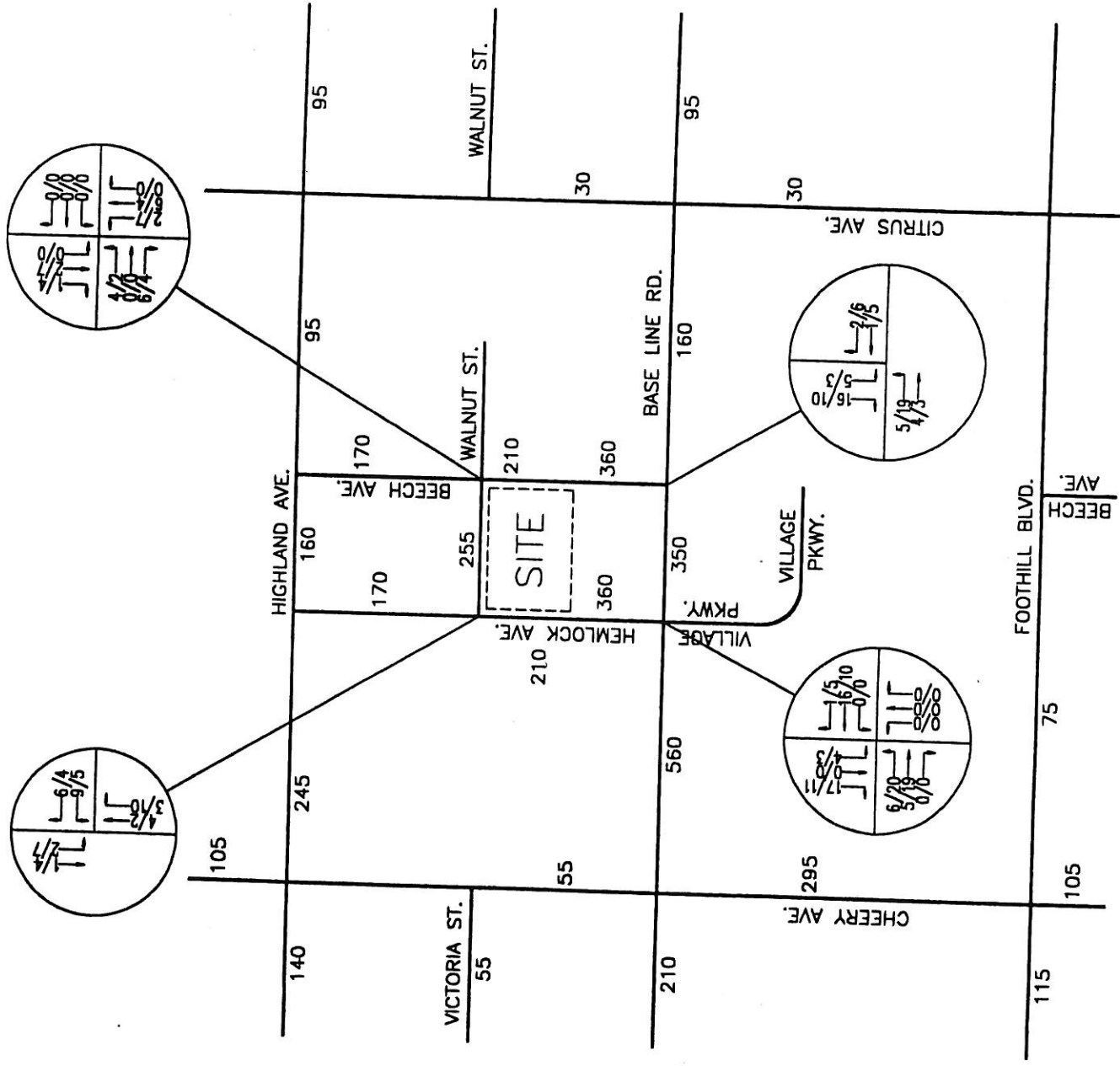
10 = PERCENT TO/FROM PROJECT

EXHIBIT 2-B



10 = PERCENT TO/FROM PROJECT

EXHIBIT 2-C OPENING YEAR PROJECT TRAFFIC VOLUMES

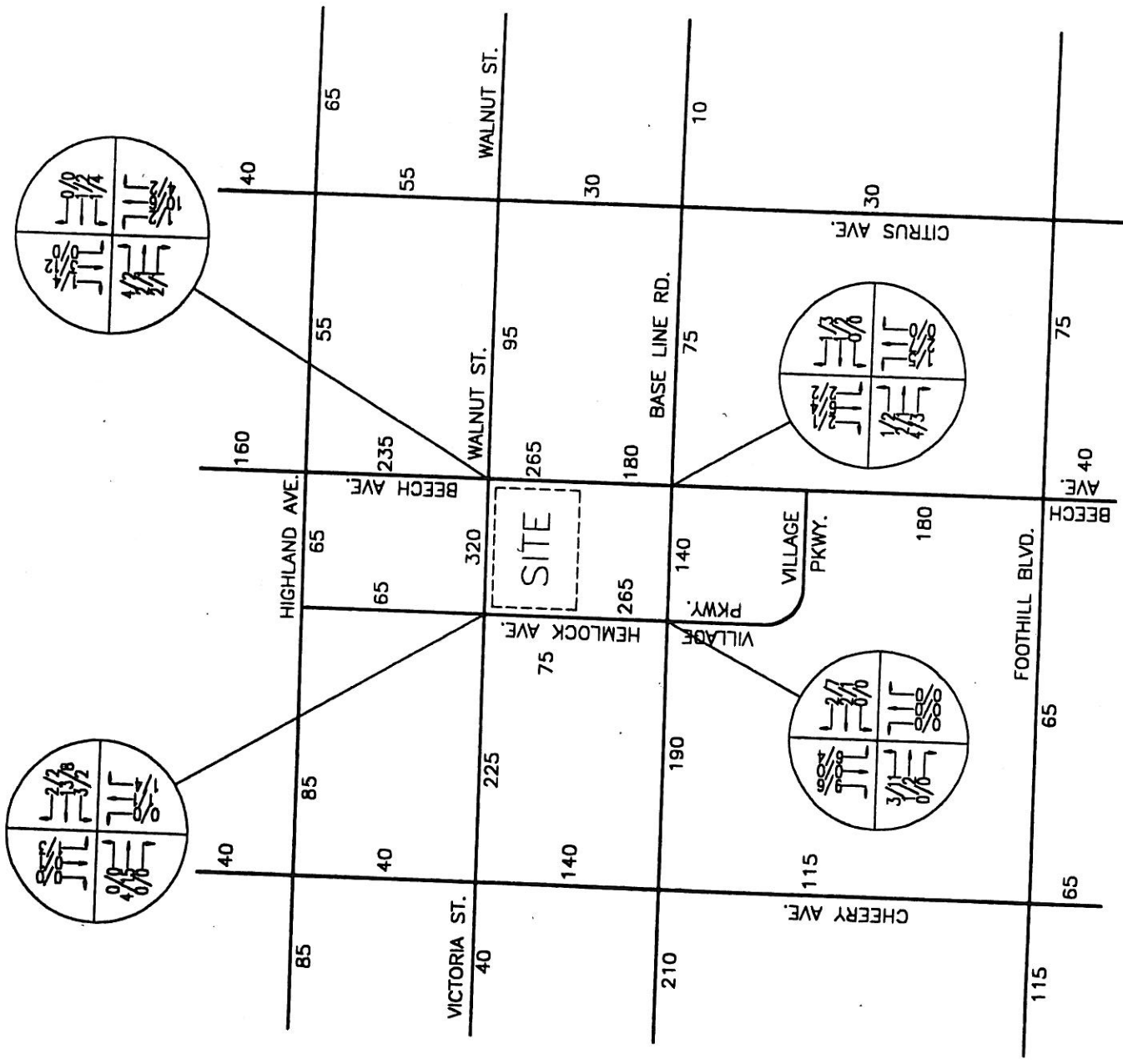


LEGEND:

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS

30 = VEHICLES PER DAY

YEAR 2015 PROJECT TRAFFIC VOLUMES EXHIBIT 2-D



LEGEND:

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS

30 = VEHICLES PER DAY

2.3 Other Cumulative Development Traffic

The City of Fontana Planning staff identified five other cumulative developments which may be completed within the same timeframe as the proposed project. The list of the five other cumulative developments is shown on Table 2-3, and the locations of these cumulative development sites are depicted on Exhibit 2-E.

The traffic related to the other development has been calculated similarly to the proposed project in accordance with the following accepted procedural steps:

- Trip Generation
- Trip Distribution
- Traffic Assignment

These steps are described in detail below.

2.3.1 Other Cumulative Development Trip Generation

The other cumulative development trip generation has been calculated in accordance with the Institute of Transportation Engineers publication Trip Generation Manual (5th edition, 1991). The trip generation rates are presented in Table 2-4.

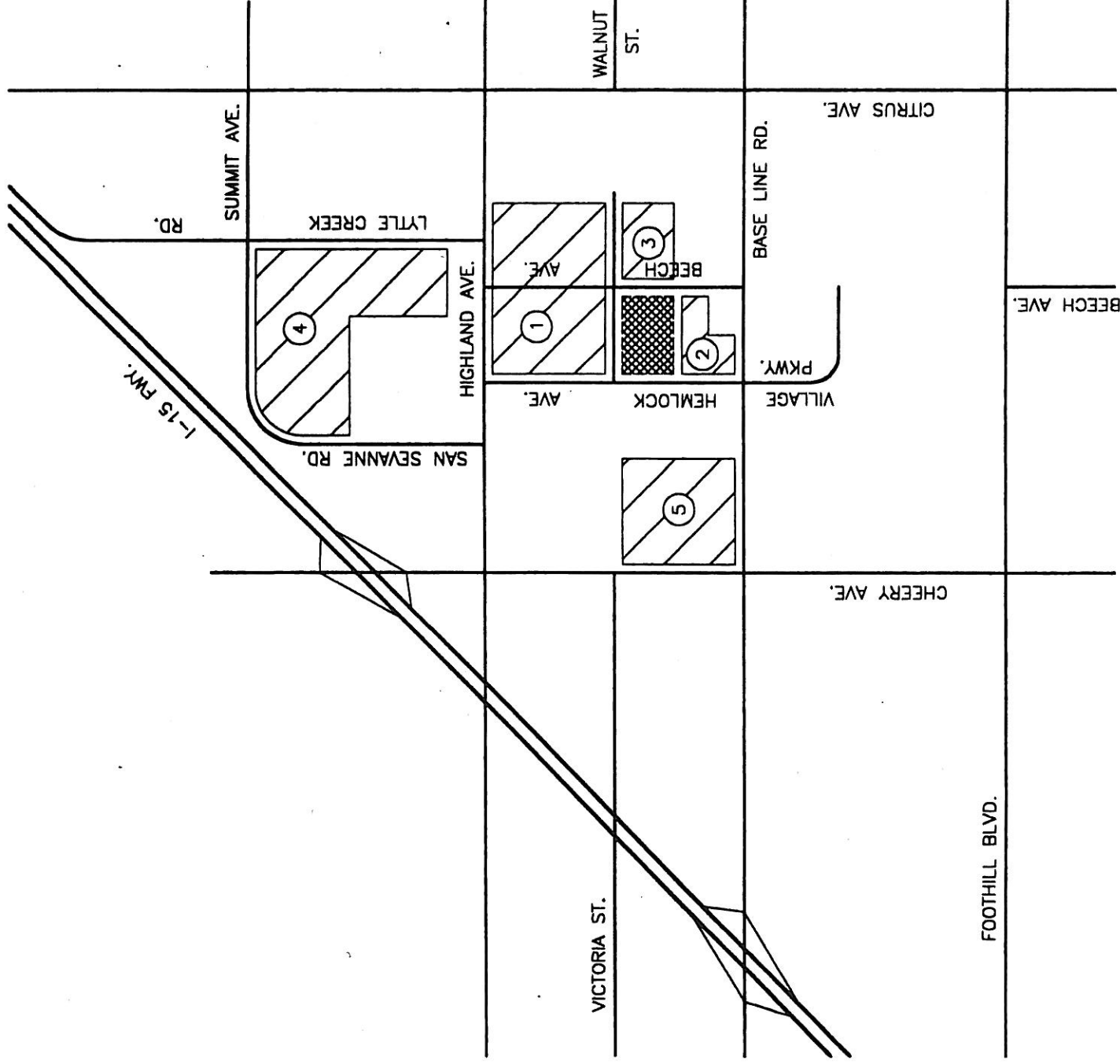
Table 2-5 summarizes the trip generation for the five other cumulative developments. The five other cumulative developments are projected to generate a total of approximately 6,750 trip-ends per day with 525 vehicles

TABLE 2-3
OTHER CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ZONE	LAND USE	QUANTITY		UNITS ¹
		OPENING YEAR	YEAR 2015	
1	<u>The Landings</u> Commercial Retail Single-Family Residential Park	307.0 10.0	332.9 807.0 10.0	TSF DU AC
2	<u>ITM 14293</u> Single-Family Residential	90.0	144.0	DU
3	<u>ITM 14775</u> Single-Family Residential	75.0	192.0	DU
4	<u>Summit Heights</u> Single-Family Residential Park Commercial Retail	150.0 14.1	813.0 14.1 382.0	DU AC TSF
5	<u>Morningside</u> Single-Family Residential Commercial Retail	80.0	351.0 80.0	DU TSF

¹ DU = dwelling units; AC = acres; TSF = thousand square feet; ST = students

EXHIBIT 2-E OTHER CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

 = PROJECT SITE LOCATION

 = OTHER CUMULATIVE DEVELOPMENT LOCATION



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TENTATIVE TRACT MAP 15863, Fontana, CA

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TABLE 2-4

OTHER CUMULATIVE DEVELOPMENT TRIP GENERATION RATES¹

LAND USE	UNITS ²	PEAK-HOUR				DAILY
		AM		PM		
		IN	OUT	IN	OUT	
Single-Family Residential	DU	0.19	0.55	0.66	0.35	9.55
Park	AC	0.04	0.04	0.09	0.09	2.23

TABLE 2-5

OTHER CUMULATIVE DEVELOPMENT TRIP GENERATION

LAND USE	QUANTITY	PEAK-HOUR ³						DAILY ⁴
		AM		PM				
		IN	OUT	IN	OUT			
					IN	OUT		
<u>The Landings</u> Single-Family Residential Park	307 DU 10 AC	60 NOM ⁵	170 NOM	205 5	105 5		2,930 20	
<u>ITM 14293</u> Single-Family Residential	90 DU	15	50	60	30		860	
<u>ITM 14775</u> Single-Family Residential	75 DU	15	40	50	25		720	
<u>Summit Heights</u> Single-Family Residential Park	150 DU 14.1 AC	30 5	85 5	100 5	55 5		1,430 30	
<u>Morningside</u> Single-Family Residential	80 DU	15	45	55	30		760	
TOTAL		140	395	480	255		6,750	

¹ Source:

Institute of Transportation Engineers (ITE), Trip Generation, Fifth Edition, 1991, Land Use Category 210.

² DU =

dwelling units

AC =

acre

³ Peak hour trips rounded to the nearest 5.⁴ Daily trips rounded to the nearest 10.⁵ NOM =

nominal

per hour during the AM peak hour and 720 vehicles per hour during the PM peak hour.

2.3.2 Other Cumulative Development Trip Distribution and Assignment

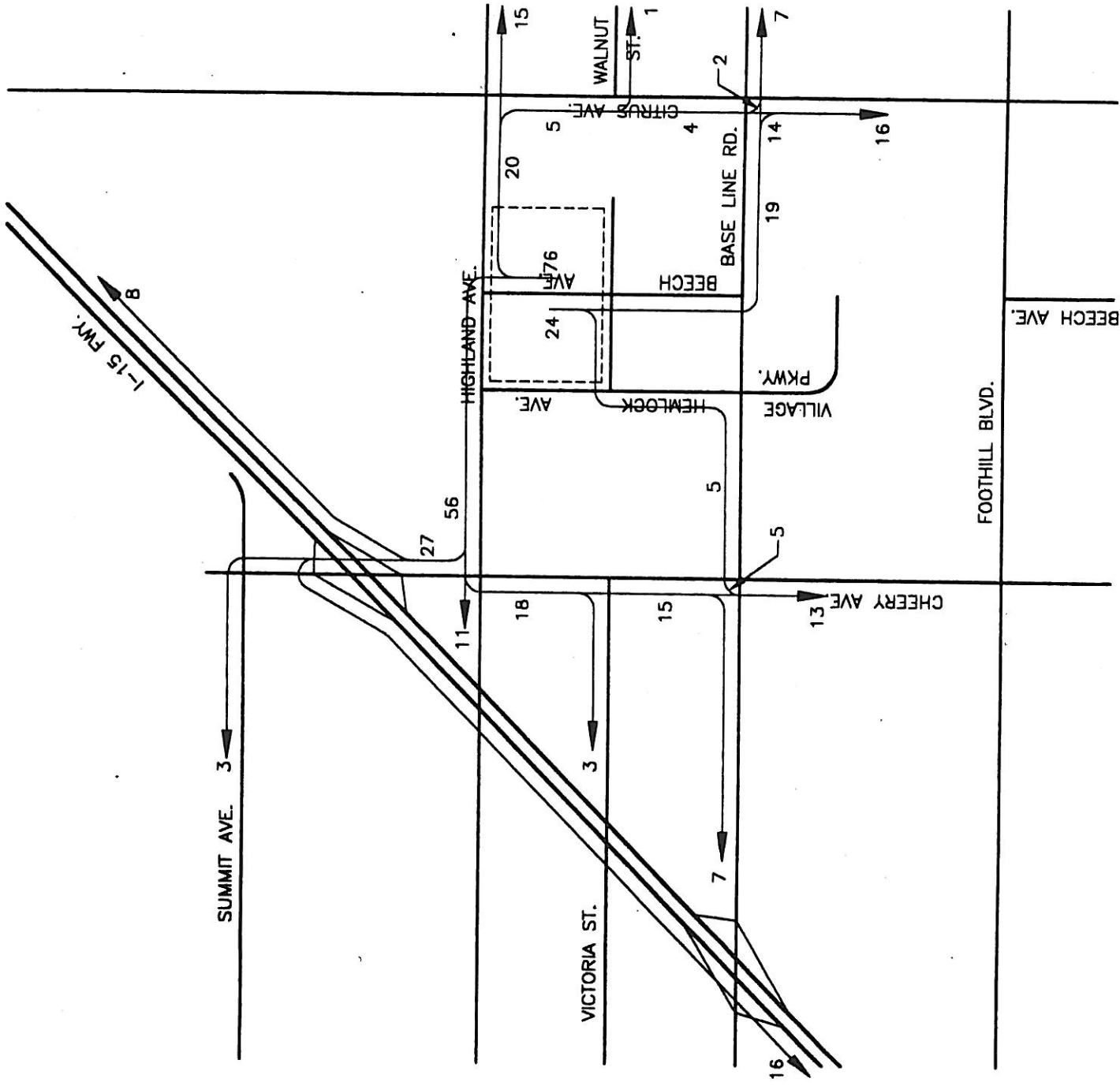
The trip distribution and assignment process represents the directional orientation of traffic to and from the cumulative development sites. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial, residential and recreational opportunities and the proximity to the regional freeway system.

The detailed trip distribution/traffic assignment process has been accomplished manually. These trip distribution patterns are based upon previously published traffic studies and local traffic patterns. The other development trip distribution patterns are presented on Exhibits 2-F to 2-J.

2.3.3 Other Cumulative Development Only Traffic Volume Forecasts

The other development only traffic forecasts have been developed by applying the trip generation and distribution calculations. The traffic volumes attributable to the five other cumulative developments are presented on Exhibit 2-K.

EXHIBIT 2-F THE LANDINGS TRIP DISTRIBUTION



LEGEND,

10 = PERCENT TO/FROM PROJECT

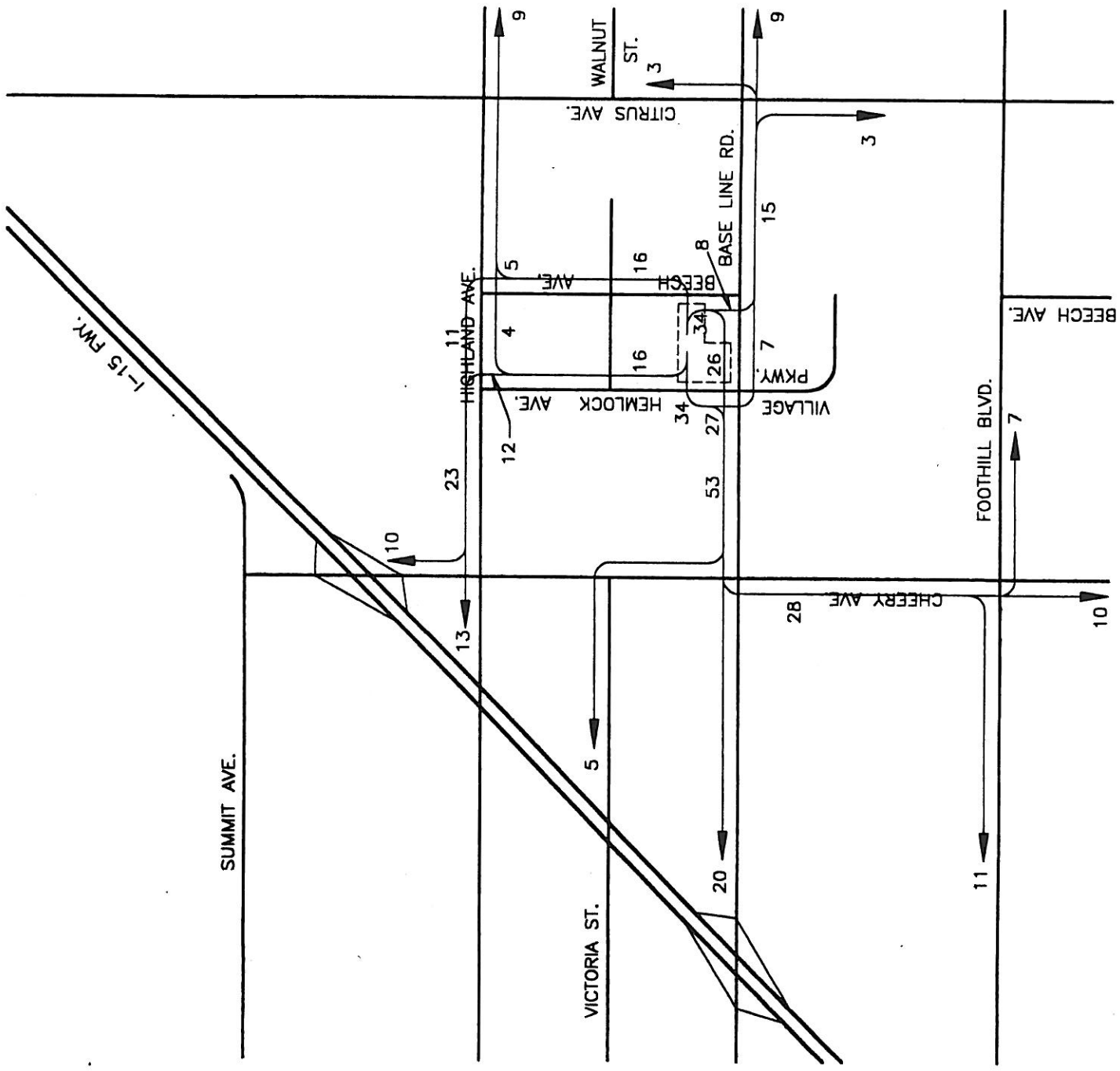
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TENTATIVE TRACT MAP 15863, Fontana, CA

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EXHIBIT 2-G TENTATIVE TRACT 14293 TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT



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TENTATIVE TRACT MAP 15863, Fontana, CA

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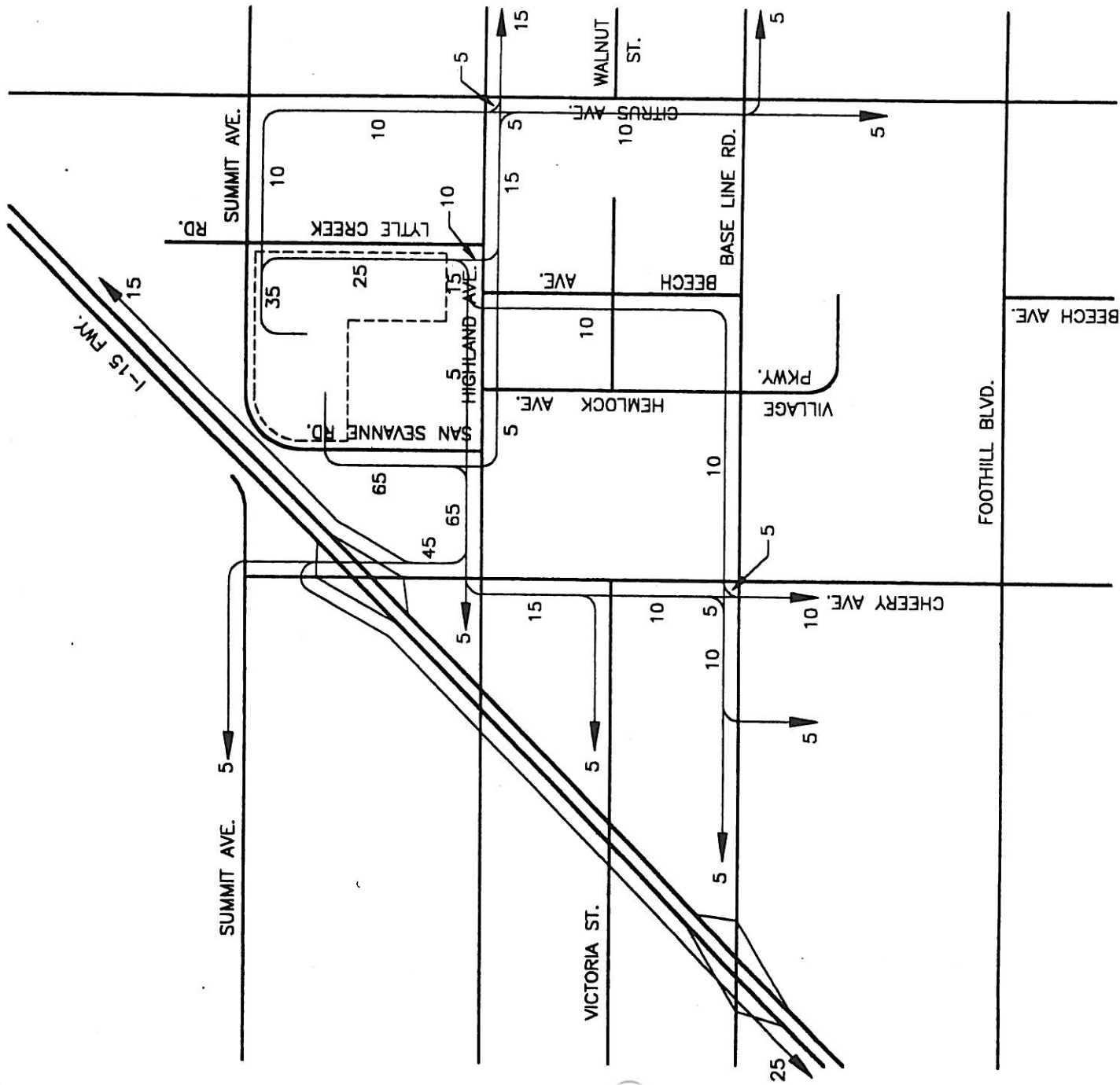
This is a detailed street map of a residential area in San Francisco. The map shows a grid of streets with various street names and numbers. A route is highlighted with a thick black line, starting from the bottom left and moving towards the top right. The route passes through several intersections and is marked with numbers 10, 13, 5, 20, 28, 11, 7, 10, 3, 15, 38, 53, 15, 12, 50, 32, 20, 3, 9, 3, 9, 10, 7, 10, 3, 9. The streets shown include Summit Ave., Victoria St., Highland Ave., Foothill Blvd., Cherry Ave., Village Pkwy., Base Line Rd., Citrus Ave., Walnut St., and Beech Ave. The map also shows a large area labeled 'I-15 Fwy.' on the left side. The map is oriented with North at the top.

10 = PERCENT TO/FROM PROJECT

TENTATIVE TRACT MAP 15863, Fontana, CA

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& ASSOCIATES INC.

EXHIBIT 2-1 SUMMIT HEIGHTS TRIP DISTRIBUTION



LEGEND.

10 = PERCENT TO/FROM PROJECT

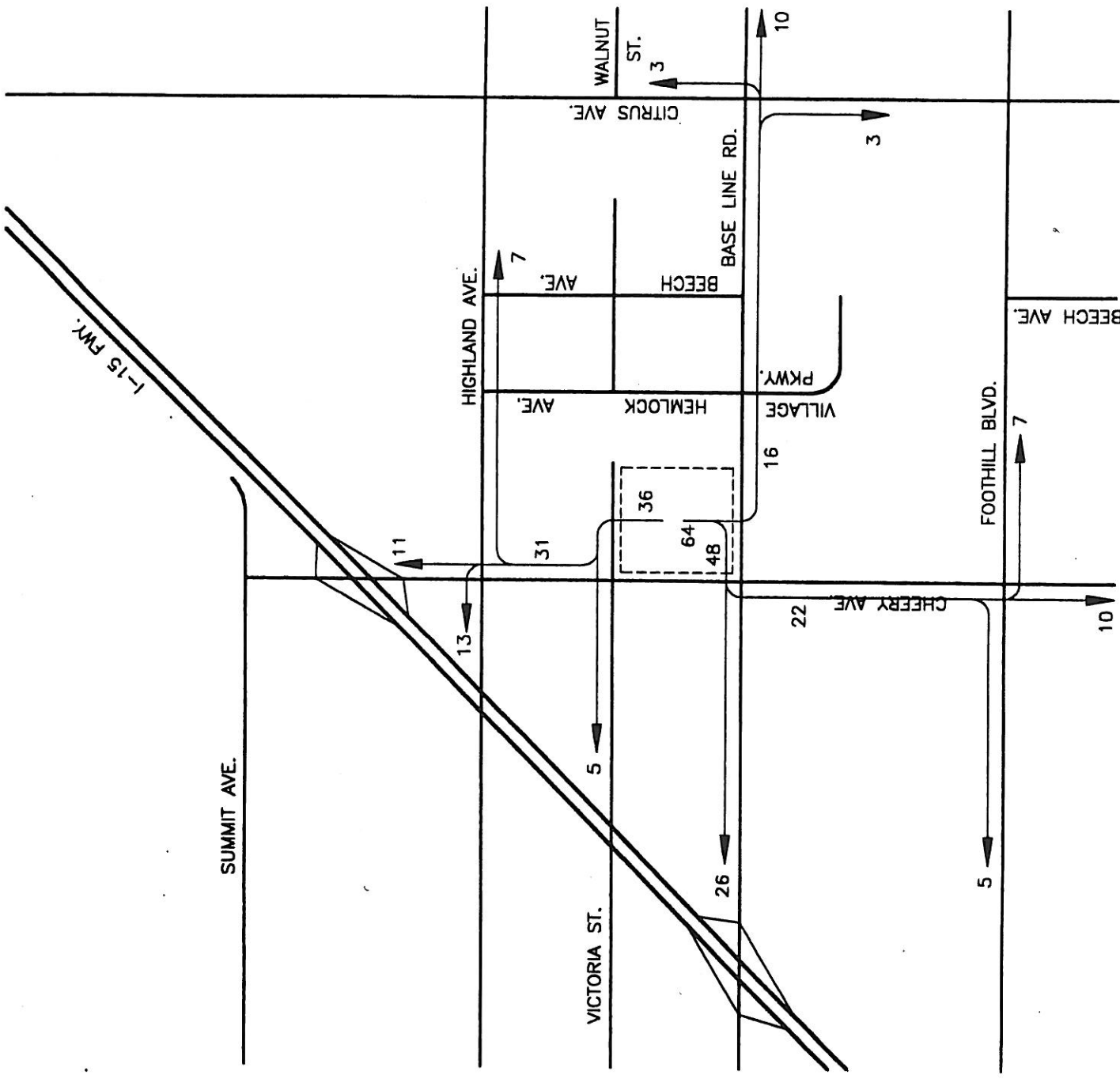
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TENTATIVE TRACT MAP 15863, Fontana, CA

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EXHIBIT 2-J MORNINGSIDE TRIP DISTRIBUTION



LEGEND.

10 = PERCENT TO/FROM PROJECT

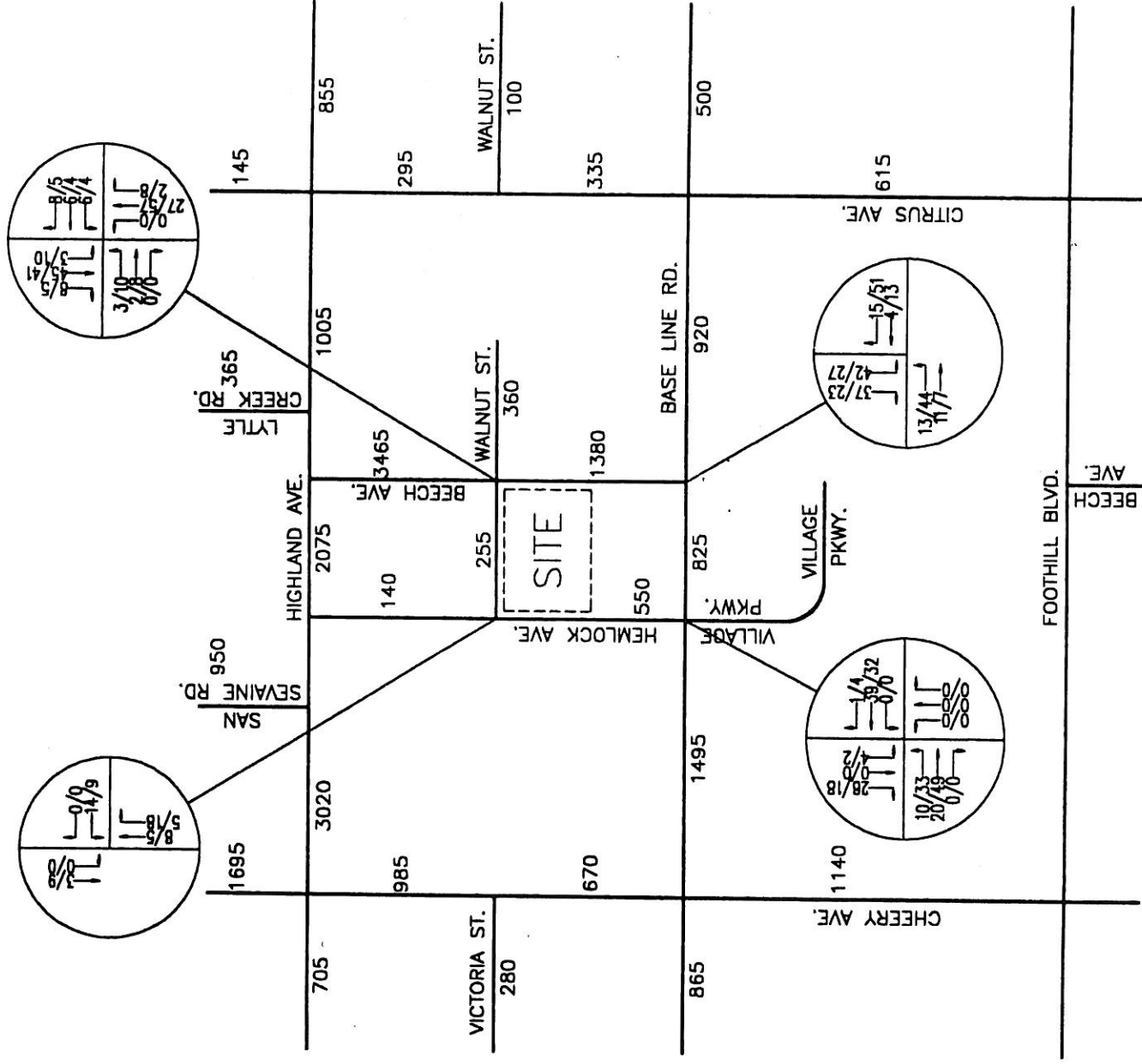


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TENTATIVE TRACT MAP 15863, Fontana, CA

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EXHIBIT 2-K OTHER CUMULATIVE DEVELOPMENT TRAFFIC VOLUMES



LEGEND:

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS
30 = VEHICLES PER DAY (1000'S)

3. EXISTING CONDITIONS

This section of the report summarizes existing roadway and traffic conditions in the study area. The existing conditions intersection analysis location is as follows:

Hemlock Avenue (NS) at:

- Base Line Road (EW)

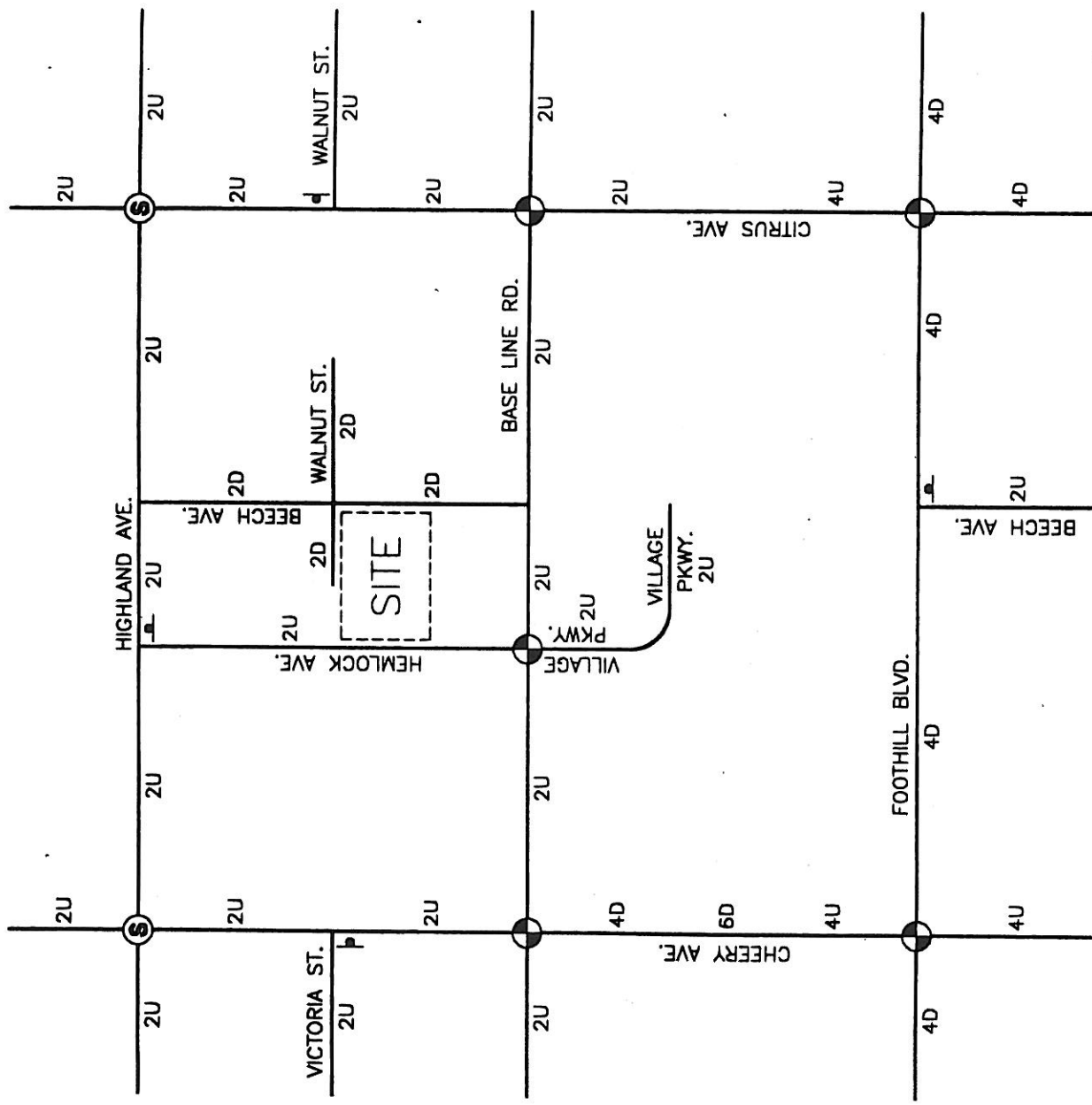
The number of through travel lanes for existing roadways and intersection controls are presented, along with existing traffic count data collected for this study. This data was used to analyze existing traffic operations in the study area. Existing plans for roadway improvements are also described in this section.

3.1 Existing Roadway System and Daily Traffic Volumes

The number of through travel lanes for existing roadways and intersection controls within the study area are presented on Exhibit 3-A, while Exhibit 3-B shows the existing traffic volumes in the study area. Average daily traffic volumes (ADT) are based upon the latest traffic data collected from the 1997 Traffic Volumes manual for San Bernardino County, the 1995 Traffic Volumes on California State Highways by Caltrans, the City of Fontana ADT map (1994) and factored up from peak hour counts conducted for RKJK using the following formula for each intersection leg:

$$(\text{Approach Volume} + \text{Exit Volume}) * 10 = \text{Leg Volume}$$

EXHIBIT 3-A EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

- ⊕ = TRAFFIC SIGNAL
- Ⓢ = ALL WAY STOP
- ⌄ = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED



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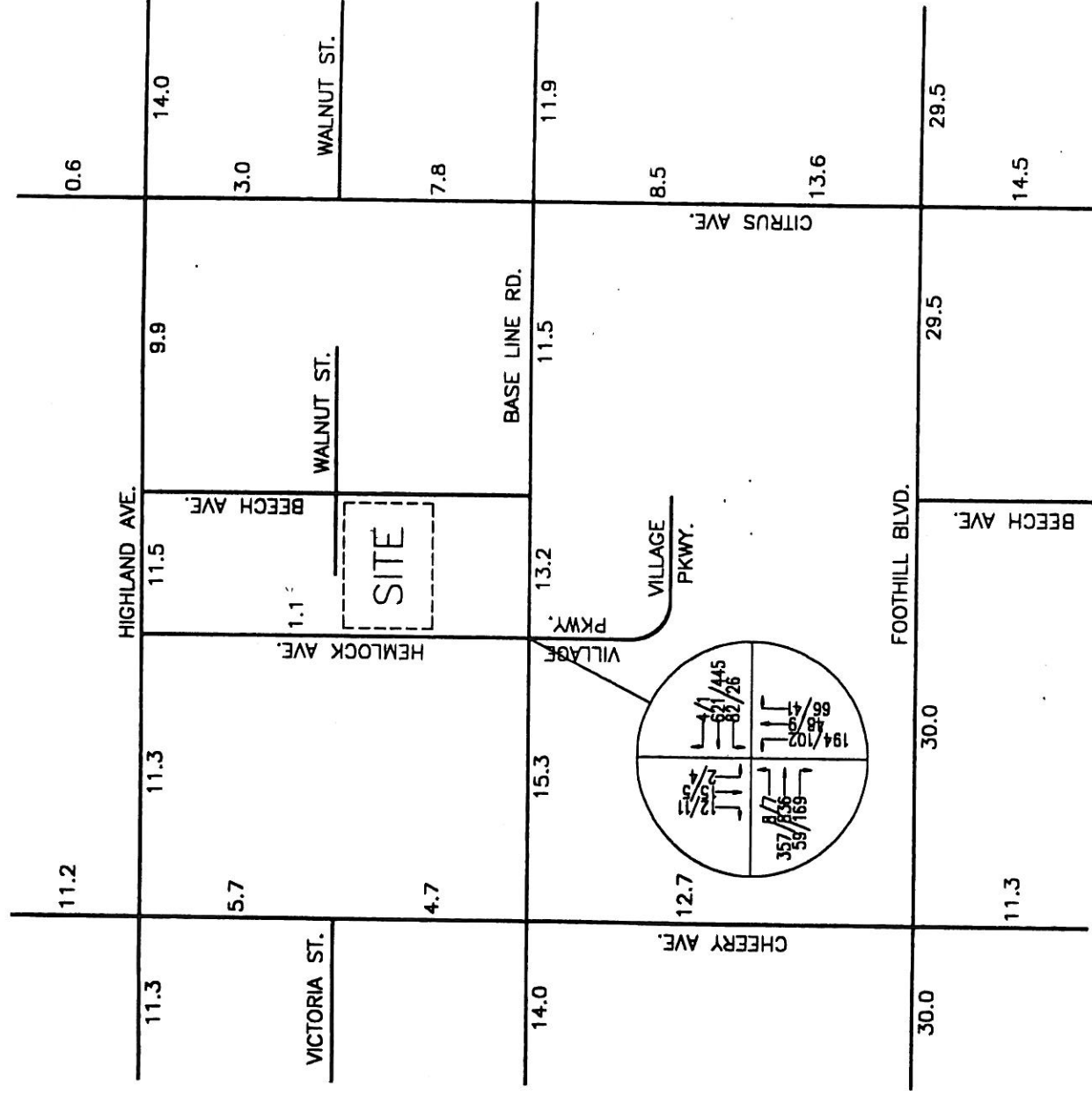
TENTATIVE TRACT MAP 15863, Fontana, CA

RKJK

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EXHIBIT 3-B

EXISTING TRAFFIC VOLUMES



LEGEND:

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS

30.0 = VEHICLES PER DAY (ADT) (1000'S)

Regional access to the site is provided directly by the Interstate 15 (I-15) Freeway and State Route 30 (SR-30). Local access is provided by various arterial roadways in the vicinity of the site. The north-south arterials which will be most affected by the project include Cherry Avenue, Hemlock Avenue, Citrus Avenue and Beech Avenue. East-west arterials expected to provide local access include Highland Avenue, Walnut Street and Base Line Road.

3.2 Existing Peak Hour Traffic Volumes

The existing peak hour intersection turning movement volumes are presented on Exhibit 3-B. Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts conducted specifically for RKJK, or provided by the various local agencies. Traffic count worksheets are included in Appendix "B". The AM peak hour traffic volumes were determined by counting the two hour period between 7 - 9 AM in the morning. Similarly, the PM peak hour traffic volumes were identified by counting the two hour period from 4 - 6 PM in the evening.

3.3 Existing Traffic Operations

Existing peak hour traffic operations have been evaluated for both the AM and PM peak hours of traffic at the study area intersection. The results of this analysis are summarized in Table 3-1, along with the existing intersection geometrics and traffic control devices at the analysis location.

TABLE 3-1

EXISTING CONDITIONS INTERSECTION ANALYSIS

INTERSECTION	TRAFFIC CONTROL ²	INTERSECTION APPROACH LANES ¹												DELAY (SECS.) ²		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Hemlock Ave. (NS) at: • Base Line Rd. (EW)	TS	0	1	0	0	1	0	0	1	1	0	1	0	7.0	6.8	B	B

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

Source: Dowling Associates, Traffix Version 6.8 (1996).

TS = Traffic Signal

The study area intersection currently operates at acceptable Levels of Service during the peak hours (LOS "D" or better). The operations analysis worksheets for existing conditions are included in Appendix "C".

3.4 Planned Transportation Improvements and Relationships to General Plan

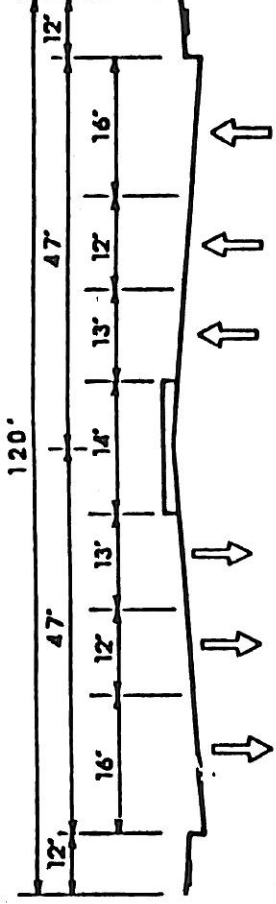
The transportation system within the study area is expected to undergo significant improvement as a result of work to be performed by Caltrans on the State Route 30 corridor. Two separate future conditions, Opening Year and Year 2015, are of interest for purposes of this study. The City of Fontana General Plan roadway classifications within the study area are shown on Exhibit 3-C. Exhibits 3-D to 3-H depict the City of Fontana roadway cross-sections for the various classifications shown on Exhibit 3-C.

Many of the roadways in the study area have not been fully constructed to their Master Plan Classification. A brief discussion of the various facilities providing direct access to the project and their ultimate configurations is, therefore, provided.

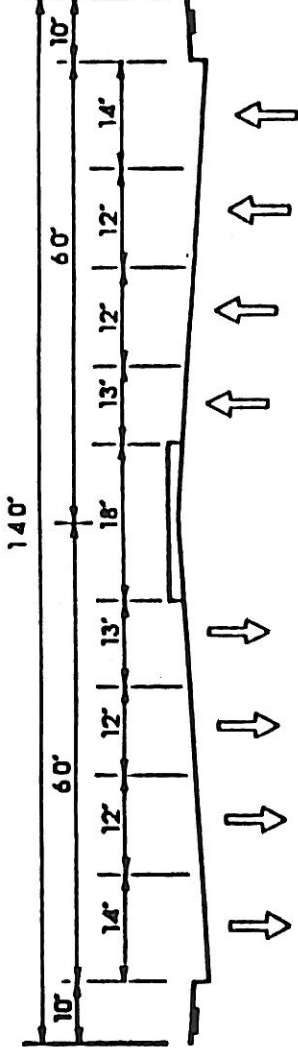
Interstate 15 is expected to undergo two significant changes. Two high occupancy vehicle (HOV) lanes (one in each direction) are included in the long term plans for this facility. In addition, a new interchange with the State Route 30 Freeway is planned. Interchanges are also planned at Duncan Canyon Road and Summit Avenue, with removal of the Cherry Avenue interchange.

EXHIBIT 3-D CITY OF FONTANA GENERAL PLAN ROADWAY CROSS-SECTIONS (PART 1)

MODIFIED MAJOR HIGHWAY
SIERRA AVE.
MERRILL AVE - MARYGOLD AVE



MODIFIED MAJOR HIGHWAY
SIERRA AVE.
MARYGOLD AVE - VALLEY BLVD.



MODIFIED MAJOR HIGHWAY
SIERRA AVE.
VALLEY AVE - SLOVER AVE

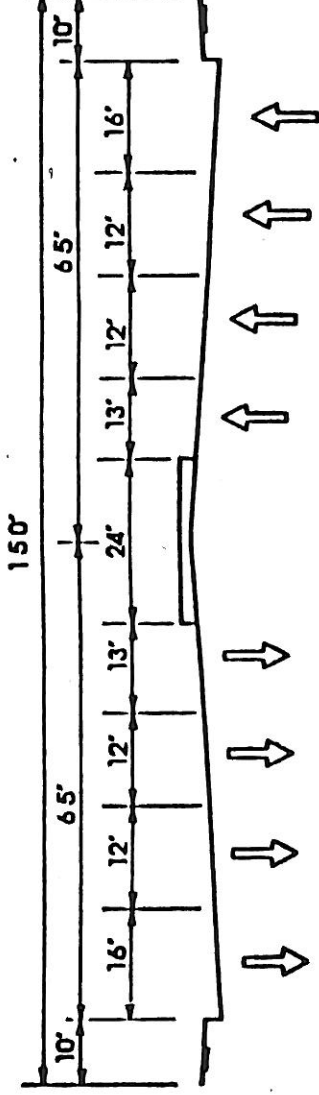
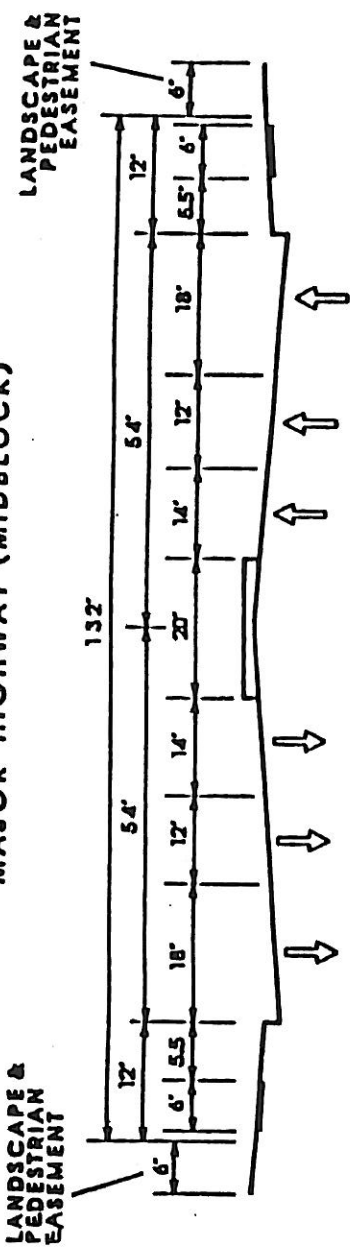
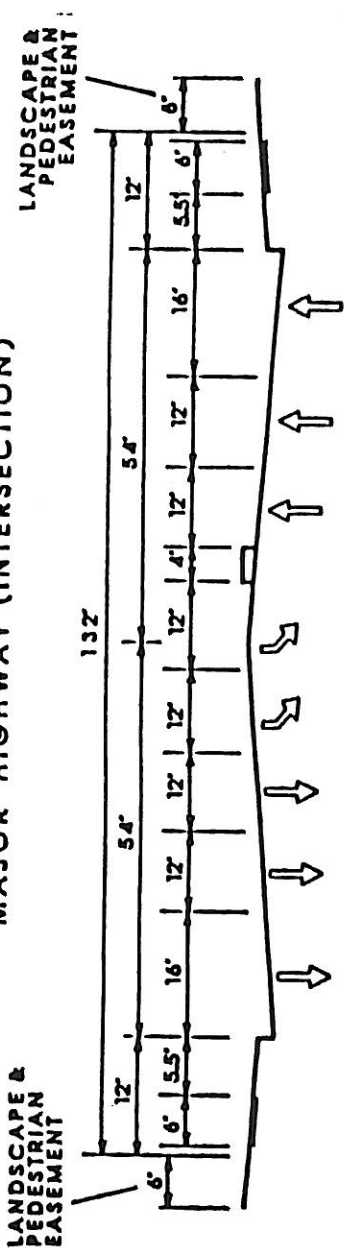


EXHIBIT 3-E CITY OF FONTANA GENERAL PLAN ROADWAY CROSS-SECTIONS (PART 2)

MAJOR HIGHWAY (MIDBLOCK)



MAJOR HIGHWAY (INTERSECTION)



MODIFIED MAJOR HIGHWAY
VALLEY BLVD.
SIERRA AVE - PALMETTO AVE

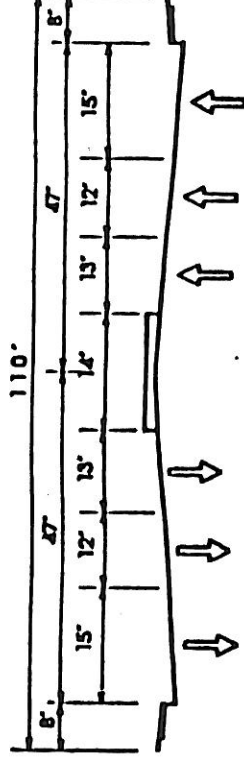
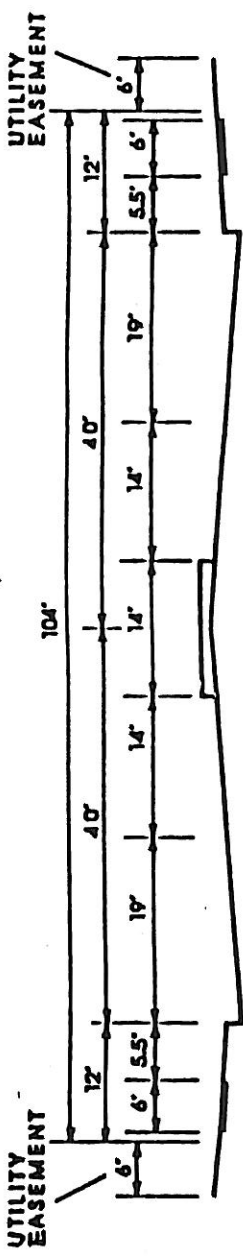
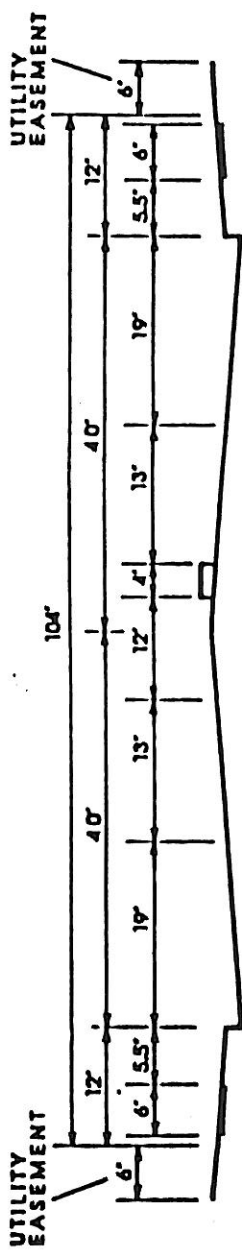


EXHIBIT 3-F
CITY OF FONTANA GENERAL PLAN
ROADWAY CROSS-SECTIONS (PART 3)

PRIMARY HIGHWAY (MIDBLOCK)



PRIMARY HIGHWAY (INTERSECTION)



**MODIFIED PRIMARY HIGHWAY 110' R.O.W.
CHERRY AVE - COYOTE CYN. RD.
FROM SUMMIT AVE TO DUNCAN CYN RD./INTERCHANGE 1-15**

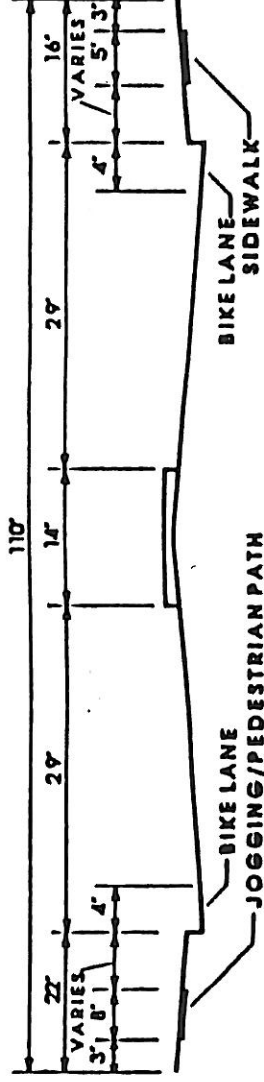
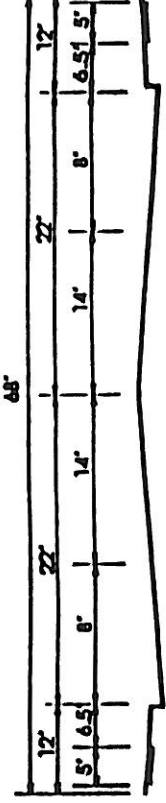
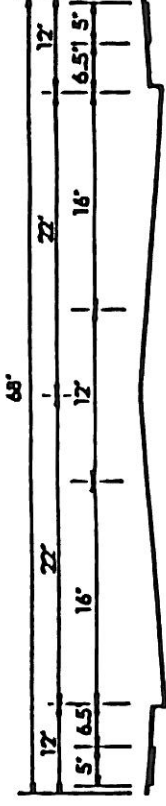


EXHIBIT 3-G CITY OF FONTANA GENERAL PLAN ROADWAY CROSS-SECTIONS (PART 4)

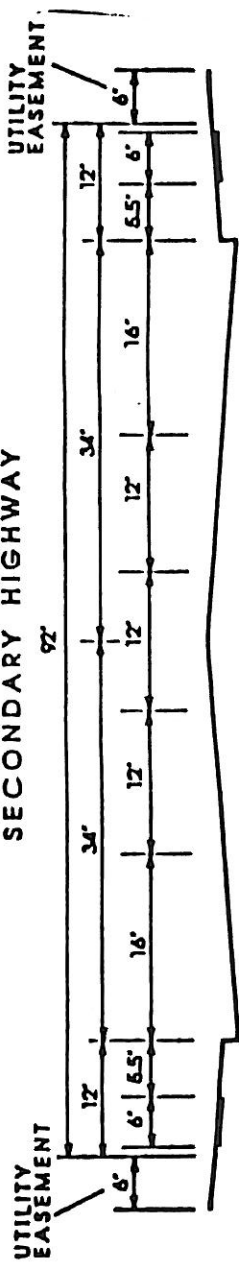
COLLECTOR STREET (MIDBLOCK)



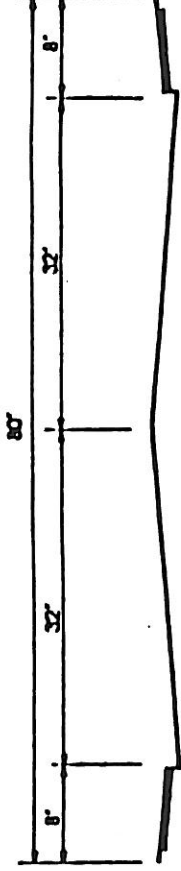
COLLECTOR STREET (INTERSECTION)



SECONDARY HIGHWAY



MODIFIED SECONDARY HIGHWAY 80' R/W
ORANGE WAY



MODIFIED SECONDARY HIGHWAY 88' R/W
SAN BERNARDINO AVE.

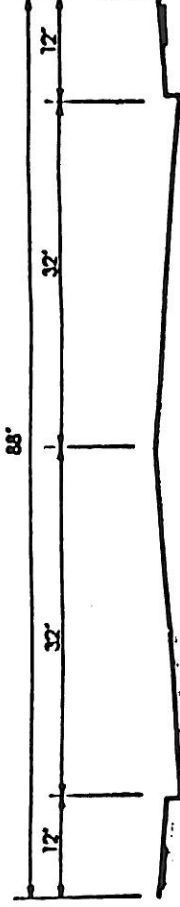
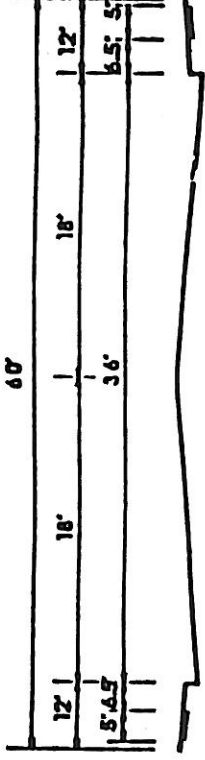
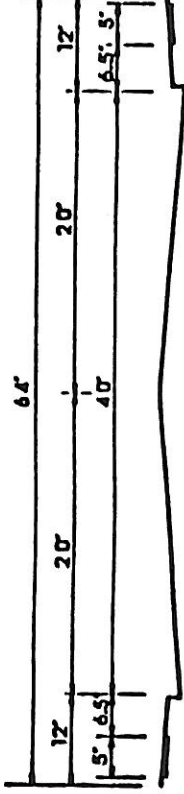


EXHIBIT 3-H CITY OF FONTANA GENERAL PLAN ROADWAY CROSS-SECTIONS (PART 5)

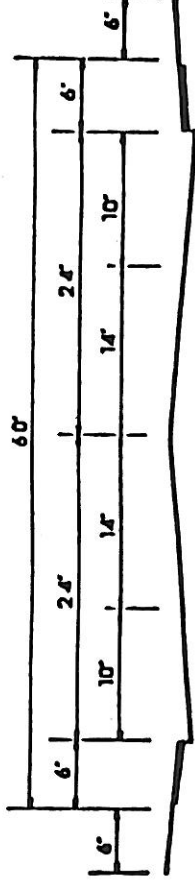
SHORT LOCAL STREET



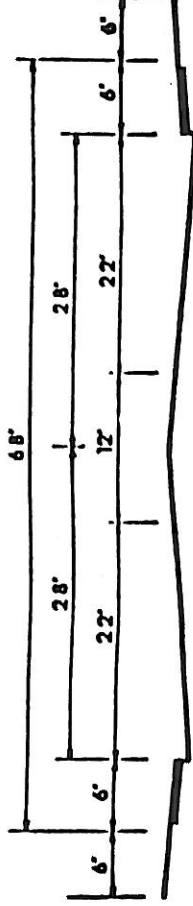
LOCAL STREET



LOCAL INDUSTRIAL



INDUSTRIAL COLLECTOR



State Route 30 (SR-30) is expected to undergo major improvements in the future. The current alignment will be replaced by construction of a limited access freeway facility extending from the eastern terminus of the existing limited access facility at I-10 to the I-210 freeway in Los Angeles County. The proposed interchanges are described for each individual street crossing the proposed alignment of this limited access facility.

Highland Avenue is classified as a Primary highway (four-lane divided roadway) which will parallel SR-30 on the south side.

3.4.1 Funded Roadway Improvements

The most significant improvement project in the study area involves the construction of the SR-30 Freeway between Los Angeles County and the City of San Bernardino. Although the forecasts which will be used to develop Opening Year and Year 2015 traffic volume forecasts explicitly include growth on the order of 5% per year within the study area, no other committed sources of funding for additional improvements necessary to serve the increase in traffic are in place. The analyses contained in this report, therefore, assumed minimal additional improvements beyond those anticipated in the State Route 30 corridor.

Highland Avenue is currently designated as State Route 30 (SR-30). The final design of the proposed limited access State Route 30 is essentially complete, and this facility is expected to be constructed by the Year 2015. Upon completion, State Route 30 will include 3 general use lanes and a high occupancy vehicle (HOV) lane in each direction. Interchanges will be provided with the following arterial roadways near the study area:

- Haven Avenue
- Milliken Avenue
- Day Creek Boulevard
- I-15 Freeway
- Cherry Avenue
- Beech Avenue (HOV access only)
- Citrus Avenue
- Sierra Avenue
- Alder Avenue¹
- Ayala Drive

All interchanges other than the Sierra Avenue interchange will be diamond interchanges. The Sierra Avenue interchange is planned as a partial cloverleaf with loop on-ramps in the northeast and southwest quadrants. In addition, overcrossings will be constructed at Hermosa Avenue, Rochester Avenue, Etiwanda Avenue, East Avenue, San Sevaine Road, Locust Avenue and Linden Avenue. At the same time, the existing Cherry Avenue interchange with I-15 will be relocated to Summit Avenue.

Frontage roads to the north and south of SR-30 are also part of the SR-30 project. The north frontage road is referred to as Carter Avenue on the City of Fontana General Plan. Carter Avenue is a four lane divided roadway. The south frontage road is designated as Highland Avenue on the City of Fontana General Plan. Highland Avenue will be constructed as a four lane divided roadway, in accordance with the City of Fontana General Plan designation.

¹ Although this interchange is a high priority improvement for the City of Rialto, the Year 2015 projections were prepared with an "overcrossing only" at this location because of SANBAG concerns regarding the status of funding for this interchange.

4. FUTURE TRAFFIC CONDITIONS

This chapter of the report describes the development of the future year traffic volume forecasts, and presents the resulting traffic volumes which will be used for traffic operations analysis. Future traffic conditions without the project are presented first, followed by the future with project traffic volumes.

4.1 Future Without Project Traffic Conditions

Future traffic conditions without the project have been evaluated for two years, 1999 (project Opening Year) and 2015 (future year).

4.1.1 Project Opening Year (1999) Forecasts

The Opening Year background traffic projections without the project were developed by extending historical traffic volume growth trends for the study area (ambient growth). Historical traffic volumes on State Route 30 west of Riverside Avenue have been used to calculate the growth rate as follows:

1986 Volume:	13,700 vehicles per day
1995 Volume:	20,500 vehicles per day
Ratio:	1.496
Calculated Growth Rate:	4.58% per year, say 5%

Anticipated growth of 5% has been applied to each existing traffic volume. Since the five other cumulative developments may be completed within the same timeframe as the proposed project, the cumulative development related traffic volumes are incorporated into the Opening Year Without Project

Analysis. The resulting Opening Year traffic volumes (without the proposed project) are presented on Exhibit 4-A.

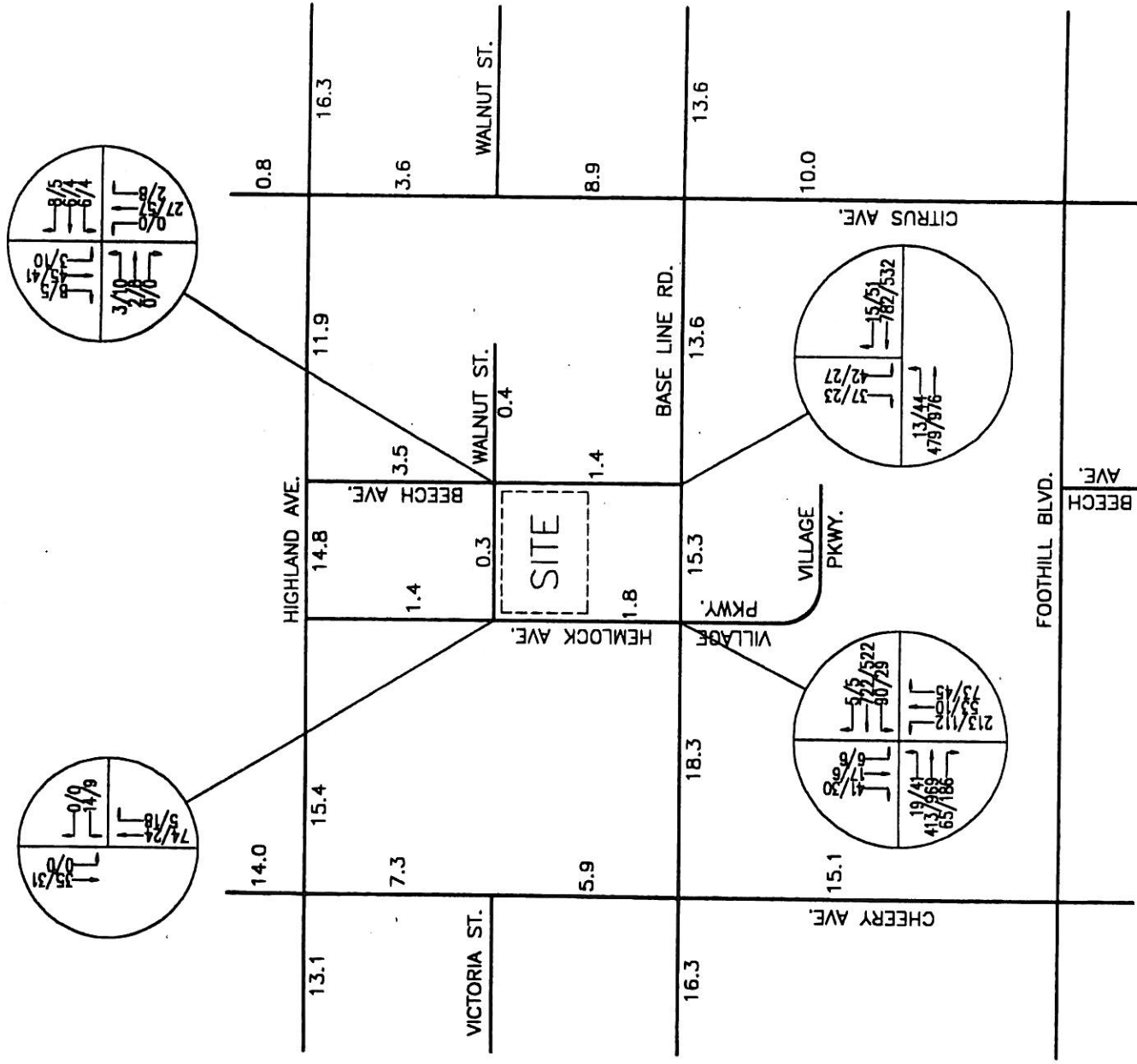
4.1.2 Year 2015 Forecasts

Year 2015 forecasts are based upon two traffic studies previously published by RKJK. These studies are the Summit Heights Specific Plan TIA and the California Landings TIA. The traffic forecast for these studies have been developed from the CTP model using accepted procedures for model forecast refinement and smoothing.

The resulting Year 2015 without project traffic volume forecasts are presented on Exhibit 4-B. The daily traffic volumes, particularly on the regional facilities, reflect the high areawide growth rate anticipated between now and the Year 2015. The construction of SR-30 does result in some decreases in traffic on various east-west arterials in the study area, as the new freeway is a more desirable roadway for east-west through traffic.

The Year 2015 peak hour forecasts were developed using the previously described daily forecasts, along with peak hour traffic count data collected at each analysis location. This takes advantage of the known accuracy of the CTP model in forecasting daily traffic on the various arterials and freeways. It also recognizes that the CTP model has only been validated to the peak period/hour level along freeways in the region. The CTP model zone structure is also not designed to provide accurate turning movements along arterial roadways unless extensive refinement and reasonableness checking is performed.

EXHIBIT 4-A OPENING YEAR WITHOUT PROJECT TRAFFIC VOLUMES



LEGEND.

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS
 30.0 = VEHICLES PER DAY (1000'S)

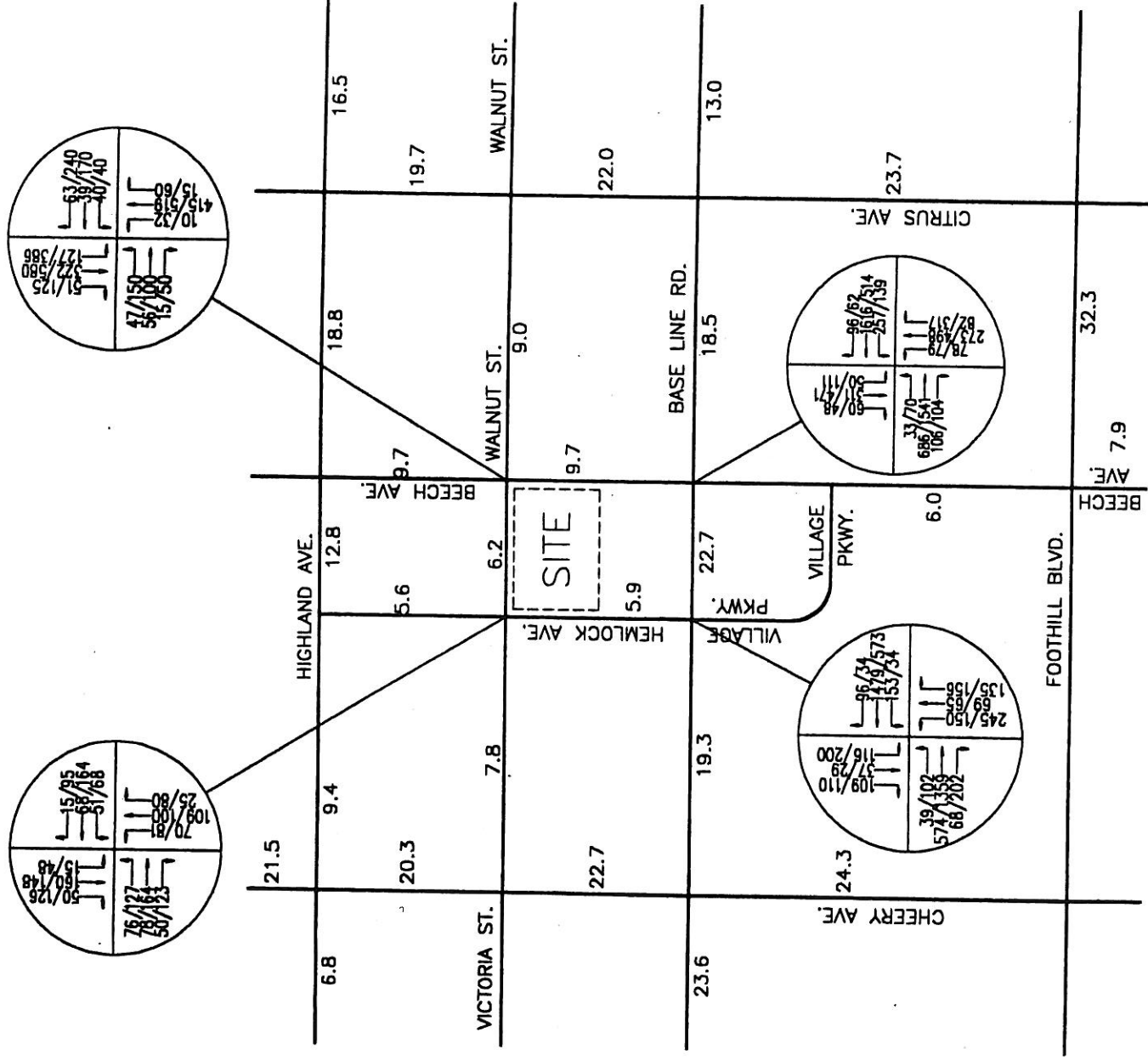
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TENTATIVE TRACT MAP 15863, Fontana, CA

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EXHIBIT 4-B YEAR 2015 WITHOUT PROJECT TRAFFIC VOLUMES



LEGEND:

10/20 = AM\PM PEAK HOUR TURNING MOVEMENTS
 30.0 = VEHICLES PER DAY (1000'S)

880-97-001:17A

TENTATIVE TRACT MAP 15863, Fontana, CA

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Each existing turning movement has been multiplied by the average growth in daily traffic for the two legs of the intersection involved. The resulting initial estimate of the future Year 2015 peak hour turning movements has then been reviewed for reasonableness. The reasonableness checks performed include review of flow conservation, as well as comparison to both the existing actual counted volume and the overall relationship between the forecast peak hour volume and daily volume on each individual intersection leg. Where necessary, the initial estimates were adjusted to achieve flow conservation, reasonable growth, and acceptable relationships between the peak hour and daily traffic volume forecasts. The Year 2015 AM and PM peak hour turning movements (without the project) are shown in Exhibit 4-B.

4.2 Future With Project Traffic Conditions

The future year with project traffic projections are developed by combining the future year (without project) traffic forecasts to the project only forecasts.

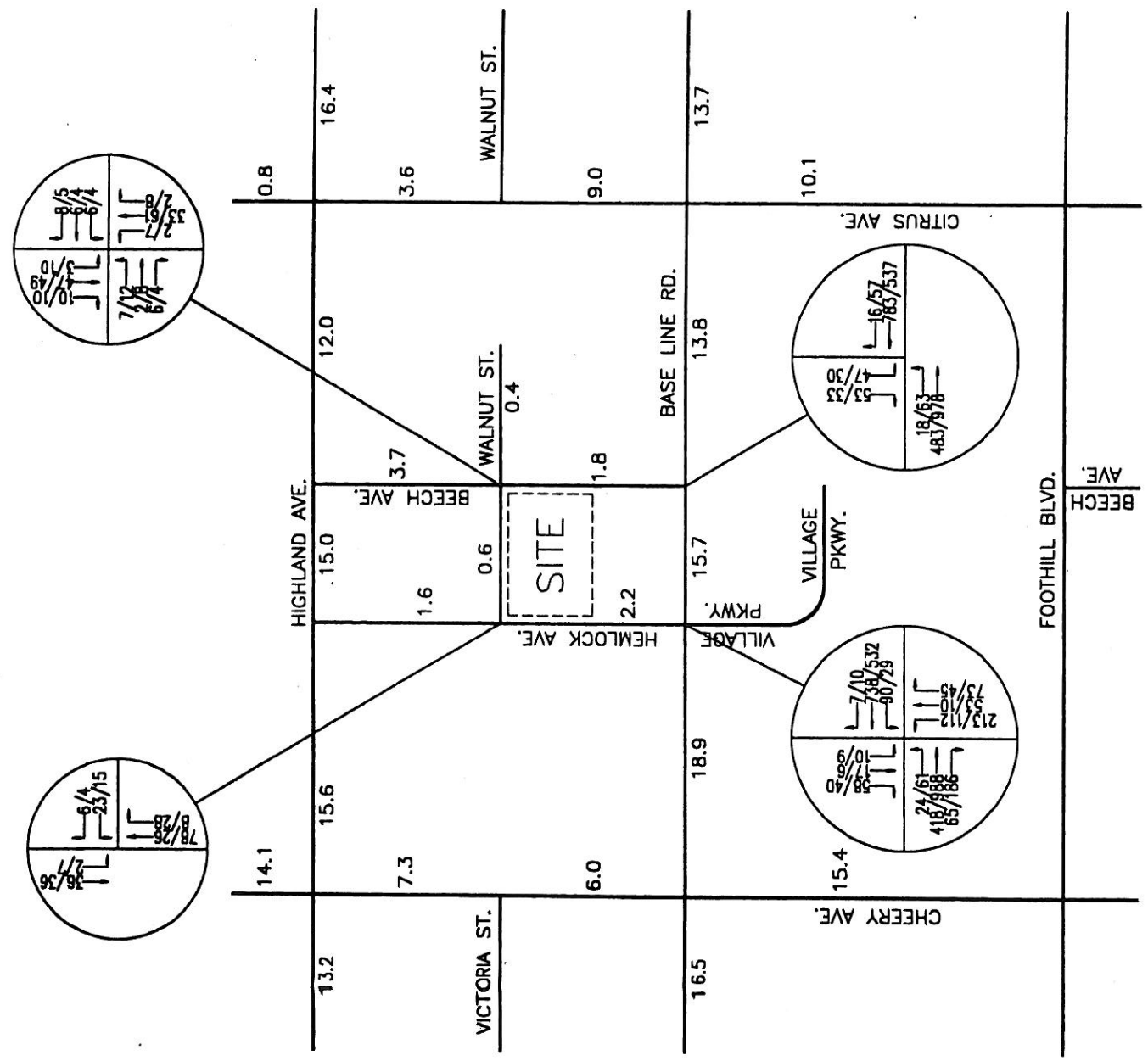
4.2.1 Project Opening Year (1999) Forecasts

The traffic forecasts for Opening Year conditions with the proposed project are presented on Exhibit 4-C.

4.2.2 Year 2015 Forecasts

The traffic forecasts for Year 2015 with the proposed project are presented on Exhibit 4-D.

EXHIBIT 4-C OPENING YEAR WITH PROJECT TRAFFIC VOLUMES

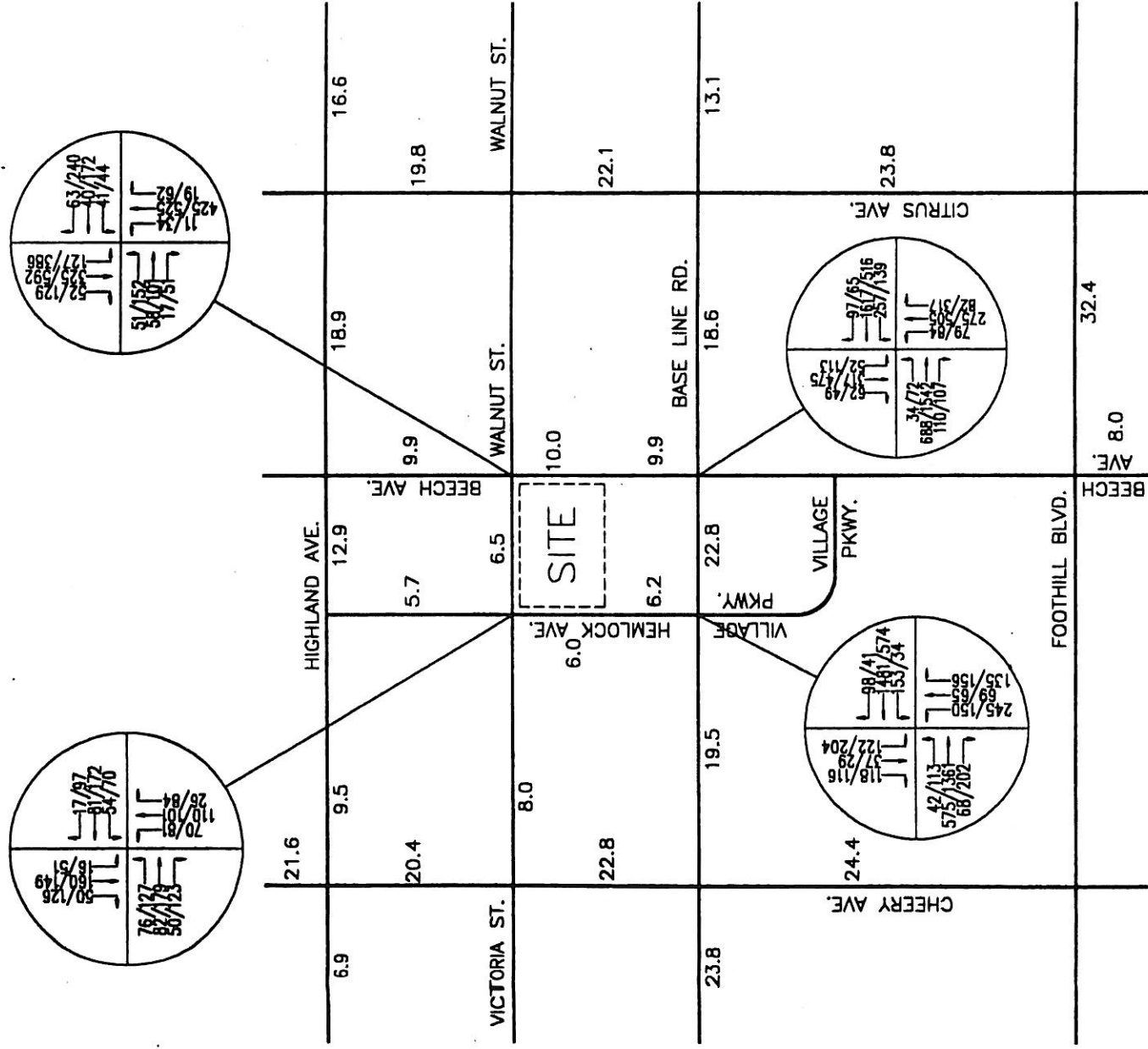


LEGEND.

10/20 = AM/PM PEAK HOUR TURNING MOVEMENTS
 30.0 = VEHICLES PER DAY (1000'S)



EXHIBIT 4-D YEAR 2015 WITH PROJECT TRAFFIC VOLUMES



LEGEND.

10/20 = AM\PM PEAK HOUR TURNING MOVEMENTS

30.0 = VEHICLES PER DAY (1000'S)



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TENTATIVE TRACT MAP 15863, Fontana, CA

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5. FUTURE TRAFFIC OPERATIONS ANALYSIS

Analysis of Future Opening Year (1999) conditions are presented first, followed by the analysis of Year 2015 conditions.

5.1 Future Opening Year (1999) Traffic Operations

The operations analysis for Opening Year (1999) conditions examined two scenarios, which are the Opening Year without project conditions and Opening Year with project conditions. Each of these conditions is discussed in the remainder of this section.

5.1.1 Opening Year (1999) Without Project Conditions

The intersection operations analysis for Opening Year (1999) without project conditions are summarized in Table 5-1. The operations analysis worksheets for Opening Year without project conditions are included in Appendix "D". As shown in Table 5-1, all the study area intersections are expected to operate at acceptable levels of service during the peak hours (LOS "D" or better).

5.1.2 Opening Year (1999) With Project Conditions

The intersection operations analysis for Opening Year (1999) with project conditions are summarized in Table 5-2. The operations analysis worksheets for Opening Year with project conditions are included in Appendix "E". As shown in Table 5-2, all the study area intersections are expected to operate at acceptable levels of service during the peak hours (LOS "D" or better).

TABLE 5-1

OPENING YEAR WITHOUT PROJECT CONDITIONS INTERSECTION ANALYSIS

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹												DELAY (SECS.) ²				LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND								
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM		
Hemlock Ave. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	TS CSS	0 0	1 1	0 0	0 0	1 1	0 0	1 0	0 0	1 0	0 1	0 0	8.4 0.5	13.0 0.5	B A	B A			
Beech St. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	CSS CSS	0 0	0 1	0 0	1 0	0 1	1 0	0 0	1 1	0 0	1 0	0 1	0 0	1.2 0.9	1.1 1.0	A A	A A		

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

² Source: Dowling Associates, Traffix Version 6.8 (1996).

³ TS = Traffic Signal
CSS = Cross Street Stop

TABLE 5-2

OPENING YEAR WITH PROJECT CONDITIONS INTERSECTION ANALYSIS

INTERSECTION	TRAFFIC CONTROL ²	INTERSECTION APPROACH LANES ¹												DELAY (SECS.) ²				LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND								
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM		
Henlock Ave. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	TS CSS	0	1	0	0	1	0	0	1	1	0	1	0	8.7	16.6	B	C		
		0	0	0	1	0	1	1	2	0	0	2	1	0.8	0.8	A	A		
Beech Ave. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	CSS CSS	0	0	0	1	0	1	0	1	0	0	1	0	1.5	1.6	A	A		
		0	1	0	0	1	0	0	1	0	0	1	0	1.1	1.1	A	A		

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

² Source: Dowling Associates, Traffic Version 6.8 (1995).

TS = Traffic Signal
CSS = Cross Street Stop

5.2 Future Year 2015 Traffic Operations

The operations analysis for Year 2015 conditions examined two scenarios. These are the Year 2015 without project conditions and Year 2015 with project conditions. Each of these conditions is discussed in the remainder of this section.

5.2.1 Year 2015 Without Project Conditions

The intersection operations analysis for Year 2015 without project conditions are summarized in Table 5-3. The operations analysis worksheets for Year 2015 without project conditions are included in Appendix "F". As shown in Table 5-3, all the study area intersections are expected to operate at acceptable level of service during the peak hour with funded improvements (LOS "D" or better).

For Year 2015 traffic conditions without the project, traffic signals are expected to be warranted at the intersection of Beech Avenue/Base Line Road, Beech Avenue/Walnut Street and Hemlock Avenue/Walnut Street (see Appendix "H").

5.2.2 Year 2015 With Project Conditions

The intersection operations analysis for Year 2015 with project conditions are summarized in Table 5-4. The operations analysis worksheets for Year 2015 with project conditions are included in Appendix "G". As shown in Table 5-4, all the study area intersections are expected to operate at acceptable levels of service during the peak hours with funded improvements (LOS "D" or better).

TABLE 5-3
YEAR 2015 WITHOUT PROJECT CONDITIONS INTERSECTION ANALYSIS

INTERSECTION	TRAFFIC CONTROL ²	INTERSECTION APPROACH LANES ¹												DELAY (SECS.) ²				LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND								
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM
Hemlock Ave. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	TS TS ⁴	0 0	1 1	0 0	0 0	1 1	0 0	1 0	2 1	0 0	1 0	2 1	0 0	26.1 5.9	24.3 6.0	D B	C B	C B	C B
Beech Ave. (NS) at: • Base Line Rd. (EW) • Walnut St. (EW)	TS TS	1 1	2 1	0 0	1 1	2 1	0 0	1 1	2 1	0 0	1 1	2 1	0 0	24.5 4.4	19.4 6.7	C A	C A	C A	C B

When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

Source: Dowling Associates, Traffix Version 6.8 (1998).

³ TS = Traffic Signal
CSS = Cross Street Stop

Additional Year 2015 improvement required by traffic signal warrant.

YEAR 2015 WITH PROJECT CONDITIONS INTERSECTION ANALYSIS

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

² Source: Dowling Associates, *Traffic Version 6.8* (1996).

³ TS = Traffic Signal
CSS = Cross Street Stop

⁴ Additional Year 2015 improvement required by traffic signal warrant.

6. SUMMARY AND RECOMMENDATIONS

This chapter summarizes the findings of this traffic impact study, and provides a series of recommendations related to project implementation.

6.1 Summary

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act (CEQA) and the City of Fontana requirements. The City of Fontana is the lead agency responsible for preparation of the traffic impact study, in accordance with CEQA authorizing legislation. An opening year analysis and a Year 2015 analysis are included in this report.

The Opening Year background traffic without the project were estimated using the "build up" approach. The Opening Year traffic volumes without the project are estimated by combining traffic increases due to local background growth with growth due to other cumulative developments. The growth forecast entails the factoring of existing traffic counts based on historical growth rates in the study area, which accounts for general ambient growth in traffic within the region. In this analysis, a growth rate of 5 percent per year for 2 years is used. The City of Fontana Planning staff identified five other cumulative developments, which may also be completed within the same timeframe as the TTM 15863 project. Traffic from five other cumulative projects are, therefore, incorporated into the Opening Year Without Project Analysis.

To develop the traffic volumes for the Opening Year with project, the traffic volumes generated by the proposed project and the five other cumulative developments are added to the background traffic volumes factored from existing traffic volumes.

The Year 2015 traffic volumes without project are based upon two traffic studies previously published by RKJK. These studies are the Summit Heights Specific Plan TIA and the California Landings TIA. The traffic forecast for these studies have been derived from the subregional travel demand model currently being used for long range planning in San Bernardino County. This model is commonly referred to as the Comprehensive Transportation Plan (CTP) model. The CTP model is an approved travel demand forecasting tool within San Bernardino County.

To develop the Year 2015 traffic volumes with the project, the project-related traffic volumes are added to Year 2015 without project traffic volumes.

Trip generation has been estimated based on the average trip rates contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 5th Edition (1991). The project trip distributions were developed based on a review of existing traffic volumes and projected future traffic patterns as predicted by the CTP model. The trip distribution for the five other developments are also based on the CTP model and other previously published traffic studies.

6.1.1 The Project

The traffic related to the project has been calculated in accordance with the following accepted procedural steps:

- Trip Generation.
- Trip Distribution.
- Traffic Assignment.

The project trip generation has been calculated in accordance with the Institute of Transportation Engineers publication Trip Generation Manual (5th edition, 1991). The average trip rate of low rise apartment has been used in this analysis.

TTM 15863 is projected to generate a total of approximately 1,060 trip-ends per day with 80 vehicles per hour during the AM peak hour and 115 vehicles per hour during the PM peak hour.

The trip distribution/traffic assignment process has been accomplished manually, as an overlay to model forecasts. The individual distribution patterns for each area of the project have been developed based on the regional trip distribution, as well as the individual access points and local traffic patterns.

6.1.2 Other Cumulative Development

The traffic related to other cumulative development has been calculated similarly to the procedures for the proposed project.

The project trip generation has been calculated in accordance with the Institute of Transportation Engineers publication Trip Generation Manual (5th edition, 1991).

The five other developments are projected to generate a total of approximately 6,750 trip-ends per day with 525 vehicles per hour during the AM peak hour and 720 vehicles per hour during the PM peak hour.

The trip distribution/traffic assignment process has been accomplished manually, as an overlay to model forecasts. The individual distribution patterns for each area of the project have been developed based on the regional trip distribution, as well as the individual access points and local traffic patterns.

6.1.1.3 Existing Study Area Conditions

The existing conditions intersection analysis location is as follows:

Hemlock Avenue (NS) at:

- Base Line Road (EW)

Regional access to the site is provided directly by Interstate 15 (I-15) Freeway and State Route 30 (SR-30). Local access is provided by various arterial roadways in the vicinity of the site. The north-south arterials which will be most affected the project include Cherry Avenue, Hemlock Avenue, Beech Avenue and Citrus Avenue. East-west arterials expected to provide local access include Highland Avenue, Walnut Street and Base Line Road.

Existing peak hour traffic operations have been evaluated for both the AM and PM peak hours of traffic throughout the study area.

The study area intersection currently operates at acceptable Levels of Service (LOS "D" or better) during the peak hours.

6.1.4 Future Conditions

The transportation system within the study area is expected to undergo significant improvement as a result of work to be performed by Caltrans on the State Route 30 corridor. The current alignment will be replaced by construction of a limited access freeway facility extending from the eastern terminus of the existing limited access facility at I-10 to the I-210 freeway in Los Angeles County.

Highland Avenue is classified as a Primary highway (four-lane divided roadway) which will parallel SR-30 on the south side.

Future traffic conditions without the project have been evaluated for 1999 (project opening year) and 2015 (future year). The Opening Year traffic volumes without the project are estimated by combining traffic increases due to local background growth with growth due to other developments. In this analysis, a growth rate of 5 percent per year for 2 years is used. The City of Fontana Planning staff identified five other cumulative developments, which may be completed within the same timeframe as the TTM 15863 project. Traffic from five other cumulative projects are, therefore, incorporated into the Opening Year Without Project Analysis.

To develop the traffic volumes for the Opening Year with project, the traffic volumes generated by the proposed project and the five other developments are added to the background traffic volumes factored from existing traffic volumes.

The Year 2015 traffic volumes without project are based upon two traffic studies previously published by RKJK. These studies are the Summit Heights Specific Plan TIA and the California Landings TIA. The traffic forecast for these studies have been derived from the subregional travel demand model currently being used for long range planning in San Bernardino County. This model is commonly referred to as the Comprehensive Transportation Plan (CTP) model. The CTP model is an approved travel demand forecasting tool within San Bernardino County.

To develop the Year 2015 traffic volumes with the project, the project-related traffic volumes are added to the Year 2015 without project traffic volumes.

6.1.4 Future Traffic Operations

All the study area intersections are expected to operate at acceptable levels of service during the peak hours for both Opening Year and Year 2015 conditions. No additional off-site improvements are necessary other than the already funded improvements.

6.2

Recommendations

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements.

6.2.1 On-site Improvements

On-site improvements will be required in conjunction with the proposed development to ensure adequate transportation within the project itself. Exhibit 6-A depicts the recommended on-site circulation system, as listed below:

Provide full access capabilities at all external project access points.

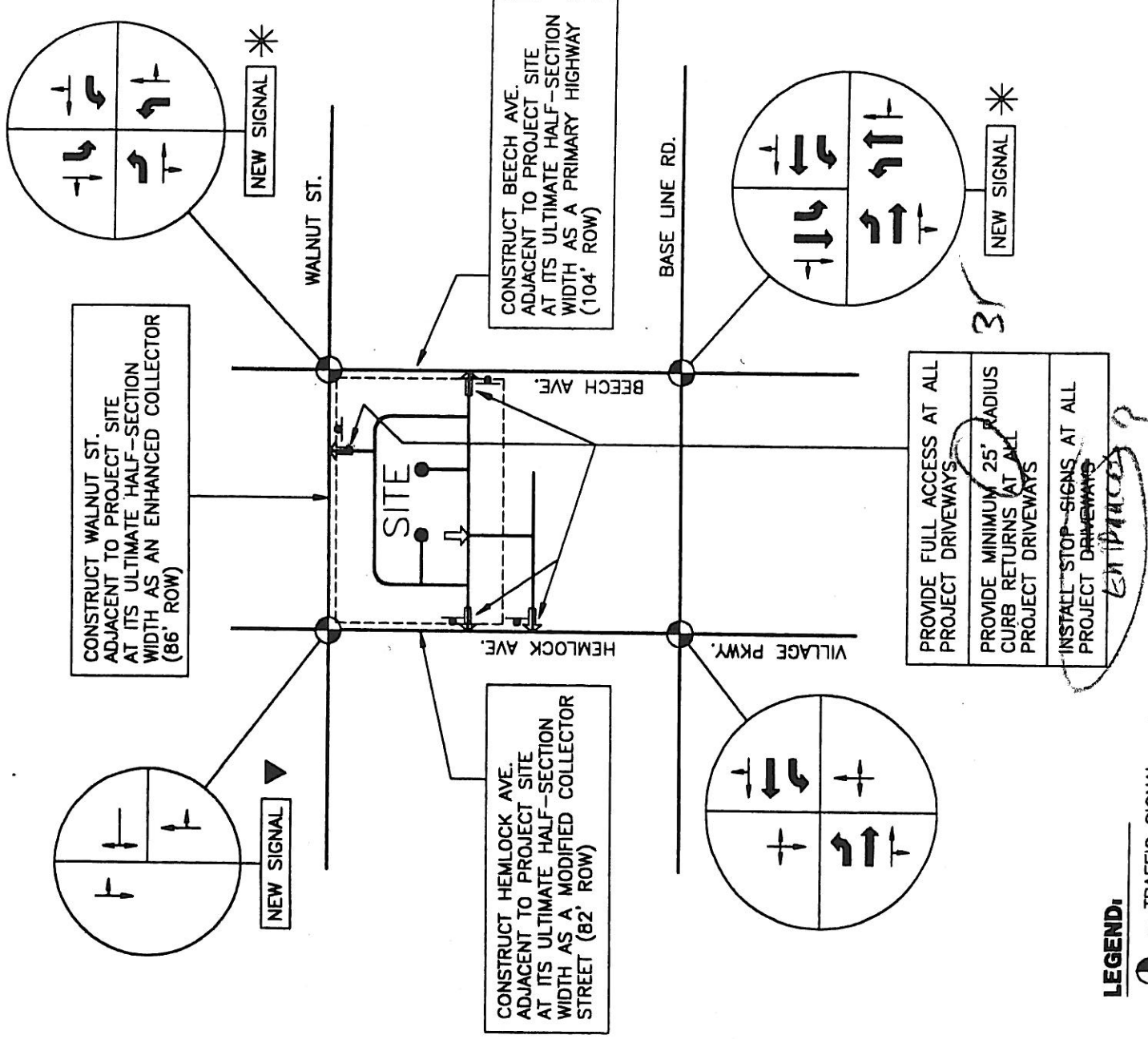
Install cross-street stop signs at the external project access points.

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Provide minimum 25 foot radius curb returns at all external project access points.

Construct Walnut Street adjacent to project site at its ultimate half-section width as an enhanced Collector (86' right-of-way).

Construct Hemlock Avenue adjacent to the project site at its ultimate half-section width as a Modified Collector Street (82' right-of-way).

EXHIBIT 6-A CIRCULATION RECOMMENDATIONS



✱ = YEAR 2015 FUNDED IMPROVEMENTS
 ▼ = ADDITIONAL YEAR 2015 IMPROVEMENTS

— = EXISTING/INITIAL LANE
 ➔ = YEAR 2015 IMPROVEMENT LANE
 ↔ = FULL ACCESS DRIVEWAY

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TENTATIVE TRACT MAP 15863, Fontana, CA

RKJK
 ROBERT KAHN • JOHN KAHN & ASSOCIATES INC.

Construct Beech Avenue adjacent to project site at its ultimate half-section width as a Primary Highway (104' right-of-way).

6.2.2 Off-Site Improvements

For Opening Year traffic conditions with the project, no additional off-site improvements are required. For Year 2015 traffic conditions with the project, no additional off-site improvements are required other than the already funded improvements.

The required Year 2015 funded improvements are summarized in Exhibit 6-A and also listed below:

For the intersection of Hemlock Avenue at Base Line Road:

- One shared through and right turn lane, one through lane and one left turn lane for the eastbound and westbound direction
- One through lane for northbound and southbound direction

For the intersection of Beech Avenue at Base Line Road:

- New traffic signal
- One shared through and right turn lane, one through lane and one left turn lane for all four directions

For the intersection of Beech Avenue at Walnut Street:

- New traffic signal
- One left turn lane and one shared through and right turn lane for all four directions

An additional Year 2015 improvement is recommended:

For the intersection of Hemlock Avenue at Walnut Street:

- New traffic signal required by traffic signal warrant

6.2.3 Transportation System Management Actions

a. Off-Site

As development in the area occurs, transit agency's should consider expanding service within the area.

b. On-Site Operational

The developer will comply with the trip reduction ordinance of the City of Fontana.