
V. DEVELOPMENT STANDARDS

A. Development Standards

The purpose of these standards is to guide the future development of the MCCABE RANCH Specific Plan in a manner that is compatible with existing ordinances and regulations.

1. Residential (zero-lot-line)

The minimum single-family lot size within the zero-lot-line area shall be 5,000 square feet. Minimum lot width shall be 50 feet and shall be measured at the center point between the front yard and rear yard setback lines.

Side yard setbacks shall be a minimum of 10 feet on one side of a lot and zero feet on the other side of the same lot. In no instance shall any portion of residential structures be closer than 15 feet to another residential structure. Side street setbacks shall be a minimum of 15 feet. Setback distances shall be measured from wall of structure to property line. Front yard and rear yard setbacks remain as specified in the County ordinance as it allows for greater flexibility, provided a site plan review is prepared for each phase. The site plan review must have the approval of both the County Planning Department.

The height limit on zero-lot line structures shall be a maximum of two stories and a maximum of 35 feet. No roof top structures to exceed the 35- foot limit from finished floor of foundation shall be allowed.

Each such lot shall provide for a minimum of two off street parking spaces, both of which must be behind the front yard set back line, and must be either in an enclosed garage or a carport. The spaces allowed within the setback line must be designed and installed in a manner that will not locate parked cars that extent into the sidewalk portion of the parcel.

Roof mounted air-conditioning equipment or other mechanical systems are prohibited.

2. Residential (standard 6000 sq. foot lot)

The minimum side yard setback for any residential occupancy structure including carports, patios, or other components shall be 5 feet. No mechanical equipment or other structural component shall be located in the side yard setback, unless there remains at least 20" clear walking area between the fence and the mechanical equipment. Further if the mechanical equipment is an AC compressor unit, the fence between the adjoining properties shall have acoustical absorption material to suppress the noise.

The maximum height limit is 2.5 stories and 35 feet.

Each parcel with a three bedrooms or smaller residence shall provide two off street parking spaces both of which must be behind the front yard setback line.

B. Environmental Mitigation Measures

All development within the MCCABE RANCH Specific Plan shall be consistent with the Mitigated Negative Declaration for the MCCABE RANCH Specific Plan and shall conform to all of the mitigation measures.

1. Traffic Circulation

All primary interior streets shall consist of two travel lanes, two parking lanes, concrete curb-gutters, concrete sidewalks, and one side of the street accommodating bicycle paths. On the streets where a bicycle path is installed there shall not be any parking allowed.

The primary entrance street shall have double travel lanes in both directions, with no on street parking. Contiguous to the street shall be concrete curbs-gutters and sidewalks.

The cul-de-sac streets within the subdivision shall be two travel lanes with two parking lanes. Contiguous thereto shall be concrete curb-gutters and sidewalks. The cul-de-sac circle at the end of each street shall have a minimum 65-foot radius to the r/w line and shall not have parking allowed on the radius. Bicycle paths need not be provided on cul-de-sac streets.

All on-site roadways shall be constructed to County Standards.

2. Public Services

a. Sewer

- *All sewer lines within the development will be located in the streets and installed to Heber Public Utility District standards.*
- *All sewer lines within the development will be sized to meet the minimum flow requirements as determined by a licensed engineer and as approved by the Heber Public Utility District.*
- *The developer will be required to convey the wastewater from the subdivision to the nearest District line. Heber Public Utility District's Water/Sewer Master Plan and the Heber Urban Area Plan will be the guiding document for the purposes of design and mitigation.*
- *Connections to the system installed by the Developer will be controlled by the Heber Public Utility District, however to be equitable, the District will need to develop a re-imbusement schedule for portions of the line, if it can be used by adjoining property owners.*

b. Water

- *Heber Public Utility District has recently installed a new 12" water main in Dogwood Road. The District's Master Plan and recommendations of the Service Area Plan will direct the engineering of this development.*
- *The water mains within the subdivision likewise will be installed to the County's and Heber Public Utility District's standards by the developer.*
- *Like the sewer system, the extension of the water system will require annexation of the property to the Heber Public Utility District.*

3. Emergency Services

a. Fire Protection

- *The fire department is a general fund department, and thus receives all necessary funding through taxes.*
- *The County currently has an adopted fire mitigation fee, which will be applicable to this project. However this fee is a one-time fee to provide funds for the Department's capital equipment, and does not provide an on-going fee for the operational aspects.*

b. Police Protection

- *The Imperial County Sheriff's Department will have jurisdiction.*
- *At the present time the County has an adopted police mitigation fee. This fee is however a one time fee and will not provide for the on-going operational costs, which at this time are tax supported.*

4. Schools

- *This project will be serviced by the Heber School District and the Central Union High School District.*
- *This project will be subject to the State mandated development impact fees collected at time of building construction.*

5. Drainage

- *A preliminary grading and drainage plan has been prepared. The project prior to receiving any permits will need to have a comprehensive grading and drainage plan submitted to the Imperial County Public Works Department for review and approval.*
- *It is expected that all storm drainage will be accommodated within the storm water detention basin located adjacent to the project site at both locations.*
- *Storm water run-off from the detention basin will be discharged to the Date Drain #3 through a controlled structure or structures as designed by a licensed engineer.*

6. Soils

- *The conclusions and requirements of the Soils Report will be incorporated into the design and construction of all on site improvements, including roads, foundations, and other components.*

7. Air Quality

- *This project will be required to comply with the adopted air quality impact mitigation rules in effect at the time of the start of the project. At this time, no air quality permits are required, however during construction, dust suppression and other air quality mitigation may be required by the APCD. Developer shall obtain written approval from the APCD prior to the recordation of the first phase tract map.*

The following measures will be implemented to ensure that during the construction phase of the project Reasonably Available Control Measures will be complied with along with Best Management Practices from the NPDES Permit.

During the initial grading phase:

To reduce the dispersal of sediment and silt, either watering operations, or a chemical product will be utilized.

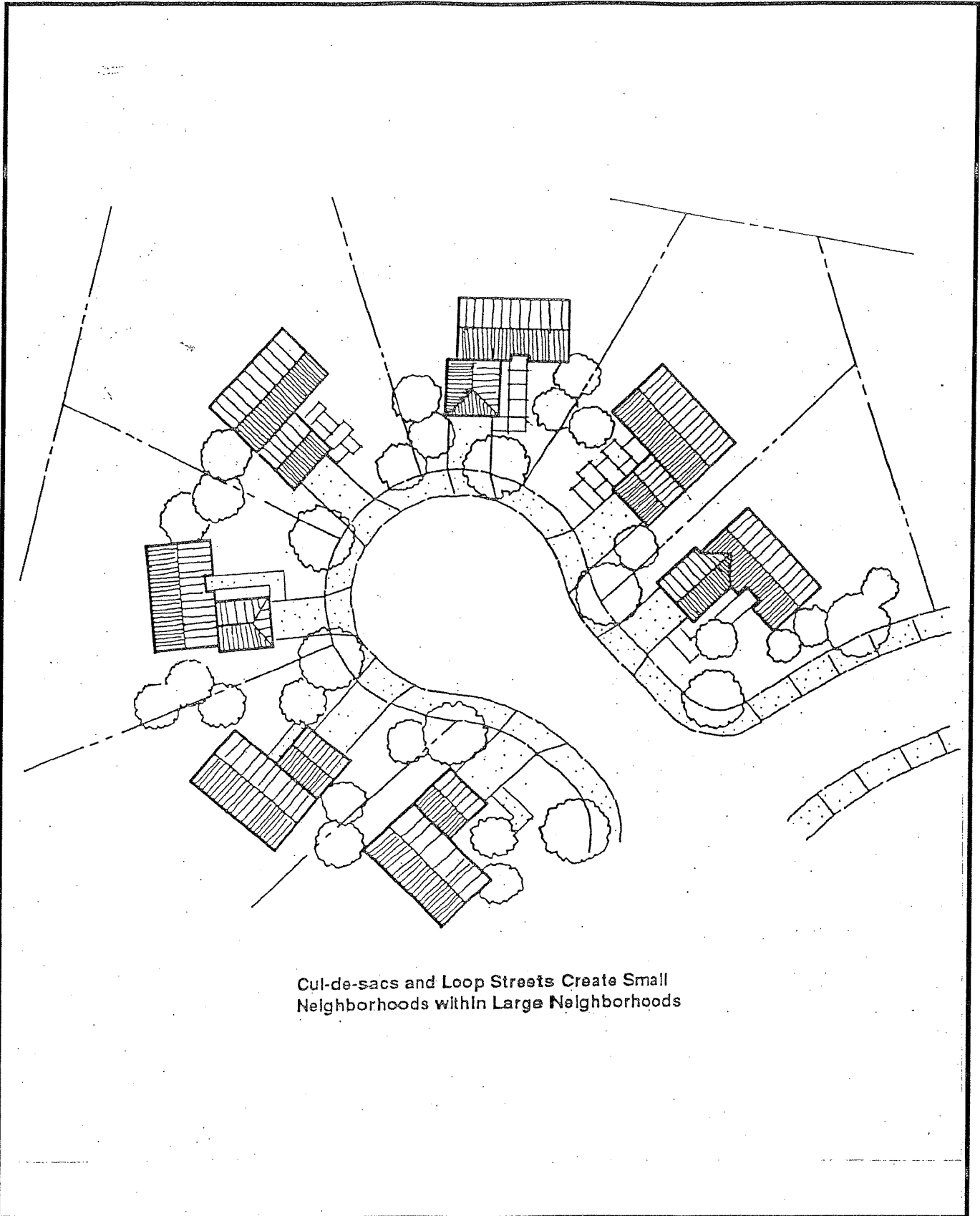
The entrances and exits from the project onto surface streets will be stabilized by crushed asphalt and the roadway will be swept to keep tracking to a minimum.

If the conditions warrant, the site will maintain a truck wash off area to further eliminate the possibility of tracking sediment and silt from the construction site to paved surfaces.

Construction roadways will be stabilized with crushed asphalt to reduce sediment tracking.

During the construction phase:

The construction phase will be conducted by other developers who will have APCD requirements to abide by.

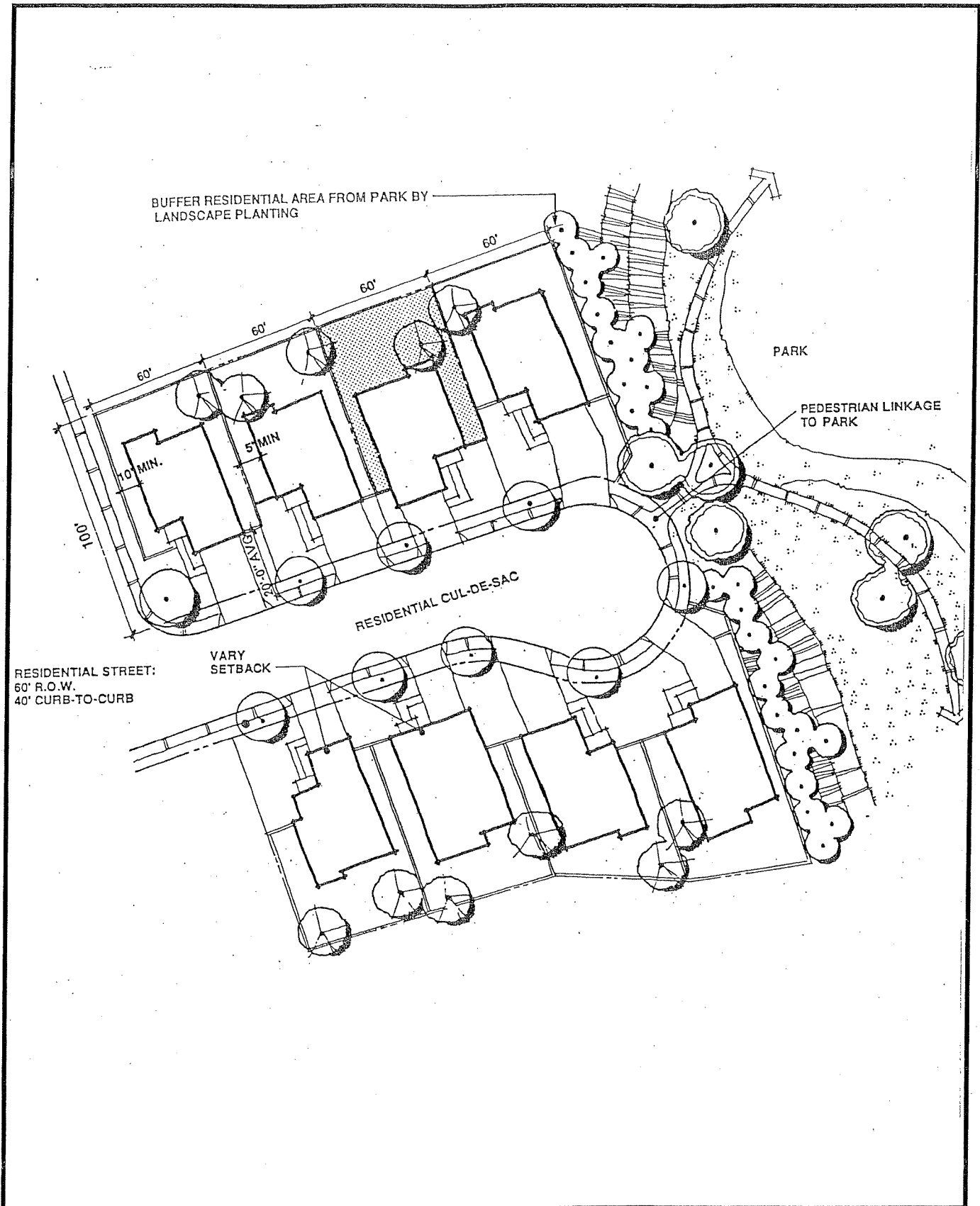


Cul-de-sacs and Loop Streets Create Small Neighborhoods within Large Neighborhoods

McCABE RANCH
SUBDIVISION

Site Planning and
Building Orientation

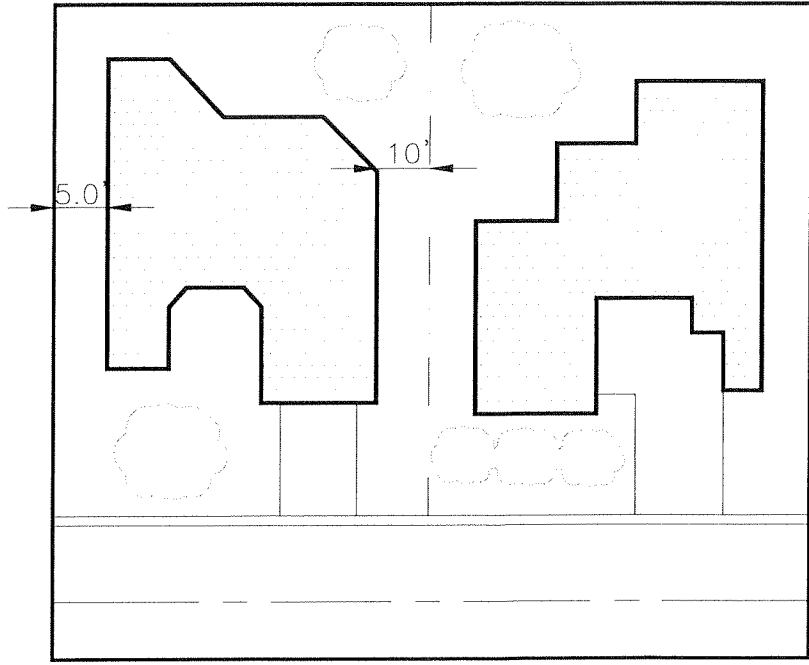
FIGURE
V-1



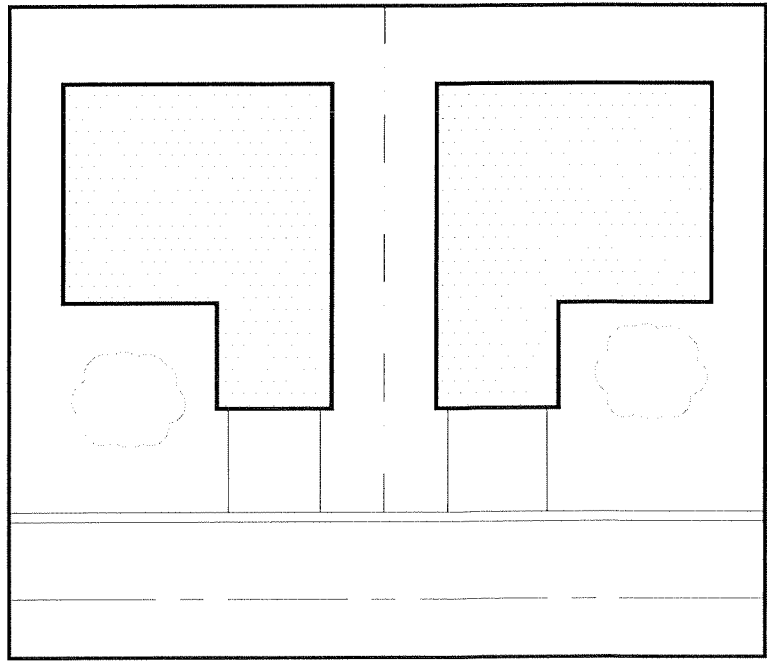
McCABE RANCH
SUBDIVISION

Single Family Residential

FIGURE
V-2



This



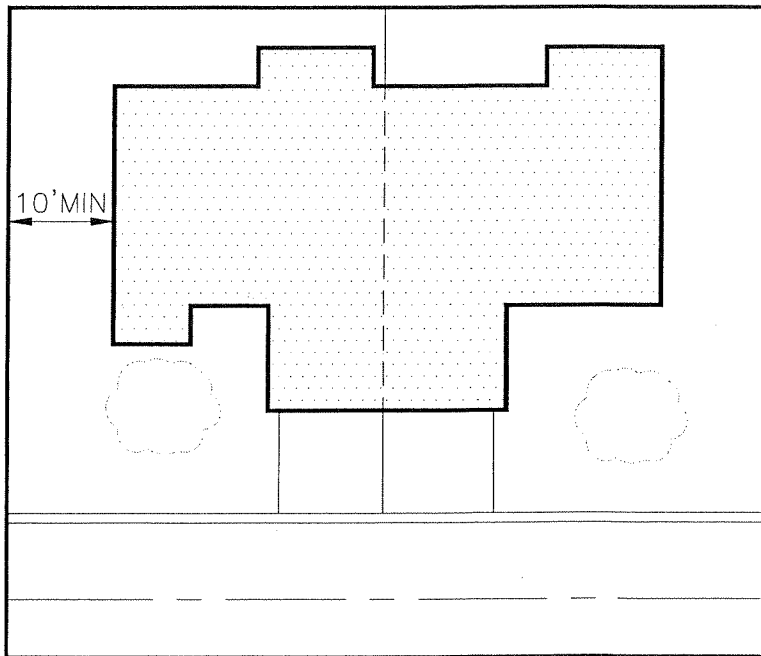
Not This

Single Family Residence
 6,000 SQ.FT. min Detached
 20.0' min Front yard setback.

*McCABE RANCH
 SUBDIVISION*

Street Scene

*FIGURE
 V-3*



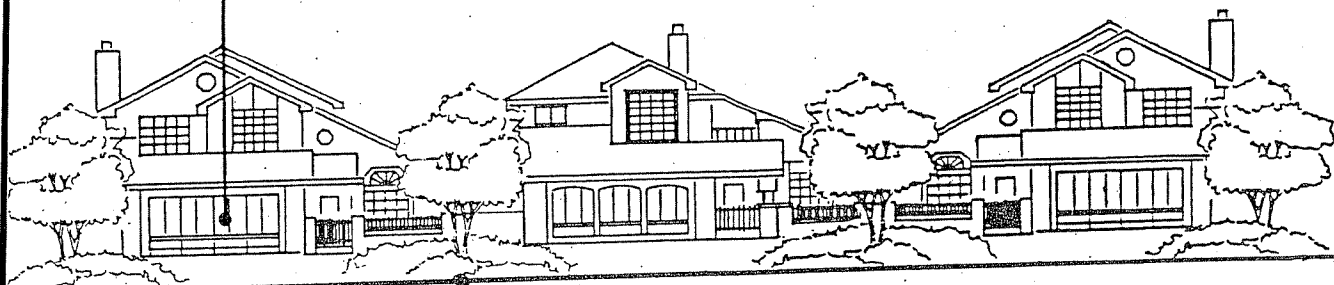
Single Family Residence
4,500 SQ.FT. min Attached
20.0' min Front yard setback.

McCABE RANCH
SUBDIVISION

Street Scene

FIGURE
V-4

Streetscene Elements which Create Interest:
Varied Roof Heights
Varied Roof Types
Varied Building Facade Elements

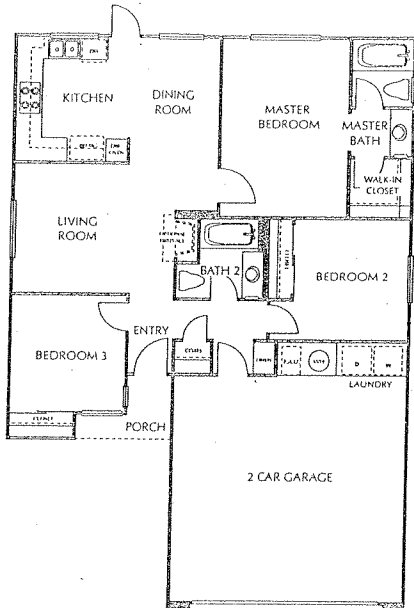


Streetscene Elements which Create Unity:
Minimum of One Street Tree Planted on
Each Lot

McCABE RANCH
SUBDIVISION

Street Scene

FIGURE
V-5



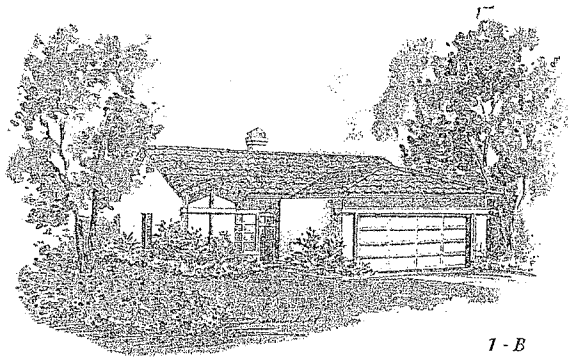
PLAN ONE

3 Bedrooms ♦ 2 Baths

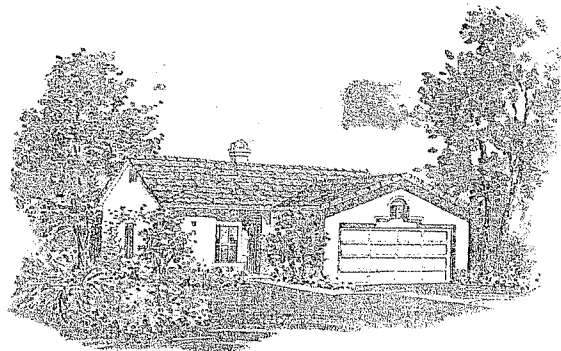
Living	1,045 Sq. Ft.	97.08 M ²
Garage	455 Sq. Ft.	42.27 M ²
Total	1,500 Sq. Ft.	139.35 M ²



1-A



1-B

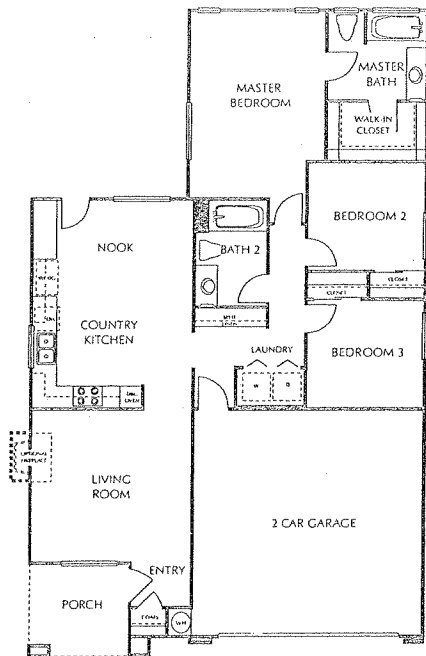


1-C

McCABE RANCH
SUBDIVISION

Plan View & Elevations

FIGURE
V-6



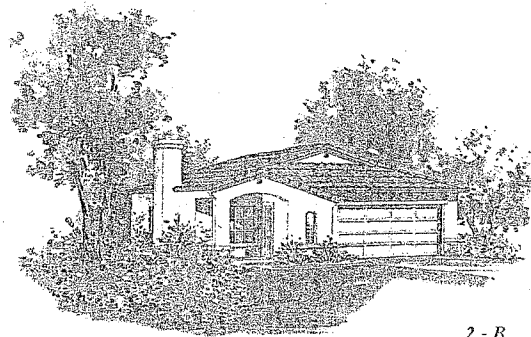
PLAN TWO

3 Bedrooms ♦ 2 Baths

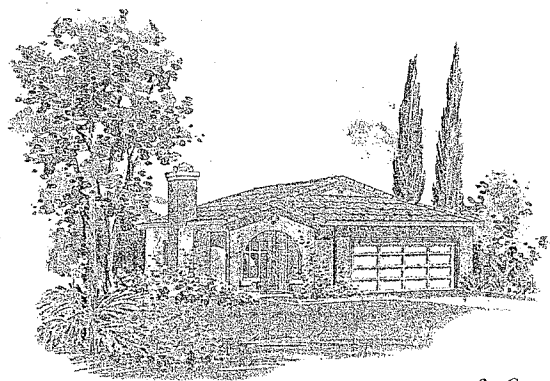
Living	1,232 Sq. Ft.	114.46 M ²
Garage	421 Sq. Ft.	39.11 M ²
Total	1,653 Sq. Ft.	153.57 M ²



2 - A



2 - B

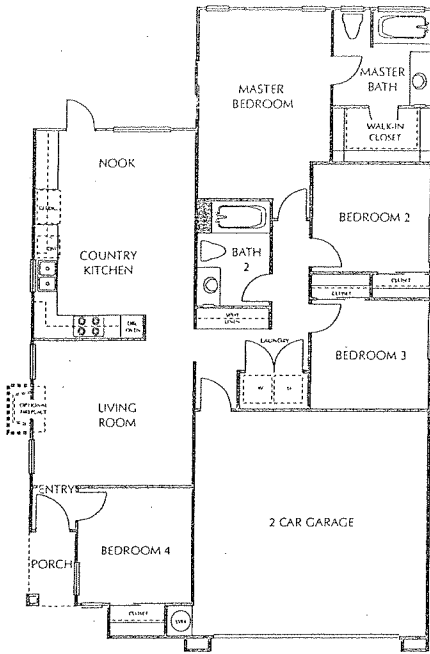


2 - C

McCABE RANCH
SUBDIVISION

Plan View & Elevations

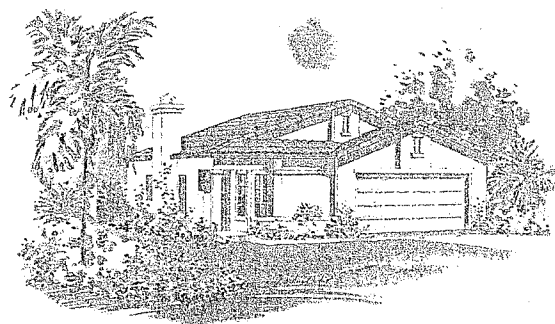
FIGURE
V-7



3 - A



3 - B



3 - C

PLAN THREE

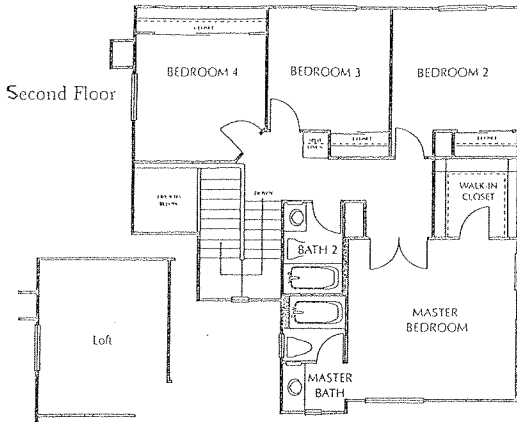
4 Bedrooms ♦ 2 Baths

Living	1,323 Sq. Ft.	122.91 M ²
Garage	421 Sq. Ft.	39.11 M ²
Total	1,744 Sq. Ft.	162.02 M ²

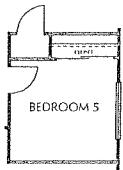
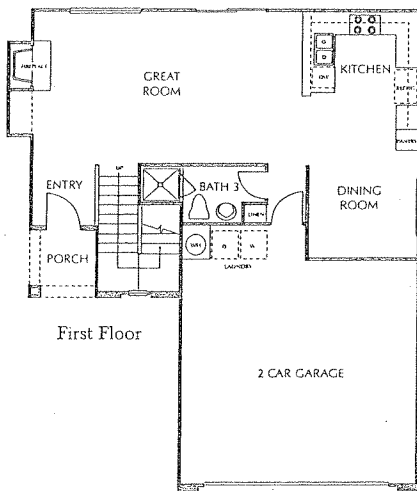
McCABE RANCH
SUBDIVISION

Plan View & Elevations

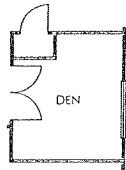
FIGURE
V-8



Optional Loft at Bedroom 4



Optional Bedroom 5 at Dining Room

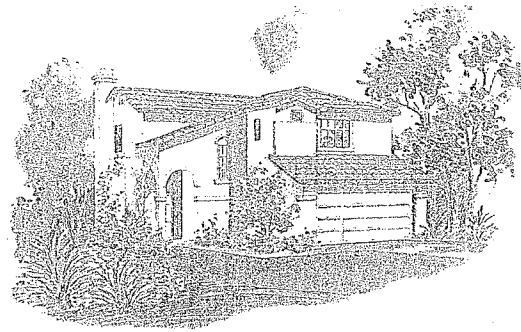


Optional Den at Bedroom 5

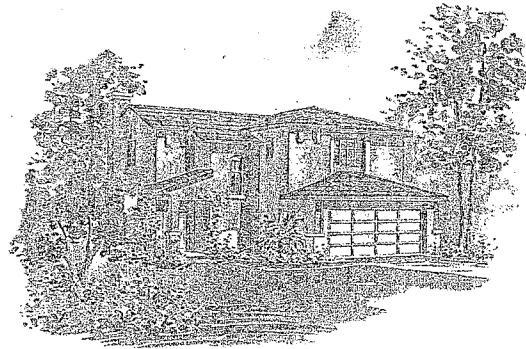
PLAN FOUR

4 Bedrooms ♦ 3 Baths
Optional 5th Bedroom or Den

Living	1,621 Sq. Ft.	150.60 M ²
Garage	454 Sq. Ft.	42.18 M ²
Total	2,075 Sq. Ft.	192.78 M ²



4 - A



4 - B

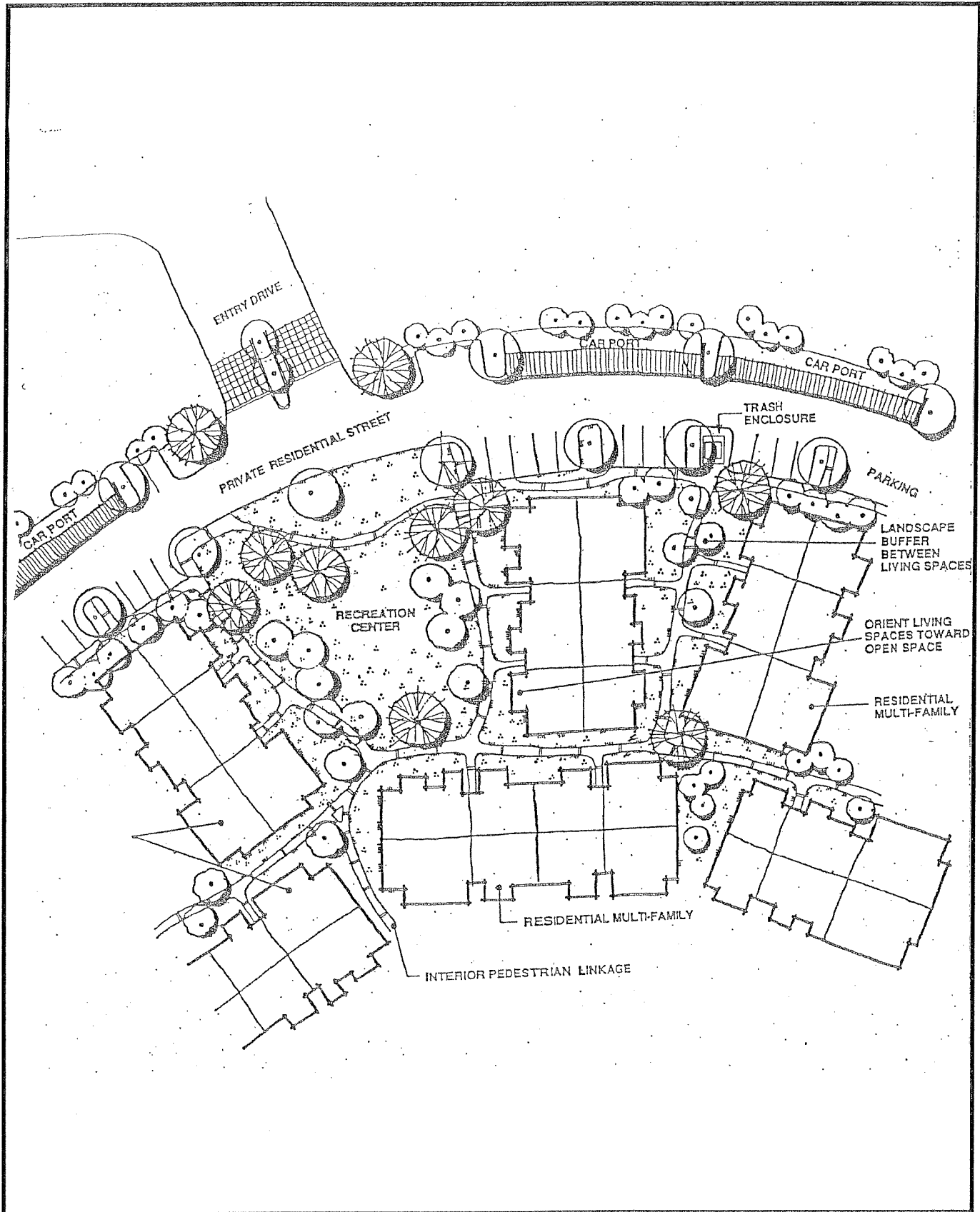


4 - C

McCABE RANCH
SUBDIVISION

Plan View & Elevations

FIGURE
V-9



McCABE RANCH
SUBDIVISION

Multi-Family Residential

FIGURE
V-10

VI. CONSISTENCY WITH THE COUNTY GENERAL PLAN

This section will describe the relationship between the MCCABE RANCH Specific Plan and the Imperial County General Plan. All of the goals and objectives of the nine adopted elements of the General Plan were analyzed. Those goals and objectives that are applicable to the Specific Plan are listed below along with a statement of how the project conforms to each goal or objective. Those goals and objectives that were not applicable or beyond the scope of this specific plan are not included.

A. Relationship with the General Plan

The MCCABE RANCH Specific Plan is consistent with the Imperial County General Plan in that the goals and objectives of the General Plan that are applicable to the proposed project will be furthered by the approval and implementation of the Specific Plan.

IMPERIAL COUNTY GENERAL PLAN

Land Use Element

A. Preface

The Land Use Element of the General Plan serves as the primary policy statement by the Board of Supervisors for implementing development policies and land uses in Imperial County. This section (Chapter III) of the Land Use Element presents Imperial County's Goals and Objectives relative to all land use within the unincorporated areas of the county. They have been prepared in collaboration with the General Plan Ad-Hoc Advisory committee appointed by the Board of Supervisors.

The Goals and Objectives, together with the Implementation Programs and Policies in Chapter IV, are the statements that shall provide direction for private development as well as government actions and programs. Imperial County's Goals and Objectives are intended to serve as long-term principles and policy statements representing ideals, which have been determined by the citizens as being desirable and deserving of community time and resources to achieve. These Goals and Objectives, therefore, are important guidelines for land use decision making. It is recognized, however, that other social, economic, environmental, and legal considerations are involved in land use decisions and that these Goals and Objectives, and those of the other General Plan Elements, should be used as guidelines but not doctrines.

B. Goals and Objectives

Commercial Agriculture

Goal 1: *Preserve commercial agriculture as a prime economic force.*

Objective 1.1 Encourage the continued agricultural use of prime/productive agricultural lands.

Objective 1.2 Discourage the location of incompatible development adjacent to productive agricultural lands.

Objective 1.3 Identify compatible agricultural related uses appropriate for location in agricultural areas.

Economic Growth

Goal 2: *Diversify employment and economic opportunities in the County while preserving agricultural activity.*

Objective 2.1 Achieve a balanced and diversified local economy with a variety of economic and employment opportunities.

Objective 2.2 Provide adequate space and land use classifications to meet current and projected economic needs for commercial development.

Regional Vision

Goal 3: *Achieve balanced economic and residential growth while preserving the unique natural, scenic, and agricultural resources of Imperial County.*

Objective 3.1 Maintain and improve the quality of life, the protection of property and the public health, safety, and welfare in Imperial County.

Objective 3.2 Preserve agriculture and natural resources while promoting diverse economic growth through sound land use planning.

Objective 3.3 Attain County growth and development patterns that are orderly, safe, and efficient utilizing appropriate financing resources.

Objective 3.4 Protect/improve the aesthetics of Imperial County and its communities.

Objective 3.5 Ensure safe and coordinated traffic patterns, contiguous growth, and promote a planned and consistent development around city/township areas.

Towns and Communities

Goal 4: *Preserve and enhance distinctive historic desert towns and newer communities.*

Objective 4.1 Preserve and enhance existing urban and rural communities.

Objective 4.2 Encourage distinctive community identities.

Housing Opportunities

Goal 5: *Encourage the compatible development of a variety of housing types and densities to accommodate regional population projections and special housing needs.*

Objective 5.1 Provide sufficient, suitable residential sites and housing supply to meet projected housing needs of all segments of the population.

Objective 5.2 Promote affordable housing for residents of all income groups, including low and moderate income households.

C. Relationship to Other General Plan Elements

The Land Use Policy Matrix Table 3) identifies the relationship between the Land Use Element Goals and Objectives to other Elements of the Imperial County General Plan. The Issue Area identifies the broader goals of the Element and the "Xs" identify that related objectives are contained in the corresponding Elements.

ISSUE AREA	HOUSING	CIRCULATION	NOISE	SEISMIC/ PUBLIC SAFETY	AGRICULTURAL	OPEN SPACE CONSERVATION	GEOTHERMAL	WATER
Agricultural Preservation					X	X	X	X
Economic Growth					X		X	
Land Use Planning	X	X	X	X	X	X	X	X
Housing Opportunities	X	X						
Extractive Resources						X		
Public Facilities	X			X				
Environmental Sensitivity	X	X	X	X	X	X	X	X

IMPLEMENTATION PROGRAMS AND POLICIES

A. Preface

Both Attorney General opinions and court decisions have stressed the importance of the Land Use Element to regulate the use and intensity (both population and building) of land use areas. In that regard, each land use category identified herein has development standards that include population density and building intensity. Specific regulatory standards to implement the General Plan land use categories are contained within the County Zoning Ordinance.

Population density is defined as "the relationship between the number of dwelling units per acre and the number of residents per dwelling." Building intensity may be based upon a combination of variables such as maximum dwelling units per acre, permitted uses, height and size limitations. While some court decisions have defined population density as the number of people in an area, quantifiable standards must be stated for each land use category.

A key component of this Element is the Land Use Plan, which delineates boundaries and establishes development standards for land use categories in order to maintain consistency and compatibility between uses and to classify the various land uses recognized by the General Plan. Land use categories are based on the existing land uses and the level of public facilities and services available to support new land uses.

B. Land Use Descriptions

The permitted uses and standards, which follow in Section C, describe types of agricultural or industrial uses with terms such as "light", "medium", or "heavy" and commercial uses as "neighborhood" or "general". For clarity, the meanings of these terms as used herein are described below. Also, residential is described as "dwelling units per acre" which shall mean per gross acre as described below.

Agricultural Uses

Light Agriculture - Agricultural crop production such as field, forage, tree groves, vines, and other plant crops intended to provide food or fiber, as well as flowers and field or container plants including ornamental, landscape, agricultural, and native plants. Animal keeping, including aquaculture (fish farms), would not be a primary use, but may be allowed as a secondary or incidental use to be regulated by

**McCabe Ranch Subdivision
Preliminary Infrastructure Study**
In an unincorporated area of the County of Imperial, State of California

Presented to:

**The Imperial County Planning Department
Imperial County Courthouse
939 West Main Street
El Centro, California 92243**

Prepared by:

Development Design & Engineering, LLC
September 6, 2001

A. PROJECT DESCRIPTION AND SETTING

1. Project and Site Description:

The proposed project is a mixed-use 79.63-acre residential development. The project site is bounded by Dogwood Road on the east, the westerly extension of Correll Road on the south and the Dogwood Lateral No.2 on the west. Reference is made to the Tentative Subdivision Map for this project titled "McCabe Ranch Subdivision – Tentative Tract Map No. 952". A copy of the tentative map is included in the map portion of this study. The project is to be developed in phases.

The site is located on within the northwest portion of the unincorporated community of Heber. Basic utilities including water, sewer, storm drain and electrical services exist near the site and are available to the project. Specific services are addressed later in this study.

2. Land use:

The project site is suitable for the proposed use as evidenced by many similar residential subdivisions developed over the last 10 years near the site including the Heberwood Estates, Correll Estates, Appaloosa Estates, McCabe Cove, and Magnolia Gate Subdivisions.

The project site is zoned A2 and is currently under agricultural production. Adjacent properties are zoned consistent with existing uses. The property to the immediate south (Heberwood Estates) is a mixed zoned of R1, R3 and C2. The properties to the immediate east, west and north (all existing farmlands) are all zoned as A2.

B. PUBLIC FACILITIES EVALUATION

1. Existing and Planned Ultimate Sanitary Sewer Service Facilities

A. Existing Sanitary Sewer Facilities:

No sanitary sewer services currently exist on the project site. The nearest points of connection to existing services include:

- 1) An 8" sanitary sewer line located in Correll Road that terminates as a manhole located near the intersection of Dogwood Road and Correll Road in the Correll Estates Subdivision.
- 2) An 8" sanitary sewer line located in Maple Avenue that terminates at the northerly boundary of Heberwood Estates Subdivision No.1.

B. Ultimate Sanitary Sewer Facilities:

According to the Heber Public Utilities District – "Sewage Master Plan – Sewer Collector Pipelines" the ultimate sanitary sewer services for the project site are to include a combination of gravity flow lines, pumping

stations and force main lines. Specifically, the area to be developed by the project site is to be served by:

- 1) A planned 18" gravity flow line located within Correll Road along the southern boundary of the project site.
- 2) The planned 18" line is to flow easterly to a planned lift station located at the intersection of Dogwood Road and Correll Road
- 3) The planned lift station is to deliver flows to a planned 21" gravity flow line located within Correll Road along the northern boundary of the Correll Estates Subdivision.
- 4) The planned 21" line is to flow easterly to a planned lift station located near the intersection of Correll Road and Rockwood Street.
- 5) The planned lift station is to then deliver flows southerly via a 12" force main located in Rockwood Street to the sewer plant located at the northeast corner of the intersection of Hawk Street and Rockwood Street.

Additionally, Heber Public Utilities District – "Sewage Master Plan – Sewer Collector Pipelines" indicates that two 8" force mains are to run along the east and west sides of the project site to provide service to the areas north of the project site as they are developed. Note that although the planned 8" force mains are not necessary for this development of this project site, accommodations for the future installation of the planned 8" force mains have been indicated on the Tentative Map.

C. Project Proposed Sanitary Sewer Facilities:

The sanitary sewer improvements proposed for the project are to include a local collection system consisting of 8" gravity flow lines located in the streets of the proposed McCabe Ranch Subdivision. Additionally, the following ultimate sanitary sewer improvements called for by Heber Public Utilities – "Sewage Master Plan – Sewer Collector Pipelines" are to be included:

- 1) The H.P.U.D. master planned 18" gravity flow line located within Correll Road along the southern boundary of the project site
- 2) The H.P.U.D. planned lift station located at the intersection of Dogwood Road and Correll Road
- 3) The H.P.U.D. planned 21" gravity flow line located within Correll Road along the northern boundary of the Correll Estates Subdivision. (Note: The improvement plans for Correll Estates Unit No.5 call for an 8" gravity flow line in Correll Road, however, the 8" line is to serve only as a local collector for Correll Estates–Unit No.5 and is not suitable for the project proposed here)
- 4) The H.P.U.D. planned lift station located near the intersection of Correll Road and Rockwood Street.
- 5) The H.P.U.D. planned 12" force main in Rockwood Street to the sewer plant located at the northeast corner of the intersection of Hawk Street and Rockwood Street.
- 6) Easements along the project site boundaries for the proposed future installation of the 8" force mains along the eastern and western sides of the project site to accommodate future development of properties to the north as indicated by H.P.U.D.

D. Effects on Existing Sanitary Sewer Facilities:

No negative effects are expected on the existing facilities due to the following facts:

- 1) The project site was included in the "Amended Application for the Request for the Dedication of an Expanded Sphere of Influence Area of the Heber Public Utilities District" document submitted to Imperial County Local Agency Formation Commission on July 23, 1998. Specifically, the project proposed here was included as part of the "McCabe Ranch Master Plan" area, an area consisting of approximately 587 acres.
- 2) H.P.U.D. does have sufficient capacity and the capability to be able to continue to support expected growth within the sphere of influence.
- 3) Planned construction of sanitary sewer infrastructure for the project is to be in accordance with H.P.U.D.'s master plan.

2. Existing and Planned Ultimate Water Service Facilities

A. Existing Water Facilities:

Some existing water services currently exist on the project site and include:

- 1) A 12" water line located in Dogwood Road. Note, this is consistent with the requirements of the Heber Public Utilities – "Water Master Plan – Water Transmission Pipelines".
- 2) A 12" water line located in Correll Road. Note, this is also consistent with the requirements of the Heber Public Utilities – "Water Master Plan – Water Transmission Pipelines".
- 3) An 8" water line located in Maple Avenue that terminates at the northerly boundary of Heberwood Estates Subdivision No.1.

B. Ultimate Water Facilities:

According to the Heber Public Utilities District – "Water Master Plan – Water Transmission Pipelines" the water delivery services for the area to be developed by the project site is to include:

- 1) A planned 12" water line located within Correll Road along the southern boundary of the project.
- 2) An existing 12" water line located within Dogwood Road along the eastern boundary of the project.
- 3) A planned 12" water line located along the western boundary of the project.

C. Project Proposed Water Facilities:

The water line improvements proposed for the project are to include a local delivery system consisting of 8" lines located in the streets of the proposed McCabe Ranch Subdivision. Additionally, the following ultimate water transmission pipelines improvements called for by Heber Public Utilities – "Water Master Plan – Water Transmission Pipelines" are to be included:

- 1) The H.P.U.D. planned 12" water line located within Correll Road along the southern boundary of the project site
- 2) The H.P.U.D. planned 12" water line located along the western boundary of the project site.

D. Effects on Existing Water Facilities:

No negative effects are expected on the existing facilities due to the following facts:

- 1) The project site was included in the "Amended Application for the Request for the Dedication of an Expanded Sphere of Influence Area of the Heber Public Utilities District" document submitted to Imperial County Local Agency Formation Commission on July 23, 1998. Specifically, the project proposed here was included as part of the "McCabe Ranch Master Plan" area, an area consisting of approximately 587 acres.
- 2) H.P.U.D. does have sufficient capacity and the capability to be able to continue to support expected growth within the sphere of influence.
- 3) Planned construction of water pipeline transmission infrastructure for the project is to be in accordance with H.P.U.D.'s master plan.

3. Existing and Planned Ultimate Storm Drainage Service Facilities

A. Existing Storm Drainage Facilities:

A countywide drainage and flood control manual has been prepared and is currently under review by the Imperial Irrigation District. As of the date of this writing, the countywide drainage and flood control manual has not been adopted. In the absence of a formal policy, the I.I.D. as the lead agency in drainage and flood control in Imperial County has had as a standing policy, the limitation of drainage from subdivisions to a single 12" line. The resultant is that on-site retention basins exist on the majority of commercial/industrial and residential developments within the county and cities in Imperial Valley including the subdivisions adjacent to the project site. This has been the local practice for at least the last 25 years.

Existing I.I.D. drainage facilities currently available to the project site include:

- 1) The Imperial Irrigation District's Date Drain No.3 is located near the western boundary of the project site.

B. Ultimate Storm Drainage Facilities:

Specific recommendations for drainage were made in the City of Calexico Service Area Plan-Drainage Facilities for the project site. These recommendations generally stated that developers should continue local practice by designing site specific detention basins that outflow to IID facilities. Recently however, city staff has made a determination that it may be in the best interest of the city to pursue the concept of "Regional

Detention Basins” that ultimately outflow to IID facilities. One such “Regional Detention Basin” being considered at present is located along the project site’s northern boundary. This area of the project site presently delivers drainage flows to the Strout Drain.

C. Project Proposed Storm Drainage Facilities:

As stated above, city policy has been to allow for site specific detention basins that outflow to Imperial Irrigation District facilities. Therefore, at present, on-site detention basins/parks have been proposed for this project. However, should city staff elect to proceed with the implementation of the “Regional Detention Basin” as noted above, and which would be located on the project site’s northern boundary, it is anticipated that the project could be designed in such a way as to utilize the facility. This would conditional however upon an agreement being reached to the satisfaction of both the city and the project developer concerning size, location, costs and possible re-imbursements associated with construction of the “Regional Detention Basin”.

D. Effects on Existing Storm Drainage Facilities:

Preliminary engineering calculations for the sizing of the detention basin located on the project site are attached to this study. More detailed calculations may be required by the Imperial Irrigation District prior to granting of an encroachment permit for ultimate delivery of drainage flows to their facilities. Additional studies including a Master Drainage Plan for the “Regional Detention Basin” and the areas contributing to the basin would be required if the city elects to proceed with the concept construction of a “Regional Detention Basin” for this project and the surrounding projects.

4. Existing and Planned Ultimate Electrical Service Facilities

A. Existing Electrical Service Facilities:

Some electrical services currently exist on or near the project site. The nearest points of connection to existing services include:

- 1) The Imperial Irrigation District provide electrical services to the surrounding properties via overhead and underground power lines.
- 2) Overhead power lines run along and Dogwood Road and McCabe Road.

B. Ultimate Electrical Service Facilities:

Ultimate electrical services requirements include:

- 1) An Imperial Irrigation District substation was proposed by the Heberwood Estates Subdivision Tentative Map. The substation was to be located at the northwest corner of the Heberwood property along Correll Road. The proposed substation has not yet been constructed nor has the lot for the substation been dedicated.

C. Project Proposed Electrical Service Facilities:

Proposed electrical services improvements include:

- 1) Overhead and underground lines are to be installed as directed and requested by agreement with the Imperial Irrigation District.

D. Effects on Existing Electrical Service Facilities:

Effects on electrical services facilities are to be determined and evaluated by the Imperial Irrigation District Power Department and any adverse effects identified and mitigated to the satisfaction of the I.I.D.

5. **Traffic Service Facilities**

A. Existing, Ultimate, Proposed and Effects on and for Traffic Service Facilities:

A Traffic Impact Study has been prepared by Linscott, Law & Greenspan and is attached to this study. Additionally, the Traffic Study has been submitted to both the County Engineer for review and comment.

C. SUMMARY

1. **Analysis of Existing, Proposed and Ultimate Infrastructure conditions and requirements and Effects on Infrastructure by project:**

A. Summary:

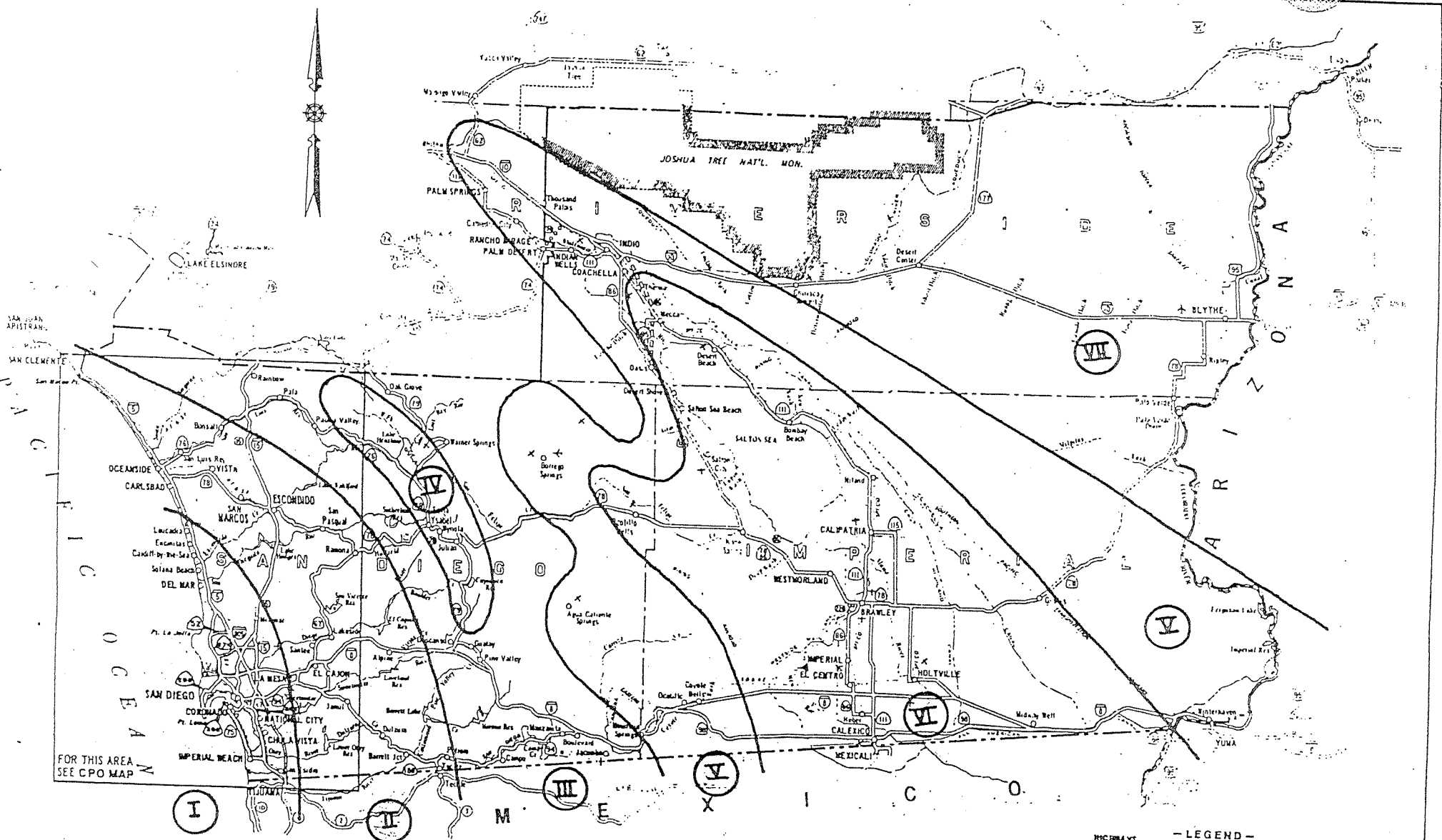
Adequate infrastructure exists and/or can be constructed such that the project site can be developed as proposed by the enclosed Tentative Map. Further, no significant impacts on were identified as effecting the existing infrastructure that could not be mitigated.

Development Design & Engineering, LLC

Gordon O. Olson, P.E., P.L.S.
Principal Engineer

Enc: (1) Tentative Tract Map
(1) Traffic Study

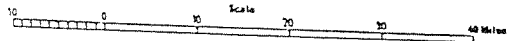
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STATE OF CALIFORNIA
BUSINESS AND TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

DISTRICT II

**INTENSITY-DURATION-FREQUENCY
CHART ZONE BOUNDARIES**



- LEGEND -**
- HIGHWAYS Traversable State Highways
 - UNCONSTRUCTED STATE HIGHWAYS (Planned Adopted by Calif., Nev., Conn.)
 - UNCONSTRUCTED STATE HIGHWAYS (Planning Not Adopted)
 - INTERSTATE HIGHWAY NUMBERS
 - STATE HIGHWAY SIGNS NUMBERS
 - U.S. HIGHWAY NUMBERS
 - LEGISLATIVE ROUTE NUMBERS
 - RAILROADS
 - AIRTRAX
 - OTHER LINES
 - RAPID TRANSIT
 - AIRPORTS
 - ← Commercial
 - ← Military
 - ← Private

RUN RATIONAL

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 1 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	6.20	5.61	4.92	4.00	2.12
6	5.59	5.05	4.42	3.60	1.91
7	5.11	4.62	4.05	3.30	1.75
8	4.74	4.28	3.75	3.05	1.62
9	4.43	4.00	3.50	2.85	1.51
10	4.17	3.77	3.29	2.69	1.42
11	3.95	3.56	3.12	2.54	1.35
12	3.76	3.39	2.96	2.42	1.28
13	3.59	3.24	2.83	2.31	1.22
14	3.44	3.10	2.71	2.21	1.17
15	3.31	2.98	2.61	2.13	1.12
16	3.19	2.87	2.51	2.05	1.08
17	3.08	2.77	2.42	1.98	1.05
18	2.98	2.68	2.35	1.92	1.01
19	2.89	2.60	2.27	1.86	.98
20	2.81	2.53	2.21	1.80	.95
21	2.73	2.46	2.15	1.75	.93
22	2.66	2.39	2.09	1.71	.90
23	2.59	2.33	2.04	1.66	.88
24	2.53	2.28	1.99	1.62	.86
25	2.47	2.22	1.94	1.59	.84
26	2.42	2.17	1.90	1.55	.82
27	2.37	2.13	1.86	1.52	.80
28	2.32	2.08	1.82	1.49	.78
29	2.27	2.04	1.78	1.46	.77
30	2.23	2.00	1.75	1.43	.75
31	2.19	1.96	1.71	1.40	.74
32	2.15	1.93	1.68	1.38	.73
33	2.11	1.89	1.65	1.35	.71
34	2.08	1.86	1.63	1.33	.70
35	2.04	1.83	1.60	1.31	.69
36	2.01	1.80	1.57	1.29	.68
37	1.98	1.77	1.55	1.27	.67
38	1.95	1.75	1.52	1.25	.66
39	1.92	1.72	1.50	1.23	.65
40	1.89	1.70	1.48	1.21	.64
41	1.87	1.67	1.46	1.19	.63
42	1.84	1.65	1.44	1.18	.62
43	1.82	1.63	1.42	1.16	.61
44	1.79	1.61	1.40	1.15	.60
45	1.77	1.58	1.38	1.13	.60
46	1.75	1.56	1.36	1.12	.59
47	1.73	1.55	1.35	1.10	.58
48	1.71	1.53	1.33	1.09	.57
49	1.69	1.51	1.32	1.08	.57
50	1.67	1.49	1.30	1.07	.56
51	1.65	1.47	1.29	1.05	.55
52	1.63	1.46	1.27	1.04	.55
53	1.61	1.44	1.26	1.03	.54
54	1.59	1.43	1.24	1.02	.54
55	1.58	1.41	1.23	1.01	.53
56	1.56	1.40	1.22	1.00	.53
57	1.55	1.38	1.21	.99	.52
58	1.53	1.37	1.19	.98	.51
59	1.52	1.36	1.18	.97	.51

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 2 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	4.87	4.30	3.70	3.00	1.59
6	4.41	3.89	3.35	2.72	1.44
7	4.05	3.58	3.08	2.50	1.33
8	3.77	3.33	2.87	2.33	1.23
9	3.53	3.12	2.69	2.18	1.16
10	3.34	2.95	2.54	2.06	1.09
11	3.17	2.80	2.41	1.96	1.04
12	3.02	2.67	2.30	1.87	.99
13	2.89	2.55	2.20	1.79	.95
14	2.78	2.45	2.12	1.72	.91
15	2.68	2.36	2.04	1.65	.88
16	2.58	2.28	1.97	1.60	.85
17	2.50	2.21	1.90	1.54	.82
18	2.42	2.14	1.85	1.50	.80
19	2.35	2.08	1.79	1.45	.77
20	2.29	2.02	1.74	1.41	.75
21	2.23	1.97	1.70	1.38	.73
22	2.17	1.92	1.65	1.34	.71
23	2.12	1.87	1.62	1.31	.70
24	2.07	1.83	1.58	1.28	.68
25	2.03	1.79	1.54	1.25	.67
26	1.98	1.75	1.51	1.23	.65
27	1.94	1.71	1.48	1.20	.64
28	1.90	1.68	1.45	1.18	.63
29	1.87	1.65	1.42	1.16	.62
30	1.83	1.62	1.40	1.13	.60
31	1.80	1.59	1.37	1.11	.59
32	1.77	1.56	1.35	1.10	.58
33	1.74	1.54	1.33	1.08	.57
34	1.71	1.51	1.31	1.06	.56
35	1.69	1.49	1.29	1.04	.56
36	1.66	1.46	1.27	1.03	.55
37	1.64	1.44	1.25	1.01	.54
38	1.61	1.42	1.23	1.00	.53
39	1.59	1.40	1.21	.98	.52
40	1.57	1.38	1.20	.97	.52
41	1.55	1.36	1.18	.96	.51
42	1.53	1.35	1.16	.95	.50
43	1.51	1.33	1.15	.93	.50
44	1.49	1.31	1.14	.92	.49
45	1.47	1.30	1.12	.91	.48
46	1.45	1.28	1.11	.90	.48
47	1.44	1.27	1.10	.89	.47
48	1.42	1.25	1.08	.88	.47
49	1.40	1.24	1.07	.87	.46
50	1.39	1.22	1.06	.86	.46
51	1.37	1.21	1.05	.85	.45
52	1.36	1.20	1.04	.84	.45
53	1.35	1.19	1.03	.83	.44
54	1.33	1.17	1.02	.82	.44
55	1.32	1.16	1.01	.82	.44
56	1.31	1.15	1.00	.81	.43
57	1.29	1.14	.99	.80	.43
58	1.28	1.13	.98	.79	.42
59	1.27	1.12	.97	.79	.42

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 3 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	5.76	5.16	4.41	3.61	1.80
6	5.23	4.68	4.00	3.27	1.64
7	4.81	4.30	3.68	3.00	1.51
8	4.48	4.00	3.43	2.79	1.41
9	4.21	3.75	3.22	2.62	1.32
10	3.97	3.55	3.04	2.48	1.25
11	3.78	3.37	2.89	2.35	1.19
12	3.60	3.21	2.76	2.24	1.14
13	3.45	3.08	2.64	2.15	1.09
14	3.32	2.95	2.54	2.06	1.05
15	3.20	2.85	2.45	1.99	1.01
16	3.09	2.75	2.36	1.92	.98
17	2.99	2.66	2.29	1.86	.95
18	2.90	2.58	2.22	1.80	.92
19	2.82	2.50	2.16	1.75	.89
20	2.74	2.44	2.10	1.70	.87
21	2.67	2.37	2.04	1.65	.85
22	2.60	2.31	1.99	1.61	.83
23	2.54	2.26	1.95	1.58	.81
24	2.49	2.21	1.90	1.54	.79
25	2.43	2.16	1.86	1.51	.77
26	2.38	2.11	1.82	1.47	.76
27	2.33	2.07	1.79	1.44	.74
28	2.29	2.03	1.75	1.42	.73
29	2.25	1.99	1.72	1.39	.72
30	2.21	1.96	1.69	1.36	.70
31	2.17	1.92	1.66	1.34	.69
32	2.13	1.89	1.63	1.32	.68
33	2.10	1.86	1.60	1.30	.67
34	2.06	1.83	1.58	1.27	.66
35	2.03	1.80	1.55	1.25	.65
36	2.00	1.77	1.53	1.24	.64
37	1.97	1.75	1.51	1.22	.63
38	1.94	1.72	1.49	1.20	.62
39	1.92	1.70	1.47	1.18	.61
40	1.89	1.67	1.45	1.17	.61
41	1.87	1.65	1.43	1.15	.60
42	1.84	1.63	1.41	1.14	.59
43	1.82	1.61	1.39	1.12	.58
44	1.80	1.59	1.37	1.11	.58
45	1.78	1.57	1.36	1.09	.57
46	1.75	1.55	1.34	1.08	.56
47	1.73	1.53	1.33	1.07	.56
48	1.71	1.52	1.31	1.06	.55
49	1.70	1.50	1.30	1.05	.54
50	1.68	1.48	1.28	1.03	.54
51	1.66	1.47	1.27	1.02	.53
52	1.64	1.45	1.26	1.01	.53
53	1.63	1.44	1.24	1.00	.52
54	1.61	1.42	1.23	.99	.52
55	1.59	1.41	1.22	.98	.51
56	1.58	1.39	1.21	.97	.51
57	1.56	1.38	1.20	.96	.50
58	1.55	1.37	1.19	.95	.50
59	1.54	1.36	1.17	.94	.49
60	1.52	1.34	1.16	.94	.49

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 4 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	4.70	4.11	3.60	2.90	1.55
6	4.38	3.83	3.36	2.71	1.45
7	4.13	3.61	3.16	2.55	1.36
8	3.92	3.43	3.00	2.42	1.30
9	3.75	3.28	2.87	2.32	1.24
10	3.60	3.15	2.76	2.22	1.19
11	3.47	3.04	2.66	2.14	1.15
12	3.35	2.94	2.57	2.07	1.11
13	3.25	2.85	2.49	2.01	1.08
14	3.16	2.77	2.42	1.95	1.04
15	3.08	2.70	2.36	1.90	1.02
16	3.00	2.64	2.30	1.86	.99
17	2.93	2.58	2.24	1.81	.97
18	2.87	2.52	2.20	1.77	.95
19	2.81	2.47	2.15	1.74	.93
20	2.75	2.42	2.11	1.70	.91
21	2.70	2.38	2.07	1.67	.89
22	2.65	2.33	2.03	1.64	.88
23	2.61	2.30	2.00	1.61	.86
24	2.57	2.26	1.96	1.59	.85
25	2.53	2.22	1.93	1.56	.84
26	2.49	2.19	1.90	1.54	.82
27	2.45	2.16	1.88	1.52	.81
28	2.42	2.13	1.85	1.50	.80
29	2.39	2.10	1.83	1.48	.79
30	2.35	2.07	1.80	1.46	.78
31	2.32	2.05	1.78	1.44	.77
32	2.30	2.02	1.76	1.42	.76
33	2.27	2.00	1.74	1.41	.75
34	2.24	1.98	1.72	1.39	.74
35	2.22	1.96	1.70	1.37	.73
36	2.19	1.94	1.68	1.36	.73
37	2.17	1.92	1.66	1.34	.72
38	2.15	1.90	1.64	1.33	.71
39	2.13	1.88	1.63	1.32	.70
40	2.11	1.86	1.61	1.30	.70
41	2.09	1.84	1.60	1.29	.69
42	2.07	1.82	1.58	1.28	.68
43	2.05	1.81	1.57	1.27	.68
44	2.03	1.79	1.55	1.26	.67
45	2.01	1.78	1.54	1.25	.67
46	2.00	1.76	1.53	1.24	.66
47	1.98	1.75	1.52	1.23	.66
48	1.96	1.73	1.50	1.22	.65
49	1.95	1.72	1.49	1.21	.65
50	1.93	1.71	1.48	1.20	.64
51	1.92	1.69	1.47	1.19	.64
52	1.90	1.68	1.46	1.18	.63
53	1.89	1.67	1.45	1.17	.63
54	1.88	1.66	1.44	1.16	.62
55	1.86	1.65	1.43	1.15	.62
56	1.85	1.64	1.42	1.15	.61
57	1.84	1.62	1.41	1.14	.61
58	1.83	1.61	1.40	1.13	.60
59	1.81	1.60	1.39	1.12	.60

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 5 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	6.81	6.01	5.21	4.12	1.79
6	6.14	5.41	4.69	3.71	1.62
7	5.62	4.96	4.29	3.39	1.48
8	5.21	4.59	3.97	3.14	1.37
9	4.87	4.29	3.71	2.94	1.28
10	4.59	4.04	3.49	2.77	1.21
11	4.35	3.82	3.31	2.62	1.14
12	4.14	3.64	3.15	2.49	1.09
13	3.95	3.47	3.00	2.38	1.04
14	3.79	3.33	2.88	2.28	1.00
15	3.64	3.20	2.77	2.19	.96
16	3.51	3.08	2.66	2.11	.92
17	3.39	2.98	2.57	2.04	.89
18	3.28	2.88	2.49	1.97	.86
19	3.18	2.79	2.41	1.91	.84
20	3.09	2.71	2.34	1.86	.81
21	3.01	2.64	2.28	1.81	.79
22	2.93	2.57	2.22	1.76	.77
23	2.86	2.50	2.16	1.71	.75
24	2.79	2.44	2.11	1.67	.73
25	2.72	2.38	2.06	1.63	.72
26	2.66	2.33	2.01	1.60	.70
27	2.61	2.28	1.97	1.56	.69
28	2.55	2.23	1.93	1.53	.67
29	2.50	2.19	1.89	1.50	.66
30	2.45	2.15	1.85	1.47	.65
31	2.41	2.11	1.82	1.44	.63
32	2.37	2.07	1.79	1.42	.62
33	2.32	2.03	1.76	1.39	.61
34	2.29	2.00	1.73	1.37	.60
35	2.25	1.97	1.70	1.35	.59
36	2.21	1.93	1.67	1.33	.58
37	2.18	1.90	1.64	1.31	.57
38	2.15	1.87	1.62	1.29	.56
39	2.11	1.85	1.59	1.27	.56
40	2.08	1.82	1.57	1.25	.55
41	2.05	1.79	1.55	1.23	.54
42	2.03	1.77	1.53	1.21	.53
43	2.00	1.75	1.51	1.20	.53
44	1.97	1.72	1.49	1.18	.52
45	1.95	1.70	1.47	1.17	.51
46	1.92	1.68	1.45	1.15	.51
47	1.90	1.66	1.43	1.14	.50
48	1.88	1.64	1.41	1.12	.49
49	1.86	1.62	1.40	1.11	.49
50	1.84	1.60	1.38	1.10	.48
51	1.81	1.58	1.37	1.09	.48
52	1.79	1.57	1.35	1.07	.47
53	1.78	1.55	1.34	1.06	.47
54	1.76	1.53	1.32	1.05	.46
55	1.74	1.52	1.31	1.04	.46
56	1.72	1.50	1.29	1.03	.45
57	1.70	1.49	1.28	1.02	.45
58	1.69	1.47	1.27	1.01	.44
59	1.67	1.46	1.26	1.00	.44
60	1.65	1.44	1.24	.99	.44

> ***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 6 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	4.49	3.89	3.28	2.60	1.19
6	4.05	3.51	2.96	2.34	1.08
7	3.72	3.21	2.72	2.15	.99
8	3.45	2.98	2.52	1.99	.92
9	3.22	2.79	2.36	1.87	.86
10	3.04	2.63	2.22	1.76	.81
11	2.88	2.49	2.11	1.67	.77
12	2.74	2.37	2.01	1.59	.73
13	2.62	2.27	1.92	1.52	.70
14	2.51	2.18	1.84	1.46	.67
15	2.42	2.09	1.77	1.40	.64
16	2.33	2.02	1.71	1.35	.62
17	2.25	1.95	1.65	1.30	.60
18	2.18	1.89	1.60	1.26	.58
19	2.11	1.83	1.55	1.23	.56
20	2.05	1.78	1.50	1.19	.55
21	2.00	1.73	1.46	1.16	.53
22	1.95	1.69	1.43	1.13	.52
23	1.90	1.65	1.39	1.10	.51
24	1.85	1.61	1.36	1.07	.49
25	1.81	1.57	1.33	1.05	.48
26	1.77	1.54	1.30	1.03	.47
27	1.73	1.50	1.27	1.01	.46
28	1.70	1.47	1.24	.99	.45
29	1.66	1.44	1.22	.97	.44
30	1.63	1.42	1.20	.95	.43
31	1.60	1.39	1.18	.93	.43
32	1.57	1.37	1.15	.91	.42
33	1.55	1.34	1.13	.90	.41
34	1.52	1.32	1.12	.88	.41
35	1.50	1.30	1.10	.87	.40
36	1.47	1.28	1.08	.86	.39
37	1.45	1.26	1.06	.84	.39
38	1.43	1.24	1.05	.83	.38
39	1.41	1.22	1.03	.82	.38
40	1.39	1.21	1.02	.81	.37
41	1.37	1.19	1.00	.80	.36
42	1.35	1.17	.99	.78	.36
43	1.33	1.16	.98	.77	.36
44	1.31	1.14	.96	.76	.35
45	1.30	1.13	.95	.75	.35
46	1.28	1.11	.94	.75	.34
47	1.27	1.10	.93	.74	.34
48	1.25	1.09	.92	.73	.33
49	1.24	1.08	.91	.72	.33
50	1.22	1.06	.90	.71	.33
51	1.21	1.05	.89	.70	.32
52	1.20	1.04	.88	.70	.32
53	1.18	1.03	.87	.69	.32
54	1.17	1.02	.86	.68	.31
55	1.16	1.01	.85	.67	.31
56	1.15	1.00	.84	.67	.31
57	1.14	.99	.83	.66	.30
58	1.12	.98	.83	.65	.30
59	1.11	.97	.82	.65	.30

***** INTENSITY DUMP -- DISTRICT 11 -- ZONE 7 *****

DURATION (MINUTES)	100 YEAR (IN/HR)	50 YEAR (IN/HR)	25 YEAR (IN/HR)	10 YEAR (IN/HR)	2 YEAR (IN/HR)
5	5.83	5.20	4.32	3.48	1.55
6	5.20	4.64	3.85	3.10	1.39
7	4.72	4.22	3.50	2.82	1.26
8	4.34	3.88	3.22	2.59	1.16
9	4.04	3.60	2.99	2.41	1.08
10	3.78	3.37	2.80	2.25	1.01
11	3.56	3.18	2.63	2.12	.95
12	3.37	3.01	2.50	2.01	.90
13	3.21	2.86	2.37	1.91	.85
14	3.06	2.73	2.27	1.82	.82
15	2.94	2.62	2.17	1.75	.78
16	2.82	2.51	2.08	1.68	.75
17	2.72	2.42	2.01	1.61	.72
18	2.62	2.33	1.94	1.56	.70
19	2.53	2.26	1.87	1.51	.67
20	2.45	2.18	1.81	1.46	.65
21	2.38	2.12	1.76	1.41	.63
22	2.31	2.06	1.71	1.37	.62
23	2.25	2.00	1.66	1.34	.60
24	2.19	1.95	1.62	1.30	.58
25	2.13	1.90	1.58	1.27	.57
26	2.08	1.85	1.54	1.24	.55
27	2.03	1.81	1.50	1.21	.54
28	1.99	1.77	1.47	1.18	.53
29	1.95	1.73	1.44	1.16	.52
30	1.91	1.69	1.41	1.13	.51
31	1.87	1.66	1.38	1.11	.50
32	1.83	1.63	1.35	1.09	.49
33	1.80	1.60	1.32	1.07	.48
34	1.76	1.57	1.30	1.05	.47
35	1.73	1.54	1.28	1.03	.46
36	1.70	1.51	1.25	1.01	.45
37	1.67	1.49	1.23	.99	.44
38	1.64	1.46	1.21	.98	.44
39	1.62	1.44	1.19	.96	.43
40	1.59	1.41	1.17	.94	.42
41	1.57	1.39	1.16	.93	.42
42	1.54	1.37	1.14	.92	.41
43	1.52	1.35	1.12	.90	.40
44	1.50	1.33	1.11	.89	.40
45	1.48	1.31	1.09	.88	.39
46	1.46	1.30	1.08	.87	.39
47	1.44	1.28	1.06	.85	.38
48	1.42	1.26	1.05	.84	.38
49	1.40	1.25	1.03	.83	.37
50	1.39	1.23	1.02	.82	.37
51	1.37	1.22	1.01	.81	.36
52	1.35	1.20	1.00	.80	.36
53	1.34	1.19	.98	.79	.36
54	1.32	1.17	.97	.78	.35
55	1.31	1.16	.96	.77	.35
56	1.29	1.15	.95	.76	.34
57	1.28	1.13	.94	.76	.34
58	1.26	1.12	.93	.75	.34
59	1.25	1.11	.92	.74	.33

PRELIMINARY DRAINAGE STUDY

FOR McCABE RANCH SUBDIVISION No. 1

DESIGN CRITERIA

The design criteria used for this report include the following items:

1. Retention basins in residential and commercial areas will detain the runoff of entire area (streets and lots).
2. Retention basins shall be sized for a 100-year/24 –hour storm (assumed to be a total of 3 inches of rain).
3. Design area is divided into one major basin:

BASIN AREAS

BASIN	AREA (ACRES)
A	79.63
TOTAL	79.63

4. The runoff analysis for the developed condition was performed using the *Rational Method*.

$$Q = CIA$$

Q = Required storage,
 C = Runoff coefficient (1.0),
 i = Rainfall intensity total (3 inches),
 A = Area of basin in acres.

i) Retention Basin "A" – Parcel B

Land Use	Area
Residential (Single Family)	42.51 AC.
Residential (Multi-family)	7.04 AC.
Street Area	24.74 AC.
Retention Area	5.35 AC.
Total	79.63 AC.

REQUIRED STORAGE

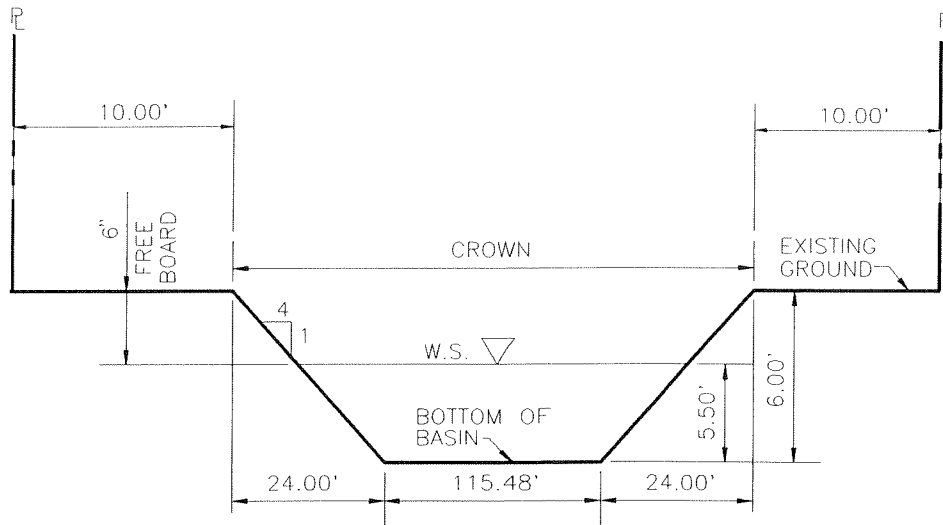
$$Q = CIA$$

Q = Required storage,
 C = Runoff coefficient (1.0),
 i = Rainfall intensity total (3 inches),
 A = Area of basin in acres (79.63 acres)

$$Q_{req'd} = 3/12 \times 1 \times 79.63 = 19.92 \text{ ac-ft}$$

RETENTION BASIN SIZING

Average Crown Elevation	980.00
High Water Elevation	979.50
Proposed Bottom Elevation	974.00
Average Depth	6.00 ft
Average Storage Water Depth	5.50 ft



Crown Area Provided	4.69 ac
Water Level Area	4.56 ac
Bottom Area Provided	3.19 ac
Average Area (Total)	3.94 ac
Average Area (Storage)	3.88 ac

STORAGE PROVIDED

- A) TOTAL STORAGE
 $(3.94 \text{ ac}) (6.0 \text{ ft}) = 23.64 \text{ ac-ft}$
- B) STORAGE @ WATER LEVEL
 $(3.88 \text{ ac}) (5.50 \text{ ft}) = 20.76 \text{ ac-ft}$

Storage provided > Storage required
 Therefore, retention basin "A" size is **ADEQUATE**.

DEVELOPED RUNOFF METHODOLOGY

The runoff analysis for the developed condition will be performed using the Rational Method. The major basins will be divided into sub-basins for each design point. The hydrological analysis utilized to determine the runoff at each design point will be the Rational Method ($Q = C \times I \times A$).

Where,

Q = Runoff (CFS),
 C = Runoff coefficient,
 I_A = Rainfall intensity (in/hr), and
 A = Area of sub-basin (acres).

Determination of Runoff Coefficient

The following runoff coefficients will be used in the hydrologic analysis. Per Caltrans Table 819.2B (our Figure A).

RESIDENTIAL

Single family areas $(0.3+0.5)/2 = 0.40$
Multi-units, detached $(0.4+0.6)/2 = 0.50$

Determination of Intensity

Intensity for each sub-basin will be obtained from I.D.F. CHART FOR DISTRICT II, ZONE IV (our Figures B and C) for a 25-year frequency storm.

Time of Concentration

Time of concentration is the time required for storm runoff to travel from the most remote point of the drainage basin the point of interest.

The time of concentration for this study will be calculated using the Kirpich equation, which is a rough approximation of the overall time.

$$T_c = 0.0078 (L / S^{0.5})^{0.77}$$

where

T_c = Time of concentration in minutes,
 L = Horizontally projected length of watershed in feet,
 $S = H/L$, where H is the difference in elevation between the most remote point and the outlet, measured in feet.

Determination of Areas

The area of each sub-basin will be determined during the preparation of the final Drainage Report.

Hydrology Calculation

Hydrologic calculations will be developed for each basin. These calculations will be included in the final Drainage Report.

FLOOD ROUTING

The storm drainpipes for the proposed systems will be designed based on Manning's equation:

$$Q = (1.486 / n) \times A \times r^{2/3} \times s^{1/2},$$

where

n = Roughness coefficient for 0.009 PVC pipe,
 A = Cross-sectional area of flow,
 r = Hydraulic radius, and
 s = Slope of Pipe.

Flood Routing Method

The Rational Method will be utilized to calculate peak storm water flows and route the calculated flows through the drainage system.

When two major basins combine at a junction point, the smaller of the flows will be adjusted by using the Rational Method. This procedure accounts for the differing times of concentration for the flows upstream of the junction point. The smaller Q will be reduced by either the ratio of the intensities or the ratio of the times of concentration, according to the following procedure:

- Let Q , T , and I correspond to the tributary with the largest discharge.
- Let q , t , and i correspond to the tributary with the smallest discharge.
- Let Q and T correspond to the peak discharge and the time of concentration when peak flow occurs.

If $T > t$, the peak discharge is corrected by the ratio of the intensities:

$$Q = Q + q(I/i) \quad \text{and} \quad T = T.$$

If $T < t$, the peak discharge is corrected by the ratio of the times of concentration:

$$Q = Q + q(T/t) \quad \text{and} \quad T = T.$$

Flood Routing Tables

Hydraulic calculation for each system will be prepared, using Manning's Equation. These calculations will be included in the final Drainage Report

The flood routing calculations for developed conditions will be also included in the Final Drainage Report.

HYDRAULIC ANALYSIS

Hydraulic calculations will be performed to confirm capacities of the pipe sizes and grades.

The storm drain pipelines will be analyzed using Manning's Equation for open channels. The system will be designed to operate as a pressurized system. Calculations listing the 25-year flow, pipe size and slope, velocity, depth of flow, and hydraulic grade line for proposed pipes will be included in the Final Drainage Report.

February 13, 1995

Table 819.2B
Runoff Coefficients for
Developed Areas

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.25
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

The runoff coefficients given in Figure 819.2A and Table 819.2B are applicable for storms of up to 5 or 10 year frequencies. Less frequent, higher intensity storms usually require modification of the coefficient because infiltration, detention, and other losses have a proportionally smaller effect on the total runoff volume. The adjustment of the rational method for use with major storms can be made by

multiplying the coefficient by a frequency factor, $C(f)$. Values of $C(f)$ are given below. Under no circumstances should the product of $C(f)$ times C exceed 1.0.

Frequency (yrs)	$C(f)$
25	1.1
50	1.2
100	1.25

(2) *Regional Analysis Methods.* Regional analysis methods utilize records for streams or drainage areas in the vicinity of the stream under consideration which would have similar characteristics to develop peak discharge estimates. These methods provide techniques for estimating annual peak stream discharge at any site, gaged or ungaged, for probability of recurrence from 50% (2 years) to 1% (100 years). Application of these methods is convenient, but the procedure is subject to some limitations.

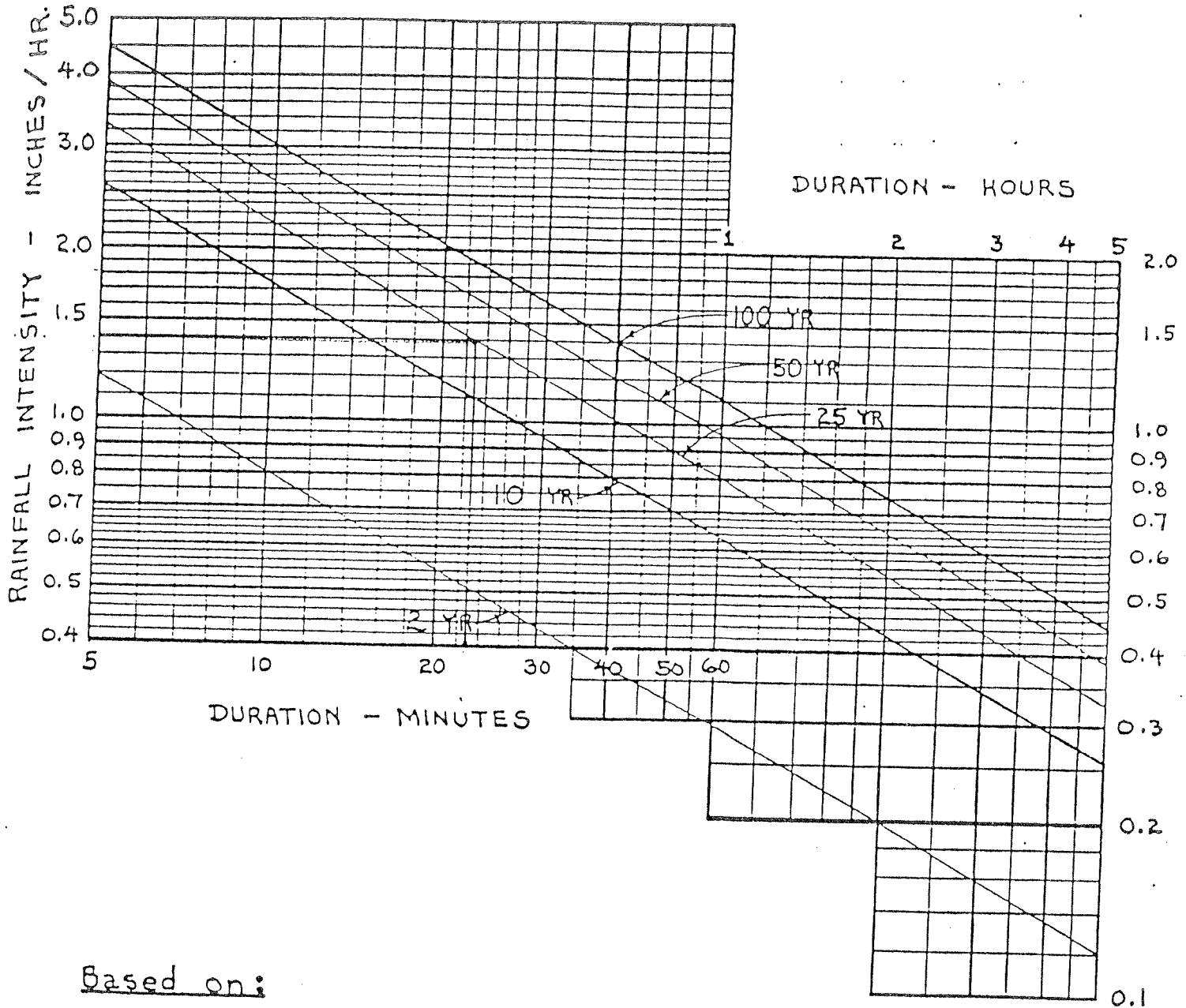
Regional Flood - Frequency equations developed by the U.S. Geological Survey for use in California are given in Figure 819.2C. These equations are based on regional regression analysis of data from 705 gaging stations. Nomographs and complete information on use and development of this method may be found in "Magnitude and Frequency of Floods in California" published in June, 1977 by the U.S. Department of the Interior, Geological Survey.

The Regional Flood-Frequency equations are applicable only to sites within the flood-frequency regions for which they were derived and on streams with virtually natural flows. For example, the equations are not generally applicable to small basins on the floor of the Sacramento and San Joaquin Valleys as the annual peak data which are the basis for the regression analysis were obtained principally in the adjacent mountain and foothill areas. Likewise, the equations are not directly applicable to streams in urban areas affected substantially by urban development. In urban areas the equations may be used to estimate peak discharge values under natural conditions and then by use of the techniques described in the publication or HEC 19, adjust the discharge values to compensate for urbanization.

INTENSITY-DURATION-FREQUENCY CHART

DISTRICT 11

ZONE VI

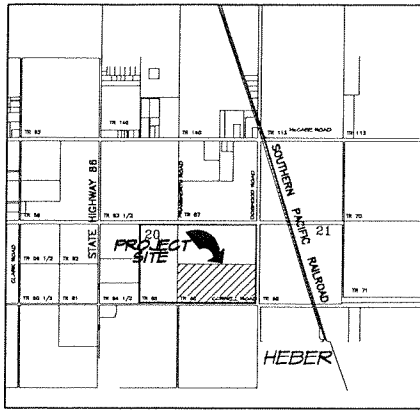


Based on:

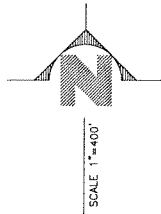
RAINFALL ANALYSIS FOR DRAINAGE DESIGN
VOLUMES I - II - III

STATE OF CALIFORNIA
DEPT. OF WATER RESOURCES
BULLETIN 195 - OCTOBER 1976

Figure C



VICINITY MAP
NO SCALE



LOT DATA:

EXISTING ZONING: A-2
PROPOSED ZONING: R-1 & R-3

ASSESSORS PARCEL NUMBERS:

A.P.N. 054-130-74

RECORDED EASEMENTS:

THE FOLLOWING EASEMENTS OF RECORD WERE LISTED IN THE TITLE REPORT BY FIRST AMERICAN TITLE INSURANCE COMPANY ORDER #4745-51, DATED FEBRUARY 1, 2001.

- 1 AN EASEMENT FOR DITCHES, CANALS, TELEPHONE AND TELEGRAPH LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE CALIFORNIA DEVELOPMENT CO., RECORDED SEPTEMBER 14, 1904 IN BOOK 21, PAGE 356 OF DEEDS.
THE ROUTE OR LOCATION CANNOT BE DETERMINED FROM SAID INSTRUMENT.
- 2 AN EASEMENT FOR DITCHES, CANALS, TELEPHONE AND TELEGRAPH LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE CALIFORNIA DEVELOPMENT CO., RECORDED SEPTEMBER 14, 1904 IN BOOK 21, PAGE 357 OF DEEDS.
THE ROUTE OR LOCATION CANNOT BE DETERMINED FROM SAID INSTRUMENT.
- 3 AN EASEMENT FOR A POWER LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED DECEMBER 3, 1931 AS FILE NO. 66, IN BOOK 473, PAGE 542 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:
SAID EASEMENT TO BE LOCATED ALONG THOSE PORTIONS OF WHICH ARE BEING USED AS PUBLIC-TRAVELLED WAYS.
- 4 AN EASEMENT FOR POWER LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED APRIL 23, 1938 AS FILE NO. 35, IN BOOK 426, PAGE 565 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:
SAID EASEMENT TO BE LOCATED ALONG THOSE PORTIONS OF WHICH ARE BEING USED AS PUBLIC-TRAVELLED WAYS.

LEGEND:

○ SURVEY MONUMENT	EXISTING CONTOUR
★ STREET LIGHT	→ DIRECTION OF FLOW
— — NEW 8" WATER LINE (UNLESS NOTED OTHERWISE)	— — EXISTING WATER LINE
— — NEW 6" SANITARY SEWER LINE (UNLESS NOTED OTHERWISE)	— — EXISTING SANITARY SEWER LINE
— — NEW FIRE HYDRANT	— — EXISTING STORM DRAIN LINE
— — NEW STORM DRAIN LINE	EXISTING PAVEMENT
— — SPOT ELEVATION	— — SUBDIVISION BOUNDARY
— — PUBLIC UTILITY EASEMENT	
— — BUILDING SET-BACK LINE (ALONG STREET ONLY)	

LEGAL DESCRIPTION

THE SOUTH HALF OF THE WEST HALF OF TRACT 66, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M. IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

OWNERS/DEVELOPERS:

MCCABE RANCH PROPERTY, INC.
1951 BENTLEY AVE.
LOS ANGELES, CA 90025
YIH-MIN CHU & SUZANNA CHU
1951 BENTLEY AVE.
LOS ANGELES, CA 90025

ENGINEER/SURVEYOR:

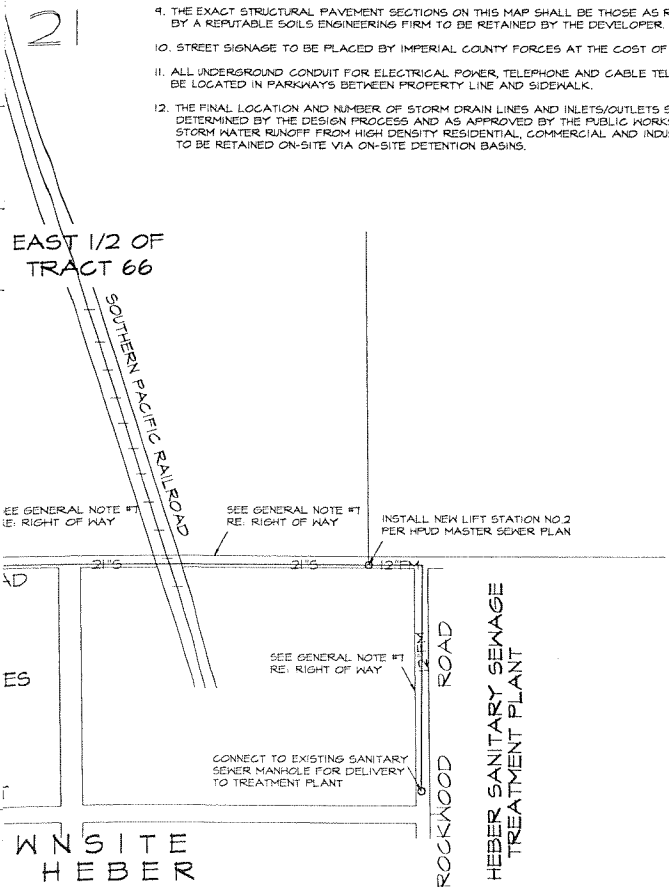
GORDON O. OLSON P.L.S. 7107
DEVELOPMENT DESIGN & ENGINEERING, LLC
1122 STATE STREET
EL CENTRO, CALIFORNIA
TEL (760) 353-8110

FLOOD ZONE:

ACCORDING TO F.I.E.M.A. FLOOD INSURANCE RATE MAP, PANEL 060065-1000B, THE SITE IS LOCATED IN FLOOD ZONE "C", AN AREA OF MINIMAL FLOODING.

GENERAL NOTES:

1. DESIGN STANDARDS FOR IMPROVEMENTS SHALL APPLY UNLESS DIRECTED OTHERWISE BY THE COUNTY OR H.P.U.D. ENGINEER.
MIN. CURB AND GUTTER SLOPE = 0.002 FT/FT
MIN. SANITARY SEWER SLOPE = 0.002 FT/FT
MIN. STORM SEWER SLOPE = 0.0010 FT/FT
2. WATER SUPPLY AND SEWAGE TREATMENT WILL BE PROVIDED BY THE CITY OF HEBER. ULTIMATE STORM WATER DELIVERY TO BE MADE TO IMPERIAL IRRIGATION DISTRICT FACILITIES.
3. BUILDING SETBACKS ARE TO BE IN COMPLIANCE WITH APPLICABLE ZONING ORDINANCES.
4. WATER PIPELINES, SANITARY SEWER, ALL PUMP STATIONS TO BE OWNED, OPERATED AND MAINTAINED BY THE COUNTY OF IMPERIAL.
5. STREET PAVING, CURBS AND GUTTERS, SIDEWALKS, STORM WATER DITCHES AND INLETS AND STORM WATER PIPELINES, LYING WITHIN STREET RIGHTS-OF-WAY, TO BE OWNED, OPERATED AND MAINTAINED BY THE COUNTY OF IMPERIAL.
6. THE DEVELOPERS INTEND TO FILE MULTIPLE FINAL MAPS AS PROVIDED FOR BY SECTION 66456.1 OF THE SUBDIVISION MAP ACT.
7. IMPROVEMENTS CALLED FOR OUTSIDE OF THE BOUNDARIES OF THIS SUBDIVISION SHALL BE SUBJECT TO ACQUISITION OF RIGHTS-OF-WAY AS PROVIDED BY SECTION 66462.5 OF THE SUBDIVISION MAP ACT.
8. THE EXACT DESIGN AND LOCATION OF IMPROVEMENTS INDICATED ON THIS MAP SHALL BE THOSE DETERMINED BY THE DESIGN PROCESS AND APPROVED BY PUBLIC WORKS VIA A SET OF APPROVED "PLANS FOR IMPROVEMENTS".
9. THE EXACT STRUCTURAL PAVEMENT SECTIONS ON THIS MAP SHALL BE THOSE AS RECOMMENDED BY A REPUTABLE SOILS ENGINEERING FIRM TO BE RETAINED BY THE DEVELOPER.
10. STREET SIGNAGE TO BE PLACED BY IMPERIAL COUNTY FORCES AT THE COST OF THE DEVELOPER.
11. ALL UNDERGROUND CONDUIT FOR ELECTRICAL POWER, TELEPHONE AND CABLE TELEVISION SHALL BE LOCATED IN PARKWAYS BETWEEN PROPERTY LINE AND SIDEWALK.
12. THE FINAL LOCATION AND NUMBER OF STORM DRAIN LINES AND INLETS/OUTLETS SHALL BE THOSE DETERMINED BY THE DESIGN PROCESS AND AS APPROVED BY THE PUBLIC WORKS DEPARTMENT. STORM WATER RUNOFF FROM HIGH DENSITY RESIDENTIAL, COMMERCIAL AND INDUSTRIAL LOTS IS TO BE RETAINED ON-SITE VIA ON-SITE DETENTION BASINS.



DEVELOPMENT DESIGN & ENGINEERING, LLC
PLANNING - CIVIL ENGINEERING - LAND SURVEYING - PROJECT MANAGEMENT

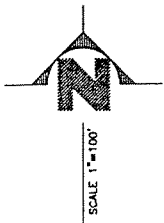


1122 STATE STREET
EL CENTRO, CALIFORNIA 92243
(760) 353-8110
FAX (760) 352-6408

TENTATIVE TRACT MAP NO. 952

MCCABE RANCH SUBDIVISION
IN TRACT 66, T.16 S., R.14 E., S.B.M.

IMPERIAL COUNTY, CALIFORNIA	DATE: 2/26/02	SHEET 1
CLIENT: MCCABE RANCH PARTNERS	FILE NAME:	JOB NUMBER: 000075
		BY: G.O.



EX. IID DRAIN INLET

SEE GENERAL NOTE #7
RE: RIGHT OF WAYS

TR. 65

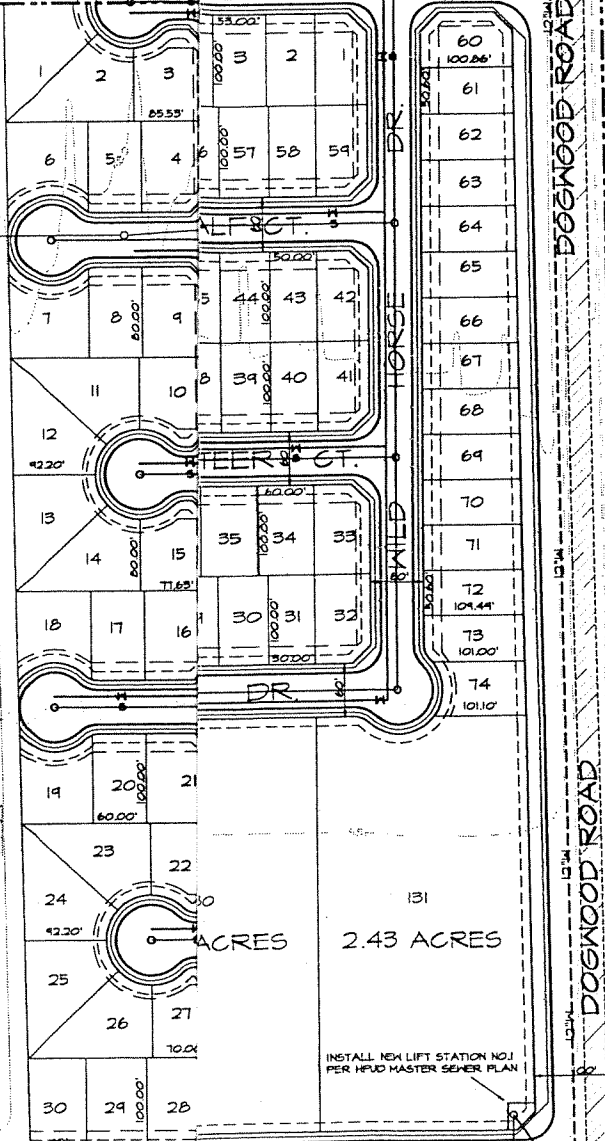
DATE DRAIN NO. 3

N 00°50'25" E 1514.92'

DOGWOOD LATERAL No. 2

PARK / DETENTION BASIN

5.35 ACRES



DOGWOOD ROAD

5 00' 48 3/32" E 1516.12'

ACRES 2.43 ACRES

INSTALL NEW LIFT STATION NO.1
PER HPUD MASTER SEWER PLAN

CONNECT TO EXIST 12" WATER
MAIN PER HPUD MASTER WATER
PLAN

INSTALL NEW 21" SANITARY
SEWER GRAVITY LINE TO
LIFT STATION NO.2 PER HPUD
MASTER SEWER PLAN

SEE GENERAL NOTE #7
RE: RIGHT OF WAYS

SEE GENERAL NOTE #7
RE: RIGHT OF WAYS

CORRELL
ESTATES

LEGEND:

○ SURVEY MONUMENT	EXISTING CONTOUR
☼ STREET LIGHT	→ DIRECTION OF FLOW
—+— NEW 2" WATER LINE (UNLESS NOTED OTHERWISE)	—+— EXISTING WATER LINE
—S— NEW 8" SANITARY SEWER LINE (UNLESS NOTED OTHERWISE)	—S— EXISTING SANITARY SE
PKH NEW FIRE HYDRANT	—SD— EXISTING STORM DRAIN
—SD— NEW STORM DRAIN LINE	--- EXISTING PAVEMENT
68.50 TO 67.00 FL. SPOT ELEVATION	- - - SUBDIVISION BOUNDARY
— PUBLIC UTILITY EASEMENT	

DEVELOPMENT DESIGN & ENGINEERS, LLC
PLANNING - CIVIL ENGINEERING - LAND SURVEYING - PROJECT MANAGEMENT



1122 STATE STREET
EL CENTRO, CALIFORNIA 92245
(760) 352-8100
FAX (760) 352-6408

TENTATIVE TRACT MAP NO. 952

MCCABE RANCH SUBDIVISION
IN TRACT 66, T.16 S., R.14 E., S.B.M.

INFERIAL COUNTY, CALIFORNIA
CLIENT: MCCABE RANCH PARTNERS
DATE: 11/26/02
FILE NAME: 00011702.dwg
JOB NO: 00

DEVELOPMENT DESIGN & ENGINEERING, LLC.
1122 STATE STREET
EL CENTRO, CA. 92243

AREA CALCULATIONS REPORT
Job: 00073

March 05, 2002
H:\Projects\2002\00073\

***** LOTS in Tract No. 1 *****

LOT No.	Description	AREA, S.F	AREA, ACRES
1	Lot No. 1	5300.00	0.1217
2	Lot No. 2	5300.00	0.1217
3	Lot No. 3	5300.00	0.1217
4	Lot No. 4	5300.00	0.1217
5	Lot No. 5	5300.00	0.1217
6	Lot No. 6	5300.00	0.1217
7	Lot No. 7	5300.00	0.1217
8	Lot No. 8	5300.00	0.1217
9	Lot No. 9	5300.00	0.1217
10	Lot No. 10	5300.00	0.1217
11	Lot No. 11	6065.81	0.1393
12	Lot No. 12	5745.53	0.1319
13	Lot No. 13	5066.42	0.1163
14	Lot No. 14	5065.36	0.1163
15	Lot No. 15	5065.36	0.1163
16	Lot No. 16	5982.66	0.1373
17	Lot No. 17	6336.22	0.1455
18	Lot No. 18	5211.95	0.1196
19	Lot No. 19	5211.95	0.1196
20	Lot No. 20	5211.95	0.1196
21	Lot No. 21	5211.95	0.1196
22	Lot No. 22	5210.82	0.1196
23	Lot No. 23	5210.82	0.1196
24	Lot No. 24	5210.82	0.1196
25	Lot No. 25	5210.82	0.1196
26	Lot No. 26	5210.82	0.1196
27	Lot No. 27	5211.64	0.1196
28	Lot No. 28	6343.03	0.1456
29	Lot No. 29	6163.34	0.1414
30	Lot No. 30	5000.00	0.1148
31	Lot No. 31	5000.00	0.1148
32	Lot No. 32	5800.00	0.1331
33	Lot No. 33	5800.00	0.1331
34	Lot No. 34	6000.00	0.1377
35	Lot No. 35	6000.00	0.1377
36	Lot No. 36	6565.23	0.1507
37	615 No. 37	8627.47	0.1981
38	Lot No. 38	5210.32	0.1196
39	Lot No. 39	5000.00	0.1148
40	Lot No. 40	5000.00	0.1148

41	Lot No. 41	5300.00	0.1217
42	Lot No. 42	5300.00	0.1217
43	Lot No. 43	5000.00	0.1148
44	Lot No. 44	5000.00	0.1148
45	Lot No. 45	5210.32	0.1196
46	Lot No. 46	5200.00	0.1194
47	Lot No. 47	5000.00	0.1148
48	Lot No. 48	5486.27	0.1259
49	Lot No. 49	8341.46	0.1915
50	Lot No. 50	6462.11	0.1483
51	Lot No. 51	5389.39	0.1237
52	Lot No. 52	5696.10	0.1308
53	Lot No. 53	5000.00	0.1148
54	Lot No. 54	5000.00	0.1148
55	Lot No. 55	5000.00	0.1148
56	Lot No. 56	5000.00	0.1148
57	Lot No. 57	5000.00	0.1148
58	Lot No. 58	5000.00	0.1148
59	Lot No. 59	5300.00	0.1217
60	Lot No. 60	5631.82	0.1293
61	Lot No. 61	5121.87	0.1176
62	Lot No. 62	5158.27	0.1184
63	Lot No. 63	5194.66	0.1193
64	Lot No. 64	5231.06	0.1201
65	Lot No. 65	5267.46	0.1209
66	Lot No. 66	5303.86	0.1218
67	Lot No. 67	5340.25	0.1226
68	Lot No. 68	5376.65	0.1234
69	Lot No. 69	5413.05	0.1243
70	Lot No. 70	5449.44	0.1251
71	Lot No. 71	5485.84	0.1259
72	Lot No. 72	5522.24	0.1268
73	Lot No. 73	5635.89	0.1294
74	Lot No. 74	5732.18	0.1316
75	Lot No. 75	5300.00	0.1217
76	Lot No. 76	5000.00	0.1148
77	Lot No. 77	5000.00	0.1148
78	Lot No. 78	5000.00	0.1148
79	Lot No. 79	5000.00	0.1148
80	Lot No. 80	5853.70	0.1344
81	Lot No. 81	5899.82	0.1354
82	Lot No. 82	8713.03	0.2000
83	Lot No. 83	6373.00	0.1463
84	Lot No. 84	5830.71	0.1339
85	Lot No. 85	5779.36	0.1327
86	Lot No. 86	7287.84	0.1673
87	Lot No. 87	5398.56	0.1239
88	Lot No. 88	5399.09	0.1239
89	Lot No. 89	5399.09	0.1239
90	Lot No. 90	5398.56	0.1239
91	Lot No. 91	6152.33	0.1412
92	Lot No. 92	6425.97	0.1475
93	Lot No. 93	5351.58	0.1229
94	Lot No. 94	5536.27	0.1271
95	Lot No. 95	8159.66	0.1873
96	Lot No. 96	5400.00	0.1240
97	Lot No. 97	5400.00	0.1240

98	Lot No. 98	5400.00	0.1240
99	Lot No. 99	5400.00	0.1240
100	Lot No. 100	5400.00	0.1240
101	Lot No. 101	5400.00	0.1240
102	Lot No. 102	5400.00	0.1240
103	Lot No. 103	5400.00	0.1240
104	Lot No. 104	5887.00	0.1351
105	Lot No. 105	5500.00	0.1263
106	Lot No. 106	5200.00	0.1194
107	Lot No. 107	5200.00	0.1194
108	Lot No. 108	5200.00	0.1194
109	Lot No. 109	5595.47	0.1285
110	Lot No. 110	6126.14	0.1406
111	Lot No. 111	8030.48	0.1844
112	Lot No. 112	5665.87	0.1301
113	Lot No. 113	6348.84	0.1457
114	Lot No. 114	6348.84	0.1457
115	Lot No. 115	6348.84	0.1457
116	Lot No. 116	5931.92	0.1362
117	Lot No. 117	8470.50	0.1945
118	Lot No. 118	7318.04	0.1680
119	Lot No. 119	7318.04	0.1680
120	Lot No. 120	7087.12	0.1627
121	Lot No. 121	8226.08	0.1888
122	Lot No. 122	8274.13	0.1899
123	Lot No. 123	7849.48	0.1802
124	Lot No. 124	10336.03	0.2373
125	Lot No. 125	7277.84	0.1671
126	Lot No. 126	6000.00	0.1377
127	Lot No. 127	91047.81	2.0901
128	Lot No. 128	108992.60	2.5021
129	Lot No. 129	106493.27	2.4447

***** Report Summary *****

Total LOT Area in Tract 1 = 1026822.46 SF.....or 23.57 Acres

***** LOTS in Tract No. 2 *****

LOT No.	Description	AREA, S.F	AREA, ACRES
1	Lot No. 1	8240.36	0.1891
2	Lot No. 2	8394.71	0.1927
3	Lot No. 3	7450.94	0.1710
4	Lot No. 4	7181.29	0.1649
5	Lot No. 5	5997.33	0.1377
6	Lot No. 6	8027.67	0.1843
7	Lot No. 7	7783.23	0.1787
8	Lot No. 8	5997.33	0.1377
9	Lot No. 9	7181.29	0.1649
10	Lot No. 10	6993.57	0.1605
11	Lot No. 11	8320.64	0.1910
12	Lot No. 12	8325.23	0.1911
13	Lot No. 13	8308.54	0.1907
14	Lot No. 14	8089.50	0.1857
15	Lot No. 15	6993.57	0.1605
16	Lot No. 16	7181.29	0.1649
17	Lot No. 17	5997.33	0.1377
18	Lot No. 18	7211.57	0.1656
19	Lot No. 19	6976.93	0.1602
20	Lot No. 20	5997.33	0.1377
21	Lot No. 21	7181.29	0.1649
22	Lot No. 22	6231.00	0.1430
23	Lot No. 23	8320.64	0.1910
24	Lot No. 24	8325.23	0.1911
25	Lot No. 25	8308.54	0.1907
26	Lot No. 26	8089.50	0.1857
27	Lot No. 27	6231.00	0.1430
28	Lot No. 28	7456.14	0.1711
29	Lot No. 29	6726.15	0.1544
30	Lot No. 30	6573.32	0.1509
31	Lot No. 31	6300.00	0.1446
32	Lot No. 32	6200.00	0.1423
33	Lot No. 33	6200.00	0.1423
34	Lot No. 34	6200.00	0.1423
35	Lot No. 35	6200.00	0.1423
36	Lot No. 36	6200.00	0.1423
37	615 No. 37	6200.00	0.1423
38	Lot No. 38	6875.43	0.1578
39	Lot No. 39	8238.27	0.1891
40	Lot No. 40	6633.59	0.1522
41	Lot No. 41	6438.09	0.1477
42	Lot No. 42	6263.16	0.1437
43	Lot No. 43	7145.94	0.1640
44	Lot No. 44	6216.36	0.1427
45	Lot No. 45	6288.46	0.1443
46	Lot No. 46	6288.46	0.1443
47	Lot No. 47	6288.46	0.1443
48	Lot No. 48	6288.46	0.1443
49	Lot No. 49	6967.91	0.1599
50	Lot No. 50	7441.40	0.1708
51	Lot No. 51	6200.00	0.1423

52	Lot No. 52	6200.00	0.1423
53	Lot No. 53	6200.00	0.1423
54	Lot No. 54	6200.00	0.1423
55	Lot No. 55	6200.00	0.1423
56	Lot No. 56	6200.00	0.1423
57	Lot No. 57	6200.00	0.1423
58	Lot No. 58	6200.00	0.1423
59	Lot No. 59	6300.00	0.1446
60	Lot No. 60	8730.60	0.2004
61	Lot No. 61	6000.00	0.1377
62	Lot No. 62	6000.00	0.1377
63	Lot No. 63	6000.00	0.1377
64	Lot No. 64	6000.00	0.1377
65	Lot No. 65	6000.00	0.1377
66	Lot No. 66	6000.00	0.1377
67	Lot No. 67	7137.86	0.1638
68	Lot No. 68	6537.86	0.1500
69	Lot No. 69	6000.00	0.1377
70	Lot No. 70	6000.00	0.1377
71	Lot No. 71	6000.00	0.1377
72	Lot No. 72	6000.00	0.1377
73	Lot No. 73	6000.00	0.1377
74	Lot No. 74	6000.00	0.1377
75	Lot No. 75	6099.62	0.1400
76	Lot No. 76	6066.95	0.1392
77	Lot No. 77	7363.09	0.1690
78	Lot No. 78	6133.28	0.1408
79	Lot No. 79	6001.12	0.1377
80	Lot No. 80	6000.00	0.1377
81	Lot No. 81	6000.00	0.1377
82	Lot No. 82	6000.00	0.1377
83	Lot No. 83	6000.00	0.1377
84	Lot No. 84	6000.00	0.1377
85	Lot No. 85	6000.00	0.1377
86	Lot No. 86	7137.86	0.1638
87	Lot No. 87	6237.86	0.1432
88	Lot No. 88	6000.00	0.1377
89	Lot No. 89	6000.00	0.1377
90	Lot No. 90	6000.00	0.1377
91	Lot No. 91	6000.00	0.1377
92	Lot No. 92	6000.00	0.1377
93	Lot No. 93	6000.00	0.1377
94	Lot No. 94	6000.00	0.1377
95	Lot No. 95	6000.00	0.1377
96	Lot No. 96	6000.00	0.1377
97	Lot No. 97	6028.96	0.1387
98	Lot No. 98	6323.73	0.1451
99	Lot No. 99	6000.00	0.1377
100	Lot No. 100	6000.00	0.1377
101	Lot No. 101	6298.55	0.1445
102	Lot No. 102	6683.34	0.1534
103	Lot No. 103	9934.16	0.2280
104	Lot No. 104	6520.70	0.1496
105	Lot No. 105	6041.36	0.1386
106	Lot No. 106	6000.00	0.1377
107	Lot No. 107	6000.00	0.1377
108	Lot No. 108	6000.00	0.1377

109	Lot No. 109	6000.00	0.1377
110	Lot No. 110	6000.00	0.1377
111	Lot No. 111	6000.00	0.1377
112	Lot No. 112	6000.00	0.1377
113	Lot No. 113	6000.00	0.1377
114	Lot No. 114	6000.00	0.1377
115	Lot No. 115	6000.00	0.1377
116	Lot No. 116	6937.86	0.1592
117	Lot No. 117	6937.86	0.1592
118	Lot No. 118	6000.00	0.1377
119	Lot No. 119	6000.00	0.1377
120	Lot No. 120	6000.00	0.1377
121	Lot No. 121	6000.00	0.1377
122	Lot No. 122	6000.00	0.1377
123	Lot No. 123	6000.00	0.1377
124	Lot No. 124	6000.00	0.1377
125	Lot No. 125	6000.00	0.1377
126	Lot No. 126	6000.00	0.1377
127	Lot No. 127	6000.00	0.1377
128	Lot No. 128	6000.00	0.1377
129	Lot No. 129	6000.00	0.1377
130	Lot No. 130	6000.00	0.1377
131	Lot No. 131	6000.00	0.1377
132	Lot No. 132	6499.26	0.1492
133	Lot No. 133	8197.50	0.1881
134	Lot No. 134	7967.07	0.1828
135	Lot No. 135	6300.99	0.1446
136	Lot No. 136	6330.63	0.1453
137	Lot No. 137	6001.97	0.1377
138	Lot No. 138	6000.00	0.1377
139	Lot No. 139	6000.00	0.1377
140	Lot No. 140	6000.00	0.1377
141	Lot No. 141	6300.00	0.1446
142	Lot No. 142	6218.93	0.1427
143	Lot No. 143	6000.00	0.1377
144	Lot No. 144	6000.00	0.1377
145	Lot No. 145	6000.00	0.1377
146	Lot No. 146	6000.00	0.1377
147	Lot No. 147	6000.00	0.1377
148	Lot No. 148	6000.00	0.1377
149	Lot No. 149	6000.00	0.1377
150	Lot No. 150	6218.93	0.1427
151	Lot No. 151	6218.93	0.1427
152	Lot No. 152	6000.00	0.1377
153	Lot No. 153	6000.00	0.1377
154	Lot No. 154	6000.00	0.1377
155	Lot No. 155	6000.00	0.1377
156	Lot No. 156	6000.00	0.1377
157	Lot No. 157	6000.00	0.1377
158	Lot No. 158	6000.00	0.1377
159	Lot No. 159	6218.93	0.1427
160	Lot No. 160	7760.84	0.1781
161	Lot No. 161	7399.96	0.1698
162	Lot No. 162	6031.73	0.1384
163	Lot No. 163	6000.00	0.1377
164	Lot No. 164	6000.00	0.1377
165	Lot No. 165	6000.00	0.1377

166	Lot No. 166	6000.00	0.1377
167	Lot No. 167	6300.00	0.1446
168	Lot No. 168	6300.00	0.1446
169	Lot No. 169	6000.00	0.1377
170	Lot No. 170	6000.00	0.1377
171	Lot No. 171	6000.00	0.1377
172	Lot No. 172	6000.00	0.1377
173	Lot No. 173	6000.00	0.1377
174	Lot No. 174	6000.00	0.1377
175	Lot No. 175	9141.81	0.2098

***** Report Summary *****

Total LOT Area in Tract 2 = 1147875.70 SF.....or 26.35 Acres

Total LOT Area = 2174515.20 SF.....or 49.92 Acres



**FIRST AMERICAN TITLE INSURANCE COMPANY
1425 W. MAIN STREET, EL CENTRO, CALIFORNIA 92243
P.O. BOX 27, EL CENTRO, CALIFORNIA 92243 (760) 337-6590**

MARCH 7, 2002

DEVELOPMENT DESIGN & ENGINEERING, LLC
1122 STATE STREET
EL CENTRO, CA 92243

ATTENTION: GORDON O OLSON

YOUR REF. CHAVEZ
OUR ORDER NO. 9795-51

IN RESPONSE TO THE HEREIN REFERENCED APPLICATION FOR A POLICY OF TITLE INSURANCE, THIS COMPANY HEREBY REPORTS THAT IT IS PREPARED TO ISSUE, OR CAUSE TO BE ISSUED, AS OF THE DATE HEREOF, A POLICY OR POLICIES OF TITLE INSURANCE DESCRIBING THE LAND AND THE ESTATE OR INTEREST THEREIN HEREINAFTER SET FORTH, INSURING AGAINST LOSS WHICH MAY BE SUSTAINED BY REASON OF ANY DEFECT, LIEN OR ENCUMBRANCE NOT SHOWN OR REFERRED TO AS AN EXCEPTION HEREIN OR NOT EXCLUDED FROM COVERAGE PURSUANT TO THE PRINTED SCHEDULES, CONDITIONS AND STIPULATIONS OF SAID POLICY FORMS.

THE PRINTED EXCEPTIONS AND EXCLUSIONS FROM THE COVERAGE OF SAID POLICY OR POLICIES ARE SET FORTH HEREIN. COPIES OF THE POLICY FORMS SHOULD BE READ. THEY ARE AVAILABLE FROM THE OFFICE WHICH ISSUED THIS REPORT.


PLEASE READ THE EXCEPTIONS SHOWN OR REFERRED TO BELOW AND THE EXCEPTIONS AND EXCLUSIONS SET FORTH IN EXHIBIT A OF THIS REPORT CAREFULLY. THE EXCEPTIONS AND EXCLUSIONS ARE MEANT TO PROVIDE YOU WITH NOTICE OF MATTERS WHICH ARE NOT COVERED UNDER THE TERMS OF THE TITLE INSURANCE POLICY AND SHOULD BE CAREFULLY CONSIDERED.

IT IS IMPORTANT TO NOTE THAT THIS PRELIMINARY REPORT IS NOT A WRITTEN REPRESENTATION AS TO THE CONDITION OF TITLE AND MAY NOT LIST ALL LIENS, DEFECTS, AND ENCUMBRANCES AFFECTING TITLE TO THE LAND.

THIS REPORT (AND ANY SUPPLEMENTS OR AMENDMENTS HERETO) IS ISSUED SOLELY FOR THE PURPOSE OF FACILITATING THE ISSUANCE OF A POLICY OF TITLE INSURANCE AND NO LIABILITY IS ASSUMED HEREBY. IF IT IS DESIRED THAT LIABILITY BE ASSUMED PRIOR TO THE ISSUANCE OF A POLICY OF TITLE INSURANCE, A BINDER OR COMMITMENT SHOULD BE REQUESTED.

DATED AS OF MARCH 6, 2002 AT 7:30 A.M.

(UPDATED)



KIM CARSON - TITLE OFFICER
DIRECT DIAL PHONE 337-6593
FAX NO. 337-9176



THE FORM OF POLICY TITLE INSURANCE CONTEMPLATED BY THIS REPORT IS:

PRELIMINARY TITLE REPORT

TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

HONG-CHU LO AND LI-CHING HO, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVIDED 16% INTEREST;
I-HSIANG HSU AND LIN HSIU HSIA HSU, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVIDED 42.58% INTEREST;
KWAN-SHIH HUANG AND SHU-YU LO, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVIDED 16% INTEREST; AND
WEN-CHIN LO AND PI-YU CHUNG, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVIDED 25.42% INTEREST,
ALL AS TO PARCELS A, C, D AND E,
AND
WEN-LING WANG, A SINGLE WOMAN, AS TO AN UNDIVIDED 50% INTEREST;
YIH-MIN CHU AND SUZANNA CHU, HUSBAND AND WIFE AS JOINT TENANTS, AS TO AN UNDIVIDED 45% INTEREST; AND
MCCABE TWO PROPERTY INC., A CALIFORNIA CORPORATION, AS TO AN UNDIVIDED 5% INTEREST,
ALL AS TO PARCEL B

THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

FEE

THE LAND REFERRED TO HEREIN IS DESCRIBED AS FOLLOWS:

(SEE ATTACHED LEGAL DESCRIPTION)

AT THE DATE HEREOF EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS CONTAINED IN SAID POLICY FORM WOULD BE AS FOLLOWS:

1. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$5,550.02, PAID.
SECOND HALF: \$5,550.02, PAID.
CODE AREA: 74-000.
A.P. NO.: 054-130-08-01.

AFFECTS PARCEL C



2. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$1,166.54, PAID.
SECOND HALF: \$1166.54, PAID.
CODE AREA: 74-000.
A.P. NO.: 054-130-20-01.

AFFECTS PARCEL A.

3. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$935.39, PAID.
SECOND HALF: \$395.39, PAID.
CODE AREA: 74-003.
A.P. NO.: 054-130-30-01.

AFFECTS PARCEL A.

4. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$6,994.64, PAID.
SECOND HALF: \$6,994.64, PAID.
CODE AREA: 66-001.
A.P. NO.: 054-130-33-01.

AFFECTS PARCELS A AND B.

5. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$3,772.47, PAID.
SECOND HALF: \$3,772.47, PAID.
CODE AREA: 66-001.
A.P. NO.: 054-130-36-01.

AFFECTS PARCEL A.

6. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$865.65, PAID.
SECOND HALF: \$865.65, PAID.
CODE AREA: 74-000.
A.P. NO.: 054-130-42-01.

AFFECTS PARCEL D.

7. TAXES FOR PRORATION FOR THE FISCAL YEAR 2001-2002
FIRST HALF: \$1,213.65, PAID.
SECOND HALF: \$1,213.65, PAID.
CODE AREA: 74-000.
A.P. NO.: 054-160-24-01.

AFFECTS PARCEL E.



8. THE LIEN OF SUPPLEMENTAL TAXES OR ASSESSMENTS, IF ANY, ASSESSED PURSUANT TO CHAPTER 3.5 COMMENCING WITH SECTION 75 OF THE CALIFORNIA REVENUE AND TAXATION CODE AND ANY OTHER APPLICABLE STATUTES OF THE CALIFORNIA REVENUE AND TAXATION CODE.

SUPPLEMENTAL TAXES:

THE REQUIREMENT THAT THIS COMPANY BE FURNISHED WITH ALL SUPPLEMENTAL TAX BILLS, IF ANY, FROM THE OWNER OF THE HEREIN DESCRIBED PROPERTY BEFORE CLOSE OF ESCROW.

9. AN EASEMENT FOR DITCHES, CANALS, TELEPHONE AND TELEGRAPH LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE CALIFORNIA DEVELOPMENT CO., RECORDED SEPTEMBER 14, 1909 IN BOOK 27, PAGE 356 OF DEEDS.

THE ROUTE OR LOCATION CANNOT BE DETERMINED FROM SAID INSTRUMENT.

AFFECTS PARCEL B

10. AN EASEMENT FOR DITCHES, CANALS, TELEPHONE AND TELEGRAPH LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE CALIFORNIA DEVELOPMENT CO., RECORDED SEPTEMBER 14, 1909 IN BOOK 27, PAGE 357 OF DEEDS.

THE ROUTE OR LOCATION CANNOT BE DETERMINED FROM SAID INSTRUMENT.

AFFECTS PARCEL B

11. AN EASEMENT FOR PUBLIC ROAD AND INCIDENTAL PURPOSES IN FAVOR OF IMPERIAL COUNTY, RECORDED OCTOBER 24, 1912 AS FILE NO. 20, IN BOOK 59, PAGE 208 OF DEEDS, LOCATED WITHIN AND ALONG THE EASTERLY LINE OF PARCEL A.

12. AN EASEMENT FOR AN IRRIGATION DITCH AND INCIDENTAL PURPOSES IN FAVOR OF ROBERT KNAPP, RECORDED APRIL 25, 1923 AS FILE NO. 39, IN BOOK 199, PAGE 242 OF DEEDS, LOCATED WITHIN AN AREA 20 FEET WIDE OVER THE SOUTH HALF OF THE EAST HALF OF PARCEL A.

THE ROUTE OR LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE RECORD.

13. AN EASEMENT FOR A DITCH AND INCIDENTAL PURPOSES IN FAVOR OF ROSS T. HICKEE AND B. U. SKINNER, RECORDED JULY 28, 1926 AS FILE NO. 9, IN BOOK 122, PAGE 376 OF OFFICIAL RECORDS, LOCATED WITHIN PARCEL D.

THE ROUTE OR LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE RECORD.



14. AN EASEMENT FOR A POLE LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE SOUTHERN SIERRAS POWER COMPANY, RECORDED SEPTEMBER 11, 1928, AS FILE NO. 44, IN BOOK 200, PAGE 329 OF OFFICIAL RECORDS, LOCATED WITHIN PARCEL C.

THE ROUTE OF SAID EASEMENT IS SET OUT IN SAID DOCUMENT AND AFFECTS A PORTION OF THE HEREIN DESCRIBED PROPERTY.

15. AN EASEMENT FOR A POLE LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE SOUTHERN SIERRAS POWER COMPANY, RECORDED NOVEMBER 1, 1928 AS FILE NO. 35, IN BOOK 213, PAGE 142 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

CENTER LINE OF SAID EASEMENT LOCATED 2 FEET SOUTH OF THE COUNTY ROAD ALONG THE NORTH LINE OF THE WEST 33 FEET OF PARCEL A.

16. AN EASEMENT FOR POLES AND INCIDENTAL PURPOSES IN FAVOR OF THE SOUTHERN SIERRAS POWER COMPANY, RECORDED APRIL 16, 1929 AS FILE NO. 19, IN BOOK 230, PAGE 138 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

CENTER LINE OF SAID EASEMENT LOCATED 2 FEET WEST OF THE COUNTY ROAD ALONG THE EAST LINE OF THE NORTH 750 FEET OF PARCEL A.

17. AN EASEMENT FOR POLE LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE SOUTHERN SIERRAS POWER COMPANY, RECORDED SEPTEMBER 23, 1936 AS FILE NO. 20, IN BOOK 435, PAGE 574 OF OFFICIAL RECORDS, LOCATED WITHIN AND ALONG THE WEST LINE OF PARCEL A.

THE ROUTE OF SAID EASEMENT IS SET OUT IN SAID DOCUMENT AND AFFECTS A PORTION OF THE HEREIN DESCRIBED PROPERTY.

18. AN EASEMENT FOR A POWER LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED DECEMBER 3, 1937 AS FILE NO. 66, IN BOOK 473, PAGE 542 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

SAID EASEMENT TO BE LOCATED ALONG THOSE PORTIONS OF PARCEL B WHICH ARE BEING USED AS PUBLIC-TRAVELLED WAYS.

19. AN EASEMENT FOR POWER LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED APRIL 22, 1938 AS FILE NO. 35, IN BOOK 486, PAGE 565 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

SAID EASEMENT IS TO BE LOCATED ALONG THOSE PORTIONS OF PARCEL A BEING USED AS PUBLIC-TRAVELLED WAYS.

20. AN EASEMENT FOR POWER LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED AUGUST 2, 1930 AS FILE NO. 55, IN BOOK 529, PAGE 562 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

SAID EASEMENT IS TO BE LOCATED ALONG AND ADJACENT TO THE WEST TOE OF DOGWOOD LATERAL 2 CANAL OF PARCEL C.



21. AN EASEMENT AND RIGHT OF WAY FOR THE DOGWOOD LATERAL 2 CANAL AND INCIDENTAL PURPOSES AS DISCLOSED BY INSTRUMENT RECORDED AUGUST 2, 1939 AS FILE NO. 55, IN BOOK 529, PAGE 562 OF OFFICIAL RECORDS, AND THE RIGHT OF OTHERS TO USE SAID EASEMENT AS CONVEYED OR RESERVED IN VARIOUS OTHER INSTRUMENTS OF RECORD, OVER, UNDER, ALONG AND ACROSS THE EAST SIDE OF PARCEL C.
22. AN EASEMENT AND RIGHT OF WAY FOR IRRIGATION, WASTE OR DRAINAGE CANALS, OR POWER OR TELEPHONE LINES AND INCIDENTAL PURPOSES AS RESERVED BY INSTRUMENT RECORDED NOVEMBER 22, 1940 IN BOOK 560, PAGE 280 OF OFFICIAL RECORDS, AND THE RIGHT OF OTHERS TO USE SAID EASEMENT AS CONVEYED OR RESERVED IN VARIOUS OTHER INSTRUMENTS OF RECORD, OVER, UNDER, ALONG AND ACROSS HEREIN DESCRIBED PROPERTY.

THE ROUTE OR LOCATION OF SAID EASEMENT CANNOT BE DETERMINED FROM THE RECORD.

AFFECTS PARCEL E.

23. AN EASEMENT FOR POWER LINES AND INCIDENTAL PURPOSES IN FAVOR OF IMPERIAL IRRIGATION DISTRICT, RECORDED JUNE 16, 1941 IN BOOK 570, PAGE 424 OF OFFICIAL RECORDS, LOCATED ALONG THE EAST SIDE OF PARCEL E.
24. AN EASEMENT FOR TELEPHONE AND/OR ELECTRIC POWER LINE OR LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED AUGUST 1, 1944 AS FILE NO. 22, IN BOOK 602, PAGE 158 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 80 FEET IN WIDTH LYING WEST OF AND PARALLEL WITH THE EXISTING RIGHT OF WAY FOR THE DOGWOOD LATERAL 2 AS CONSTRUCTED ALONG THE EAST SIDE OF PARCEL C.

25. AN EASEMENT FOR CANAL, TELEPHONE AND/OR ELECTRIC POWER LINE OR LINES AND INCIDENTAL PURPOSES IN FAVOR OF THE IMPERIAL IRRIGATION DISTRICT, RECORDED AUGUST 1, 1944 AS FILE NO. 18, IN BOOK 623, PAGE 278 OF OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 80 FEET IN WIDTH LYING WEST OF AND PARALLEL WITH THE EXISTING RIGHT OF WAY FOR THE DOGWOOD LATERAL 2, AS CONSTRUCTED ACROSS PARCEL B.

26. AN EASEMENT FOR A WASTE DITCH AND/OR TILE LINE AND INCIDENTAL PURPOSES IN FAVOR OF LAURA CRANCE, RECORDED JULY 30, 1946 AS FILE NO. 73, IN BOOK 661, PAGE 447 OF OFFICIAL RECORDS, LOCATED WITHIN THE SOUTH 20 FEET OF THE EAST 1320 FEET OF PARCEL C.



27. AN AGREEMENT REGARDING AN EASEMENT FOR A PIPELINE, DATED APRIL 7, 1955, UPON THE TERMS, COVENANTS, AND CONDITIONS CONTAINED THEREIN. EXECUTED BY AND BETWEEN: SACHA PEGGY MARTIN; WILLIAM J. THORNBURG AND MARGUERITE E. THORNBURG.

RECORDED: APRIL 8, 1955 AS FILE NO. 32, IN BOOK 908, PAGE 91 OF OFFICIAL RECORDS.

REFERENCE IS MADE TO SAID INSTRUMENT FOR FURTHER PARTICULARS.

AFFECTS PARCEL A.

28. AN EASEMENT FOR COUNTY HIGHWAY AND INCIDENTAL PURPOSES IN FAVOR OF THE COUNTY OF IMPERIAL, RECORDED OCTOBER 26, 1966 AS FILE NO. 57, IN BOOK 1236, PAGE 769 OF OFFICIAL RECORDS, LOCATED WITHIN PARCEL A.

THE ROUTE OF SAID EASEMENT IS SET OUT IN SAID DOCUMENT AND AFFECTS A PORTION OF THE HEREIN DESCRIBED PROPERTY.

29. AN EASEMENT FOR WATER DITCH AND INCIDENTAL PURPOSES IN FAVOR OF DON ROSSON, RECORDED NOVEMBER 5, 1973 AS FILE NO. 22, IN BOOK 1356, PAGE 106 OF OFFICIAL RECORDS.

THE ROUTE OF SAID EASEMENT IS SET OUT IN SAID DOCUMENT AND AFFECTS A PORTION OF THE HEREIN DESCRIBED PROPERTY.

AFFECTS PARCEL E

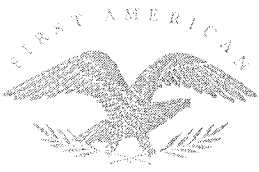
30. AN EASEMENT FOR A WATER LINE AND INCIDENTAL PURPOSES IN FAVOR OF THE HEBER PUBLIC UTILITIES DISTRICT, RECORDED MAY 12, 1993 AS FILE NO. 93010959, IN BOOK 1732, PAGE 1321 AND RE-RECORDED SEPTEMBER 23, 1993 AS FILE NO. 93022804, IN BOOK 1745, PAGE 1479 OF OFFICIAL RECORDS, LOCATED WITHIN PARCEL A.

THE ROUTE OF SAID EASEMENT IS SET OUT IN SAID DOCUMENT AND AFFECTS A PORTION OF THE HEREIN DESCRIBED PROPERTY.



31. THE REQUIREMENT THAT THIS COMPANY BE FURNISHED A COPY OF A CORPORATE RESOLUTION APPROVING THE SALE OR ENCUMBRANCE OF THE HEREIN DESCRIBED PROPERTY, AS APPLICABLE.

INFORMATION NOTE: THE POLICY ISSUED WILL BE BASED ON SHORT TERM RATE.



LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF IMPERIAL, AND IS DESCRIBED AS FOLLOWS:

PARCEL A:

TRACT 67, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE INTEREST IN AND TO THE NORTH 72 FEET OF THE WEST HALF OF SAID LAND, CONVEYED TO THE COUNTY OF IMPERIAL BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 368 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THE INTEREST IN AND TO THE NORTH 60 FEET OF THE EAST HALF OF SAID LAND CONVEYED TO THE COUNTY OF IMPERIAL BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 367 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION OF SAID LAND LYING WITHIN PARCEL MAP NO. M-1476, ON FILE IN BOOK 6, PAGE 34 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

ALSO EXCEPTING THEREFROM THAT PORTION OF SAID LAND LYING WITHIN APPALOOSA ESTATES SUBDIVISION, TRACT NO. 924, ON FILE IN BOOK 17, PAGE 47 OF FINAL MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

ALSO EXCEPTING THE INTEREST CONVEYED TO THE SOUTHERN PACIFIC RAILROAD IN AND TO A STRIP OF LAND 50 FEET ON EACH SIDE OF THE CENTERLINE OF THE PROPOSED IMPERIAL AND GULF RAILROAD FOR RIGHT OF WAY FOR RAILROAD AND RAILWAY PURPOSES AS GRANTED TO SOUTHERN PACIFIC COMPANY IN DEED RECORDED NOVEMBER 16, 1903 IN BOOK 332, PAGE 437, RECORDS OF SAN DIEGO COUNTY, A COPY THEREOF BEING ON FILE IN BOOK 19, PAGE 123 OF DEEDS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

TOGETHER WITH:

ALL OF TRACT 65, AND THE NORTH HALF OF THE WEST HALF OF TRACT 66, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL B:

THE SOUTH HALF OF THE WEST HALF OF TRACT 66, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.



PARCEL C:

TRACT 63 1/2, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE INTEREST CONVEYED TO THE COUNTY OF IMPERIAL IN AND TO A STRIP OF LAND ALONG THE NORTH LINE OF SAID LAND BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 366 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS FOLLOWS: BEGINNING AT A POINT WHICH IS 27.27 FEET EAST AND 60.01 FEET SOUTH OF THE NORTHWEST CORNER OF SAID TRACT 63 1/2, SAID POINT BEING ON EASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY 99 AS NOW OCCUPIED AT ITS POINT OF INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE COUNTY ROAD GRANTED TO THE COUNTY OF IMPERIAL BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 366 OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY; THENCE SOUTH $1^{\circ}08' 1/2''$ EAST, 244.13 FEET; THENCE NORTH $89^{\circ}02'$ EAST, 347.76 FEET; THENCE NORTH $0^{\circ}24' 1/2''$ WEST, 238.22 FEET TO THE SOUTH LINE OF SAID COUNTY ROAD; THENCE WEST ALONG THE SOUTHERLY LINE OF SAID COUNTY ROAD, 350.87 FEET TO THE POINT OF BEGINNING.

PARCEL D:

THE NORTH HALF OF THE SOUTH HALF AND THE SOUTH HALF OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTH HALF OF TRACT 64 1/2, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL E:

PARCEL 1, OF PARCEL MAP NO. M-704, IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ON FILE IN BOOK 3, PAGE 50 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.



PARCEL C:

TRACT 63 1/2, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE INTEREST CONVEYED TO THE COUNTY OF IMPERIAL IN AND TO A STRIP OF LAND ALONG THE NORTH LINE OF SAID LAND BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 366 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS FOLLOWS: BEGINNING AT A POINT WHICH IS 27.27 FEET EAST AND 60.01 FEET SOUTH OF THE NORTHWEST CORNER OF SAID TRACT 63 1/2, SAID POINT BEING ON EASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY 99 AS NOW OCCUPIED AT ITS POINT OF INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE COUNTY ROAD GRANTED TO THE COUNTY OF IMPERIAL BY DEED RECORDED MAY 13, 1947 IN BOOK 675, PAGE 366 OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY; THENCE SOUTH 1°08 1/2' EAST, 244.13 FEET; THENCE NORTH 89°02' EAST, 347.76 FEET; THENCE NORTH 0°24 1/2' WEST, 238.22 FEET TO THE SOUTH LINE OF SAID COUNTY ROAD; THENCE WEST ALONG THE SOUTHERLY LINE OF SAID COUNTY ROAD, 350.87 FEET TO THE POINT OF BEGINNING.

PARCEL D:

THE NORTH HALF OF THE SOUTH HALF AND THE SOUTH HALF OF THE SOUTH HALF OF THE SOUTH HALF OF THE NORTH HALF OF TRACT 64 1/2, TOWNSHIP 16 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL E:

PARCEL 1, OF PARCEL MAP NO. M-704, IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ON FILE IN BOOK 3, PAGE 50 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.



ORDER NO. 9795-51

WIRING INSTRUCTIONS FOR YOUR TRANSACTION

THE INSTRUCTIONS PROVIDED BELOW ARE EXCLUSIVELY FOR OUR DEMAND/DRAFT,
SUB-ESCROW ACCOUNTS.

FIRST AMERICAN TRUST COMPANY
SANTA ANA BRANCH
421 N. MAIN ST.
SANTA ANA, CA 92701

ABA 122241255

CREDIT TO FIRST AMERICAN TITLE INSURANCE COMPANY
ACCOUNT NO. 13101

PLEASE REFERENCE YOUR TITLE OFFICER AND TITLE ORDER NUMBER.

EP

FEBRUARY 09, 2001 12:29 PM

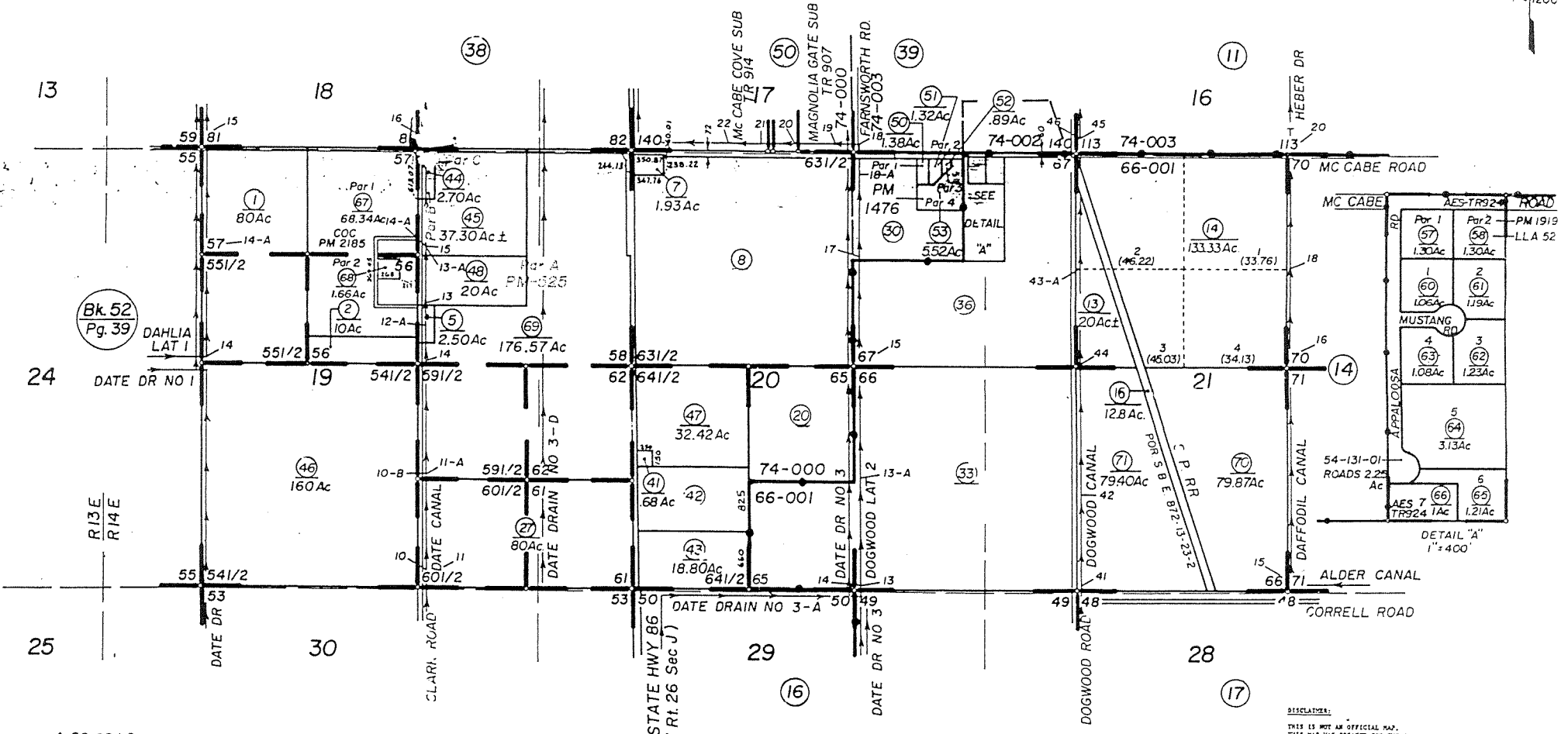
TRACT 541/2, 551/2, 561/2, 57, 58, 591/2, 601/2, 61, 62, 631/2, 641/2, 65, 66 & 67 &
 APPALOOSA ESTATES SUB TR 924 & POR SEC 21 T16S, R14E

Tax Area Code
 66-001
 74-000 MPR
 74-003

54-13

FM 17-47

1" = 1200'



Bk. 52
 Pg. 39

4-26-96 LS
 2-28-96 RM
 4-24-97 LS
 9-17-98 LS
 1-6-99 LS

"This map may or may not be a survey of the land depicted hereon. You should not rely upon it for any purpose other than orientation to the general location of the parcel or parcels depicted. First American Title expressly disclaims any liability for alleged loss or damage which may result from reliance upon this map."

54-131-01 ROADS 2.25Ac
 CODAMAP, a product of BIT INCORPORATED

DISCLAIMER:
 THIS IS NOT AN OFFICIAL MAP.
 THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY ASSESSOR, FOR THE SOLE PURPOSE OF AIDING IN THE PERFORMANCE OF THE DUTIES OF THE ASSESSOR. ANY ERRORS OR OMISSIONS IN THIS MAP ARE NOT THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL OR THE ASSESSOR. (REV. & TAX. CODE SEC. 327)

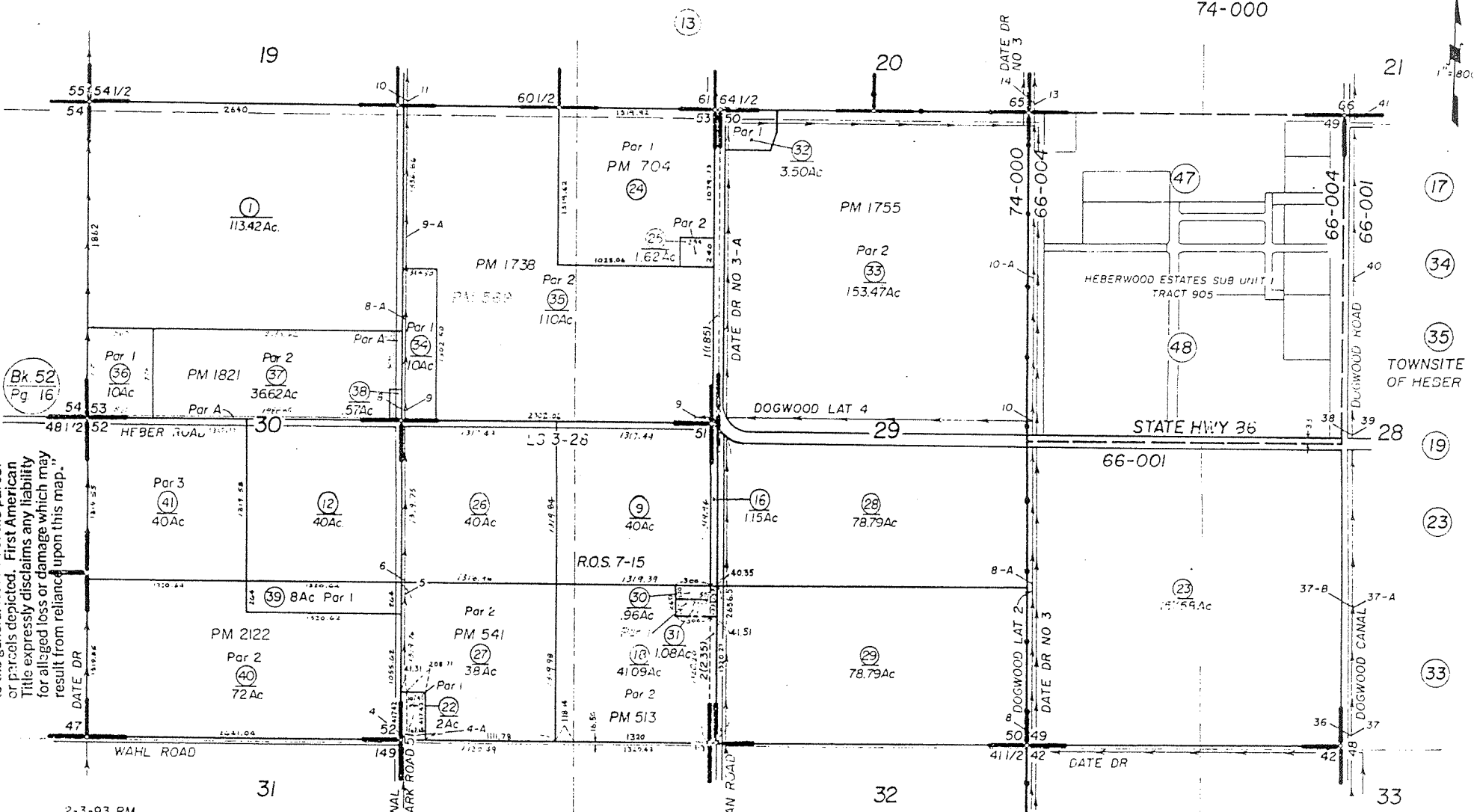
Assessor's Map Bk. 54- Pg. 13
 County of Imperial, Calif.

NOTE - Assessor's Black Numbers Shown in Ellipses.
 Assessor's Parcel Numbers Shown in Circles.



1"=80'

survey of the land depicted hereon.
You should not rely upon it for
any purpose other than orientation
to the general location of the parcel
or parcels depicted. First American
Title expressly disclaims any liability
for alleged loss or damage which may
result from reliance upon this map.



Bk 52
Pg 16

2-3-93 RM
3-23-93 DP
1-6-92 DP
7-25-89 LS
11-20-87 LS

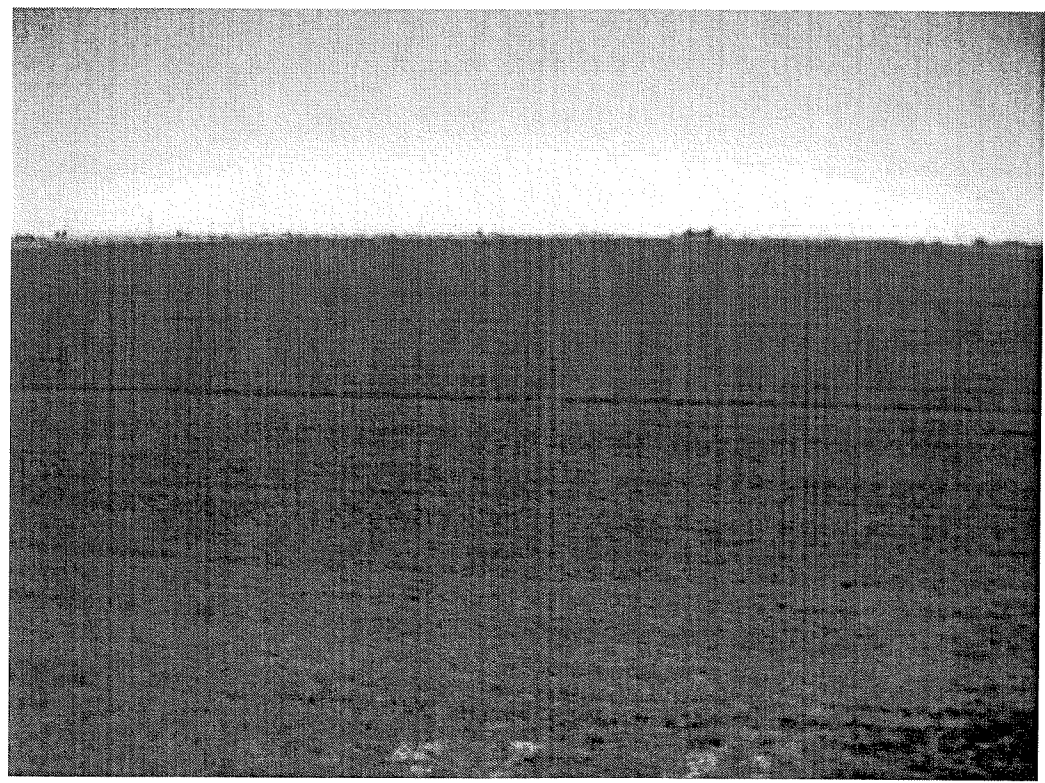
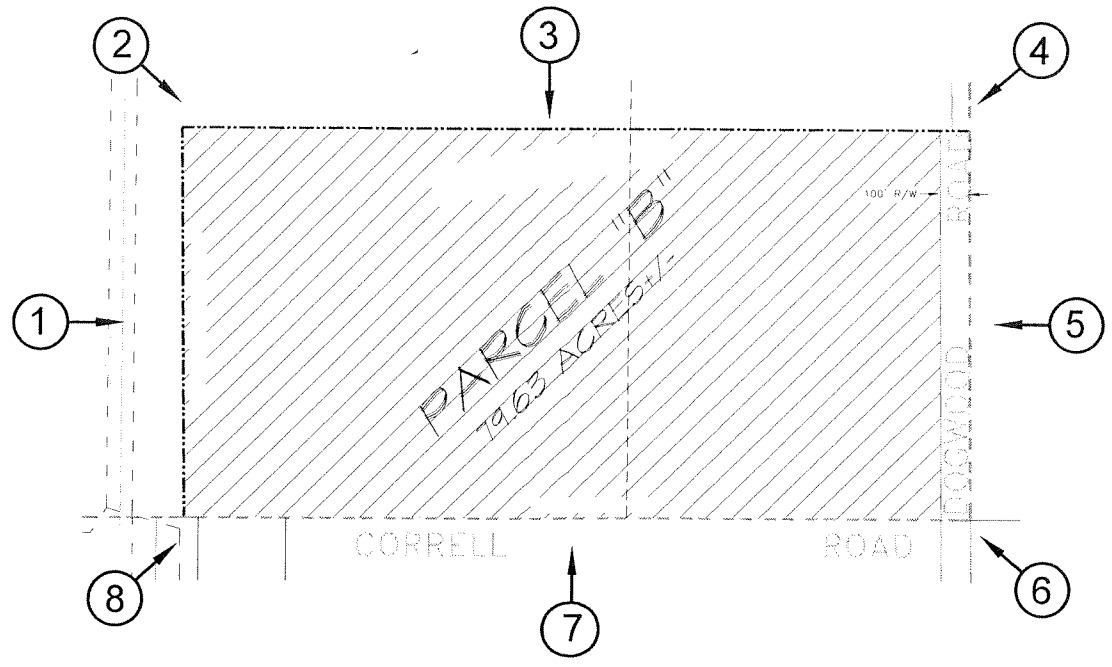
2-10-94 RM
CODAMAP, a product of BIT INCORPORATED

DISCLAIMER:
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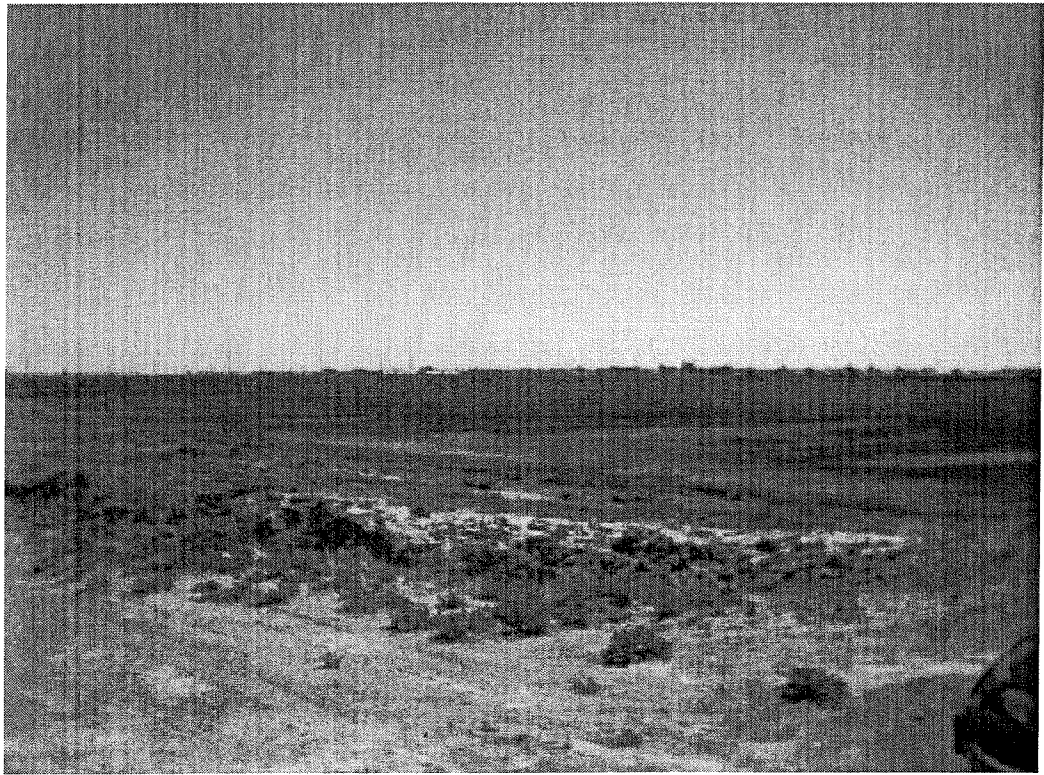
NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles

Assessor's Map Bk.54- Pg.16
County of Imperial, Calif.

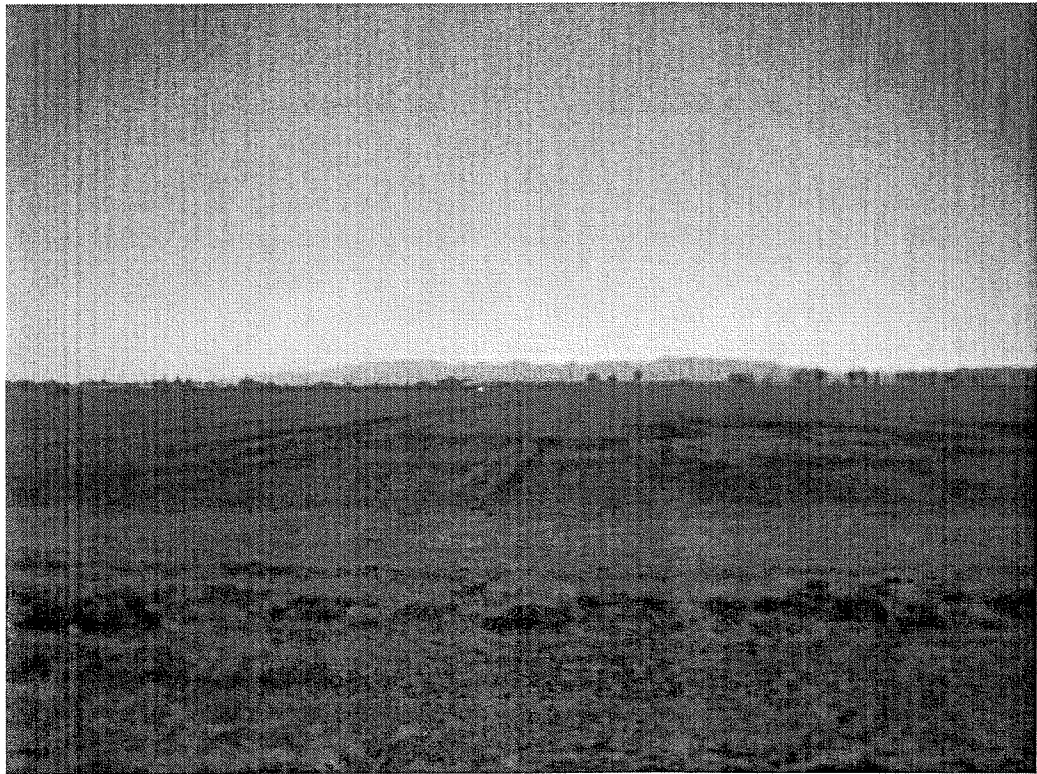
McCABE RANCH SUBDIVISION PHOTO INDEX:



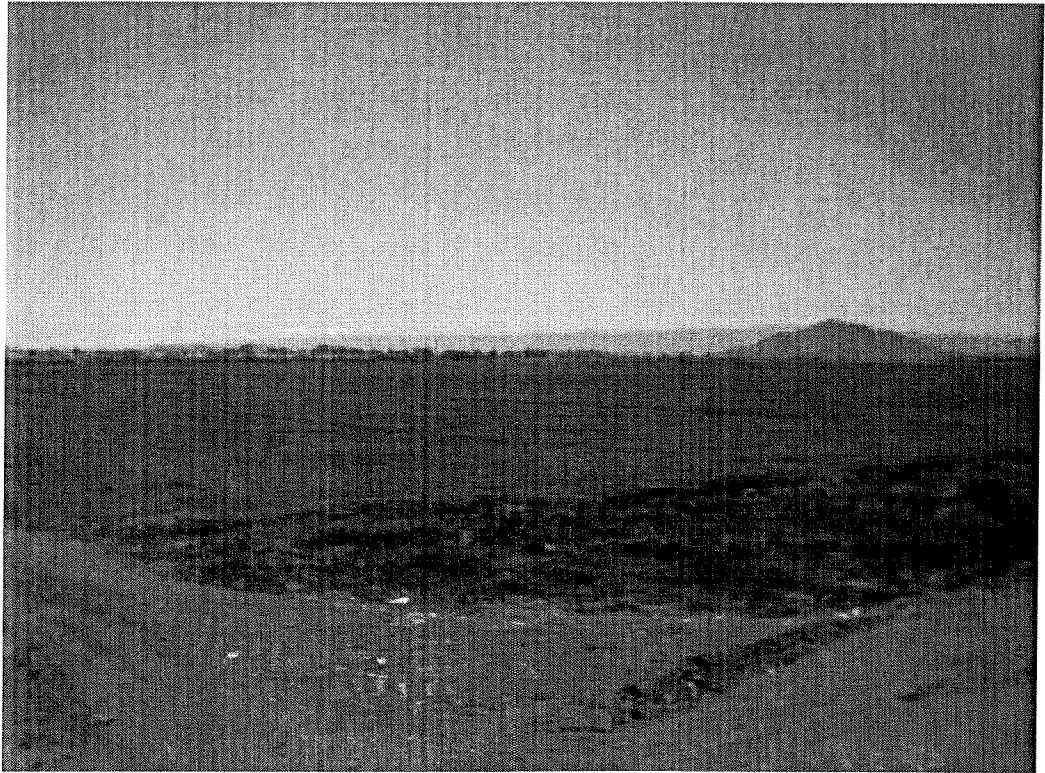
PICTURE 1



PICTURE 2



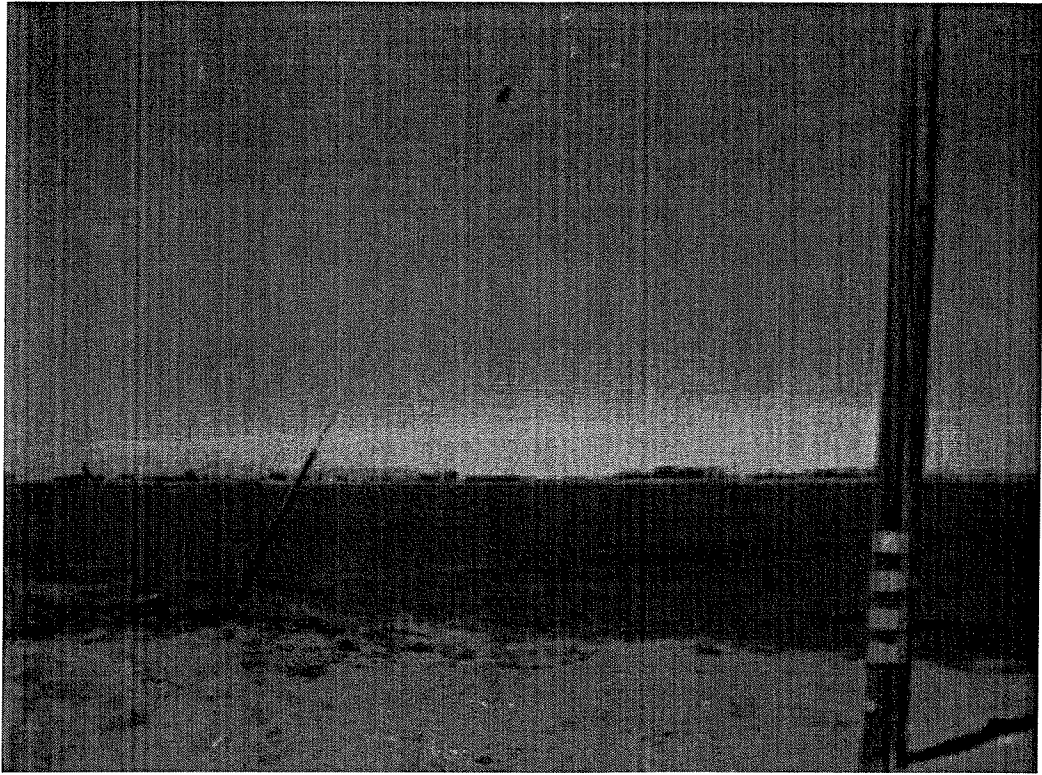
PICTURE 3



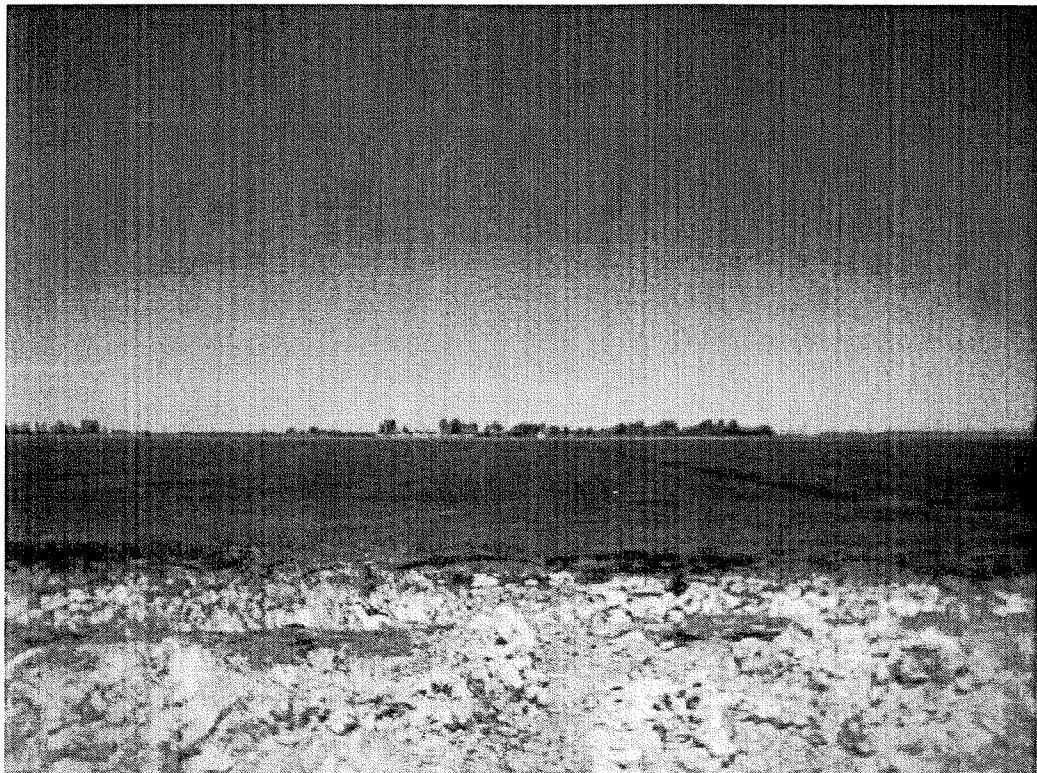
PICTURE 4



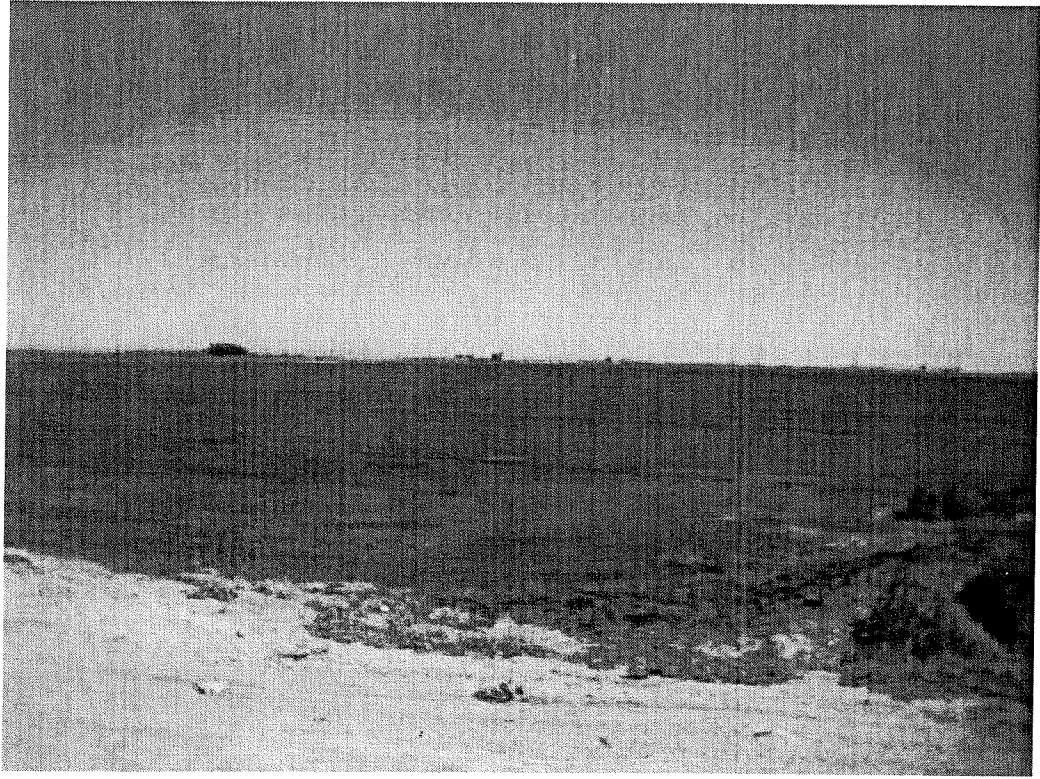
PICTURE 5



PICTURE 6



PICTURE 7



PICTURE 8

DEPARTMENT OF TRANSPORTATION

DISTRICT 11
P. O. BOX 85406, MS-50
SAN DIEGO, CA 92186-5406
PHONE (619) 688-6954
FAX (619) 688-4299



*Flex your power!
Be energy efficient!*

March 6, 2002

11-IMP-086
PM 2.1 (KP 3.3)
McCabe Ranch

Ms. Shelly Martinez
County of Imperial
939 Main Street, Suite B-1
El Centro, CA 92243

Dear Ms. Martinez:

We have reviewed the Traffic Impact Analysis for **McCabe Ranch**, a 441-unit subdivision located at the northwest corner of Dogwood Road and Correll Road northeast of State Route 86 (SR 86).

The Department (Caltrans District 11) has no comments at this time.

If you have any questions please contact Vann Hurst, Development Review Branch, at 619.688.6976.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Figge".

BILL FIGGE, Chief
Development Review and Public Transportation Branch

C: VHurst (MS 50)
GPound (MS 50)
HMorris (MS 55)
Laura Zahn, Consultant
Development Design & Engineering, LLC
1122 State Street, Suite D
El Centro, CA 92243