
CHAPTER EIGHT: ENERGY AND TELECOMMUNICATIONS

8.1 Introduction

This chapter summarizes energy and communications requirements for Specific Plan III (SP III). Also included are implementation measures related to energy efficiency and use of alternative energy sources. The following provisions assume that other entities will provide most services. Some services may be directly owned and administered by the community. These provisions are intended to allow the installation of current technology with resulting savings in energy, pollution, traffic and other impacts. The Master Plan also has a conservation goal through community design to achieve 25 percent energy savings on use of electricity and natural gas.

Chapters Five and Six address public health issues associated with electric and magnetic fields, fuel lines and pipelines. Setbacks and other development standards for these issues are provided in Chapter Three: Land Use (see Section 3.3: Development Standards).

The installation costs associated with electricity distribution are paid by the Modesto Irrigation District (MID), the electricity provider for Mountain House, and recouped through electricity rates. Installation of the gas system is paid by PG&E and recovered through gas rates. Installation of the telecommunications network is paid by the Southwestern Bell Corporation (SBC) and ultimately is charged to end users through user fees. Installation of the cable network will be paid by the cable company and is charged to end users through subscription fees.

8.2 Electricity

8.2.1 Master Plan Summary

The Master Plan establishes a “backbone” or “grid” electrical power distribution system designed in coordination with street construction. The intent is to provide a reliable electrical power system while minimizing risks to public health and risks of damage to utilities and properties adjacent to utility easements. It is assumed that:

The existing Mountain House Substation on Kelso Road in Alameda County will be expanded to meet all future power needs within the Mountain House Community Services District (MHCSO). This will be accomplished by adding substation transformers to keep pace with development. Underground distribution feeders will be installed in conjunction with the construction of roadways and development of neighborhoods.

A 230 kV power transmission line passes through the community in an easement that is restricted to certain uses. Safety considerations for this line are covered in Chapter Six: Public Health and Safety.

Siting of all major electrical facilities at Mountain House is subject to approval of the California Public Utility Commission. A 20% margin of safety is provided in determining community power needs to provide protection against power interruptions.

Public health and safety issues will be considered in developing and implementing the electric transmission and distribution systems. All development will adhere to restrictions of use applicable to areas within the easement rights-of-way of primary power transmission lines, including setbacks along either side of the 230 kV line. The 230kV Rio Oso-Tesla transmission-line easement will be designated for open space uses when it passes through residential areas. Where the transmission line passes through industrial, commercial, and public land uses, it will reflect that land use designation but uses under or adjacent to the easement will be restricted to uses compatible with the easement, such as parking lots.

8.2.2 Specific Plan III Description

The MID is the electricity provider for the entire Mountain House community. The existing MID substation on Kelso Road is designed to be able to serve the entire Mountain House community, however, additional switchgear and transformers need to be added as the connected electrical load increases. Equipment can be added in increments as needed and the facility was designed to be able to flexibly serve the needs of a growing community. Primary electrical distribution voltage is available in existing joint trench facilities at the intersections of Central Parkway and DeAnza Boulevard with Mascot Boulevard. The joint trench system will be extended to the area south of Grant Line Road along Central and DeAnza as needed for service distribution to the SP III area. See Figure 8.1: Joint Trench Facilities for Primary and Secondary Electrical, Natural Gas, Telecommunications, and Cable TV Distribution Lines.

PG&E electrical distribution pole lines exist along the south side of Grant Line Road and the west side of Mountain House Parkway. The lines serve PG&E customers outside of Mountain House, and must remain in service. It is possible for interim electric service requirements, through an agreement with MID, for SP III properties to take power from these PG&E lines temporarily. Ultimately, power to all of the properties within Mountain House must be provided by MID. The PG&E overhead pole lines will need to be placed underground in conjunction with the widening and ultimate improvement of Grant Line Road and Mountain House Parkway. This means that there will be parallel underground electric facilities, those owned by PG&E and those owned by MID. This will be an additional cost to the developers to underground the existing PG&E pole lines.

8.2.3 Implementation Measures

- a. PG&E/MID Review: The County shall submit this Specific Plan and subsequent development applications to MID and PG&E for review and comment on any proposed development in the vicinity of electric power utilities that cross the project site. As part of the development plan review and approval, MID and PG&E shall be responsible for ensuring that the operation and

condition of their electrical facilities are in compliance with Public Utilities Commission (PUC) regulations for proposed land uses on and adjacent to their easement.

- b. Electrical Transformers: Electrical transformers within residential neighborhoods shall be in underground vaults. Where located in commercial and industrial areas and in the downtown area, transformers may be mounted above ground provided they are adequately shielded by landscaping. All setbacks shall comply with County codes.
- c. Approved Land Uses and structures within Easements: The project's proposed land uses and structures within PG&E's electric power transmission line easements of 230 kV shall be subject to PG&E approval and in compliance with PG&E approved land uses and structures. No buildings or structures are allowed within the easement. However, play ground equipment could be accepted if grounded to PG&E specifications.
- d. When any portion of an arterial street is to be included in a development's construction plans, then all of the buried utilities that are ultimately planned to be within the improvement area shall be installed as part of the street improvement project, regardless if any of the utilities are needed for any phase of the development associated with street construction. Conduits or sleeves may be installed in lieu of buried utility, if approved by the MHCS D.
- e. Electrical transformers within residential Villages shall be in underground vaults, subject to MHCS D and MID requirements. The developer shall pay for any incremental costs relating to undergrounding transformers not paid for by MID. Transformers located in the commercial and industrial areas may be placed above ground provided they are aesthetically designed and/or shielded by landscaping subject to MHCS D and MID requirements.
- f. All electrical infrastructure facilities outside the boundary of the Tentative Maps shall be constructed, in accordance with the Master Plans, and fully operational, or bonded for, prior to the recording of the Final Map. The MHCS D General Manager may defer the installation of a facility if it can be demonstrated to the satisfaction of the MHCS D General Manager that it is not needed for the phase being developed. Any deferral will require the developer to provide the MHCS D a bond insuring the eventual construction of the facility.
- g. When public utilities are to be located outside public rights-of-way but within the Tentative Map boundary, the developer shall provide public utility easements for these utilities. The easements shall be shown on all Final Maps and parcel maps.
- h. Easement Setbacks: Structure and setbacks outside but adjacent to power line easements shall comply with the provisions of this Specific Plan (see Section 6.8).
- i. Undergrounding of Lines: All electrical, telephone and Charter Communication Television (CATV) distribution lines shall be underground, where practical.
- j. MHCS D Energy Conservation Plan: All implementing projects shall comply with the applicable provisions of the MHCS D Energy Conservation Ordinance.

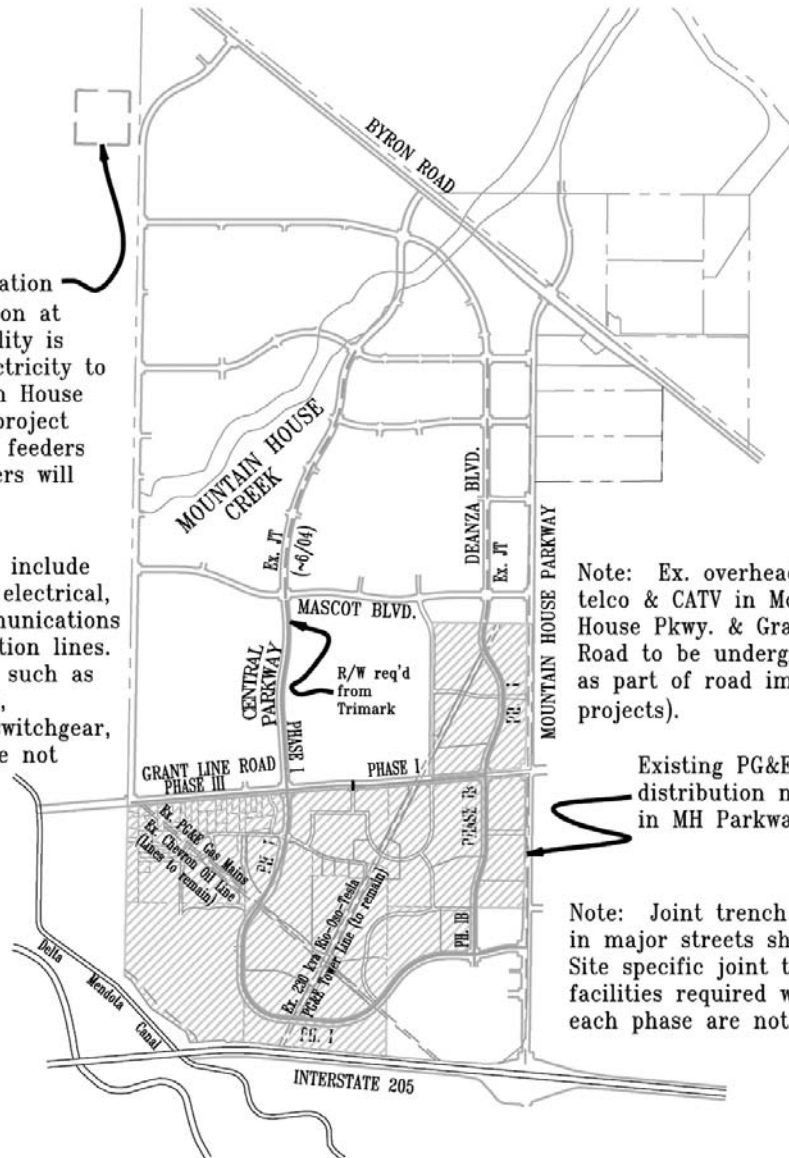
Existing Modesto Irrigation District (MID) substation at Kelso Road. The facility is designed to serve electricity to the ultimate Mountain House community. As the project progresses, additional feeders and larger transformers will be added in planned increments.

Joint trench facilities include primary & secondary electrical, natural gas, telecommunications and cable TV distribution lines. Appurtenant facilities such as gas regulator stations, underground vaults, switchgear, transformers, etc., are not shown.

Note: Ex. overhead power, telco & CATV in Mountain House Pkwy. & Grant Line Road to be undergrounded as part of road improvement projects).

Existing PG&E gas distribution main in MH Parkway

Note: Joint trench routing in major streets shown only. Site specific joint trench facilities required within each phase are not shown.



LEGEND:

- PROPOSED JOINT TRENCH FACILITIES (ELECTRIC (MID), GAS (PG&E), TELECOMMUNICATIONS (SBC) & CATV (CHARTER))
- - - EXISTING JOINT TRENCH FACILITIES
- ▨ LIMITS OF SPIII

NOTE: ASSUMES JOINT TRENCH IN CENTRAL & DEANZA IS COMPLETE TO SOUTH OF MASCOT BLVD. (BY OTHERS).



FIGURE 8-1: JOINT TRENCH FACILITIES FOR PRIMARY AND SECONDARY ELECTRICAL, NATURAL GAS, TELECOMMUNICATIONS, AND CABLE TV DISTRIBUTION LINES

8.3 Natural Gas

8.3.1 Master Plan Summary

The Master Plan calls for a natural gas transmission and distribution system that will deliver a reliable and cost-efficient source of natural gas to the community, while minimizing the risks to public health and the risk of damage to utilities and properties located adjacent to utility easements. The natural gas transmission and distribution systems shall be designed and constructed to assure a reliable and cost-effective source of natural gas to the Mountain House community, and to achieve a 25% savings in the consumption of natural gas as compared to standard usage. Public safety issues shall be considered during construction near natural gas transmission and distribution systems.

The Master Plan assumes a 10% safety margin in the calculation of the community's gas demand and a 25% natural gas savings in the calculation of the community's gas demand. SP III specifies land uses and development standards adjacent to natural gas lines. The County will submit SP III to PG&E for review.

8.3.2 Specific Plan III Description

Figure 8.1: Joint Trench Facilities for Primary and Secondary Electrical, Natural Gas, shows the proposed layout of the natural gas transmission and distribution system for Mountain House. An existing PG&E gas transmission pipeline in Mountain House Parkway serves the Mountain House community through an existing regulator station at the intersection with Mascot Boulevard that reduces the transmission gas pressure to local distribution pressure. The distribution system includes gas pipelines, generally operating at 60 pound(s) per square inch gauge (psig) or less, and individual gas regulators that take the natural gas directly into homes and businesses.

Two existing PG&E “backbone” gas transmission pipelines, 26-inch and 36-inch in diameter, traverse the SP III site from southeast to northwest. Parallel to these two lines and within the same easement is an 18-inch Chevron oil products pipeline. These major facilities will remain in service through the development of SP III. A separate Pipeline Risk Analysis was conducted by the San Joaquin County Community Development Department to evaluate the risks associated with development in proximity to these pipelines. To mitigate the risks, the report presented recommendations for the establishment of a minimum “no-build” setback distance of 68 feet from the center of the nearest pipeline. This setback distance is respected in the preferred land use plan so that no permanent structure may be built in proximity to the major gas transmission and oil products pipelines.

8.3.3 Implementation Measures

- a. Approved Land Uses within Easements: The project's proposed land uses within natural gas transmission pipeline, and oil products pipeline easements shall be subject to PG&E, Chevron-Exxon approval, and be in compliance with their approved land uses.
- b. Utilities Locations: Utilities (electrical distribution, telephone, cablevision, natural gas, and other) both above ground and underground or concealed public facilities, including surface access boxes or manholes, shall be located such that they will have a minimum impact on maintenance and vehicular and pedestrian traffic.
- c. Surface Facilities: Future development plans shall closely coordinate the placement of surface public facilities with the architectural design of the community to minimize the adverse impact on aesthetics.
- d. When any portion of an arterial street is to be included in a development's construction plans, then all of the buried utilities that are ultimately planned to be within the improvement area shall be installed as part of the street improvement project, regardless if any of the utilities are needed for any phase of the development associated with street construction. Conduits or sleeves may be installed in lieu of buried utility, if approved by the MHCSD.
- e. All gas infrastructure facilities outside the boundary of the Tentative Maps shall be constructed, in accordance with the Master Plans, and fully operational, or bonded for, prior to the recording of the Final Map. The MHCSD General Manager may defer the installation of a facility if it can be demonstrated to the satisfaction of the MHCSD General Manager that it is not needed for the phase being developed. Any deferral will require the developer to provide the MHCSD a bond insuring the eventual construction of the facility.
- f. When public utilities are to be located outside public rights-of-way but within the Tentative Map boundary, the developer shall provide public utility easements for these utilities. The easements shall be shown on all Final Maps and parcel maps.

8.4 Telecommunications/Cable

8.4.1 Master Plan Summary

The Master Plan calls for an extensive telecommunication services to satisfy current and anticipated future needs, including adequate spare communication lines for expansion of services within the community as needed for the next 20 to 40 years.

The Mountain House telecommunications transport system will consist of a high speed digital fiber optics network with a centralized hub for all forms of telecommunications to serve residential,

business, and public services including fast response to emergencies (police, fire and major medical).

8.4.2 Specific Plan III Description

Southwestern Bell Corporation (SBC) provides telephone and internet service to Mountain House. The Mountain House project is fed with optical fiber originating from the Tracy Central Office. To feed SP III, a fiber would be extended within a new joint trench southward down De Anza Boulevard from the existing controlled environmental vault (CEV) near the intersection of Legacy Drive and De Anza Boulevard to a location near the intersection with Grant Line Road. At this location a new CEV would be placed containing the “next generation digital loop carrier” (NGDLC) equipment necessary to serve the SP III area. In addition, the optical fiber would be continued east on Grant Line Road and south down Mountain House Parkway to form a complete fiber ring with existing fiber on the south side of I-205. Feeder and distribution cables from the CEV will follow the most direct routes to serving area interface cabinets (SAI’s), which will be placed strategically throughout the proposed SP III.

Charter Communications provides cable television and internet service to the Mountain House Community. Mountain House is fed with a fiber optic cable originating at Charter’s main office in Turlock. Within Mountain House, the fiber optic cable is extended down DeAnza Boulevard from a hub station located near the wastewater treatment plant. The fiber optic cable will be extended within the joint trench in the main roadways to the various neighborhood areas. There, the cable comes to a fiber optic node station where it is converted to a coaxial cable system for distribution wiring within the neighborhoods.

8.4.3 Implementation Measures

- a. Communications facilities shall provide for splicing of fiber optic cables and other requirements, as needed. Preliminary locations, which are subject to change as designs are refined, are in neighborhood centers, at the Town Center, and at Mountain House Business Park.
- b. The backbone telecommunications facilities shall be constructed underground and follow the main routes of the other service utilities.
- c. Residential Equipment: As a condition of Tentative Map approval, each residential unit shall have an appropriate “in unit” hook-up terminal.
- d. Communication systems of the latest technology shall be provided for use by the schools, parks and recreation and public infrastructure.
- e. As a condition of Tentative Map approval, each business shall have an appropriate “in unit” hook-up terminals and equipment.
- f. When any portion of an arterial street is to be included in a development’s construction plans, then all of the buried utilities that are ultimately planned to be within the improvement area shall be installed as part of the street improvement project, regardless if any of the utilities are needed

for any phase of the development associated with street construction. Conduits or sleeves may be installed in lieu of buried utility, if approved by the MHCS D.

- g. Any phased development shall install all “in-tract” utilities needed to serve its development. In addition, if any future adjacent or nearby phases of the development, or adjacent neighborhoods, will depend on obtaining service from such utilities, then the utility lines shall be sized to serve these future developments. Any utility lines that are intended to be used by an adjacent development or neighborhood shall be installed up to the phase or Tentative Map boundary line to make it available for future extension.
- h. All communications infrastructure facilities outside the boundary of the Tentative Maps shall be constructed, in accordance with the Master Plans, and fully operational, or bonded for, prior to the recording of the Final Map. The MHCS D General Manager may defer the installation of a facility if it can be demonstrated to the satisfaction of the MHCS D General Manager that it is not needed for the phase being developed. Any deferral will require the developer to provide the MHCS D a bond insuring the eventual construction of the facility.
- i. When public utilities are to be located outside public rights-of-way but within the Tentative Map boundary, the developer shall provide public utility easements for these utilities. The easements shall be shown on all Final Maps and parcel maps.