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File 1984 -0025 Project Name: 230 KV Transmission Line – Special Use Permit

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		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the in some instances, not all entries designated to be scanned by the department are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been provided. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	**Table of Contents**
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DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Action Sheet	X		Letter From Karl Metzner to Larry Keith re: request of 12/13/84 to revise special use approval from Alternative A to Alternative D- 3/20/85
X	X	Transmission Line Siting Study - Map	X	X	Letter from John Muir to Karl Metzner re; substation– 4/21/86
X	X	Development Schedule			
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X	X	Public Meetings Held to Date – 5/14/84			
X		Corridor Evaluation Criteria			
X		Route Evaluation Criteria			
X		Decision No. C83-1790 - Before the Public Utilities Commission of the State of Colorado – 11/30/83			
X		Report on – Effects of Transmission Lines on Birds in Flight– by Dean Miller, Transmission Engineering Manager, Public Service Company of CO - 10/82			
X		Corridor Combinations – Grand Junction Conversion Study			
		Letter from Susan Rinker, Planning Commission to Larry Keith, Public Service Co. re: concerns – 11/28/83			

B. PROJECT NARRATIVE

1. Introduction

Public Service hereby requests approval from Grand Junction, Colorado, and subsequent issuance of a Special Use Permit for the Project consisting of the construction, operation, and maintenance of 230,000 volt transmission lines and substation to be located within the 1/4-mile wide corridors designated on Exhibit Q-1 (Figure 2-8) within the city limits of Grand Junction. More specifically, this includes portions of the following facilities:

Transmission Lines:

- o Horizon-Grand Junction Segment
- o Grand Junction-Clifton-Colorado Ute Segment

Substation:

- o Grand Junction Substation

These facilities are permitted in all zone districts involved as Special Uses.

Alternate corridors which were considered are identified. These are shown as primary alternatives on Exhibit A1-1 (Figure 2-1) and as alternatives considered but rejected on Exhibit A1-2 (Figure 2-6) in Appendix 1. A discussion of the process used to select alternatives and a comparison of alternate corridors is also presented in Appendix 1. A complete discussion of alternatives is included in the Environmental Assessment which is submitted as Appendix 2 of this Application.

Permits are also required from Mesa County and from the City of Fruita. A comprehensive Environmental Assessment, Appendix 2, was prepared and submitted to the Bureau of Land Management for decision and issuance of a right-of-way grant on federal lands.

2. Project Need

Public Service proposes to upgrade its existing 69,000 volt transmission and substation system in Mesa County and the Grand Junction vicinity to 230,000 volts.

The existing transmission and substation system was built in the late 1950's and early 1960's. Minor additions were made to the system in the late 1960's and again in the 1970's as the demand for electricity increased. The system is now operating above its capacity during peak periods and is unable to serve the area's electric demand as the system capacity has not been upgraded appreciably for 25 years. After analyzing four load growth scenarios, five cases which modeled alternate systems were examined under similar loading conditions, and Public Service selected a medium growth scenario as the best indicator of future system loads. The medium growth scenario assumes five percent annual growth in electric demand through 1985 and 3.5 percent annual growth through the year 2010. On the basis of this estimated growth, Public Service determined that converting the existing system to a 230,000 volt (230-kV) system would best serve the needs of customers in Mesa County and the Grand Junction vicinity for a reasonable period into the future.

Public Service is an operating public utility engaged in the generation, purchases, transmission, distribution, and sale of electric power and energy throughout extensive areas of the State of Colorado subject to the jurisdiction of the Public Utilities Commission of the State of Colorado.

The nature of the construction is such that the investment and related expenditures will not be recovered from any customer specifically, but will be treated in the usual manner for rate-making purposes; i.e., the cost will be spread out over all of the Applicant's customers.

The Public Utilities Commission authorized Public Service to construct the proposed facilities and issued the Certificate of Public Convenience and Necessity in Decision No. C83-1790 on November 30, 1983.

3. Description of Project

The Grand Junction Conversion involves the construction of approximately 55.5 miles of 230,000 volt transmission line within the 1/4-mile corridors, the construction of two new 230,000 volt substations, and the modification of the existing Cameo Substation, Horizon Substation, and Grand Junction Substation. Approximately 6.8 miles of the Grand Junction Conversion will replace the existing 69,000 volt transmission lines and follow the same general alignment, approximately 3.0 miles will be constructed parallel to existing 69,000 volt lines, approximately 45.9 miles will be located within new corridors.

For purposes of organization and reference, the Grand Junction Conversion has been divided into transmission lines and substations. The transmission lines have been subdivided into four distinct Segments: Cameo-Fruita, Fruita-Horizon, Horizon-Grand Junction, and Grand Junction-Clifton-Colorado Ute.

Portions of the Horizon-Grand Junction Segment, portions of the Grand Junction-Clifton-Colorado Ute Segment, and the Grand Junction Substation are within the city limits of Grand Junction and make up the Project for purposes of this Application.

a. Transmission Lines

I. Horizon-Grand Junction Segment

The Horizon-Grand Junction Segment is the shortest Segment and involves approximately 2.2 miles of transmission line from a point near the existing Redlands Substation and the existing Grand Junction Substation. This Segment will complete a connection between the Horizon and Grand Junction Substations and will be located on the same general alignment as an existing Public Service line. Single column steel poles will be used on this Segment.

II. Grand Junction-Clifton-Colorado Ute Segment

The Grand Junction-Clifton-Colorado Ute Segment consists of an 11.7 mile transmission line between the existing Grand Junction Substation near downtown and the new Clifton Substation. A transmission line would also be constructed between the new Clifton Substation and an existing Colorado Ute Substation. This Segment of the Project will utilize a mixture of structure types; single column steel poles, single column wood poles, and wood H-frames.

b. Substation

The Project will include the addition of 230,000 volt equipment at the existing Grand Junction Substation.

4. Construction Schedule

Construction of the Project will include surveying, detailed engineering, the acquisition of land rights, construction of the new 230,000 volt facilities, and removal of portions of the existing 69,000 volt facilities. Construction is expected to be completed 36 months after all permits have been granted. (Refer to response to Grand Junction Submittal Requirement O.)

5. Compliance with Grand Junction Zoning and Development Code

a. Chapter 4 Zoning

4.5 Special Uses

4.5.1 The Project is allowed in all zone districts involved as a special use as referenced by 4.3.4 Use Matrix, Figure 4.3.4 Use/Zone Matrix of the Grand Junction Zoning and Development Code.

4.5.2 Procedure for Special Use Permit.

4.5.2.A The submittal requirements set forth in 4.7 of the Grand Junction Zoning and Development Code and items identified in the preapplication conference on the Special Use Action Sheet have been followed in preparing and submitting this Application.

4.5.2.C The Applicant's response to criteria established in 4.8 of the Grand Junction Zoning and Development Code is submitted herein.

4.5.2.F The only signs associated with the Project will be "DANGER HIGH VOLTAGE" signs placed on the substation fences. Such signs will conform to 5.7, Sign Regulation of the Grand Junction Zoning and Development Code.

4.7 Submittal Requirements for Special and Conditional Uses

4.7.1 Refer to Exhibit Q-1 (Figure 2-8) for a plan of the Project corridors and Exhibit Q-2 for a site plan of Grand Junction Substation.

4.7.2.A Refer to Exhibits Z-1, Z-2, and Z-3 for typical structure types, and Exhibit Q-2 for elevations of Grand Junction Substation.

4.7.2.B Construction of the Project will include surveying, detailed engineering, the acquisition of land rights, construction of the new 230,000 volt facilities and removal of portions of the existing 69,000 volt facilities. Construction is expected to be completed 36 months after all permits have been granted. (Refer to response to Grand Junction Submittal Requirement O).

4.7.2.C Agreements, provisions, or covenants which will govern the Project include the commitments proposed herein for the Project.

4.7.2.D Other material which may be needed to adequately review the Project is included in the Environmental Assessment attached hereto as Appendix 3. Much of this information has been extracted and reiterated in this application or referenced for the convenience of those reviewing this request.

4.7.2.E Proposed mitigation measures include minimizing disturbance from construction, revegetating areas that are disturbed, and removing portions of the existing 69-kV system. The amount of area that will be disturbed by construction is shown in Exhibit Z-1 (Table 2-6). Reclamation practices and mitigation are described in detail in the following listing of specific mitigation measures.

1. Construction plans, methods, and practices are extremely important for the Project, and shall be designed to minimize damage to privately owned lands involved in the Project. All work shall therefore be performed in a manner which will minimize marring and scarring of the landscape or silting of waterways.

   The methods of construction shall take into account soil stability, the protection of natural vegetation, and protection of adjacent resources, such as the protection of natural habitat for wildlife and appropriate measures for the prevention of silt deposition in water courses.

   The force employed by the contractor shall be advised that all aspects of the construction operation and activity shall be geared to the preservation and enhancement of natural beauty and the conservation of our natural resources.

   Public Service will assign company inspectors to follow the contractor and a right-of-way agent as a liaison with landowners to ensure compliance with the construction requirements.

2. The contractor shall limit the movement of crews and equipment to the right-of-way (ROW) and specified access routes. Movement on the ROW shall be limited to minimize damage to grazing lands, crops, orchards, or other property, and shall avoid marring the land.

3. Contractor shall supply temporary culverts, bridges, and gates, where required and at the option of the inspector, and shall repair promptly any bridges, culverts, fences, gates, phone lines, sidewalks, curbs, gutters, or ditches damaged during construction, and shall leave ditches, roads, fences, gates, culverts, phone lines, sidewalks, curbs, gutters, and bridges in as good condition as found and shall operate in such a manner as to keep property damage to a minimum.

4. Before the contract is considered complete, the contractor shall repair all property damaged in any way to the reasonable satisfaction of the owner and company.

5. The cost of repairs due to damage done by the contractor to any property in the process of construction of the Project, shall be borne by the contractor.

6. All crates, boxes, metal bands, lagging, wrappings, and other material, equipment, and refuse of every kind shall be cleaned up and disposed of during and following construction of the Project. This clean-up work shall be done to the satisfaction of the Inspector before the contract will be considered complete.

7. Contractor shall adequately protect all open holes, where necessary, until concrete or poles are placed. Hole covers shall be furnished by the contractor.

8. When weather and ground conditions permit, the contractor shall obliterate all contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands; ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, disking, or other approved methods. Damage to the ditches, tile drains, terraces, roads, and other features of the land shall be corrected. At the end of each construction season and before final acceptance of the work in these agricultural areas, all ruts shall be obliterated, and all trails and areas that are hard-packed as a result of contractor operations shall be loosened and leveled. The land and facilities shall be restored as nearly as practicable to their original condition. Ground vehicular equipment will not be operated if soil and weather conditions result in excessive rutting.

9. Water bars or small terraces shall be constructed across all ROW trails on hillsides to prevent water erosion and to facilitate natural revegetation on the trails.

10. The contractor shall comply with all federal, state, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel will be instructed on the protection of cultural and ecological resources. To assist in this effort, the construction contract will address: (a) federal and state laws regarding antiquities and plants and wildlife, including collection and removal, and (b) the importance of these resources and the purpose and necessity of protecting them.

11. The contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment.

12. On completion of the work, all work areas except existing access trails will be revegetated as soon as practical, using an approved seed mixture. Typical seed mixtures are listed in Exhibits B-2 (Table 2-10) and Exhibit B-3 (Table 2-11). Alternatively, in areas where mutually acceptable, the ground shall be scarified or left in a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. Site-specific revegetation measures will be developed after consultation with the landowner or land manager. Public Service will also work with landowners to control weeds within the right-of-way. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.

13. Construction roads not required for maintenance access shall be restored to the original contour and made impassable to vehicular traffic. The surfaces of such construction roads shall be revegetated, as above, or scarified as needed to provide a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. Where it is the desire of the land owner or land managing agency that access be left open in specific locations on their land, Public Service will review these requests and incorporate them into the Access Plan as appropriate.

14. Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, and other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, oil, and other petroleum products.

15. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.

16. Excavated material or other construction materials shall not be stockpiled or deposited near or on streambanks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.

17. Waste waters from concrete batching or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material is defined as that material which will settle from the water by gravity during a one-hour quiescent detention period.

18. The emission of dust into the atmosphere will not be permitted during the manufacture, handling, and storage of concrete aggregates, and the contractor shall use such methods and equipment as are necessary for the collection and disposal, or prevention, of dust during these operations. The contractor's methods of storing and handling cement shall also include means of eliminating atmospheric discharges of dust.

19. Burning or burying of waste materials on the ROW or at the construction site will not be allowed. The contractor shall remove all waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW.

20. The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic, and shall conduct his construction operations so as to offer the least possible obstruction and inconvenience to public traffic.

21. The operation of construction equipment will be minimized in drainages. Where needed, culverts will be installed during the dry season or during periods of no flows, when possible. Crossing drainages will be minimized, especially during flow periods.

22. The finish of all steel structures, conductors, and insulators will be non-specular to reduce visual impacts. The finish of all woodpoles and wood cross members will be brown in color; the poles will be treated with a preservative. All substation structures, equipment, and buildings will be painted earthtone colors.

23. Additional visual resource mitigation measures include careful structure selection and location in sensitive areas and minimizing the disturbances associated with access.

24. A Class III (100%) cultural resources survey will be conducted prior to construction on lands affected by the Project. Following identification of the cultural resources within the survey area, a preliminary report will be prepared and maps with site locations will be compiled. The preliminary report will include a brief description and evaluation of cultural resources located within the survey area and recommendations for avoidance. The preliminary report and maps will be submitted to Public Service transmission line engineers. The site information will be used in siting and designing towers, access roads, and other construction areas, to avoid the cultural resources along the route to the extent possible. The BLM will consult with the Colorado State Historic Preservation Officer and the Advisory Council on Historic Preservation concerning possible mitigation measures for sites eligible for the National Register of Historic Places. Types of mitigation would include excavation and analysis, avoidance of disturbance, and recording through photographs, drawings, or collection prior to disturbance.

25. Impacts to paleontological resources would result from disruption of fossil-bearing strata during construction of Project facilities. In general, measures to reduce these impacts would include (1) avoidance of known fossil collection sites and (2) survey of suspected fossil-bearing strata during construction, operation, and reclamation of the Project. Fossil finds encountered during the course of the Project would be brought to the attention of the proper federal and state agencies.

26. The need for mitigation to endangered or threatened species will be identified during formal consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act. Mitigation for other species of concern (e.g., raptors, sage grouse) would be identified during informal consultation with the appropriate federal and state agencies. All mitigation would be designed on an as needed and case-by-case basis. The sensitive areas along the chosen route identified during the baseline inventory and environmental review process would be re-examined, if necessary, prior to construction to ascertain the status (e.g., black-footed ferret searches in prairie dog towns, confirmation of raptor nesting activity), impacts assessed at that time, and, if necessary, site-specific mitigation designed in cooperation with the appropriate agencies.

27. Certain segments of the existing 69-kV line are proposed to be abandoned, used for distribution, or remain in service. See Exhibit B-11 (Figure 2-11). The portions which are to be abandoned will be dismantled, removed from the right-of-way, and the disturbed areas revegetated, using the same seed mixtures as shown for the new transmission lines. See Exhibit B-2 (Table 2-10) and Exhibit B-3 (Table 2-11).

4.8 Criteria for Evaluating Special and Conditional Uses

4.8.1 General Criteria

4.8.1.A A comprehensive Environmental Assessment was prepared which evaluated alternatives by mapping and documenting land use and other environmental conditions along the corridors. Potential conflicts or impacts that would result from the construction and operation of the Project were identified to select the alternative which achieved the best overall level of compliance with the route evaluation criteria, thus resulting in the lowest level of conflict. These criteria included compliance with Mesa County, Colorado, 1983 Land Use Development Policies. The Project has been sited and designed to be compatible with adjacent uses. Consideration was given to structure type, material, right-of-way requirement, method of construction, revegetation and landscaping, and adjacent uses to minimize the visual and physical impacts of the Project during construction, operation, and maintenance.

4.8.1.B Design features of the Project are discussed throughout this application and in the Environmental Assessment. Refer to Response to Grand Junction Submittal Requirement B., 5.a. Chapter 4 Zoning, and 5.b. Chapter 5 General Regulations.

4.8.1.C There are no planned accessory uses associated with the Project.

4.8.1.D The Project will provide one of the necessary public services listed in this Section of the Grand Junction Zoning and Development Code: electricity. The Project has been planned to provide adequate and reliable electric service to customers in Grand Junction and the Mesa County vicinity through the year 2010. The implementation of the Project will also allow the other listed services which rely on electricity to be provided without reduction to existing uses. Refer to Grand Junction Submittal Requirement B, Project Narrative, 2. Project Need.

4.8.1.E The Project will be unmanned and will not add to the population in the vicinity of the Project and thus will not require any additional schools, parks, hospitals, business or commercial facilities, or transportation facilities.

4.8.1.F Proper maintenance will be provided for the Project at all times. Maintenance activities will be conducted on a regularly scheduled basis to ensure the proper operation of the transmission lines and

substations. Substation sites will be maintained in accordance with local requirements to ensure an attractive, weed free, upkept appearance.

4.8.1.G The Project will conform to adopted plans, policies, requirements for parking and loading, signs, and all other applicable regulations of the Grand Junction Zoning and Development Code. There are no parking or loading activities associated with the Project. "DANGER HIGH VOLTAGE" signs will be placed on the substation fences and are exempt from the Grand Junction Sign Regulation, Section 5.7 by 5.7.3.A and 5.7.3.J; construction and safety regulations will be adhered to.

4.8.2 Specific Criteria Matrix

In addition to the general criteria previously addressed, the "Grand Junction Zoning and Development Code" provides a specific criteria matrix for evaluating certain special uses, including facilities for electric service. These criteria are addressed in the following discussion.

Does the Location of the Use Benefit Existing Facilities?

Construction of the Project will benefit existing facilities by providing a more reliable electric system for present and future users in Grand Junction and the Mesa County vicinity. This benefit will result from construction of the overall system and is not related to the specific location of the transmission line facilities. However, the locations of the substations are more critical in providing reliable service and utilizing the full capacity of the facilities.

Could There be Adverse Impacts on Natural Resource and Wildlife Habitat Areas, and Can These Impacts be Mitigated?

The Project will not result in any significant adverse effects on natural resource or wildlife habitat areas. Significant impacts have been avoided through incorporation of the extensive mitigation measures listed in Section 4.7.2.E of this Application. A complete analysis and discussion of the Project's impacts are included in the Environmental Assessment that has been submitted as Appendix 2 of this Application.

Do Safety Considerations Require Special Fencing and Signage?

The transmission lines do not require special fencing and signage. The Grand Junction Substation will be enclosed by an eight foot high chain link security fence, including a three-strand barbed wire outrigger. "DANGER HIGH VOLTAGE" signs will be placed on the substation fences.

Are Prevailing Wind Factors Such as to Cause Adverse Impacts from the Proposed Location of the Use?

The Project will be designed to withstand wind and other climatic factors; the location of the transmission lines and substations will not result in increased wind hazard to adjacent uses.

Is There a Need for the Facility on a Community-Wide Basis?

The Project's need has been documented by the Public Utility Commission's issuance of a Certificate of Public Convenience and Necessity (PUC Decision C83-1790). A copy of the PUC decision is included in the EA which has been submitted as part of this Application.

4.10 Uses Not Mentioned

4.10.1 It is hereby requested that the Administrator make a determination, and the Planning Commission ratify, that "Neighborhood Electric Substations," a use which is not mentioned, be interpreted to fit into all zone districts as a special use requiring a special use permit, like and similar to transmission lines, under the terms of the Grand Junction Zoning and Development Code. "Neighborhood Electric Substations" are defined as "facilities used for the purpose of reducing voltages to levels less than 115 kilovolts for distribution to individual customers."

b. Chapter 5 General Regulations

5.1 General Performance Standards

5.1.1 General

The transmission line development will be located on a right-of-way which meets or exceeds the requirements of the National Electrical Safety Code. These requirements and Public Service Company's standard easement ensures that compatibility problems will not be created. There will be no off-site odors, vibrations, glare, or noise caused by the transmission line or substations.

The Project will be constructed, operated, and maintained so that any dust, fumes, odors, refuse matter, smoke, vapor, noise and vibration will be confined to the transmission line rights-of-way and substation sites or will be effectively minimized so as not to be injurious to the neighborhood or detrimental to the general public.

5.1.2 Outdoor Storage

Once construction is completed, there will be only temporary storage uses from time to time in connection with maintenance activities.

5.1.3 Illumination

The only illumination associated with the Project is the lighting installed in the substation yards. This is typically low level lighting for security and emergency maintenance. This lighting will be arranged to reflect light away from nearby residential properties and away from the vision of passing motorists.

5.1.4 Vehicular Traffic Areas

5.1.4.A Vehicular access to the Project transmission lines will be infrequent, primarily during emergencies. Existing roads will be used to the extent possible. The right-of-way will be reclaimed to the condition of its present use. Vehicular access to the Grand Junction Substation will also be infrequent. The substation yard will be surfaced with gravel; access to the site is asphalt surfaced. The transmission line right-of-way and substation site will be maintained in good condition free of weeds, dust, trash, and debris.

5.1.4.B As noted above, traffic along the Project transmission line and substation will be infrequent and will not unreasonably disturb area residents. The majority of vehicular access will occur during emergency situations such as power outages.

5.1.4.C All entrances and exits to the Project will be via existing roads and will not result in any additional traffic congestion. There is no parking associated with the Project.

5.1.5 Fences

The Project will be constructed, operated, and maintained to meet all safety requirements of the National Electrical Safety Code. The transmission lines do not require fencing. The Grand Junction Substation is presently enclosed by an eight foot high chain link security fence, including a three-strand barbed wire outrigger.

5.1.6 Structure Height

The Project transmission structures (electronic towers) are exempted from maximum height limitations by this section of the Grand Junction Zoning and Development Code. The Project substation structures are also exempted; however, the substations control buildings will be designed and constructed to comply with maximum building height limitations.

5.1.7 Setbacks

There are no "yards" associated with the Project transmission lines. The Project substations will be designed and constructed to comply with required setbacks as determined by the classification of the existing or officially mapped abutting roads, streets, and rights-of-way.

5.1.8 Lot Areas

5.1.8.A The Project will be unmanned and unoccupied, and does not require a sewage disposal system. There are no "lots" associated with the Project transmission lines.

5.1.8.B The Project substations are exempted by this section; however, no new lots will be created as Grand Junction Substation will be built on an existing site.

5.2 City Property

The Project does not propose to use any City-owned property as defined by this section.

5.3 Streets

5.3.1 Public Right-of-Way Use

Utility poles and links of the Project transmission lines may occupy public rights-of-way.

5.3.2 Traffic Visibility

No wall, fence, shrub, plant, or any other item will be erected or grown to a height exceeding thirty inches above grade within the triangular area as shown in Figure F5.3.2 of the Grand Junction Zoning and Development Code.

5.4 Design Standards and Development Requirements

5.4.1 Streets, Alleys, and Easements

5.4.1.A The Project does not require or include any streets.

5.4.1.B The Project transmission lines do not require or include any alleys. Existing access to the existing Grand Junction Substation is via an existing alley running west from 6th Street. The Project does not propose any new alleys.

5.4.1.C Easements will be created by the Project transmission lines. Easements will be provided along lot lines of the Grand Junction Substation as required.

5.4.1.D The transmission lines will not require permanent access. Access for construction and maintenance will be by the use of existing streets and roads, and the transmission line right-of-way. The Grand Junction Substation has existing access and will not generate any traffic beyond the existing street and road capabilities. The Project does not propose to dedicate any rights-of-way.

5.4.2 Lots and Blocks

5.4.2.A There are no "blocks" associated with the Project.

5.4.2.B There will be no "parcels" created by the Project.

5.4.3 Irrigation System and Design

There will be no irrigation systems required by the Project.

5.4.4 Potable Water System

5.4.4.A & B Drinking water is not required for the Project as neither the transmission lines nor the substation will be occupied or manned. Drinking water will be consumed during construction activities and will be supplied, by the individual workers, from existing developments which are presently served by area water systems.

5.4.4.C The Project is within an average eight (8) minutes fire response time. The Project transmission lines, by nature of the corridor selection criteria, are not located such that fire hydrants are readily available.

The Project has been designed and will be operated and maintained such that the possibility of fire is very remote. In the case of lightning, shielding wires connected to the highest point on the transmission structures above the conductors act like a lightning rod. They are connected to ground so that when lightning strikes the shield wire, the potential for damage to nearby trees, barns, or other structures is lessened. In the case of a pole being struck and damaged or any other event which may cause the conductors to sag or touch the ground, automatic and instantaneous breaker devices are located at substations which "shut-off" the flow of electricity, thus eliminating the possibility of fires starting by sparks. A Project area fire plan is included in the Environmental Assessment.

The Project is not manned or occupied and, therefore, does not involve facilities such as low density residential development, institutions, medium and high density residential development, or commercial and industrial development which require minimum fire flow standards.

The Grand Junction Substation, as an existing 69/13-kV facility, has existing fire protection, and the improvement of this facility to a 230/13-kV substation will not result in any need for increased fire protection.

5.4.4.D The Project does not require water service.

5.4.5 Sanitary Sewer System

5.4.5.A,B,C Sewage treatment is not required for the Project as neither the transmission lines nor the substations will be occupied or manned. Portable sanitary units will be provided at the staging areas while construction is in progress.

5.4.6 Public Sites, Parks, and Open Space

These standards assume that the Applicant is the fee owner of the property and has complete control over its uses. For the transmissions lines, Public Service will purchase only easement rights which allow it to construct the transmission lines and appurtenant facilities, and reserve to the landowners all rights and uses of the property which are compatible with the existence of the transmission line. In connection with the transmission lines, there will be no "lots", "yards", or "buildings" as defined in the Grand Junction Zoning and Development Code. No structures will be utilized for shelter or enclosure. There will be multiple uses of the transmission line right-of-way, both by the Applicant and the underlying fee owner. The entire transmission line will remain "open" and the terms of the easement itself, which prevents the construction of buildings and other structures which may interfere with the transmission line, creates a legal buffer between the line and adjacent land uses.

The Project includes the rebuilding and upgrading of existing uses; transmission lines and Grand Junction Substation.

5.4.7 Campgrounds

There are no campgrounds associated with the Project.

5.4.8 Natural Resources

The Project will not impact any natural resources or impede the extraction of any mineral resources.

5.4.9 Extractive Use

There are no extractive uses associated with the Project.

5.4.10 Public Improvements, and

5.4.11 Guarantee of Public Improvements

It is submitted that the commitments of the Applicant set forth in this Application constitute an improvement agreement as contemplated by these sections and should be adequate to meet the requirements thereof. Public Service in this regard can be distinguished from other developers who, upon completion of their construction Projects, may sell the facilities to third parties and often

5.6.7 Grading and Drainage Plan

Any disturbance will be kept to a minimum at structure sites and along the transmission line right-of-way. All structure site pads will be graded to blend, as near as possible, with adjacent landforms. All disturbed areas will be reseeded to minimize erosion. The intent will be to restore all construction areas as near as feasible to their original condition.

Grading and drainage plans for the Substation will be submitted to the County along with site development plans with applications for building permits.

5.6.8 Erosion Control Plan

All disturbed areas along the Project transmission lines will be revegetated as stated in Section 4.7.2.E. The Grand Junction Substation will be surfaced with gravel.

5.6.9 Historical/Archaeological Report

Historical and archaeological areas were included in the siting and evaluation of alternative transmission line corridors. There are no known historical or archaeological sites affected by the Project.

5.6.10 Improvements Agreement, and

5.6.11 Improvements Guarantee

Refer to response to 5.4.10 and 5.4.11.

5.6.12 Development Schedule

Construction of the Project will include surveying, detailed engineering, the acquisition of land rights, construction of the new 230,000 volt facilities, and removal of portions of the existing 69,000 volt facilities. Construction is expected to be completed 36 months after all permits have been granted. (Refer to response to Grand Junction Submittal Requirement O.)

5.6.13 Site Plan

Refer to Exhibit Q-1 (Figure 2-8) for a plan of the Project corridors and Exhibit Q-2 for a site plan of the Grand Junction Substation.

5.7 Sign Regulation

The only signs associated with the Project will be "DANGER HIGH VOLTAGE" signs placed on the substation fences. These signs are 14 inches by 10 inches and are spaced at approximately 60 feet or so that a sign is visible from any approach to the substation. These

signs are exempt from the sign regulation by Sections 5.7.3.A and 5.7.3.J due to the nature and purpose of the signs and as they do not exceed one and one-half square feet per sign; construction and safety regulations will be adhered to.

5.8 Floodplain Regulation

A floodplain analysis and application for a Floodplain Development Permit will be prepared and submitted to Grand Junction once engineering is completed.

5.9 Geologic and Wildfire Regulation

The Project is not located in any area identified as a geologic and/or wildfire hazard area.

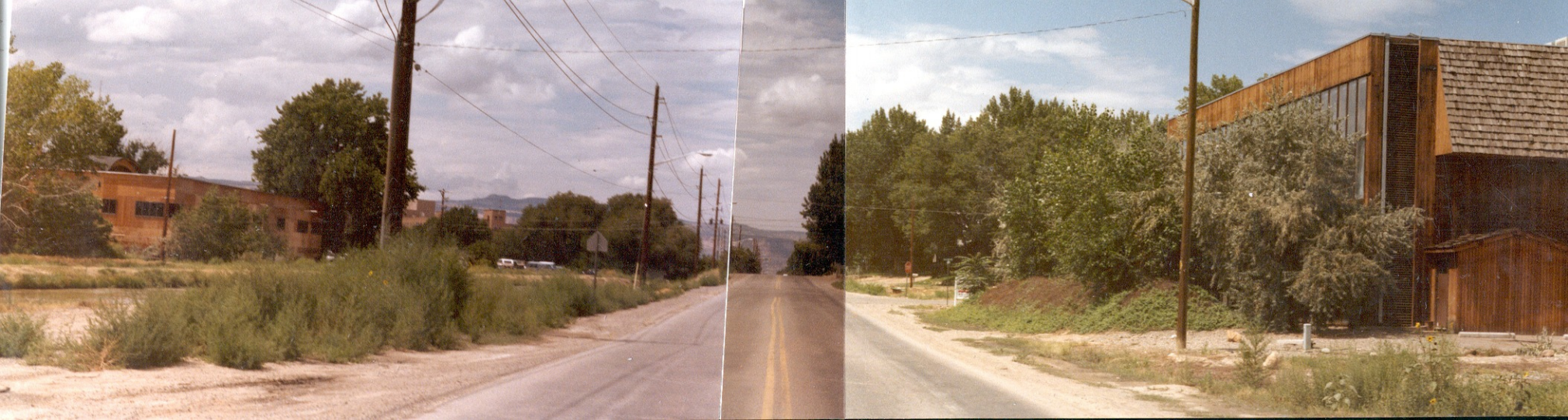
Exhibit B-2
TABLE 2-11

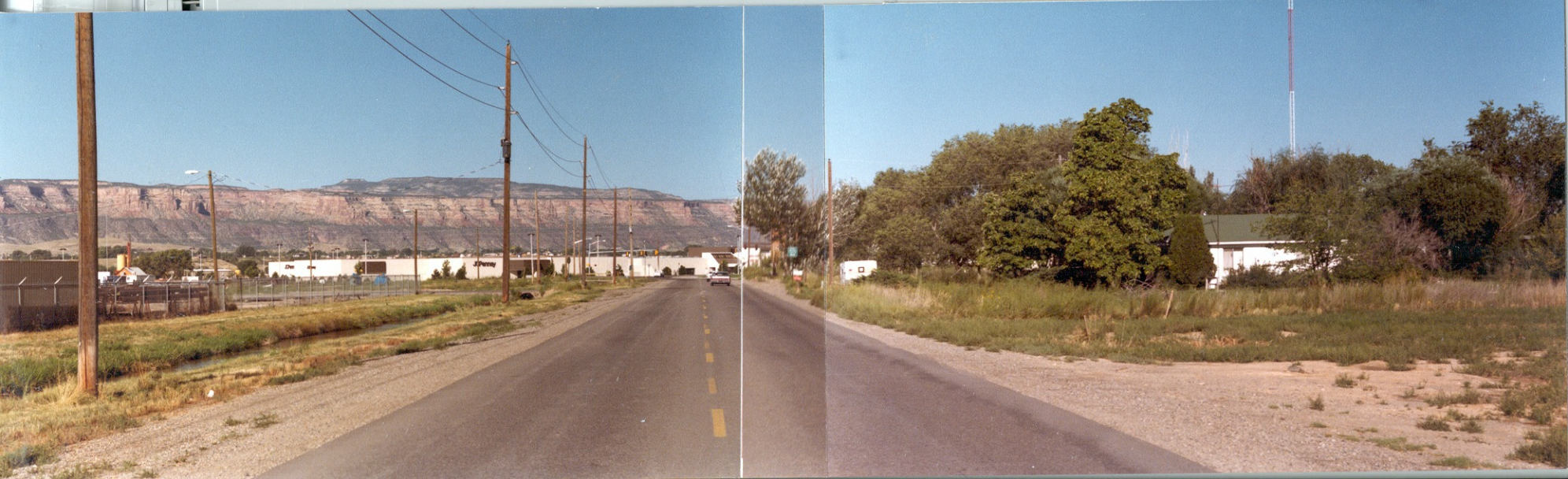
TYPICAL REVEGETATION SEED MIX
SALTBUSH SHRUBLAND*

Species	Common Name - Variety	Rate** (P.L.S. lbs/acre)	Rate** (P.L.S./sq. ft.)
GRASSES			
Agropyron dasystachyum var. riparium	Streambank Wheatgrass	0.7	2.5
Elymus salina	Salina Wildrye	1.5	13.1
Hilaria jamesii	Galleta - Viva	4.8	17.5
Oryzopsis hymenoides	Indian Ricegrass - Nezpar	1.6	6.9
Sitanion hystrix	Bottlebrush Squirreltail	0.6	2.6
Sporobolus cryptandrus	Sand Dropseed	0.05	6.0
		9.25	46.0
FORBS			
Hedysarum boreale	Northern Sweetvetch	1.3	1.0
Oenothera caespitosa	Stemless Evening-primrose	0.1	1.1
Penstemon palmeri	Palmer Penstemon	0.1	1.4
Sphaeralcea grossularieaefolia	Gooseberryleaf Globemallow	0.1	1.1
Verbesina encelioides	Golden Crownbeard	0.05	1.1
		1.65	5.7
SHRUBS			
Atriplex confertifolia	Shadscale	3.4	5.1
Atriplex gardneri	Gardner Saltbush	1.2	3.1
Ephedra viridis	Green Joint-fir	1.7	1.0
Grayia spinosa	Spiny Hopsage	0.4	1.5
		6.7	10.7
	TOTAL	**17.6**	**62.4**

* Note: Species may vary depending upon specific site conditions encountered. Other species which may be used include alkali sacaton (Sporibolus airoides, Weeping Alkaligrass (Puccinellia distans "Fults"), Lemmons alkaligrass (Pucinellia lemmoni), and Rabbitbrush (Chrysothamnus spp.).

** Rate for drill seeding; if broadcast seeded, listed rates should be doubled.





Q. SITE PLAN

1. Description of the Project

The Project is shown in Exhibit Q-1 (Figure 2-8) and includes only those portions within the city limits of Grand Junction. As noted earlier, construction of the Project will result in the completion of a 230-kV loop to serve Grand Junction and the Mesa County area. Also included as part of the Project are adding equipment at the existing Grand Junction Substation (refer to Exhibit Q-2). Refer to response to Grand Junction Submittal Requirement B. Project Narrative, 3. Description of Project.

As-built drawings of the transmission lines, indicating specific structure location and height, will be submitted to Grand Junction once surveying, engineering, and construction are completed.

Bob -
FYI & then
File 25-84

Public Service Company of Colorado

November 21, 1984

Mr. Karl Metzner, Director of Planning
City of Grand Junction
250 North Fifth Street
Grand Junction, Colorado 81501

Re: File #25-84 Special Use Application - 230kV Transmission Line

Dear Mr. Metzner:

This letter is in response to your letter of October 25, 1984 in which official notification of your approval of our Application was documented. Item 1 of the conditions and restriction requires written response to the review comments; our response follows:

Final plan and profile sheets will be provided to the City Engineer for review prior to construction. As-built drawings of the transmission line, indicating the specific structure location and height, will be submitted to Grand Junction once surveying, engineering and construction are completed.

The Construction Schedule, Exhibit O-1, indicates that portions of the existing 69,000 volt line will be removed beginning approximately 23 months after obtaining all permits. This removal is scheduled both concurrent with some portions of the 230,000 volt construction and well after other portions. The existing 69,000 volt system must remain in place to provide service to our customers until the 230,000 volt system is constructed and operational.

Flood Plain Permits will be requested from both the City of Grand Junction and Mesa County Floodplain Administrators respectively depending on the appropriate jurisdictional authority along the final alignment of the 230,000 volt line.

Your department's assistance and cooperation throughout the course of our Land Use Study and the preparation of our Application is greatly appreciated. Please contact me if additional response or clarification is required.

Sincerely,

Larry E. Keith
Landscape Architect
Architectural & Right-of-Way

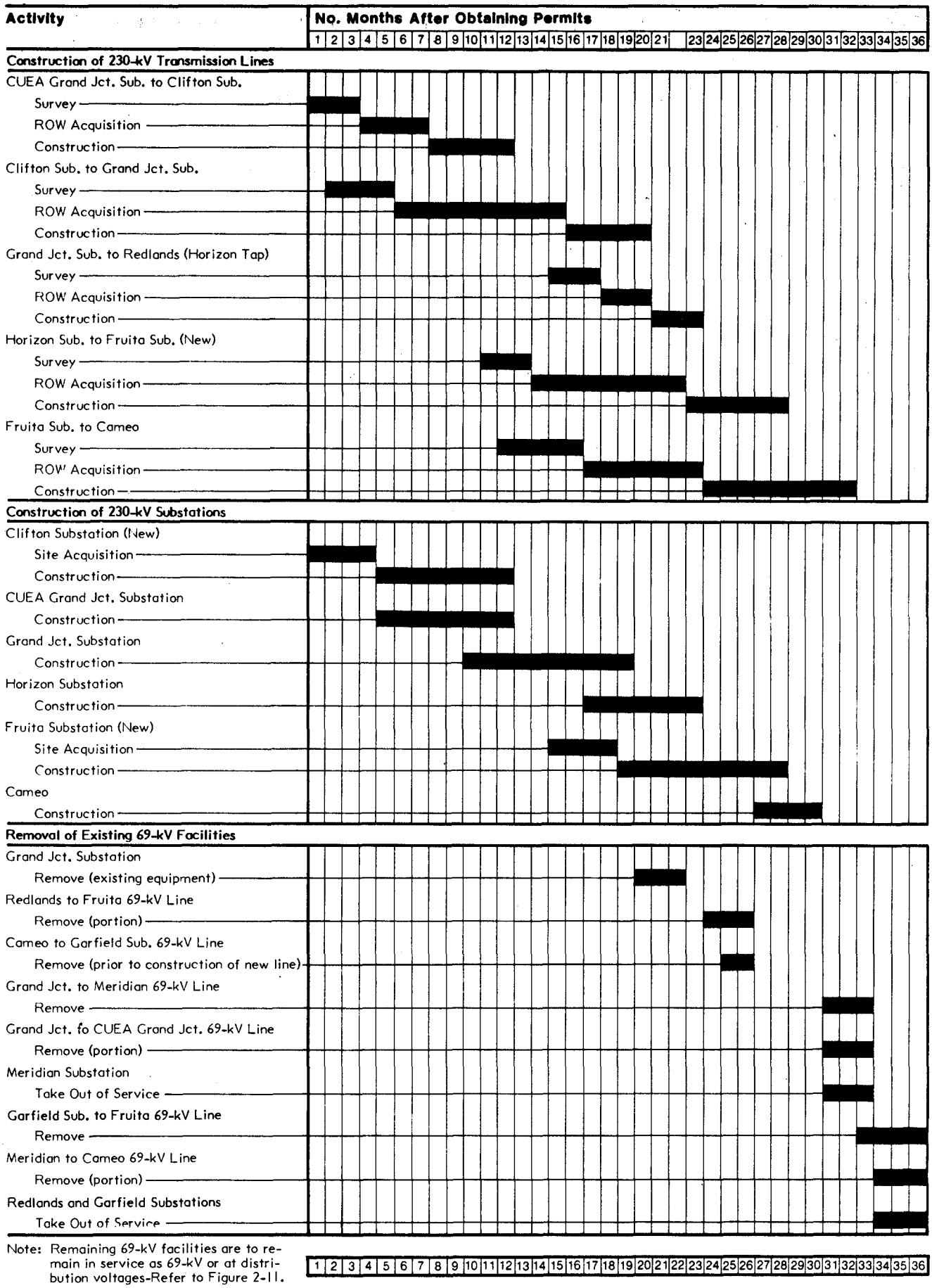
LEK/ea

cc - N. J. Temple
Mark Achen, Grand Junction City Manager
File

Exhibit O-1

Construction Schedule

Table 2-5 Revised



Note: Remaining 69-kV facilities are to remain in service as 69-kV or at distribution voltages-Refer to Figure 2-11.

Exhibit O-2
TABLE 2-7

TYPICAL PERSONNEL AND EQUIPMENT FOR TRANSMISSION LINE CONSTRUCTION

Activity	# Of Persons	Equipment
Permission to survey	1-2	1-2 automobiles
Land acquisition	1-2	1-2 automobiles
Surveying	8	2-4 pickup trucks
Structure site work/ROW	3-4	1 bucket truck, 1 pickup truck
Materials hauling	8-12	2 tractor trailers, 2 hydrocranes, 3 pickup trucks, 2 flatbed trucks
Foundation excavation	4-6	2 trucks with augers, crane digger, 2 pickup trucks, 2 Bobcats
Forming and placing of foundation concrete	8	concrete truck, 2 pickup trucks, 1 hydrocrane
Structure assembly/erection	6	1 hydrocrane, 2 pickup trucks, 1 flatbed truck, 1 crane
Groundwire and conductor stringing	15-25	reel trailer, tensioner, puller, 5-6 pickup trucks, 1 winch truck, 1 digger, 1 flatbed truck, 2 tractor trailers, 2 bucket trucks
Cleanup	3	1 pickup truck, 1 flatbed truck
Revegetation	3	tractor, disc, pickup truck, 1 flatbed truck
Some structure erection and wire stringing by helicopter	6-10*	helicopter, 1 fuel truck, 1 parts trailer, 1 pickup truck

* This would be in addition to the crews and equipment shown above.

The above figures represent the number of persons and equipment at any one construction location and indicate sequential activities.

Exhibit O-3
TABLE 2-8
SUBSTATIONS
CONSTRUCTION PERSONNEL/EQUIPMENT

Crew
2 to 3 crews / 10 to 15 workers

Vehicles	Frequency of Use
3 Six-Man Crew Cab Trucks	Daily
2 Cars	Daily
1 Low Boy Semi-Truck	2-3/week
2-3 Cement Trucks	Daily
Fuel Truck	1/day
Toilet Pump	1/week
Dump Trucks	Frequent in/out while installing gravel for substation yard

Equipment
Backhoe
Scrapper
Blade
Dozer — Some in/out - infrequent
Front End Loader
Drill Rig
Bob Cat

Dust - Water Truck During Grading

ELECTRICAL CONSTRUCTION

Crew
6 Workers
1 Executive Foreman

Vehicles	Frequency of Use
1 Six-Man Crew Cab Truck	Daily
1 Pickup Truck	Daily
2-3 Cars	Daily
1 Pitman Boom Truck	Intermittent
1 Bucket Truck	Intermittent
1 27-Foot Semi-Type Trailer	In/out

Equipment for Transformer and Switchgear

2 Cranes	In/out
2 Flatbed Semi-Trucks	In/out
1 Semi-Trailer (for degassing)	In/out (after transformer on foundation)
2 Oil Tankers	In/out (after transformer on foundation)

Test Crew/Relay Shop

2 Man Crew + 3 Man Crew	± 2 weeks
2 Suburban Vans	Daily

Construction crew will perform site preparation, foundation work, construction of the control building, and erection of substation structures. The electrical crew will install the electrical equipment, including buses, switches, circuit breakers, transformers, and control wiring.

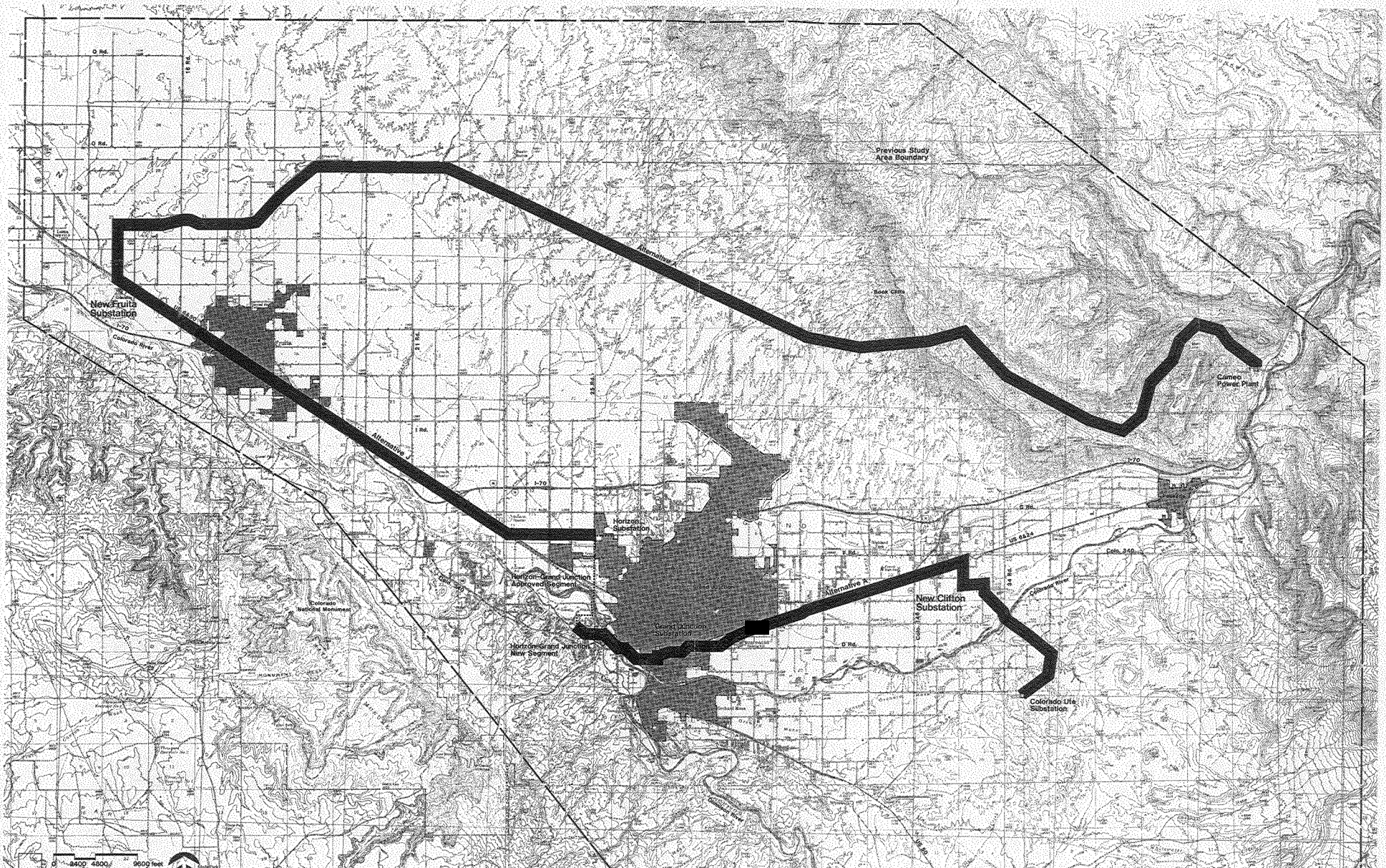


Exhibit B-1

The Proj

Figure 2-8 Revi

Grand J
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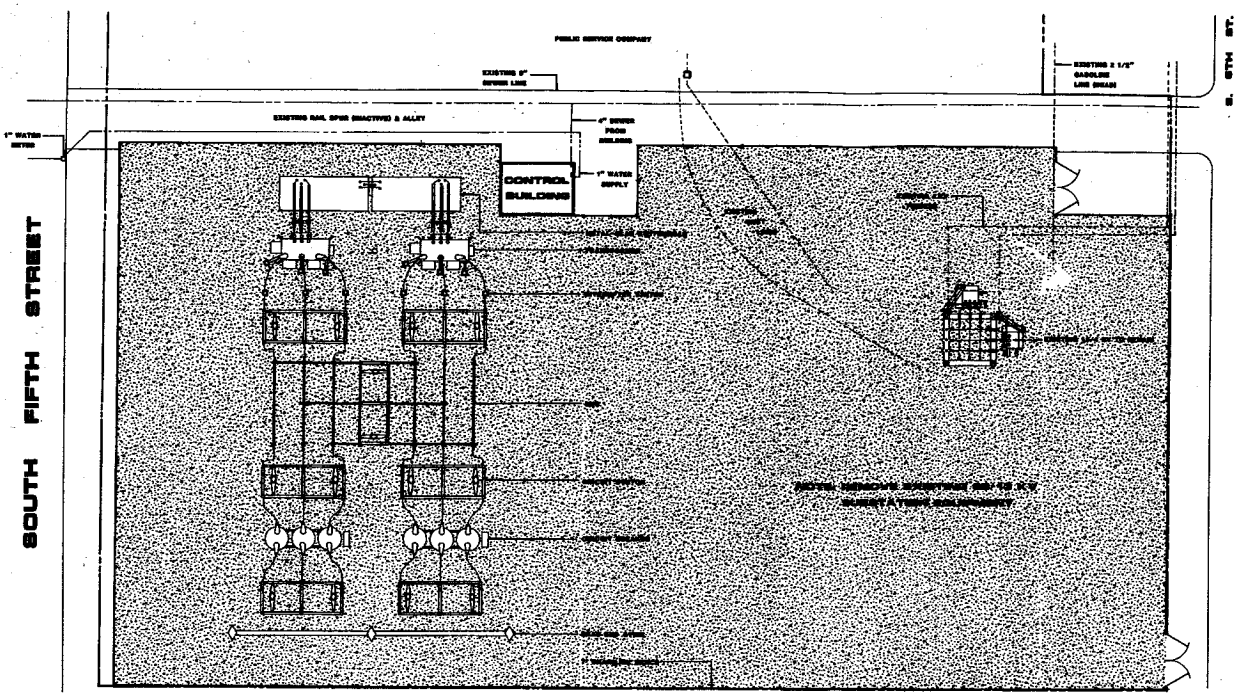
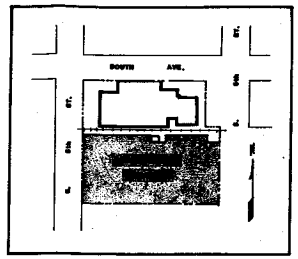
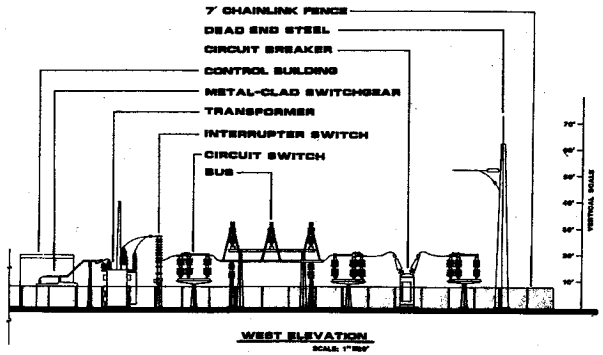
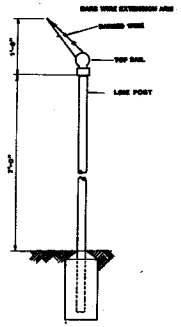




VICINITY MAP
NO SCALE



WEST ELEVATION
SCALE: 1"=20'



EXISTING CHAINLINK SECURITY FENCE SECTION
NO SCALE

LEGEND

EXISTING 7' CHAINLINK FENCE W/ 1' BARBED WIRE OUTRIGGER

EXISTING 3/4" CRUSHED ROCK

REVISION | REFERENCE DRAWINGS

GRAND JUNCTION SUBSTATION

RIGHT-OF-WAY SECTION

EXHIBIT B-2

Z. STRUCTURAL INFORMATION

1. Transmission Lines

a. Design Characteristics

Electrical and physical characteristics of the facilities are shown in Exhibit C-2 (Table 2-6), Exhibit C-3 (Figure 2-9), and Exhibit C-4 (Figure 2-10).

(1) Electrical Design

All Public Service facilities are designed, constructed, operated and maintained to meet or exceed all applicable standards of design and performance set forth in the National Electrical Safety Code. The facilities constituting the Project will be so designed, constructed, operated, and maintained.

(2) Physical Design

The transmission structure is the most visually obvious element of a transmission line, and consists of wood, steel, or a lattice of light steel elements. Wood poles are generally placed in holes augered in the ground and then backfilled. Steel poles or lattice structures rest on concrete footings which are placed in excavations and then backfilled. Near the top of any structure is an arrangement of structural elements which function to hold the line conductors above the ground and away from the structure. Insulators are suspended from the structural elements which function to hold the line; and the conductors, which provide the medium for the transfer of electrical energy, are hung from the ends of the insulators. The conductor consists of strands of reinforcing steel cable encased by aluminum strands. Insulators and hardware used on the line will be non-specular, brown where woodpoles are used and gray where steel poles are used. One or two overhead ground wires, depending on circuit configuration, are installed at the top of the structure to provide protection to the conductor from direct lightning strikes.

Exhibit C-3 (Figure 2-9) shows scale illustrations of each structure that may be used. The types of structure that are most likely to be used for each segment are shown in Exhibit C-4 (Figure 2-10).

In addition to the standard tangent structures, the structure illustrations show special variants of each. These are used at angles of more than a few degrees in the line. Structures similar in appearance to the angle variants are also used in situations where spans longer than the maximum that can be accepted by the standard structures are required or are advantageous. Such structures are also used at large angles in the line and when turning in to substations where they are known as "dead-end" structures.

No angle or other special structures are illustrated for steel structure types because such structures are generally similar in design and proportion to the standard ones, only more bulky, with heavier structural members and, in the case of angle structures, longer cross arms.

Exhibit C-2 (Table 2-6) gives average spans for each structure type. The maximum figures mean that longer spans cannot be used on a given transmission line. The use of special guyed, or otherwise strengthened, structures enables much longer spans to be achieved.

A line can span across a deep canyon or from top to bottom of a steep slope, if the configuration of the topography is such that the progressively greater sag of the conductors does not reduce their ground clearance below the required minimum.

b. Right-of-Way Needs

In addition to the need to obtain the right to locate transmission facilities on private property or land managed by a federal agency, a right-of-way is needed to meet the electrical clearance requirements of the National Electrical Safety Code, and to provide working space for maintenance activities, as well as to provide vertical and horizontal clearances to buildings or other structures near the right-of-way. General right-of-way needs are shown in Exhibit C-4 (Figure 2-10).

c. Operation and Maintenance

(1) Operation

(a) Use of the Right-of-Way

Public Service will acquire easements specifically for the construction, operation, and maintenance of the transmission lines. The fee ownership rights will remain with the individual landowners.

Although permanent structures are not allowed within the right-of-way, any land use activity that does not interfere with the safe operation and maintenance of the line can continue. A standard easement agreement is included in Appendix G.

(b) Operational Control

The day-to-day operation of the line is directed by system dispatchers in power control centers. These dispatchers use Public Service's communication facilities to operate circuit breakers that control the transfer of power through the line. These circuit breakers also operate automatically, as for example in the structural failure of a conductor, to ensure safety.

(2) Maintenance

(a) Maintenance of Electrical Equipment

Public Service's preventive maintenance program for transmission lines includes routine aerial and ground patrols. Aerial patrols are conducted approximately six times per year, and special patrols are conducted as needed, particularly after wind, ice or severe lightning storms, when damaged conductors, insulators, and structures may occur.

Ground patrols are usually conducted once a year. The purpose of patrols is to detect equipment needing repair or replacement. Whenever possible, ground patrols and subsequent repair activities are scheduled during times when there

is likely to be a minimum of crop or property damage. Maintenance may include repairing frayed or damaged conductors, inspection and repair of steel towers, inspection and replacement of wood poles and crossarms, replacing damaged and broken insulators, and the application of preservative to wood poles and crossarms. In addition to maintaining the structures, conductors and right-of-way, Public Service will maintain gates on access roads and keep such roads in passable condition and properly maintained to minimize erosion, in accordance with the terms and conditions of the right-of-way grants.

Transmission lines are sometimes damaged by storms, floods, vandalism, or accidents, and require immediate repair. Emergency maintenance will involve prompt movement of crews to repair damage and replace any equipment. If property damages result from the repair activities, Public Service representatives will meet with the landowners to arrange for repair or compensation.

2. Substation

a. Design Characteristics

Substations are needed to reduce the transmission voltage to a standard distribution voltage to serve the customers. As previously noted, the only substation within Grand Junction is the Grand Junction Substation. This is an existing facility that will be rebuilt to operate as a 230/13-kV substation.

Structures within the proposed substations will be approximately 60 feet in height (dead-end structures). Other equipment (approximately 25'-35' in height) will include buses, switches, circuit breakers, transformers, and a control building.

b. Operation and Maintenance

The electric substations to be constructed as a portion of the Project will be unmanned and operated remotely from a Public Service operations center. Each transmission line and distribution feeder will be equipped with automatic circuit breakers to de-energize the circuit when faults occur. The equipment and facility layout will be designed to limit radio and television interference and audible noise.

The electric substations will be enclosed by an eight foot (8') high chain link or wood and chain link (depending on the location) security fence including a three-strand barbed wire outrigger. Gates will be locked and secured. Entry will be restricted to appropriate utility personnel. "DANGER HIGH VOLTAGE" signs will be placed on the substation fences. All Public Service facilities are patrolled periodically to detect worn or damaged equipment. Public Service Operations and Engineering personnel receive safety training for emergency situations.

Maintenance will include equipment testing, and routine and emergency procedures.

Exhibit Z-1

TABLE 2-6 REVISED

STRUCTURE TYPE

	Single Circuit				Double Circuit
Description	Single Column Wood	Single Column Steel	Wood H-Frame	Lattice Steel H-Frame	Single Column Steel
Voltage: Initial Operation	230 kV	230 kV	230 kV	230 kV	230 kV
Voltage: Possible Ultimate Operation	230 kV	230 kV	230 kV	230 kV	230 kV
ROW Width	60'	20'-50'	100'	100'	60'
Span Between Structures: Average	600'	550'	750'	N/A*	550'
Span Between Structures: Typical Maximum	650'	900'	1000'	N/A*	900'
No. of Structures Per Miles (average span)	8-9	9-10	7	N/A*	9-10
Height of Structures: Average	80'	95'	75'	120'	95'
Height of Structures: Typical Range	80'-90'	85'-120'	65'-90'	90'-120'	85'-120'
Structure Base Area	7 sq. ft.	20 sq. ft.	78 sq. ft.	78 sq. ft.	20 sq. ft.
Land Disturbed at Structure Base	900 sq. ft.	900 sq. ft.	2500 sq. ft.	900 sq. ft.(h) 2500 sq. ft.	900 sq. ft.
Minimum Ground Clearance Beneath Conductor	34'	34'	34'	34'	34'
Minimum Ground Clearance Beneath Conductor Over Cultivated Land	34'	34'	34'	34'	34'
Circuit Configuration	Staggered Vertical	Vertical	Horizontal	Horizontal	Vertical
Conductor Type & Size (Cir. Mils in Inches)	ACSR** 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"	ACSR 1272 1.345"

* Lattice steel H-Frame structures would only be used in limited locations; spans will vary to meet specific requirements.

** ACSR - Aluminum conductor, steel reinforced

(h) Helicopter construction

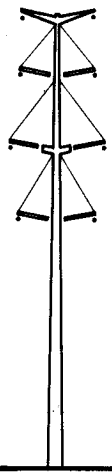
Exhibit Z-2

Typical Structure Types

Figure 2-9 Revised

Single Column Steel
Single Circuit

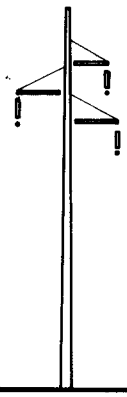
Average Span: 550'
Average Height: 95'
Height Range: 85'-120'
ROW Width: 20'-50'



Single Column Steel
Double Circuit

Average Span: 550'
Average Height: 95'
Height Range: 85'-120'
ROW Width: 60'

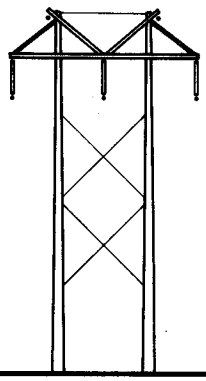
Note:
Double Circuit Single column wood structures have similar characteristics to those described above



Single Column Wood
Single Circuit

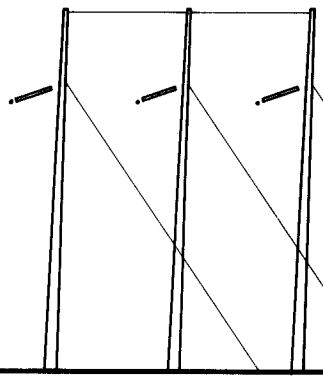
Average Span: 600'
Average Height: 80'
Height Range: 80'-90'
ROW Width: 60'

Note:
Insulator configuration may vary following final design

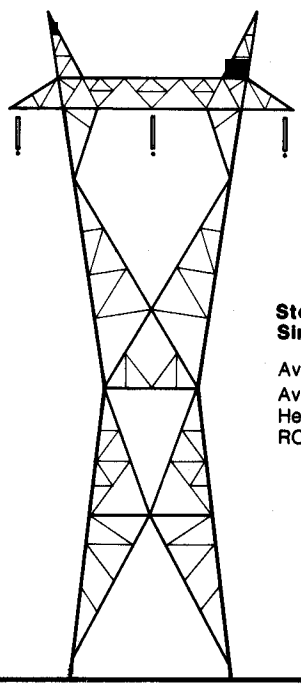


Wood H-Frame
Single Circuit

Average Span: 750'
Average Height: 75'
Height Range: 65'-90'
ROW Width: 100'

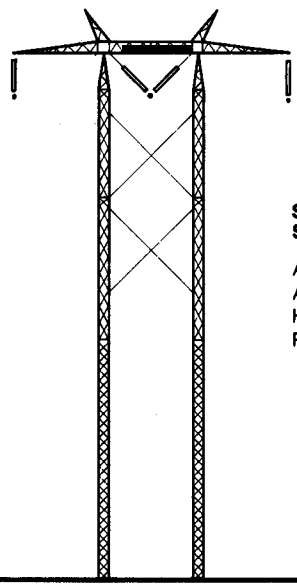


Wood Angle Structure
Single Circuit



Steel Lattice
Single Circuit

Average Span: N/A
Average Height: 140'
Height Range: N/A
ROW Width: 100'



Steel Lattice H-Frame
Single Circuit

Average Span: N/A
Average Height: 120'
Height Range: 90'-120'
ROW Width: 100'

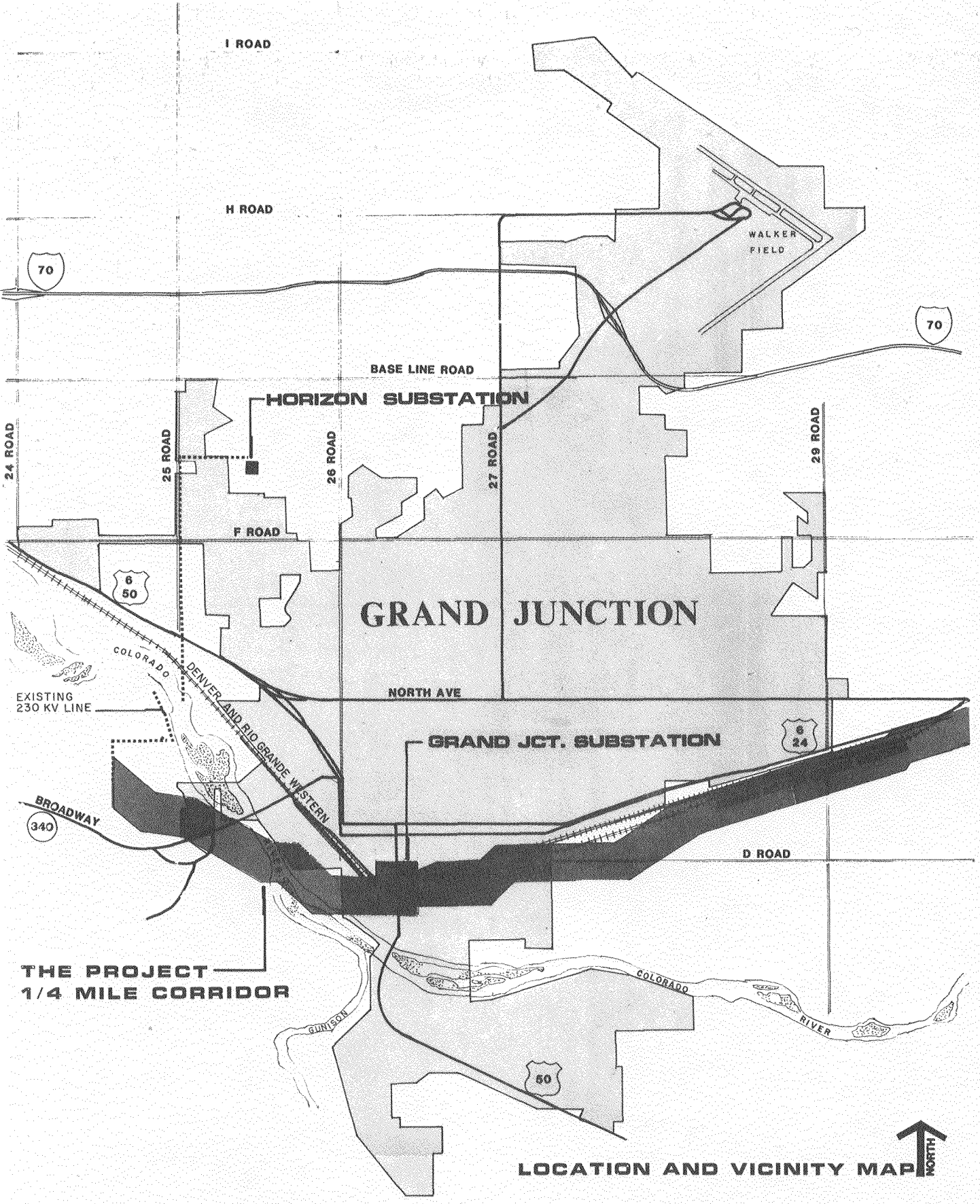
Exhibit Z-3

Probable Structure Types for the Proposed Alternatives

Figure 2-10 Revised

		Structure Design Characteristics						Right-of-Way Requirements							
		Single Column Wood	Single Column Steel	Wood H-Frame	Steel H-Frame	Single Circuit	Double Circuit	20'	50'	60'	100'	Conventional Construction	Helicopter * Construction	BLM Land	Private Land
Cameo–Fruita Segment															
Route A	Links 1			●		●					●	●	●	●	●
	3			●	●	●					●	●	●	●	
	7/8			●		●					●	●		●	
	19	●		●		●				●	●	●		●	●
	25	●		●		●				●	●	●			●
	27	●		●		●				●	●	●			●
	95	●				●				●		●			●
Horizon–Fruita Segment															
Route J	Links 41		●			●			●			●			●
	47		●			●			●			●			●
	54		●			●			●			●			●
	58	●								●		●			●
	59	●				●				●		●			●
	61	●								●		●			●
	62	●				●				●		●			●
	68	●	●			●				●		●			●
Grand Junction–Clifton–Colorado Ute Segment															
Route A	Links 71		●				●			●		●			●
	72	●	●			●		●		●		●			●
	82	●								●		●			●
	83		●			●		●				●			●
	91			●		●					●	●			●
	92			●		●					●	●		●	●
Horizon–Grand Junction Segment															
	Links 70		●			●		●	●	●		●			●
	71		●				●			●		●			●
	73		●			●				●		●			●
	75		●			●				●		●			●

* Portions of these links will be constructed using helicopters: other portions (where existing access is available) may be constructed using conventional methods.



LOCATION AND VICINITY MAP

Exhibit A1-3

PUBLIC MEETINGS HELD TO DATE
(through May 14, 1984)

Date	Location	Type of Meeting
June 28, 1983 7:00 p.m.	Fruita, East Jr. High School	Workshop to discuss project, route selection process, and evaluation criteria.
June 29, 1983 7:00 p.m.	Grand Junction, East Jr. High School	Same as above.
June 30, 1983	Palisade, Veterans Memorial Building	Same as above.
October 4, 1983	Fruita City Hall	Scoping meeting to identify concerns and review the route selection process and preliminary results.
October 5, 1983 7:00 p.m.	Grand Junction, Two Rivers Plaza	Same as above.
October 6, 1983 7:00 p.m.	Clifton Elementary School	Same as above.
October 26, 1983 7:00 p.m.	Grand Junction	Joint workshop with Grand Junction and Mesa County Planning Commissions; review of project route selection process and preliminary results.
November 7, 1983 7:00 p.m.	Fruita City Hall	Workshop with Fruita City Council to review project, route selection process and preliminary results.
April 3, 1984 (two meetings, one at 2:00 p.m., one at 7:00 p.m.)	Grand Junction, BLM Offices	Public meetings to obtain comment on the Draft EA.
May 14, 1984 7:00 p.m.	Fruita City Hall	Workshop with Fruita City Council to obtain comments on Draft EA and discuss alternative through Fruita.

Exhibit A1-4
TABLE 2-1
Page 1 of 3

CORRIDOR EVALUATION CRITERIA

	Weights
RESIDENTIAL AND OTHER PROPERTY	
o Number of occupied buildings that would have to be removed	10.0
o Number of unoccupied buildings (sheds, etc.) that would have to be removed	1.0
o Number of parcels crossed resulting in potentially significant land use limitations	5.0
o Number of residences that would be affected by the acquisition of ROW	2.0
o Miles of transmission line located on private lands and not following an established ROW (railroads, canals, roads, etc.)	5.0
AGRICULTURAL LANDS	
o Number of occurrences of potential conflict with mechanical irrigation systems	10.0
o Probable number of poles within cultivated land, including orchards	5.0
o Probable number of poles at the edge of cultivated land, including orchards	2.5
REMOVAL OF TREES	
o Probable number of trees removed	10.0
VISUAL PROMINENCE FROM HOMES	
o Number of houses from which the transmission line would be prominent	10.0
o Number of houses from which the transmission line would be evident	5.0

Development Department

CITY - COUNTY PLANNING
grand junction-mesa county 559 white ave. rm. 60 grand jct., colo. 81501
(303) 244-1628

November 28, 1983

Mr. Larry Keith
Public Service Company
5909 E. 38th Avenue
Denver, CO 80207

Dear Mr. Keith:

The Grand Junction Planning Commission has reviewed the latest information on the Grand Junction transmission line siting study and is in receipt of the Mesa County Planning Department's letter to you, dated November 21, 1983. We have concerns about some points raised in the letter and would like to clarify our position and recommendation.

Please understand that we make these comments as the Grand Junction Planning Commission, and that Ray Gronwall should continue to be the key staff contact person for this study.

1. The Planning Commission is opposed to the siting of a high voltage transmission line along the Colorado River (links 60, 66, 69 and links 77a and b). We do not believe that a transmission line and a river greenbelt are compatible uses. In fact, the existence of such a line may jeopardize the future creation of a possible Greenbelt Park.

   We also feel that placement of facilities of this type in an identified floodplain and gravel resource area is not proper planning, especially in light of the 1983 flooding event.

2. From the information available at the present stage of study, we feel that the railroad alignment (links 58, 59, 61, 62, 68 and link 72) is the preferred choice. This alignment should not have more significant visual impacts than the river route and may, in fact, have lesser overall visual impacts due to the height and spacing of the poles. The railroad route would also have less environmental impacts, not be subject to flooding hazards, and preserve the integrity of a future river

greenbelt system. Since the railroad and its parallel roadways already constitute a significant transportation corridor, it seems logical to use that corridor rather than creating a new one.

3. Ownership along the river is broken into numerous medium to small parcels. This would make it more difficult and expensive to purchase easements or rights-of-way. Given all other factors being equal, the most cost effective approach would be preferable since the costs are ultimately borne by the consumer.

4. We wish to compliment Public Service and EDAW, Inc., on the intensive efforts put into this study. We believe the methodology addresses major concerns in as objective a manner as possible. The unavoidable subjective concerns seem well treated.

Thank you for allowing us the opportunity to express our concerns.

Sincerely,

Susan Rinker

Susan Rinker, Chairperson
Grand Junction Planning Commission

mm

xc: Jim Wysocki
Ray Gronwall
Julie Dougan

Mesa County
Policy and
Research Office

544 Rood Ave Rm 89
Grand Junction, Colorado 81501

(303) 244-1678

April 24, 1984

Julia Dougan
Bureau of Land Management
Grand Junction Resource Area
764 Horizon Drive
Grand Junction, Colorado 81501

Dear Ms. Dougan:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Grand Junction Conversion Transmission Line Project. The following comments from the Policy and Research Office, Parks Department, Planning Department and Health Department represents Mesa County's staff review of this document.

PARKS DEPARTMENT

1. The EA was well researched and detailed. We agree with the proposed routes except for the Horizon - Fruita segment. Alternative B, of this segment, would result in more visual impacts, in the future, than the LL Alternative, due to anticipated residential growth in the Appleton area. While it is true that more people will view the LL Alternative, from their autos, it is already a transportation corridor, and thus more compatible. The visual impact to viewers from their residences has been time and again expressed to be more significant than from their autos.

2. Alternative BB should be avoided at all costs due to a proposed Greenbelt in this area. If and when that Greenbelt is developed, the visual impacts would be greater than the other alternatives. The recreational impacts are also greater, resulting from BB in the Horizon-Fruita segment.

3. Likewise, Alternative L in the Grand Junction-Clifton-Colorado Ute segment should be avoided, also due to the proposed Greenbelt in the Gunnison River area. A proposed regional park in the confluence area (Colorado and Gunnison Rivers) would also be adversely affected by Alternative L.

4. We would also like to add that the visual impacts from Alternative WW of the Cameo-Fruita segment would be more adverse to the general public than the AA Alternative, due to the view from Valley residences, as opposed to the assessed visual impacts from autos on I-70 as stated in the EA. However, as I stated earlier, I do agree with the proposed Alternative A route.

HEALTH DEPARTMENT

1. We reviewed the section of the document appropriate to the interests of this Department. The impacts associated with this project will be greatest during the construction process.

2. The short duration of the effort and limited workforce required will reduce the potential for overloads of existing urban services to near zero. Sanitary facilities in remote areas can be provided through use of portable units.

3. There do not appear to be any readily identifiable long term environmental impacts of significance to this agency. The availability of electrical power may, in the long run, result in a higher level of industrial or residential development. Either of these may require an expansion of the existing municipal services. We do not anticipate any significant expansion of either type to occur coincident with construction of the line.

4. In summary, the construction of the project is of more concern to this agency than the line itself. PSC has identified mitigation measures, the construction period is relatively short, and no great influx of workers is anticipated. Thus, no significant adverse impacts are anticipated.

PLANNING DEPARTMENT

The Draft Environmental Assessment for this project contains a great deal of valuable information, but should be stengthened in a number of areas:

1. Visual Assessment - Additional visual assessment is needed for all of the corridors to adequately assess visual impacts. Such an evaluation should include a Visual Features Map which highlights major visual features, major

"viewscapes" and the alternative power line routes and how they impact the major viewscapes. This should be an improved version of the map in Figure 3-8. The Colorado National Monument should be included as an area of high scenic quality. Arrows or other such devices should be used to designate major views, viewing areas and viewscapes.

2. Recognition of the Colorado River/Gunnison River Greenbelt Open Space as an important parallel public open space corridor recognized by both the City of Grand Junction and Mesa County on officially adopted plans.

The greenbelt proposal would entail a strip of land on both sides of the Colorado and Gunnison Rivers which remains as permanent natural open space and, in the case of the large stretches of the river which have been desecrated by intensive gravel mining and industrial uses, reclamation of the river banks with in-fill planting and creation of ponds and lagoons suitable for wildlife habitat restoration. The greenbelt concept includes the opening up of one or both sides of the rivers to limited public access as a trail/linear park (for bicycling, hiking, jogging) as easement, right-of-way or fee simple ownership. Much of the concept could be achieved through the acquisition of conservation easements over private land rather than outright acquisition.

Since the existing 69 KV line closely parallels the greenbelt route on the Colorado River form the Walker Wildlife Area on the west to 30 Road on the East, there should be a specific reference of this linear park and Parks Plan on pages 3-12 and 4-5.

3. The revegetation specifications (Table 2-10 and 2-11) should be modified to include the following:

Table 2-10 suggests many acceptable species for a Pinion-Juniper Ecosystem. We question the use of black sagebrush as the only sagebrush listed as it is one of the least salt tolerant of the genus. It also appears that this selection is limited to the Cameo Plant site in this corridor study.

Table 2-11 includes many desirable species also. We would add some more salt tolerant species such as Alkali Sacaton (Sporibolus alvoides), Weeping Alkaligrass (Puccinellia distans "Falts") and Lemmons Alkaligrass (Puccinellia lemmoni). These will fill those salty areas common along the corridor. We also missed seeing rabbitbrush (Chrysothamnus species) in the shrub list. A greater selection of saltbrush species (Atriplex spp.) would also allow diversity in the high salt areas.

4. We recommend that the adopted Roadway Landscape Guidelines for Mesa County be used wherever the proposed transmission

line follows major roads. We also recommend that Public Service Company plant and maintain these areas.

5. Due to the large visual impact this project will have on the residents and visitors of the Grand Valley, we recommend that Public Service Company add the following to their mitigation plan.

   A) Public Service Company should contribute to the further development of the Walker Wildlife area.

   B) Public Service Company should contribute to the current Development Impact Fund for park land acquisition.

   C) Public Service Company should contribute to the Connected Lakes Park Fund. This fund has special relevance since a portion of the transmission line will pass very close to this park.

   D) Public Service should recognize the committment of Grand Junction and Mesa County to a Greenbelt system along the Colorado and Gunnison Rivers.

POLICY AND RESEARCH OFFICE

1. This office has recently reviewed and updated the Mesa County population estimates since the 1980 census. To assure uniformity in all demographic references, we recommend that the following be used in Table 3-3.

	1981	1982	1983
Mesa County	89,009	94,381	92,784
Collbran	383	414	410
DeBeque	335	405	353
Fruita	3,102	3,300	3,252
Grand Junction	29,798	31,634	30,934
Palisade	1,767	1,985	1,911
Unincorporated	53,624	56,643	55,524

2. (P.4-46 & 4-47) (Short-term Uses Versus Long-term Productivity) We recommend that the definition of long and short term be changed. The short-term of this project may be best defined as the construction phase and long-term; the period thereafter. This transmission line will most likely remain for a long time. Also, there is no definition of "the life of the project" in this EA. When analyzing short-term versus long-term impacts, construction versus the remaining period makes more sense. The visual impacts of a transmission line in a residential area cannot be considered short-term.

3. Recognizing that the Board of County Commissioners has the

sole authority to decide upon the final location of this tranmission line, this office makes the following staff recommendations.

A) For the Cameo-Fruita segment, we recommend Alternative A. This alternative complies with the adopted Mesa County Land Use and Development Policies in that is avoids the visual impacts on Mt. Garfield, makes maximum use of undeveloped land, uses existing rights-of-way where possible, and minimizes impacts to agricultural land.

Link 2 of Alternative AA will further impact the views of Mt. Garfield. Link 2a of Alternative WW has not been addressed in this EA in sufficient detail to consider this option over Alternative A. This transmission line cannot avoid impacting agricultural land between the Highline Canal and the Gary Substation. It is our opinion that the proposed Alternative A has complied with the adopted Policies in that it minimizes the impacts. According to the data and analysis in the EA, any other route would cause greater impacts on other landowners and residents.

B) For the Horizon-Fruita segment, we recommend Alternative J. This Alternative complies with Mesa County's adopted Policies in that it uses existing transportation and utility corridors and uses shared rights-of-way.

Since I-70 is south of this proposed line, the major view of the Colorado National Monument to travellers will be preserved. Although Alternative BB does not have the visual impacts from major arterials, the impact on the Colorado River and Walker Wildlife area area are not consistant with the adopted Policies. The other Alternatives of B and LL would directly impact a greater number of landowners and residents.

C) For the Grand Junction-Colorado Ute segment, we recommend Alternative A. This alternative complies with the Mesa County adopted Policies in that it uses existing transportation and utility corridors and uses shared rights-of-way. Since this transportation is currently highly developed, it is our opinion that any visual impacts would be offset by the existing development.

Alternative D and L do not conform to the adopted Policies by impacting the Colorado and Gunnison Rivers. Alternative J would affect a much larger number of landowners.

Again, thank you for the opportunity to comment. If you have any questions or concerns, please feel free to call.

Sincerely,

Raymond J. Gronwall

Raymond J. Gronwall
Policy Analyst

Enc.

Mesa County
Planning

559 White Ave. Rm. 60
Grand Junction, Colorado
81501-2643

(303) 244-1628

Copy of county comments & review. Received, 10/16/84 KGM

STAFF REVIEW
October 11, 1984

a. Project: C78-84 Conditional Use - 230 kV Transmission Line and Substations.
Petitioner: Public Service Company.
Location: Cameo-Fruita Segment and Substation (30.8 miles), Fruita-Horizon Segment (11.2 miles), Horizon-Grand Junction Segment (2.2 miles), Grand Junction-Clifton-Colorado Ute Segment and Substation (11.7 miles).
A request for a conditional use permit for approximately 55.9 miles of 230 kV transmission line and two substations.

b. Surrounding Land Use and Zoning: Since the proposed powerline is approximately 55.5 miles long, each segment will be described with the major zones and land use affected:

	Land Uses	Zones
1. Cameo Fruita Segment (30.8 miles) Type of pole Mainly H frame wood Av. Height: 75'-100' Av. ROW Width: 100'	Bookcliffs, Coal Gulch, High Desert, rangeland, irrigated farmland, farm roads	AFT, Industrial
2. Fruita Horizon Segment (11.2 miles) Type of pole: Single column wood pole, some single column steel poles Av. Height: 80'-95' Av. ROW Width: 20'-60'	D&RGW Railroad, Gary Refinery, 6 & 50 commercial strip, irrigated farmland, Foresight Park	Industrial, AFT, Planned, Commercial, Planned Business, Planned Industrial

certificate of public convenience and necessity in decision no. C83-1790 on November 30, 1983.

The project represents a major investment in the present and future of Mesa County. Like all utilities -- sewer, water, natural gas -- the need for an adequate, modern, reliable electrical system is essential to the growth of an urban area. With this project the State's major electric utilities, including Public Service and Colorado Ute which will link into the system at their Orchard Mesa 345 kV line, have made a major commitment to invest in the future of the Grand Valley.

Mesa County has adopted a specific set of land use and development policies with regard to the location of transmission lines. Public Service has evaluated each of the preferred alternatives with regard to each of these alternatives.

We will discuss each of the alternatives on a segment-by-segment basis and the alternative(s) which are most closely consistent with the policies.

1. Cameo-Fruita Segment

The preferred alternative (A, F, V, AAA, CCC) has many advantages over alternatives WW and AA: it passes in back of the Bookcliffs and Mount Garfield and would be virtually invisible from I-70, Clifton and Walker Field. The other alternatives (WW and AA) are highly visible from I-70, would present a major visual intrusion in front of Mount Garfield and the Bookcliffs.

The entry from the high desert north of Fruita into the Fruita substation has been of great concern to the farmers in the Fruita area. The route which appears to least disrupt irrigated farmland is route CCC, which follows an existing wash (East Branch Wash) and then links into 15 Road near N Road. This route would cut diagonally across the proposed Quail Ridge development at 16 and O Roads. Other alternatives in this segment are more disruptive of agricultural fields and homes.

While CCC would have some negative visual impacts on Quail Ridge, it would be offset to some extent by its lower elevation since it would be located in or near the wash.

2. Fruita-Grand Junction Segment

Alternative J, the preferred alternative between Fruita and the Horizon Substation, follows the existing railroad and 6 & 50 corridor. This route would present a major visual intrusion between the highway and the Colorado National Monument. The alternative which would be least visually intrusive would be alternative BB, which would follow the existing 69 kV line on the bluffs of the Redlands. This route, however, has a number of problems, including a river crossing at the Walker Wildlife Area and proximity to existing and planned residential development in the Redlands. Whether the new line is located here or not, the existing line will be retained along the bluffs of the Redlands.

Route J, the preferred alternative, seems to meet most of the policies except for the visual impact policy, which will be negative.

3. Grand Junction-Clifton Segment

Alternative A, the preferred alternative for this route, follows the D&RGW right-of-way from the Grand Junction border through Clifton to 33 Road and then turns south to the new Clifton substation on 33 Road.

Alternatives for this route include a river alternative (Alternative D), which would follow the gravel pits and floodplain of the Colorado from the industrial areas along C 1/2 and 28 Roads to the floodplain and irrigated fields along the river. The route would include the northern part of Corn Lake, the Clifton Sanitation Lagoons and cut north on 33 Road to the new substation.

There are two other alternatives: Alternative J, which goes along the bluffs of Orchard Mesa in a built up and heavily farmed area of Orchard Mesa and Alternative L, which sweeps far to the south on the desert hills outside of the irrigated area of Orchard Mesa. This route also includes a segment along the Gunnison River and its narrow floodplain. It would cross the river several times and link into the Grand Junction substation near the confluence of the Gunnison and the Colorado.

Alternative A will present a major visual intrusion to the views of the Colorado National Monument, the Grand Mesa

and Mount Garfield from Business I-70. It would be a major negative view, not only for motorists on Business I-70, but also for residents and businesses in the Clifton area.

We would suggest either Alternative D or a mitigation program for Alternative A. This program could consist of a contribution to the Clifton and Fruitvale business associations for landscaping improvements at these centers to offset the negative impacts of the new powerline. Both 30 Road and Business I-70, and 32 Road and Business I-70, were identified in the Mesa County Roadway Landscape Guidelines as "key identity nodes". These could consist of a landscaped entry feature such as a landscaped rest stop or landscaping along the frontages of key commercial parcels. The landscaping would then be maintained by the business association. The cost of installing one key identity node has been estimated at from $5,000 - $10,000. The exact location of the facility would have to be identified with the assistance of the Fruitvale and Clifton business associations.

Another alternative is the undergrounding of the segment from 29 Road to 32 Road. While Public Service Company has stated that undergrounding is only acceptable if the local government pays for it, it is also a part of the transmission line policy #21, which states in part: "...locating transmission lines underground will be considered as an alternative when technically feasible and where location of overhead transmission lines could impact scenic views, residential neighborhoods....recognizing that the selection of the underground alternative would require a financial arrangement which would be acceptable to the P.U.C. and the affected parties" (Mesa County Land Use and Development Policy #21).

d. Staff Recommendation: Approval of the conditional use permit to Public Service Company of Colorado for the construction, operation and maintenance of a 230,000 volt transmission lines and corridors to be located within a 1/4 mile corridor along the following corridors as identified on exhibit A1-1:

1. Cameo-Fruita Segment:
Alternative CCC, since it least disrupts agricultural lands and removes visual intrusion from I-70 and the Bookcliffs.

2. Fruita-Horizon Segment
Alternative J, since it avoids the environmental problems of L and BB.

3. Grand Junction-Clifton-Colorado Ute Segment
Alternative D, since it avoids the major visual incursion that Alternative A would bring to Fruitvale and Clifton and could lead to a strip of undeveloped land adjacent to the Colorado River and the gravel pits which could be later developed into the proposed Colorado River greenbelt.

Alternative A would be acceptable with contribution to the Clifton and Fruitvale business associations for landscaping improvements or the installation of "key identity nodes" at each location. This alternative would also be acceptable if placed underground to avoid incursion into the views identified in the Mesa County Land Use and Development Policies.

And subject to:

Revegetation of all disturbed areas in accordance with the revegetation guidelines provided in the application.

Obtaining all necessary permits from the Federal, State and local governments, including B.L.M., City of Fruita and City of Grand Junction permits.

Preparation of a final construction phasing schedule and submittal of the schedule to the Mesa County Planning Department for public information and to coordinate inspections.

Repair of any road damage to County roads and posting of a bond or other surety to cover this contingency.

REVIEW SHEET SUMMARY

FILE NO. C78-84 DUE DATE 10/16/84

ACTIVITY 230,000 Volt Transmission Line & Substations

PHASE

LOCATION Mesa Co. from Cameo to Fruita to Gr. Jct., Gr. Jct. to Clifton to E. Orchard Mesa

PETITIONER Public Service Co. of Colorado, Attn: Larry E. Keith

PETITIONER ADDRESS 5909 E. 38th Avenue, Denver, CO 80207

ENGINEER

DATE REC.	AGENCY	COMMENTS
9/14/84	Ute Water	Ute has no objections to this improvement program or the proposed locations of the facilities. In most cases the Ute system components are located under driving surfaces or road shoulders of dedicated road R.O.W. In some isolated circumstances a proposed tower location may conflict with existing water line or vault structure. Should this occur, Ute reserves the right to review the conflict on an individual basis.
9/17/84	G.J. Fire	This office will not have any objections or corrections of the Public Service transmission line and substation.
9/19/84	Public Service	Gas: May be some conflicts with gas. Will keep contact to aleviate problems that may arise. No objections otherwise. Electric: This project may have some conflicts with electric distribution facilities which will be coordinated with the Transmission Department as the project develops.
9/20/84	Bur. of Reclamation	The United States owns the Government Highline Canal, laterals, and drainage systems. The Grand Valley Water Users Association (GVWUA) manages this system for the United States. Anytime these systems are crossed such as with the proposed transmission line, a "Right-of-Use" document (license agreement) must be obtained from the United States Bureau of Reclamation and approved by the GVWUA. It appears that the proposed route will cross United States facilities and therefore, plans should be made to secure the aforementioned documents. These documents must be obtained prior to any construction activities and may take up to 4 weeks to secure. If additional information is needed please contact the Bureau of Reclamation, Lands and Rights-of-Way Branch in Grand Junction at 242-8621.
9/26/84	Clifton Fire	(No comments on Review Sheet)
9/28/84	Mountain Bell	No comments.
10/02/84	Tri River Ext.	Is irrigation water available for the Clifton Substation Landscaping? A landscape and irrigation plan should be submitted for review. The plants selected must be based on a soil test for soluble salts in accordance with the Mesa County Landscape specifications. Landscaping at the other facilities should be based on the zone the stations fit into. The Roadway landscape guidelines is suggested as a set of guidelines to follow.

DATE REC.	AGENCY	COMMENTS
10/9/84	Lower Valley Fire	Lower Valley Fire Protection District addressed its requirements for this project in a letter dated July 23, 1984, to Larry Keith of Public Service Company. A copy of the letter, which we appreciate, is included in their application for a Conditional Use Permit. The letter is self-explanatory, and Lower Valley Fire Protection District adheres to the alternatives listed in the letter, as being acceptable to our approving this application. We commend Public Service for making inquiries well in advance of their application. We were able to respond in a timely fashion, and the application contains our input as part of the application, and not an add-on as is generally the case. We recommended this approach in the past and continue to recommend it now.
(LATE) 10/17/84	Div. of Wildlife	We are pleased that Alternative J was selected as the proposed transmission line route for the Horizon-Fruita Segment. This route has substantially less potential adverse environmental impacts than the river corridor route, which we recommended against the implementation of. The environmental impact statement for this project inadequately addressed potential impacts to waterfowl. For the most part, impacts to this resource were overlooked. The Colorado River in Mesa County is a major waterfowl migration corridor and overwintering area for western Colorado. In some years as many as 10,000 ducks and 5000 geese have been observed overwintering in the Grand Valley. The major potential impact to waterfowl from the project would be from bird collisions with powerlines at the river crossings. Regarding mitigation measure 27 on page 39 and under Section O, we recommend that Mesa County require documentation that the proponents have consulted with involved federal and state agencies and have satisfied the concerns of those agencies. This documentation could be a letter from each agency stating they have met with the proponent and reached whatever agreements. The county should set a deadline for the proponents to fulfill this recommendation. Some mitigation measures we foresee at this time as necessary include: 1) At river crossings the powerlines should be strung in a plane that is parallel to the river rather than vertical to the river. The powerlines should also be well marked to make them more visible to not only waterfowl but to aircraft. The Colorado Division of Wildlife flies low level waterfowl population surveys annually along the Colorado River. 2) All construction activity through Coal Canyon and the Bookcliffs should be done only during the period from June 1 to November 30 to avoid disturbances to wintering mule deer, wild horse foaling, chukar partridge nesting, and raptor nesting. 3) Transmission lines and towers should be designed to minimize the potential for electrocuting raptors. Guidelines for protecting raptors from electrocution are provided in: Suggested Practices for Raptor Protection on Powerlines - The State of the Art - 1981; Raptor Research Report #4, Raptor Research Foundation, Inc. 1981.
10/16/84	Grand Valley Water Users	The above activity as proposed will cross or encroach on Assoc. operated facilities (canal, laterals and drainage ditches) at several locations. The Assoc's position on said activity coincides with that of the Bur. of Reclamation as stated on its Review Sheet of 9/17/84 (copy attached).
(LATE)10/19	County Health	No comments.
(LATE)10/19	County Engr.	Before a Floodplain Development Permit can be considered for this project, Public Service will have to submit to the County Floodplain Administrator: 1. Project plans for each river or stream crossing in which poles or other facilities or alternations are to be placed within the 100-year floodplain of that river or stream. 2. Project plans where poles are placed in an alignment along a river or stream within the 100 year floodplain of that river or stream. 3. Stream cross-sections at each location where poles

DATE REC.	AGENCY	COMMENTS
	Co. Engr. (Cont.)	are placed within the 100 year floodplain of a river or stream. Where lines are to be placed within County road right-of-ways, underground utility permits will have to be obtained from the Mesa County Road Department prior to construction. If the sub-station is placed along 33 Road, 33 feet of road right-of-way will have to be dedicated for 1/2 of the proposed collector road section for 33 Road.

REVIEW SHEET SUMMARY

FILE NO. 25-84 TITLE HEADING 230 K.V. Transmission Line DUE DATE

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Location: Between existing Redlands tap point and existing Grand Junction substation at 5th and Grand along Colorado River

Petitioner: Larry E. Keith

PETITIONER ADDRESS 5909 E. 38th Avenue, Denver, CO 80207

ENGINEER Public Service Company of Colorado

DATE REC.	AGENCY	COMMENTS
9/21/84	City Engineer	No specific comments on application. Please send final plans to City Engineer for pole location review. Pole locations in City right-of-way and floodplain areas are specific concerns and I would like to review before construction.
10/18/84	Development Dept.	The 230 KV lines proposed through the city limits of Grand Junction are located in the industrially zoned sections north of the Colorado River. As stated on page 23, "as builts" will be provided once "construction is completed." The City Engineer may need to review exact placement prior to construction to ensure safety aspects have been accommodated for from the City's perspective. In your development schedule (Exhibit O-1), you show a time lag of approximately 6 months between the construction of the 230 KV line and the removal of the 69 KV line. Can you clarify the reason these can't be done concurrently? Page 24, "Z" Structural Information. In the past, with the 230 KV pole placement along the river, the City/County experienced some problems of bank protection of the poles. I would recommend that prior to exact placement being constructed, PSCo verifies with the City and County Floodplain Administrators to ensure no "after the fact" problems will occur. This would only be where the lines will cross or be placed in the floodplain. It will help in future runoff situations and prevent a recurrence of last year's concerns. Given all other technical review comments are resolved, this department does not object to the issuance of a special use permit for the Alternative A placement for a 230 KV transmission line, as per Section 4-5 of the Grand Junction Zoning and Development Code.

3. Grand Junction-Clifton-Colorado Ute Segment (11.7 miles)

Type of pole: Single column steel, Single column wood, Wood H frames Av. Height: 75'-100' Av. ROW Width:20'-100'	Downtown Grand Jct., Industrial & Heavy Commercial, D&RGW ROW, Bus. I-70, Fruitvale Center, Clifton Bus. Dist., 32 Rd. Bridge	Industrial, Commercial, Planned Commercial, Planned Business, AFT, Planned Industrial, Planned Educational
4. Fruita Substation	Pasture	AFT
5. Clifton Substation	Pasture	AFT

c. Staff Comments:

This is perhaps the largest single upgrading of an electric power facility that has ever been proposed for the Grand Valley. It is now being proposed for County permitting, having already applied for permits from the B.L.M., the City of Fruita, and the City of Grand Junction.

The proposed upgrade would change the existing 69,000 volt system which now serves as the valley's primary transmission system into a 230,000 volt system.

The existing electrical system dates back to the 1950's before much of Mesa County's explosive growth took place. The system is now operating above its capacity during peak periods.

Public Service has projected a medium growth scenario as the best indicator of future system loads. This scenario assumes a 5% annual growth rate in electric demand through 1985 and 3.5% annual growth through the year 2010. The Chevron-BMML population projection, for comparison, under the "no action (i.e. no oil shale other than Union)" shows a decrease in the County's population from 1980 to 1984 (2%) and a steady increase thereafter at an annual average of 5% to 2000.

The Public Utilities Commission authorized the Public Service Company to construct the proposed facilities and issued a

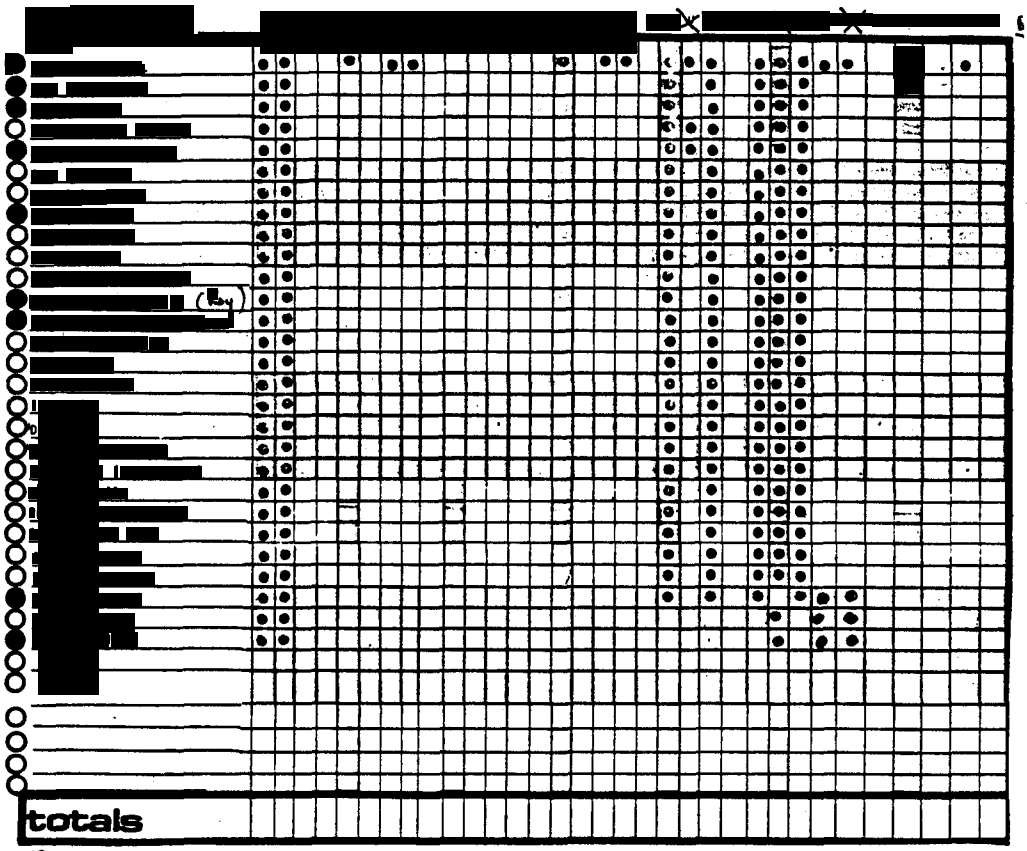
[redacted]

ACTION SHEET

File No. #25 84

Zone [redacted]

[redacted]



totals

BOARDS

STAFF

DATE	
9/11/84	Sent out packets for review to City Agencies
10/25/84	Sent letter of confirmation to PSCo Larry Keith

APPLICATION FEE REQUIREMENTS

Special Use $115.00 at submittal

20 day review time.

GRAND JUNCTION planning

[redacted]

submittal legend

General Requirements

- ✓ *A Application Form
- ✓ B Impact Statement or Project Narrative
- *C Summary Form
- D Appraisal of Application for Open Space
- ✓ E Evidence of Title
- F Draft of Covenants/Restrictions
- ✓ *G Legal Description
- *H Names & Addresses of Adjacent Property Owners Within 200'
- I Floodplain Analysis
- J Geology Report/Soils Report
- K Gamma Radiation Report
- L Subsurface Soils Investigation
- *M Improvements Agreement
- *N Improvements Guarantee
- ✓ O Development Schedule (include in narr.)

*On City Forms Provided By Department

Site Plan Requirements

- P Plat (including easements - 24" X 32")
- ✓ Q Site Plan - (24" X 32") (alignment)
- R Adjacent Land Use and Zoning
- S Drainage/Grading Plan
- T Utilities Composite
- U Landscaping/Screening/Buffering
  - a) Types of Open Space - existing/proposed
  - b) Percent and open space
  - c) Maintenance, Irrigation Rights
- V Parking
  - a) Total number proposed/required
  - b) Dimensions, striped, handicapped
- W Roadway Plan/Profile
- X Traffic Circulation Patterns
  - a) Pedestrian/Bikeways/Crosswalks
  - b) Dimensions of curb cuts, driveways
  - c) Internal circulation detail
- Y Traffic Analysis
- ✓ Z Structural Information (structures & poles etc)
  - W) Heights, elevations, sq. footage
  - X) Percent building coverage
  - X) Set backs (centerline/property line)
  - X) Lighting and signage detail

- ✓ AA Location & Vicinity Map (site plan)
- BB Assessor's Map with subject property outlined in red
- CC Reduction of Assessor's Map (Not larger than 11 1/2" X 14")
- DD Reduction of Plan (Same)
- EE Reduction of Plat (Same)
- ✓ FF Action Sheet
- GG County Treasurer tax certification

pre-application conference

DATE 12/19/83 CONFERENCE ATTENDANCE: Karl, Ray, Bob, Larry, Dave, PSCo

Development Proposal/Phase SU. for Transmission Line

Location along Colo. River ? as shown in application

Class of R.O.W. NA

Curb Cuts: (existing/proposed) NA

Parking: (existing/proposed) NA

Bikeways & Pedestrian Access NA

COMPATIBILITY WITH SURROUNDING USES: will be addressed.

LANDSCAPING/IRRIGATION/BUFFERING/SCREENING: (existing/proposed)

NA

CITY POLICIES APPLYING TO THIS PROPOSAL

Goals, Objectives, Policies _____ Corridor Policies _____
Vicinity Studies _____ Related Files _____
Airport _____ Flood _____ County _____

REQUIREMENTS:

1) Incomplete submittal shall delay this application.
2) Written response to review agency comments must be submitted to the Department a minimum of 48 hours prior to the first scheduled Public Hearing.
3) Project must obtain Building Permit within 1 year from date of final approval or according to approved development schedule.
4) Neighborhood Input brief overview in application narrative
5) Show as-builts & conceptuals of power poles. & specifics of alignment
6) Floodplain analysis & City permit if any encroachment into 100 yr. floodplain

WE HEREBY ACKNOWLEDGE that we have familiarized ourselves with the rules and the regulations with respect to preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of this application, and review sheet comments.

WE RECOGNIZE that we ourselves or our representative(s) must be present at all hearings. In the event that the petitioner is not represented, the item will be dropped from the agenda, and an additional fee charged to cover re-scheduling expenses before it can again be placed on the agenda.

NOTE: Any changes to the approved plan will require a re-review and approval by the planning department prior to those changes being accepted.

Signature(s) of petitioner(s): _____

Signature(s) of representative(s) _____

City of Grand Junction, Colorado 81501
250 North Fifth St.,

October 25, 1984

Mr. Larry E. Keith
5909 East 38th Avenue
Denver, CO 80207

RE: File #25-84 Special Use Application--230 K.V. Transmission Line

Dear Mr. Keith:

Your application for a special use permit for the Grand Junction 230 K.V. Conversion has been processed and reviewed in accordance with sections 4-5, 4-7, and 4-8 of the Grand Junction Zoning and Development Code. A copy of all review comments is attached.

Our review has indicated that this project meets all the general and specific criteria contained in section 4-8 for the proposed alternative routes numbered A and J in your submittal.

This letter is your official notification that the special use application, as submitted for alternative A and J, is hereby approved for those portions within the city limits of Grand Junction. This approval is subject to the following conditions and restrictions:

1. Compliance with attached review comments. (Written response from you is required.)

2. Compliance with all terms and commitments as specified in your application.

3. Review and approval by this department and the Grand Junction City Engineer of the exact route and pole locations prior to commencement of construction.

4. Any changes or amendments to this submittal and approval shall require a re-review by this department and any other affected agencies.

5. We recommend you work to coordinate the overall line placement with the other affected agencies and departments to ensure the best locations.

If you have any questions or concerns about this approval, I will be happy to discuss them with you.

Sincerely,

Karl Metzner
Director of Planning

KM/tt

enclosures

xc: Tom Keith, EDAW, Inc.
Mark Achen, Grand Jct. City Manager
Bennett Boeschenstein, Mesa County Planning

Grand Junction Planning Department
559 White Ave. Room 60
Grand Junction, Colorado 81501-2643

March 20, 1985

Larry E. Keith
Landscape Architect/Planner
Public Service Co. of Colorado
5909 East 38th Avenue
Denver, CO 80207

CERTIFIED

RE: File #25-84 Special Use Application-230KV Transmission

Dear Mr. Keith:

Your request of December 13, 1984 to revise special use approval from Alternative A to Alternative D has been reviewed and is hereby approved. Approval is subject to all previous review comments and we accept your response to those comments dated November 21, 1984.

Please contact me when you have identified specific pole locations and I will arrange for review by the City Public Works Department, and commence processing of the floodplain permit, if required.

Thank you for your cooperation.

Sincerely,

Karl G. Metzner
Director of Planning

KGM/tt

xc: Bennett Boeschenstein, County Planning Director
Lyle Dechant, County Attorney
Mark Achen, City Manager
John Kenney, Acting Public Works Director
File #25-84

Public Service™

Public Service
Company of Colorado
5909 E. 38th Ave.
Denver, CO 80207

April 21, 1986

Mr. Karl Metzner
Director of Planning
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

Re: Grand Junction Substation -
Grand Junction 230kV Conversion Project

Dear Mr. Metzner:

As we discussed on April 16, 1986, Public Service Company of Colorado intends to use dull galvanized steel in its rebuild of the Grand Junction Substation. The metal clad switchgear will be a light gray.

After a number of years of using painted steel structures, we have experienced maintenance problems associated with paint failures. In order to repaint the structures, the substation must be taken out of service which is not always possible as service to our customers must be maintained. In some cases, the paint failure is severe enough that sandblasting is required subjecting our electrical equipment to contamination.

I feel the use of the dulled galvanized structure is compatible with the existing industrial uses surrounding the substation.

Should you have any concerns or comments, please advise.

Sincerely,

John H. Muir

John H. Muir
Senior Right-of-Way Agent
Architectural & Right-of-Way Department

JHM/ea

approved apr. 25, 1986
KGM