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Re: Draft Environmental Impact Report for the San Joaquin Cross  
Valley Loop Transmission Project

Dear Mr. Uchida:

This firm represents the City of Visalia ("City") on the application of Southern California Edison ("SCE") to construct and operate the San Joaquin Cross Valley Transmission Loop Project ("Project"). This Project would traverse land within the Visalia city limits as well as within Visalia's adopted Urban Development Boundary and Urban Area Boundary. The City understands and appreciates the need for the proposed Project. However, it is concerned about the far-ranging environmental impacts which may accompany the Project, regardless of the particular Project alignment.

After carefully reviewing the draft Environmental Impact Report ("DEIR") for the proposed Project, we have found that it fails to comply with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 *et seq.*, and the CEQA Guidelines, California Code of Regulations, title 14, § 15000 *et seq.* ("CEQA Guidelines"). Although the proposed Project would traverse land within Visalia



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-- and indeed sections of the proposed alignments would pass within 50 feet of existing residential neighborhoods --, the DEIR fails to adequately address or mitigate the numerous significant impacts upon the City. The Project would irreparably alter views in the area, including views of the majestic Sierra Nevada Mountain Range, yet the DEIR incorrectly concludes these impacts would not be significant in many areas of the various Project alignments and would be mitigated to a less than significant level in all other areas. The increase in noise levels, from construction of the Project and from the high-voltage lines' corona discharge, would be a source of aggravation and annoyance, yet the DEIR fails to provide specific and enforceable mitigation for these impacts. The DEIR defers entirely an evaluation of the Project's compatibility with Visalia's planned development, including important roadway and community amenity projects long contemplated by the City. In addition, the DEIR fails to adequately analyze impacts related to the loss of Project-specific and cumulative Prime Farmland, Farmlands of Statewide Importance, and Farmlands of Local Importance. The DEIR also fails at the essential task of analyzing alternatives to the Project.

An EIR is "the heart of CEQA." *Laurel Heights Improvement Ass'n v. Regents of University of California*, 47 Cal. 3d 376, 392 (1988) (citations omitted). It "is an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' Because the EIR must be certified or rejected by public officials, it is a document of accountability." *Id.* (citations omitted). Where, as here, the environmental review document fails to fully and accurately inform decision-makers, and the public, of the environmental consequences of proposed actions, it does not satisfy the basic goals of the statute. *See* Pub. Res. Code § 21061.

As a result of the DEIR's numerous and serious inadequacies, there can be no meaningful public review of the Project. The California Public Utilities Commission ("CPUC") must revise and recirculate the DEIR in order to permit an adequate understanding of the environmental issues at stake.

#### **I. The DEIR Fails to Adequately Analyze the Project's Land Use Impacts.**

The proposed Project (also referred to as "Alternative Route 1") and each of the Alternative alignments would traverse land within the existing Visalia city limit and land within the City's Urban Development Boundary ("UDB"). The Project therefore has the potential to impact the City's well established existing community as well as land proposed for development. Although the DEIR purports to undertake a land use



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consistency analysis, its "analysis" is cursory and uninformative and therefore the Project's land use impacts on the City of Visalia remain largely unanalyzed.

**A. The DEIR Fails to Adequately Analyze Impacts Relating to the Project's Compatibility With the Visalia Community.**

**1. The DEIR Lacks Detailed Information Regarding Potentially Affected Parcels.**

As a preliminary matter, the DEIR does not specifically identify the parcels of land that would be impacted by the proposed Project alignment or any of the Alternative alignments within either the existing City limits or within the UDB. An adequate analysis of the Project's impacts on Visalia must necessarily begin with this rudimentary information. The revised DEIR must identify those parcels that would be impacted by the proposed Project and each Alternative alignment and analyze the specific effect on these parcels. This document should, therefore, provide the following information for Alternative Route 1 and each of the Alternative routes: 1) an identification of those parcels within the existing right of way ("ROW"); 2) a description of the current uses on each of those parcels; 3) a description of proposed uses on those parcels following construction of the proposed Project; and 4) an identification of those parcels that may be precluded from development as a result of the proposed Project and each Alternative alignment.

The revised DEIR must also include information about the property rights that SCE will acquire under the proposed Project and each Alternative alignment. The City understands that SCE has indicated that it seeks to revise the terms of its existing ROW, whether the PUC approves the proposed Project or one of the Alternative alignments. Currently, SCE owns an easement over the existing ROW and the fee owner retains significant rights to use the underlying property. The additional rights in the existing ROW that SCE has said it may require for the Project are not necessarily additional land, but rather either fee ownership or expanded easement rights that would limit the underlying property owner's use of its land within the ROW. The alteration of the property rights in the existing ROW as between SCE and the fee owner has foreseeable impacts, including the potential disuse or non-maintenance of the underlying land, ultimately leading to blight. In order to evaluate these environmental impacts, the revised DEIR must first identify any potential change in the nature of property rights for the proposed Project and each of the Alternative alignments.



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## **2. The DEIR Fails to Adequately Analyze Impacts from the Alignment of Alternative Route 1.**

Development of Alternative Route 1 would impact Visalia's existing community as well as proposed development within the City's ultimate planning boundary. Specifically, the Project would affect about one mile of existing ROW within the City, and an additional two miles that are within the City's UDB. Although SCE currently has a transmission line corridor that runs along the edge of the City's eastern boundary, the proposed Project would nonetheless result in impacts to a well established community. *See* Letter from Mayor Gamboa, City of Visalia, to Mr. Jensen Uchida, September 22, 2008, attached as Exhibit A to this letter for a discussion of the number of existing and proposed residents that would be impacted by the proposed Project and Exhibit B, Southern California Edison Proposed Routes.

As discussed below in Section II of this letter (Visual Impacts), the increase in the height of the poles and the additional lines that are features of all of the potential transmission routes would result in unsightly views of the towers, lines and the blighted wasteland that typically can occur within a transmission line corridor. The poles and lines, which would be more than twice as tall as the existing SCE structures, would stand well above the tree-line and thus interfere with views of the Sierra Nevada Mountain Range. In addition, the increase in the number of lines will also increase residents' fear or apprehension of electro-magnetic fields ("EMF"). While the scientific community may remain divided as to the potential risks associated with EMF exposure, the public nonetheless is apprehensive about the potential health risks that EMF pose. Additional transmission lines would also bring an increased risk of downed power lines which in turn poses an increased risk of wildfires in an area already prone to wildfires. The potential hazards associated with living next to or near power lines thus would affect residents' use and enjoyment of their homes. Given the proximity of the existing community to this Project, the DEIR's land use analysis should have carefully examined these effects. Yet, the document never so much as mentions Visalia in its "analysis" of the Project's potential to physically divide an established community. *See* DEIR at 4.9-14.

The alignment of Alternative Route 1 would also thwart Visalia's well established plans to build out the City. Visalia's UDB extends east of the current City boundaries. Over the next ten years or so, the City expects its population to grow from 123,000 to about 165,000. While some of this development would be infill, much of this growth is expected to occur within the UDB. The City's plans in this location will support mixed use neighborhoods, including single and multi family homes, schools, parks, shopping and other land uses. *See* Exhibit A. Exhibit B (Southern California Edison Proposed Routes) shows an aerial view of the City and the City's UDB line (in



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brown). At present, urban development within the City is located predominantly west of the current SCE ROW. Once the City is fully built out, however, urban development would extend an additional one-half mile to the east of the SCE ROW. Consequently, the Project's towers and lines would create a significant obstacle to Visalia's planned expansion of the City since they would appear as a stark industrial swath through Visalia's urban core. The DEIR fails entirely to address this impact.

The transmission lines -- and the blighted landscape that can occur under the lines -- would therefore have a pervasive influence on the emerging community. Rather than develop near the transmission lines, developers would likely seek other locations for development. As a result, the land near transmission lines -- or even within sight of the transmission lines -- may be left undeveloped. Thus, rather than build out in a concentric and contiguous manner as the Visalia General Plan clearly promotes, the City would be left with islands of undeveloped land. This leap-frog pattern of development results in all sorts of other problems including the inability to provide efficient public utilities and services and incomplete or sporadic public amenities (such as gaps in sidewalks and gutters). Or, rather than develop these lands with residential uses as the City may be intending, parcels along the transmission line corridor may be developed with less desirable uses.

### **3. The DEIR Fails to Adequately Analyze Impacts From Alternative Routes 2, 3 and 6.**

Although each of the Alternative routes would affect about four miles of existing ROW along the eastern edge of the City, the DEIR also fails to examine how such an alignment would impact Visalia's established community. Rather than provide an analysis of land use compatibility impacts, the DEIR simply asserts that "the Project would traverse *Park and Conservation* land use designations." DEIR at 4.9-19, 20 and 21. The DEIR never explains the implications of this potential land use conflict. Nor, more importantly, does the DEIR identify, let alone analyze, the specific impacts on the residential neighborhoods which abut the west side of the existing transmission corridor. As with the proposed Project alignment, Alternative routes 2, 3 and 6 would physically divide the community upon build out of the City (*see* discussion above).

Alternative routes 2, 3 and 6 would also interfere with several important projects contemplated for development within the City. The City is planning to develop a regional sports park on a City-owned 100-acre parcel, located between the existing SCE transmission lines and Avenue 152, just north of Mineral King Avenue. (The location of this park is shown on the City of Visalia Trail Linkages Plan, attached as Exhibit C). While this proposed park site is currently adjacent to SCE's existing transmission lines, the increased intensity of use, and in particular the visible increase in industrial character



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of this location, would complicate the development of this sports park and potentially interfere with the community's use and enjoyment of the park.

In addition, the City is proposing the construction of a major arterial along the existing SCE ROW (Alternative routes 2, 3 and 6). This arterial -- referred to as the Visalia Parkway -- would be constructed immediately east of, and parallel to, the existing SCE right of way until it crosses the right of way just south of St. Johns Parkway and then continues northward on the west side of, and parallel to, the right of way until it reaches St. Johns River. *See* Proposed Visalia Parkway, attached as Exhibit D. This roadway would be a four-lane arterial with a grade separated interchange with Highway 198. The proximity of this major roadway project to the SCE ROW unquestionably would complicate the construction, design and operation of the Parkway's intersections with Highway 198, Walnut Avenue, Tulare Avenue, Noble Avenue, Mineral King Avenue and Houston Avenue. The revised DEIR must analyze how the construction of new towers and lines would impact the City's proposed construction of this major roadway.

Finally, the City is continuing to build out its city-wide 86-mile recreational trail system that will improve access to important community facilities and services for Visalia residents. This trail system (shown on Exhibit C, City of Visalia Trail Linkages Plan) is an effort to establish a system of trails along Visalia's waterway corridors. To this end, several policies in the Community Waterways section of the Conservation, Open Space, Recreation and Parks Element ("CORP") of the City's General Plan promote trails and bike paths along the City's waterways. Moreover, policy commitments in the CORP call for restoring, enhancing and maintaining the natural, scenic, historic, and open space quality of the City's creek corridors and open spaces.

The St. Johns River and Mill Creek are two important waterways that currently have paths within riparian setback areas; the St. Johns River path currently traverses the existing SCE ROW, and the Mill Creek path is scheduled to also cross the ROW in the future. Both paths would be adversely impacted by Alternative alignments 2, 3 and 6. Far from enhancing the scenic and open space qualities of these waterway corridors, the increased height of the proposed Project's poles, coupled with the industrial nature of the new lines, would be contrary to the City's goals for these spaces. *See* Exhibit N (photos of existing transmission lines and mountains from St. Johns River trail; taller towers and lines would obscure the mountain views). Moreover, these paths have become an important amenity for Visalia residents, not only because they provide connections within the City but also because they provide critical access to nature in an otherwise urban environment. The proposed Project would therefore interfere with the residents' use and enjoyment of the interconnected system of waterway paths.



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**B. The DEIR Fails to Adequately Address the Project's Inconsistency With the Visalia General Plan.**

In addition to the Project's clear inconsistency with the City's goals relating to the enhancement and restoration of the City's waterway corridors, the Project is also inconsistent with numerous other objectives and goals established by the City's General Plan. Although the DEIR does list some Visalia General Plan policies with which the Project might conflict, it ignores other objectives, goals and policies that are highly relevant, including:

- Objective, which calls for maintaining and enhancing Visalia's physical diversity, visual qualities and small-town characteristics. Land Use Element at 1-18, 3-2. The construction of tall transmission poles and lines clearly does not maintain or enhance Visalia's visual qualities or small-town characteristics. The DEIR must discuss this inconsistency.
- Policy 1.1.16, which calls for minimizing the visual impact of development through various design techniques such as building orientation, landscaping depth and density. Land Use Element at 3-5. (*See also* Policy 4.1.6, which calls for the development of design measures to buffer residential development from non-residential land uses. These measures should, at a minimum, include setbacks, and landscaping. Land Use Element at 3-27). The DEIR fails to consider landscaping to minimize the visual effects of the Project's features.
- Implementing Policy 3.3-1, which is to encourage cooperative agreements with the City and SCE to explore recreation and open space facilities. CORP at 64. This policy specifically names SCE as a potential partner in developing open space, yet the DEIR fails to mention this policy or propose any joint use of the ROW for recreation or open space purposes.
- Objective, calling for the City to maximize opportunity for joint use of public land and facilities such as schools, stormwater ponding basins and other recreation areas under public jurisdiction suitable for recreation. CORP at 6. Although the DEIR does not identify this objective or discuss the implications for the proposed Project, as discussed below, opportunities exist for joint use of the SCE ROW corridor to mitigate many of the Project's environmental impacts.
- Objective, calling for the utilization of ordinances, easements, restrictive covenants and other tools to negotiate with landowners and developers to



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ensure that significant natural resources and open space are protected during development. CORP at 6.

In other instances, the DEIR lists goals and policies set forth in Visalia's General Plan, yet stops short of actually analyzing the inconsistencies between the Plan's provisions and the Project. For example, the DEIR lists, but does not analyze the implications of, the following highly relevant policies:

- Implementing Policy 1.1.4: Work with utilities and transportation companies to landscape power line and railroad right-of-ways throughout the community and to underground utilities and abandoned railroad spurs where possible.
- Implementing Policy 1.1.5: Develop land use and site design measures for areas adjacent to high-voltage power facilities.
- Implementing Policy 4.1.16: Require special site development standards for proposed non-residential or more intensive land uses adjacent to established residential areas to minimize negative impacts on abutting properties.

CEQA's requirement to discuss plan inconsistencies is meant to inform the lead agency so that it may modify a project to avoid the inconsistencies. *See Orinda Ass'n v. Board of Supervisors*, 182 Cal. App. 3d 1145, 1169 (1986). Here, the DEIR's simple recitation of the policy without the required analysis fails to inform decision makers of opportunities to modify the Project, or apply mitigation, to reduce numerous environmental impacts.

**C. The DEIR Fails to Identify Any Mitigation for The Project's Significant Land Use Impacts.**

The extensive land use impacts described above, coupled with the Visalia General Plan provisions calling for the City and SCE to develop cooperative agreements to explore recreation and open space facilities, dictate that serious consideration be given to conjunctive use of the proposed transmission line ROW. As discussed more fully in Section II (Visual Impacts) of this letter, conjunctive use would help to make the proposed transmission line corridor more compatible with the existing community and proposed development. A linear right-of-way is an ideal configuration for a walking or bicycling trail. With appropriate landscaping and landscaped buffers, such a linear park or trail would offset the tendency for the transmission line corridor to become a wasteland with associated effects on the community's ambiance and character.



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Moreover, a trail along the SCE ROW would provide a critical link in the City's efforts to complete its city-wide trail system.

Finally, development of a linear park or pathway would further mitigate the Project's numerous land use impacts by helping to implement the following goals, objectives and policies set forth in the City's General Plan:

- Objective: Design parks and recreation facilities which will enhance community identity and which will serve the recreation and social needs of Visalians of all ages, economic situations and physical abilities. CORP at 6.
- Objective C: Provide park sites which respond to the needs of the City's diverse population, including ... trails and bikeways for pedestrians, joggers and bicyclists... CORP at 59.
- Goal: Create and preserve an open space system in the Visalia planning area to meet a variety of needs. *Id.* at 6.
- Objective: Create and preserve open space for outdoor recreation. *Id.*
- Objective: Create and maintain open space for public health and safety in areas which require special management or regulation. *Id.*
- Goal: Develop a high quality public park system which provides adequate space and facilities for varied recreational opportunities which are conveniently accessible to all Visalia residents. *Id.*
- Objective: Acquire adequate park sites for future City growth. *Id.*
- Objective: Utilize ordinances, easements, restrictive covenants and other tools to negotiate with landowners and developers to ensure that significant natural resources and open space are protected during development. *Id.*
- Policy: Maintain open space corridors and green belts between industrial and residential development in all areas of the City. *Id.* at 58.

## **II. The DEIR Fails to Adequately Analyze Visual/Aesthetic Impacts.**

Under CEQA, it is the state's policy to "[t]ake all action necessary to provide the people of this state with . . . enjoyment of aesthetic, natural, scenic, and historic environmental qualities." Pub. Res. Code § 21001(b). Thus, courts have recognized that aesthetic issues "are properly studied in an EIR to assess the impacts of a



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project." *The Pocket Protectors v. City of Sacramento*, 124 Cal. App. 4th 903, 937 (2004).

Here, the DEIR's analysis of the proposed Project's impacts to visual resources is wholly inadequate. The DEIR fails to discuss the extent and severity of the impacts identified, fails to analyze impacts to certain user groups, and fails to require all feasible mitigation. In particular, the DEIR fails to analyze the proposed Project's severe aesthetic impacts on visual resources in and near the City of Visalia, especially in relation to views of the nearby Sierra Nevada mountains. Visalia's scenic qualities are well known, ranging from its rivers, to its views of the nearby foothills and the Sierra Nevada range. The City has a strong connection with these mountains and the Sequoia and Kings Canyon National Parks in particular. Visalia is known as the Gateway to the Sequoias, and the City recently started California's first Valley-to-Mountains National Park Shuttle. As evidenced by numerous goals and policies in the City's General Plan, City residents value Visalia's scenic vistas, rivers, parks and trails. See Sections I.B, I.C of these comments regarding the City's values, as evidenced in its General Plan. A revised DEIR must be prepared and recirculated to fully analyze the proposed Project's impacts on these important resources.

**A. The DEIR Fails to Analyze All Aesthetic Impacts of the Project.**

In those areas of the proposed Project where new transmission towers would replace existing ones, the DEIR fails to analyze the visual impacts caused by the proposed changes to the number and configuration of transmission lines. For the first 1.1 miles of the proposed Project and Alternative alignments, the Project would replace 60 foot transmission towers with 120-160 foot towers. DEIR at 2-6. Further, the Project would increase the number of transmission lines from six to twelve, and would change the current configuration of lines to create three separate sets of horizontal lines instead of just one set. *Id.*, Figures 2-4, 2-5. All of the Alternative alignments would also require these same changes for an additional 7 to 13.5 miles along SCE's existing ROW, where existing towers would be replaced with much taller towers that would carry twice as many lines. DEIR at 3-10 to 3-18. These changes would dramatically increase the visual impact and prominence of the transmission lines and towers.

Although the DEIR acknowledges that the new towers would be taller than existing ones, it fails to analyze the visual impacts caused by the reconfiguration and doubling of the number of lines. DEIR at 4.1-43, 44. Instead, the DEIR merely states that visual impacts due to increased tower height would be "less than significant as the proposed transmission line would result in an incremental visual effect which would not substantially alter the intrinsic character or composition of the existing view." DEIR at 4.1-44 (finding no significant visual impact in the first 1.1 mile portion of the proposed



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Project), 4.1-53 (finding no significant visual impact along most of the proposed Alternative 2 alignment within the existing ROW). It notes that the "replacement poles would extend further into the sky than the existing poles," and that the proposed new tubular poles, which would be spaced farther apart than existing poles, would be less visually obtrusive than the existing lattice towers. DEIR at 4.1-43, 44.

However, the DEIR ignores the fact that the Project would substantially increase the number and orientation of transmission lines. Despite the further distance between poles, the Project would result in twice the number of lines configured in three horizontal rows instead of one. These new lines, some of which would be more than twice as high as current lines, would contrast starkly with the sky and with views of the Sierra Nevadas. As described above, the views of the Sierras are treasured by Visalia residents, and any impact to these spectacular vistas is clearly significant. The new transmission lines and poles would be visible from a much greater distance and would obstruct a larger portion of a person's view when viewed from a near distance. The DEIR's failure to analyze these significant aesthetic impacts from the transmission lines themselves renders the DEIR's analysis insufficient.

The DEIR also fails to analyze the impact the taller transmission poles and increased number of lines would have due to the fact that they would rise significantly above the tree line. Currently, the existing SCE lines are approximately at tree height, so the lines are less noticeable because they do not stand out starkly against the skyline.<sup>1</sup> For a point of reference, Exhibit E shows the spectacular Sierra Nevada skyline from Visalia; the streetlight poles and utility lines in the foreground of the Akers Street photograph are approximately 25 and 35 feet tall, respectively. They do not stand out against the skyline due to the shielding by the trees. Likewise, the photograph from Road 144/Avenue 313 shows the existing lines and towers on SCE's ROW. *See* Exhibit E (four unlabeled photographs). The existing towers do not stand out against the skyline because they do not rise above treeline from a middleground viewing distance. However, the proposed new poles and lines would be approximately four times as tall as the utility lines in the Akers Street picture, and two or more times as tall as the existing poles in SCE's ROW. *Id.* Consequently, the new lines would tower above the trees, obstructing the views of the distant mountains. The trees would not be able to soften the effects of the tall lines, and the increased structure height would create an alarming increase in

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<sup>1</sup> Note that Visalia is a Tree City, USA, and has been for 20 years; thus, it has a lot of trees. This designation is part of a tree planting and tree care program sponsored by The National Arbor Day Foundation.



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industrial character juxtaposed against the beautiful Sierra Nevadas and the foothills. The DEIR fails to analyze this impact.

**B. The DEIR Fails to Analyze the Project's Aesthetic Impacts on Certain User Groups and Underestimates its Impacts on Other User Groups.**

The DEIR fails to analyze the Project's visual impacts on individuals who would be exposed to views of the transmission lines from public parks and pathways, including the St. Johns River and Mill Creek bike paths and the existing city park in the River Run Ranch development in northern Visalia. *See* Exhibit F (River Run Ranch Development) (showing location of town park adjacent to, and underneath, ROW). Instead, the DEIR arbitrarily limits its analysis of impacts on public park users to visitors in Kaweah Oaks Preserve and Cutler Park. DEIR at 4.1-16, 19; *see also* DEIR at 4.1-53, 54, 55 (not mentioning impacts to viewers from the bike paths). Given the proximity of the bike paths and city park to the Alternative Project alignments, users of these paths and this park would experience a significant deterioration in aesthetic quality due to the Project. A recirculated DEIR must analyze these impacts.

The St. Johns River bike path traverses the northeastern part of the city of Visalia from west to east, following the St. Johns River. *See* Exhibit C (City of Visalia, Trail Linkages Plan); Exhibit F (River Run Ranch Development map). The riverway is a semi-wild natural area that offers a respite from the City's urban environs and is an oasis for walkers, runners and bicyclists. The developed portion of the pathway currently traverses from west of SCE's ROW, through the ROW, and ends approximately an eighth of a mile to the east of the ROW. A well-used unofficial trail continues from that point all the way to Cutler Park and beyond.

Construction of large, new transmission lines and towers on the Alternative alignments would cause significant visual impacts to bicyclists and pedestrians on the St. Johns bike bath. The tall, tubular steel towers would be highly visible against the backdrop of the Sierra Nevadas, and the increased number and height of transmission lines would significantly detract from what are now spectacular views of the Sierras. *See* Exhibit N (Photos from St. Johns path, from a point between Lovers Lane and McAuliff St. looking east). As you can see in the photos attached in Exhibit N, SCE's current transmission towers and lines do not rise above treeline, making them only moderately obtrusive visually. The DEIR fails to analyze the significant visual impacts the proposed new transmission lines and towers would cause for users of the St. Johns bike trail.

Similarly, the Mill Creek trail is a well-used urban pathway that provides pedestrians and bicyclists with a scenic transportation and recreation corridor through the City. This path currently stops approximately a half mile west of SCE's ROW, but the



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City plans to extend the path across the ROW to the eastern edge of the City limits. *See* Exhibit C (City of Visalia Trail Linkages Plan). The visual impact of the new, 120-160 foot high transmission lines on path users would be severe, especially given that the paths represent one of the few places in Visalia for residents to escape the developed, urban feel of the City.

The DEIR's own standards for measuring the severity of aesthetic impacts in this location demonstrate that the impact would be high. *See* DEIR at 4.1-17 (describing impact measurement methodology). For instance, bicyclists and pedestrians would view the transmission lines for a long period of time because the views would be only partially screened, the new, tall towers would be visible from a long distance, and bicyclists and pedestrians do not travel fast. Thus, the transmission lines would likely be visible in the background, middleground and foreground as bicyclists and pedestrians approached the lines. *See* DEIR at 4.1-17 (describing viewing distances). Further, as the DEIR admits, park users are a sensitive user group. DEIR at 4.1-43 ("sensitive receptor locations [include] residential areas, city parks, or pedestrian environments."). The DEIR's failure to analyze these significant impacts to a sensitive user group renders its analysis inadequate.

The DEIR also fails to adequately analyze the impact of the Project on residents in the area by underestimating both the number of residents affected as well as the severity of the Project's impact on their views. *See Ocean View Estates Homeowners Ass'n, Inc. v. Montecito Water Dist.*, 116 Cal. App. 4th 396, 401-03 (2004) (environmental document must analyze and mitigate aesthetic impacts to public and private views). For instance, the document acknowledges that in the first 1.1 miles of the proposed Project alignment (which is identical in the Alternative alignments as well), the transmission lines would pass "within a few hundred feet of several medium-density residential developments." DEIR at 4.1-3. It also states that the viewers primarily affected in this area would be nearby residents; specifically, 52 property owners whose properties abut the existing ROW. However, the DEIR severely underestimates the number of people who will be affected in this area, as it appears to assume that residents of only 52 properties who live adjacent to the ROW will be impacted. Also, for Alternative alignments 2, 3 and 6, which would proceed north after the 1.1 mile mark, the DEIR simply states that the transmission lines would pass within a quarter mile of "several residential subdivisions," but gives no detail regarding the number of people that would be affected. DEIR at 4.1-13.

Contrary to the DEIR's assertion that only a few dozen residents will suffer aesthetic impacts in the proposed Project's first 1.1 mile section immediately north of Rector Substation, thousands of people will actually be affected. In fact, in this first section of the proposed Project, approximately 500 existing homes with existing



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obstructed views of the Sierra Nevada range will experience an increase in intensity of the obstruction. *See* Exhibit B (Southern California Edison Proposed Routes) and Testimony of Michael Olmos, City of Visalia, attached as Exhibit G. Also, approximately 850 existing homes that do not currently experience any visual obstruction of the mountains will experience such an obstruction after completion of the Project. *Id.*

Even more residents would be affected by the proposed Project in the three-mile section of the Alternative 2, 3 and 6 alignment that runs north from the end of the first 1.1 mile section. In this section of the Project, approximately 1000 existing homes with existing obstructed views of the Sierra Nevada range will experience an increase in intensity of the obstruction, and approximately 2000 existing homes that do not currently experience any visual obstruction will experience such an obstruction after completion of the Project. *Id.* Given that one of the DEIR's criteria for determining the significance of an aesthetic impact is the number of people whose views would be affected, DEIR at 4.1-1, and given that the Project would cause significant visual changes from existing conditions, these sections of the Project would clearly result in significant aesthetic impacts. The DEIR's analysis of impacts to only 52 residential properties in the first 1.1 mile section of the Project, and its failure to identify the number of people affected in the next three mile section in the Alternative alignments, renders its analysis woefully inadequate.

### **C. The DEIR's Photo Simulations are Inadequate.**

Visalia is situated a mere fifty miles from Sequoia National Park, and the City's identity is profoundly linked to the stunning Sierra Nevada Range that lies just to the east of the City. On clear days, views of the mountains from the eastern parts of the City can be breathtaking. *See* Exhibits E, N. Even though the DEIR notes that the City has policies in place to protect scenic corridors (*see* DEIR at 4.1-22, 23), and even though the DEIR contains numerous photos of the Project area, the document entirely fails to include *any* photos of the Sierras in its visual simulations. As shown by the photos in Exhibits E and N, the Sierra Nevadas are *the* dominant visual resource to the east of the City, providing stunning views of high peaks and rolling foothills. This backdrop, though sometimes obscured due to air pollution, is one of the most important aesthetic resources for residents in the City. The DEIR's failure to include any photographs that include the mountains, and that show how the proposed and Alternative Project alignments would impact views of the mountains, renders the DEIR inadequate for carrying out CEQA's fundamental purpose of informing government decision makers and the public about the potential significant impacts of the Project. 14 Cal. Code Regs. § 15002(a)(1), *Napa Citizens for Honest Gov't v. Napa County Bd. Of Supervisors*, 91 Cal. App. 4<sup>th</sup> 342, 356 (2001) (An EIR must provide decision-makers with enough information to make an intelligent judgment regarding a project's environmental impacts).



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**D. The DEIR Fails to Analyze Aesthetic Impacts Associated with the Creation of and Changes to the Right-of-Way Itself.**

The DEIR entirely fails to analyze the visual impacts of creating a new ROW that will cut through agricultural, urban and semi-urban lands. The proposed new ROW will create a visual scar that will divide the landscape and current and future neighborhoods. Similarly, the DEIR completely ignores the visual impacts the Project will have on the existing ROW. Although it acknowledges that there will be temporary impacts due to construction, the DEIR fails to analyze the ways in which the Project will alter the visual characteristics of the existing ROW even after construction is finished. DEIR at 4.1-40, 41. The Project will cause long-term impacts due to construction because it will require the use of heavy equipment for land clearing and excavation in order to construct tower foundations and tension the transmission lines. DEIR at 4.1-41. This work will disturb the soil and remove much, if not all, vegetation in the ROW. This will create a significant aesthetic impact, yet the DEIR completely ignores this impact. Further, as described below, the DEIR fails to require any mitigation to reduce this impact to a less than significant level.

Transmission line ROWs can be stark, barren, unused scars that run for miles across the landscape. This is illustrated in the “before” photographs in Exhibit H, which depict a Pacific Gas and Electric transmission line corridor in San Jose, California. Grass is overgrown and dead, the ground is characterized by dirt and rocks as opposed to any plantings, and the area is visually unappealing. There is no landscaping to soften the bare dirt and views of the towers, and no trail or other appealing features to draw people to the area. Instead, the imposing towers and lack of landscaping has created a “dead zone” around the towers, which is self-perpetuating: lack of initial planning leads to an unattractive area, which leads to lack of use and upkeep, which leads to further deterioration and blight. This creates not only a visually unappealing area, but also divides existing and future communities and creates poor economic conditions that would negatively impact future residents and developers.

The DEIR fails to analyze such economic, social and visual effects in the context of determining the significance of the Project’s aesthetic impacts. This is contrary to CEQA, which states that “[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community . . . the social effect on the community would be the basis for determining that the effect would be significant.” 14 Cal. Code Regs. § 15131(b). Here, the Project will divide existing and planned communities by creating a visual scar, lowering property values adjacent to the ROW, and interfering with planned growth. *See* Section I of these comments, above, regarding interference with land use planning. These social and



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economic effects, combined with the direct visual effects of the proposed Project, unquestionably make the entire Project's physical impacts significant.

**E. The DEIR Fails to Analyze Indirect Aesthetic Impacts.**

As described above, transmission lines, if not adequately integrated into communities through use of appropriate visual screening, landscaping and planning for conjunctive uses, can cause environmental impacts by driving down property values and creating unused and visually displeasing space. The situation is somewhat similar to big box retailers that move into the suburbs, thereby displacing downtown businesses and leading to deterioration of the downtown. Such "changes to the physical environment caused by a project's economic effects are an indirect effect that must be analyzed in an EIR." Stephen Kostka and Michael Zischke, Practice Under the California Environmental Quality Act, § 13.64, p. 678 (citing 14 Cal. Code Regs. §§ 15064(c), 15131(a)); *see also Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4<sup>th</sup> 1184 (2004) (holding that a lead agency must assess indirect physical impacts caused by urban decay).

In the case of high voltage transmission lines, property adjacent to such lines is generally more difficult to sell and less desirable. *See* Exhibits A, I. People – rightly or not – fear the electromagnetic fields emitted by transmission lines, as well as dislike the visual aspects of the lines. *See* Alix Freedman, *The Wall Street Journal*, December 8, 1993, attached as Exhibit J. When property values decline due to factors such as adjacent transmission lines, neighborhoods can be destabilized as families move out and properties take longer to sell or transition to the rental market. This sort of community destabilization is self perpetuating and can cause neighborhood decline and blight. Without compensating landscaping, maintenance and features such as pathways or public parks, transmission line ROWs easily become deserted, blighted areas that are visually unappealing. As a consequence, adjacent lands also become less desirable. The DEIR fails to analyze these indirect aesthetic impacts that will be caused by the project's economic as well as direct visual impacts.

**F. The DEIR's Standards of Significance do not Adequately Measure the Project's True Impacts.**

The DEIR's standards of significance are inadequate because they do not take into account the numerous inconsistencies with local and regional plans. These plan policies show that local cities and towns place a very high value on their visual resources; thus the DEIR should be more conservative in its standards of significance, taking into account local values regarding what constitutes a significant impact. For instance, the City of Visalia's General Plan states that "[t]he undergrounding of utility lines shall be



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pursued and encouraged,” and the General Plan sets a goal to “[w]ork with utilities . . . to landscape power line [] right-of-ways throughout the community and to underground utilities . . . .” DEIR at 4.1-23. Clearly, the City considers any power lines to be visually intrusive and requires landscaping of rights-of-way as well as undergrounding where possible. Yet the proposed Project proceeds in the exact opposite direction, not requiring undergrounding or landscaping, but proposing to build miles of new, above-ground transmission lines. The DEIR must take these inconsistencies into account in its determination of significance.

As shown throughout these comments, the aesthetic impacts of the Project are significant despite the significance standards used in the DEIR. Further, as described below, the DEIR’s minimal mitigation measures will not render the Project’s aesthetic impacts less than significant. Thus, the Commission must re-analyze the Project’s aesthetic impacts in relation to this new evidence and standard. *See Protect The Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1111 (2004) (an agency may not reach a determination of “no significant impact” by applying significance criteria that fail to account for particular impacts). Alternatively, the Commission must justify the basis for its standards of significance given that its standards ignore inconsistencies with local plans and do not result in a finding of significant impacts. *See, e.g., Mira Mar Mobile Community v. City of Oceanside*, 119 Cal. App. 4th 477 (2004); *National Parks & Conservation Ass’n v. County of Riverside*, 71 Cal. App. 4th 1341, 1355 (1999).

#### **G. The DEIR’s Mitigation Measures are Inadequate.**

CEQA requires agencies to adopt feasible measures when approving a project to reduce or avoid its significant environmental effects. Pub. Res Code § 21002, 21081(a). Here, the DEIR requires only two mitigation measures that will mitigate the Project’s long-term aesthetic impacts. DEIR at 4.1-40. These measures require that transmission poles be treated with appropriate colors, finishes and textures to blend the structures with the visible backdrop landscape, and that transmission line conductors, insulators and lattice structures be non-specular, non-reflective and non-refractive. DEIR at 4.1-40. However, these measures will not mitigate for all of the significant aesthetic impacts of the transmission lines, ROW and poles. Further, the DEIR does not even propose these measures along the entire length of the proposed Project alignment.

##### **1. The DEIR Fails to Require Feasible Measures to Mitigate for Aesthetic Impacts Caused by the Proposed Project.**

As described above, there are significant aesthetic impacts associated with creating a new ROW that will visually divide the landscape and leave it barren and



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unused in some sections. Similarly, there will be visual impacts associated with construction of the Project on the existing ROW, even after the construction is finished. Despite these significant impacts, the DEIR does not propose mitigation to make the ROW less visually jarring, such as replanting vegetation or undertaking landscaping. DEIR at 4.1-41, 42. Given the absence of any plans to landscape the ROW to fit in with the community or provide an attractive pathway or other resource, the public and decision makers are left to assume that SCE will not manage or replant the ROW and that it will remain a visual scar, in a state of disuse, disrepair and blight.<sup>2</sup>

There are numerous feasible mitigation measures that would address the visual impacts associated with the planned, stark transmission line ROW as well as the new, taller transmission towers and increased number of lines. Such measures include landscaping, creation of a pathway or greenway under the transmission lines, or creation of a landscape plan. Other mitigation could include creation of a committee to develop a conjunctive use plan for the ROW that will make it visually appealing and keep it from becoming a dead zone that divides communities and mars the landscape. The "after" pictures in Exhibit H (PG&E Transmission Line Corridor photographs) show the feasibility and desirability of undertaking a comprehensive ROW land use and landscaping plan. These photos depict a Pacific Gas & Electric ROW in San Jose, California where the ROW was turned into a public pathway instead of remaining an unused eyesore. *See also* Gary Holisko, *Developing Near Transmission Lines?*, Planning West Magazine, July/Aug 2008, p. 34, attached as Exhibit K (encouraging development of community amenities within transmission line ROWs).

Creation of a multi-use public open space area in portions of the Project ROW that pass through existing and planned communities would be a feasible measure to mitigate the significant aesthetic impacts of the Project. In addition, such an open space use would, as discussed in Section I above, mitigate for the Project's significant land use impacts. Although conjunctive use of utility ROW's requires careful planning in order to make sure that the use is not incompatible with the transmission of electricity, many conjunctive uses are clearly feasible. In fact, SCE has "[o]ne of the most progressive

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<sup>2</sup> The DEIR does require replacement of top soil after construction to mitigate impacts to agricultural land on portions of the ROW that cross agricultural land. DEIR at 4.2-11. However, the Project will also cross through developed and developing areas in Visalia and (in the proposed Project alignment) Farmersville and Lemon Cove. DEIR at Figure 2-3. Presumably, agricultural crops are not grown in these areas or would not be re-grown after construction of the proposed Project. The DEIR provides no mitigation for the ROW's visual impacts in these areas.



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secondary land use programs” in the state. Miles Anderson, *Secondary Land Use: Utility Rights of Way in Southern California*, p. 25, attached as Exhibit L. SCE currently allows many different conjunctive land uses on ROW’s in southern California, including “golf courses, parks, playgrounds, horse stables, amusement parks, agricultural land, self storage facilities, retail stores, public recreation facilities,” and more. *Id.* at 26. A linear public park and trail are clearly feasible measures that SCE could implement along portions of the proposed Project or Alternative alignments.

A conjunctive use committee should be formed to study mitigation options and develop recommendations for conjunctive uses on particular sections of the ROW that pass through areas in or near Visalia and other communities. The revised DEIR should identify specific standards that would guide the committee’s process and final recommendations, and that would identify stakeholder groups that should be represented on the task force. The purpose of the committee would be to identify the most important areas where conjunctive uses on the ROW would mitigate the Project’s impacts on the surrounding communities and develop recommendations for feasible conjunctive uses that would mitigate these impacts. As the Project proponent, SCE must be responsible for funding and carrying out all mitigation measures, including the committee’s work and the mitigation measures that are developed through the work. However, the committee itself should be made up of interested individuals that can represent the community’s interests. The committee should work with and include members of Visalia’s Bicycle, Pedestrian and Waterways Trails Committee, which currently serves as an advisory board to the City Council and advocates for a network of safe, accessible and attractive pedestrian and bicycle routes through the City.

The committee should also identify landscaping that would best mitigate the visual impacts of the Project. “Landscaping provides one of the most effective methods to diffuse the effects of power lines and use the space within and adjacent to the right of way in a manner which is aesthetically pleasing and an amenity to homeowners. Screening can enhance the quality and intimacy of the immediate setting by creating the perception that towers have receded into the distance.” *See Exhibit K (Developing Near Transmission Lines?* at 34). A well landscaped ROW where conjunctive uses were allowed would turn an eyesore into a community amenity. Further, creating a pathway along the portion of the ROW in the Alternative 2, 3 and 6 alignments that is in the City of Visalia would connect the existing Mill Creek and St. Johns River trails and would provide access to Culter Park, a new sports park and a future community park that will be near the SCE transmission lines, north of Mineral King. By providing these important trail connections, the transmission line corridor would serve to integrate the ROW into the community’s overall urban structure, thereby mitigating its impacts to land use and preventing the decline of adjacent neighborhoods.



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Another feasible mitigation measure that the DEIR fails to require is an evergreen vegetative screen of sufficient height for immediate visual screening around the Rector Substation. Although there is current screening on the southern and eastern sides of the Substation, screening should be provided on the north and western sides as well. Similarly, the DEIR fails to analyze the feasibility of mitigation that would require matching the structure spacing in locations where new transmission towers will parallel existing towers. For instance, along the first 1.1 miles of the proposed Project alignment, new transmission towers would be erected parallel to new double-circuit transmission structures. DEIR at 4.1-43. Likewise, along the Alternative 2, 3 and 6 alignments, new double circuit transmission towers would be constructed along the western side of the ROW, while the existing single circuit towers would be consolidated on new double circuit towers on the eastern side of the ROW. DEIR at 3-10, 3-13, 3-16. SCE should match existing structure spacing and spans as closely as possible in these areas to avoid or reduce the number of off-setting tower placements. This would reduce visual complexity as seen from sensitive receptor locations.

The DEIR does not state what rights SCE owns in its ROW, and therefore it is not clear whether a pathway could be constructed without SCE, the City of Visalia or another party first acquiring an easement (or fee title) for the purpose of creating a trail. However, SCE has the right of eminent domain and may “condemn any property necessary for the construction and maintenance” of its transmission lines. Pub. Utilities Code § 612.<sup>3</sup> Under CEQA law, an agency’s mitigation authority is as broad as its express or implied powers granted by other law. *Golden Gate Bridge Dist. v. Muzzi*, 83 Cal. App. 3d 707 (1978). In *Golden Gate Bridge Dist.*, the court held that a district’s power to condemn property for construction of a project implicitly includes the power to condemn property to mitigate environmental impacts resulting from the project. *Id.* at 713. Thus, SCE has the legal authority to acquire the rights necessary to construct a public trail, which would mitigate the proposed Project’s numerous environmental impacts. Of course, it would be far preferable to work with the owners of the land underlying the easement instead of resorting to condemnation, and the City would fully

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<sup>3</sup> This provision gives “electrical corporations” the right to condemn property for the construction and maintenance of an “electrical plant.” “Electrical corporation” is defined as “every corporation or person owning, controlling, operating, or managing any electric plant for compensation within this state . . . .” Pub. Utilities Code § 218(a). “Electrical plant” is further defined to include “all real estate, fixtures and personal property owned, controlled, operated, or managed in connection with or to facilitate the production, generation, *transmission*, delivery, or furnishing of electricity . . . .” Pub. Utilities Code § 217 (emphasis added).



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support efforts to work with such landowners within the City's Urban Development Boundary and Urban Area Boundary to find acceptable solutions. As one of the owners of land underlying portions of the easement, the City is also willing to work directly with SCE on developing a conjunctive use plan on its land in the ROW. Regardless of the method by which rights to the land underlying the ROW are acquired for conjunctive uses, the DEIR's failure to include this feasible mitigation is unlawful and renders the document inadequate.

If one of the Alternative alignments is selected as the final Project alignment, a multi-use path or a bike trail would provide especially relevant and useful mitigation, as the trail would connect the St. Johns River Trail in the north with the Mill Creek Trail in the south, and would provide public access to Cutler Park and a new city sports park to the south of Cutler Park. *See Exhibit C (City of Visalia Trail Linkages Plan)*. Such mitigation would offset the Project's negative visual impacts to existing parks as well as its impacts to land use planning.

The DEIR also fails to require, or even analyze, undergrounding of a portion of the proposed Project. This is a feasible mitigation measure that would mitigate significant impacts to aesthetics and land use. Please refer to Section V of these comments on Alternatives for further discussion of the feasibility and rationale for undergrounding.

## **2. The DEIR's Proposed Mitigation Measures are Inadequate to Support its Conclusions.**

The DEIR includes virtually no analysis of how effective its proposed mitigation measures will be at reducing the aesthetic impacts of the Project, and it provides no significant evidence that the Project's impacts will be reduced to a less than significant level. An agency may not make such conclusory assertions in the absence of substantial evidence. *See National Parks & Conserv. Ass'n v. County of Riverside*, 71 Cal. App. 4<sup>th</sup>, 1341, 1366 (1999) (analyzing agency's basis in expert opinion and other evidence before concluding that project's potential impacts would be mitigated to insignificant level). Instead, an EIR must contain facts and analysis, not just an agency's bare conclusions. *Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal. 3d 553, 568 (1990).

For instance, the DEIR finds that the Project will result in less than significant aesthetic impacts in certain areas along SR 198 after implementation of Mitigation Measure 4.1-1. DEIR at 4.1-45. This measure requires that transmission poles be treated with appropriate colors, finishes and textures to blend the structures with the visible backdrop landscape. DEIR at 4.1-40. However, the DEIR offers no evidence



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to support its assertion that this measure will, in fact, reduce the impacts of the Project to a less than significant level. It offers no information from planners, aesthetic experts, or professionals who have used such mitigation previously or who can attest to the fact that such mitigation actually works. Indeed, it is difficult to believe that painting a tower one color will make it blend in against multi-hued backgrounds that change in color from day to day and season to season. Further, in the photo simulations, the DEIR does not state whether or not the simulated transmission towers are depicted as they would appear with the mitigation measure or without. DEIR at Figure 4.1-3a to 4.1-13b. Nor does the DEIR photographically compare a transmission tower without mitigation to one with it to allow the public to determine whether the mitigation reduces the impacts to a level that is no longer significant. This failure makes it impossible for the DEIR to carry out CEQA's fundamental purpose of informing government decision makers and the public about the potential significant impacts of the Project. 14 Cal. Code Regs. § 15002(a)(1).

### **3. The DEIR Must Expand the Areas in Which it Requires its Proposed Mitigation.**

As described above, the DEIR requires mitigation in the form of appropriate colors, finishes and textures on transmission poles; however, it requires this mitigation only in a few, select locations. DEIR at 4.1-40. Specifically, the DEIR states that for "all structures that are visible from moderate to highly sensitive viewing locations . . . SCE shall apply surface coatings with appropriate colors, finishes, and textures to blend the structures with the visible backdrop landscape." DEIR at 4.1-40. However, the DEIR requires such coatings only on ten transmission towers that are near SR 198 and SR 245. DEIR at 4.1-40 (mitigation measure 4.1-1a). Assuming that this mitigation measure actually works, it must be required on more locations within the Project alignment.

The ten towers listed in the DEIR are not the only ones that are located in sensitive viewing locations. In fact, the DEIR admits as much, stating on page 4.1-43 that "sensitive receptor locations [include] residential areas, city parks, or pedestrian environments." Yet the DEIR does not require surface coatings to blend the structures with the backdrops near such residential areas, city parks or pedestrian environments. DEIR at 4.1-44. For instance, the DEIR does not require this mitigation measure for the first 1.1 miles of the proposed Project alignment, even though, as described elsewhere in these comments, more than a thousand existing residents would have their views negatively impacted by the proposed Project. DEIR at 4.1-44. Similarly, it does not require this mitigation measure on the towers in the Alternative alignments that would be near Cutler Park in the City of Visalia, or the city park adjacent to the River Run Ranch development in Visalia. See Exhibit H (River Run Ranch Development) (showing location of town park adjacent to, and underneath, ROW); DEIR at 4.1-53 (not requiring



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surface coating mitigation in this section of the Alternative 2 alignment, which is the same as the other Alternative alignments in this location). As described above, the Project would cause significant aesthetic impacts in all areas where sensitive viewers would see the transmission lines, not just a few areas near SR 198 and other roads. Thus, these mitigation measures should be required in all areas where residents, park users or motorists would be exposed to views of the new transmission towers and lines.

### **III. The DEIR Fails to Adequately Analyze or Mitigate the Project's Noise Impacts.**

A particularly glaring inadequacy of the DEIR is its analysis of and mitigation for the Project's noise impacts. The proposed Project, or any of the Alternative alignments, would generate two distinct categories of noise impacts: construction-related noise, and noise associated with corona discharge. Inasmuch as some of the closest sensitive receptors will be no more than 50 feet from construction activities and the new transmission lines, the DEIR should have carefully evaluated the increase in noise levels from construction and operation of the proposed Project.

#### **A. The DEIR's Analysis of Noise Impacts is Hamstrung by Its Failure to Consider All of the Impacted Receptor Locations.**

Given the alignment of the proposed Project and the Alternative routes through the eastern edge of established communities in Visalia, it is likely that the proposed transmission corridor would impact thousands of sensitive receptors. *See* Exhibit A (Letter from Mayor Gamboa) which identifies the number of residences and individuals within the City of Visalia that would likely be impacted by the proposed Project. While the document generally asserts that there are "a number of residences" located within 200 feet of the first 1.1 miles and there are rural residences intermittently along the remaining 17.4 miles of ROW (at 4.10-6), it never specifically identifies the number, type or specific location of sensitive receptors that would be potentially affected by construction of the Project as well as those that might be exposed to elevated noise levels from the constant hum associated with the lines. Since the DEIR omits this critical information, it is simply not possible to evaluate the Project's noise impacts.

The revised DEIR must provide detailed documentation, including maps, identifying those sensitive receptors that have the potential to be impacted by the proposed Project. In addition to identifying residences, the revised document must identify any other sensitive receptors such as motels and hotels, libraries, religious institutions, hospitals, nursing homes, active sport areas, picnic areas, recreation areas, and playgrounds that would be potentially affected by the proposed Project.



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**B. The DEIR's Analysis of Construction Noise Impacts is Deficient.**

The DEIR fails to evaluate the actual and specific consequences of construction-related noise on nearby sensitive receptors; it cavalierly concludes that impacts would be less than significant. (See DEIR at 4.10-12 where the document concludes that construction activities would not conflict with applicable noise ordinances and plans and DEIR page 4.10-15 where the document concludes that noise levels generated by construction equipment would be mitigated to a less than significant level). Given the very high decibel level of construction equipment and the proximity of sensitive receptors to all of the proposed corridor's potential routes, the DEIR should have provided a comprehensive analysis of these impacts. This type of evaluation is necessarily complex, requiring a thorough understanding and description of the amplitude and duration of noise exposure at receptor locations along the entire length of each potential route alignment. Absent a thorough evaluation of the construction noise environment, it is impossible to make a finding regarding a substantial temporary or periodic increase in ambient noise levels. The DEIR thus fails to provide the evidentiary basis to conclude that construction-related noise impacts would be less than significant. Set forth below are the most egregious deficiencies in the DEIR's analysis of noise impacts.

**1. Equipment and Helicopter Noise**

Construction equipment can generate noise levels as high as 98 dBA at a distance of 50 feet, while helicopter operations can generate noise levels of approximately 80 dBA at a distance of 200 feet. DEIR at 4.10-15 and 16. As a point of reference, 98 dBA is considered "very loud" by acoustical engineers and is equivalent to the noise a passing train generates while standing on the train platform. See Typical Sound Levels, Handbook of Environmental Acoustics, attached as Exhibit M. Rather than comprehensively describing the noise levels that nearby sensitive receptors would experience from construction-related operations, the DEIR simply states that construction equipment noise and noise from helicopter operations that the Project "would have the potential to impact nearby sensitive receptors." *Id.* at 4-10-16. This generic statement does not come close to meeting CEQA's clear standards which require that an EIR provide a sufficient degree of analysis to inform the public about the proposed project's adverse environmental impacts and to allow decision-makers to make intelligent judgments. Consistent with this requirement, the information regarding the project's impacts must be "painstakingly ferreted out." *Environmental Planning and Information Council of Western El Dorado County v. County of El Dorado*, 131 Cal. App. 3d 350, 357 (1982) (finding an EIR for a general plan amendment inadequate where the document did not make clear the effect on the physical environment).



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The DEIR does not provide the locations and distances between the sensitive receptors and the construction activities and helicopter operations. Noise levels expected at the sensitive receptors are also not predicted. Nor does the DEIR disclose how long receptors would likely be impacted. Increased noise levels over the course of a few days may not be a source of concern. Elevated noise levels over the duration of the construction period, which would take between 9 and 12 months, on the other hand, may become intolerable. *See* DEIR at 2-34. Yet, the DEIR is silent on all of these effects. An adequate analysis of construction noise impacts would include the locations of sensitive receptors in the Project area, a description of existing ambient noise levels at these receptor locations, predicted noise levels during each phase of construction at each sensitive receiver location, and a comparison of noise levels during construction to the existing ambient noise levels. This analysis must also take into account the type, duration, amplitude, topological conditions, specific construction techniques, and construction durations to determine whether noise levels would substantially increase. Only upon completion of this analysis will the DEIR preparers be in a position to evaluate whether measures exist to mitigate construction related noise impacts.

Moreover, the DEIR provides no evidence to support the conclusion that the proposed mitigation measures would reduce noise levels from construction-equipment to a less than significant level. The DEIR provides a generic suggestion that compressors and other small stationary equipment should be shielded with portable barriers (at 4.10-17), but the DEIR omits any detail as to the feasibility of installing such barriers. Nor does the DEIR identify which specific noise sources would be attenuated, or describe the expected resultant noise level. The DEIR offers no mitigation for the helicopter-related noise impacts other than promising to notify residents of the construction schedule and a hotline for residents to call with complaints. *Id.* To conclude as the DEIR does, that an impact is less than significant, the analysis must be supported with substantial evidence. Substantial evidence consists of "facts, a reasonable presumption predicated on fact, or expert opinion supported by fact," not "argument, speculation, unsubstantiated opinion or narrative." Pub. Res. Code § 21080(e)(1)-(2). Because the DEIR conclusion of insignificance is premised on unsupported assumptions and bald conclusions, it falls far short of this threshold.

## **2. Nighttime Construction Noise**

The DEIR's analysis of nighttime construction-related noise is also legally deficient. In one instance, the document states that construction activities located in Visalia would be limited to between the hours of six a.m. and seven p.m. on weekdays. DEIR at 4.10-12. Yet the document also states that SCE may determine that nighttime construction may be necessary. *Id.* at 4.10-12 and 4.10-16. The DEIR correctly acknowledges that if construction activities were to occur at night, it could result in a



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significant nuisance impact to nearby residences and that SCE would be required to obtain variances consistent with the regulatory requirements of the jurisdiction where the work would take place. *Id.* Yet, the DEIR never actually explores the effect that nighttime construction noise would have on sensitive receptors. Noise can be far more intrusive during the evening and nighttime hours when ambient noise levels are at their lowest and when sensitive receptors are sleeping. Since the surrounding area is quieter at these times, the masking effect of other noise would not screen construction noise. The DEIR's failure to take into account this higher sensitivity to noise and evaluate how the increase in noise from nighttime construction would affect receptors during these sensitive time periods renders the DEIR legally inadequate.

Nor does the DEIR propose adequate mitigation for impacts created by nighttime construction operations. Although the DEIR looks to the preparation of a nighttime noise reduction plan, this plan does not yet exist. Instead, the DEIR simply lists the types of noise attenuation strategies that *may* be included in the plan. DEIR at 4.10-17 (emphasis added). The document does not, however, set forth sufficient specific, measurable performance standards for the noise reduction plan that could justify later formulation of noise attenuation strategies targeted to meet those standards. Thus, the DEIR provides no basis to judge the effectiveness of the noise reduction plan. Rather, it is a "mere expression[] of hope" that SCE will be able to devise a way around the problem of nighttime noise. *Lincoln Place Tenants Ass'n v. City of Los Angeles*, --- Cal. App. 4th ---, 2005 WL 1635178, at \*10 (July 13, 2005). CEQA requires more than that to mitigate significant impacts. *Id.*

### 3. Noise From Blasting Operations.

Although the Project would be required to conduct blasting at certain locations to eliminate rock obstructions, the DEIR does not adequately analyze impacts relating to noise or vibration levels from these blasting operations. Blasting operations may generate noise levels of up to 115 dBA at 50 feet. DEIR at 4.10-18. As a point of reference, this noise level ranges somewhere between the maximum noise level at a rock concert and an air raid siren at 50 feet (120 decibels is considered by acoustical engineers to be the threshold of pain.) See Exhibit M (Typical Sound Levels). Moreover, by the DEIR's own admission, blasting operations can cause structure damage (*see* DEIR at 4.10-14, second to last bullet). But here too, the DEIR excuses itself from conducting the actual analysis of impacts with the claim that areas where blasting would be utilized have not been determined, and thus it is difficult to assess the potential impacts on sensitive receptors. DEIR at 4.10-13. The DEIR's treatment of noise and vibration impacts relating to blasting operations clearly violates CEQA. As explained by the Court in *Laurel Heights Improvement Ass'n of San Francisco v. Regents of the University of California*, 47 Cal. 3d 376, 399 (1988) (*Laurel Heights I*), "[w]e find no authority that



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exempts an agency from complying with the law, environmental or otherwise, merely because the agency's task may be difficult." The DEIR preparers could have made some attempt to determine where blasting might be necessary, especially in the more urbanized locations along the Project alignment. Moreover, the analysis could have identified the decibel level of explosions at certain distances. The DEIR could have described, even generally, the peak particle velocity which would be used to evaluate the effect that blasting operations would have on noise sensitive receptors and buildings.

Because the DEIR defers the analysis of impacts, it is not possible to conclude, as the DEIR does, that mitigation measures would reduce the impacts to a less than significant level. DEIR at 4.10-14. Indeed, the mitigation that is identified to reduce blasting-related impacts is so undefined that it is impossible to evaluate its effectiveness. The document calls for the preparation of a Blast Survey Workplan which would establish vibration limits and develop vibration and settlement threshold criteria. DEIR at 4.10-14. Rather than set forth specific vibration and settlement threshold criteria, the DEIR defers the identification of these criteria until the design process. Details relating to vibration and settlement threshold criteria must be identified prior to Project approval. *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal. App. 3d 61, 79.

**C. The DEIR Fails to Adequately Analyze the Noise Impacts Relating to Corona Discharge.**

Some locations along the proposed Project and Alternative alignments would pass by existing communities that currently do not experience any noise from high-voltage power lines. Some of these locations currently may experience very low ambient noise levels. As the DEIR itself notes, it is important to consider the ambient noise environment: "[i]f the ambient noise environment is quiet and the new source greatly increases the noise exposure, even through a criterion level may not be exceeded, an impact may occur." DEIR at 4.10-11.

The City of Visalia's Municipal Code establishes a nighttime exterior noise level standard of 45 dBA. DEIR at 4-10-9. The DEIR concludes that corona noise levels from the proposed Project would be just one decibel short of triggering a violation of the City's noise standard (i.e., 44 dBA). *Id.* at 4.10-12. One decibel is certainly within the margin of error. We therefore disagree with the DEIR's conclusion that noise sensitive residential receptors would not be significantly impacted by the constraint source of noise generated by the high-voltage transmission lines.



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**D. The DEIR Omits Consideration of Feasible Mitigation Measures.**

In large part because the DEIR fails to adequately analyze the Project's noise impacts, it fails to identify feasible mitigation measures capable of minimizing these impacts. For example, the revised DEIR should analyze the following measures:

- For those segments of the routes which would not be located within the SCE existing ROW, and where the proposed ROW traverses undeveloped lands, increase the width of the ROW to allow increased separation from existing and future sensitive receptors.
- If impact equipment such as jack hammers, pavement breakers, and rock drills are used during construction, hydraulically or electric-powered equipment should be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, the construction contractor should place exhaust mufflers on the compressed-air exhaust and external jackets on the tools themselves where feasible.
- Prohibit nighttime construction activities (i.e., between 8:00 p.m. and 6:00 a.m.).
- Prohibit haul truck operations during the evening and nighttime hours (i.e., between 8:00 p.m. and 6:00 a.m.).
- Equipment staging and parking areas must be located as far as feasible from residential and school buildings.
- As feasible, the construction contractor should maintain construction noise levels at or below the 70 dBA indoor daytime speech interference criterion during daytime hours (7 a.m. to 10 p.m.), below the 50 dBA indoor nighttime sleep interference criterion at night (10 p.m. and 7 a.m.), and below applicable Visalia noise ordinance limits.
- SCE should offer to temporarily relocate to a nearby hotel any resident whose interior nighttime noise level due to Project construction activities exceeds 50 dBA with windows open. Exceedances of the 50 dBA criterion shall first be verified by field acoustical measurements.
- The following helicopter noise control measures shall be included in the construction contract specifications prepared for the Project, and applied, as



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feasible, to reduce exposure to helicopter pass-by and hovering noise at any particular residential receptor:

- Prepare a schedule accurately reflecting hover times for equipment and construction crew drop-offs and pick-ups that shall be made available at least two weeks in advance to impacted noise receptors within a distance to be determined by a qualified acoustical consultant as the Project progresses, depending on the noise level generated by the selected helicopter.
- Prohibit hovering during evening and nighttime hours (i.e., between 8:00 p.m. and 6:00 a.m.)
- Select routes to avoid direct flyovers above residences and other noise sensitive land use areas, to the extent feasible.

The revised DEIR should consider these or alternative feasible noise reduction measures in order to reduce the Project's significant noise impacts.

#### **IV. The DEIR Fails to Adequately Analyze and Mitigate Impacts Relating to the Loss of Agricultural Resources.**

The proposed Project and each of the Alternative alignments pass through areas of Prime Farmland and Farmlands of Statewide Importance. *See* DEIR Figure 4.2-1. Certain of the alignments would also pass through Farmlands of Local Importance. *Id.* The DEIR finds that, for the proposed Project alignment, about 52 acres of agricultural lands would be expected to experience “temporary” impacts while 31 acres would be permanently impacted. *Id.* at 4.2-11. The DEIR falls short in identifying the exact acreage within Visalia that would be converted. This is important because, as discussed below, the document assumes that certain agricultural lands taken out of production to enable Project construction would be replanted. Consequently, the DEIR fails to identify mitigation for these “temporarily impacted” lands. Yet, the DEIR provides no evidence to support its assumption that these lands would be put back into agricultural production. Therefore, the DEIR must identify those parcels of land that would be impacted by the proposed Project so that the loss of these lands can be mitigated through appropriate mechanisms.<sup>4</sup>

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<sup>4</sup> A parcel-by-parcel identification of affected agricultural lands is also needed because it is not possible to verify the accuracy of the DEIR’s estimates of “temporary” (footnote continued)



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The DEIR concludes that impacts relating to the “temporary loss” of agricultural lands could be mitigated to a level of less than significant with measures such as stockpiling and replacing soils. *Id.* at 4.2-12. The assumption behind this conclusion is that these lands would simply be put back into agricultural production once construction activities cease. The DEIR also casually suggests that any fiscal impacts related to loss of agricultural production are not considered impacts under CEQA and would be addressed by SCE during ROW acquisition. *Id.* The DEIR errs in its approach to analyzing these “temporary” impacts. Taking these lands out of production cannot be considered a temporary loss. Much of the land that would be “temporarily converted” is planted with walnut and orange trees. *See* Table 4.2-5. As the DEIR acknowledges, it takes walnut trees and orange trees about ten years to reach full maximum production. *Id.* at 4.2-12. Once this land is taken out of walnut and orange tree production, it is likely the land will *never* return to agricultural production. As such, the DEIR must include the loss of these lands as permanent impacts of the Project and propose specific and enforceable mitigation.

In addition to the deficiencies in the DEIR’s analysis of Project-specific impacts to agricultural lands, the DEIR also fails to actually analyze the Project’s cumulative loss of agricultural lands. A legally adequate cumulative impacts analysis views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the project at hand. “Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” CEQA Guidelines § 15355(b). The cumulative impacts concept recognizes that “[t]he full environmental impact of a proposed . . . action cannot be gauged in a vacuum.” *Whitman v. Board of Supervisors*, 88 Cal. App. 3d 397, 408 (1979).

A cumulative impacts analysis is especially important in the present case because agricultural lands throughout California are diminishing at a rapid rate. Yet rather than assess how the proposed Project would contribute to this reduction in agricultural lands, the DEIR simply refers to a list of cumulative projects and states that

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and permanent loss of agricultural lands without this information. For example, Table 4.2-5 states that 4.6 acres of walnut crops would be permanently disturbed by the proposed Project whereas page 4.2-15 states that 29 acres of walnut orchards would be permanently removed, and that this 29 acres is in addition to the 4.6 acres. At the same time, Table 4.2-4 identifies the loss of “total farmland” as 31.1 acres. This number does not appear to be accurate given the permanent loss of 33.6 (29 + 4.6) acres of walnut orchards alone.



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since they are not yet in the planning stage, the acreage of farmland that could be converted by these projects is not known. *Id.* The DEIR then summarily concludes that “the acreage of Farmland in Tulare County is expected to decline” and that “the Proposed Project would contribute to this decline.” *Id.* Under CEQA, such self-evident ruminations cannot substitute for meaningful analysis. *City of Antioch v. City Council*, 187 Cal. App. 3d 1325 (1986). Rather, an EIR must contain analysis sufficient to allow informed decision-making. Moreover, such dismissive treatment of this important resource is not adequate under CEQA. Rather, the DEIR author must “use its best effort to find out and disclose all that it reasonably can” regarding the cumulative loss of agricultural lands. *Citizens to Preserve the Ojai v. Ventura*, 176 Cal. App. 3d 421, 431 (1986); *see also Laurel Heights Improvement Assn. v. Regents of the University of California*, 47 Cal. 3d 376, 399 (1988) (*Laurel Heights I*).

The level of detail presented in the DEIR cumulative impact chapter's list of projects (Table 3-12) is sufficient to permit an adequate analysis of the Project's cumulative impact on agricultural resources. This table, along with a map depicting the exact location of these projects, identifies all sorts of pertinent information such as the Project name, address, land use, and acreage. With this information, the DEIR could have included at least a general analysis of the effect that these projects, together with the proposed Project, would have on local and regional agricultural lands. Moreover, inasmuch as these cumulative projects have been mapped, the DEIR could have determined the cumulative acreage of Prime Farmland, Farmlands of Statewide importance and Farmlands of Local Importance that would be impacted.

The DEIR must be revised to provide a legally adequate analysis of the Project-specific and cumulative impacts on agricultural resources.

## **V. The DEIR Fails to Consider a Reasonable Range of Alternatives.**

The DEIR fails to comply with CEQA's mandate that significant environmental damage be avoided or substantially lessened where feasible. Pub. Res. Code § 21002; CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d); *Citizens for Quality Growth v. City of Mount Shasta*, 198 Cal. App. 3d 433, 443-45 (1988). As stated in *Laurel Heights Improvement Association v. Regents of University of California*, “[w]ithout meaningful analysis of alternatives in the DEIR, neither the courts nor the public can fulfill their proper roles in the CEQA process . . . [Courts will not] countenance a result that would require blind trust by the public, especially in light of CEQA's fundamental goal that the public be fully informed as to the consequences of action by their public officials.” 47 Cal. 3d 376, 404 (1998). The discussion of alternatives must focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these



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alternatives would impede to some degree the attainment of the project objectives, or would be more costly. CEQA Guidelines § 15126.6(b).

Here, the DEIR fails to analyze any alternative that includes undergrounding a portion of the transmission line, even though undergrounding could mitigate the proposed Project's significant aesthetic impacts and minimize conflicts with Visalia's existing and planned community. The lack of an alternative that provides for partial undergrounding is particularly noticeable given that the DEIR discusses so many other possible alternatives, including alternatives such as demand side management and reconductoring. DEIR at 3-21 to 3-25 (discussing alternatives). Such an alternative could require undergrounding along SR 198, which would mitigate the significant visual impacts the Project would cause have on motorists using this highway, which is in the process of being designated as a scenic roadway. If the final alignment follows the route north through Visalia (Alternatives 2, 3 and 6), undergrounding would also mitigate for impacts to land use planning along Visalia Parkway, as described in Section I of these comments.

Undergrounding high voltage transmission lines is a feasible mitigation measure that the California PUC has required in other projects. For instance, the PUC approved the Sunrise transmission line project, which requires 5.9 miles of undergrounding. Final EIR/EIS, Sunrise Powerlink Project, Comparison of Alternatives at H-128 (Oct. 2008), available at: <http://www.cpuc.ca.gov/Environment/info/aspen/sunrise/feir/H%20Comp%20of%20Alts.pdf>. Similarly, the PUC approved an underground route for part of the northern and southern segments of Pacific Gas & Electric's Jefferson-Martin 230 kV Transmission Project in order to mitigate impacts to visual, land use and biological resources. PUC Decision 04-08-046, Opinion Granting a Certificate of Public Convenience and Necessity at 3-4, 18, 55, 67, 112, 140 (Aug. 19, 2004), available at: [http://docs.cpuc.ca.gov/word\\_pdf/FINAL\\_DECISION/39122.pdf](http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/39122.pdf). The DEIR is deficient in its failure to analyze and require undergrounding for portions of the proposed Project in locations containing particularly sensitive receptors and in locations where the proposed Project conflicts with current land use plans.



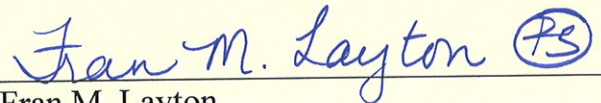
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## VI. Conclusion

In order to cure the panoply of defects identified in this comment letter, the DEIR must be revised to adequately assess the environmental impacts of the Project, and to identify effective mitigation measures and alternatives capable of alleviating these impacts. CEQA requires that the public have a meaningful opportunity to review and comment upon this significant new information, which should be presented in the form of a recirculated DEIR.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP



Fran M. Layton

Erin Chalmers

Laurel L. Impett, AICP, Urban Planner

cc: Alex Peltzer, Visalia City Attorney

### List of Exhibits:

- A. Letter from Mayor Gamboa, City of Visalia to Mr. Jensen Uchida, September 22, 2008
- B. Southern California Edison Proposed Routes
- C. City of Visalia Trail Linkages Plan
- D. Proposed Visalia Parkway
- E. Photographs of Skyline (Index of Photographs and Six Photographs)
- F. River Run Ranch Development
- G. Testimony of Michael Olmos, City of Visalia
- H. PG&E Transmission Line Corridor, San Jose, California
- I. Testimony of Donald Fulbright
- J. Alix Freedman, The Wall Street Journal, December 8, 1993
- K. Gary Holisko, *Developing Near Transmission Lines?*, Planning West Magazine, July/Aug 2008
- L. Miles Anderson, Secondary Land Use: Utility Rights of Way in Southern California
- M. Typical Sound Levels, Handbook of Environmental Acoustics
- N. Photographs From St. Johns Path, from a point between Lovers Lane and McAuliff St. looking east



September 22, 2008

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop Project  
c/o Environmental Science Associates  
225 Bush Street, Suite 1700  
San Francisco, CA 94104

**RE: San Joaquin Cross Valley Transmission Loop Project**

Dear Mr. Uchida,

Thank you for the opportunity to provide input regarding the proposed San Joaquin Cross Valley Transmission Loop Project that has been proposed by Southern California Edison. The Visalia City Council understands and appreciates the need for the project. However, the Council is also interested in seeing the impacts of this project fully considered, and the public made readily aware of the impacts identified, before a route is approved.

Portions of Alternatives Routes 1, 2, 3, and 4 are located inside the Visalia City limits, as well as within Visalia's adopted Urban Development Boundaries and Urban Area Boundary, so the City of Visalia is very interested in the findings of the EIR, the recommended mitigations, and the ultimate alignment of this transmission loop project.

As the CPUC begins its analysis, the City of Visalia believes it would be beneficial for you to have the following information as it relates to the proposed routes 1, 2 and 3:

Preferred Route 1:

Within one-half mile of the Preferred Route 1, there are currently 773 constructed dwelling units.

In addition, there are 184 residential lots on which residences have not yet been constructed (infill development), and there are 381 additional residential lots which have been approved through tentative subdivision maps.

In addition to the lots specified above, there are approximately 34 acres of undeveloped Rural Residential, 173 acres of undeveloped Low Density Residential land and 8 acres of undeveloped Medium Density Residential land. Using anticipated growth trends, these lands will accommodate approximately 762 dwelling units upon full buildout.

There are also approximately 260 acres of undeveloped Urban Reserve land. Estimating that this land would include 86% low density, 5% medium density, and 3% high density (this leaves 6% for commercial, schools, parks, etc.), these lands would accommodate 1,089 dwelling units upon full buildout using anticipated growth trends.

The California Department of Finance indicates that Visalia has an average of 2.975 people per household. Based on these figures, it is estimated that approximately 12,733



people in Visalia will live within a one-half mile radius of Preferred Route 1 upon build out.

Proposed Routes 2 & 3

Within one-half mile of the proposed routes 2 and 3, within the Visalia Urban Growth Boundary, there are currently approximately 1,870 constructed dwelling units, and an additional 302 residential lots on which residences have not yet been constructed (infill development).

In addition to these lots, there are also approximately 556 additional residential lots that have been approved through tentative subdivision maps.

In addition to the lots specified above, there are approximately 34 acres of undeveloped Rural Residential, 308 acres of undeveloped Low Density Residential land and 28 acres of undeveloped Medium Density Residential land. Using anticipated growth trends, these lands would accommodate approximately 1,456 dwelling units upon full buildout.

There are also approximately 1,209 acres of undeveloped Urban Reserve land. Estimating that this land would include 86% low density, 5% medium density, and 3% high density (this leaves 6% for commercial, schools, parks, etc.), these lands would accommodate 5,064 dwelling units using upon full buildout using anticipated growth trends.

In addition to these residential developments, it is expected that the urban reserve lands will include a mix of other land uses to serve this growing population including commercial, office, schools and parks, all of which are anticipated to draw people to the area from a greater distance than the one-half mile designation used here to develop these residential figures.

Based upon the State Department of Finance figures referenced previously, it is estimated that approximately 29,500 people in Visalia will live within one-half mile of the transmission line upon build out if the line follows routes 2 or 3.

With these statistics in mind, the City of Visalia clearly has an interest in the findings of this EIR. The City asks that the CPUC's EIR include, but not be limited to, the following issues:

Visual impacts of taller poles and increased number of transmission lines on nearby existing and future neighborhoods.

The proposed transmission line expansion for Routes 1, 2, and 3 will occur within portions of the existing SCE easement along the Road 148 alignment. Residential neighborhoods abut the west side of the existing SCE transmission route. Future mixed use neighborhoods, including single and multiple family homes, schools, parks, shopping and other mixed land uses, will be planned along the east side of the transmission route in areas currently designated on the City of Visalia General Plan as Urban Reserve. The



visual impacts of the transmission line expansion must be evaluated, particularly with respect to the view to the east toward the Sierra Nevada Mountain Range.

Impacts of power lines on future development along the SCE easement (i.e., planned future mixed use neighborhoods).

Expansion of power lines along the existing SCE easement will impact future development in the area. The EIR must address design techniques for compatibility, EMF buffering, safety, visual amelioration, and other design impacts for future development on both sides of the power line easement. This analysis must also include conjunctive use of the SCE easement, such as future developed park, trails, treescape, storm water facilities, of other uses that will blend in and complement an urban environment.

Impacts of power lines on nearby property values.

Expanded power line facilities within the existing SCE easement will cause future prospective home and property buyers concerns when considering purchases along the transmission corridor. Concerns will include, but not be limited to, visual impacts, power line "hum", fear of electro-magnetic fields, and safety issues. The impacts of the power line expansion upon property and home values along the easement must be quantified in the EIR and analyzed with respect to future effects upon these neighborhoods.

Economic impacts, including possible blight, occurring from potential reduced property values.

If property values are reduced due to the power line expansion project, neighborhoods may be impacted by reduced homeownership, increased rentals, lower quality development and other effects caused by lowering property values. Over time, these impacts may result in poor land use mix, reduced property maintenance and neighborhood blight. Blight is a serious physical, social, and economic impact. The potential for blight if property values are reduced due to the power line expansion project must be evaluated in the EIR.

Noise impacts from power line "hum" on adjacent properties/land uses.

Existing high voltage power lines within the SCE easement generate a substantial "hum". This noise may increase as a result of the increased number of transmission lines in the proposed project. Current and future residents along Routes 1, 2, and 3 may be disturbed by power line hum and their quality of life degraded. The impact of this noise effect upon neighborhood livability, desirability and property values must be evaluated in the EIR.

Impacts of electro-magnetic fields (EMFs) upon persons and animals in the vicinity of the proposed power lines.



EMFs are an ongoing concern to persons living near major power lines. The impacts of EMFs to humans and animals resulting from the project for all three routes must be fully disclosed in the EIR. Secondary effects upon neighborhood desirability and property values must also be fully evaluated.

Potential conjunctive uses for power line easement.

Power line easements have the potential to degrade urban neighborhoods if they are left as barren, unlandscaped corridors occupied by transmission poles and lines only. Conversely, these corridors can present opportunities if they are creatively and wisely managed to contain uses complement neighborhoods. These uses can include, but are not limited to, linear parks, pedestrian and bicycle trails, community gardens, urban forests, and other potential uses. The EIR should evaluate potential for conjunctive uses for all three proposed routes within the Visalia urban area.

Compatibility with future interchange at State Highway 198 and Road 148.

The City of Visalia is planning a future highway interchange at the juncture of Road 148 alignment and State Highway 198. This interchange will serve existing and future urban land uses and City residents in neighborhoods located east and west of Road 148, north and south of State Highway 198. The existing SCE power line easement is located along the Road 148 alignment. Transmission Loop Routes 1 & 2 will be affected by the future development of Road 148 to arterial status street (84'-110' right of way width, 4 lanes, some portions with raised medians and turn lanes) and the planned future interchange at State Highway 198. If Route 2 or 3 is selected for the SCE project, the design of the transmission facility must be compatible the with planned future highway interchange and street improvements.

Effects upon tourism if towers/lines are placed in the viewshed of the State Highway 198.

State Highway 198 is a major tourist entry route to the Southern Sierra Nevada Mountain Range, the Sequoia/Kings Canyon National Park, Mineral King, and several foothill and mountain communities. Transmission poles/towers and lines may be visible from State Highway 198 in Routes 1, 2, and 3. Highway 198 is designated as a Scenic Corridor in the Tulare County Scenic Highways Element. The EIR must analyze impacts the project will have on the Highway 198 Scenic Corridor, including any degradation of the corridor panorama and disruption of views of the mountain range from Visalia neighborhoods.

Project cost estimates.

Information on land acquisition and construction cost estimates for the various routes provided to date has been limited and details are lacking. It is difficult to evaluate the economic impact on ratepayers from implementation of the various routes. The EIR should include detailed costs estimates for each route to determine economic impacts to ratepayers.



Detailed evaluation of Alternative Route 4.

Information on Route 4 is very limited. It appears this route was dismissed early in the evaluation process by SCE without the opportunity for the public to adequately examine its potential environmental and system effects. SCE determined Route 4 is inadequate to achieve SCE's power objectives for this project, but how is the public able to affirm this conclusion when so little information and analysis about Route 4 has been provided? Further, Route 4 may have significant environmental issues or benefits, but given the lack of information, how is this able to be determined? The EIR must provide a thorough description, analysis, and environmental evaluation of Route 4 to determine its characteristics and environmental impacts in comparison to the other routes.

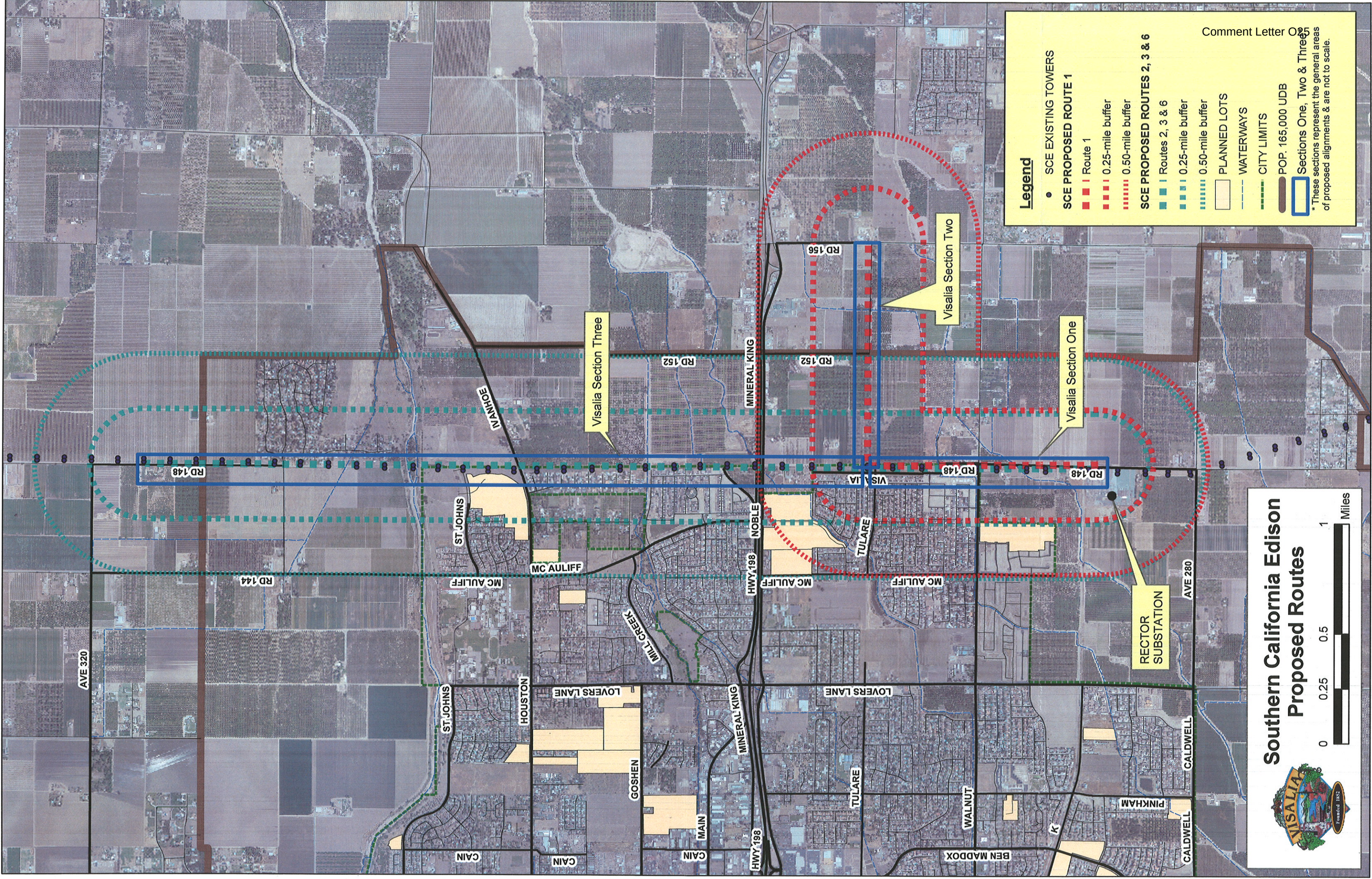
Again, the City of Visalia appreciates the opportunity to provide input as part of the CPUC's scoping process related to the San Joaquin Cross Valley Transmission Loop. We look forward to reviewing the draft EIR and providing further comments at that time.

Again, we thank you for your consideration in this matter.

Sincerely,

Jesus Gamboa, Mayor





**Legend**

- SCE EXISTING TOWERS
- SCE PROPOSED ROUTE 1
  - Route 1
  - 0.25-mile buffer
  - 0.50-mile buffer
- SCE PROPOSED ROUTES 2, 3 & 6
  - Routes 2, 3 & 6
  - 0.25-mile buffer
  - 0.50-mile buffer
- PLANNED LOTS
- WATERWAYS
- CITY LIMITS
- POP. 165,000 UDB

Sections One, Two & Three

\*These sections represent the general areas of proposed alignments & are not to scale.



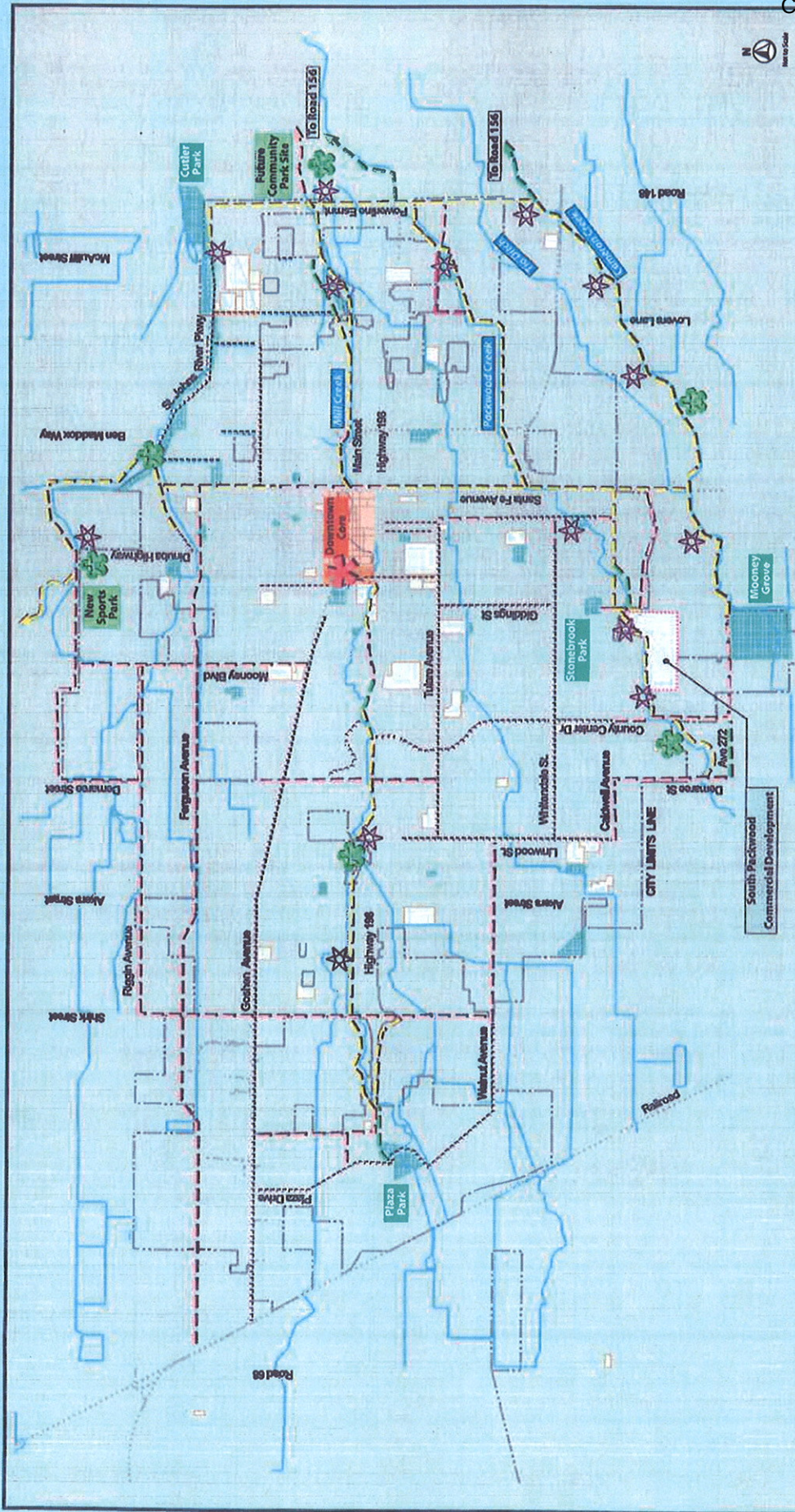
### Southern California Edison Proposed Routes

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Miles



# TRAIL LINKAGES PLAN



## LEGEND

- Existing Class I Bike Trail
- Existing Class II Bike Path
- Existing Sidewalk Bikeway
- Existing Parks
- Existing Schools
- Future Park
- Future Class I Bike Trail
- Future Class II Bike Path
- Optional Class I Bike Trail
- Optional Class II Bike Trail
- Potential Rest and Staging Area

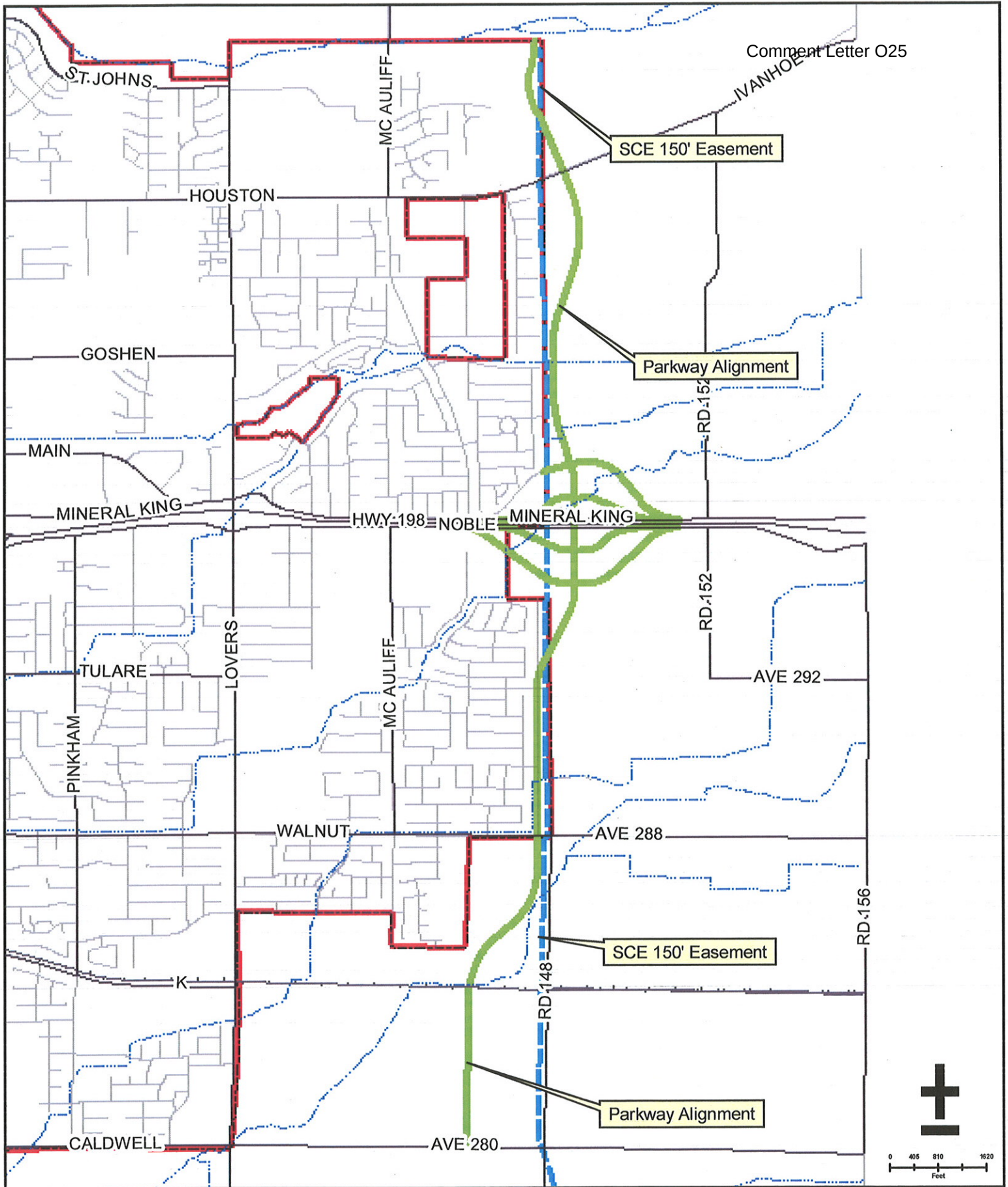
## TRAIL LINKAGES PLAN



AND DESIGN GROUP  
City of Australia

## WATERWAYS AND TRAILS MASTER PLAN Trail Linkages Plan

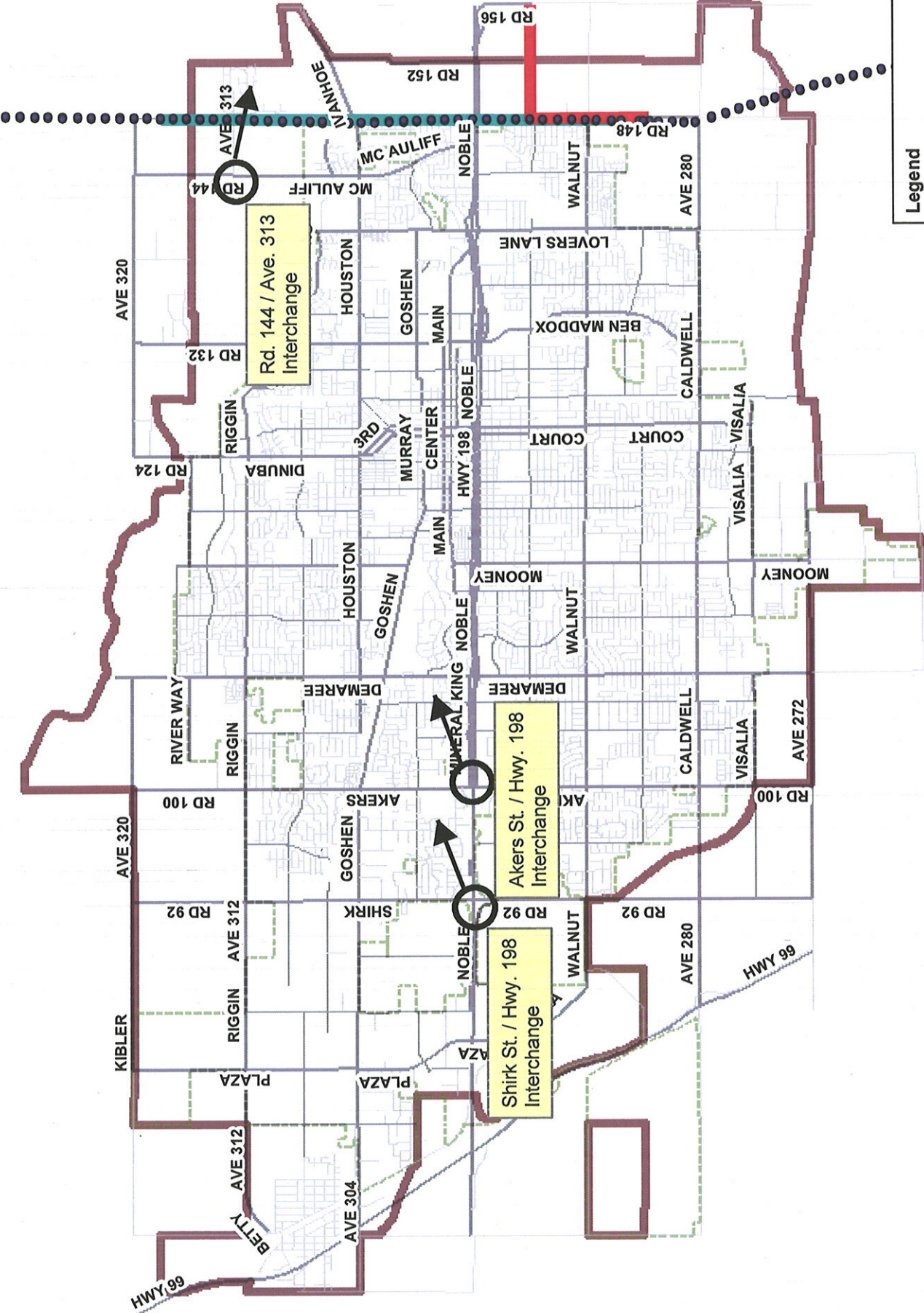




# Proposed Visalia Parkway







**Legend**

- SCE EXISTING TOWERS
- SCE PROPOSED ROUTE 1
- SCE PROPOSED ROUTES 2, 3 & 6
- CITY LIMITS
- 165,000 POPULATION UDB

**City of Visalia**  
**Picture Index Map**

0 0.5 1 2 3 Miles

N  
W E  
S





View from Shirk Street / Highway 198 Interchange



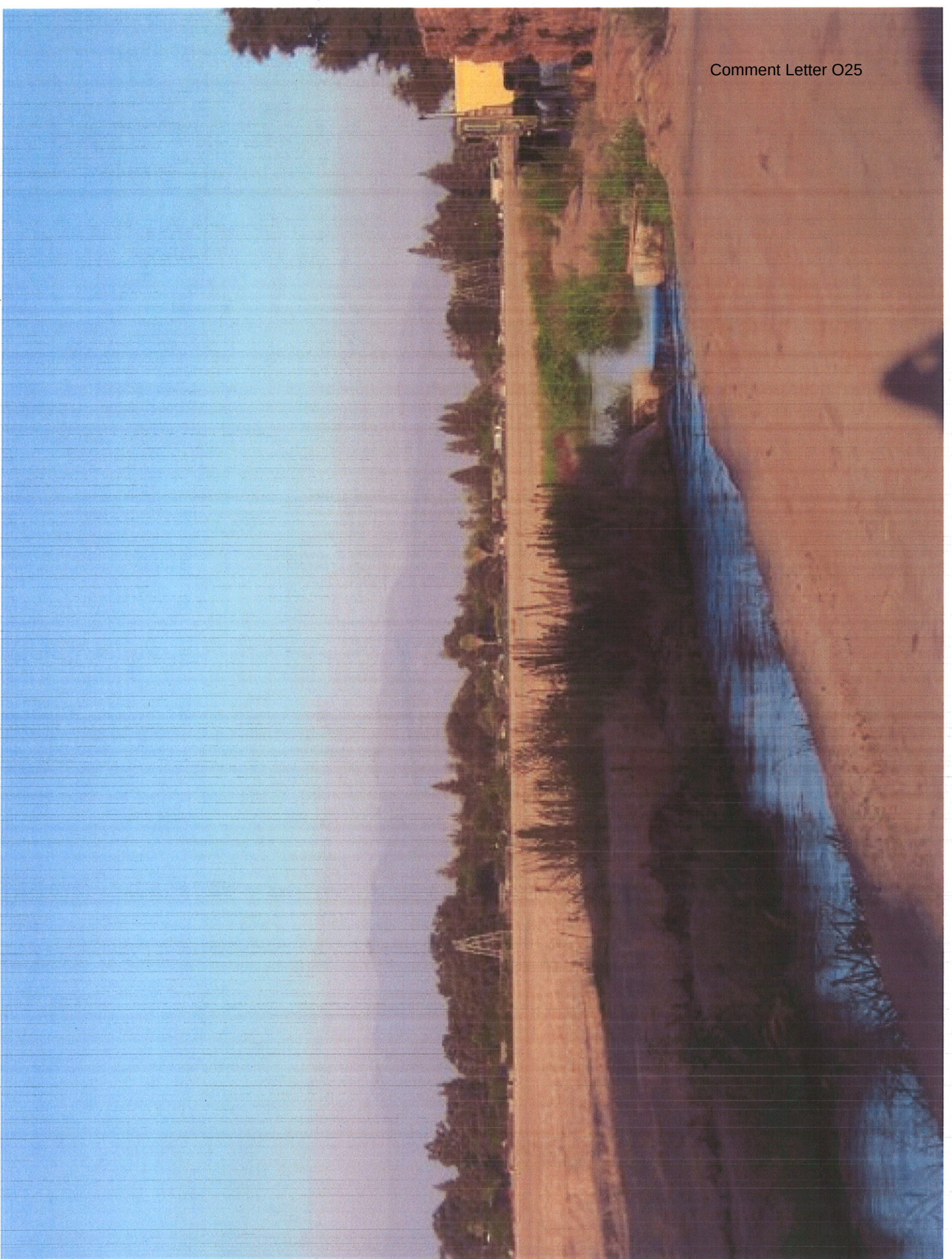


View from Akers Street / Highway 198 Interchange

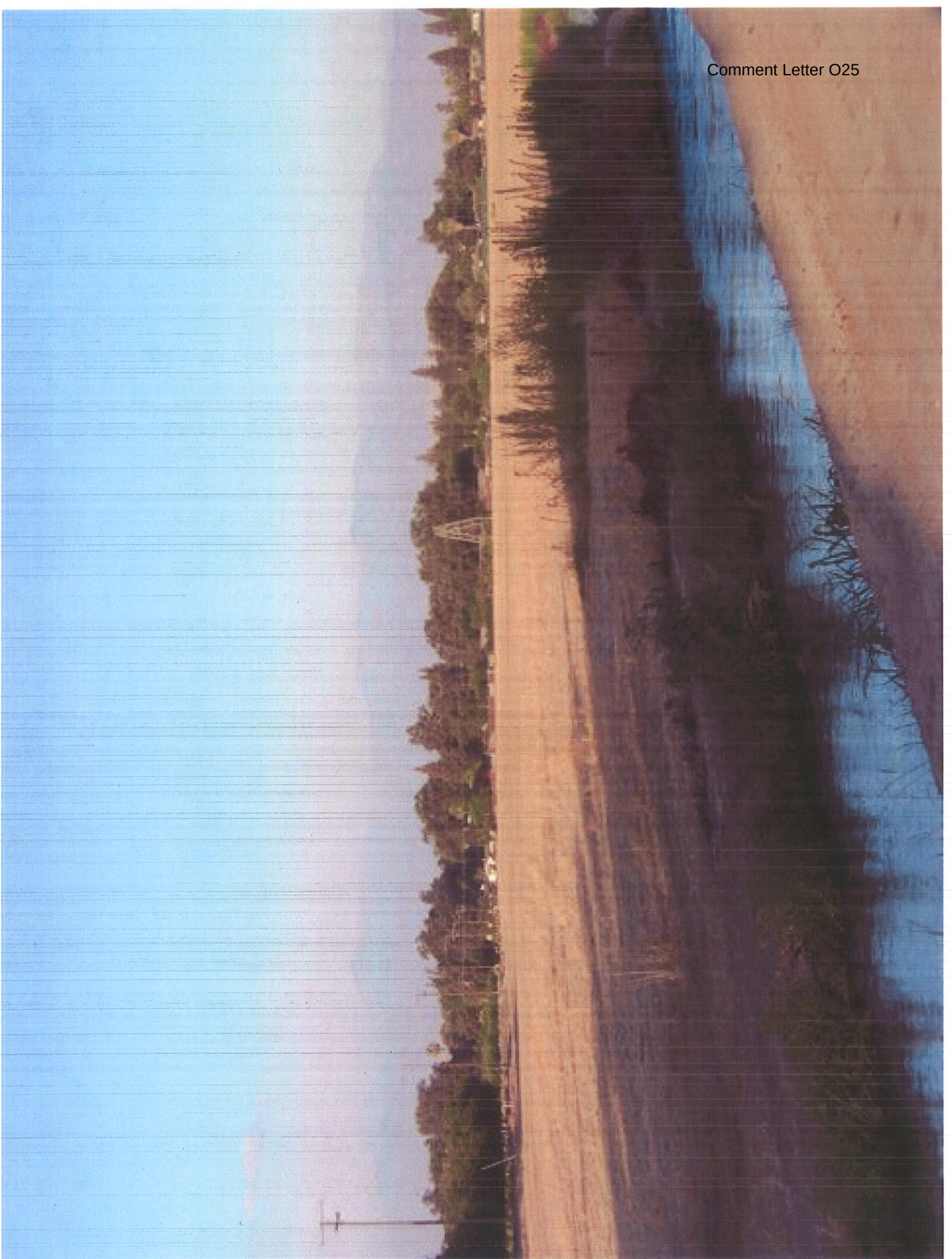




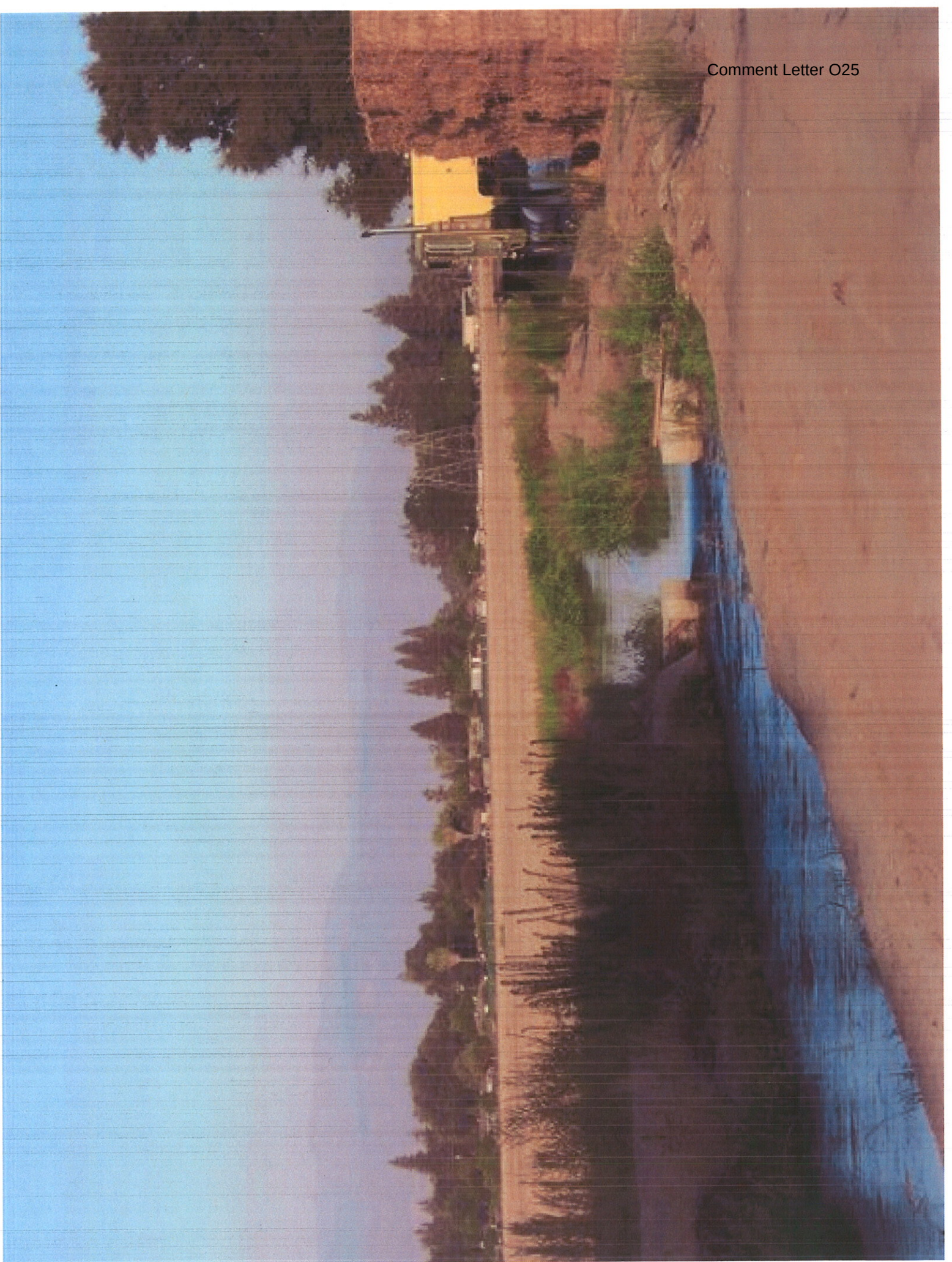


















BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern  
California Edison Company (U 338-E) for a  
Certificate of Public Convenience and  
Necessity for the San Joaquin Cross Valley  
Loop Transmission Project.

Application No. 0805039  
(Filed May 30, 2008)

**PREPARED DIRECT TESTIMONY OF MICHAEL OLMOS  
ON BEHALF OF  
THE CITY OF VISALIA**



**PREPARED DIRECT TESTIMONY OF MICHAEL OLMOS  
ON BEHALF OF  
THE CITY OF VISALIA**

**Question 1:** What is your name and position, how long have you held your position, and what is your background and expertise?

**Answer:** Michael Olmos. I have been with the City of Visalia since 2001. I am the current Assistant City Manager. In this position, in addition to assisting the City Manager with specific projects, I also directly oversee the Community Development Department, as well as overseeing the work of the Public Works Department head, and the Housing and Economic Department head. These are all the areas of the city government having to do with development of the City, and with the management of the City's Public Work systems and assets. I've held the Assistant City Manager position for approximately the past four years. Prior to that, I was the Community Development Director, and before that I was City Planner. Prior to coming to the City of Visalia, I worked for the City of Reedley as the Community Development Director from 1990 to 2001, responsible for planning, building, engineering, and all Public Works field operations. From 1987 to 1990, I was employed as a regional planner for the County of Tulare.

I have a bachelors degree in economics from California State University, Fresno, and am a member of the American Institute of Certified Planners.

**Question 2:** What is Visalia's population and its growth rate?

**Answer:** The City's latest population has been estimated to be 123,000. We have grown at an average rate of 3.2% over the past 10 years.

**Question 3:** Describe the community values that characterize the City of Visalia and that inform its planning efforts.

**Answer:** Visalia's small town characteristics, along with its natural and rural features, such as its waterways, Valley Oaks and its rich agriculture heritage, combine to offer a high degree of livability and level of community amenity not present in most California communities. Visalia's scenic qualities are well known, ranging from its rivers, to its views of the nearby foothills and the Sierra Nevada range. The City has a strong connection with these mountains and the Sequoia and Kings Canyon National Parks, in particular. Visalia is known as



the Gateway to the Sequoias and recently started California's first Valley-to-Mountains National Park Shuttle. The City's numerous scenic vistas and the scenic corridor along SR 198 have contributed to Visalia's unique image particularly as a "non-Highway 99" Valley-town.

The City prides itself on providing a clean, safe and livable community for its residents. Visalia offers a high quality of life which is derived from its attractive, small town ambience, characterized by its well-established downtown, Main Street, and its historic and highly livable residential neighborhoods. The City seeks to maintain and enhance this lifestyle for Visalia's residents by ensuring that: 1) Visalia's downtown and residential neighborhoods are safe, well-connected and attractive; 2) future development within the City's planning area is orderly, contiguous and concentric; 3) agricultural land is protected from premature urban development; 4) Visalia's well established parks and network of trails are preserved and enhanced; and 5) development projects do not detract from the City's overall character and ambience as defined primarily by its agricultural lands and its unique scenic vistas.

**Question 3A:** Are these values embodied in any City plans or documents?

**Answer:** Yes, the City's General Plan extensively documents Visalia's community values. One objective of the General Plan update process in 1991 was to record a perceived community value system for the City; in other words, how Visalia "looks and feels." These community values served as the basis for many of the General Plan's goals, objectives, and implementing policies. By identifying community values and translating them into policy statements, the General Plan plays a central role in preserving Visalia's important community characteristics.

Some of the most important objectives, goals and policies which reflect Visalia's community values include the following:

**Provisions Pertaining to Orderly Growth and Preservation of Agricultural**

**Resources:**

- Goal 6: *Manage planning area growth to be contiguous and concentric from the City's Core area.* (Land Use Element at 1-25).



• Objective B: *Minimize urban sprawl and leap-frog development by encouraging compact, concentric and contiguous growth.* (Land Use Element at 1-25).

• Objective C: *Encourage development of comprehensive planned, compact, well-integrated areas for residential development.* (Land Use Element at 1-22).

• Objective A: *Protect agricultural land from premature urban development.* (Land Use Element at 1-25).

#### **Provisions Pertaining to Protection of the City's Unique Scenic Resources:**

• Objective A: *Maintain and enhance Visalia's physical diversity, visual qualities and small-town characteristics.* (Land Use Element at 1-18 and 3-2).

• Policy 1.1.18: *Develop scenic corridor and gateway guidelines that will maintain the agricultural character of Visalia at its urban fringe.* (Land Use Element at 3-5).

• Policy 2.1.5: *Develop an East Highway 198 Specific Plan for the east end of Highway 198 to enhance the scenic quality of the east entrance and corridor and balance the scenic qualities on both ends of Highway 198.* (Land Use Element at 3-6).

#### **Provisions Pertaining to Incompatible Land Uses:**

• Policy 1.1.16: *Minimize visual impact of development through various design techniques such as building orientation, landscaping depth and density.* (Land Use Element at 3-5).

• Policy 4.1.6: *Develop design measures to buffer residential development from non-residential land uses. These measures should, at a minimum, include setbacks, and... landscaping.* (Land Use Element at 3-27).

#### **Provisions of Visalia General Plan Pertaining to Open Space and Parks Lands:**

• Goal 3: *Develop a high quality public park system which provides adequate space and facilities for varied recreational opportunities which are conveniently accessible to all Visalia residents.* (Conservation, Open Space, Recreation and Parks Element at 6).



• Objective: *Create and maintain open space for public health and safety in areas which require special management or regulation.* (Conservation, Open Space, Recreation and Parks Element at 6).

• Objective: *Acquire adequate park sites for future City growth.* (Conservation, Open Space, Recreation and Parks Element at 6).

• Objective: *Maximize opportunity for joint use of public land and facilities such as schools, stormwater ponding basins and other recreation areas under public jurisdiction suitable for recreation.* (Conservation, Open Space, Recreation and Parks Element at 6).

• Objective: *Utilize ordinances, easements, restrictive covenants and other tools to negotiate with landowners and developers to ensure that significant natural resources and open space are protected during development.* (Conservation, Open Space, Recreation and Parks Element at 6).

• Implementing Policy 3.3-1: *Encourage cooperative agreements with the City and [other agencies], Southern California Edison Company and other public agencies and utilities to explore innovative recreation and open space facilities throughout the Visalia planning area.* (Conservation, Open Space, Recreation and Parks Element at 64).

• Objective: *Preserve and protect agricultural use on lands in and surrounding the Visalia planning area for open space purposes and for the managed production of resources.* (Conservation, Open Space, Recreation and Parks Element at 6).

**Question 4:** Would the proposed transmission line Project, or any of the alternative transmission line routes, affect the values you identified above?

**Answer:** Yes, though some more than others. Portions of the Proposed Project and Alternative Routes 2, 3 and 6 are located within Visalia's city limits, as well as within Visalia's adopted Urban Development Boundary and Urban Area Boundary. Future mixed use neighborhoods, including single and multi family homes, schools, parks, shopping and other land uses are planned along the east side of the Proposed Project alignment and each of the alternative transmission line routes in areas currently designated in the Visalia General Plan as Urban Reserve.



It is easiest to discuss the anticipated effects of the Proposed Project as well as the Project Alternatives in terms of the various sections of the routes that are involved. The first section of the route that would cause impacts to the City of Visalia, which I'll refer to as "Visalia Section One", runs from the Rector Substation northward to the Tulare Avenue alignment. (See Exhibit A, Southern California Edison Proposed Routes). In Section One, the Proposed Project and the Project Alternatives are all the same: the existing pairs of 60-foot towers, each carrying three transmission lines for a total of six lines, would be replaced with pairs of 120- to 160-foot towers, carrying six lines each for a total of twelve lines, all to be constructed within the existing right of way.

The second section ("Visalia Section Two"), which would only be at issue if the Proposed Project (also referred to as "Alternative 1"), is selected, runs eastward from the north end of Section One straight east to Avenue 152 (the eastern boundary of the City of Visalia's planning area, a boundary known as the Urban Development Boundary, or "165,000 Population Target Boundary"). In Section Two, a new set of 120- to 160-foot mono pole towers with six lines would be located in a newly created right of way. The last section ("Visalia Section Three") is common to Alternatives 2, 3, and 6. It runs north from the end of Section One approximately three miles to the Avenue 316 alignment, which is also the northern limit of the City's Urban Development Boundary.

**Question 4A:** Would the community's widely held value of maintaining scenic corridors and opportunities for aesthetically valuable viewsheds be affected by the Project or any of the alternatives?

**Answer:** Yes, the changes to the community's views could be severe in each of the Visalia Sections and, unless specific measures are incorporated into the Project design, all of the transmission routes, including the DEIR's designated environmentally superior alternative, would not be feasible from the City's perspective.

As the attached photos clearly show, Visalia's identity is profoundly linked to the stunning Sierra Nevada Range since the mountains and foothills are dominant features from the eastern portions of the City. (See Exhibit B which depicts views from the intersections of



Highway 198/Akers Street and Highway 198/Shirk Street looking northeast). The obstruction of these views of the Sierra Nevada Range could substantially affect Visalia's community image. Moreover, interference with viewsheds would be in direct contrast to the City's General Plan objective calling for the City's visual qualities to be maintained and enhanced. (See Objective A, Land Use Element at 3-2).

In Visalia Section One (all routes), the visual impacts are associated with: (i) increasing the tower height from the existing 60 feet to 120-160 feet, (ii) increasing the number of lines that create visual obstruction from six to twelve, and (iii) changing the current configuration in which all of the lines are horizontally configured across the top of the tower to a configuration in which there are four wires each going horizontally across at three different heights. The dramatic effect that would accompany the new lines cannot be sufficiently emphasized. The current SCE lines are at about tree height, so the lines are not as noticeable because they tend to blend in with the trees (note that Visalia has been a Tree City, USA for more than 20 years so the City has a lot of trees).<sup>1</sup> As a point of reference, the streetlight poles and the utility lines in the foreground of the Akers Street photograph are approximately 25 feet and 35 feet tall, respectively.

The new poles and lines would be about two and one-half times as tall as the existing structures. Consequently, the new lines would tower above the trees and create a stark obstruction against the distant views of the mountains. Without the trees to soften the effects of the lines, the substantial increase in structure height and the increased stature of these unnatural geometric forms and straight lines would create an alarming increase in industrial character juxtaposed against the Sierra Nevada Mountain Range and the foothills.

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<sup>1</sup> . Tree City USA is a tree planting and tree care program sponsored by The National Arbor Day Foundation for cities and towns in the United States. To qualify for Tree City USA, a town or city must meet four standards established by The National Arbor Day Foundation and the National Association of State Foresters.



1 Future residents would also be affected given the City's plans to continue its  
2 development east of the proposed transmission line right of way. As shown on Exhibit A  
3 (which depicts the  $\frac{1}{4}$  and  $\frac{1}{2}$  mile buffers), I estimate that in the area of Visalia Section One,  
4 approximately 500 existing homes with existing obstructed views of the Sierra Nevada range  
5 will experience an increase in intensity of the obstruction, while approximately 850 existing  
6 homes that do not currently experience any visual obstructions will experience such an  
7 obstruction after completion of the Project due to the increased height of the poles and the lines.  
8 These numbers are based on assumptions that the existing towers and lines are visible from a  
9 distance of  $\frac{1}{4}$  mile, while the planned towers and lines will be visible from a distance of  $\frac{1}{2}$  mile.

10 The same impacts would apply to Visalia Section Three (common to all of the  
11 alternatives). I estimate that in the area of Visalia Section Three, approximately 1,000 existing  
12 homes that have obstructed views as a result of the existing SCE transmission lines will  
13 experience an increase in intensity of the obstruction, while approximately 2,000 existing homes  
14 that do not currently experience visual obstructions will experience such an obstruction due to  
15 the increased height of the transmission lines. Donald Lawrence Company, a local land use  
16 developer, is in the process of constructing the River Run Ranch development—a portion of  
17 which is currently under construction, with plans for future construction. This major  
18 development would be impacted by Alternative Routes, 2, 3 and 6. The visual obstructions will  
19 also be experienced in the areas adjacent to Visalia Section Two (unique to Route 1, the  
20 Proposed Project). These would be new impacts, as opposed to increased impacts.

21 It should be noted that the effects in this regard will be different depending on the  
22 alternative selected. Specifically, the visual impairment noted above with regard to Section  
23 Two (the Proposed Project) will be felt by residents of Visalia's future planning area since there  
24 is currently no urban development in this location. This may provide the City with an  
25 opportunity to attempt to plan around these obstructions (e.g., with appropriate site design,  
26 homes may be situated on lots so that their primary view faces away from electrical  
27 infrastructure). On the other hand, Visalia Sections One and Three will affect current as well as  
28 future development, making the impacts harder to rectify. It is important to note that the only



alignment that would not adversely affect scenic vistas of the Sierra Nevada Mountain Range within Visalia Section Three is the proposed Project.

**Question 4:** Would the Project or any of the alternatives present new challenges to the community's values related to maintaining neighborhood continuity and orderly planned development of the City?

**Answer:** Yes, to varying degrees depending on the Sections at issue.

Regarding Visalia Section Two (unique to the Proposed Project) the new transmission line corridor would create a significant obstacle to Visalia's planned expansion of the City. As discussed above, Visalia's Urban Development Boundary extends east of the City and consequently, the City is planning on developing these lands with a variety of uses, including housing. The construction of a new utility corridor -- and a stark no-man's-land under the lines -- would have a pervasive influence on the emerging community. However, if the Project were redefined to include an aesthetically pleasing landscaped pathway (as discussed further below), the right of way would be a compatible use that would provide significant, offsetting benefits to the community.

Regarding Visalia Section Three, the increased intensity of use of the existing right of way would substantially interfere with other important planned City improvement projects. As Exhibit C shows, the Visalia Parkway is proposed to be constructed immediately east of, and parallel to, the existing SCE right of way until it crosses the right of way just south of St. John's Parkway and then continues northward on the west side of, and parallel to, the right of way until it reaches St. John's River. The Visalia Parkway would be a four-lane arterial with a grade separated interchange with Highway 198. The proximity of this major roadway project to the SCE right of way (Alternative Routes 2, 3 and 6) would complicate the construction, design and operation of the Parkway's intersections with Highway 198, Walnut Avenue, Tulare Avenue, Noble Avenue, Mineral King Avenue and Houston Avenue.

The City is also planning to develop a regional sports park on a City-owned 100-acre parcel, located between the existing SCE transmission lines and Avenue 152, just north of Mineral King Avenue. (See Exhibit D, City of Visalia Trail Linkages Plan). While this land is



currently adjacent to SCE transmission lines, the increased intensity of use, in particular the visible increase in industrial character of this location, would complicate the development of this sports park and potentially interfere with the community's use and enjoyment of this park setting. However if the proposed Project were redefined to include a landscaped pathway within the proposed right of way, such a pathway would enhance public access to the new regional park.

Moreover, utility line corridors can become an eyesore, an unused no-man's-land. While some property owners who own the fee interest in the property underlying the transmission lines maintain these corridors by removing unattractive weeds, scrub brush and litter, such upkeep and maintenance tends to be sporadic. Additionally, if the right of way is not landscaped and integrated into the community, it can negatively affect the property values of adjacent and nearby parcels. This impact can reduce neighborhood desirability, increase vacancies and rentals, and eventually cause further neighborhood deterioration and blight.

**Question 5:** There are transmission lines already running along a portion of the Proposed Project route and along all of the alternate routes. What specific considerations make the San Joaquin Cross Valley Loop Transmission Project infeasible from the City's point of view?

**Answer:** The new lines and towers would definitely have economic, and social impacts on our community, as identified in the responses to Questions 4, 4A, and 4B. In addition, developers would be less inclined to build close to the lines, potentially leaving a large swath of vacant land in the middle of future neighborhoods. Our experience has shown that, all things being equal, areas adjacent to power lines will develop later than other vacant lands. Development may eventually occur in these areas, but before this happens, the land is subject to being left vacant. Thus, the City's careful plans for growth, which have been developed over the course of years of planning, could be thwarted. Also, placing *any* new above-ground lines runs counter to the goals and values of the community. The City has been working for years to underground its existing utility lines. Constructing the tall, new towers and lines proposed for the Project takes the City in the exact wrong direction. It will make the SCE corridor more



imposing and cause trepidation for residents in the vicinity. The corridor will become a greater obstacle as the City plans for future development of this area

**Question 6A:** Are there specific measures that could provide benefits to ameliorate the above described impacts of the Proposed Project and alternatives?

**Answer:** There are features which could be added to the Project or any of its alternative alignments that would offset the Project's effects on the Visalia community. First, the Project could be revised to include a secondary, conjunctive use such as the development of a landscaped walking and/or bicycle pathway. Linear open spaces or linear parks associated with utility corridors such as this offer an ideal configuration for such trails, thus offsetting the tendency for the transmission line corridor to become a wasteland with its associated adverse effects on community character and ambience. Moreover, a landscaped trail or pathway would integrate the transmission line corridor into the City's overall growth plan and help to promote critical connections between the City's existing and its planned network of trails and parks. Specifically, a pathway or trailway along the transmission line corridor for Alternative Routes 2, 3 or 6 would connect with the St. Johns River Trail and Mill Creek Trail and provide direct access to Cutler Park, the new sports park as well as the future community park site near the existing SCE transmission lines, north of Mineral King. (See Exhibit D, City of Visalia Trail Linkages Plan). By providing these important connections, the transmission line corridor along Alternative Routes 2, 3 and 6 would serve to integrate the right of way into the community's overall urban structure.

In consultation with the CPUC, SCE, the City and landowners along the transmission line right of way should develop a public-private secondary use plan for the transmission corridor. Such a secondary use plan would include the following features: 1) dedication of a public open space easement to the City that guarantees permanent public access; and 2) SCE contribution toward public facilities (such as walking/bicycling path or trail, landscaping and benches) for those segments of the corridor within Visalia city limits and its Urban Development Boundary.

Second, various visual relief measures could be included in the Proposed Project to offset the visual obstruction of the Project's significant structures. To this end, SCE should develop –



in consultation with a visual specialist designated by the CPUC – a Visual Relief Plan. This Plan would be developed in coordination with the City and submitted to the CPUC for review and approval. The Plan would include the following measures:

#### **Structure Surface Treatment Plan**

For all structures that are visible from sensitive viewing locations within the City's existing and planned development areas (e.g., substation, towers and polls), surface coatings would be applied with appropriate colors, finishes, and textures to most effectively blend the structures with the visible backdrop landscape. At locations where a lattice steel tower or a tubular steel pole would be silhouetted against the skyline, non-reflective, light-gray colors should be selected to blend with the sky. The transmission line conductors should be non-specular and non-reflective, and the insulators should be non-reflective and non-refractive.

#### **Evergreen Screen**

SCE should establish a permanent evergreen vegetative screen of sufficient height for immediate visual screening around the Rector Substation and should provide a permanent drip irrigation system for plant survival.

#### **Match Structure Spacing and Spans**

In locations designated by the CPUC, in consultation with the City, SCE should match existing structure spacing and spans as closely as possible to avoid or reduce the number of off-setting tower placements, which would reduce visual complexity as seen from sensitive receptor locations. All new spans should match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans.

Third, undergrounding certain portions of the Project would offset the impacts related to the interference with the planned Visalia Parkway. Specifically, undergrounding the areas in the vicinity of the major arterial intersections described in Answer 4B would resolve those issues in those specific areas.

The combination of all of these measures would go a long way toward making the Project, whether it be Alternative 1, 2, 3 or 6, feasible from the City's perspective.



**Question 6B:** Does the City have any specific, written goals regarding the proposals described above?

**Answer:** Yes, in addition to the General Plan goals, objectives and policies discussed above in response to Question 3A, the following General Plan provisions support these proposals:

- Implementing Policy 1.1.4: *It is a priority to work with utility companies to landscape power line rights-of-way and to underground utilities where possible.* (Land Use Element at 3-3); and
- Implementing Policy 1.1.5: *Develop land use and site design measures for areas adjacent to high-voltage power facilities.* (Land Use Element at 3-3).

Other General Plan policies recommend developing measures to ensure the compatibility of land uses. While these policies do not specifically call out utilities, they are nonetheless intended to ensure that the visual consequences of all aspects of development are properly designed, oriented or landscaped to maintain the visual integrity and overall character of the City. These policies include:

- Policy 1.1.16: *Minimize visual impact of development through various design techniques such as building orientation, and landscaping depth and density.* (Land Use Element at 3-5).
- Policy 4.1.6: *Develop design measures to buffer residential development from non-residential land uses. These measures should include setbacks and landscaping.* (Land Use Element at 3-27).

These and other General Plan policies make clear that there are practical ways to ensure that uses such as utility lines are constructed so as to minimize impacts to an existing community's character and ambience.

**Question 7:** Aren't all of the impacts from transmission lines outweighed by the need for reliable and safe electric transmission in the City?

**Answer:** A safe and reliable power supply is certainly necessary, but there is no need to compromise the visual beauty and integrated planning of our community in order to facilitate



1 electrical transmission. The specific measures discussed above, if incorporated into any one of  
2 the alternatives being considered for the Proposed Project, would provide important economic  
3 and social benefits that would serve to lessen the Project's deleterious effects on the Visalia  
4 community.



## Lower Silver Creek Trail, North – Photo Gallery

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### ***Dobern Bridge***



From Bambi Lane - Before



From Bambi Lane - ***After!***



Toward Bambi Lane - Before



Toward Bambi Lane - ***After!***



Comment Letter O25



From Dobern Ave - Before



From Dobern Ave - **After!**

**Wenlock Drive Pedestrian Corridor**



Along Wenlock Drive - Before



Along Wenlock Drive - **After!**



Comment Letter O25



From Dumont Circle - Before



From Dumont Circle - **After!**



...more after



...more after



...more after



... and even more after



Comment Letter O25

***Lausett Ave Bridge***



**Lausett Ave Bridge - Before**



**Lausett Ave Bridge - *After!***



**From Lausett Ave - Before**



**From Lausett Ave - *After!***

***Kammerer Avenue Bridge***



Comment Letter O25



***Trail through Capitol Park***



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BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern  
California Edison Company (U 338-E) for a  
Certificate of Public Convenience and  
Necessity for the San Joaquin Cross Valley  
Loop Transmission Project.

Application No. 0805039  
(Filed May 30, 2008)

**PREPARED DIRECT TESTIMONY OF DONALD FULBRIGHT  
ON BEHALF OF  
THE CITY OF VISALIA**



**PREPARED DIRECT TESTIMONY OF DONALD FULBRIGHT  
ON BEHALF OF  
THE CITY OF VISALIA**

**Question 1:** What is your name, background and experience?

**Answer:** Donald Fulbright. I have been a real estate developer/builder in the Visalia area since 1975. I have completed developments in five different cities, all in the proximity of Visalia. I have built more than 3,000 homes in my career.

**Question 2:** Do you own property that will be affected by the proposed Southern California Edison San Joaquin Cross Valley Loop Transmission project?

**Answer:** I have developments in Visalia and in Farmersville, both of which could be affected by the project depending on which route is selected. The most direct impact will be in Visalia, where my company, Donald Lawrence Company (holding title to the property as Castlewood Partners Inc.), owns the residential development (River Run Ranch) immediately west of the existing power lines, north of Houston Avenue. This development currently consists of 225 completed homes, all of which have been sold, and an additional 72 acres of partially completed residential neighborhoods, which on completion and build-out will have approximately 300 homes. The City of Visalia has approved a master site plan and tentative subdivision maps for approximately 158 homes in the undeveloped area of River Run Ranch on the west side of the Edison right of way. There are 54 lots on 17 acres that are currently under development in this phase (see attached Exhibit A) pursuant to an approved subdivision map. We have submitted building plans to the City for these homes and construction will begin soon. All of the streets and roads in this portion of the River Run Ranch development have been completed and the main trunk lines for sewer, water, and storm-water have been installed. There are conceptual plans for the remaining 55 acres of the River Run Ranch development west of the Edison right of way, as shown on Exhibit A.

Our company also owns the land underlying the Edison power line easement and the 64 acres of vacant land east of the power lines, which has not yet been annexed to the City. This area, which has been pre-zoned for commercial land uses, low density multi-family, and single



family housing, will eventually comprise the eastern portion of our River Run Ranch development.

The attached map (Exhibit A) also shows the conceptual layout for a multi-use corridor that includes a possible alignment of the future Visalia Parkway and a pedestrian trail underlying the power lines.

The Edison company currently has a right of way for power lines that cross through the River Run Ranch property in a north-to-south direction for 2,300 feet. Edison's easement, which was established in the early 1900's, is 150 feet in width and allows use of the land by the underlying land owner, with height restrictions applicable to any improvements.

If any of the Alternate Routes, as identified in the Draft Environmental Impact Report for the subject project, are selected, it is my understanding that the existing power lines in the right of way that crosses the River Run Ranch would be changed. Specifically, the current twin sets of 63-foot lattice towers, carrying three lines each, would be replaced with new twin sets of mono-pole towers that will be anywhere from 120 feet tall to 160 feet tall, each pole carrying six lines for a total of twelve lines, as compared to the current total of six lines.

**Question 3:** How will the intensified use of the power line easement affect your planned development?

**Answer:** We specifically designed the River Run Ranch development with special features to offset the impact of the existing power lines. Specifically, we made provisions in the design that ensured that only seven of the planned 525 homes west of the Edison right of way are closer than 140 feet from the nearest power line. As is shown on the attached Exhibit A, we were careful to ensure that a great majority of the streets, public open space and other similar amenities were included in this 140 foot buffer. We designed the development to include this buffer because we were concerned about the desirability of homes situated any closer than 140 feet from the power lines. In particular, home buyers will be concerned about the possible electro-magnetic field effects of living close to the lines as well as having to listen to the constant buzzing noise that the lines emit and the crackling sound that comes off of the lines after it has rained.



If we had known that Edison was going to propose a transmission line project with pole structures between 120 and 160 feet tall, we would have designed an even wider buffer area, in the range of between 200 and 275 feet, instead of 140 feet.

If the height of the towers and the number of the lines on the towers are both doubled, it is my opinion that the negative influence on potential buyers for homes in the immediate vicinity is more than doubled.

**Question 4:** Doesn't raising the height of the pole structures actually provide a benefit to your development?

**Answer:** As I understand it, even though the replacement poles will be taller under the proposed project and the alternative routes, the lowest level of lines will still be approximately 60 feet above ground level, about the same height as the current lines. Also, the future lines will feature three vertical rows of lines, instead of just one. This means that there will be an increased visual impact, with little or no offsetting benefit. Although I have heard that the new pole set up will provide some level of improvement in electro-magnetic fields exposure, in my experience, people do not bother to learn the latest science on electro-magnetic field: if they can see the power lines, they will have a negative reaction, and there is no doubt that more people will see the planned 160-foot towers than currently see the existing 60-foot towers.

In my experience, any home that has an obvious view of major transmission lines is more difficult to sell, and it will sell for approximately \$20,000 to \$30,000 less than other homes in the same subdivision that do not have the same view of these lines. With the greater height, the transmission lines will now be visible from further away; however, it is too late for us to redesign our development to reduce the effect of the proposed project on the sales price of homes in the development. It is my opinion that approximately 30 to 35 homes in our subdivision will now experience a negative sales impact, with a corresponding total reduction in value of approximately \$600,000 to \$1,000,000, as a result of raising the height of the pole structures consistent with the project design. And that is only with regard to our currently



approved, but not yet built, subdivision. I have not attempted to calculate the negative impact to the value of the land to the east of the power lines that we are holding for future development .

Even if we were able to redesign the development to provide a larger set back from the transmission line right of way, that would translate into a much smaller return on our investment because we purchased the land anticipating the current setback, not a larger set back. If we had known of the proposed Edison project at the time we initially purchased the property, we would have factored this lost land into the purchase price. As a ballpark estimate, the value of the land that we will not be able to develop as a result of the project as currently proposed, (approximately 8 acres, based on an additional 150 feet from west to east and 2,300 feet from north to south) is approximately \$650,000 in current values (based on a conservative estimate of \$80,000 per acre).

**Question 5:** Are there features that could be incorporated into the project that you believe would offset the economic and social effects of the project on your development that you have described and that would provide important community benefits?

**Answer:** We obviously have taken steps in terms of designing the development on our own land, including providing a buffer area, to address the effects of the existing transmission lines. Ideally, in addition there are public uses and amenities that could be added in this area to address the additional effects of the proposed project that I have described above. We have attempted to show one concept for such public uses in the potential trail alignment that can be seen on the attached Exhibit A. Amenities within the trail corridor underlying the transmission lines would include publicly supported landscaping, including trees to help offset the vertical visual effect of the poles, and walking and biking trails or horse paths.

Attached as Exhibit B are a series of photos of the desired type of conjunctive use that would provide concrete benefits to the community and would offset the significant economic effect that the new transmission lines will have on the River Run Ranch development. These are photos of a Pacific Gas and Electric utility alignment in San Jose, California showing the before and after utility line corridor. These photos, obtained from the National Trails Training Partnership website, are available on line at



<http://www.sjpark.org/Trails/SilverCrLower/SilverCrLowerPhotos.htm>. We have not been successful in getting such amenities established in our own buffer zones, primarily because we cannot get the necessary approval for these uses on the land under the lines. However, as the attached Planning West Magazine article from July-August 2008 - "Developing Near Transmission Lines" - shows, amenities such as landscaping provide one of the most effective methods to diffuse the effects of power lines and, as a result, contribute to an attractive community that serves to enhance neighborhood appeal and residential property values. (See Exhibit C attached hereto).

I also believe such a multi-use public open space area would help offset the impact of the project on the community at large, as well as to future planned development on the areas to the east of the City. Incorporating into the power line expansion project a conversion of the vacant land under the towers into a community amenity has the potential, in my opinion, to turn a negative influence on this neighborhood into a positive amenity that would be put to great use by a number of community groups and events.





**Extra Low Frequency  
Power Lines!**

Property Devaluation Near Power Lines (Beuler)

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Posted:  
11 January 2000

----- Forwarded message -----

Date: Mon, 10 Jan 2000 17:50:31 -0000  
From: John Bueler <buelnerds@earthlink.net>  
To: Roy Beavers <rbeavers@llion.org>  
Subject: Fw: houston appraiser and transmission lines

Mr. Beavers I found the article I was looking for. So many people quote this article but this is the first time I have actually read the article. Please make this available for all you readers if you think it will be of help to them. Thank you for your suggestions of how to find it....

The following article has been sent by a user at CALIFORNIA STATE UNIVERSITY via ProQuest, a Bell & Howell information service.

Power lines short-circuit sales, homeowners claim Wall Street Journal

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From The *Wall Street Journal*  
Print Media Edition: Eastern edition  
New York  
Dec 8, 1993

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Authors: Freedman, Alix M

Pagination: PAGE B1

ISSN: 00999660

Subject Terms: Real estate  
Litigation  
Electromagnetism  
Electric power



## Abstract:

After two decades of debate over the safety of the electromagnetic field, or EMFs, produced by electric power lines, courts in California, Florida and New York are now recognizing lawsuits against power companies that bypass medical issues and focus on the economic impact of home buyers' fears.  
Copyright Dow Jones & Company Inc Dec 8, 1993

## Full Text:

The legal battles over the purported hazards of high-voltage power lines have shifted from health to real estate.

The new breed of plaintiffs are people like Jean and Martin Covalt, owners of a spacious villa in San Clemente, Calif., with avocado orchards, saunas -- and a power line running through their backyard.

Soon after the Covalts bought the house in 1989, San Diego Gas & Electric Co. workers added eight more wires to the line and cranked up the current. The fall-out: Near the family swimming pool, the electromagnetic fields, or EMFs, produced by that current rose to about 10 times the level that some people deem safe. The EMF readings were also extremely high in the bedroom of the Covalts' two infants.

Last year, after an epidemiologist dispatched by SDG&E failed to allay their fears, the frantic couple put their house up for sale. It didn't draw a single offer, even after its price was cut in half to \$750,000. Convinced the house is unsellable, the Covalts have stopped making their \$6,000-a-month mortgage payments and are wondering when their bank will foreclose.

Just before Thanksgiving, the Covalts delivered a jolt of their own: they joined with 22 neighbors in a class-action lawsuit against SDG&E. "We sank every dime into this house because we thought we would live here for 20 years," Ms. Covalt says. "The utility has basically ruined our lives and destroyed us."

Significantly, the lawsuit doesn't allege that anyone's health has been damaged by proximity to the power lines. Instead, these plaintiffs in tony San Clemente -- along with an increasing number of angry homeowners nationwide -- are saying that they should be compensated because the value of their property has fallen due to a perceived health risk.

Not surprisingly, SDG&E officials take a different view. "This is a group of well-to-do homeowners who purchased their home at the peak of the California real-estate market. . .and appear to be looking for a deep pocket to mitigate their loss in wealth," says Greg Barnes, an SDG&E lawyer.

For two decades, scientific debate has raged: How dangerous are the EMFs that emanate from every wire through which a current runs? Although the risks are believed to be low, some scientists have found an association between childhood cancer and power lines and similar risks among occupationally exposed workers.

A year ago, researchers from Sweden's prestigious Karolinska Institute reported finding up to a fourfold higher leukemia rate among Swedish children living near power lines. A companion study released at the same time by the National Institute of Occupational Health, also in Sweden, showed that male workers exposed to approximately the same levels of EMF had three times the rate of a certain kind of leukemia.

Still, certain other studies of workers have found no unusual cancer levels and health problems among exposed workers. And, no one has figured out how EMFs may cause cancer and how much exposure



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might be perilous. The utility industry, which is now spending more than \$15 million a year to fund EMF studies, says the evidence is inconclusive.

Until now, plaintiffs charging that power lines caused their cancer have had scant success. But continuing scientific controversy and rising public awareness have produced plaintiffs like the Covalts. The biggest energizer: Courts in states including California, Florida and New York now allow lawsuits that bypass the medical issues to focus solely on the economic impact of home buyers' fears.

Last month, in a landmark case brought against the Power Authority of the State of New York, the state's Court of Appeals ruled that landowners whose property is seized by utilities for new construction can seek damages when "cancerphobia" lowers the value of the rest of their property. The judge said that property owners must present "credible, tangible evidence" of that fear. Plaintiffs' lawyers contend the ruling also applies to homeowners whose land hasn't actually been seized by a utility, but who live near new or existing lines.

Although their claims are largely untested, plaintiffs' new liberty to skip the science has utilities braced for more suits and more payouts. "Property devaluation cases are going to be a major source of litigation against utilities," says Michael Withey, a Seattle lawyer who is leading the nascent EMF bar's crusade. "They are cheaper to bring than personal-injury cases because you don't have to conduct mini-trials on the science."

Utility officials insist that EMFs pose no threat either to health or real estate values, but some are jittery about the sheer numbers of potential litigants. To date, transmission lines, which are highly visible and carry power cross-country at high voltage, have grabbed the headlines. Still the less imposing distribution lines that run through America's neighborhoods are far more ubiquitous and closer to homes. And these too can generate high levels of EMF.

"The potential impact of these suits may be greater because it's a lot easier to find someone who merely lives near a power line than someone with substantial EMF exposure who has died of cancer," says Mark Warnquist, a lawyer who represents the utility industry.

In Pleasantville, N.Y., Howard Reiss blames a Consolidated Edison Co. power line 75 feet from his house for driving him from his intended retirement home. Fearful for his health, he put his house up for sale in April and stopped counting after 89 prospective buyers trooped through his house (first priced at \$400,000 and now at \$275,000) without a single offer.

In Guilford, Conn., Kevin Brunelle accuses Connecticut Light & Power Co. of wreaking havoc on his marriage and his dream home, a two-family house located in the shadows of the utility's substation. In 1991, after his street gained media notoriety for what residents characterized as an unusually high incidence of EMF-related cancer, his tenants moved out. And when one of his sons developed a tumor in his leg, his wife and children decamped, too. Unable to handle his mounting debts, Mr. Brunelle put his house, appraised at \$140,000 in 1986, on the market for \$118,000. Eventually, his bank foreclosed; the house was sold last month after being listed at \$69,900.

Derek Benham, a new homeowner in Oakland, Calif., says when a realtor recently tried to show him a house a stone's throw away from a transmission line, he and his wife "just turned around and split." David Bolton, a Houston appraiser, did a study several months ago showing that 100 properties bordering a transmission line sold for 13% to 30% less than 100 comparable properties away from the line, but in the same neighborhood.

The utility industry tells a different story. Kansas City Power & Light Co. is just the latest to release a



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study concluding that power lines have no impact on property prices. Utility officials argue that the economy, not fear of EMFs, is the prime culprit behind sluggish real-estate sales. And while many utilities are trying to reroute or reconfigure wiring on new lines to reduce EMF levels, they say the expense of rejiggering existing lines makes no sense since EMFs are an unproven hazard.

But some homeowners say such obduracy has made court their last resort.

At a town meeting with Con Edison Co. this past summer, Pleasantville residents entreated the utility to bury the line. But officials cited a \$10 million-per-mile figure, offering only to study the matter further. Now some irate residents have put out legal feelers. "They've pushed us to the point where we have no other alternatives," says Mr. Reiss. A Con Edison spokesman replies that the utility's concern is not the money but the absence of information about what levels of EMF may be unsafe.

Similarly, Dr. Mark McCartin, who brought the class action against SDG&E last November, says that he and his neighbors are fighting for the health of their kids and "would get out of their hair forever" if the utility would simply move its line to an unpopulated area.

But Mr. Barnes, SDG&E's lawyer, estimates that moving the three-mile line in question would cost a prohibitive \$1.8 million. The plaintiffs, he adds, turned down SDG&E's offer to reconfigure the line to cancel out some of the magnetic fields. That would have reduced EMF levels by up to 70% for a mere \$76,000.

It isn't clear if line-linked property claims will turn into the next asbestos litigation. Since EMFs are so omnipresent -- flowing from cellular phones, hairdryers and VDTs -- plaintiffs' lawyers suspect jurors will require land owners to offer powerful proof that EMFs truly were the cause of declining property values.

And things might prove tricky even for homeowners armed with reams of market data. Recently, for example, Dorothy English was forced to take a \$70,000 loss on her Feasterville, Pa., house, located just 100 feet from Philadelphia Electric Co.'s power line. Ms. English, who wants to sue the utility, claims the property registered dangerous levels of EMF. But Deborah Taylor, the new buyer, says the line never fazed her.

Why was the house such a bargain? "It didn't show very well because they had three dogs and 10 cats and the litter boxes on the wall-to-wall carpets could make you gag," Ms. Taylor says.

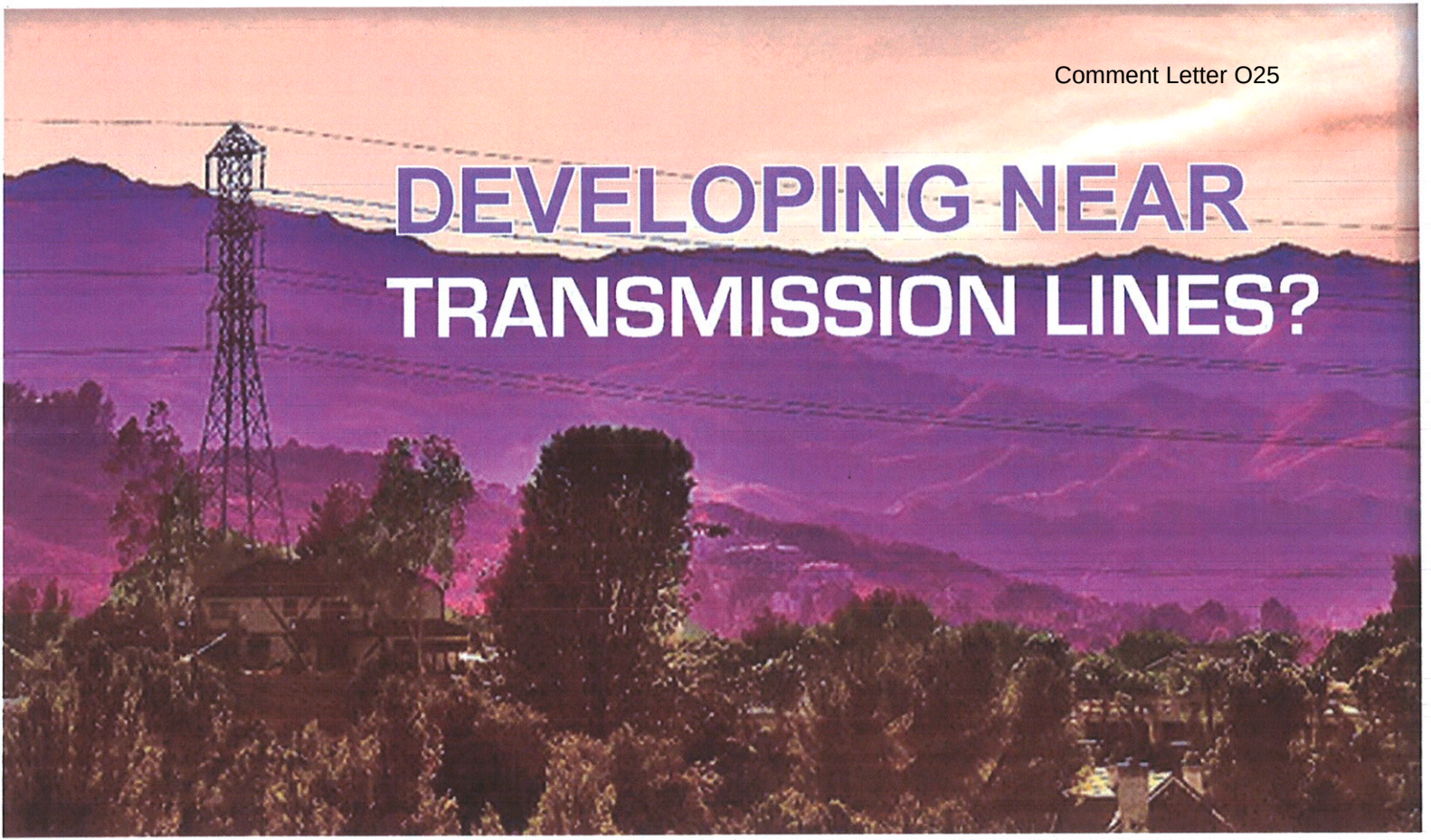
Credit: Staff Reporter of The Wall Street Journal

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# DEVELOPING NEAR TRANSMISSION LINES?

**A little planning can go a long way in  
minimizing their impact.**

**BY GARY HOLISKO, MCIP**

Lands under power lines and transmission towers, though primarily owned by private landowners, are subject to specific rights contained in the statutory right of way agreements referred to as rights of way. The agreements restrict owners' rights to activities that do not impact public safety, interfere with the operation of the lines, cause a hazard, or interfere with the rights granted. They also generally allow for the construction and maintenance of the existing facilities, including tree cutting and their replacement with future lines.

BC Transmission Corporation (BCTC) is a Canadian company established in 2003 as a provincial Crown corporation to focus on building and maintaining a safe, reliable and cost-effective power grid. BCTC recently published guidelines for development adjacent to its transmission corridors. The guidelines will assist landowners, designers, planners, developers and communities who are working within or beside power lines and transmission towers to minimize their impact and promote a quality environment.

BCTC was formerly the transmission group within BC Hydro, another provincial Crown corporation which continues to be responsible for generation and distribution services in much of BC. While BC Hydro retains ownership of the physical assets and the legal tenure for the rights of way, BCTC is responsible for operating, planning and maintaining the province's publicly owned high-voltage electric transmission grid. Transmission voltage power is delivered through

an interconnected system of more than 18,000 kilometers of transmission lines to substations which in turn step down the voltage for distribution. BCTC manages 20,500 steel towers, 75,000 wood poles, and 287 substations.

## **Designing Around Power Lines: Draft Guidelines**

Landowners and developers often see proximity to power lines and rights of way as a factor that may affect property values. However, with effective planning and design, transmission corridors can provide benefits to landowners and create better, more aesthetically pleasing communities. A right of way on private property can create opportunities for individual property owners to enjoy larger lot sizes with the potential for large gardens and outdoor spaces, while the use of public right of way corridors for public amenities such as walking trails, playing fields and bicycle paths contributes to attractive communities which in turn serves to enhance neighborhood appeal and residential property values.

## **The Design Elements**

It is important to create a harmony between density, alignment, orientation and landscaping, in order to create an aesthetically appealing community.



## Topography

The location of towers can have an enormous impact on public perception. When towers are set in an elevated position and are viewed from lower ground, the scale and visual impact of the towers is emphasized. Conversely, where towers are viewed from an elevated position the visual impact is reduced. Towers set across the brow of a hill will be silhouetted against the sky and will appear more prominent than towers set in a similarly elevated position but with rising land or built development behind them.

## Density

The density of property surrounding the tower can also affect its visual impact and perception in the community. By placing buildings with higher heights closest to the overhead power line, views of the line from public areas can be minimized. Higher densities close to power lines, particularly in residential areas with lower heights, can typically have a negative perception.

## Alignment and Orientation

The alignment of streets and paths can reduce the number of direct views of towers, minimizing their impact and reducing the impression of a linear corridor.

Buildings should be oriented to minimize direct views of towers. Some developments may face towards the overhead power lines, rather than towers, as part of a variety of design responses to the transmission route. Development blocks adjacent to overhead power lines can also be left open ended, using the resultant space to create public gardens, squares or parking courts. The use of buildings oriented perpendicular to the lines, offers the opportunity to minimize direct views towards the route, significantly reducing the visual impact from streets, buildings and gardens. This orientation is best suited for high and medium density developments usually in the form of high rise condominiums, apartments and town homes.

The orientation of homes parallel to the right of way does little to minimize the visual impact of the lines from inside the homes. One solution is to locate cul-de-sacs on the edges of the right of way and between towers. Curving streets and paths, even by relatively small degrees, can significantly reduce the visual impact of towers. Views toward towers may occur at some distance from the tower, and can also be framed by new street scenes and public open spaces at some distance from the towers, particularly where there may be changes in topography.

The arrangement of buildings, boundaries, fences, paths and planting parallel to the transmission route over long distances will tend to highlight the presence of overhead power lines and the linear nature



Typical residential development backing onto two 230 kV H-frame lines in Delta, BC.



# "Landscaping provides one of the most effective methods to diffuse the effects of power lines"

of the route and will make them more obtrusive. However, where one or more of these elements is varied (and not parallel), the linearity of the transmission route and its overall prominence can be diminished.

## Distance

Varying the distance of development from transmission facilities is an important design tool. Buildings are not permitted within the right of way. Auxiliary buildings should be kept, as a minimum, at the edge of the right of way or set back to allow uses not otherwise permitted to take place within the right of way (e.g. in-ground swimming pools, greenhouses, garages, etc). In commercial and multi-residential settings, the area of the lot within the right of way can be used for parking and other amenities.

## Landscaping and Screening

Landscaping provides one of the most effective methods to diffuse the effects of power lines and use the space within and adjacent to the right of way in a manner which is aesthetically pleasing and an amenity to homeowners. Screening can enhance the quality and intimacy of the immediate setting by creating the perception that towers have receded into the distance. The effectiveness of any screening depends on the distance of the viewer from the overhead power line and from the screening.

Within the right of way, trees and shrubs generally cannot exceed three meters in height at maturity. Appropriately low growing vegetation can be located within the right of way, while larger species can be planted near the edge, thereby reducing the visual impact of the lines and enhancing the overall environment.

Outside of the right of way, strategic screening can enhance the quality and intimacy of the area, giving the impression that towers and lines are further away. Mature trees planted along streets can effectively screen views and enhance the residential environment. Layers of planting create a series of silhouettes into the distance, creating a depth in the field of vision that helps to reduce the visual impact of overhead power lines. In this way, views of towers can be effectively screened without the need for continuous belts of planting. When branches of mature trees actually arch over the street, then views of towers can be obscured for much of the year. Consideration should be given to the use of screening in layers with varying heights to match site circumstances.

## Community Amenities within the Right of Way

Most public amenity uses are on municipal lands. While use of the right of way has some restrictions, the presence of long corridors of clear, open, space provides the opportunity to develop significant private and community amenities. Consent of the owner and the local government as well as BCTC will be required for any public use of a right of way.

In order to best use this space, it is worth considering design ideas, such as:

- Breaking the transmission route into cells using roads, bridges, etc.
- Creating places with a variety of uses such as garden squares and parking lots
- Creating meandering paths and varied planting
- Providing a mix of activities beneath and adjacent to overhead power lines

## Compatibility

The following are examples of compatible uses within the right of way, subject to maintaining safety clearances.

**Public Open Space and Playing Fields** - active recreational uses may take place close to overhead lines subject to the nature of the activity, layout of playing fields and the level of supervision. The location and type of lighting used for playing fields within rights of way need to be reviewed by BCTC where high voltage overhead lines are present.



**Nature and Conservation** - the retention or creation of nature conservation areas may be particularly suitable where public access to the area is restricted or prevented.

**Circulation Paths** - active recreation paths, roads, cycle paths and walkways can be successfully accommodated beneath high voltage overhead lines.

**Allotments and Community Orchards** - using rights of way for allotments and community orchards

**Parking** - accommodating ancillary parking beneath high voltage overhead lines.

**Private Gardens** - using rights of way for gardens and planting.

### Power Line Safety and Maintenance

Contact, or near contact, with high voltage equipment is extremely dangerous and must be avoided. Objects that approach overhead electricity conductors too closely can cause fatal or severe shocks and burns. In order to prevent such incidents, minimum safety clearances for all overhead power lines are prescribed, which must be maintained between conductors and the ground, trees, buildings and any other structures, such as street lighting.

Care must be taken in unloading, stacking or moving material underneath conductors and in the construction of buildings or other structures in the vicinity of an overhead power line. Generally, buildings located outside of the right of way are safe from any of these concerns.

Emergency access to large buildings that are being constructed adjacent to transmission rights of way also must be considered. For example, the crew on a fire truck attempting to extinguish a fire in a multi-story development at the edge of a right of way must have adequate clearance from the transmission lines.

### 1. Induced Currents

Induction is the transfer of electric current or charge to an object that is not directly in contact with power lines. Induction can be an issue with buildings that are more than two stories, or long buildings that are parallel and located adjacent to high voltage (generally 230 kV and higher) lines and rights of way. As the height of a building increases, it comes into closer proximity to the high voltage wires with greater exposure to induced currents. While there is no direct public safety risk, it does significantly increase nuisance or micro-shocks. Developers should retain a professional consultant with expertise in calculating electric and magnetic fields, mitigation strategies and safety issues during construction and after occupancy if they plan to build in close proximity to high voltage transmission lines.



Playing fields and tennis courts underneath 230kV and 500 kV lines in Coquitlam, BC.





Townhouse development built on angle to 500 kV lines with trees screening right of way in Surrey, BC.

## 2. Electric and Magnetic Fields (EMF)

Power frequency (also referred to as extremely low frequency or ELF) electric and magnetic fields are present everywhere that electricity flows. All electric wires, and the lighting, appliances and other electrical devices they supply, are sources of electric and magnetic fields. Scientists have been researching EMF and possible health effects for more than 30 years, and this extensive research has yet to establish a link between health risks and EMF. Health Canada and the BC Centre for Disease Control state that there is no reason to be concerned about exposure levels in typical Canadian homes and workplaces, regardless of the proximity to power lines.

## 3. Changes to Ground Level

Changes to the ground level are not permitted without approval, as there must be a minimum distance between the lowest point of the transmission line and the ground. When ambient temperature is high and transmission lines are operating at maximum capacity, the lines will sag.

## Conclusion

Transmission towers and lines are a necessary part of the infrastructure that enables us to provide electricity to our homes and businesses. Many transmission lines built in what were formerly rural areas are now being "encroached" upon by development. Hopefully this article, and the guide it is based upon, will provide some helpful guidelines on how to best consider transmission lines when developing lands within and nearby. By doing so, the owner, developer and community will all benefit. ★

These guidelines were approved and placed on the BCTC website in April of this year. Visit them at: [www.bctc.com/the\\_transmission\\_system/rights\\_of\\_way\\_prop\\_rights/](http://www.bctc.com/the_transmission_system/rights_of_way_prop_rights/)

*This is an updated version of the article that was published in Planning West magazine, September 2007 edition. Reprinted with permission, Planning Institute of British Columbia and BC Society of Landscape Architects.*



# Typical Sound Levels

