# **APPENDIX F**

Aesthetics Resources Supporting Information

### APPENDIX F: TECHNICAL KEY OBSERVATION POINT ANALYSIS

Appendix F provides supplemental information for the Aesthetics impact assessment approach described in Section 4.1 of the Subsequent Environmental Impact Report (EIR) for the Riverside Transmission Reliability Project. The CPUC has not developed its own method for assessing visual character and quality under CEQA. The visual impact assessment follows the CEQA Guidelines and supplements the CEQA Guidelines with guidelines provided in *Visual Impact Assessment for Highway Projects*, which uses a numeric evaluation approach to assess the degree of impact (FHWA 1988). Supplemental information provided in Appendix F includes a detailed description of the analysis methodology and key observation point (KOP) visual impact rating sheets.

#### **METHODOLOGY**

The purpose of the analysis is to address the following three primary questions:

- What are the visual qualities of the characteristic landscape in the project area?
- What are the potential effects of the project on the area's visual quality and aesthetics?
- Who would see the project, and what is their likely level of concern about how the project visually fits within the existing characteristic landscape?

The CPUC evaluated 20 candidate KOPs around the revised project and selected eight KOPs that best represented views for detailed analysis that would be typically experienced by residents and visitors in the project area. These KOPS were used to simulate what the constructed revised project and alternatives would look like. KOPs selected for analysis were based on the following criteria:

- Open view to the proposed alignment
- Open view to alternative alignments to be considered in the Subsequent EIR
- Opportunities to compare the proposed transmission line related to existing and planned land uses
- Likely open view opportunities of residents who may see the proposed alignment or alternatives from public streets or recreation areas
- Locations and users that would be most sensitive to changes in visual conditions

Views of existing conditions and visual simulations for the proposed alignment and alternatives, as appropriate, from each KOP were evaluated quantitatively with a numerical rating system to analyze the revised project's impact on visual quality.

KOP analysis involved evaluating each KOP by following the steps presented below and assigning numerical values for visual characteristics. Visual characteristic values were prepared

and documented in the KOP impact rating sheets presented in the following section. The evaluation involved the following steps:

- 1. **Viewer Response.** Analyze, describe, and define numerical ratings for viewer response using the following criteria:
  - a. Viewer Sensitivity. The extent to which the viewing public would notice or experience a substantial change in visual quality. Viewer sensitivity is based on several factors that can differ in level of importance from one viewer to another. Because this sensitivity is important to understand, the proposed project was evaluated to consider the visual experience of many different viewers.
  - b. **Viewer Exposure.** Typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, the viewing distance to the resource change (foreground, middleground, or background), the duration of their view, the speed at which the viewer moves, and the position of the viewer. The foreground is defined as the zone within 0.25 mile to 0.5 mile of the viewer; the middleground is defined as the zone that extends from the foreground to a maximum of 3 to 5 miles of the viewer; and the background zone extends from the middleground to infinity.
- 2. **Existing Visual Quality.** Use the baseline photographs to analyze, describe, and assign numerical ratings for existing visual quality using three criteria:
  - a. **Vividness.** The visual power or memorability of landscape components as they combine in distinctive visual patterns.
  - b. **Intactness.** The memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern.
  - c. **Unity.** The degree to which the visual resources of the landscape join to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony or inter-compatibility between landscape elements.
- 3. **Proposed Visual Quality.** Prepare photo-simulations of the proposed project. Analyze the photo-simulation and assign numerical ratings for the Proposed Project's visual quality using vividness, intactness, and unity.
- 4. **Visual Quality Change.** Calculate visual change as the difference between existing visual quality and visual quality with presence of the proposed project (numerical assessment). Assess resulting visual quality before and after mitigation, if necessary.

The numerical rating scale presented in Table F-1 was used to determine visual quality and viewer response.

Table F-1 Visual Quality and Viewer Response Rating Scale

Numeric Value	Description
0 = None	No or very low degree of visual change to the existing visual resource.
1 = Low	Minor adverse change to existing visual quality, with low viewer response to change in the visual environment. Impacts would be less than significant.
2 = Moderate	Moderate adverse change to existing visual quality with moderate viewer response. Impact can be reduced within 5 years using conventional visual resource mitigation measures of facilities including landscaping.
3 = Moderately High	Moderate adverse change to existing visual quality with high viewer response; or high adverse visual resource change with moderate viewer response. Conventional visual resource mitigation measures of facilities, including landscape treatment practices, will generally reduce impacts.
4 = High	A high level of adverse change to the visual quality, or a high level of viewer response to visual change, such that architectural design and landscape treatment cannot reduce the impacts to below a significant level. Viewer response level is high. An alternative project design or location may be required to avoid highly adverse impacts.

The ratings for viewer response and change in visual quality were multiplied together to produce an overall score (refer to KOP impact rating sheets below for detailed calculations at each KOP). For example:

Visual Quality Change (VQC)	-3.0
Viewer Response (VR)	3.5
Visual Impact (VQC × VR)	-10.5 (Moderately High)

The composite visual impact score reflects both the degree of visual quality change resulting from the proposed project and the viewer response to the change. The interrelationship of these two factors in determining whether visual impacts would be significant is shown in Table F-2. Overall visual impact scores of moderately high and high are considered significant under CEQA and require mitigation. The scoring relationship between overall visual change or impact and potential need for mitigation is provided in Table F-3.

Table F-2 Guidelines for Determining Significance of Visual Impact

	Overall Visual Change					
Overall Viewer Sensitivity	Low (0 to <1)	Low to Moderate (1 to <2)	Moderate (2 to <3)	Moderate to High (3 to <4)	High (4)	
Low (0 to <1)	Not Significant	Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	
Low to Moderate (1 to <2)	Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	
Moderate (2 to <3)	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	
Moderate to High (3 to <4)	Adverse, but Not Significant	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant	
High (4)	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant	Significant	

No impact visual changes are not perceptible.

**Not Significant** impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

Adverse but Not Significant impacts are perceived as negative but do not exceed environmental thresholds.

**Adverse and Potentially Significant** impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.

**Significant** impacts with feasible mitigation may be reduced to less-than-significant levels or avoided all together. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

Table F-3 Visual Impact Scoring Scale

Cumulative Score Range	Impact Description
0	No visual impact. No mitigation is required.
-1 to -4	Low/less-than-significant level of visual impact. No mitigation is required.
-4 to -9	Moderate level of visual impact. Mitigation may be required depending on the level of viewer response to reduce the impact to a less-than-significant level.
-9 to -13	Moderately high level of visual impact. Mitigation would reduce the impact to a less-than-significant level.
-13 or below	<b>High level of visual impact</b> . The project may require design changes along with mitigation measures to reduce the impact.

#### **SELECTION OF KEY OBSERVATION POINTS**

Table F-4 summarizes 20 KOPs that were considered for detailed analysis and preparation of simulations of the revised project and alternatives for this Subsequent EIR. KOPs that were evaluated for impacts to visual quality are assigned numbers 1 through 8. KOPs that were

considered but not evaluated and	d the general reasoning	for not being carrie	d forward are
provided.			

Table F-4 Summary of KOPs Evaluated

KOP #	KOP Name	Landscape Character Unit (LCU)	Distance Zone from Project Feature	Viewer Sensitivity	KOP Selection Considerations?
1	Cantu Galleano Ranch Road: looking west to intersection with Wineville Avenue	Industrial	Foreground	Low to Moderate	Selected
	Wineville Avenue: looking north to intersection with Cantu Galleano Ranch Road	Industrial	Foreground	Low to Moderate	Rejected: This KOP does not fully capture Cantu-Galleano Ranch Road "gateway" character; project elements partially blocked from view by vegetation
	Wineville Avenue: looking west and north from northeast side of intersection with Landon Drive/Rosebud Lane	Industrial	Foreground	Low to Moderate	Rejected: Close proximity to the intersection allows for only partial view of the lower portions of foreground project elements; KOPs #2 and KOP #3 better capture entire project and provide better comparisons with nearby land uses
2	Wineville Avenue: looking north from near shared-use path approximately 600 feet south of intersection with Landon Drive/Rosebud Lane	High Density Residential	Foreground	High	Selected
3	Rosebud Lane: looking west from intersection with Horse Chestnut Street	High Density Residential	Foreground	High	Selected
	Interstate 15: looking southeast traveling south approximately 1,000 feet south of Canto Galleano-Ranch Road overcrossing	Interstate 15 / Industrial	Foreground / Middleground	Low to Moderate	Rejected: User sensitivity low to moderate
	Interstate 15: looking southeast traveling south approximately 1,000 feet south of Bellegrave Avenue overcrossing	Interstate 15 / Open Space Agriculture	Foreground / Middleground	Low to Moderate	Rejected: User sensitivity low to moderate

KOP #	KOP Name	Landscape Character Unit (LCU)	Distance Zone from Project Feature	Viewer Sensitivity	KOP Selection Considerations?
	Interstate 15: looking southeast traveling south, approximately 2,000 feet north of Limonite Avenue overcrossing	Interstate 15 / Open Space Agriculture	Foreground / Middleground	Low to Moderate	Rejected: KOP #5 captures the Limonite Avenue "gateway" character and provides a better comparison with nearby land uses; user sensitivity low to moderate
	Interstate 15: looking northeast traveling north approximately 700 feet south of Limonite Avenue overcrossing	Interstate 15	Foreground / Middleground	Low to Moderate	Rejected: KOP #5 captures the Limonite Avenue "gateway" character and provides a better comparison with nearby land uses; user sensitivity low to moderate
	Interstate 15: looking northeast traveling north approximately 750 feet north of Limonite Avenue overcrossing	Interstate 15 / Open Space Agriculture	Foreground/ Middleground	Low to Moderate	Rejected: KOP #5 captures the Limonite Avenue "gateway" character and provides a better comparison with nearby land uses; user sensitivity low to moderate
4	Vernola Park: looking southwest from southwest corner of perimeter pedestrian trail	Open Space Developed Park / Open Space Agriculture	Foreground / Middleground	High	Selected
	Vernola Park: looking north from northwest corner of perimeter pedestrian trail	Open Space Developed Park / Open Space Agriculture	Foreground	High	Rejected: Other KOPs provide a better comparison of revised project elements with existing and planned land uses; views partially blocked by perimeter park fencing
	Vernola Park: looking northwest from home plate of central baseball diamond	Open Space Developed Park	Not visible	High	Rejected: The revised project elements are visually blocked by topography and vegetation

KOP #	KOP Name	Landscape Character Unit (LCU)	Distance Zone from Project Feature	Viewer Sensitivity	KOP Selection Considerations?
	Pats Ranch Road: looking west from pedestrian connection with Kestral Court	High Density Residential / Open Space Agriculture	Foreground / view partially blocked	Moderate to High	Rejected: The revised project elements are partially blocked by topography. Other KOPs show the same revised project elements from locations with greater visibility and higher viewer exposure
	Pats Ranch Road: looking west (SCE simulation location) from pedestrian connection with Peregrine Drive	High Density Residential / Open Space Agriculture	Foreground	Moderate to High	Rejected: Selected KOPs 5 and 6 capture more of the revised project elements in one view for comparison of the aesthetic impacts of revised project and Alternative 3
5	Limonite Avenue: looking north from I-15 northbound on-ramp	Commercial / Open Space Agriculture	Foreground	Moderate	Selected
6	Limonite Avenue at Pats Ranch Road: looking west from pedestrian island of Limonite Avenue	Commercial / Open Space Agriculture	Foreground	Moderate	Selected
	Limonite Avenue at Pats Ranch Road: looking northwest from bus stop	Commercial / Open Space Agriculture	Foreground	Moderate	Rejected – The revised project elements are partially obstructed by existing traffic lights, utility infrastructure, and street signage
7	Goose Creek Golf Club: looking southeast from cart path west of driving range	Open Space Developed Park	Foreground	High	Selected
8	Norco riding and hiking trail: looking northwest	Open Space Santa Ana River	Foreground / Middleground	High	Selected

Figure F-1 KOP Locations



Sources: 2M Associates

#### **KOP IMPACT RATING SHEETS**

KOP impact rating sheets were used to assess the visual change during operation of the revised project compared to the existing visual quality for each KOP selected for visual simulation. Rating sheets for each KOP are provided below.

KOP impact rating sheets were also prepared to assess the visual change during operation of the alternatives considered in the Subsequent EIR. KOP rating sheets are also included for alternatives below.

KOP #1: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value				
Visual Quality (VQ)	Existing	Proposed	Proposed with Mitigation		
Vividness	3.0	3.0	N/A		
Intactness	2.0	1.0	N/A		
Unity	1.0	0.0	N/A		
VQ Total	5.0	4.0	N/A		
<b>VQ Change</b> (Proposed VQ - Existing VQ)	-1.0		N/A		
Viewer Response (VR)					
Viewer Sensitivity (S)	2	.0			
Viewer Exposure (E)	2	.0			
Average VR ([S + E] / 2)	2	.0			
Visual Impact					
VQ Change	-1	1.0	N/A		
Average VR	2.0		N/A		
<b>Visual Impact</b> (VQ Change x Average VR)	-2.0 (LOW IMPACT)		N/A		

KOP #1: Visual Impact Rating Sheet - Alternatives 1, 2, 4

Parameter	Numerical Rating Value			
Visual Quality (VQ)	Existing	Alternatives 1, 2, 4		
Vividness	3.0	4.0		
Intactness	2.0	1.0		
Unity	1.0	1.0		
VQ Total	5.0	6.0		
VQ Change (Proposed VQ - Existing VQ)		-1.0		
Viewer Response (VR)				
Viewer Sensitivity (S)		2.0		
Viewer Exposure (E)	2.0			
Average VR ([S + E] / 2)		2.0		
Visual Impact				
VQ Change		-1.0		
Average VR		2.0		
Visual Impact (VQ Change x Average VR)	-2.0 (L0	OW IMPACT)		

KOP #2: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical I	Rating Value	
Visual Quality (VQ)	Existing	Proposed	
Vividness	2.0	3.0	
Intactness	2.0	1.0	
Unity	2.0	1.0	
VQ Total	6.0	4.0	
VQ Change (Proposed VQ - Existing VQ)	-2.0		
Viewer Response (VR)			
Viewer Sensitivity (S)	3	3.0	
Viewer Exposure (E)	3.0		
Average VR ([S + E] / 2)	3.0		
Visual Impact			
VQ Change	-2	2.0	
Average VR	3	3.0	
Visual Impact (VQ Change x Average VR)	-6.0 (MODERATE IMPACT)		

KOP #3: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	2.0	3.0
Intactness	3.0	1.0
Unity	3.0	1.0
VQ Total	8.0	4.0
VQ Change (Proposed VQ - Existing VQ)	-4.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	4.0	
Viewer Exposure (E)	4.0	
Average VR ([S + E] / 2)	4.0	
Visual Impact		
VQ Change	-4.0	
Average VR	4.0	
Visual Impact (VQ Change x Average VR)	-16.0 (HIC	ЭН ІМРАСТ)

KOP #3: Visual Impact Rating Sheet - Alternative 4

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Alternative 4
Vividness	2.0	2.0
Intactness	3.0	2.5
Unity	3.0	2.5
VQ Total	8.0	5
VQ Change (Proposed VQ - Existing VQ)	-1.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	4.0	
Viewer Exposure (E)	4.0	
Average VR ([S + E] / 2)	4.0	
Visual Impact		
VQ Change	-1.0	
Average VR	4	.0
Visual Impact (VQ Change x Average VR)	-4.0 (LOW	/ IMPACT)

KOP #4: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	2.0	3.0
Intactness	3.0	1.5
Unity	3.0	2.0
VQ Total	8.0	6.5
VQ Change (Proposed VQ - Existing VQ)	-2.5	
Viewer Response (VR)		
Viewer Sensitivity (S)	4	.0
Viewer Exposure (E)	3.0	
Average VR ([S + E] / 2)	3.5	
Visual Impact		
VQ Change	-2	2.5
Average VR	3	.5
Visual Impact (VQ Change x Average VR)	-8.75 (MODEI	RATE IMPACT)

KOP #4: Visual Impact Rating Sheet - Alternative 3

Parameter	Numerical F	Rating Value
Visual Quality (VQ)	Existing	Alternative 3
Vividness	2.0	3.0
Intactness	3.0	1.5
Unity	3.0	2.5
VQ Total	8.0	6.5
VQ Change (Proposed VQ - Existing VQ)	-2.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	4	.0
Viewer Exposure (E)	3.0	
Average VR ([S + E] / 2)	3	.5
Visual Impact		
VQ Change	-2	2.0
Average VR	3	5.5
<b>Visual Impact</b> (VQ Change x Average VR)	-7.0 (MODER	RATE IMPACT)

KOP #5: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	3.0	4.0
Intactness	3.5	1.0
Unity	3.0	0
VQ Total	9.5	5.0
VQ Change (Proposed VQ - Existing VQ)	-4.5	
Viewer Response (VR)		
Viewer Sensitivity (S)	2	2.0
Viewer Exposure (E)	2.0	
Average VR ([S + E] / 2)	2.0	
Visual Impact		
VQ Change	-4.5	
Average VR	2	2.0
Visual Impact (VQ Change x Average VR)	-9.0 (MODER	RATE TO HIGH)

KOP #5: Visual Impact Rating Sheet - Alternative 3

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Alternative 3
Vividness	3.0	4.0
Intactness	3.5	2.0
Unity	3.0	1.0
VQ Total	9.5	7.0
<b>VQ Change</b> (Proposed VQ - Existing VQ)	-2.5	
Viewer Response (VR)		
Viewer Sensitivity (S)	2	2.0
Viewer Exposure (E)	2.0	
Average VR ([S + E] / 2)	2.0	
Visual Impact		
VQ Change	-2.5	
Average VR	2	2.0
<b>Visual Impact</b> (VQ Change x Average VR)	-5.0 (M0	ODERATE)

KOP #6: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	2.0	3.0
Intactness	3.0	0.5
Unity	3.0	0
VQ Total	8.0	3.5
VQ Change (Proposed VQ - Existing VQ)	-4.5	
Viewer Response (VR)		
Viewer Sensitivity (S)	2	.0
Viewer Exposure (E)	2.0	
Average VR ([S + E] / 2)	2	.0
Visual Impact		
VQ Change	-4	1.5
Average VR	2	.0
Visual Impact (VQ Change x Average VR)	-9.0 (MODERATE	TO HIGH IMPACT)

KOP #6: Visual Impact Rating Sheet - Alternative 3

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Alternative 3
Vividness	2.0	3.0
Intactness	3.0	2.0
Unity	3.0	1.0
VQ Total	8.0	6.5
VQ Change (Proposed VQ - Existing VQ)	-2.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	2	2.0
Viewer Exposure (E)	2.0	
Average VR ([S + E] / 2)	2	2.0
Visual Impact		
VQ Change		2.0
Average VR		2.0
<b>Visual Impact</b> (VQ Change x Average VR)	-4 (LOW TO MC	DDERATE IMPACT)

KOP #7: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	3.0	4.0
Intactness	3.0	0
Unity	3.0	0
VQ Total	9.0	4.0
VQ Change (Proposed VQ - Existing VQ)	-5.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	4.	0
Viewer Exposure (E)	3.0	
Average VR ([S + E] / 2)	3.5	
Visual Impact		
VQ Change	-5.0	
Average VR	3.5	
Visual Impact (VQ Change x Average VR)	-17.50	(HIGH)

KOP #8: Visual Impact Rating Sheet – Revised Project

Parameter	Numerical Rating Value	
Visual Quality (VQ)	Existing	Proposed
Vividness	3.0	4.0
Intactness	3.5	1.0
Unity	3.5	1.0
VQ Total	10.0	6.0
VQ Change (Proposed VQ - Existing VQ)	-4.0	
Viewer Response (VR)		
Viewer Sensitivity (S)	4.	0
Viewer Exposure (E)	3.0	
Average VR ([S + E] / 2)	3.5	
Visual Impact		
VQ Change	-4.0	
Average VR	3.	5
Visual Impact (VQ Change x Average VR)	-14.0 (	HIGH)

### APPENDIX F: AESTHETICS RESOURCES SUPPORT INFORMATION

# KOP PHOTOS AND VISUAL SIMULATIONS

Baseline photos and visual simulations are provided at each KOP.

### APPENDIX F: AESTHETICS RESOURCES SUPPORT INFORMATION

KOP 1 - Baseline Conditions



KOP 1 - Photosimulation - Revised Project



KOP 1 - Photosimulation - Alternatives 1, 2, and 4



KOP 2 - Baseline Conditions



KOP 2 - Photosimulation - Revised Project



**KOP 3 – Baseline Conditions** 



KOP 3 - Photosimulation - Revised Project



KOP 3 - Photosimulation - Alternative 4



**KOP 4 – Baseline Conditions** 



KOP 4 - Photosimulation - Revised Project



KOP 4 - Photosimulation - Alternative 3



**KOP 5 – Baseline Conditions** 



KOP 5 - Photosimulation - Revised Project



KOP 5 - Photosimulation - Alternative 3



**KOP 6 – Baseline Conditions** 



KOP 6 - Photosimulation - Revised Project



KOP 6 - Photosimulation - Alternative 3



KOP 7 - Baseline Conditions 1



<sup>&</sup>lt;sup>1</sup> Note: KOP 7 baseline photograph and simulation were provided by Southern California Edison and represent baseline and project conditions in panoramic views. Panoramic simulations allow the viewer to see more of the proposed 230-kV transmission line; however, project facilities appear smaller in a panoramic simulation due to the nature of baseline photography.

KOP 7 - Photosimulation (Panoramic) - Revised Project <sup>2</sup>



<sup>&</sup>lt;sup>2</sup> Note: KOP 7 baseline photograph and simulation were provided by Southern California Edison and represent baseline and project conditions in panoramic views. Panoramic simulations allow the viewer to see more of the proposed 230-kV transmission line; however, project facilities appear smaller in a panoramic simulation due to the nature of baseline photography.

KOP 8 - Baseline Conditions



KOP 8 - Photosimulation - Revised Project



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