

## APPENDIX F: AESTHETIC RESOURCES SUPPORT INFORMATION

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Appendix F provides supplemental information for the aesthetic resources impact assessment approach described in Section 4.2.3. 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:

### Key Observation Points (KOPs)

- Table showing the 15 cKOPs renumbered as KOPs
- KOP visual impact rating sheets

### Candidate Key Observation Points (cKOPs)

- A detailed description the screening methodology for each of the 60 cKOPs and figures showing cKOP locations relative to the Proposed Project
- The photo log for each of the cKOPs with field notes and baseline photographs
- The sensitivity matrix used to quantitatively evaluate the cKOPs to identify which views would be most impacted by the Proposed Project

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**KEY OBSERVATION POINTS**

**Numbering**

Table F-2 shows the re-numbering for the 15 cKOPs selected as KOPs

**Table F-1 Sensitivity Matrix for Key Observation Points**

KOP	cKOP	Name	LCU
1	1	Stonebridge Athletic Field	A-1
2	8	Angelique Street	A-2
3	15	LPCP Trans County Trail	A-2
4	21	Quinton Road	A-2
5	23	Bassmore Drive	A-2
6	31	BMOSP Trail	A-3
7	32	Maler Road	A-3
8	33	Black Mountain Ranch Park	B
9	40	DMMP Trails at Peñasquitos Junction	C
10	42	DMMP Trail	D
11	46	LPCP Trail	D
12	49	Gablewood Way	D
13	50	Heather Run Court	D
14	51	Briarlake Woods Drive	D
15	58	Manorgate Drive	D

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### Visual Impact Rating Sheets

Rating sheets were used to assess the visual change to the existing visual quality for each KOP after construction and during project operation prior to implementation of applicant proposed measures (APMs) and mitigation measures. KOPs that received moderately high visual impact ratings were further rated for visual impact after implementation of APMs and mitigation measures.

#### Visual Quality and Viewer Response Evaluation Basis

0 = None

1 = Low

2 = Moderate

3 = Moderately High

4 = High

#### Visual Impact Evaluation Basis

0 = Neutral visual impact (no impact)

-1 to -4 = Low; less than significant level of visual impact

-4 to -9 = Moderate visual impact

-9 to -13 = Moderately high visual impact

-13 or below = High visual impact

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**Table F-2 KOP 1 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	2.5	2.0	2.0
Intactness	2.0	1.0	1.5
Unity	3.0	1.5	2.0
<b>Visual Quality Total</b>	<b>7.5</b>	<b>4.5</b>	<b>5.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.0</b>		<b>-2.0</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	3.0		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.5</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.0		-2.0
Viewer Response	3.5		3.5
<b>Visual Impact (VQC x VR)</b>	<b>-10.5 (MODERATELY HIGH)</b>		<b>-7.0 (MODERATE)</b>



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**Table F-3 KOP 2 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	2.5	1.5
Intactness	2.0	1.0
Unity	2.5	1.0
<b>Visual Quality Total</b>	<b>7.0</b>	<b>3.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	1.0	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.5</b>	
<b>Visual Impact</b>		
Visual Quality Change	-3.5	
Viewer Response	2.5	
<b>Visual Impact (VQC x VR)</b>	<b>-8.75 (MODERATE)</b>	

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**Table F-4 KOP 3 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	3.0	2.0	2.5
Intactness	2.5	1.0	3.0
Unity	2.5	1.0	2.0
<b>Visual Quality Total</b>	<b>8.0</b>	<b>4.0</b>	<b>6.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>		<b>-2.5</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	2.0		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.0</b>		
<b>Visual Impact</b>			
Visual Quality Change	-4.0		-2.5
Viewer Response	3.0		3.0
<b>Visual Impact (VQC x VR)</b>	<b>-12.0 (MODERATELY HIGH)</b>		<b>-7.5 (MODERATE)</b>

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**Table F-5 KOP 4 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	3.5	2.5
Intactness	2.5	1.0
Unity	3.0	2.0
<b>Visual Quality Total</b>	<b>9.0</b>	<b>5.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	1.0	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.5</b>	
<b>Visual Impact</b>		
Visual Quality Change	-3.5	
Viewer Response	2.5	
<b>Visual Impact (VQC x VR)</b>	<b>-8.75 (MODERATE)</b>	

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**Table F-6 KOP 5 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	1.5	1.5
Intactness	2.0	1.0
Unity	2.0	1.5
<b>Visual Quality Total</b>	<b>5.5</b>	<b>4.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-1.5</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	1.0	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.5</b>	
<b>Visual Impact</b>		
Visual Quality Change	-1.5	
Viewer Response	2.5	
<b>Visual Impact (VQC x VR)</b>	<b>-3.75 (LOW)</b>	

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**Table F-7 KOP 6 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	3.0	2.0	2.0
Intactness	2.0	0.5	0.6
Unity	2.5	1.5	1.7
<b>Visual Quality Total</b>	<b>7.5</b>	<b>4.0</b>	<b>4.2</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>		<b>-3.3</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	1.5		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.75</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.5		-3.3
Viewer Response	2.75		2.75
<b>Visual Impact (VQC x VR)</b>	<b>-9.625 (MODERATELY HIGH)</b>		<b>-9.075 (MODERATELY HIGH)</b>
<b>VQ and VR Evaluation Basis</b>		<b>Overall Evaluation Basis</b>	
0 = None		0 = Neutral visual impact (no impact)	
1 = Low		-1 to -4 = Low; less than significant level of visual impact	
2 = Moderate		-4 to -9 = Moderate visual impact	
3 = Moderately High		-9 to -13 = Moderately high visual impact	
4 = High		-13 or below = High visual impact	

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**Table F-8 KOP 7 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	2.0	1.5	1.5
Intactness	2.0	0.5	0.5
Unity	2.5	1.0	1.2
<b>Visual Quality Total</b>	<b>6.5</b>	<b>3.0</b>	<b>3.2</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>		<b>-3.3</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	1.5		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.75</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.5		-3.3
Viewer Response	2.75		2.75
<b>Visual Impact (VQC x VR)</b>	<b>-9.63 (MODERATELY HIGH)</b>		<b>-9.0 (MODERATELY HIGH)</b>

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**Table F-9 KOP 8 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	3.0	2.5	2.5
Intactness	2.5	1.0	1.0
Unity	3.0	1.0	1.5
<b>Visual Quality Total</b>	<b>8.5</b>	<b>4.5</b>	<b>5.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-4.0</b>		<b>-3.5</b>
<b>Viewer Response</b>			
Viewer Sensitivity	3.5		
Viewer Exposure	2.5		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.0</b>		
<b>Visual Impact</b>			
Visual Quality Change	-4.0		-3.5
Viewer Response	3.0		3.0
<b>Visual Impact (VQC x VR)</b>	<b>-12.0 (MODERATELY HIGH)</b>		<b>-10.5 (MODERATELY HIGH)</b>

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**Table F-10 KOP 9 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	3.5	3.5
Intactness	3.5	3.0
Unity	3.0	2.5
<b>Visual Quality Total</b>	<b>10.0</b>	<b>9.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-1.0</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	1.5	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.75</b>	
<b>Visual Impact</b>		
Visual Quality Change	-1.0	
Viewer Response	2.75	
<b>Visual Impact (VQC x VR)</b>	<b>-2.75 (LOW)</b>	



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**Table F-11 KOP 10 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	3.5	3.0
Intactness	3.5	2.0
Unity	3.5	3.0
<b>Visual Quality Total</b>	<b>10.5</b>	<b>8.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-2.5</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	2.0	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.0</b>	
<b>Visual Impact</b>		
Visual Quality Change	-2.5	
Viewer Response	3.0	
<b>Visual Impact (VQC x VR)</b>	<b>-7.5 (MODERATE)</b>	

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**Table F-12 KOP 11 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	4.0	3.0	3.0
Intactness	3.5	2.5	2.5
Unity	4.0	2.9	3.0
<b>Visual Quality Total</b>	<b>11.5</b>	<b>8.4</b>	<b>8.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.1</b>		<b>-3.0</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	2.0		
<b>Average Viewer Response (VS+VE)/2</b>	<b>3.0</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.1		-3.0
Viewer Response	3.0		3.0
<b>Visual Impact (VQC x VR)</b>	<b>-9.3 (MODERATELY HIGH)</b>		<b>-9.0 (MODERATELY HIGH)</b>

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**Table F-13 KOP 12 Rating Sheet**

Parameter	Value	
<b>Visual Quality</b>		
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>
Vividness	3.0	2.5
Intactness	3.0	2.0
Unity	3.5	3.0
<b>Visual Quality Total</b>	<b>9.5</b>	<b>7.5</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-2.0</b>	
<b>Viewer Response</b>		
Viewer Sensitivity	4.0	
Viewer Exposure	1.5	
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>2.75</b>	
<b>Visual Impact</b>		
Visual Quality Change	-2.0	
Viewer Response	2.75	
<b>Visual Impact (VQC x VR)</b>	<b>-5.5 (MODERATE)</b>	

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**Table F-14 KOP 13 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	3.5	3.0	3.0
Intactness	2.0	1.0	1.5
Unity	3.0	1.5	1.5
<b>Visual Quality Total</b>	<b>8.5</b>	<b>5.5</b>	<b>6.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.0</b>		<b>-2.5</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	2.0		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.0</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.0		-2.5
Viewer Response	3.0		3.0
<b>Visual Impact (VQC x VR)</b>	<b>-9.0 (MODERATELY HIGH)</b>		<b>-7.5 (MODERATE)</b>

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**Table F-15 KOP 14 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	3.5	3.0	3.0
Intactness	3.0	1.0	1.5
Unity	3.0	2.0	1.5
<b>Visual Quality Total</b>	<b>9.5</b>	<b>6.0</b>	<b>6.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>		<b>-3.0</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	2.0		
<b>Average Viewer Response (VS+VE)/2</b>	<b>3.0</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.5		-3.0
Viewer Response	3.0		3.0
<b>Visual Impact (VQC x VR)</b>	<b>-10.5 (MODERATELY HIGH)</b>		<b>-9.0 (MODERATELY HIGH)</b>

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**Table F-16 KOP 15 Rating Sheet**

Parameter	Value		
<b>Visual Quality</b>			
<b>Existing or Proposed</b>	<b>Existing</b>	<b>Proposed</b>	<b>Proposed with APMs and Mitigation</b>
Vividness	4.0	3.5	3.5
Intactness	3.5	2.0	2.25
Unity	3.5	2.0	2.25
<b>Visual Quality Total</b>	<b>11.0</b>	<b>7.5</b>	<b>8.0</b>
<b>Visual Quality Change (Proposed VQ - Existing VQ)</b>	<b>-3.5</b>		<b>-3.0</b>
<b>Viewer Response</b>			
Viewer Sensitivity	4.0		
Viewer Exposure	2.5		
<b>Average Viewer Response ((VS+VE)/2)</b>	<b>3.25</b>		
<b>Visual Impact</b>			
Visual Quality Change	-3.5		-3.0
Viewer Response	3.25		3.25
<b>Visual Impact (VQC x VR)</b>	<b>-11.38 (MODERATELY HIGH)</b>		<b>-9.75 (MODERATELY HIGH)</b>

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## **CANDIDATE KEY OBSERVATION POINTS**

### **Screening Methodology and Map**

A sensitivity matrix was used to quantitatively evaluate the 60 cKOPs to identify which views would be most impacted by the Proposed Project. Of the cKOPs, 17 were initially rejected from further analysis because they were either duplicative, or the viewer groups are considered to have a low sensitivity level. The KOP selection included representative view points for each of the Proposed Project segments and screening based on seven criteria:

1. Distance zones
2. Number of viewers
3. Project features within viewshed
4. Viewer sensitivity
5. View duration
6. Baseline visual quality
7. View perspective

All criteria analyzed are based on a landscape-level evaluation. For example, Criterion 2, Number of Viewers, a vantage point (cKOP) on Interstate (I)-15, which has an average daily traffic count of over 200,000, would receive a numeric rating of 5 (maximum for the criterion); a cKOP on a dead end residential street would have a low number of viewers and would be assigned a value of 1. Another example, Criterion 6, Baseline Visual Quality is a landscape-level assessment; the Baseline Visual Quality of Yosemite Valley or an auto-wrecking yard are not factors in the determining the values for this criterion.

### **Distance Zones**

Distance zones for construction and operation of a transmission line in this landscape are defined as follows:

- Immediate foreground views – 0 to 300 feet
- Foreground – from the visual receptor’s occupied position to a distance of 0.25 miles
- Middleground – 0.25 to 3.0 miles
- Background – 3.0 miles to 17 miles (the visual impact threshold distance of transmission line towers [Argonne 2014]), and seldom seen – beyond 17 miles; atmospheric conditions can greatly influence the observer’s ability to see details in background views.

As the distance between the observer and the Proposed Project increases, the project occupies a smaller amount of the observers view cone; also with increased distance, the details of the project features are less discernable.

The following values were assigned to viewer distance zones in the Proposed Project area:

- Distance Zone value 1 – most distant cKOPs analyzed at just less than 1 mile (0.9 mile)

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- Distance Zone value 2 – cKOPS between 1,320 (0.25 miles) and 2,000 feet from Proposed Project features
- Distance Zone value 3 – cKOPS between 800 and 1,320 feet (0.25 miles) from Proposed Project features
- Distance Zone value 4 – cKOPS between 300 and 800 feet from Proposed Project features
- Distance Zone values 5 – cKOPS between 300 and 800 feet from Proposed Project features where cKOP is within 100 feet of the upper threshold distance

A value of 0.5 is either added to the assigned value if the cKOP is within 100 feet of the aforementioned upper threshold distance or subtracted if the cKOP is within 100 feet of the lower threshold distance.

#### **Number of Viewers**

Number of viewers of the Proposed Project is defined at a project specific or landscape-level. This criterion is based on the cKOPS analyzed in this matrix as follows:

- Number of Viewers value 1 – Residential cKOPS
- Number of Viewers value 2 – Recreational vantage point within preserves that are traversed by the ROW or residential cKOPS with recreational potential
- Number of Viewers value 3 – cKOPS on local thoroughfares
- Number of Viewers value 4 – cKOPS on SR-56 (64,000 Average Daily Trips [ADT])
- Number of Viewers value 5 – cKOPS on I-15 (greater than 200,000 ADT)

#### **Project Features within Viewshed**

The criterion is concerned with the number of Proposed Project features in the viewshed that may be construed as visual intrusions by sensitive receptors. Proposed Project features that are considered to cause visual intrusion include: new conductor spans, tower structures (including large diameter in-line dead end structures), retaining walls, marker balls, and long term ground disturbing activities that create contrast by vegetation removal. Numerical values are assigned as follows:

- Project Features value 1 – cKOP view cone only encompasses a span on new conductors
- Project Features value 2 – cKOP view cone encompasses a conductor span and a new, larger tower structure
- Project Features value 3 – cKOP view cone contains a conductor span, a new tower structure, and marker balls on the overhead optical ground wire
- Project Features values 4 through 8 – Higher values than three are assigned to cKOPS with a greater number of visual intrusions. For example, if a cKOP's view of the Proposed Project's ROW is from a middleground view or the view parallels the ROW more tower structures, conductors spans, and other project features would be visible. Where these conditions exist, the project features are added cumulatively.

The maximum value for this criterion is landscape-specific; the highest value awarded to a cKOPS in this analysis is eight, which occurred at cKOP 51. In addition, some project features



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are considered more visually prominent than others and are assigned higher values than one. These include cable poles, which are assigned a value of two, and in-line dead end tower structures and marker ball spans, which are awarded a value of 1.5.

Each segment of the Proposed Project would introduce unique project features and components that could be perceived as being visually intrusive. Impacts are systematically analyzed by Landscape Characterization Units (LCUs). Throughout the length of Segment A new project elements are identical. However, the existing project elements in each subsection that would remain have different architectural elements associated with them. Therefore, the segment was divided into three unique sub-segment LCUs for analysis. Segments B, C, and D each represent an individual LCU.

### **Viewer Sensitivity**

The viewer sensitivity criterion is assessed in a quasi-quantitative nature; all viewer groups within the Proposed Project viewshed are landscape-specific. As a result of the CPUC's scoping process, many stakeholders commented that the perceived visual intrusion of the Proposed Project on their personal residential viewshed was a concern. CEQA clearly states that it concerns itself with visual intrusion on public views. Residential views are not public views, although visual receptors with panoramic open space views tend to take ownership and seek to protect those views. The CPUC acknowledges that residential (non-public) viewsheds are important and require consideration and subsequent analysis. As a result of comments received during the scoping process, 26 of the 60 cKOPs that were initially identified, provenienced, and characterized can be construed as representative of residential viewsheds.

The value assigned to each cKOP in the viewer sensitivity criterion rates the receptor's concern levels. Visual sensitivity is often linked to the activity in which the visual receptor is engaged. When a receptor is at leisure they are more acutely aware of their surroundings and are likely to be more concerned about changes made to those surroundings. For example, a shopper at a commercial center or a commuter on I-15 or SR-56 will have lower viewer sensitivity than an equestrian or a hiker in the LPCP. All viewers see the landscape that surrounds them differently based on their experiences, preferences, and expectations. With this in mind, the lowest value assigned to cKOPs analyzed here is a moderate (3) sensitivity level. Sensitivity values are assigned as follows:

- Viewer Sensitivity value 4 – Residential or recreational cKOPs if:
  - The primary view direction is oriented away from the project, or
  - The view of the project features is partially screened (obscured) by vegetation and/or topography
- Viewer Sensitivity value 5 – Residential cKOPs not identified during the scoping process and recreational vantage points not located in preserves
- Viewer Sensitivity value 6 – Residential views from areas specified in comments received during scoping and cKOPs located within preserves where the ROW crosses sensitive recreational receptors

All other cKOPs are assigned a value of 3.

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### View Duration

The amount of time sensitive visual receptors are subjected to views of the Proposed Project is evaluated in the view duration criterion. Again, this criterion is landscape-level and project specific. The following were used to assign numeric values to the view duration:

- View Duration value 1 – a commuter on I-15 traveling at posted speed limits would have a fleeting, transitory view of the project for less than a minute per trip and their view duration would be short
- View Duration value 2 – recreational cKOPs that are on trails or bikeways when the duration of the view would be measured in minutes; a value of 2 would also be assigned to motorist's views where the posted speed limit is 45 miles per hour or less
- View Duration value 3 – cKOP at a destination on a trail where visual receptors would be offered the opportunity to pause, or at a designated park where visual receptors would view the project features for tens of minutes
- View Duration value 4 – cKOP where views of the project would be measured in hours
- View Duration value 5 – non-public, residential visual receptor with a view of the transmission line ROW where the duration of the view could be many hours

### Baseline Visual Quality

The baseline visual quality criterion is a qualitative assessment of the existing visual quality of the cKOPs that are landscape-level and project-specific. All of the viewsheds of the cKOPs evaluated are already compromised, to varying degrees, by the presence of the existing transmission line ROW, which has been a part of the fabric of the landscape for decades. Many of the cKOP viewsheds, particularly the residential vantage points, have developed around the ROW over those decades. A more naturally appearing landscape receives a higher rating value than landscapes that may contain disharmonious anthropogenic cultural modifications. The following values are used to assess baseline visual quality:

- Baseline Visual Quality value 2 (lowest value in this criterion) – cKOP that includes views of I-15, the motion of many vehicles and the noise created by that motion detract from the Baseline Visual Quality
- Baseline Visual Quality value 3 – cKOPs where the anthropogenic elements in the view are less than harmonious
- Baseline Visual Quality value 4 – A harmoniously designed urban area or a somewhat visually compromised naturally appearing landscape
- Baseline Visual Quality value 5 – A panoramic, naturally appearing view from a trail in the LPCP or an open space view of a chaparral covered canyon from a residential cKOP

### View Perspective

The view perspective criterion takes into account the perspective that the Proposed Project is viewed from at each cKOP. Project features are more noticeable (visually impactful) when they are silhouetted against the sky (skylined). Conversely, project features are less noticeable if they

## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

are silhouetted against a landscape backdrop (back dropped). The percentage of the project features that are skylined will determine the value assigned to this criterion. The following thresholds percentages indicated the percentage of the project features, in feet, that are skylined:

- View Perspective value 1 – 0 percent
- View Perspective value 2 – 1 to 33 percent
- View Perspective value 3 – 34 to 65 percent
- View Perspective value 4 – 66 to 99 percent
- View Perspective value 5 – 100 percent

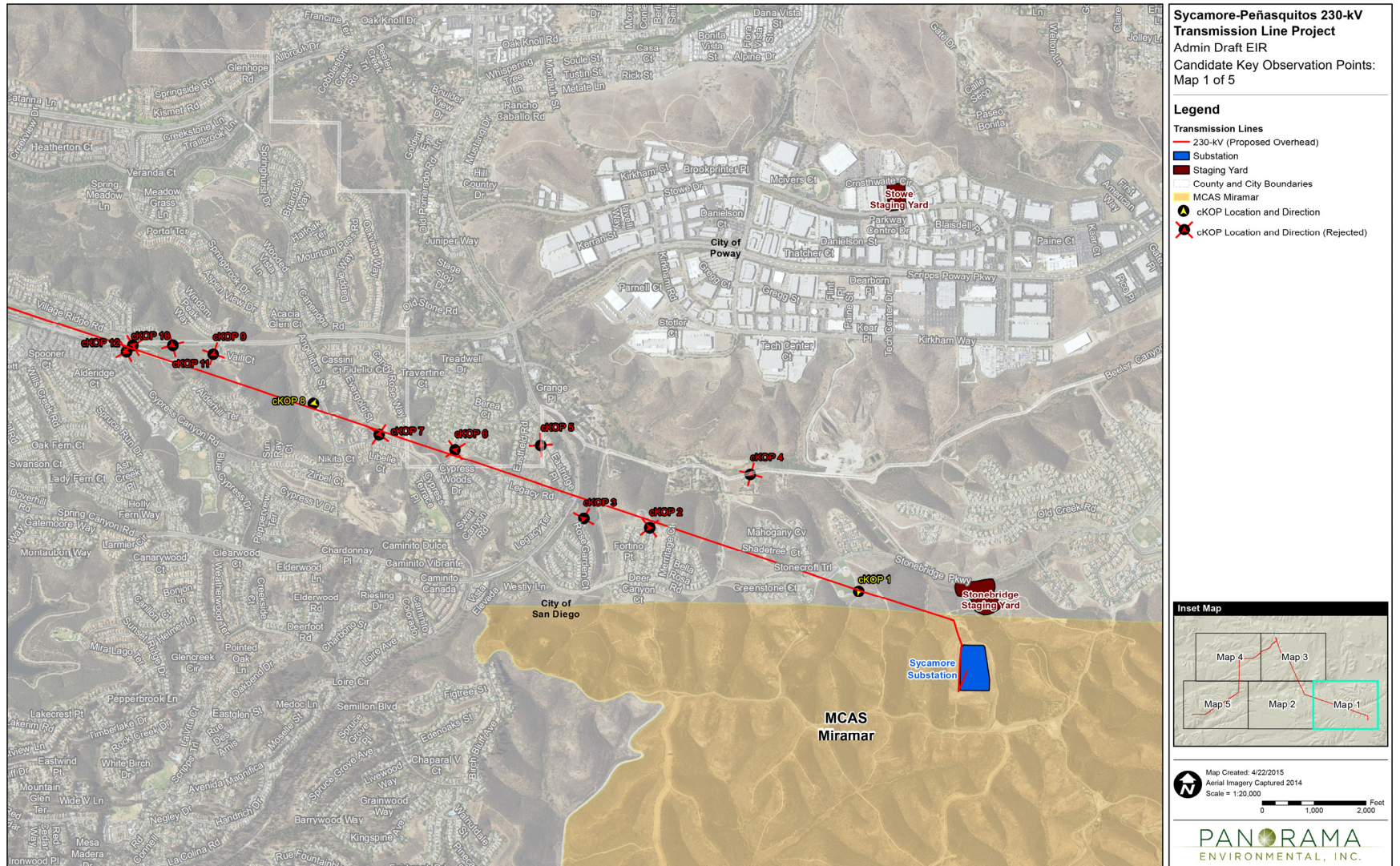
### **Total Score**

The total score represents the sum of the scores for distance zones, number of viewers, project features within viewshed, viewer sensitivity, view duration, baseline visual quality, and view perspective associated with each cKOP. The total scores were ranked by segment and used as the basis for selection of the final 15 KOPs.



## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

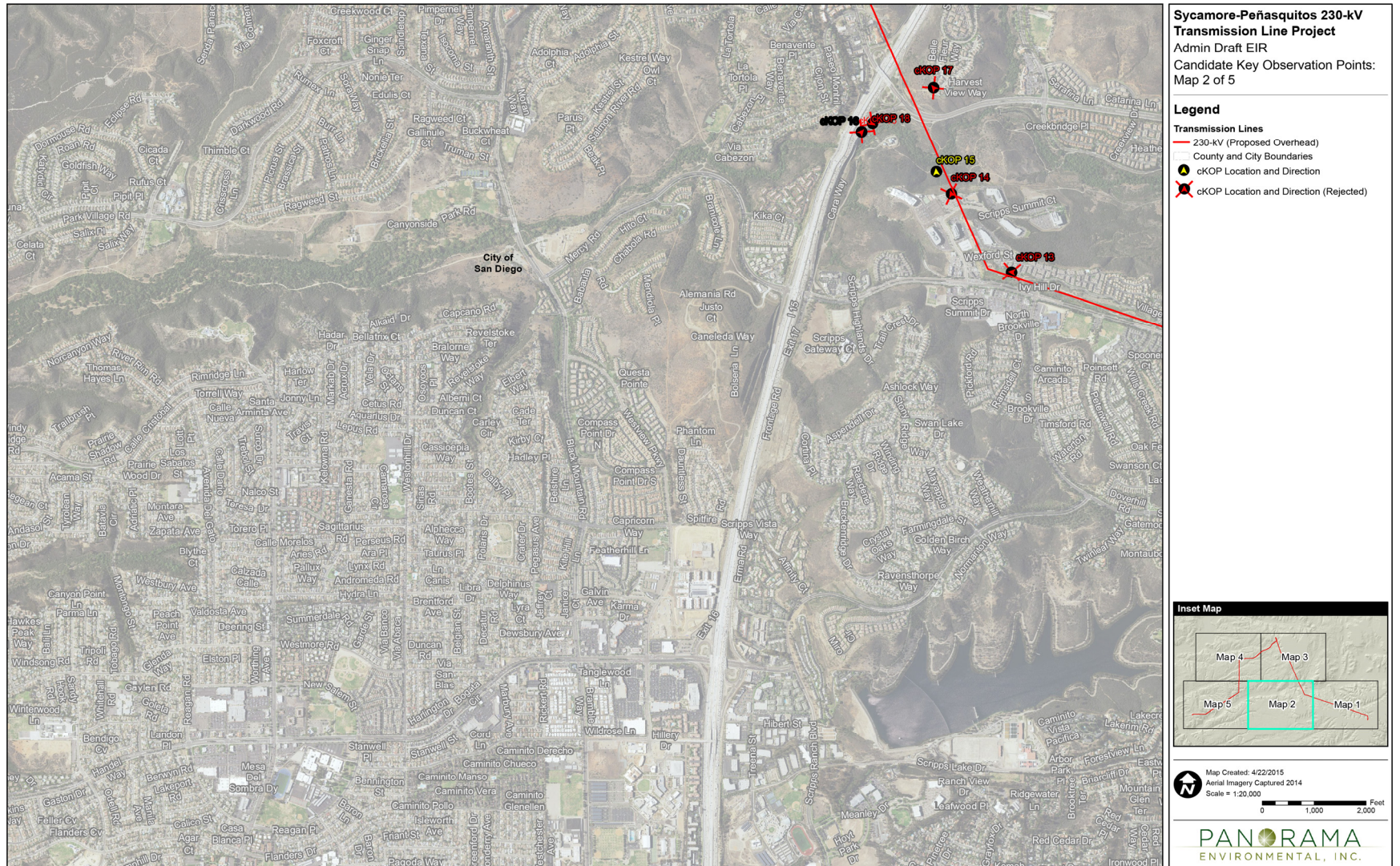
**Figure F-1 cKOP Locations Relative to the Proposed Project (Map 1 of 5)**





## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

**Figure F-2 cKOP Locations Relative to the Proposed Project (Map 2 of 5)**





## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

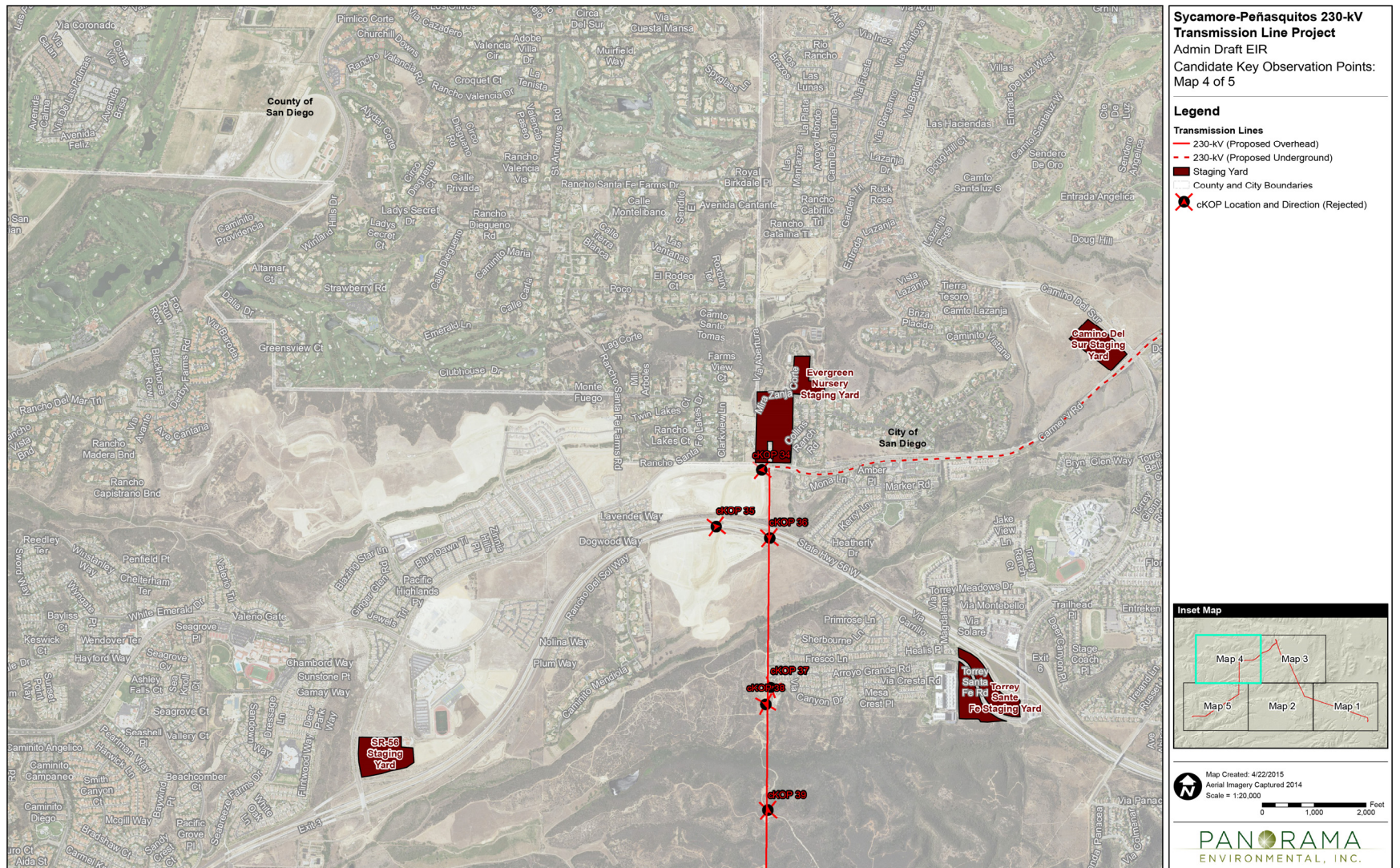
**Figure F-3 cKOP Locations Relative to the Proposed Project (Map 3 of 5)**





## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

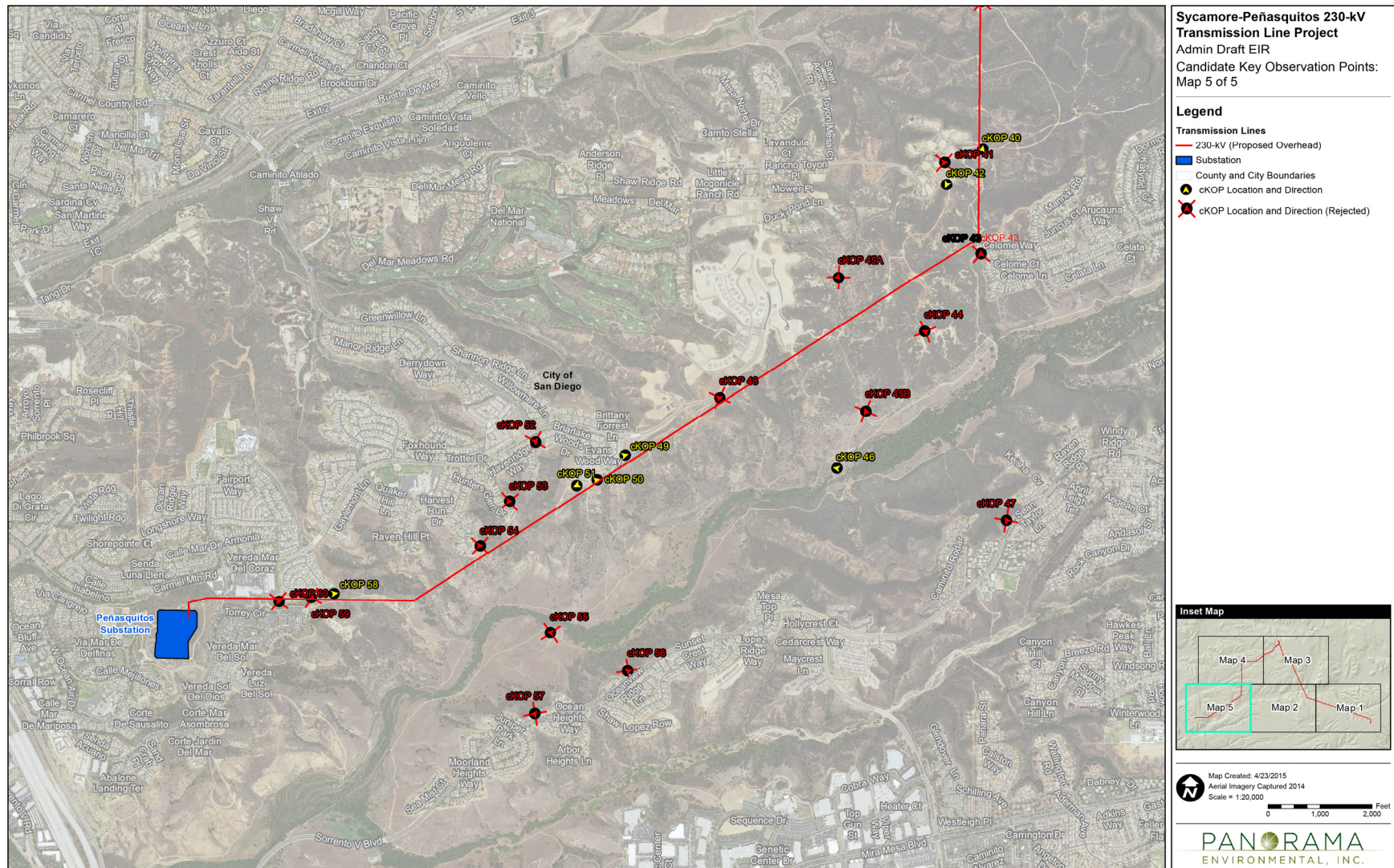
**Figure F-4 cKOP Locations Relative to the Proposed Project (Map 4 of 5)**





## APPENDIX F AESTHETIC RESOURCES SUPPORT INFORMATION

**Figure F-5 cKOP Locations Relative to the Proposed Project (Map 5 of 5)**





**APPENDIX F**  
**AESTHETIC RESOURCES SUPPORT INFORMATION**

**Photo Log and Baseline Photographs**

The photograph log includes field notes for each of the 60 cKOPs. A set of 60 baseline photographs were taken from each of the cKOPs to depict representative existing public views in the Proposed Project Area.

**APPENDIX F**  
**AESTHETIC RESOURCES SUPPORT INFORMATION**

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## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 1 Location: Sycamore Canyon Park off Stonebridge Prkwy

Date: 9/8/2014

Photo #(s) 1018-1020

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Encantata

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 260°

GPS Coordinates Latitude: 32° 55' 16.77" Longitude: 117° 2' 17.77"

Focal Length: 50mm

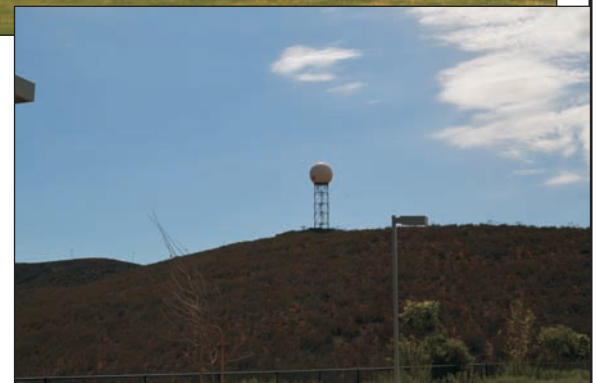
Visibility: >15 mi.

Primary User Group: Active & Passive Recreationists

Comments: cKOP 1 is located in the SE corner of the park at a bench behind the perimeter path which could be used as an exercise circuit. 2 lit ballfields, tot lot, shorter lights on perimeter path. Park conceived and planned under TL which passes diagonally over the park. Surrounded on 2 sides by MCAS Miramar. Doppler radar in clear view from the entire park topographically superior and to the southwest. Somewhat enclosed viewshed because of topography. View corridor to Black Mountain to northwest. A few marker balls may be visible on span after the second set of tower structures. Ballfield stadium light standards are not visible in this view but they are a obvious vertical element from other vantage points.



Doppler radar on MCAS  
Miramar. It is south [(left)  
az=230°] of the perspective of  
cKOP 1.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 2 Location: 11445 Fortino Point SD, CA

Date: 9/8/2014

Photo #(s) 1018-1020

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Encantata

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: ENE 80°

GPS Coordinates Latitude: 32° 55' 27.87"N Longitude: 117° 3' 05.72"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 2 is located near the end of a residential street that serves as access to P8 and R8. The view cKOP is from the PEA and will be used as is. The TL ROW predates Rancho Encantata (Stonebridge Estates) by decades. The TL ROW opportunistically uses high ground to traverse the rugged terrain that was graded extensively for the residential subdivision. The TL s topographically superior position relative to the receptors often affords views similar to this one where a single set of tower structures are visible; the rest being screened by topographic obstructions. The existing structures are skylined as would be the proposed incongruent TSP, which would be located left (north) of the existing H-frame structure shown in the baseline visual conditions presented in this view. The number of receptors is considered low because of the residential street designation and residents of this neighborhood would be the most impacted. 32°55'27.87"N 117° 3'5.72"W





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 3 Location: 11574 Rose Garden Ct.

Date: 9/8/2014

Photo #(s) 1027-1035

Panorama Y N # of Frames 1027-0131

Jurisdiction/Planning Area: City of San Diego/Rancho Encantata

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 80°

GPS Coordinates Latitude: 32° 55' 30.16"n Longitude: 117° 3' 20.02"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 3 is located off a cul de sac on a sewer access road. It characterizes the backyard view of 11547 Rose Garden Ct. very well. It is in the NW corner of Rancho Encantata. Topographically inferior (+/- 250') cKOP, Existing tower structures skylined (P8, R8), long span (=/- 1900') across a tributary canyon to Beeler Canyon and Pomerado Road (left, West). Marker balls and a new tower structure type will be introduced into this decidedly residential viewshed. The view from this backyard is panoramic and will be changed markedly if marker balls are required.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 4 Location: 11,175 Beeler Canyon Rd., Poway, CA 92064

Date: 9/8/2014

Photo #(s) 1014

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of Poway

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: 240°

GPS Coordinates Latitude: 32° 55' 38.85" Longitude: 117° 2' 42.46"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/Motorists

Comments: Topographically inferior (+/- 250') cKOP, existing tower structures skylined, some vegetative screening at individual residences in backyards may screen views, large lots, horse properties, residences built over many years some very new. Quiet secluded neighborhood on a dead end road. Anticipated high viewer sensitivity. East of cKOP 4 is a Vulcan Materials Plant, it is well screened by mature oleanders. Not certain if its still extractive, no worker activity or truck traffic observed.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 5 Location: 11,549 Eastridge Place

Date: 9/8/2014 & 9/9/2014

Photo #(s) 1036 4pm (back lit) & 1013 noon (side lit)

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Scripps Miramar Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 222°

GPS Coordinates Latitude: 32° 55' 44.16"n Longitude: 117° 3' 29.80"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: Representative of residential views along the west side of Eastridge Pl. (+/- 20 residences). Interesting vantage point from the perspective STL and TSP is within a single frame. Topographically superior to adjacent Rolling Hills Estates (cKOP 6) so views are somewhat panoramic and naturally appearing foreground of a canyon/open space.



9/9/14 Noon



9/8/14 4 p.m.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 6 Location: 11,688 Treadwell Dr. Scrub Oak Trail Access Poway, CA 92064

Date: 9/8/2014

Photo #(s) 1015-1017

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of Poway

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 181°

GPS Coordinates Latitude: 32° 55' 43.16" Longitude: 117° 3' 49.22"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/Recreationists

Comments: Luxury custom homes in the SW corner of Poway, not a lot of affected residences but more than several are very close to the line, like this one. Poway's Scrub Oak trail access off Treadwell between homes. TL 23051/6920 are <50' from property line. Two of the homes here use the access for horseshoe pits. Perimeter wall are low and partially wrought iron. No corona observed. Mature dense chaparral dominant over cover. Both primary users groups are considered sensitive receptors.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 7 Location: Evergood Street

Date: 9/8/2014

Photo #(s) 1016-1019

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Miamar Ranch North

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 260°

GPS Coordinates Latitude: 32° 55' 45.93" Longitude: 117° 4' 6.48"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 7 is east of and topographically superior to Evergood Street. Views from backyards here are on Cypress Canyon Park Dr. 2 sets of relatively closely spaced spans. Not many homes experience this view. No trail connectivity. There is a turf area north of and below cKOP 7, but no recreational amenities. TSPs are side lit and their green hue is obvious from this distance (665).



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 8 Location: 11,706 Angelique Street

Date: 9/9/2014

Photo #(s) 1020-1028

Panorama Y N # of Frames 5

Jurisdiction/Planning Area: City of San Diego/Scripps Miramar Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 255°

GPS Coordinates Latitude: 32° 55' 51.82" Longitude: 117° 4' 21.25"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: Representative of residential views along the west side of Angelique Street. A stakeholder at Tuesday evenings scoping meeting voiced assertions his backyard viewshed is already compromised by the conductor catenaries. He was concerned about marker balls and he was directed to my station and the mapbook showed no markerballs across "his" canyon he thought this odd because the next canyon had them and his was larger and deeper. I emailed PM and CEO with my concerns, regarding this. Marker ball shp is in data request 3. Many homes along Angelique and Cypress Canyon will experience similar changes in their backyard views because the 2 long spans across 2 finger canyons will change dramatically.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 9 Location: 11654 Vail Court

Date: 9/9/2014

Photo #(s) 1033-1034

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Miamar Ranch North

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 244°

GPS Coordinates Latitude: 32° 56' 1.07n" Longitude: 117° 4' 44.00w"

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 9 is from Fieldstone Summit development it is a small development and 17 residences will be impacted profoundly. This is not the best vantage point but access to better was not possible (steep topo and dense chaparral. Multiple consecutive spans (2) MAY have marker balls along large open space canyons. From this vantage point that will not be evident. TL is topographically superior and conductors and tower structure are skylined. There are no trail access from this development.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 10

Location: Miramar Ranch North Community Center Cypress Rd

Date: 9/9/2014

Photo #(s) 1047

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Scripps Miramar Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 106°

GPS Coordinates Latitude: 32° 56' 03.63"n Longitude: 117° 05' 03.63"w

03.63"n

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Patrons/Recreationist/Motorist

Comments: The community center is a popular local gathering place, the MRN Planning Group meets here. Butterfly Garden is well landscaped with year around flowering plants. The adjacent parking lot, south of and away from the TL is a park and ride and used by parents of adjacent middle school. An area of multifamily residential. Only one pair of tower structure are visible and a limited amount of conductors are visible. This view is from the sidewalk on the north end of Butterfly Park. This is by far the worst case scenario for the community center. TSPs are front lit so there green hue is apparent. Dulled untreated galvanized TSP adjacent to and north (left) of the H-frame will appear incongruent under similar lighting conditions. The large stringing area east (right) of the structures is obscured by intervening vegetation.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: II Location: Scripps Poway Parkway

Date: 9/9/2014

Photo #(s) 1043

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Miamar Ranch North

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 99°

GPS Coordinates Latitude: 32° 56' 02.64"n Longitude: 117° 4' 53.15"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Motorists

Comments: cKOP II is looking easterly from the eastbound lanes of this busy thoroughfare (ADT 34,973). Only 1 set of tower structures are visible but 2 spans of conductors are visible and marker balls will be on both span across open space canyons, only 2 places in the alignment where this occurs. Heavy and mature ornamental trees, scrubs, and ground cover along the travelway's edges and median obscure views of the ROW from SP Prky. This planting plan definitely softens the ROW's presence, given its nearly parallel alignment for +/- 1.5 miles through a heavily populated portion of the planning area. For motorists the conductors are difficult to see because of their immediate vertical presence. The immediate foreground is a landscaped area that is planted with spring flowering perennials part of Butterfly Park. The homes visible on the horizon are on Aberhill Terrace. Their views will be impacted but cKOPs 8, 9 are similar but not as close.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 12 Location: Scripps Poway Prkwy

Date: 9/9/2014

Photo #(s) 1050

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Scripps Miramar Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: ESE 106°

GPS Coordinates Latitude: 32° 56' 02.62"n Longitude: 117° 5' 02.17"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Motorists/Pedestrians

Comments: This vantage point is west of the previous cKOP (11) and looks in the opposite direction 30 yds from the Cypress Canyon Rd's intersection with SP Prkwy. Because of its position is mildly representative of a westbound motorist perspective. In this view TL 23051/6920 tower structure are aligned. A large permanent work area is screened from view by ornamental landscaping and Heritage Trees. This is an area that acts as a traffic calming because the travelway transitions to 2 lanes in each direction. Further east and west there are 3 lanes and higher posted speed limits. The existing TSPs are side lit at this time of day (3:19 pm) so their green hue is not as apparent as when they are front lit. SP Prkwy. has an ADT of 34,973.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 13 Location: Ivy Hills Condos

Date: 9/9/2014

Photo #(s) 1051-1053

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Scripps Miramar Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 280°

GPS Coordinates Latitude: 32° 56' 16.55"n Longitude: 117° 5' 52.23"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 13 is behind a large multi-family development north of SP Prkwy and Scripps Ranch Marketplace. The westerly view is of 2 angle structure where the line transition to a northwesterly direction. As apparent in the views the diameter of the robust angle structures is noticeable. Angle or tension poles are nearly 6' in diameter near the base; tangent towers are +/- 3' in diameter. The TSP is just over 400' from the vantage point which is in one of the few turf area of the development and is no doubt used for dog walking and other recreational activities of the many residents. It also provides access to a trail which is also access to the angle pole. The proposed TSP would be 40' closer to the TSP than the existing H-frame although it will not require the guy wire that exist on the steel H-frame structure. The large permanent work area at the base of the poles would not be visible from this vantage point because of the topographically superior location of the angle pole and intervening vegetation. In the late afternoon sun from this perspective the TSP is backlit so its faded green hue is less decernable.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 14 Location: Scripps Summit Business Park

Date: 9/15/2014

Photo #(s) 251-253

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Miramar Ranch North

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 340°

GPS Coordinates Latitude: 32° 56' 31.31"n Longitude: 117° 06' 06.01"w

Focal Length: 50mm

Visibility: <10 miles

Primary User Group: Workers

Comments: cKOP 14 is in the parking lot of a large office building complex in an elevated position. It is representative of views from windows facing north in area offices where the ROW spans Penasquitos Canyon. From this elevated perspective much of the ROW is visible all the way to the SLT angle pole outside of Hilltop Park and two or three poles north (>2.5 miles). From this elevated perspective all the TSPs and conductors are back dropped so their presence is difficult to perceive beyond the first few. The first TSP just south of Poway Rd. is an in-line dead end tower structure (6' dia.). A large (1.2 acres) stringing site South of the structure has been removed by project refinements; however it was replaced with a smaller staging area down the slope. Vegetation removal will create obvious contrast. The permanent vegetative clearing at the base of the new TSP would also be visible. Existing marker balls spanning I-15 on the guard wire are back dropped but visible 0.45 miles distant. The Poway Road TSP is partially front lit and its color is somewhat obvious even at a distance (>1300'). Marker balls will be required on the OHGW across Peñaquitos Canyon (foreground). Preliminary engineering also indicates that a retaining wall will be required for the first pole visible (P24, E24) which is just south of Poway Rd as well as for the next new TSP (P25).





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 15 Location: Trans County Trail

Date: 9/15/2014

Photo #(s) 199-202

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N 354°

GPS Coordinates Latitude: 32° 56' 33.57"n Longitude: 117° 06' 09.41"w

Focal Length: 50mm

Visibility: <10 miles

Primary User Group: Recreationists

Comments: cKOP 15 is located on a popular trail through the eastern extent of Los Peñasquitos Canyon Preserve (LPCP). Cherry stems from the main trail also connect to the Summit Business Park to the south. The trail at this point is +/- 50' above the canyon floor and Peñasquitos Creek (perennial). The Trans County Trail is extremely popular with the mountain bike community but is also used by hikers and equestrians. It is an important link between population centers to the east (Sabre Spring and Poway) to the main part of LPCP to the east; it runs under I-15. The first TSP in the view is the tension pole south of Poway Rd. discussed in the previous cKOP (14). Unlike cKOP 14 it is an inferior perspective so almost half of the TSP and the majority of the conductors are skylined as are the existing marker balls spanning I-15. This image was taken at 10:15 a.m. and the majority of the TSPs are front lit and their green hue is obvious. Like cKOP 14 the Permanent work area and staging area at the base of the new TSP will be visible. Marker balls will be required across the canyon (foreground). This span is contrary to other spans in that if you look below the catenary of the conductors a large diameter cable is suspended off the H-Frames. It goes underground at Poway Rd. The IOU has said they intend relocate the cables on the new TSP. However it is the responsibility of the cable's owner to do the relocation, so they may temporarily top the H-frame's left pole to provide a support structure until the cable is relocated. In addition to the visual intrusion mentioned a 2 sided retaining wall is proposed for P24 which will be clearly visible from this vantage point.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 16 Location: Cara Way Class I Bike Trail

Date: 9/15/2014

Photo #(s) 239- 243

Panorama Y N # of Frames 240-243

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SE 123°

GPS Coordinates Latitude: 32° 56' 44.68"n Longitude: 117° 06' 23.88"w

Focal Length: 50mm

Visibility: <10 miles

Primary User Group: Recreationists

Comments: cKOP 16 is located on Class I bike trail which begins at Poway Road and ends in Scripps Ranch (+/- 2 mi). This is the former route of US 395 the predecessor to I-15. It crosses PQ canyon on beautiful arched bridge that must be historic. Cara Way is a memorialization to an SDSU student who was murdered by a CHP officer after a traffic stop. In the canyon below the bridge Cara Knott's father created a memorial oak grove in her honor. It remains popular and well maintained despite his passing. The span shown below has been the discussion of cKOPs 14 & 15. New tower structure and marker balls will be introduced into this viewshed. The left (north) tower structure is an in-line dead end structure and the new (P24) TSP will also be dead end. There is also a retaining wall proposed that will no doubt be visible from this vantage point. The marker balls on the OHGW will be skylined and at times front lit conditions that make them most noticeable.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 17 Location: 10433 Harvest View

Date: 9/9/2014

Photo #(s) 0009

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Sabre Springs

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 320°

GPS Coordinates Latitude: 32° 56' 51.56"n Longitude: 117° 06' 10.18"w

Focal Length: 50mm

Visibility: <10 miles

Primary User Group: Residential

Comments: cKOP 17 is located on a cul de sac in a residential neighborhood above where the ROW crosses I-15; it is east of the freeway and north of the ROW. Homes on the perimeter of this development have sweeping views because of its hilltop location. This cKOP shows the ROW where it crosses I-15 looking into Rancho Peñasquitos. The view was captured in the late afternoon (4:30 pm) the TSPs are backlit and appear dark. Notice that the H-frames are difficult to detect, the new taller TSPs will be much more apparent because they will be partially skylined. Marker balls are visible across the I-15. The GIS data we have from the IOU shows additional marker balls, which seems redundant.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 18 Location: Rancho Peñaquitos, I-15

Date: 11/16/2014

Photo #(s) 64-65

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñaquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: 41°

GPS Coordinates Latitude: 32° 56' 43.03"n Longitude: 117° 06' 26.37"w

Focal Length: 50mm

Visibility: >15 Miles

Primary User Group: Residential/Recreationists

Comments: cKOP 18 is located along the I-15 corridor. Southbound on I-15 the tower structures are not in your typical field of vision as a driver and the conductors and marker balls are back dropped against the landscape so they are not really an intrusion. Northbound is similar but the viewshed is not as enclosed by topography; there are places where the conductor catenaries and existing marker balls are skylined. P25 on the north side of Poway Road and east of I-15 is typically partially back dropped. P25 however, does propose a large retaining wall and work area. The interchange was recently improved but the vast majority of the mature landscaping was retained; the landscaping provides vegetative screening. The ADT on this portion of the I-15 corridor is very high (221,395) but views of the corridor and structures is relatively brief; in the neighborhood of 60 seconds in each direction at posted speed limits. During morning and evening commute hours this section of I-15 is often slowed by heavy traffic, because of lane reductions to the north to accommodate HOV lanes.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 19 Location: Rancho Peñasquitos, Rancho Peñasquitos Blvd.

Date: 11/16/2014

Photo #(s) 81-83

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NNE 21°

GPS Coordinates Latitude: 32° 57' 11.27"n Longitude: 117° 6' 30.35"w

Focal Length: 50mm

Visibility: >15 Miles

Primary User Group: Motorists

Comments: South side sidewalk on Rancho Peñasquitos Blvd. at MTS bus stop. Adjacent land uses include Multi-family residential, assisted living facility and commercial. The north side of PQ Blvd is lined with mature eucalyptus trees; there is also a median with trees and scrubs which serves as vegetative screening of the ROW. This portion of the ROW is constrained by topography and relatively tall buildings, I had to search to find this view where the height of the TSPs fit within the view frame.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 20 Location: Plaza Rancho Peñasquitos

Date: 9/10/2014

Photo #(s) 0015 & 0016 view east 0017 view west 339°

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SE 160°

GPS Coordinates Latitude: 32° 57' 37.15"n Longitude: 117° 6' 41.00"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Active Recreationists/Patrons

Comments: cKOP 20 is in a shopping center north of the ROW's first SR-56 crossing. Adjacent to the shopping center is a skate park. Directly under the ROW is a basketball and sand volleyball court. The main part of the shopping center is west of the ROW. There is a park and ride lot between the shopping center and the skate park. The Center was undergoing a significant face lift when the site was visited. The pole behind the cKOP in the parking lots is a large diameter in-line dead end pole. A skate park is 100yd north a park and ride is in between. Left of the basketball court in the foreground is a sand volleyball court.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 21 Location: Quinton Rd.

Date: 9/10/2014

Photo #(s) 290-293

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SE 163°

GPS Coordinates Latitude: 32° 57' 47.18"n Longitude: 117° 6' 45.68"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 21 represents a group of home that occupy topographically superior ground. Their views to the north, east, and west are panoramic but decidedly urban. This cKOP was added because of scoping comments. 2 commenters replied multiple times during the process. They also had a lengthy petition. The view shows the TSPs, H-frames, and conductor catenaries are mainly back dropped so their presence recedes quickly. Chacarita SS is visible north (left of the ROW).



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 22 Location: Paseo Montaban

Date: 9/10/2014

Photo #(s) 0018-0021

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 320°

GPS Coordinates Latitude: 32° 57' 51.30"n Longitude: 117° 6' 48.00"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/recreationists

Comments: cKOP 22 represents views from the access road, it could be used as recreational asset but it is relatively short and has no destination; essentially a one way trail. The neighbor has built a basketball court and a shade ramada under the TIL s. This is kind of a private vantage point. The view is somewhat important because of the transition from TSP to SLT in the near middleground. It may help to demonstrate the incongruity of this approach. Overlook Park is south (left) of the ROW. The proposed TSPs will also be partially skylined were the H-frames are back dropped. Notice how the existing color-treated TSP recedes when it is skylined vs. backdropped against the dark vegetation of BMOSP. Also notice how the more distant SLT recedes when backdropped compared to the TSP.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 23 Location: Bassmore ROW

Date: 9/17/2014

Photo #(s) 259-261

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 346°

GPS Coordinates Latitude: 32° 58' 01.80"n Longitude: 117° 6' 54.18"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/recreationists

Comments: cKOP 23 represents views from 2 residential streets, Paseo Cardiel and Bassmore Dr. +/- 50 homes are on the street. An access trail to BMOSP is across Sundevil Way (in the direction this view is looking, so the ROW may be used by some residents as hiking or Mountain Bike access. The ROW drops steeply down from the pictured structures. In this cKOP the camera is pointed considerably up, not a normal view for a resident or recreationist. cKOPs 23, 24, & 25 were in response to a scoping letter from a resident attorney who live on Bassmore Dr.. His fence backs up to very near the TSP pictured. It was difficult to capture his backyard view because of a chainlink fence surrounding the perimeter of his property.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 24 Location: Bassmore ROW

Date: 9/17/2014

Photo #(s) 263-264

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 36°

GPS Coordinates Latitude: 32° 58' 02.60"n Longitude: 117° 6' 55.25"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/recreationists

Comments: cKOP 24 demonstrates how difficult it was to characterize the views in this enclosed viewshed. This view is from the opposite side of the ROW than the scoping commenter's residence. It is so close the TSP doesn't fit in the Horizontal field of view. The survey marker right of the H-Frame shows where the new TSP is proposed. The SW corner of the chain link fence around the cementer's residence is visible near the yellow out-building.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 25 Location: Sundevil Way

Date: 9/17/2014

Photo #(s) 256-257

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SE 112°

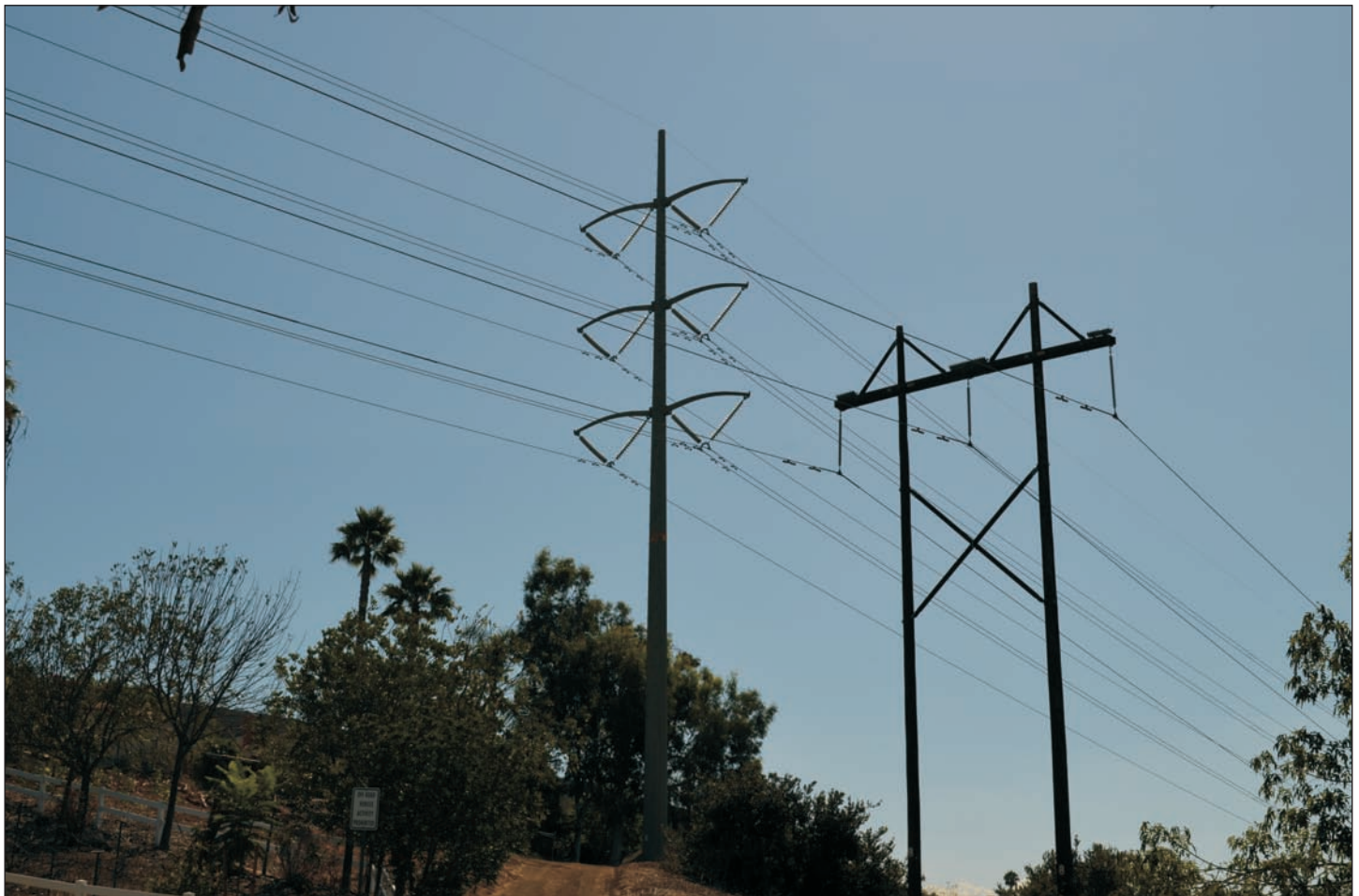
GPS Coordinates Latitude: 32° 58' 05.29"n Longitude: 117° 6' 57.32"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Motorists

Comments: cKOP 25 is another attempt to characterize the Bassmore ROW. The steeply sloping terrain and its enclosed nature of this viewshed make it very difficult to accurately characterize. Again the camera is pointed up to capture the top of the TSP. The street where cKOP 25 is located dead ends into BMOSP and seems to be a popular access point the this neighborhood's recreational amenity, a single track trail offer access to Nighthawk Trail. Sundevil Way farther south (left) the main access point for Mt. Carmel HS in the area it is likely only used for residential access.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 26 Location: Mt. Carmel High School

Date: 9/17/2014

Photo #(s) 275-276

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N 9°

GPS Coordinates Latitude: 32° 57' 58.72"n Longitude: 117° 07' 09.84"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Students/Teachers

Comments: cKOP 26 is in response to a scoping commenter who thought the students at the HS needed a vantage point. A large parking lot and Sundevil Stadium and some open space lie between the cKOP and the ROW. The blue roofs of the shade ramadas at Hilltop Park are visible in the distant foreground. Black Mountain and its Comm Site forms the horizon. The new TSP will be partially skylined and the H-frame is difficult to distinguish in these lighting conditions.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 27 Location: Hilltop Park Shade Ramada South

Date: 9/10/2014

Photo #(s) 0033-0035

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N15°

GPS Coordinates Latitude: 32° 58' 13.99"n Longitude: 117° 07' 03.85"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 27 is from a popular community park with sweeping views, on a clear day blue water ocean views of Catalina and San Clemente Islands could be afforded in the opposite direction as the project. A kiosk with a map and information on the trails to Black Mountain Open Space Park is visible in the immediate foreground. The angle (tension) structures are immediately beyond with the trail curving in front of it. The diagonal line behind the TL is the main access road to the summit. The massive microwave and satellite communications infrastructure are skylined along its horizon. The new TSP will no doubt require a large diameter in-line dead end tower structure. This SLT is rather short, less than 90'. The new TSP will tower above it if the IOU builds a 125' TSP as purported. There is also a large (1.62 acres) stringing site on both sides of the tower structures which will clear significant amounts of vegetative over cover and create additional contrasts.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 28 Location: Hilltop Park Shade Ramada North

Date: 9/17/2014

Photo #(s) 277-278

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N 345°

GPS Coordinates Latitude: 32° 58' 19.98"n Longitude: 117° 07' 11.53"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 28 is from a popular community park with sweeping views, on a clear day blue water ocean views could be afforded in the opposite direction as the project. This view is the next set of structures from the previous cKOP; it is an extremely long span (>2500') anchored by two large diameter tension structures. Currently there are 3 H-frame visible. there will be 2 new incongruent TSPs next to the SLTs. The new tower structure will be a large diameter pole that will be nearly completely skylined as will the next pair of tower structures, which are tangent poles. A large stringing site (SS II) is proposed for both sides of the work area. This will require vegetation removal and the light colored ground will contrast strongly with the dark chaparral. The cylindrical structure to the right of the first SLT is a stand pipe for the aqueduct that shares the ROW.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 29 Location: Mediatrice Lane

Date: 9/17/2014

Photo #(s) 196-198

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 15°

GPS Coordinates Latitude: 32° 58' 30.24"n Longitude: 117° 07' 31.73"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 29 approximates the back yard view of a handful of residences along this residential street. This is an area of steep topography, so much so the street is single loaded farther north. The vent structure and stand pipe are water aqueduct infrastructure. Only one H-frame is visible 2 of the new TSPs will be visible.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 30 Location: Black Mountain Open Space Park (BMOSP) Trail

Date: 9/12/2014

Photo #(s) 181-182

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 240°

GPS Coordinates Latitude: 32° 58' 41.13"n Longitude: 117° 07' 13.38"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 30 is from a labyrinth of single track trails that provide a shorter but steeper route to the summit of Black Mountain. I'd intended this one to be from the main summit access trail (double track) but as that trail trended easterly the ROW was quickly obscured by topography. I did meet a couple hikers descending the summit using this steep trail. This photograph demonstrates how the open lattice structure recedes when appropriately lit and back dropped. The photograph was taken late in the afternoon and the camera was aimed in the direction of the sun, which explains the dramatic amount of contrast in the photo. A photo at a different time of day would be preferable. The 2 pairs of tower structures visible are tangent structures however, the proposed TSPs will be more noticeable. From this elevated cKOP the permanent vegetative clearing for the new TSP will also be evident at the south (left) structure. Current data shows that north (right) of the second towers will require marker balls.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 31 Location: Black Mountain Open Space Park (BMOSP) Trail

Date: 9/12/2014

Photo #(s) 191-192

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 340°

GPS Coordinates Latitude: 32° 58' 38.59"n Longitude: 117° 07' 31.27"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 31 is from a trail that parallels the TL ROW several single tracks afford access to higher portions of the open space. These trails offer shorter but more challenging routes to the summit. This view again demonstrates how the SLTs recede with distance, when back dropped. Black Mountain Ranch Park is in the near middleground. To the right of the park, the charred vegetation from the fast moving Bernardo Fire from the spring of 2014. The trail to the left (south) of the park is part of the popular Lusardi Creek Loop Trail that traverses open space managed by the San Dieguito River Park. The intersection of Black Mountain and Carmel Valley Roads is nearly visible in the lower left part of the view frame. Marker balls are proposed on the overhead span and terminate at the first visible poles. The land scar from the vegetative clearing for the new tower will be visible.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 32 Location: Maler Rd.

Date: 9/10/2014

Photo #(s) 0040-0042

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Black Mtn. Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 325°

GPS Coordinates Latitude: 32° 58' 50.71"n Longitude: 117° 07' 35.00"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists/Residential

Comments: cKOP 32 is from the entrance to a small isolated residential development (+/-26 homes) in a finger canyon surrounded by BMOSP. The topography rises steeply around these homes. The pair of structures are skylined and adjacent to a large color treated water reservoir (SDCWA Second San Diego Aqueduct). The overhead span will likely require marker balls. The reservoir exhibits visual mitigation to reduce its contrast. The color treatment, albeit not perfect helps to reduce its dominance and the vegetative screening softens its mass. The bundled conductors of TL 23051 are very evident from this perspective.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 33 Location: Black Mountain Ranch Park

Date: 11/19/2014

Photo #(s) 0075-0077

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Black Mtn. Ranch

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NNW 350°

GPS Coordinates Latitude: 32° 59' 20.11"n Longitude: 117° 07' 49.86"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 33 is from Black Mountain Ranch Park and active recreation area that also serves as a trail head to the popular Lusardi Loop Trail which is part of San Dieguito River Park a JPA administered facility; the trail is a multi-use trail that follows La Jolla Canyon. The open space lands beyond the transmission structures shown was extensively charred in the Bernardo Fire (May 2014). A kiosk and trail head are visible on the right (north) side of the existing TSP. The H-frame structure at this location is proposed to be replaced with a TSP cable pole; a large diameter in-line dead end structure that reroute the conductors from an overhead to underground position. Cable pole because of their mass and function could be construed as the most visually obtrusive of the tower structures proposed. The horizon of this viewshed is framed by the uplands of the Harmony Grove area. The existing pair of tower structures are in Black Mountain Open Space Park (City of San Diego) and are only partially visible due to a +/-15' elevation difference between the towers base and the existing park. Data recently provided shows the proposed cable pole to be located in the turf area of the park near the white fence in the distant foreground.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 34 Location: Carmel Valley Road

Date: 9/xx/2014

Photo #(s) PEA

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Torrey Highlands

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: \_\_\_\_\_°

GPS Coordinates Latitude: 32° 58' \_\_\_\_\_ "n Longitude: 117° 07' \_\_\_\_\_ "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: Upon further review and field observations, I would like to suggest we change the location of cKOP 34 (see field notes). The vantage point currently chosen tends to minimize the visual impact by aligning the cable pole and the STL and partially screening the base. There is also a relatively large stringing site (SS 15) and permanent work area at the base that is not evident in this perspective. The location of the cable pole (P42) is topographically superior to Carmel Valley Road so I doubt that I will find a vantage point from where the impacts of the vegetation clearing for the cable pole's work area will be visible. However, adjacent residential development is underway, and those future receptors may be impacted.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 35 Location: SR-56 eastbound

Date: 9/29/2014

Photo #(s) 300

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Carmel Valley

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 82°

GPS Coordinates Latitude: 32° 58' 00.91 "n Longitude: 117° 10' 20.40"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Motorists

Comments: cKOP 35 is the eastbound lane of SR-56 near the crest of its arch. The motorist view of the line is short due to the rate of speed and the roadways sinuous alignment. This route is heavily traveled and during rush hours the duration of the view could change significantly. The ground disturbing activities visible on the north (left) side of the freeway is a large area of new home construction which continues to the other side of the freeway to the right of the view cone of the cKOP. This is the first cKOP that looks at Segment C. Segment C is the least visually impactful Segment because no new tower structures are proposed. The bundled conductors on the SLT will contain 12 phases (conductors) where now there are 6.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 36 Location: SR-56 Bikeway

Date: 9/29/2014

Photo #(s) 301 302

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Carmel Valley

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: S 176°

GPS Coordinates Latitude: 32° 57' 59.10 "n Longitude: 117° 10' 08.66"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 36 is the Class I bikeway that runs from Del Mar to Carmel Mtn. Ranch along the south side of SR-56. The blacktop bikeway is enclosed on both sides by a 5' black vinyl chain link fence. The din of the passing vehicles makes it less than a bucolic experience. The bikers observed seem to be avid cyclists commuting or seeking a long relatively unencumbered exercise route. The cKOP is located under the ROW where the bundling of conductors will be most visually profound.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 37 Location: Santa Fe Canyon Pl.

Date: 9/10/2014

Photo #(s) 57 58

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Torrey Santa Fe

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 204°

GPS Coordinates Latitude: 32° 57' 30.14 "n Longitude: 117° 10' 7.84"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 37 is representative of what south facing residents of the Torrey Santa Fe (Santa Fe Canyon Pl. and Via Canyon Dr.) development would experience. These home have dramatic open space views of Del Mar Mesa Preserve's Deer Canyon. Conductor bundling's visual intrusion depends on the viewers perspective. If their perspective is normal (that is if the observer were at a similar elevation as the conductor catenary it would appear as if it were a single conductor. If the observers perspective is superior or inferior the multiple lines (separated by 18") would be more noticeable. This perspective is inferior and nearly underneath the lines which could be construed as a worst case scenario. The presence of the marker balls on the shield wire of the SLTs are very noticeable.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 38 Location: T/Ls Trail

Date: 9/10/2014

Photo #(s) 59-61

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Del Mar Mesa Preserve

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 204°

GPS Coordinates Latitude: 32° 57' 26.88 "n Longitude: 117° 10' 8.92"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist

Comments: cKOP 38 is from the TL Trail as it enters Del Mar Mesa Preserve (DMMP). DMMP has restricted access to many of the mountain bike communities favorite trails because of the area's biological relevance. This trail remains open and is the primary N-S access to the handful of other trails on the mesa that remain open and to Los Peñasquitos Canyon Preserve (LPCP). In the foreground is perpendicular crossing of Deer Canyon some 300' feet down to the canyons floor. The hill up the south side of the canyon is called Cardiac Hill. Notice the dense Maritime Scrubs coarse texture and mottled grey-green color. This view would be completely naturally appearing if not for the presence of the TL. The stark contrast of the bare soil is extremely noticeable.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 39 Location: TL Trail

Date: 9/30/2014

Photo #(s) 326 327

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/DMMP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N 356°

GPS Coordinates Latitude: 32° 57' 26.88 "n Longitude: 117° 10' 8.92"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist

Comments: cKOP 39 is from the opposite side of Deer Canyon as cKOP 38 and is oriented south as opposed to north. Again directly beneath the conductors catenary. Torrey Santa Fe are the house in the distant foreground. Marker ball presence is diminished because of their location behind the SLTs. The low mountains west of Escondido form the horizon.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 40 Location: Del Mar Mesa Trail

Date: 9/30/2014

Photo #(s) 313 314

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/DMMP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: N 12°

GPS Coordinates Latitude: 32° 56' 38.46 "n Longitude: 117° 10' 38.46"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist

Comments: cKOP 40 is at the intersection of 3 trails. There is an informational kiosk. This is the mesa top there are few finger canyon or other forms of relief. This northerly view along the ROW would be completely naturally appearing if not for the TL presence. The abundant Maritime Coastal Sage Scrub gives the ground plane a coarse texture. The topographically inferior position to the conductor catenaries will allow the additional phases of the bundling to be seen at least in the foreground. Notice the co-location of what is assumed to be a fiber optic cable on the west (left) side of the H-frame. Its catenary is considerable below that of the conductors adding to visual intrusion.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 4I Location: East side of the Preserve on access trail

Date: 11/16/2014

Photo #(s) 53-59 (Project Refinement folder)

Panorama Y N # of Frames 54-58 (5)

Jurisdiction/Planning Area: City of San Diego/Del Mar Mesa

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 87°

GPS Coordinates Latitude: 32° 56' 36.09"n Longitude: 117° 10' 16.24"w

Focal Length: 50mm

Visibility: <10 miles

Primary User Group: Recreationist/Residential

Comments: cKOP 4I is from a multi-use trail that circumnavigates the Preserve Del Mar and exclusive gated community nearly surrounded by Del Mar Mesa Preserve. ~1/2 of the 24 lots have residences. The homes are palatial some are over 20,000 sq. ft. on 1/4 acre lots. Depending on the home's orientation Segments C &/or D are visible. This view was chosen to get some separation from the ROW. Other homes are closer. This view is representative of a existing residential view which overlooks Segment C. The pads of the homes are +/- 10' superior to the view shown from the recreational trail. This elevated perspective provides their views of the conductor catenaries are a nearly normal perspective. Under these conditions the bundling that is proposed on the SLTs will be nearly imperceptible.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 42 Location: Del Mar Mesa Trail at the Preserve

Date: 9/30/2014

Photo #(s) 335 336

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/DMMP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 205°

GPS Coordinates Latitude: 32° 56' 32.05"n Longitude: 117° 10' 15.65"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist/Residential

Comments: cKOP 42 is on the trail that goes half way around the custom home subdivision called the Preserve. Large expensive lots and home to 10,000 sq ft. This SW erty view looks at segment D. Segment C which is closer and easterly was not included because the home sites in the Preserve are at nearly the same elevation as the as the conductors. As explained earlier under this normal perspective bundling of the conductors would be difficult to discern.

The Upper Cobbles Trail cuts across a portion of the frame diagonally and is representative of the type of impact pole clearing would have in this landscape. This is a middleground (>0.5 mi.) View of Segment D. The new TSPs would be taller and more visible than the H-frames they will replace. 5 SLTs are visible in this view frame. A single marker ball is visible left of the left most SLT.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñasquitos Transmission Line

Client: Panorama Environmental

cKOP: 43 Location: Peñasquitos Junction/Park Village Drive

Date: 10/22/2014

Photo #(s) 463-465 using 464

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: 356°

GPS Coordinates Latitude: 32° 56' 16.90"n Longitude: 117° 10' 10.10"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist/Residential

Comments: cKOP 43 is located in LPCP on the Transmission Lines Trail south of PQ Junction looking North at the angle structures proposed. This trail is one of few unrestricted accesses between LPCP and DMMP. The residence visible in the left (west) portion of the view frame is located in the Preserve development. As a result of "project refinements" the SLT will be replaced by a large diameter in-line dead end structure TSP and the steel H-frame next to it will be removed. The 2 wood pole in the left of the frame will be removed and replaced with the first of the TSPs proposed for Segment D. Marker balls will also be required but they already exist. A larger stringing site and permanent work areas will require removal of the dense MSS which will expose the buff colored soil which will create strong contrasts. From this topographically inferior perspective the bundling of conductors proposed in Segment D it be noticeable. This cKOP was moved from a residential cKOP to accommodate changes proposed by project refinements





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñasquitos Transmission Line

Client: Panorama Environmental

cKOP: 44 Location: Los Peñasquitos Canyon Preserve (LPCP) Upper Cobbles Date: 11/16/2014

Photo #(s) 53-59

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Rancho Peñasquitos

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 292°

GPS Coordinates Latitude: 32° 56' 03.77"n Longitude: 117° 10' 20.37"w

Focal Length: 50mm

Visibility: <10 mi. haze

Primary User Group: Recreationist

Comments: cKOP 44 is located at the end of a cherry stem off Upper Cobbles Trail. there is a trail sign where upper Cobbles turns westerly and proceeds off the mesa into Duck Pond Canyon. The sign directs recreationists to Duck Pond (right) or View Point (left). The View Point Trail goes under the TL (Segment D) and proceeds another 0.2 miles to a finger mesa on the north rim of Los Peñasquitos Canyon. Views of the canyon here are almost breathtaking; 180° views up and down the canyon. If one scans right from the down canyon viewshed the ROW comes into view as it traverses the canyon's north rim. There is a bench at the view point were recreationists are invited to pause. Viewshed infringement will be of new marker balls proposed between E15 & E16, the new taller TSPs, and the wall and relatively large work areal proposed for P47. *This cKOP's perspective was changed to view the marker balls that were part of SDG&E's project refinements (November 2014).*





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 45A Location: LPCP Duck Pond Trail

Date: 11/16/2014

Photo #(s) 90-96

Panorama Y N # of Frames 3

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NNW 132°

GPS Coordinates Latitude: 32° 55' 13.88"n Longitude: 117° 10' 39.95"w

Focal Length: 50mm

Visibility: <10 mi.

Primary User Group: Recreationist

Comments: cKOP 45A is located on upper Duck Pond Trail. At this point the main trail turns westerly and up steeply a tributary canyon to a trail head off Carmel Mountain Road near developing Alta Del Mar and Duck Pond Ranch. Where views of the ROW from the trail are intermittently obscured by topography and vegetation. This cKOP was added to approximate the valuable views from the exclusive residences at Duck Pond Ranch. The cKOP is topographically inferior and in closer proximity than the residential views. This vantage point was chosen because access to a more appropriate location is not in conformance with LPCP's management directives. This view is panoramic as evidenced by only a portion of the TL spanning the canyon is visible. This easterly perspective was chosen because cKOP 45 B captures the westerly portion of the span between P47 and P 48. This view looks at P 47. The new TSP will be left of and up slope of the existing H-frame. A westerly facing wall proposed will likely not be visible from this location. Grading impacts will most likely also be obscured. The marker balls on this span on the new OHGW on the STLs will be skylined and plainly visible from this distance (850/0.16 mi.). The marker balls from this perspective will be predominantly back lit which reduces their visibility incrementally. If not for the TL this view could be characterized as naturally appearing visually appealing.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 45B Location: LPCP Duck Pond Trail South

Date: 11/16/2014

Photo #(s) Panorama Y N # of Frames 3

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NNW 338°

GPS Coordinates Latitude: 32° 55' 48.77"n Longitude: 117° 10' 33.75"w

Focal Length: 50mm

Visibility: <10 mi.

Primary User Group: Recreationist

Comments: cKOP 45 is at a trail side kiosk near the mouth of Duck Pond Canyon, a major tributary canyon to Los Peñasquitos Canyon, where Equestrian and Hiking/Biking trails bifurcate. The equestrian trail is east of and occupies higher ground than the hiking/biking trail which follows the canyon bottom which has many scrub oak trees that obscure visibility. The trail goes deep into Duck Pond Canyon before veering west and climbing out to the exclusive residential on southern Del Mar Mesa. The palatial homes of the gated community of Duck Pond Ranch can be seen on the horizon (cKOP 45A). Duck Pond is a destination in LPCP but after 3 years of drought there is no pond or ducks. Project features visible from this vantage point include P48 and the large 3 sided retaining wall proposed. Additionally, project refinements have changed P48 from a tangent to a dead end structure and added marker balls to this relatively long (1400') span. This cKOP is 0.3 miles (1600') from the ROW so it is considered a near middleground view. Marker balls that will be skylined and front lit most times of the day, their most conspicuous state. cKOP 45 was moved from a kiosk near the waterfall to this location as a result of Project Refinements by SDG&E (Nov. 2014), it being rejected as duplicative, and renamed 45B.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 46 Location: LPCP Waterfall

Date: 9/12/2014

Photo #(s) 152-157

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 282°

GPS Coordinates Latitude: 32° 55' 37.58"n Longitude: 117° 10' 40.03"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist

Comments: cKOP 46 is at the waterfall on Penasquitos Creek. Besides the Adobe the waterfall is the most popular destination in the preserve. After 3 years of drought the waterfall is more of a series of nick points, but the water flow is still audible. Vantage points with water, particularly flowing water has a very high visual sensitivity. It psychological effect invites one to pause. More than the 4 pairs of tower structures shown in the view frame are visible from the vantage point. The visible towers are well into the middleground (>0.5 mi.). Marker balls will be visible on spans on the left side of the view cone.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 47 Location: Calle Christobal Vista Point East

Date: 9/12/2014

Photo #(s) 80-90

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 325°

GPS Coordinates Latitude: 32° 55' 27.89"n Longitude: 117° 10' 01.60"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationist

Comments: cKOP 47 is a small "park" on the north side of Calle Christobal. It has a U-shaped access road with 10 parking spaces. The only amenities are a few benches and pleasant landscaping. It is at the head of a large finger canyon and affords panoramic views of the canyon. This view frame was chosen because farther to the west (left) TL 23051 climbs out of the canyon on the side canyon shoulder and the conductors are in the field of vision.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 48 Location: Alta Del Mar Trail off Carmel Mtn Rd.

Date: 11/16/2014

Photo #(s) Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Neighborhood 10 Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: ENE 70°

GPS Coordinates Latitude: 32° 55' 50.81"n Longitude: 117° 11' 06.49"w

Focal Length: 50mm Visibility: >15 mi. Primary User Group: Recreationist

Comments: cKOP 48 is from a new multi-use trail in the under development subdivision of Alta Del Mar. It is on the south side of Carmel Mountain Road west of the SDG&E gated access road. The new trails have a DG bed and are delineated by a equestrian log pole fence. The trail nearly parallels the ROW in this vicinity as it leaves the urbanizing area and heads easterly towards Del Mar Mesa Preserve. Side trails that provide access to LPCP to the south are numerous and often challengingly steep. This easterly view is of Segment D where the wooden H-frames tower structures will be replaced with incongruent TSPs. The pyramidal forms of Black Mtn., Mount Woodson, Iron Mtn. and Cowles Mtn. are silhouetted along the horizon.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 49 Location: Gablewood Way

Date: 9/31/2014

Photo #(s) 385 386

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Carmel Country Highlands

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: ENE 73 °

GPS Coordinates Latitude: 32° 55' 39.71"n Longitude: 117° 11' 27.70 "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOPs 49, 50, and 51 are from backyard views from this neighborhood that is in close proximity to the ROW. These residents participated vocally in the scoping process with letters and a petition. Their views of the canyon are perhaps the most panoramic of residential views along this Segment. 8 of the homes have cinder block walls in their backyards that also act as retaining walls but these home have unusually deep lots and can certainly see portions of the support structures and the conductors. The rest of score of home have wrought iron or plexiglass yard view fences and many have outdoor entertainment areas. Some are so close to the alignment that the conductors are the real source of visual intrusion.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 50 Location: Heather Run

Date: 9/31/2014

Photo #(s) 377 378

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Carmel Country Highlands

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: ENE 78 °

GPS Coordinates Latitude: 32° 55' 35.01"n Longitude: 117° 11' 34.69 "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: Ibid.

cKOP 50 is looking easterly, their southerly canyon views may be improved by the higher conductors of the new line because the height of the catenaries here is so divergent. The red survey stake is the location of the new TSP, which appears to me to require a retaining wall. The retaining walls on the homes in the left were discussed previously. This easterly view was chosen because a more southerly view would only show conductors. Also this perspective shows the permanent work area that will be cleared of vegetation and probably require landform modification to accommodate the new TSP. Notice the base elevation of the H-frame and the SLT, that +/- 30' so the catenaries occupy a large area of the vertical field of view. The new taller TSPs will reduce this impact by placing the catenaries closer together.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 51 Location: Briarlake Wood Rd.

Date: 9/31/2014

Photo #(s) 377 378

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Carmel Country Highlands

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: SW 245 °

GPS Coordinates Latitude: 32° 55' 33.91"n Longitude: 117° 11' 38.55 "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: Ibid.

cKOP 51 is from what approximates a view from the backyards at Briarlake Woods Rd. +/- 35 houses on Briarlake Woods Rd. would have similar views but this one is the closest and the other are inaccessibly. The next cKOP would be representative of some of the home that are not as close to the ROW. This view was taken late in the day when the tower structures were backlit and the marine layer was starting to affect visibility. 4 SLTs are visible in this view cone. The middleground is further cluttered by a separate TL supported by TSPs that runs south from Peñaquitos S/S. This perspective was chosen because a view farther left would only show the conductor catenaries. Like cKOP 50 it appears this area will require landform alteration to accommodate the new TSP. Again the proposed taller poles will reduce the vertical field of view of the conductors. A 1 acre stringing site is proposed to the right of the first pair of tower structures and the remaining vegetation and topography will likely screen it from this vantage point. Additionally marker balls may be required on two consecutive spans after the first set of structures. Some of the marker balls will be skylined making their presence much more noticeable.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 52 Location: Carmel Country Highlands Entry Park

Date: 9/11/2014

Photo #(s) 377 378

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Neighborhood 10

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: S 165 °

GPS Coordinates Latitude: 32° 55' 43.18"n Longitude: 117° 11' 48.16 "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 52 is from a formal park at the intersection of Carmel Mtn Rd. and Carmel Country Rd. This would also be more representative of Briarlake Woods homes further to the west than the previous cKOP. Access to the area behind the majority of Briarlake Woods home was problematic. The pair of tower structures in this view are the ones in the foreground of cKOP 52. The new TSP will not be perfectly paired with the SLT but it will be closer than the H-frame currently is. The span to the right of the SLT may require marker balls. The dichotomy of the conductor catenaries is very apparent from this location. However, upon close examination the conductors on the H-frame are primarily backdropped and very difficult to see against the vegetative backdrop of the PQ Canyon's south rim.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 53 Location: Hunter Glen Pocket Park

Date: 9/11/2014

Photo #(s) 377 378

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Neighborhood 10

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: S 165 °

GPS Coordinates Latitude: 32° 55' 32.49"n Longitude: 117° 11' 55.12 "w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential/Recreationists

Comments: cKOP 53 is from a small pocket park on the east side of this long cul de sac (Hunters Glen Dr.) on a finger mesa that extends into PQ Canyon. The H-frames structure are inconspicuous. The new taller TSPs will be more evident. These two adjacent canyon are quite large and deep. The STL in the center of this view is the same one that was looked at in the previous 2 cKOPs (E54, P54) The current data we have from the IOU shows marker balls on the span right (west) of the central SLT. The H-frame paired with the STL is obscured by topography. The H-frame right of the SLT is proposed to be removed as the result of project implementation.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 54 Location: Harvest Run Dr.

Date: 9/11/2014

Photo #(s) 377 378

Panorama\_Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Neighborhood 10

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: S 165 °

GPS Coordinates Latitude: 32° 55' 22.38"n Longitude: 117° 11' 59.69"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 54 is from the next finger mesa to the west of cKOP 53. This one extends deeper into the canyon and is closer to the ROW. The cKOP is a backyard view from a residence next to the IOU's access point, which also affords LPCP access via a steep single track trail. There are perhaps 10 homes in close proximity to the ROW. This view is easterly. This span is designated to require marker balls and they will be very apparent as they come in close proximity to the homes on the end of the cul de sac. If one were to pan right from this view the conductors are the visual intrusion. Yet again the first SLT is E22. In this view however, the 1.2 acre stringing site will be visible because of the contrast created by vegetation removal (short term impact).





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 55 Location: LPCP South Side Trail

Date: 9/12/2014

Photo #(s) 170 171

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/LPCP

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 280 °

GPS Coordinates Latitude: 32° 55' 06.09"n Longitude: 117° 11' 45.17"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: Ibid.

cKOP 55 is from a hill on the LPCP's South Side Trail. The vast majority of the trail that runs along PQ Creek's south side from Sycamore crossing to this vantage point is obscured from the project by the formidable canopy of the creek's riparian corridor. cKOP is an exception where the trail climbs a ridge and gains enough elevation to allow views over the canopy. These multi-use trails are extremely popular with recreationists, the majority of which are mountain bikers. Consecutive spans across deep adjacent canyons will likely require marker balls. This view offers visual variety from the grass covered valley floor rises the multi species multi level riparian canopy to the patchy chaparral covered canyons and mesas of the canyon's north rim. Notice how the SLTs recede with distance.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 56 Location: Calle Christobal Vista West

Date: 9/11/2014

Photo #(s) 98

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Mira Mesa

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: NW 307 °

GPS Coordinates Latitude: 32° 54' 58.64"n Longitude: 117° 11' 26.73"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 56 much like cKOP 47; it is a pull off the travelway (Calle Christobol) with a few parking space, a bench and landscaping. This on differs from 47 in the fact that there is a 20' knoll and a dead end trail that leads to its acme. The panoramic views of the lower canyon are even broader and perhaps more compelling than cKOP 47. Additionally, it looks northwesterly across the canyon at 2 consecutive span that will likely require marker balls. The elevated prospective if this vantage point causes the tower structures and the conductors to be back dropped and they are very difficult to see.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 57 Location: Greenshade Rd.

Date: 9/11/2014

Photo# 101 102 Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Mira Mesa

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 88°

GPS Coordinates Latitude: 32° 54' 50.17"n Longitude: 117° 11' 47.54"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 57 is from a single loaded cul de sac on the western edge of Mira Mesa. Like cKOPs 47 and 56 it affords panoramic views of the canyon. The vantage point like cKOP 56, the western portion of the ROW is backdropped and the tower structures and conductors are difficult to see. This view is more easterly where the TL ROW is on higher ground and the tower structures are skylined. The view is just over 0.5 miles (middleground) from the project so the marker balls may not be prominent. At this distance the transparent nature of the lattice structures help them recede the proposed new monopoles will be more visible especially if they are large diameter in-line dead end towers. This view is from the north (unloaded) side of the street. From the homes the panoramic valley floor would not be visible, yet the towers and conductors of the north canyon rim would be visible.





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 58

Photo # 359-362

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Torrey Hills

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 82°

GPS Coordinates Latitude: 32° 55' 13.13"n Longitude: 117° 12' 33.27"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 58, 59, & 60 are in response scoping process where residents of this community expressed strong concerns to visual intrusion by a very organized group of individuals in this U-shaped neighborhood that is in close proximity to the ROW. +/- 40 homes will be directly affected. The +/- 40 other homes are internal and their views are much less impacted by the ROW.

This view is from the pocket park on the neighborhood's east side where commentators said they had concerns. If one were to pan to the right (west) you would see a pair of tower structures that are just outside the park. It is also representative of residential views from homes on the east side of Manorgate Dr. Perhaps 15 homes share a similar expansive view. The view is easterly. A large finger canyon to PQ Canyon runs diagonally across the foreground, PQ Canyon and Mire Mesa are in the middleground. The horizon line is the distant Traverse Range. This view is perhaps on of the more dramatic views that are not in one of the Preserve areas. Marker balls will likely be required across the canyons past the second tower pair Which is 1600' distant and they will normally appear back of side lit and they will be backdropped making them less apparent. The closest SLT tower structures are partially skylined as will be the ne TSP. Notice how difficult it is to see the existing H-frames, this will likely no be the case for the new taller more robust TSPs. The houses visible in the left portion of the view are on Hunter's Point (cKOP 54).





## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 59

Photo # 356-367

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Torrey Hills

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: W 256°

GPS Coordinates Latitude: 32° 55' 12.06"n Longitude: 117° 12' 38.17"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Residential

Comments: cKOP 59 is in the same neighborhood as cKOP 58. This view represents residential views that face south would be located on Laurelcrest Dr. It would also be representative of the +/- 12 homes on the north-south portion of Laurelcrest Dr. who's backyards faces west. Access to the slope behind those residences proved problematic. This view is representative of the +/- 20 homes facing south will experience looking westerly toward the Penasquitos Substation. Views directly south are of the conductor catenaries and a single H-frame structure. The catenaries are quite high overhead but no doubt are visible from the upper floor of these two story residences. The more expansive westerly view was chosen as opposed to the more obscured southerly view. The southerly view may be slightly improved by the proposed project because it will remove an intermediate H-frame structure that is direct south of this vantage point. It will also raise the height of the H-frame catenaries so they more closely follow the catenaries on the SLTs. Tower structure pairs are on both side of the development. The majority of these homes have backyard enclosure that are view fences and allow the residents to enjoy their open space views. The Torrey Hills dog park is in the foreground. Farther into the foreground in the lower right portion of the view frame the Torrey Hills shopping center is visible. The myriad of poles and conductor of the Substation are along the horizon. A portion of the infrastructure of the 14 acre Peñaquitos Substation is visible on the horizon in the left (south) portion of the view. The view has additional clutter added by the N-S trending TL on TSPs that are not a part of this project. From this inferior perspective the bundling of conductors on the south side of the SLTs are very evident.



## cKOP Selection Process - Photographic Survey

Project: Sycamore-Peñaquitos Transmission Line

Client: Panorama Environmental

cKOP: 60

Photo # 369-374

Panorama Y N # of Frames

Jurisdiction/Planning Area: City of San Diego/Torrey Hills

Reviewer: Langenfeld

View Direction: N EN NE NNE E ESE SE SSE S SSW SW WSW W WNW NW NNW N Azimuth: E 84°

GPS Coordinates Latitude: 32° 55' 11.28"n Longitude: 117° 12' 45.54"w

Focal Length: 50mm

Visibility: >15 mi.

Primary User Group: Recreationists

Comments: cKOP 60 is from the west end of the Torrey Hills dog park. The home discussed in the previous 2 cKOPs are visible to the north (left) and demonstrates their views in relationship to the conductors. This view looks east, the 2 h-frames will be replaced by a single TSP. No marker balls are anticipated for this span. Again from this perspective the bundled conductors on the SLTs are obvious. These types of recreationists are typically at leisure and enjoying the company of their pets. They have time to be observant of their surroundings.







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**Sensitivity Matirix**

The cKOP numbering in the table is not consecutive because 17 cKOPs were initially rejected from further analysis because they were either duplicative, or the viewer groups are considered to have a low sensitivity level. The 15 cKOPs elevated to KOPs are highlighted in the table.

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**Table F-17 Sensitivity Matrix Candidate Key Observation Points**

cKOP	Name	LCU	Distance Zone	Number of Viewers	Project Features within Viewshed	Viewer Sensitivity	View Duration	Baseline Visual Quality	View Perspective	Total Score
<p><b>Segment A – Sycamore Substation to Carmel Valley Road. (8.31 miles).</b> Segment A is subdivided into 3 LCUs. The existing 230 kilovolt (kV) tower structures of LCUs A-1 and A-3 are steel lattice towers (SLTs), while LCU A-2 contains color-treated tubular steel poles (TSPs). LCU A-1 is 1.6 miles from Sycamore Substation to Miramar Ranch North. LCU A-2 is from Miramar Ranch North through Rancho Peñasquitos to Sundevil Way (5.3 miles). LCU A-3 is from Hilltop Community Park to Black Mountain Ranch Park (1.4 miles).</p>										
1	Stonebridge Athletic Field	A-1	5	3	4.5	5	3	4	4	28.5
2	Fortino Point Road	A-1	4	1	2	5	5	3	4	24
3	Rose Garden Court	A-1	4	1	3.5	5	5	4	5	27.5
4	Beller Canyon Road	A-1	2	2	4.5	5	5	3	4.5	26
5	Eastridge Place	A-1	3	1	3	5	5	3.5	4	24.5
6	Scrub Oak Trail	A-2	4	2.5	2	5	5	3.5	5	27
8	Angelique Street	A-2	5	1	4	6	5	4	5	30
9	Vail Court	A-2	4	1	5	5	5	3.5	5	28.5
11	Scripps Poway Parkway	A-2	3.5	3.5	3.5	3	2	3.5	5	24
13	Ivy Hill Condos	A-2	4	2.5	2.5	5	3	2.5	4	23.5
15	Los Peñasquitos Canyon Preserve (LPCP) Trans County Trail	A-2	5	2	6	6	2	4.5	5	30.5
16	Cara Knot Way	A-2	3	2	6	5	2	4	4.5	26.5
17	Harvest View Way	A-2	2.5	1	4	5	5	2	3	22.5
18	Northbound Interstate 15	A-2	3	5	4.5	3	1	2	3	21.5
21	Quinton Road	A-2	5	1	5	6	5	4.5	2.5	29

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cKOP	Name	LCU	Distance Zone	Number of Viewers	Project Features within Viewshed	Viewer Sensitivity	View Duration	Baseline Visual Quality	View Perspective	Total Score
22	Paseo Montalban	A-2	5	2	4	5	3	2	2.5	23.5
23	Bassmore Drive	A-2	5	2	3	6	5	3	5	29
26	Mount Carmel High School	A-3	2	3	2.5	3	4	3	2	19.5
27	Hilltop Community Park South	A-3	4	3	3.5	5	3	4	3.5	26
29	Mediatrice Lane	A-3	4	2	4	5	5	3.5	4	27.5
30	Black Mountain Opsem Space Preserve (BMOSP) Trail	A-3	3	2	6.5	6	2	5	3	27.5
31	BMOSP Trail	A-3	5	2	7	6	2	2.5	3.5	28
32	Maler Road	A-3	5	1	4.5	5	5	4	5	29.5
<b>Segment B – Carmel Valley Road Underground (2.84 miles).</b> Long term visual impacts only would occur at the two cable poles at either end of the LCU B, which are considered as part of Segment B.										
33	Black Mountain Ranch Park	B	5	3	5	5	3	3.5	4	28.5
34	Carmel Valley Road	B	4	3.5	3	4	2	2	4	22.5
<b>Segment C – Carmel Valley Road to Peñasquitos Junction (2.19 miles).</b> The long term visual change associated with LCU C is related to the bundling of the conductors that is proposed. The current SLTs support six conductors, and the project proposes an additional six conductors on the SLTs. Bundling of conductor pairs one phase with another divergent phase 18 inches apart. From a visual perspective, this makes the additional set of conductors difficult to discern except from inferior perspective within relatively close proximity. The more inferior the perspectives, the more obvious are the additional conductors.										
36	State Route 56 Bikeway	C								
37	Sante Fe Canyon Place	C	5	1	1	5	5	3	5	25



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cKOP	Name	LCU	Distance Zone	Number of Viewers	Project Features within Viewshed	Viewer Sensitivity	View Duration	Baseline Visual Quality	View Perspective	Total Score
38	Del Mar Mesa Preserve (DMMP) Trail North	C	5	2	2	6	2	4.5	5	26.5
40	DMMP Trails at Peñasquitos Junction	C	5	2.5	2	6	2.5	4.5	5	27.5
41	DMMP Trail and the Preserve Residential	C	4	2	1	6	5	5	3.5	26.5
<p><b>Segment D – Peñasquitos Junction to Peñasquitos Substation (3.34 miles).</b> The long term visual change would consist of removal of H-frame support structures and replacement with TSPs. Conductor diameter would increase slightly to accommodate increased voltage; however, conductor size increase would not be appreciatively discernable to the casual observer.</p>										
42	DMMP Trail	D	2	2	6	6	5	4.5	4	29.5
43	Peñasquitos Junction	D	5	2	5	6	2	2	4	26
44	View Point on Upper Cobbles Trail	D	3.5	1	4.5	6	3	5	3	26
45A	Duck Pond Trail North	D	3	2	5.5	6	2	5	5	28.5
45B	Duck Pond Trail South	D	2	2.5	4.5	6	2.5	5	5	27.5
46	LPCP Trail	D	1.5	3	6	6	3	5	5	29.5
47	Calle Christabol Vista East	D	1	3	7	5	3	5	4	28
49	Gablewood Way	D	5	2	7	6	5	4.5	4	33.5
50	Heather Run	D	4.5	2	4	6	5	4	5	30.5
51	Briarlake Woods Drive	D	4	2	8	6	5	4	3.5	32.5
52	Carmel Country Highlands Entry Park	D	2.5	2	2.5	6	5	4.5	4.5	27

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cKOP	Name	LCU	Distance Zone	Number of Viewers	Project Features within Viewshed	Viewer Sensitivity	View Duration	Baseline Visual Quality	View Perspective	Total Score
55	LPCP South Side Trail	D	1.5	2.5	5.5	6	2	5	4	26.5
58	Manorgate Drive	D	5	3	6	6	5	5	2	32
59	Laurelcrest Drive Backyard	D	5	1	5	6	5	3	4.5	29.5

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**REFERENCES**

- Argonne (Argonne National Laboratory). 2015. *Electric Transmission Visibility and Visual Contrast Threshold Distances*. Dated 2014. Accessed February 16, 2015 at <http://visualimpact.anl.gov/transvctd/>.
- FHWA (Federal Highway Administration). 1988. *Visual Impact Assessment for Highway Projects*. Office of Environmental Policy. Accessed April 9, 2015 at <http://www.dot.ca.gov/ser/downloads/visual/FHWAVisualImpactAssmt.pdf>.