

Attachment K

Mitigation Measures Applicable by Construction Link, Segment, and Structures

Sunrise Powerlink Transmission Project Mitigation Monitoring, Compliance, and Reporting Program



California Public Utilities Commission
and
Bureau of Land Management
U.S. Department of Interior

October 2010

Mitigation Measures Applicable By Construction Link, Segment and Structures																													
Construction Links	IV Sub	500 kV Imperial County Link 1					500 kV San Diego Link 1					500 kV San Diego Link 2					Suncrest Link 3	230KV OH Link 5	230KV UG Link 4	230kV OH Link 5			Sycamore Sub	Reconductors			Other Substation Upgrades		
		10B	10A 10A	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A	7	5	5	4A				20	21	22		23	24	25			
Segments	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,		30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)										
Mileposts of Segments from 02/09		0	0 to 19.15	19.15 to 23.2	23.2 to 30.3	30.3 to 39.7	39.7 to 52.5	52.5 to 61.3	61.3 to 65.4	65.4 to 70.9	70.9 to 74.8	74.8 to 77.6	77.6 to 90.0		90.0 to 92.8	92.8 to 99.0	99.0 to 105.5	105.5 to 112.7	112.7 to 118.1										
Mileposts from at a glance table 033110		0	0 to 19.15	19.15 to 24.50	24.50 to 31.03	31.03 to 41.77	41.77 to 52.5	52.5 to 63.07	63.07 to 67.5	67.5 to 70.66	70.66 to 75.33	75.33 to 78.16	78.16 to 89.03		89.03 to 91.79	91.79 to 98.00	98.00 to 103.14	103.14 to 111.8	111.8 to 117.00										
Structures			EP363-1 to EP301	EP301 to EP276-1	EP276-1 to EP252-1	EP252-1 to EP206-1	EP206-1 to EP141	EP141 to EP99-2	EP99-2 to EP79	EP79 to EP67	EP67 to EP47-2	EP47-2 to EP39	EP39-1 to SSDE4		SSDE3 to CP95-1		CP88-1 to CP64-2	CP64-2 to CP31-2	CP31-2 to SSDE1										
B-1a: Provide restoration/compensation for impacted sensitive vegetation communities			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X						
B-1c: Conduct biological monitoring	X																												
B-1k: Re-seed disturbed areas after a transmission line-caused fire			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
B-1l: SDG&E shall continue to work with the USDA Forest Service to minimize impacts to the RCA between Structures 184 and 187								X																					
B-2a: Provide restoration/compensation for impacted jurisdictional areas			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

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B-7c: Minimize impacts to Peninsular bighorn sheep and provide compensation for loss of critical habitat			X	X	X	X	X																			
B-7d: Conduct burrowing owl surveys, and implement appropriate avoidance/minimization/compensation strategies			X																							
B-7e: Conduct least Bell's vireo and southwestern willow flycatcher surveys, and implement appropriate avoidance/minimization/compensation strategies							X	X		X	X	X	X	X	X	X	X	X								

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B-7h: Implement appropriate avoidance/ minimization strategies for eagle nests						X	X				X	X	X				X									
B-7i: Conduct Quino checkerspot butterfly surveys, and implement appropriate avoidance/minimization/compensat			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
B-7j: Conduct arroyo toad surveys, and implement appropriate avoidance/ minimization/compensation strategies							X	X	X	X	X	X	X	X	X	X	X	?								
B-7l: Conduct coastal California gnatcatcher surveys, and implement appropriate avoidance/ minimization/compensation strategies										X	X	X	X	X	X	X	X	X			X	X	X			

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B-8a: Conduct pre-construction surveys and monitoring for breeding birds	X																									
B-9a: Survey for bat nursery colonies			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
B-10a: Utilize collision-reducing techniques in installation of transmission lines			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
B-11a: Prepare and implement a Raven Control Plan			X	X																						
B-12a: Conduct maintenance activities outside the general avian			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
B-12b: Conduct maintenance when arroyo toads are least active							X	X						X	X	X	X	X	?							
B-12c: Maintain access roads and clear vegetation in Quino checkerspot butterfly habitat				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			

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VR-APM-5: Transmission line structures will not be installed directly in front of residences or in direct line-of-sight from a residence. Implement with V-3c		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
VR-APM-6: In scenic view areas place structures to avoid sensitive features and/or allow conductor to clearly span the features. (Need SDG&E input)																										
Land Use																										
L-1a: Prepare Construction Notification Plan	X																									
L-1c: Coordinate with MCAS Miramar																			X	X	X					
L-2b: Revise project elements to minimize land use conflicts	X						X	X	X	X	X	X	X	X	X	X	X	X	X							

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LU-APM-5: Coordinate construction activities with appropriate water management representatives. (Need SDG&E input). Implement with L-1a			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LU-APM-6: Flag ROW boundary and limits of construction activity inside and outside the ROW in environmentally sensitive areas to alert construction personnel that those areas should be minimize or avoided. Implement with L-1f			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LU-APM-7: Install project facilities along the edges or borders of private property, open space parks, and recreation areas			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						

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WR-1a: Coordinate construction schedule and activities with the authorized officer for the recreation area			X	X	X	X	X	X		X	X					X	X	X	X	X	X	X							
WR-1b: Provide temporary detours for trail users			X	X	X	X	X	X		X	X					X	X	X	X	X	X								
WR-1c: Coordinate with local agencies to identify alternative recreation areas			X	X	X					X	X					X	X	X	X	X	X								
WR-2a: Develop a reroute for the BCD Alternative Revision to reduce effects on recreation							X																						
WR-2b: Evaluate and Implement PCT Route Revision										X	X																		
WR-3a: Coordinate tower and road locations with the authorized officer for the recreation area.			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X									

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R-APM-2a: Provide advance notice of restriction of conflicts with access routes to recreational use areas. Implement with WR-1a			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
R-APM-2b: No construction that affects trail use will be conducted in that area on federal holidays. Implement with WR-1a			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
R-APM-2c: Coordinate all construction activities, including temporary trail closures, affecting the parklands and trail systems of San Diego and Imperial Counties with the counties' Parks and Recreation Department. Implement with WR-1a																X	X	X	X	X	X					

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R-APM-2d: Post signs directing vehicles to alternative park access and parking in the event construction temporarily obstructs parking areas near trailheads. Implement with WR-1a			X					X	X	X	X	X	X			X	X	X	X	X	X	X				
R-APM-2e: Post signs advising recreation users of construction activities and directing them to alternative trails or bikeways on both sides of all trail intersections. Implement with WR-1a			X					X	X	X	X	X	X			X	X	X	X	X	X	X				

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R-APM-2f: Post signs advising equestrians of construction timeframes where helicopters are used for construction, at all equestrian trail-access points within the vicinity of the flight paths.			X					X	X	X	X	X	X			X	X	X	X	X	X	X				
R-APM-3a: Construction-related traffic shall be restricted to routes approved by the authorized agencies	X																									
Agriculture																										
AG-1a: Avoid interference with agricultural operations						X	X	X	X	X	X	X	X			X	X	X	X							
AG-1b: Restore compacted soil						X	X	X	X	X	X	X	X			X	X	X	X							
AG-1c: Coordinate with grazing						X	X	X	X	X	X	X	X			X	X	X	X							
AG-3b: Consult with and inform aerial applicators						X	X	X	X	X	X	X	X			X	X	X	X							

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C-6f: Reduce adverse visual intrusions to the Desert View Tower viewshed					X																								
CR-APM-1: Instruct construction personnel on the protection and avoidance of cultural resources. Implement with PAL-1e	X																												
CR-APM-2: Flag archeological sites that are eligible or potentially eligible for the National Register		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CR-APM-3: Report any previously unidentified cultural resource (historic or prehistoric site or object) discovered		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

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		10B	10A 10A	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A	7	5	5	4A				20	21	22		23	24	25			
Section	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
Segments																													
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,	30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)											
Mileposts of Segments from 02/09	0	0 to 19.15	19.15 to 23.2	23.2 to 30.3	30.3 to 39.7	39.7 to 52.5	52.5 to 61.3	61.3 to 65.4	65.4 to 70.9	70.9 to 74.8	74.8 to 77.6	77.6 to 90.0	90.0 to 92.8	92.8 to 99.0	99.0 to 105.5	105.5 to 112.7	112.7 to 118.1												
Mileposts from at a glance table 033110	0	0 to 19.15	19.15 to 24.50	24.50 to 31.03	31.03 to 41.77	41.77 to 53.54	53.54 to 63.07	63.07 to 67.5	67.5 to 70.66	70.66 to 75.33	75.33 to 78.16	78.16 to 89.03	89.03 to 91.79	91.79 to 98.00	98.00 to 103.14	103.14 to 111.8	111.8 to 117.00												
Structures		EP363-1 to EP301	EP301 to EP276-1	EP276-1 to EP252-1	EP252-1 to EP206-1	EP206-1 to EP141	EP141 to EP99-2	EP99-2 to EP79	EP79 to EP67	EP67 to EP47-2	EP47-2 to EP39	EP39-1 to SSDE4	SSDE3 to CP95-1	CP88-1 to CP64-2	CP64-2 to CP31-2	CP31-2 to SSDE1													
CR-APM-4: Conduct maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, and reconstruction of a historical resource consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines	X																												
CR-APM-5: Follow the guidance described for: Preservation in-place for mitigating impacts to archaeological sites, and	X																												
CR-APM-6: Avoid, fence, or barricade historic properties, contributing portions and sensitive features for protection		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											

Mitigation Measures Applicable By Construction Link, Segment and Structures																													
Construction Links	IV Sub	500 kV Imperial County Link 1					500 kV San Diego Link 1					500 kV San Diego Link 2					Suncrest Link 3	230KV OH Link 5	230KV UG Link 4	230kV OH Link 5			Sycamore Sub	Reconductors			Other Substation Upgrades		
		10B	10A	9C	9B	9A	8E	8D	8C	8B	8A	7	5	5	4A	20				21	22	23		24	25				
Section		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
Segments	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,		30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)										
Mileposts of Segments from 02/09	0	0 to 19.15	19.15 to 23.2	23.2 to 30.3	30.3 to 39.7	39.7 to 52.5	52.5 to 61.3	61.3 to 65.4	65.4 to 70.9	70.9 to 74.8	74.8 to 77.6	77.6 to 90.0	90.0 to 92.8		90.0 to 92.8	92.80 to 99.0	99.0 to 105.5	105.5 to 112.7	112.7 to 118.1										
Mileposts from at a glance table 033110	0	0 to 19.15	19.15 to 24.50	24.50 to 31.03	31.03 to 41.77	41.77 to 53.54	53.54 to 63.07	63.07 to 67.5	67.5 to 70.66	70.66 to 75.33	75.33 to 78.16	78.16 to 89.03	89.03 to 91.79		89.03 to 91.79	91.79 to 98.00	98.00 to 103.14	103.14 to 111.8	111.8 to 117.00										
Structures		EP363-1 to EP301	EP301 to EP276-1	EP276-1 to EP252-1	EP252-1 to EP206-1	EP206-1 to EP141	EP141 to EP99-2	EP99-2 to EP79	EP79 to EP67	EP67 to EP47-2	EP47-2 to EP39	EP39-1 to SSDE4	SSDE3 to CP95-1		SSDE3 to CP95-1	CP88-1 to CP64-2	CP64-2 to CP31-2	CP31-2 to SSDE1											
CR-APM-7: Control erosion, sedimentation, or indirect displacement. Implement with C-2a, C-3a, C-4a, and C-5a		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CR-APM-8: Avoid and protect elements of the landscape that are essential to the historic setting of the property		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CR-APM-9: Install permanent fencing or barriers; or control/restrict access to the historic property		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

Mitigation Measures Applicable By Construction Link, Segment and Structures																										
Construction Links	IV Sub	500 kV Imperial County Link 1			500 kV San Diego Link 1			500 kV San Diego Link 2					Suncrest Link 3	230KV OH Link 5	230KV UG Link 4	230kV OH Link 5			Sycamore Sub	Reconductors			Other Substation Upgrades			
		10B	10A 10A	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A				5	5	4A		20	21	22	23	24	25	
Section	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Segments																										
PMRs																										
Mileposts of Segments from 02/09																										
Mileposts from at a glance table 033110																										
Structures																										
CR-APM-10: Locate project structures so that conductors span linear historic properties; underground placement of pipelines and conductors will be bored under linear properties to avoid disturbance or intrusion			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CR-APM-11: Implement standard practices for cultural and paleontological resources on private lands						X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CR-APM-12: Conduct cultural surveys for staging areas that have not yet been identified	X																									
Paleontological Resources																										
PAL-1a: Inventory and evaluate paleontological resources in Final APE		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							

Mitigation Measures Applicable By Construction Link, Segment and Structures																													
Construction Links	IV Sub	500 kV Imperial County Link 1					500 kV San Diego Link 1					500 kV San Diego Link 2					Suncrest Link 3	230KV OH Link 5	230KV UG Link 4	230kV OH Link 5			Sycamore Sub	Reconductors			Other Substation Upgrades		
		10B	10A 10B	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A	7	6	5	5				4A	20	21		22	23	24	25		
Section																													
Segments	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,		30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)										
Mileposts of Segments from 02/09	0		0 to 19.15	19.15 to 23.2	23.2 to 30.3	30.3 to 39.7	39.7 to 52.5	52.5 to 61.3	61.3 to 65.4	65.4 to 70.9	70.9 to 74.8	74.8 to 77.6	77.6 to 90.0		90.0 to 92.8	92.8 to 99.0	99.0 to 105.5	105.5 to 112.7	112.7 to 118.1										
Mileposts from at a glance table 033110	0		0 to 19.15	19.15 to 24.50	24.50 to 31.03	31.03 to 41.77	41.77 to 52.5	52.5 to 63.07	63.07 to 67.5	67.5 to 70.66	70.66 to 75.33	75.33 to 78.16	78.16 to 89.03		89.03 to 91.79	91.79 to 98.00	98.00 to 103.14	103.14 to 111.8	111.8 to 117.00										
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N-2a: Avoid blasting where damage to structures could occur (SDG&E to define blasting)										X	X				X	X			X										
N-3a: Respond to complaints of corona noise		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
NOI-APM-1: Provide notice by mail to all sensitive receptors and residences within 300 feet of construction sites, staging areas, and access roads; and establish a toll free telephone number for receiving questions/complaints. Implement with L-1a		X																											
Transportation and Traffic																													
T-1a: Restrict lane closures			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X						
T-4a: Ensure pedestrian and bicycle circulation and safety.			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X						

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		10B	10B 10A	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A	8A	8B	8C	8D				8E	8F	5		5	4A	20	21	22	23
Section																													
Segments	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,		30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)										
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G-3a: Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design	X																												
G-4a: Reduce effects of groundshaking		X	X	X		X	X								X	X	X												
G-4b: Conduct geotechnical investigations for liquefaction		X	X	X		X	X	X	X	X	X	X			X	X	X	X	X										
G-5a: Minimize project structures within active fault zones		X																											
G-6a: Conduct geotechnical surveys for landslides and protect against slope instability		X	X	X		X	X	X	X	X	X	X			X	X	X	X	X										
G-9a: Coordinate with quarry operations		X	X															X											

Mitigation Measures Applicable By Construction Link, Segment and Structures																										
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		10B	10A	9C	9B	9A	8E	8D	8C	8B	8A	7				5	5	4A		20	21	22	23	24	25	
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Segments																										
PMRs																										
Mileposts of Segments from 02/09																										
Mileposts from at a glance table 033110																										
Structures																										
GEO-APM-5: Avoid or minimize new disturbance, erosion on manufactured slopes, and off-site degradation from accelerated sedimentation	X																									
GEO-APM-6: Conduct surface restoration for erosion control and	X																									
GEO-APM-8: Remove or stabilize boulders uphill of structures that pose potentially high risk of landslide damage; and position structures to span over potential landslide areas	X																									
Socioeconomics																										
S-2a: Notify public of utility service interruption			X	X	X	X									X	X	X	X	X							

Mitigation Measures Applicable By Construction Link, Segment and Structures																													
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		10B	10A 10A	10A 9C	9C	9B	9A 8E	8E	8D	8C	8B	8A	7	5	5	4A				20	21	22		23	24	25			
Section		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
Segments	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
PMRs			1, 2, 3, 4	5	5, 6	7, 8, 9, 10, 11,	12, 13, 14, 15	15, 16, 17	18, 20	20, 21	22, 23	23, 24	24, 25, 26, 27,		30, 31, 32	33	34, 35	35, 36, 37, 38	39, 40, (41?)										
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F-1e: Contribute to defensible space grants fund		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X								
F-2a: Establish and maintain adequate line clearances		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
F-2b: Install existing conductors on steel poles									X	X	X	X	X	X	X	X			X										
F-2c: Perform climbing inspections					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
F-3a: Contribute to Powerline Firefighting Mitigation Fund					X					X	X	X	X						X										
F-3b: Prepare and implement a Multi-agency Fire Prevention MOU					X					X	X	X	X						X										

Segment	Description	Location	Dates
1	Imperial Valley Substation	Imperial Valley Substation	Oct-09
2	Imperial Valley Sub to Pyramid Mining	MP0 to MP19.2	Aug-10
3	Pyramid Mining to Mountain Springs Grade	MP19.2 to MP23.2	Aug-10
4	Mountain Springs Grade to Jade	MP23.2 to MP30.3	Oct-09
5	Jade to I-8 (McCain Valley)	MP30.3 to MP39.7	Oct-09
6	I-8 (McCain Valley) to USFS	MP39.7 to MP52.5	Oct-10
7	USFS East	MP52.5 to MP61.3	Aug-10
8	USFS East to Cameron Substation	MP61.3 to MP65.4	Aug-10
9	Section 8D	MP65.4 to MP70.9	Feb-11
10	Section 8C	MP70.9 to MP74.8	Jul-10
11	Section 8B	MP74.8 to MP77.6	Nov-10
12	Section 8A	MP77.6 to MP90.0	Jul-10
13	Suncrest Substation (Modified Route D Substation)	Suncrest Substation	Jun-10
14	Section 7	MP90.0 to MP92.8	Sep-10
15	Section 6 (Alpine Blvd. UG)	MP92.8 to MP99.0	Jun-10
16	Puetz Valley thru El Monte Valley	MP99.0 to MP105.5	Sep-10
17	El Monte Valley to Hwy 67	MP105.5 to MP112.7	Sep-10
18	Hwy 67 to Sycamore Canyon Substation	MP112.7 to MP118.1	Sep-10
19	Sycamore Canyon Substation	Sycamore Canyon Substation	Nov-09
20	Sycamore to Elliot 69kV Reconductor	Sycamore to Elliott	Sep-09
21	Sycamore to Scripps 69kV Reconductor	Sycamore to Scripps	Sep-09
22	Sycamore to Pomerado 69kV Reconductor	Sycamore to Pomerado	Aug-09
23	South Bay Substation Upgrades	South Bay Substation	Oct-11
24	Encina Substation Upgrades	Encina Substation	Oct-10
25	San Luis Rey Substation Upgrades	San Luis Rey Substation	Aug-10