

SUNRISE POWERLINK

Suncrest Substation

Screening Plan

Revised
May 25⁴, 2012

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Background

In accordance with mitigation measure V-7b of the Mitigation, Monitoring, Compliance, and Reporting Program (MMCRP) for the approved Sunrise Powerlink Project, SDG&E submits this Screening Plan for construction and operation activities at Suncrest Substation. The full text of V-7b is provided at the end of this document.

Mitigation measure V-7b requires SDG&E to submit a Screening Plan 90 days prior to installing landscape screening. A Screening Plan was approved on November 4, 2010, and this revision is being submitted to address changes to the landscaping and irrigation plans previously approved. Modifications to the landscaping plans were necessary because of the large amount of rock discovered during construction that made planting and/or hydroseeding some portions of the entry road, east, west and north cut slopes, and EP1-4 cut slopes, impracticable and unsafe. Additional surface treatments and screening have also been incorporated into this revised plan to further enhance screening of the substation.

Suncrest (SCR) Substation will be south of Bell Bluff Truck Trail, approximately 2.8 miles west of Japatul Valley Road, southwest of the Interstate 8 and Japatul Valley Road intersection, and east of the City of Alpine, California in San Diego County. The substation is on SDG&E owned property in a rural, sparsely developed setting. The site is bordered by the Cleveland National Forest to the north, west, and south and private lands to the east. US Interstate 8 (I-8) is approximately two miles north of the substation.

Description of Construction Activities

SCR will accommodate the termination of one 500 kV and two 230 kV transmission lines. Construction of the substation includes: grading and fencing of a 40 acre pad; construction of a single-story relay/control shelter and storage shelter; installation of a 300,000 gallon water tank with associated irrigation plumbing and fire hydrants; revegetation of disturbed slopes; installation of a pre-engineered steel warehouse building; and widening and paving of an existing 2.6 mile access road. Electrical equipment installation includes: 500 kV and 230 kV circuit breakers; 500 kV and 230 kV disconnect switches; 500/230kV transformers; 500 kV series capacitor; 230 kV shunt capacitors; substation bus support and dead-end structures; buswork; and associated hardware and foundations.

The tallest structures installed in the substation will be the 500 kV line and transformer dead-end structures. Maximum heights for these structures will be 130 feet and 75 feet, respectively. With the exception of a reduction in overall disturbance impacts, there have been no changes to the proposed construction activities for this site as compared to those described in the approved Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS).

Sensitive Receptors

The yard elevation and the existing undulating terrain surrounding SCR blocks the view of

the substation construction area from properties to the west, north, and east of the substation. Thus, the substation will be visible only from the south, southwest and southeast.

The closest existing residences to the southeast and south of the substation are approximately ~~1/2^{3/4}~~ of a mile away. There are no nearby residences to the southwest of the SCR. Depending on the relative elevations of the nearby residences, they may have a ~~partial~~ views of the ~~upper portions of the~~ substation structures, specifically the A-frame termination and bus support structures. Based on property information, approximately twelve residences would have a ~~partial~~ view of some portion of the substation.

In addition, there are distant, partial views of the substation and views of some of the transmission towers from a few locations along Japatul Valley Road approximately 1.8 miles southeast and approximately 2.8 miles southwest of the substation. These are the closest public viewing locations from main through-roads in the vicinity of the substation.¹

There will be a single point of access to the substation via Bell Bluff Truck Trail (BBTT). Currently, the last two miles of BBTT is dirt road that traverses SDG&E owned or other private property, otherwise not accessible to the general public. This portion of the road provides access to two private properties in addition to the SDG&E owned property. There are currently two locked gates along this private portion of the road to control access. One gate is approximately 0.8 miles east of the substation and the second gate is approximately two miles east of the substation. As part of this project two locked gates will be established in approximately the same locations. Keyed access will be restricted to SDG&E employees, SDG&E contractors, fire agencies, and private property owners.

Screening Elements

~~A plan overview of Landscaping and irrigation plans for the substation pad showing the locations of the screening elements is shown in the Screening Element Plan Drawing, which is~~ attached as Appendix A. ~~These plans demonstrate as-built landscaping and irrigation features installed at the site. Due to views of the substation from nearby residences south of the substation, Modifications to SDG&E has revised these plans to include 21 additional blue oak trees along the southern slope of the substation. A concept drawing for the locations of these trees andscaping plans for the east cut slope and entry road cut slopes are~~ attached as Appendix B. ~~This drawing may be modified during implementation based on subsurface conditions, fire or safety considerations. A-1. The 21 native trees will be planted within 15 feet from the top of the slope and are anticipated to grow to 20-40 feet high and 30-50 feet wide.~~

~~SDG&E fully evaluated the possibility of planting trees in the 30 foot fuel modification zone outside the perimeter fence along the edge of the southern slope; however, it was~~

¹ Documentation of potential sight lines, public viewing locations, and distant visual simulations are covered in detail in the Suncrest Substation Surface Treatment Plan (~~dated revised May 25, 2012~~ August 3, 2010) submitted to the CPUC and BLM ~~with Transmittal No. 03667.~~

determined that planting in this area was not recommended for the following reasons:

- **Fire:** Consistent with state and county codes the fuel (vegetation) modification zone is 100 feet from structures. A portion of this 30-foot road outside the perimeter fence is included in the 100-foot zone from electrical equipment and structures within the substation and provides adequate space from the perimeter fence that can also be a source of fuel during a wildland fire. In addition, the 30-foot gravel road provides space for fire-fighting personnel and equipment to access all areas of the substation in the event of an emergency without having to enter the substation, which remains locked for security reasons as all times.
- **Safety and Security:** In accordance with General Order 95, minimum clearance requirements from wires dictate that vegetation not exceed a certain height below the 500kV conductor from the substation to EP1-4. Therefore, planting trees in the fuel modification area is not recommended for safety and maintenance considerations. Moreover, trees planted in this area would need frequent maintenance to prevent branches from growing over the area into the perimeter fence or risk the tree from falling into the fence, resulting in a security breach.

The other areas modified from the original November 2010 approved plans include cut slopes located on the interior of the substation pad, not visible from public viewing locations – the east, west, north and entry road cut slopes.

The east cut slope is the slope along the northerly ½ east of the substation pad and the entry road cut slopes are the lower portions of both sides of the entry road from the northeast corner of the substation easterly to the junction with Bell Bluff Truck Trail, approximately 1,400 feet ~~(station 10+00 to station 24+00 on the site grading plan and on sheets SCR-C-102, 103, 115 & 116 of the landscape plans (included as Appendix A-1).~~

The drawings in Appendix A ~~and A-1~~ identify the planted areas around the substation including the types and quantities of proposed plants as well as the locations of the plantable retaining walls. A detailed Plant List is included with the plans attached as Appendix B. This list presents the types of plants to be added to the disturbed and manufactured slopes around the substation as part of the long term revegetation process. This list includes the sizes and ages of the plants to be installed as well as the projected heights after 5 years of growth and at maturity. The shrubs on this slope are anticipated to grow to heights ranging from 6-10' high and 6-10 ft. wide. The trees are anticipated to grow to 10-30 feet high and 10-40 feet wide. Appendix D discusses the long-term maintenance procedures and practices that will help ensure the long-term viability and growth of these trees and shrubs.

The location of this substation was selected to provide the greatest possible natural screen from the public. As discussed, the site's natural contours result in the substation being completely hidden from receptors on the east, north, and west and mostly hidden at from many public viewing locations from the south, southwest and southeast. Moreover, views of major equipment, buildings and ancillary structures are only available from the substation

yard itself which will not be accessible to the general public.

SDG&E is proposing to use a standard galvanized chain link steel fence to surround the substation due to the inherent security and maintenance free performance. The fence will be eight feet high and will be topped with two feet of barbed wire strands. The fence will not be obtrusive from a distance of $\frac{3}{4}$ of a mile; however, slats will be installed along the southern viewshed portion of the fence. The slats will consist of multiple colors found in the natural landscape and will be installed in an alternating pattern to help break up the horizontal line of lower height industrial components.

The major steel structures within the substation footprint, which will be partially visible from the south, southeast and southwest, cannot be screened by vegetation. The **partial** views of ~~the tops of~~ the structures will either have a natural back-drop allowing the structures to blend with the rocky hills and vegetation or be sky-lined, allowing them to blend in with the lighter coloration of the sky.

The major elements of the screening plan are the landscaping and design of the retaining walls and other hardscape features related to the substation pad development. The walls were designed to incorporate non-linear features (both horizontal and vertical curves) to create a more natural appearance that blends with the existing undulating topography. There will be six plantable mechanically stabilized earth (MSE) retaining walls with heights of up to 32 feet. The five located within the substation grading area will be planted with native vegetation and the one wall that is not visible along Bell Bluff Truck Trail will not be planted. All six MSE retaining walls will be constructed of "buff" colored concrete blocks and the three south slope facing MSE retaining walls will be treated with Permeon to blend with the natural soil colors.

Based on the stability of the exposed rock and soil material, a portion of the east cut slope near the substation pad, will require a soil nail wall to be installed. The soil nail wall will be covered with stained and textured concrete to simulate a natural rock surface. Where the soil nail wall is not necessary and the exposed rock is capable of supporting vegetation, the cut slope area(s) will be hydroseeded and stabilized using jute matting, if necessary. (For the purpose of the visual simulation, it was assumed that a soil nail wall would not be required and other slope areas will have sufficient soil to support vegetation.)

Drainage ditches outside the substation pad will be constructed with colored, pre-mixed concrete. Vertical concrete features outside of the substation such as headwalls will be treated to simulate the color of the surrounding natural soil. The treatment material will produce a spectrum of brown earth tone colors closely matching those found on adjacent exposed soil and natural rock. The treatment will produce color variations and shades that help disguise the concrete surface when viewed at a distance. The treatment colors will be permanent, UV resistant and color stable. The treatment will be applied to allow for natural looking variations in shading. These hardscape features, combined with the landscaping, hydroseeding and treatment of exposed rock cut of the slope areas, will allow the sloped areas around the substation to blend in with the natural features in the undisturbed areas surrounding the substation within approximately five years after the completion of

construction. The plants that are native and appropriate to this area are slow growing and a period of more than 5-years may be necessary before in-filling and screening approaches the optimal level.

The 300,000 gallon concrete water tank (approximately 50 foot in diameter by 26 feet tall) that will be present on site will be finished with “dark brown” colored concrete paint. The water tank will be constructed approximately a thousand feet northeast of the substation pad and will not be visible from the west, south and east due to the existing topography. There may be a partial view of the upper portion of the tank from I-8, which is roughly two miles north of the tank location. A line-of-sight analysis of this view indicates that the public is unlikely to see this tower and that the distance and setting will screen this feature appropriately in concert with the dark brown color.

The water tank will also provide permanent fire suppression and temporary irrigation of the landscaping at the site for 5 years. All planting is native to the area and will survive on normal winter rains once established. After the first summer, the irrigation will be cut back each year after the first, until it is totally cut off after five years. This approach will help in establishing firm root systems, as well as the long-term viability of the plants after irrigation is no longer provided. The long-term maintenance procedures are discussed in Appendix D.

The pre-engineered steel warehouse building will be constructed within the substation fenceline in the central portion of the substation pad, east of the 500kV bays and adjacent to the driveway. The warehouse will measure approximately 25 feet tall and be 60 feet by 120 feet in area. The warehouse will provide easily accessible, secure and weatherproof storage for critical spare equipment and material. The exterior of the warehouse will have the SM40 standard mesa wall finish in “Surrey Beige”. The warehouse should not be visible from public viewing areas, and the slats in the perimeter fence should allow the structure to blend with the surrounding vegetation and rock. However, if the warehouse is visible from public viewing areas, SDG&E will apply dark brown color striations to the paint the visible areas of the warehouse ~~a dark brown color~~ to help reduce visual contrast and blend the structure with the natural landscape.

The treatment of slopes or vertical surfaces that may be seen by the general public with ~~permeon~~ Permeon or vegetation will help blend the developed area with the texture and color of the surrounding native landscape.

Visual Simulation

VA visual simulations of the completed substation with the landscape features depicted after 2 and 5 years growth ~~are~~ is attached as Appendix C. ~~(The s~~ Simulation shown in Appendix C-1 does not include a depiction of the warehouse that will be located in the footprint of the graded substation pad or changes to landscaping plans that were necessary due to unanticipated soil conditions discovered during construction.) Since ground level public viewing locations are between 1/2-3/4 to 2.8 miles away from the

substation, one of the simulations provides an aerial viewpoint in order to provide a reasonable level of detail.² This viewpoint, which generally depicts an above ground “birds-eye” view, offers a perspective from the southwest of the substation. This simulation does not depict the other vegetation that will fill in around the trees and shrubs at the site.

Simulations C-2, 3, 4 and 5 provide viewpoints from the residential area to the south and southeast of the substation and show anticipated growth of all vegetation at 2 years and 5 years growth.

Theis simulations illustrates the characteristics of the selected substation site (terrain and distance to public viewpoints) as well as the anticipated design and treatment of the manufactured slopes that minimize the visual contrast of the Suncrest Substation structures and help blend the facilitys with the existing landscape to the extent feasible. The aerial overview shows bushes, shrubs, and trees, along with -but there will be other plants on the slopes that are not depicted in this simulation that will cover the bare earth and provide a more natural appearance after several years of growth. Moreover, if the rocky slopes are unable to support vegetation, some plants may not be used.

Schedule

Construction activities at the substation are anticipated to last approximately 17 months. Construction will begin upon receipt of an approved Notice to Proceed. Below is a schedule of construction activities required for the complete construction of the substation:

SDG&E - Suncrest Substation Overall Project Schedule		
Activity Description	Start Date	Finish Date
Site Development – Equipment & Materials Storage Yard	M1	M1
Site Development - Clearing & Grubbing	M1	M2
Site Development - Access Road (Bell Bluff Truck Trail) Upgrade	M1	M3
Site Development - Substation Pad Development	M2	M8
Foundation Construction	M7	M11
Installation of Cable Trench and Conduit	M8	M15
Installation of Ground Grid	M9	M12
Steel Structure Erection	M9	M11
Installation of water supply system	M8	M11
Installation of irrigation system and landscaping	M7	M13
Control Shelter and Maintenance Shelter Construction	M9	M12
Series Capacitor Installation	M11	M17
Installation of Substation Bus & Equipment	M12	M15
Finish Grading & Paving within Substation Yard	M14	M16

² The visual simulations included in the Suncrest Substation Surface Treatment Plan (dated August 3, 2010) also depict the landscape features after 5 years growth. This plan was submitted to the CPUC and BLM with Transmittal No. 03667.

Finish Grading & Paving of Access Roads	M12	M13
Testing & Commissioning	M16	M17
Demobilization	M17	M17

Mitigation measure V-7b requires completion of the screening installation prior to the start of project operation. All landscaping, with the exception of additional trees along the top of the south slope will be complete prior to the start of operation. The landscaping schedule will depend on what time of year the site development is completed with the intent to reestablish a natural landscape with native plants. Ideally, landscaping would be installed in late fall to optimize plant success. Water supply and irrigation system installation will need to be completed prior to the installation of the landscaping with a plan to install an irrigation system that supplements the natural rain fall for 5 years to mimic “average rain fall” to increase the probability of the natural plants thriving. At the end of 5 years SDG&E intends to shut off the irrigation system. The landscape contractor is responsible for replacement and maintenance of any container plants that have not survived 6 months after landscape installation is completed. After the original maintenance period is complete, SDG&E will take over the maintenance responsibility for the landscape installation as described in Appendix D.

Inspection

To demonstrate compliance with mitigation measure V-7b, within 7 days following the completion of the screening installation anticipated in late 2011 or early early 2012, SDG&E shall notify the BLM and CPUC that screening elements described in this plan are ready for inspection.

Compliance with Mitigation Measure

The remoteness, natural topography, private properties surrounding the substation site, limited access route and substation design, combine to minimize the potential public views of the substation. In addition, the special treatment of the cut and fill slopes around the substation pad and the revegetation of the slopes with native plant materials is anticipated to result in a blending of the overall substation development into the natural surroundings to the degree extent possible. As a result, the development is in compliance with the visual contrast reduction goals of mitigation measure V-7b- the full text of which is found below.

Applicable Mitigation Measure

Mitigation Measure **V-7b: Screen ancillary facilities.** SDG&E shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities (except Imperial Valley Substation) and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SDG&E shall submit the Plan to the BLM and CPUC for review and approval at least 90 days prior to installing the landscape screening. If the BLM or CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a

revised Plan. The plan shall include but not necessarily be limited to:

- An 11" x 17" color simulation of the proposed landscaping at 5 years
- A plan view to scale depicting the project and the location of screening elements
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity

– (V-7b) SDG&E shall complete installation of the screening prior to the start of project operation. SDG&E shall notify the BLM and CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.

Location	Applies to all permanent ancillary facilities including substations and switchyards.
Monitoring/ Reporting Action	CPUC and BLM to review Screening Plan prior to start of construction and verify implementation following construction.
Effectiveness Criteria	The occurrence of visual contrast from ancillary facilities will be minimized and facilities will blend with the landscape to the extent feasible.
Responsible Agency	CPUC, BLM on BLM-administered lands
Timing	Pre-, during and post construction.
Interpretation & Approach	7/2/09: SDG&E will match existing screening within existing substations.

APPENDIX A
Landscaping & Irrigation Plans

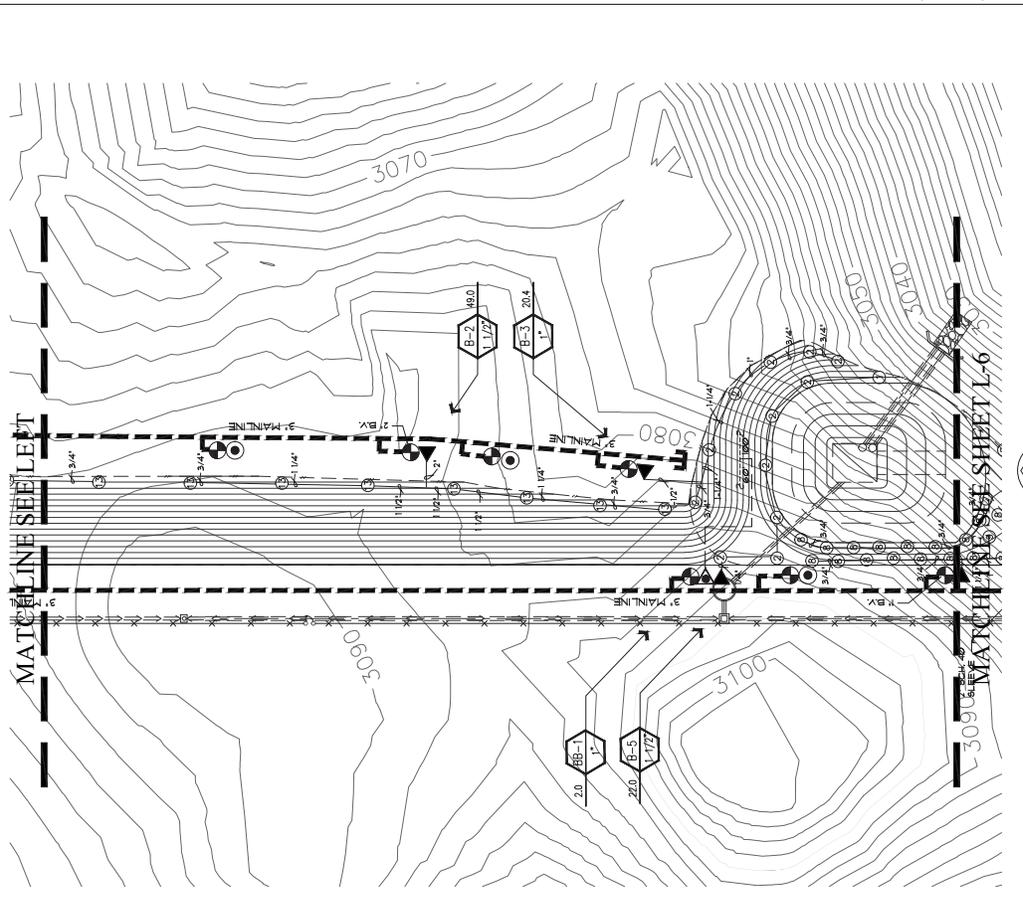
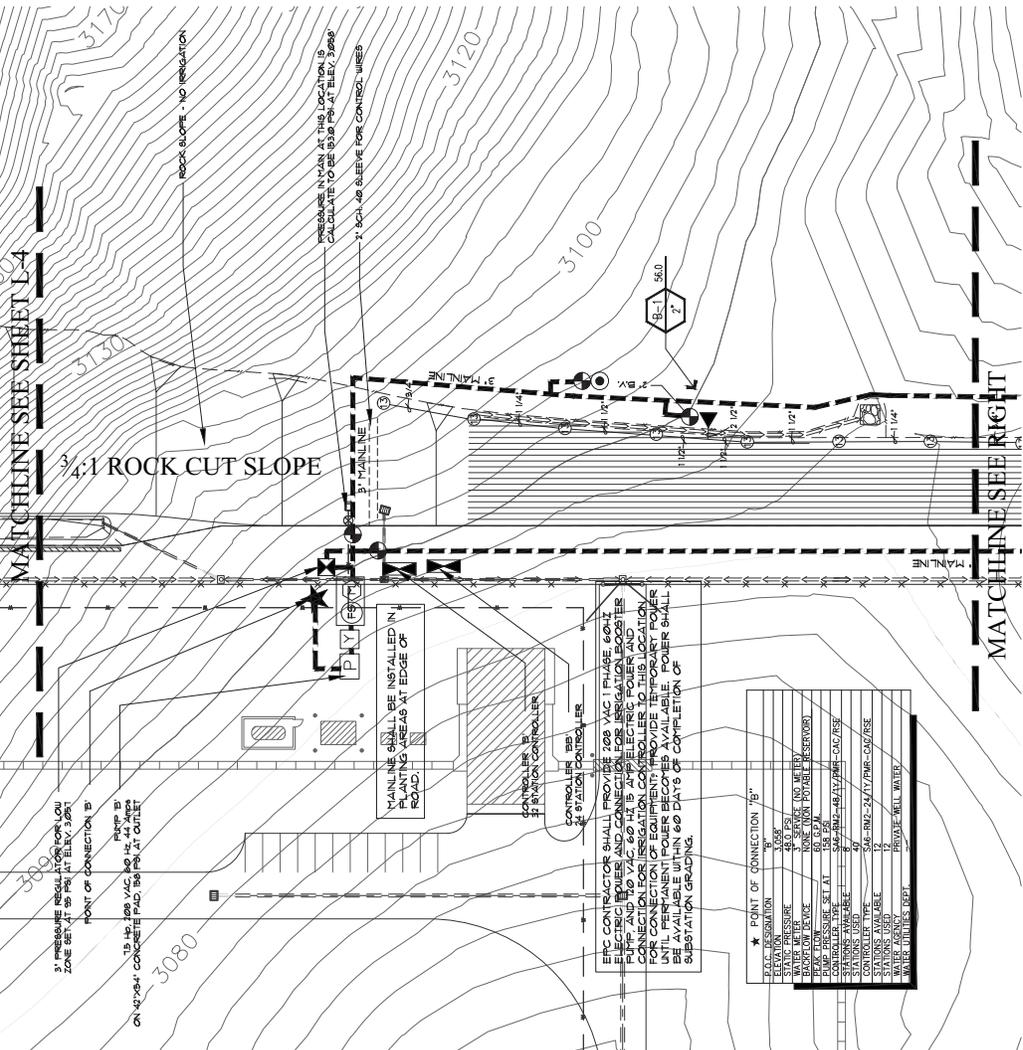
APPENDIX B

Suncrest Substation Southern Slope Additional
Screening

Appendix C
Visual Simulations

Appendix D
Suncrest Substation Long-term Maintenance
Procedures

APPENDIX A
Landscaping & Irrigation Plans



3" PRESSURE REGULATOR FOR LOW ZONE SET AT 50 PSI AT TEE, 2.50' POINT OF CONNECTION TO MAINLINE

1.5" HD 100 VAC, 1/2" HD 1/2" HD 100 ON 4" CONCRETE PAD, 18" PSI AT OUTLET

MAINLINE SHALL BE INSTALLED IN PLANTING AREAS AT EDGE OF ROAD

CONTROLLER TO IRRIGATION CONTROLLER

CONTROLLER TO STATION CONTROLLER

ERC CONTRACTOR SHALL PROVIDE 208 VAC PHASE 60HZ ELECTRIC WIRING AND CONNECTION FOR IRRIGATION BOOSTER PUMP AND TO VAC. 60 HZ AMPHLECTRIC POWER AND CONNECTION TO 1/2" HD 100 VAC MAINLINE FOR CONNECTION OF EQUIPMENT TO PROVIDE TEMPORARY POWER UNTIL PERMANENT POWER BECOMES AVAILABLE. POWER SHALL BE AVAILABLE WITHIN 60 DAYS OF COMPLETION OF SUBSTATION GRADING.

★ POINT OF CONNECTION 76'

LEAK INSPECTION	1/28/18
ELEVATION	76.00'
WATER METER	48" 3" (NO METER)
BACKFLOW DEVICE	NONE (NOT POTABLE RESERVE)
CONNECTION TO MAINLINE	58.50'
PUMP PRESSURE SET AT	58.50'
CONNECTION TO MAINLINE	58.50'
STATIONS USED	58.50' - 59.00' / 2" PUMP - 60' / 2"
STATIONS AVAILABLE	58.50' - 59.00' / 2" PUMP - 60' / 2"
STATIONS USED	58.50' - 59.00' / 2" PUMP - 60' / 2"
STATIONS AVAILABLE	58.50' - 59.00' / 2" PUMP - 60' / 2"
WATER METER	PROVIDE FULL WATER

NOTE: LANDSCAPE CONTRACTOR SHALL ADJUST IRRIGATION AROUND ROCK OUTFROPPING.

ALL MAINLINE INSTALLED ON-GRADE SHALL BE 1/2" HD 100 VAC. WIRING SHALL BE INSTALLED IN PROTECTIVE SLEEVES. SLEEVES SHALL BE INSTALLED IN PROTECTIVE SLEEVES.

NOTE: DO NOT MASH THROUGH ROOTS OF EXISTING TREES. MAINLINE TO BE INSTALLED IN PLANTING AREAS AT EDGE OF ROAD. LOCATE PIPE TO AVOID EXISTING TREE TRUNKS AND ROOTS.

3/4" MAINLINE

3' MAINLINE

3' MAINLINE

3' MAINLINE

3' MAINLINE

MATCHLINE SEE SHEET L-4

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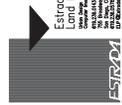
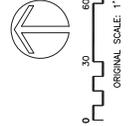
3' MAINLINE

MATCHLINE SEE SHEET L-21



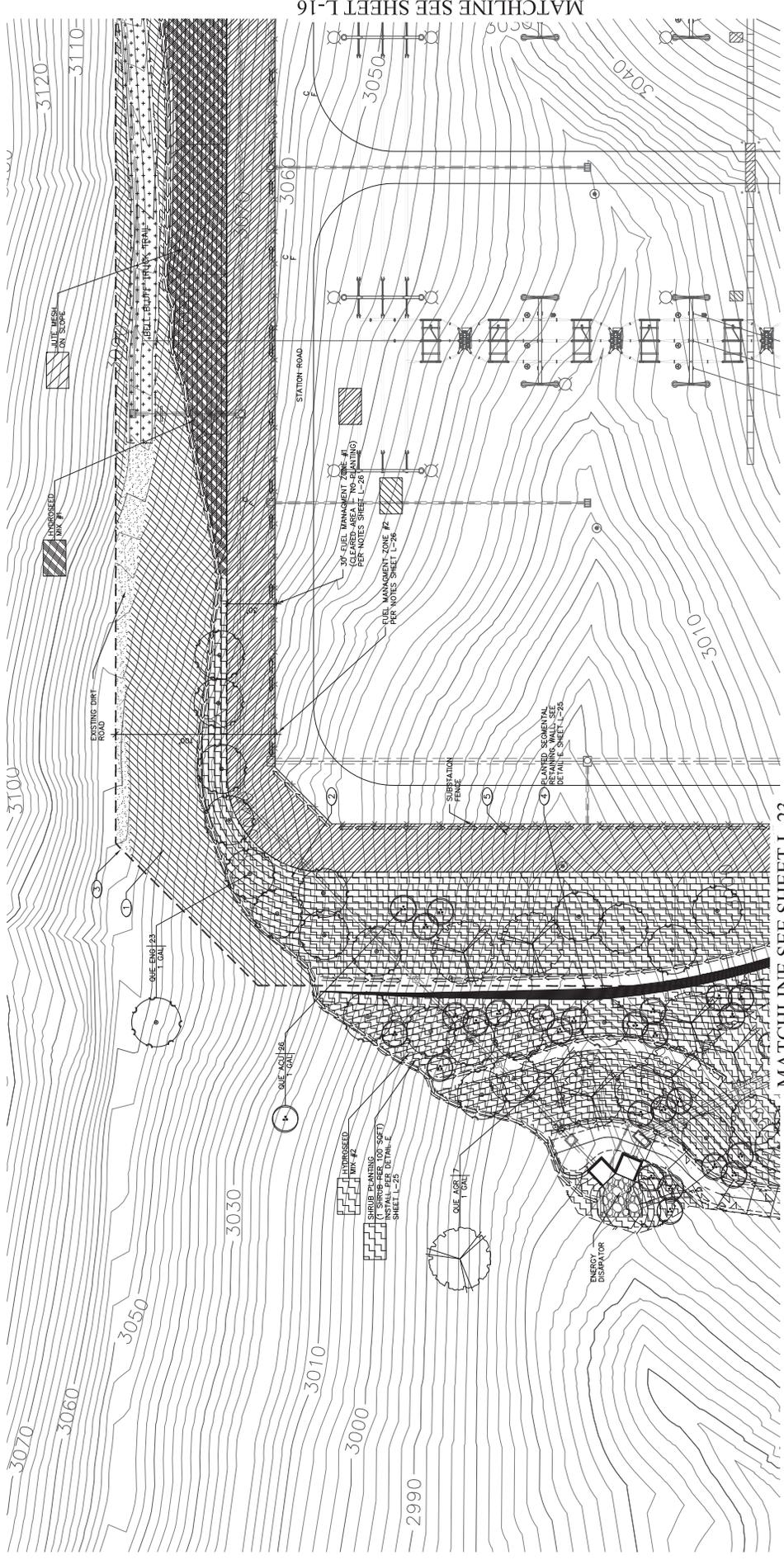
HYDROSEED SHALL BE APPLIED TO COVER ALL SOIL AREA OF EROSION

SEE SHEET L-25 FOR PLANTING DETAILS AND NOTES. SEE SHEET L-26 FOR PLANTING LEGEND AND NOTES. SEE SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



REVISIONS				CONSTRUCTION DOCUMENTS			
NO.	DATE	BY	APPROVED	NO.	DATE	BY	APPROVED
				1	08/28/10	ELP	ELP
				2	09/16/10	ELP	ELP
				3	01/18/11	ELP	ELP
				4	03/26/10	ADJUST	ADJUST

SAN DIEGO GAS & ELECTRIC COMPANY SAN DIEGO, CALIFORNIA		L-20 SANCREST SUBSTATION PLANTING PLAN	
DATE: 7/27/10	SCALE: 1"=30'	DATE: 7/27/10	SCALE: 1"=30'
DRAWN BY: ALE	DATE: 7/27/10	DATE: 7/27/10	SHEET 20 OF 27
APPROVED BY: ALE	DATE: 7/27/10	DATE: 7/27/10	SHEET 20 OF 27
JOB NO.: 5111-04	PROJECT NO.: 11	DATE: 7/27/10	SCALE: 1"=30'

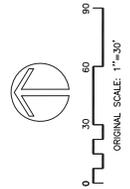


MATCHLINE SEE SHEET L-16

MATCHLINE SEE SHEET L-23

INCREASED SHALL BE APPLIED TO COVER ALL SOIL AREA OF BENCHES

SEE SHEET L-25 FOR PLANTING DETAILS AND NOTES. SEE SHEET L-26 FOR CALL OUT LEGEND AND NOTES. SEE SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADJUSTMENTS, IN QUANTITIES AND REQUIREMENTS.



SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

CONSTRUCTION DOCUMENTS		DATE	BY	APPROVED	WORK DONE
CONSTRUCTION DOCUMENTS		3/24/10	ELP		
CHANGE ORDER TO PLANTING DETAIL		08/08/10	ELP		
CHANGE OUT SUBS TO HYDROSEED, WAJIE MESH, ADJUST IRRIGATION		09/16/10	ELP		

SUNCREST SUBSTATION
PLANTING PLAN
DRAWN BY: K.J. DATE: 3/24/10 SCALE: 1"=30'
CHECKED BY: A.L. DATE: 3/24/10 SHEET 24 OF 27
JOB NO.: 511-04 PROF SCALE: 1:1

ESTRADO ENGINEERING
10000
SAN DIEGO, CALIFORNIA
LICENSE NO. 10000
EXPIRES 3/26/10

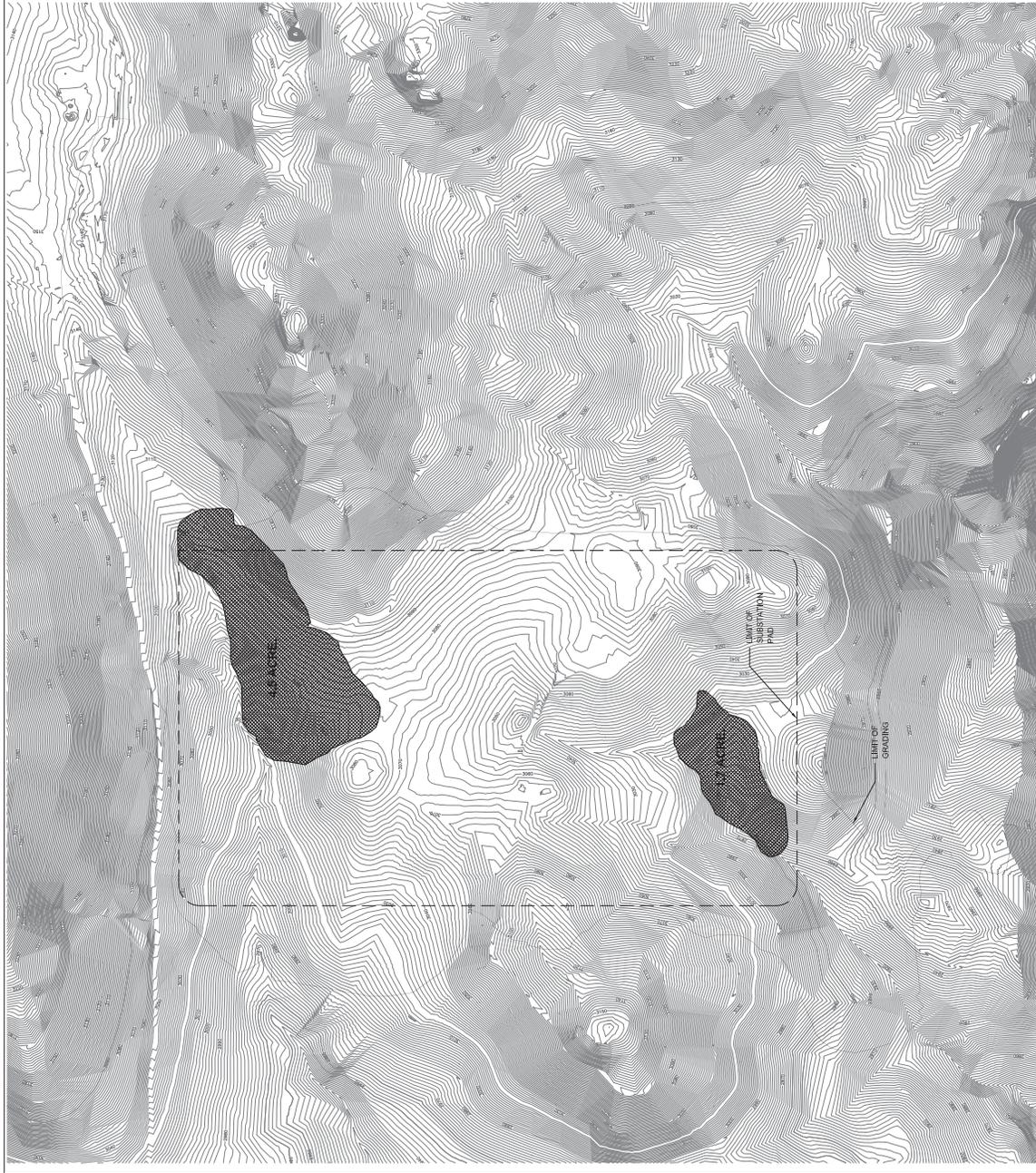
PROJECT: 5001103\CM\Construction\ngas\04118-2010\51103_P.dwg

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BY: ELP
APPROVED: [Signature]

DATE: 08/08/10
BY: ELP
APPROVED: [Signature]

DATE: 09/16/10
BY: ELP
APPROVED: [Signature]

DATE: 3/24/10
BY: ELP
APPROVED: [Signature]



LEGEND

REMOVE TOP 6" OF SOIL VEGETATION AND
 TOPSOIL TO BE CALCULATED AND SET
 FROM THIS AREA AND STOCKPILE PER
 THE AREA TO BE REMOVED. THE
 AND TO BE VERIFIED AT TIME OF CONSTRUCTION

NOTE:
 THE AREA SHOWN FOR SALVAGING TOPSOIL IS
 APPROPRIATE. THE CONTRACTOR IS RESPONSIBLE
 FOR VERIFYING THE QUANTITY OF TOPSOIL
 NECESSARY TO PROVIDE THE SPECIFIED
 APPLICATION OF SALVAGED TOPSOIL TO THE
 AREAS REQUIRING.

TOPSOIL STRIPPING AND SALVAGING PLAN



L-27

SAN DIEGO GAS & ELECTRIC COMPANY
 SAN DIEGO, CALIFORNIA

SUNCREST SUBSTATION
 TOPSOIL STRIPPING AND SALVAGING PLAN

CONSTRUCTION DOCUMENTS

REVISIONS

NO.	DATE	BY	APPROVED BY	WORK DONE
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DATE: 3/24/10
 DRAWN BY: K.J.
 APPROVED BY: A.E.
 DATE: 3/24/10
 SHEET 27 OF 27
 SHEET SCALE: 1:1
 PROJ. NO.: 511-04
 SCR-C-127

APPENDIX B
Southern Slope Additional Screening

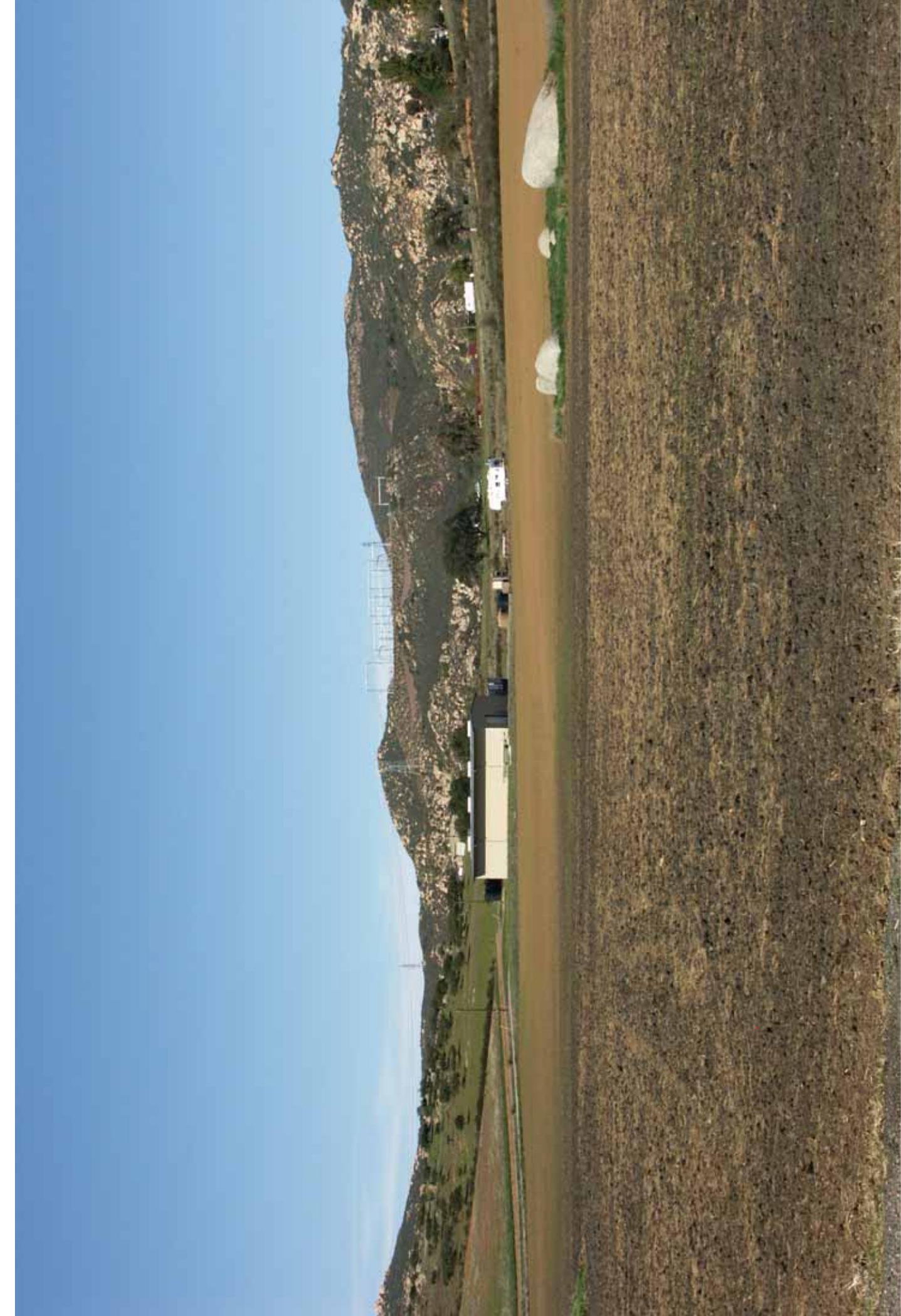
Appendix C

Visual Simulations

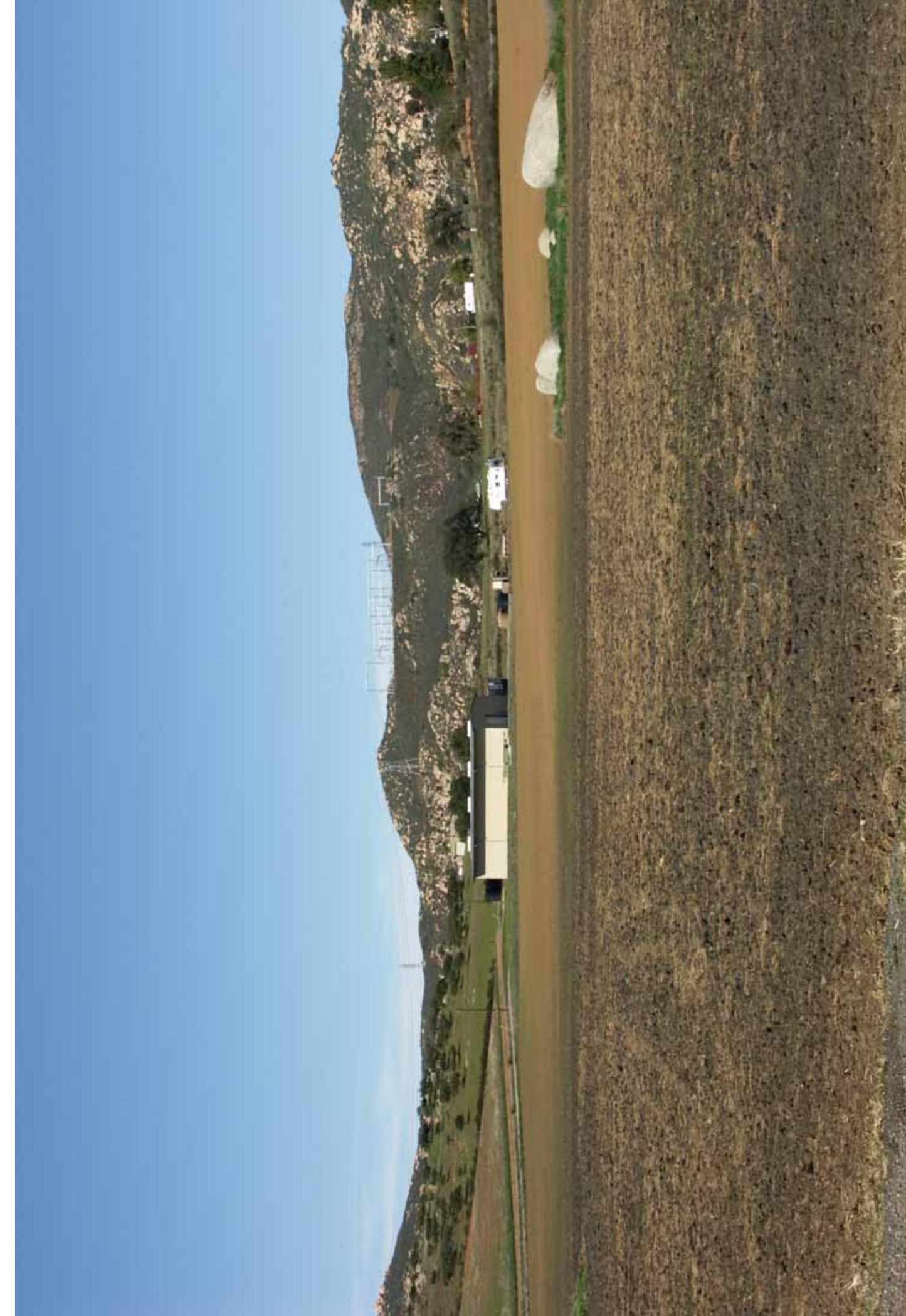


SCA01
THIS RENDERING IS BASED
ON CURRENT INFORMATION AS OF
THIS DATE AND IS SUBJECT TO
CHANGE. PLANTINGS SHOWN AS
5 YEARS AFTER INSTALLATION. 7/23/10

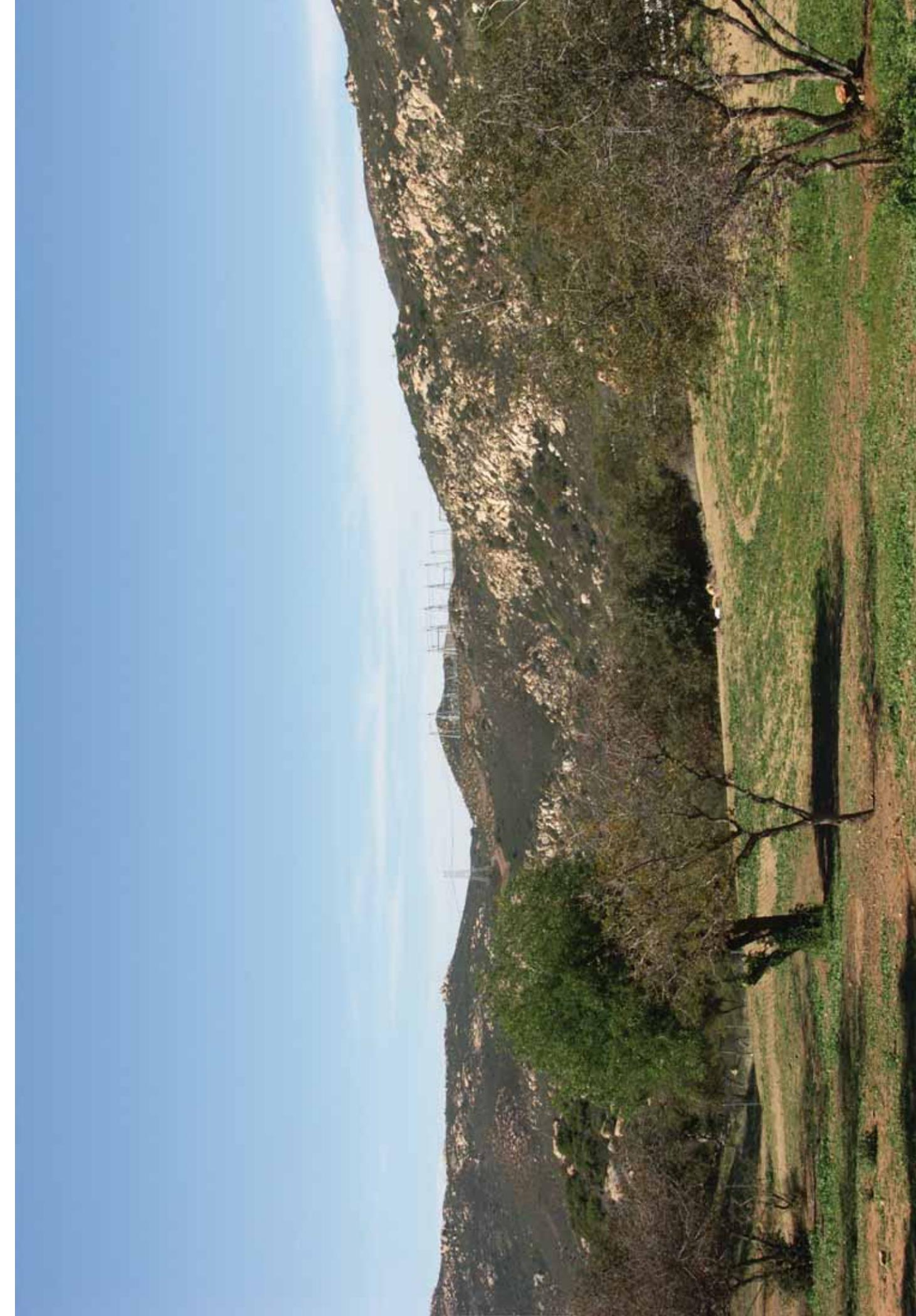
SUNCREST SUBSTATION VISUAL RENDERING
AERIAL OBLIQUE LOOKING NORTHEAST



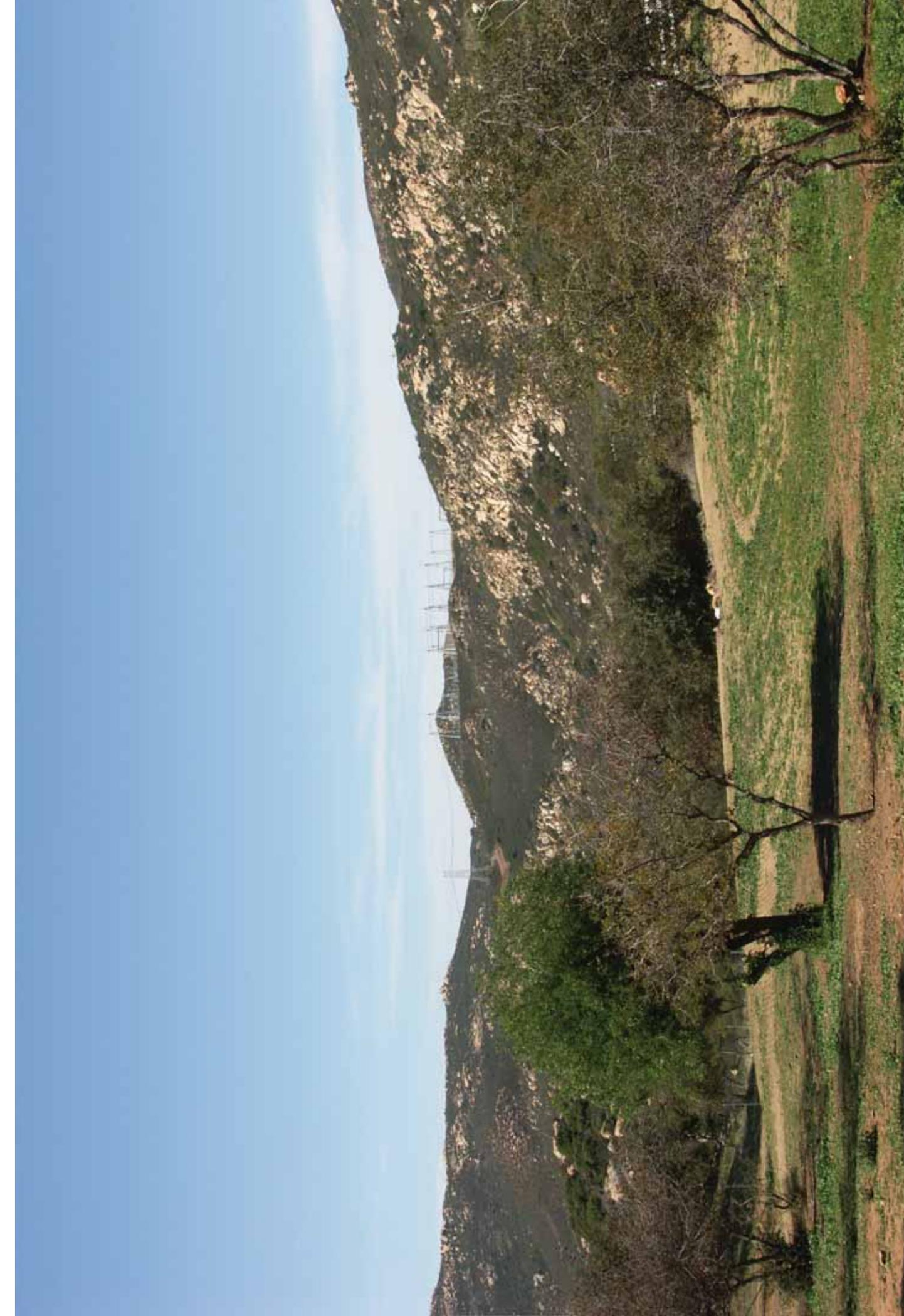
Suncrest Substation Visual Rendering with plantings shown at 2 years growth
Japatul Lane Looking North-Northwest



Suncrest Substation Visual Rendering with plantings shown at 5 years growth
Japatul Lane Looking North-Northwest



Suncrest Substation Visual Rendering with plantings shown at 2 years growth
Japatul Highlands Road Looking Northwest



Suncrest Substation Visual Rendering with plantings shown at 5 years growth
Japatul Highlands Road Looking Northwest

Appendix D
Suncrest Substation Long-term Maintenance
Procedures



SUNCREST SUBSTATION LONG-TERM LANDSCAPING MAINTENANCE PLAN & PROCEDURES

Irrigation

During year one of substation operation, the irrigation system will be utilized to promote the survival, good health and appearance of all plantings and hydroseeded areas. During years 2 through 5, irrigation will be reduced by approximately 25% during the dry season from April through November until the system is shut-off and removed in year five. Use of the irrigation system during the rainy months of December through March will be infrequently to simulate typical rainfall for the area. This approach will help the plants, that are native to the area, adjust to natural rainfall quantities for this region.

Landscaping Maintenance

The landscaping contractor will be responsible for maintenance within the first 6 months of operation. After the first year, SDG&E will take over responsibility for maintenance and care of the landscaping at the substation. The goals of the maintenance program are to keep all plant material in a healthy, optimum growing condition and in a visually pleasing appearance by watering, pruning, mowing, fertilizing, re-staking, pest and disease controlling, spraying, weeding, clean-up and any other necessary maintenance. Landscape areas shall be kept free of weeds, noxious grasses, and all other undesired vegetative growth and debris. In order to conform with these maintenance goals, the following procedures shall be implemented as appropriate:

1. All vegetated areas will be monitored and maintained, inclusive of mowing, edging, and leaf removal as required to maintain a well-groomed, weed free appearance.
2. Plants shall be maintained to be vigorous, healthy, of normal growth, free from disease, insects and insect eggs.
3. Trees shall be maintained and monitored, which shall include watering, fertilization, pest control, pruning, and other treatments, applications, and other horticultural practices to promote the health of the tree. All maintenance shall be done under the direction of a Certified Arborist or Landscape Manager.
4. Trees and plants shall be monitored for damage and equivalent size replacement plants shall be used in the event of the death or decline of existing plants.
5. Trees requiring pruning or trimming to allow work or reduce fire/safety hazards will be pruned to the best advantage of the continued survival and health of the tree. The work will be done at the direction of a Certified Arborist or qualified biologist. All pruning shall be done in a manner to maintain a natural appearance, remove dead, weak, or crossing branches, balance and enhance tree form, improve structure, and compensate

for root loss based on the specific needs of each tree. Shrubs shall not be clipped into balled or boxed forms.

6. All pruning cuts shall be smooth, clean cuts made with sharp equipment. All cuts shall be made at branch or trunk crotches. No stubbing is permitted. Undercutting is required to promote a clean cut and prevent damage to bark below cut. Final cut shall be smooth and clean single cut.
7. All cuts are to be allowed to heal exposed to air. Healing compound, sealer, or tar shall not be applied.
8. All dead and damaged plant material shall be removed before they become hazards.
9. All dead, damaged or broken plant material, including hydro-seed and groundcover, shall be replaced at 60-day intervals.
10. Trash and other debris shall be removed from vegetated areas.
11. All herbicides and fertilizers used shall be approved for the applicable use. The use of herbicides and fertilizers will be in accordance with the label specifications by personnel holding a valid pesticide and herbicide applicator's license.
12. Invasive exotics shall be hand pulled when they are small enough to ensure complete removal of the root system.
13. Pulled weeds and debris shall be transported and disposed of properly offsite immediately using approved methods to prevent any seed dispersal on the site.
14. Fuel management zones, described below, shall be maintained as follows.
 - a. Zone 1 – 30-foot Fuel Modification Vegetation Setback: A minimum 30-foot wide vegetation setback shall be maintained from the substation perimeter fence. This area is to be maintained free of vegetation, and may be a graded pad covered with gravel, Class 2 Base, or decomposed granite surfacing to allow truck access.
 - b. Zone 2 – 100-foot Fuel Modification Zone: The area within 100 feet of the substation fence, and outside the 30-foot Zone 1, shall be maintained in a suitable manner to reduce combustible fuel. The area will consist of native plant species (planted or existing) that shall be pruned to reduce fuel volume by removing highly combustible species and removing dead branches, fallen litter, and vegetation build-up. Maintenance shall consist of the following:
 - i. Remove all dead and dying vegetation, downed wood, dense clumps of dry grass and other flammable refuse.
 - ii. Trees shall be maintained widely spaced to avoid a continuous foliage canopy. Prune trees so that a clearance of three times the height of the under-story plant material is maintained.
 - iii. Large shrubs shall be pruned into widely spaced individual plants and shall be maintained to allow a 2-foot clearance above the groundcover to allow a clear space between the groundcover plants and the shrub canopy. Shrubs should be maintained spaced to avoid a continuous foliage canopy greater than 20 feet.
 - iv. Ground cover shall be maintained to a height of approximately 18 inches by yearly trimming after the growing season. Selected plants may be

removed to maintain spacing. A full cover is to be maintained to avoid erosion.

- v. Fire buffers shall be maintained in accordance with the local Fire District. The zones may be modified by the Fire District based on site conditions.
- vi. Remove fire prone species as listed in the Fire District's Guidelines.
- vii. Perform other vegetation thinning as required by the Fire Chief.
- viii. All fuel modification shall be as directed and accepted by the local Fire Chief.