URS

March 19, 2009

DOCKET
08-AFC-5
DATE MAR 19 2009
RECD. MAR 20 2009

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: SES Solar Two (08-AFC-5)
Draft Landscaping Plan
URS Project No. 27657106.00400

Dear Mr. Meyer:

On behalf of SES Solar Two, LLC, URS Corporation Americas (URS) hereby submits the Draft Landscaping Plan in Response to CEC and BLM Data Request 44 (SES Solar Two 08-AFC-5).

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit the Draft Landscaping Plan on behalf of SES Solar Two, LLC.

Sincerely,

Angela Leiba
Project Manager

AL:ml

URS Corporation
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San Diego, CA 92108
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Draft Landscaping Plan
In Response to CEC & BLM Data Request 44
Application for Certification (08-AFC-5)
SES Solar Two, LLC

Submitted to:
Bureau of Land Management
1661 S. 4th Street, El Centro, CA 92243

Submitted to:
California Energy Commission
1516 9th Street , MS 15, Sacramento, CA 95814-5504

Submitted by:
SES Solar Two, LLC
2920 E. Camelback Road, Suite 150, Phoenix, AZ 85016

URS
With Support From:
URS Corporation

March 2009

DRAFT

SOLAR TWO DRAFT LANDSCAPE CONCEPT PLAN

PREPARED FOR THE SOLAR TWO SITE
IMPERIAL COUNTY, CALIFORNIA

PREPARED FOR:

STIRLING ENERGY SYSTEMS, INC.

URS PROJECT NO. 27657106.00604

MARCH 20, 2009

D R A F T

SOLAR TWO DRAFT LANDSCAPE CONCEPT PLAN

Prepared for

Stirling Energy Systems, Inc.
Biltmore Lakes Corporate Center
2920 E. Camelback Road, Suite 150
Phoenix, AZ 85016

URS Project/Reference No. 27657106.00604

Patricia Trauth, ASLA, AICP
Principal Landscape Architect

March 20, 2009

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SECTION 1 SOLAR TWO DRAFT LANDSCAPE CONCEPT PLAN

1.1 INTRODUCTION

The proposed Draft Landscape Concept Plan for SES Solar Two (the Project) is being provided in response to Data Request 44 made by the California Energy Commission (CEC) and the Bureau of Land Management (BLM). The landscape concept plan is described in the following text and presented as a schematic in Figure 1, Landscape Concept Plan.

1.2 PROJECT OVERVIEW

The proposed Solar Two Project (Project) would develop a nominal 750-MW solar-powered electricity generating facility situated approximately 14 miles west of El Centro in Imperial County in southern California. The proposed Project area is located on approximately 6,140 acres of land authorized under a right-of-way permit from the Bureau of Land Management (BLM) to SES Solar Two LLC and approximately 360 acres of private land which may be purchased or leased by SES. A total of approximately 6,500 acres would be included within the fenced site. The Project site boundaries are the Evan Hewes Highway (County S-80) to the north, Interstate-8 (I-8) to the south, Dunaway Road to the east, and the western boundaries of Section 23 in Township 16 south, Range 12 East. North of the Project site is the USG Corporation (Plaster City) mining site. The main access to the site will be from Dunaway Road with a second north access from Evan Hewes Highway just east of the San Diego Gas and Electric (SDG&E) transmission line. This transmission line traverses the site from the northwest to the southeast.

The first phase of the Project will consist of approximately 12,000 SunCatchers configured in 1.5 megawatt (MW) solar groups with 60 SunCatchers per group. Other than the Solar Two interconnection transmission line to be constructed by SES to the Imperial Valley Substation, no new transmission lines or offsite substations will be required for Phase 1 of the Project. Eventually, the Project will be expanded to include up to 30,000 SunCatchers configured in 1.5 MW solar groups (Phase II). Phase 2 of the Project will require the construction of SDG&E's 500-kilovolt (kV) transmission line from the SDG&E Imperial Valley Substation to SDG&E's service territory. In accordance with the plan of development for Solar Two, the Project will be connected to the SDG&E Imperial Valley Substation via an approximate 10 mile offsite double-circuit 230-kV transmission line.

1.3 DRAFT LANDSCAPE CONCEPT PLAN

The Project would be clearly visible from I-8 and would have an effect on the viewshed from the road. The form, line, and texture of the visual environment will change as a result of the Project. The visual character of this area will change from open space to a regional center for large-scale solar power production. This change will be perceived differently by different people. To some people, the Project may detract from the desert environment, but to other people, the Project may be a point of positive visual interest. As one of the first large-scale projects of its kind in California, the solar technology has the potential to become a tourist attraction, drawing visitors from the energy industry, the environmental community, and government/political figures who seek direct personal experience of progressive renewable energy solutions.

The proposed Draft Landscape Concept Plan is not intended to hide the project nor mitigate visual impacts. However, it is intended to soften Project features by landscaping access roads, the Main Services Complex, Laydown/Staging Area, and Project entrances and exits. Additionally, landscaping clusters of canopy trees along the Southern border of the Project, adjacent to I-8, is intended to visibly break up long views of SunCatchers along the interstate. This placement of landscaping is anticipated to give publicly-visible areas of the project a more visually pleasing appearance.

Landscaping is also used for wayfinding purposes. Clusters of trees are used to identify the entrances and exits to the facilities. These landscaping features may become particularly important if the facilities are used for educational purposes.

1.4 SPECIES USED

All plant species proposed in this Draft Landscape Concept Plan are native species and considered drought tolerant. Additionally, species selected are not anticipated to impact the natural environment on-site. The conceptual landscape plan has been designed with three categories of species; canopy trees, shrubs, and species used to erosion control and seasonal color (Figure 1, Landscape Concept Plan).

Proposed species of canopy trees include the Blue Palo Verde (*Cerecidium floridium*), Honey Mesquite (*Prosopis glandulosa*), Desert Ironwood (*Olneya tesota*) and Desert Willow (*Chilopsis linearis*). These canopy trees will act as a windbreak around the facility and will be utilized along the I-8 corridor at half-mile intervals to visibly break up long views of the Project. The canopy trees are also proposed to be placed at the entrances and exits in order to help define these locations and render them more visually pleasing. Additionally, the trees will be planted around the perimeter of the Laydown/Staging area. A photograph of Honey Mesquite is provided on Figure 1, Landscape Concept Plan. Shrub areas are proposed to include a combination of Agaves and Cassias (species varied). These shrubs will be used at entrances and exists for both erosion control and visual definition. They are also proposed to be planted in areas surrounding the Main Services Complex and parking areas. Mexican Palo Verde (*Parkinsonia aculeata*) will be planted around the Main Services Complex and parking areas to provide filtered shade and seasonal color. A photograph of the Mexican Palo Verde in bloom is presented on Figure 1, Landscape Concept Plan.

1.5 WATER REQUIREMENTS AND MAINTENANCE PLAN

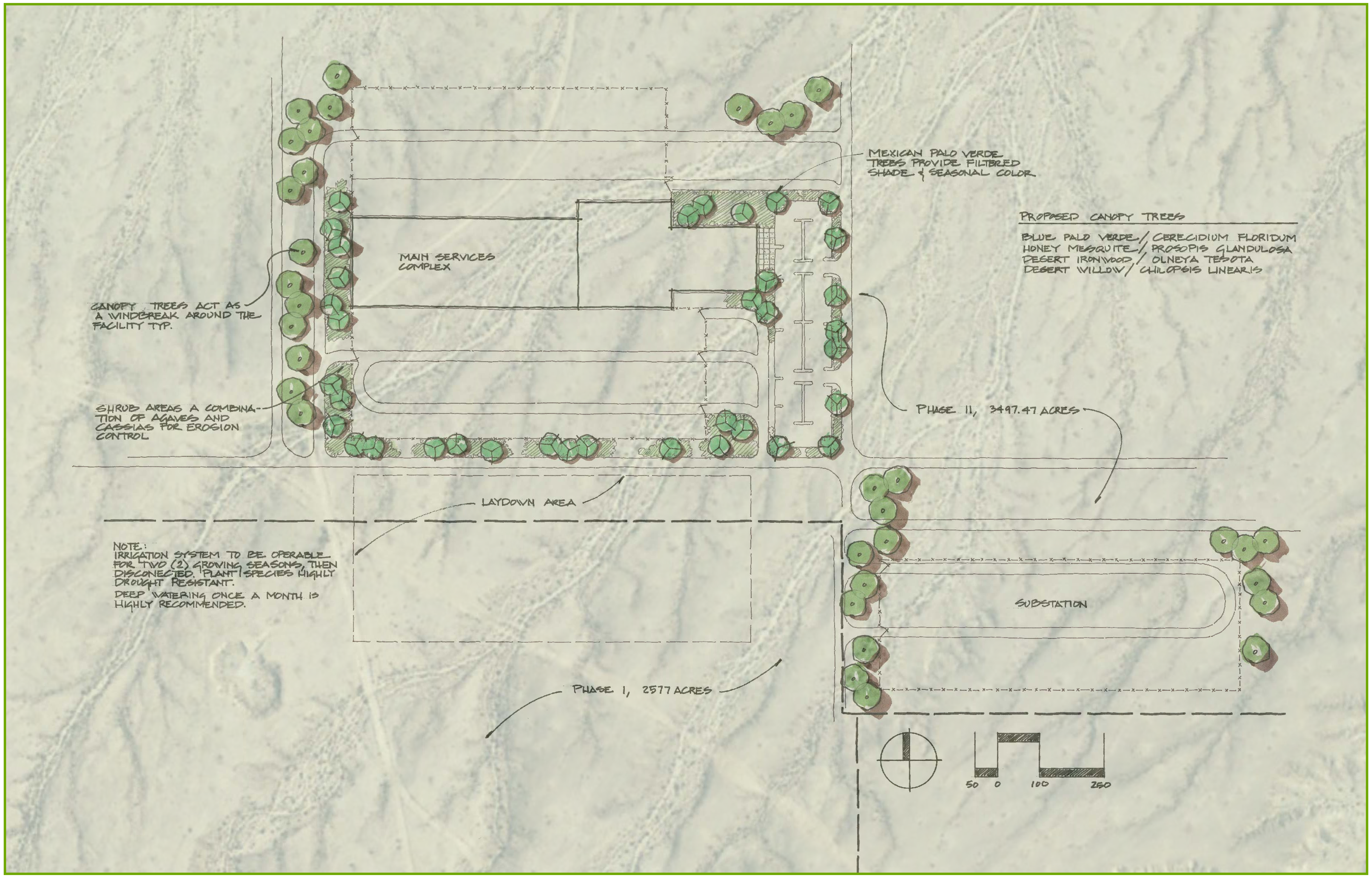
As discussed above, the species proposed for this landscaping plan are drought tolerant. Additionally, the species proposed are considered self-maintaining, requiring little maintenance once established. An irrigation system is proposed, but may be discontinued after two growing seasons. It is recommended that the plants receive a deep watering one day a month after plants are established. Grey water produced during normal plant operations is anticipated to be used to irrigate the landscaping.

Water use calculations are provided on Figure 1, Landscape Concept Plan. It is anticipated that implementation of this Draft Landscape Concept Plan will require approximately 269,000 gallons per year while the plants are being established. The projected water use calculations are based on landscape areas as proposed on the planting plan. Evapotranspiration rates are based on data compiled for the Palm Springs area of Southern California. Plant coefficient was obtained from Water use Classification of

Landscape Species (WUCOLS), University of California Extension. Water use may vary based on species, plant density and microclimate.

1.6 CONCLUSION

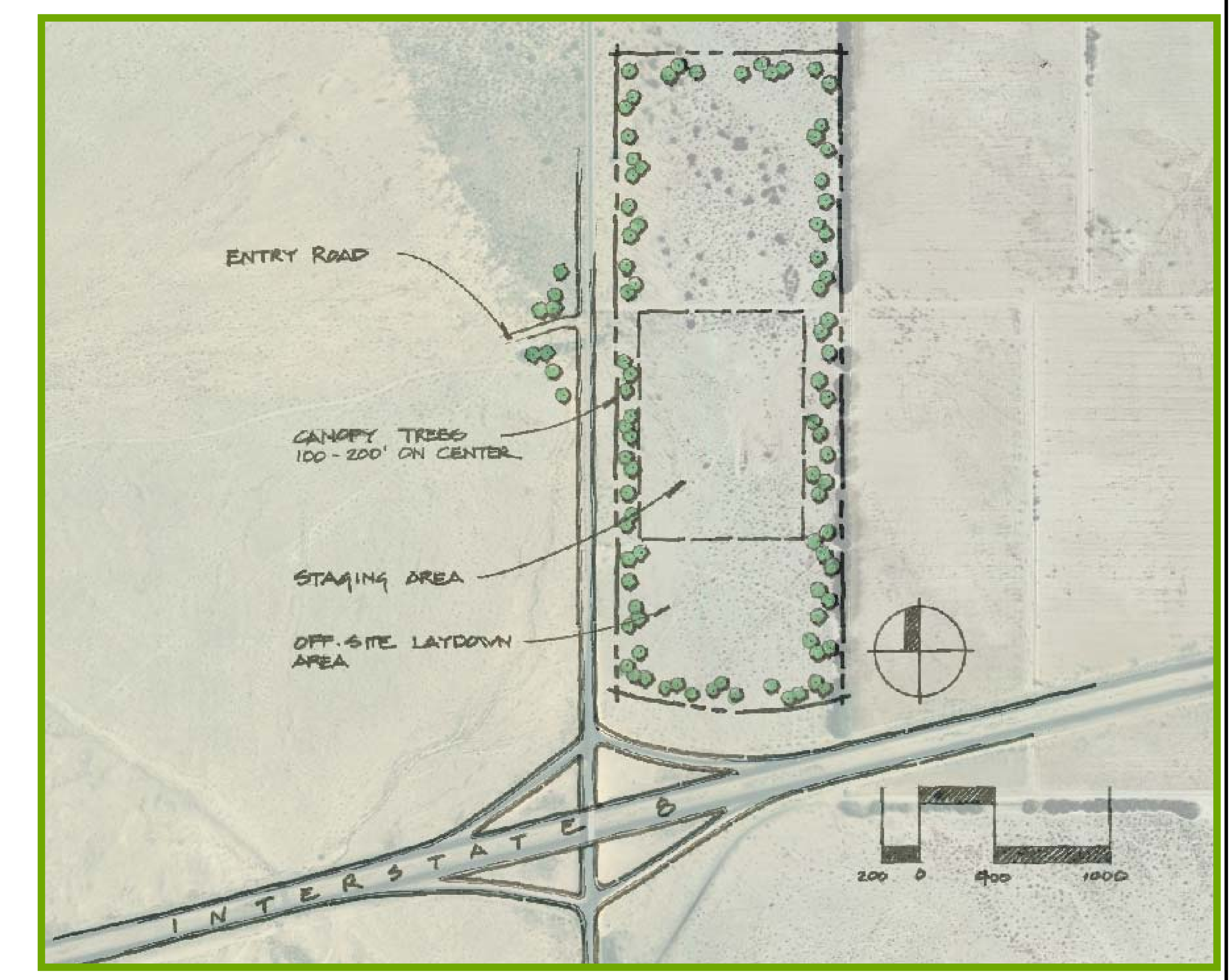
The Solar Two Draft Landscape Concept Plan is proposing to landscape areas easily viewed by the public including entrances and exits, the Interstate 8 corridor, the offsite Laydown/Staging area and main services complex. The plant species proposed are native and draught tolerant and will be irrigated using grey water. The proposed Draft Landscape Concept Plan is not intended to hide the Project nor mitigate visual impacts. However, it is intended to soften Project features, act as a potential windbreak and help establish Project entrances and exits.



MAIN SERVICES COMPLEX/ SUBSTATION

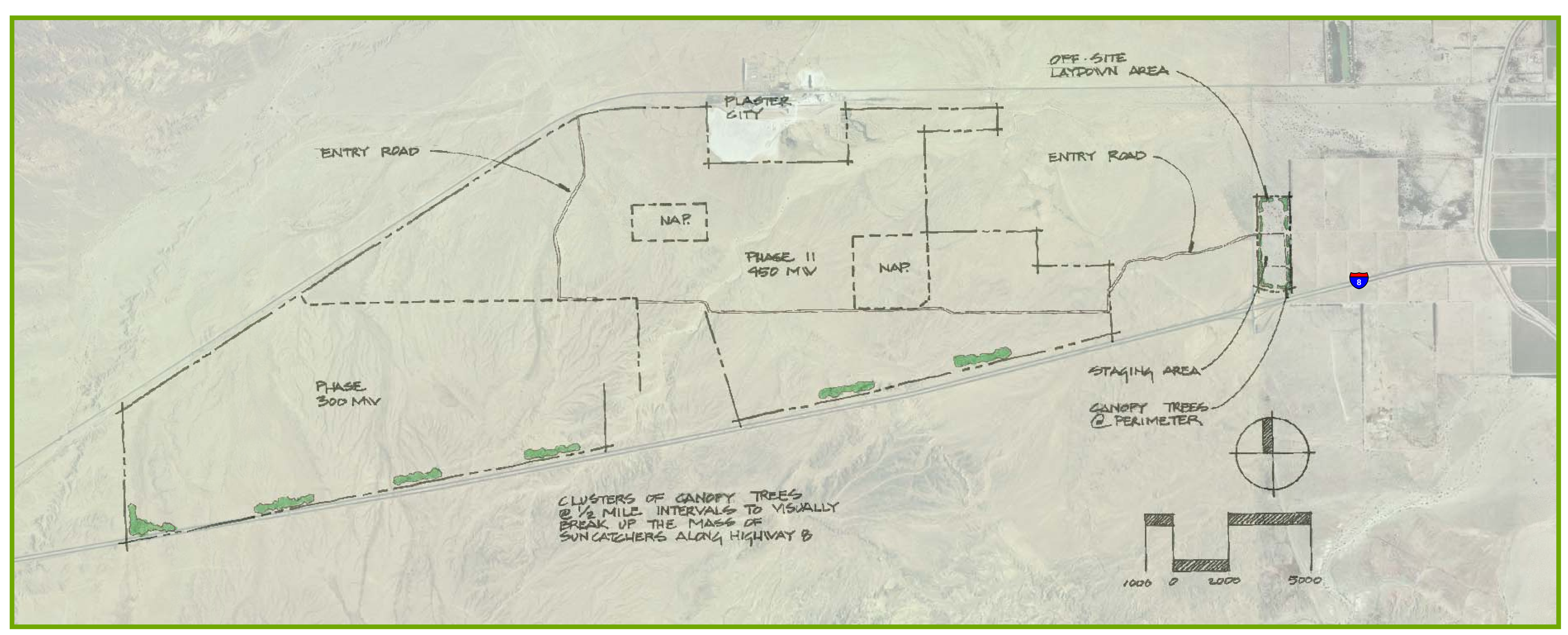
PROSOPIS GLANDULOSA

PARKINSONIA ACULEATA



LAYDOWN/ STAGING AREA

TYPICAL ENTRY



INTERSTATE 8 CORRIDOR

Projected Landscape Irrigation Water Use

For

SES Solar Two

Low to Moderate Water Use Hydrozone

	Evapotranspiration Rate	Plant Coefficient	*Monthly Plant Water Demand (in/mo)	**Total Area Water Demand (cu.ft/mo)	***Total Area Water Demand (gal/mo)***	***Low Water Use Hydrozone Water Demand (cu.ft/mo)	***Low Water Use Hydrozone Water Demand (gal/mo)***
January	0.08	0.2	0.02	1,102	***8,246***	1,225	***9,162***
February	0.12	0.2	0.02	1,654	***12,369***	1,837	***13,743***
March	0.17	0.2	0.03	1,654	***12,369***	1,837	***13,743***
April	0.23	0.2	0.05	3,169	***23,707***	3,521	***26,341***
May	0.28	0.2	0.06	3,858	***28,860***	4,287	***32,067***
June	0.32	0.2	0.06	4,409	***32,983***	4,899	***36,648***
July	0.31	0.2	0.06	4,272	***31,952***	4,746	***35,503***
August	0.28	0.2	0.06	3,858	***28,860***	4,287	***32,067***
September	0.23	0.2	0.05	3,169	***23,707***	3,521	***26,341***
October	0.16	0.2	0.03	2,205	***16,491***	2,450	***18,324***
November	0.1	0.2	0.02	1,378	***10,307***	1,531	***11,452***
December	0.07	0.2	0.01	965	***7,215***	1,072	***8,017***
Annual	2.35	0.2	0.47	32,382	***242,219***	35,980	***269,132***
				Cubic Feet	*Gallon*	*Cubic Feet*	*Gallon*

830,100 ***: Area of Hydrozone (s.f.)***

0.9 ***: Irrigation Efficiency***

*Evapotranspiration Rate x Plant Coefficient

**.083 x Monthly Plant Water Demand x Area of Hydrozone

***Total Area Water Demand / Irrigation Efficiency

Note:

1. The projected water use calculations are based on landscape areas as proposed on the planting plan. Evapotranspiration Rates are based on data compiled for the Palm Springs area of Southern California. Plant Coefficient obtained from WUCOLS, Water use Classification of Landscape Species, University of California Extension. Water use may vary based on species, plant density and microclimate.
2. Projected water requirements are based on the planted area and estimated watering demand.
3. This preliminary analysis is for discussion purposes regarding water requirements.
4. Irrigation system to be disconnected after two growing seasons (establishment period). It is highly recommended that deep watering be implemented one day a month after the establishment period.

1/30/2009

Low to Moderate Water Use Hydrozone

WATER USE CALCULATIONS

SOURCES: ESRI (High-Res 0-2m Imagery, 2007).

LANDSCAPE CONCEPT PLAN
SOLAR TWO PROJECT

URS

USE SCALE BAR FOUND ON EACH PLAN

CREATED BY: PH | DATE: 2-12-09 | FIG. NO: 1

PM: AL | PROJ. NO: 27657107.00604

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
For the SES SOLAR TWO PROJECT

Docket No. 08-AFC-5

PROOF OF SERVICE
(Revised 2/25/09)

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DECLARATION OF SERVICE

I, Angela Leiba, declare that on March 19, 2009, I served and filed copies of the attached Draft Landscape Concept Plan. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/solartwo]**. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

_X_ sent electronically to all email addresses on the Proof of Service list;

_X_ by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

_X_ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below **(preferred method);**

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original Signed By:
Angela Leiba