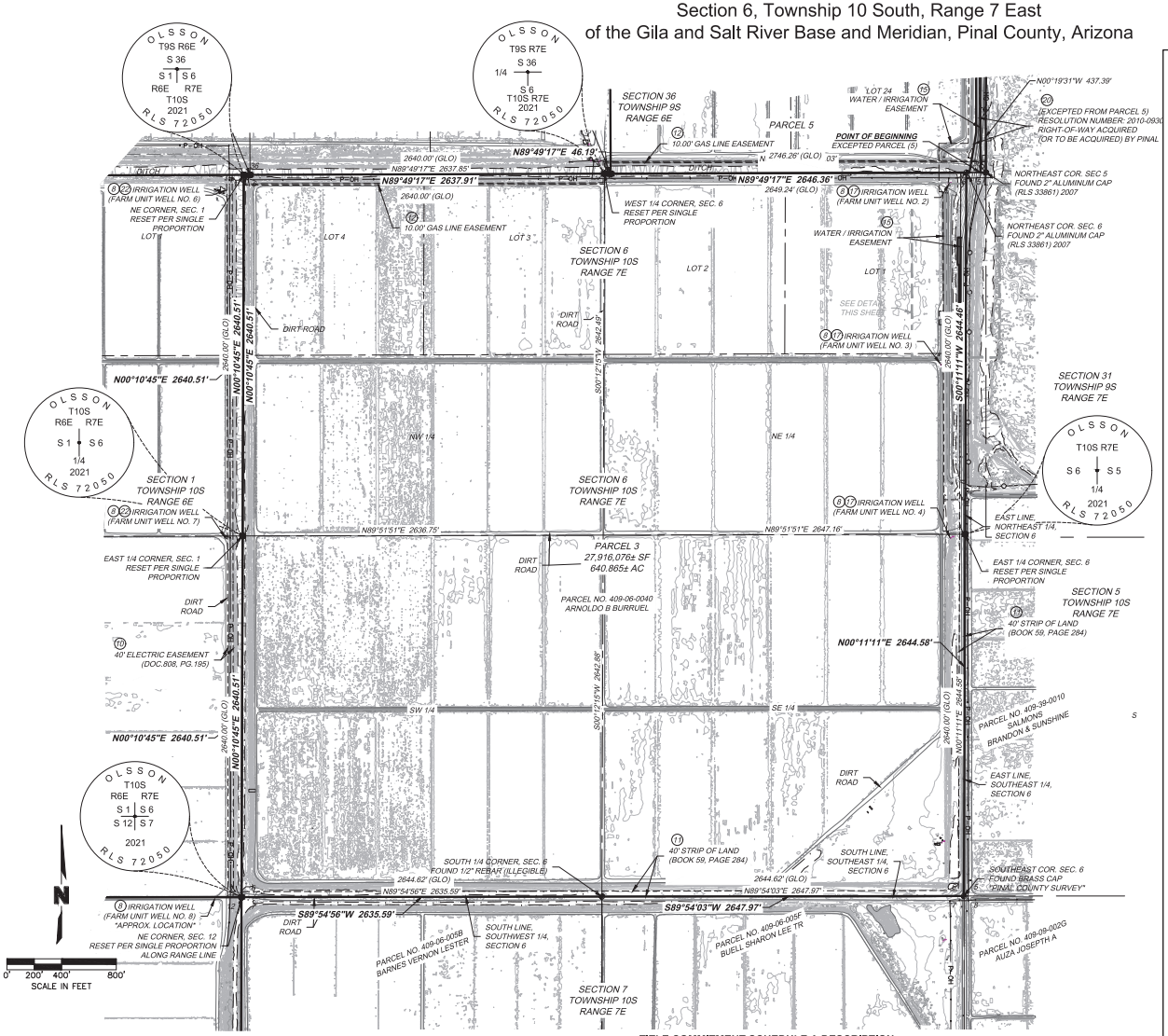
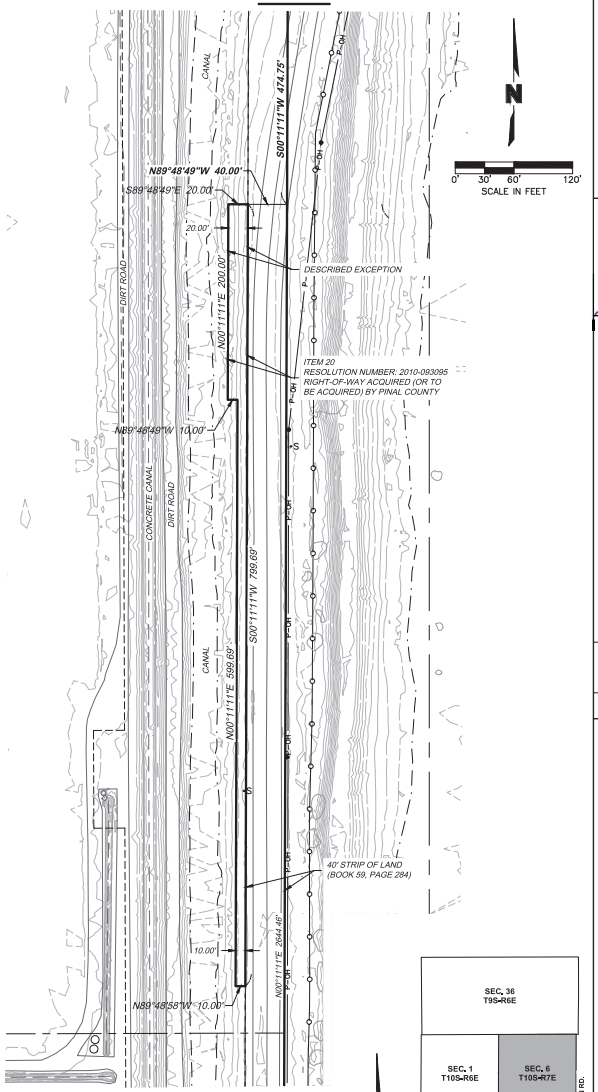
ALTA / NSPS Land Title Survey

A part of Section 36, Township 9 South, Range 6 East & Section 1 & 12, Township 10 South, Range 6 East & Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona





LEGEND

AC= Acres	Found Section Corner Monument (As Noted)
SQ. FT.= Square Feet	Found Monument (As Noted)
Rec.= Reception Number	Set Monument (#4 Rebar & 2" Alum. Cap RLS# 72050)
COR. Corner	Easement, Permanent
SEC. Section	Subject Property Boundary Line
ESMT. Easement	Section Line
R/W Right-of-Way	Quarter Section Line
	WET Wetlands / Marshlands
	X Barbed Wire Fence

TITLE COMMITMENT SCHEDULE A DESCRIPTION

Parcel 3 (409-06-0040)

Government Lots 1, 2, 3 and 4; The South Half of the North Half; and the South Half of Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Except all the coal, and other minerals in said lands together with the right to prospect for, mine and remove the same pursuant to the provisions and limitations of the act of December 29, 1916 (39 Stat., 862) as reserved to the United States of America, in Patent recorded January 8, 1924 in Book 38 of Deeds, Page 588; andAlso, Excepting therefrom a parcel of land situated in a portion of Section 6, Township 10 South, Range 7 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows: Commencing at the Northeast corner of said Section 6; thence South 00°16'01" West, along the East line of said Section 6, a distance of 474.75 feet; thence departing said East line, North 89°43'59" West, a distance of 40.00 feet to the point of beginning; thence South 00°16'01" West, along a line parallel with and 40.00 feet West of said East line, a distance of 799.69 feet; thence North 89°43'59" West, a distance of 10.00 feet; thence North 00°16'01" East, along a line parallel with and 50.00 feet West of said East line, a distance of 599.69 feet; thence North 89°43'59" West, a distance of 10.00 feet; thence North 00°16'01" East, along a line parallel with and 60.00 feet West of said line, a distance of 200.00 feet; thence South 89°43'59" East, a distance of 20.00 feet to the point of beginning.

olsson
7878 N. 16th Street, Suite 105
Phoenix, AZ 85020-5262
TEL 602.748.1000
www.olsson.com

Registered Land Surveyor CERTIFICATE NO. 72050 NICHOLAS SCHRADER ARIZONA U.S.A.

REVISIONS		
NO.	DATE	REVISIONS DESCRIPTION
1	2022/11/04	ADD TOPOGRAPHIC INFORMATION & PROPOSED LAYOUT

ALTA / NSPS LAND TITLE SURVEY
Enel Green Power
Sonak Solar Site
PINAL COUNTY, ARIZONA
2022

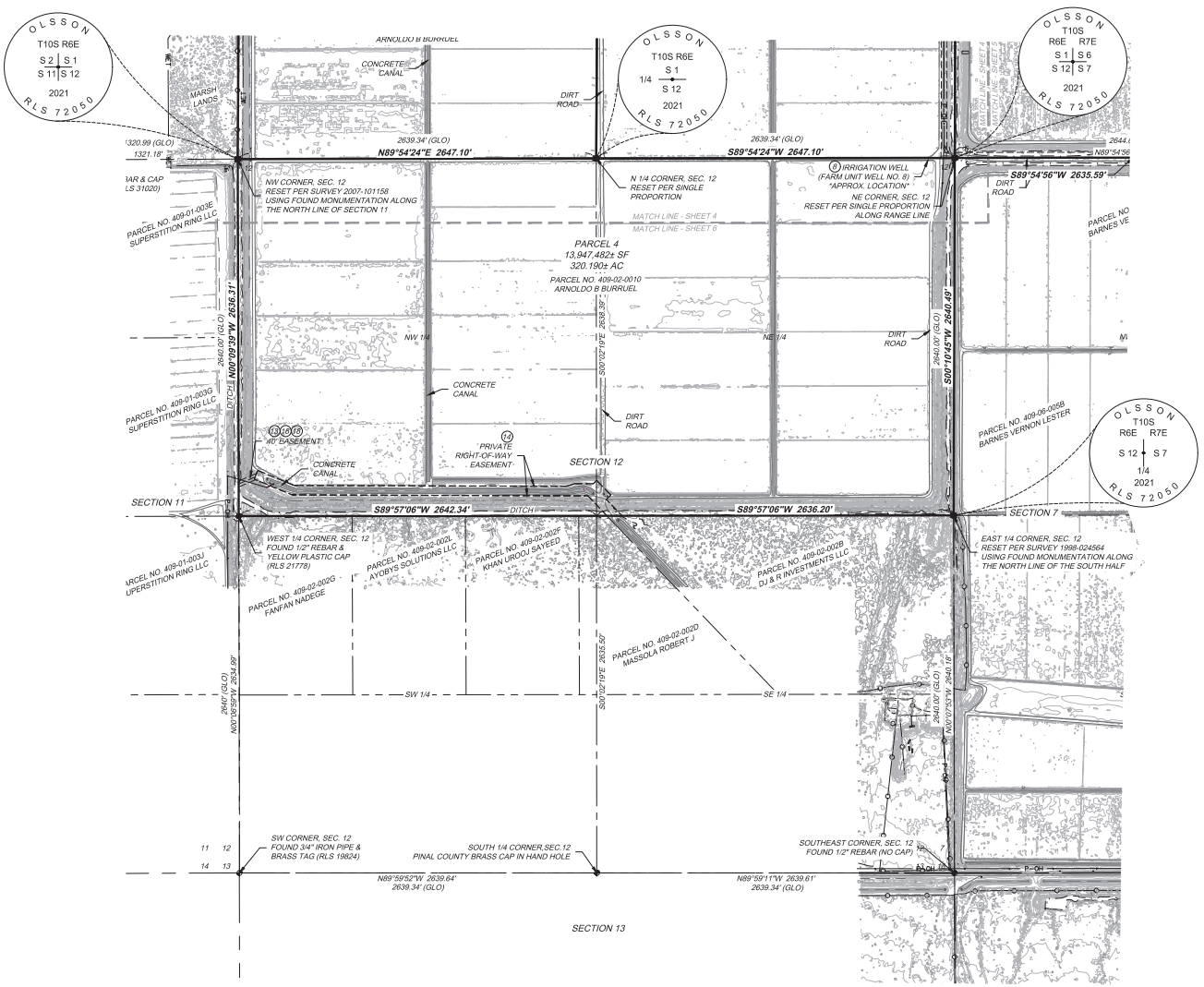
drawn by: DMW / NBS
designed by:
checked by: NSS
project no.: 021-05846
date: 01.21.2022

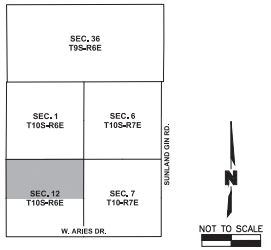
SHEET 4 of 7

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ALTA / NSPS Land Title Survey

A part of Section 36, Township 9 South, Range 6 East & Section 1 & 12, Township 10 South, Range 6 East & Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona







LEGEND

AC=	Acres
SQ. FT.=	Square Feet
Rec.=	Reception Number
COR.	Corner
SEC.	Section
ESMT.	Easement
R/W	Right-of-Way
	Found Section Corner Monument (As Noted)
	Found Monument (As Noted)
	Set Monument (#4 Rebar & 2" Alum. Cap RLS# 72050)
	Easement, Permanent
	Subject Property Boundary Line
	Section Line
	Quarter Section Line
WET	Wetlands / Marshlands
x	Barbed Wire Fence

TITLE COMMITMENT SCHEDULE A DESCRIPTION

Parcel 4 (409-02-0010)
The North Half of Section 12, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Excepting therefrom all coal, oil, gas and other mineral deposits as reserved in the Patent recorded in Book 56 of Deeds, Page 607.

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7878 N. 16th Street, Suite 105
Phoenix, AZ 85020-5262
TEL 602.748.1000
www.olsson.com

Registered Land Surveyor CERTIFICATE NO. 72050 NICHOLAS SCHRADER ARIZONA, U.S.A.

REVISIONS		
NO.	DATE	REVISIONS DESCRIPTION
1	2022/11/04	ADD TOPOGRAPHIC INFORMATION & PROPOSED LAYOUT

ALTA / NSPS LAND TITLE SURVEY
Enel Green Power
Sonak Solar Site
PINAL COUNTY, ARIZONA
2022

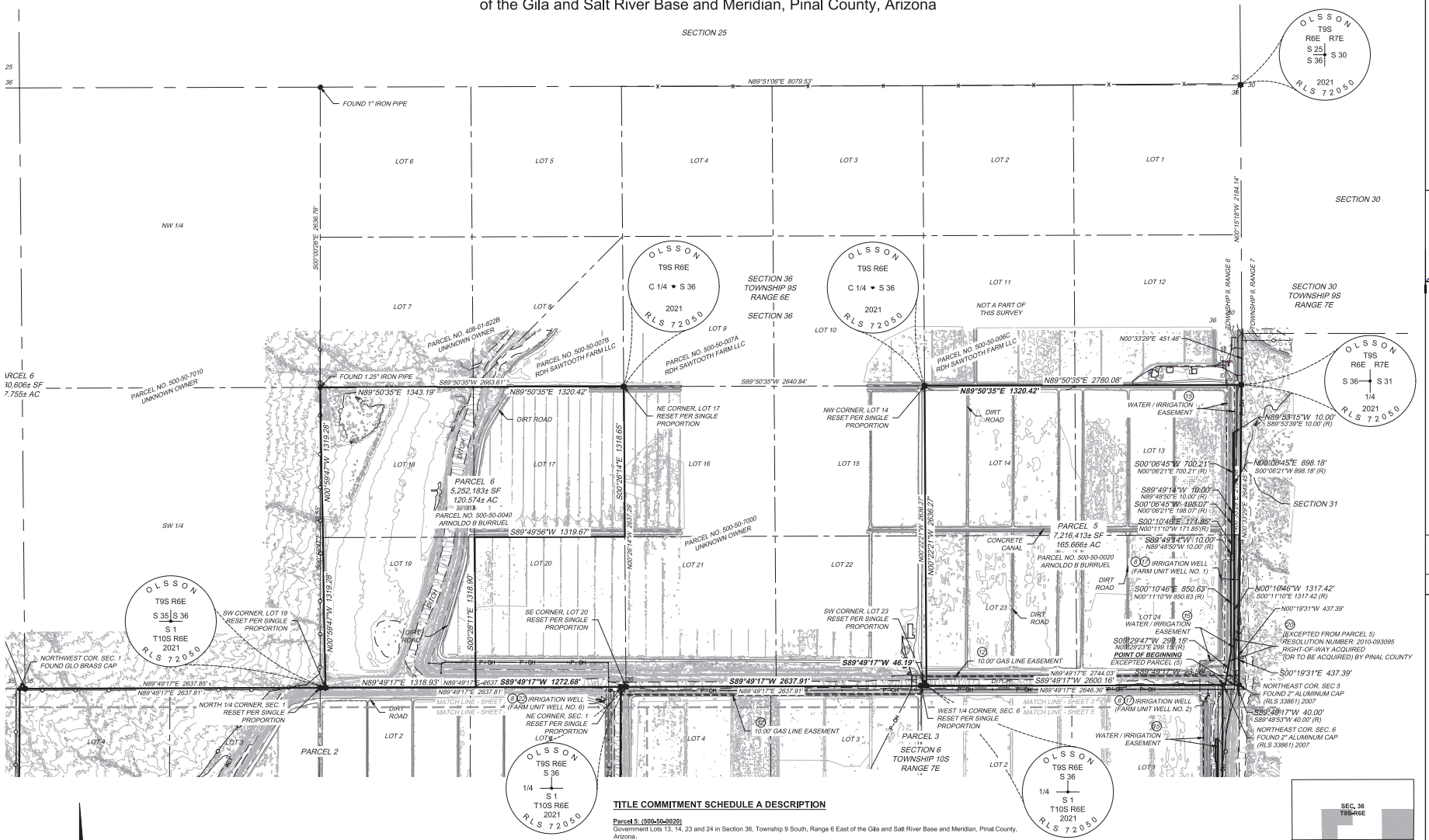
drawn by: DMW / NSS
designed by:
checked by: NSS
project no.: 021-05846
date: 01.21.2022

SHEET 5 of 7

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ALTA / NSPS Land Title Survey

A part of Section 36, Township 9 South, Range 6 East & Section 1 & 12, Township 10 South, Range 6 East & Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona



TITLE COMMITMENT SCHEDULE A DESCRIPTION

Parcel 5: (500-50-0020)
Government Lots 13, 14, 23 and 24 in Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Except all gas, oil, metals and mineral rights as reserved to the state of Arizona in the Patent to said land; and Also, excepting a parcel of land situated in a portion of Section 36, Township 9 South, Range 6 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows: commencing at the Southeast corner of said Section 36; thence South 89°48'53" West, along the South line of said Section 36, a distance of 40.00 feet to the point of beginning; thence continuing South 89°48'53" West, a distance of 80.28 feet; thence departing said South line, North 09°29'23" East, a distance of 299.15 feet; thence North 00°11'10" West, along a line parallel with and 70.00 feet West of the East line of Government Lot 24, a distance of 850.63 feet; thence North 89°48'50" East, a distance of 10.00 feet; thence North 00°11'10" West, a distance of 171.85 feet; thence North 0°06'21" East, along a line parallel with and 60.00 feet West of the East line of Government Lot 13, a distance of 198.07 feet; thence North 89°48'50" East, a distance of 10.00 feet; thence North 00°06'21" East, a distance of 700.21 feet; thence South 89°53'39" East, a distance of 10.00 feet to a point 40.00 feet West of the East line of said Government Lot 13; thence South 00°06'21" West, parallel to said East line, a distance of 898.18 feet; thence South 00°11'10" East, along a line parallel with and 40.00 feet West of the East line of said Government Lot 24, a distance of 1317.42 feet to the point of beginning.

Parcel 6 (500-50-0040)
Lots 17, 18 and 19, Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

LEGEND

AC=	Acres
SQ. FT.=	Square Feet
Rec.=	Reception Number
COR.	Corner
SEC.	Section
ESMT.	Easement
R/W	Right-of-Way

- Found Section Corner Monument (As Noted)
- Found Monument (As Noted)
- Set Monument (#4 Rebar & 2" Alum. Cap RLS# 72050)
- Easement, Permanent
- Subject Property Boundary Line
- Section Line
- Quarter Section Line
- WET — Wetlands / Marshlands
- Barbed Wire Fence

0' 200' 400' 800' SCALE IN FEET

NOT TO SCALE

SEC. 36 T9S-R6E | SEC. 1 T10S-R6E | SEC. 6 T10S-R7E | SEC. 12 T10S-R6E | SEC. 7 T10-R7E

SUNLAND GIN RD.

olsson
7878 N. 16th Street, Suite 105
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TEL 602.748.1000
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Registered Land Surveyor CERTIFICATE NO. 72050 NICHOLAS SCHRADER ARIZONA U.S.A.

REV. NO.	DATE	REVISIONS DESCRIPTION
1	2022/11/04	ADD TOPOGRAPHIC INFORMATION & PROPOSED LAYOUT

REVISIONS

ALTA / NSPS LAND TITLE SURVEY
Enel Green Power
Sonak Solar Site
PINAL COUNTY, ARIZONA
2022

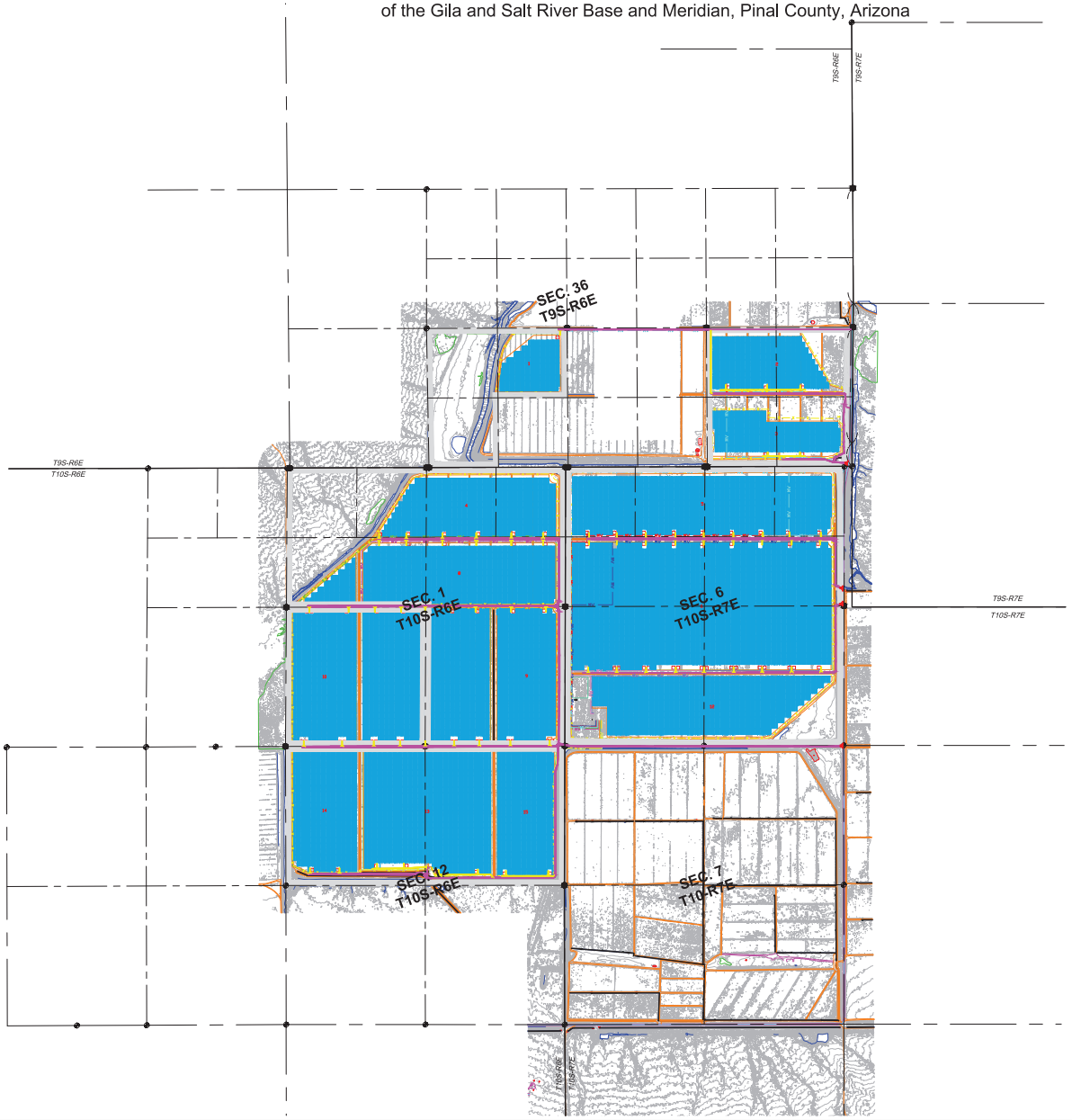
drawn by: DMW / NSS
designed by:
checked by: NSS
project no.: 021-05846
date: 01.21.2022

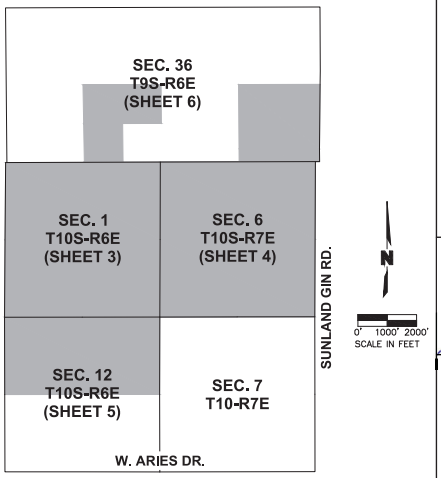
SHEET 6 of 7

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ALTA / NSPS Land Title Survey

A part of Section 36, Township 9 South, Range 6 East & Section 1 & 12, Township 10 South, Range 6 East &
Section 6, Township 10 South, Range 7 East
of the Gila and Salt River Base and Meridian, Pinal County, Arizona







LEGEND

- Easement, Permanent
- Subject Property Boundary Line
- Section Line
- Quarter Section Line

GENERAL NOTES

1. This sheet is intended to show the proposed improvments and infrastructure for the Sonak Solar project.
2. Improvements shown hereon have been provided by Enel Green Power and represent a 30% design.
3. See the previuos sheets for specific boundary information of the subject property.

olsson
7678 N. 16th Street, Suite 105
Phoenix, AZ 85020-5262
TEL 602.748.1000
www.olsson.com

Registered Land Surveyor
CERTIFICATE NO.
72050
NICHOLAS
SCHRADER
ARIZONA U.S.A.

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	2022/11/04	ADD TOPOGRAPHIC INFORMATION & PROPOSED LAYOUT

ALTA / NSPS LAND TITLE SURVEY
Enel Green Power
Sonak Solar Site
PINAL COUNTY, ARIZONA
2022

drawn by: DMW / NSS
designed by:
checked by: NSS
project no.: 021-05846
date: 01.21.2022

SHEET
7 of 7

APPENDIX C

Legal Descriptions

EXHIBIT "A" – Rezone

DESCRIPTION OF THE PROPERTY

THE FOLLOWING REAL PROPERTY LOCATED IN THE COUNTY OF PINAL, STATE OF ARIZONA:

Tract 1: APN 409-01-001A

The Southwest Quarter of Section 1, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 2: APN 409-01-001B

Government Lots 1, 2, 3 and 4; The South Half of the North Half; and the Southeast Quarter of Section 1, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 3: APN 409-06-0040

Government Lots 1, 2, 3 and 4; the South Half of the North Half; and the South Half of Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

LESS AND EXCEPT:
A parcel of land situated in a portion of Section 6, Township 10 South, Range 7 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows:
Commencing at the Northeast Corner of said Section 6; thence South 00 degrees 16 minutes 01 second West, along the East line of said Section 6, a distance of 474.75 feet; thence departing said East line, North 89 degrees 43 minutes 59 seconds West, a distance of 40.00 feet to the point of beginning; thence South 00 degrees 16 minutes 01 seconds, along a line parallel with and 40.00 feet West of said East line, a distance of 799.69 feet; thence North 89 degrees 43 minutes 59 seconds West, a distance of 10.00 feet; thence North 00 degrees 16 minutes 01 seconds East, along a line parallel with and 50.00 feet West of said East line, a distance of 599.69 feet; thence North 89 degrees 43 minutes 59 seconds West, a distance of 10.00 feet; thence North 00 degrees 16 minutes 01 seconds East, along a line parallel with and 60.00 feet West of said line, a distance of 200.00 feet; thence South 89 degrees 43 minutes 59 seconds East, a distance of 20.00 feet to the point of beginning.

Tract 4: APN 409-02-0010

The North Half of Section 12, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 5: APN 500-50-0020

Government Lots 13, 14, 23 and 24 in Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona,

LESS AND EXCEPT:
A parcel of land situated in a portion of Section 36, Township 9 South, Range 6 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows:
Commencing at the Southeast Corner of said Section 36; thence South 89 degrees 48 minutes 53 seconds West along the South line of said Section 36, a distance of 40.00 feet to the point of beginning; thence continuing South 89 degrees 48 minutes 53 second West, a distance of 80.28 feet; thence departing said South line, North 09 degrees 29 minutes 23 seconds East, a distance of 299.15 feet; thence North 00 degrees 11 minutes 10 seconds West, along a line parallel with and 70.00 feet West of the East line of Government Lot 24, a distance of 850.63 feet; thence North 89 degrees 48 minutes 50 seconds East, a distance of 10.00 feet; thence North 00 degrees 11 minutes 10 seconds West, a distance of 171.85 feet; thence North 00 degrees 06 minutes 21 seconds East, along a line parallel with and 60.00 feet West of the East line of Government Lot 13, a distance of 198.07 feet; thence North 89 degrees 48 minutes 50 seconds East, a distance of 10.00 feet; thence North 00 degrees 06 minutes 21 seconds East, a distance of 700.21 feet; thence South 89 degrees 53 minutes 39 seconds East, a distance of 10.00 feet to a point 40.00 feet West of the East line of said Government Lot 13; thence South 00 degrees 06 minutes 21 seconds West, parallel to said East line, a distance of 898.18 feet; thence South 00 degrees 11 minutes 10 seconds East, along a line parallel with and 40.00 feet West of the East line of said Government Lot 24, a distance of 1317.42 feet to the point of beginning.

Tract 6: APN 500-50-0040

Lots 17, 18 and 19, Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

EXHIBIT "B" – PAD Overlay District

DESCRIPTION OF THE PROPERTY

THE FOLLOWING REAL PROPERTY LOCATED IN THE COUNTY OF PINAL, STATE OF ARIZONA:

Tract 1:

The Southwest Quarter of Section 1, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 2:

Government Lots 1, 2, 3 and 4; The South Half of the North Half; and the Southeast Quarter of Section 1, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 3:

Government Lots 1, 2, 3 and 4; the South Half of the North Half; and the South Half of Section 6, Township 10 South, Range 7 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

LESS AND EXCEPT:
A parcel of land situated in a portion of Section 6, Township 10 South, Range 7 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows:
Commencing at the Northeast Corner of said Section 6; thence South 00 degrees 16 minutes 01 second West, along the East line of said Section 6, a distance of 474.75 feet; thence departing said East line, North 89 degrees 43 minutes 59 seconds West, a distance of 40.00 feet to the point of beginning; thence South 00 degrees 16 minutes 01 seconds, along a line parallel with and 40.00 feet West of said East line, a distance of 799.69 feet; thence North 89 degrees 43 minutes 59 seconds West, a distance of 10.00 feet; thence North 00 degrees 16 minutes 01 seconds East, along a line parallel with and 50.00 feet West of said East line, a distance of 599.69 feet; thence North 89 degrees 43 minutes 59 seconds West, a distance of 10.00 feet; thence North 00 degrees 16 minutes 01 seconds East, along a line parallel with and 60.00 feet West of said line, a distance of 200.00 feet; thence South 89 degrees 43 minutes 59 seconds East, a distance of 20.00 feet to the point of beginning.

Tract 4:

The North Half of Section 12, Township 10 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

Tract 5:

Government Lots 13, 14, 23 and 24 in Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona,

LESS AND EXCEPT:
A parcel of land situated in a portion of Section 36, Township 9 South, Range 6 East of Gila and Salt River Base and Meridian, Pinal County, Arizona, more particularly described as follows:
Commencing at the Southeast Corner of said Section 36; thence South 89 degrees 48 minutes 53 seconds West along the South line of said Section 36, a distance of 40.00 feet to the point of beginning; thence continuing South 89 degrees 48 minutes 53 second West, a distance of 80.28 feet; thence departing said South line, North 09 degrees 29 minutes 23 seconds East, a distance of 299.15 feet; thence North 00 degrees 11 minutes 10 seconds West, along a line parallel with and 70.00 feet West of the East line of Government Lot 24, a distance of 850.63 feet; thence North 89 degrees 48 minutes 50 seconds East, a distance of 10.00 feet; thence North 00 degrees 11 minutes 10 seconds West, a distance of 171.85 feet; thence North 00 degrees 06 minutes 21 seconds East, along a line parallel with and 60.00 feet West of the East line of Government Lot 13, a distance of 198.07 feet; thence North 89 degrees 48 minutes 50 seconds East, a distance of 10.00 feet; thence North 00 degrees 06 minutes 21 seconds East, a distance of 700.21 feet; thence South 89 degrees 53 minutes 39 seconds East, a distance of 10.00 feet to a point 40.00 feet West of the East line of said Government Lot 13; thence South 00 degrees 06 minutes 21 seconds West, parallel to said East line, a distance of 898.18 feet; thence South 00 degrees 11 minutes 10 seconds East, along a line parallel with and 40.00 feet West of the East line of said Government Lot 24, a distance of 1317.42 feet to the point of beginning.

LESS AND EXCEPT:

OPEN SPACE AREA NORTHEAST

A tract of land in Lot 13 of Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona, being more particularly described as follows:

BEGINNING at the Northeast corner of said Lot 13, being marked by an iron bar with an aluminum cap stamped “OLSSON RLS 72050”, from which the Southeast corner of Section 36 (also being the Southeast corner of Lot 24) bears South 00°24’41” West, a distance of 2635.33 feet to a found iron bar with a 2” aluminum cap stamped “RLS 33861 2007”, with all other bearings being relative hereto (said line does not follow the East line of Section 36 and is for reference only); Thence along the East line of said Lot 13 South 00°33’29” West, a distance of 1094.70 feet; Thence leaving said East line North 72°54’20” West, a distance of 54.32 feet to a point on the East line of a Pinal County right-of-way being recorded at instrument number 2010-093095 in the Pinal County Recorder’s Office; Thence along the East line of said right-of-way, North 00°06’45” East, a distance of 658.89 feet to the Northeast corner thereof; Thence along the North line of said right-of-way North 89°53’15” West, a distance of 10.00 feet to the Northwest corner thereof; Thence along the West line of said right-of-way, South 00°06’45” West, a distance of 655.84’; Thence leaving said right-of-way North 72°54’20” West, a distance of 278.40 feet; Thence North 29°58’29” West, a distance of 1144.34 to a point on the North line of said Lot 13; Thence along said North line 89°50’35”, a distance of 910.41 to the POINT OF BEGINNING.

Said tract contains 625,441 square feet or 14.358 acres of land, more or less.

Distances shown hereon are ground distances which have been scaled from grid

distances using the combined scale factor of 1.00016634 (reciprocal of 0.99983368).

Tract 6:

Lots 17, 18 and 19, Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona.

LESS AND EXCEPT:

OPEN SPACE AREA NORTHWEST

A tract of land in Lot 18 of Section 36, Township 9 South, Range 6 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona, being more particularly described as follows:

BEGINNING at the Northwest corner of said Lot 18, being marked by a found 1.25" iron pipe, from which the Southwest corner of said Lot 19, being marked by an iron rebar with an aluminum cap stamped "OLSSON RLS 72050" bears South 00°59'47" East, a distance of 2638.55 feet, with all other bearings being relative hereto; Thence along the North line of said Lot 18, North 89°50'35" East, a distance of 831.12 feet; Thence leaving said North line South 50°05'32" West, a distance of 1068.00 feet to the West line of said Lot 18; Thence along said West line, North 00°59'47" West, a distance of 683.01 feet to the **POINT OF BEGINNING**.

Said tract contains 283,801 square feet or 6.515 acres of land, more or less.

Distances shown hereon are ground distances which have been scaled from grid distances using the combined scale factor of 1.00016634 (reciprocal of 0.99983368).

APPENDIX D

Public Engagement

Sonak Solar Project – Neighborhood Meeting Minutes

October 20th, 2022

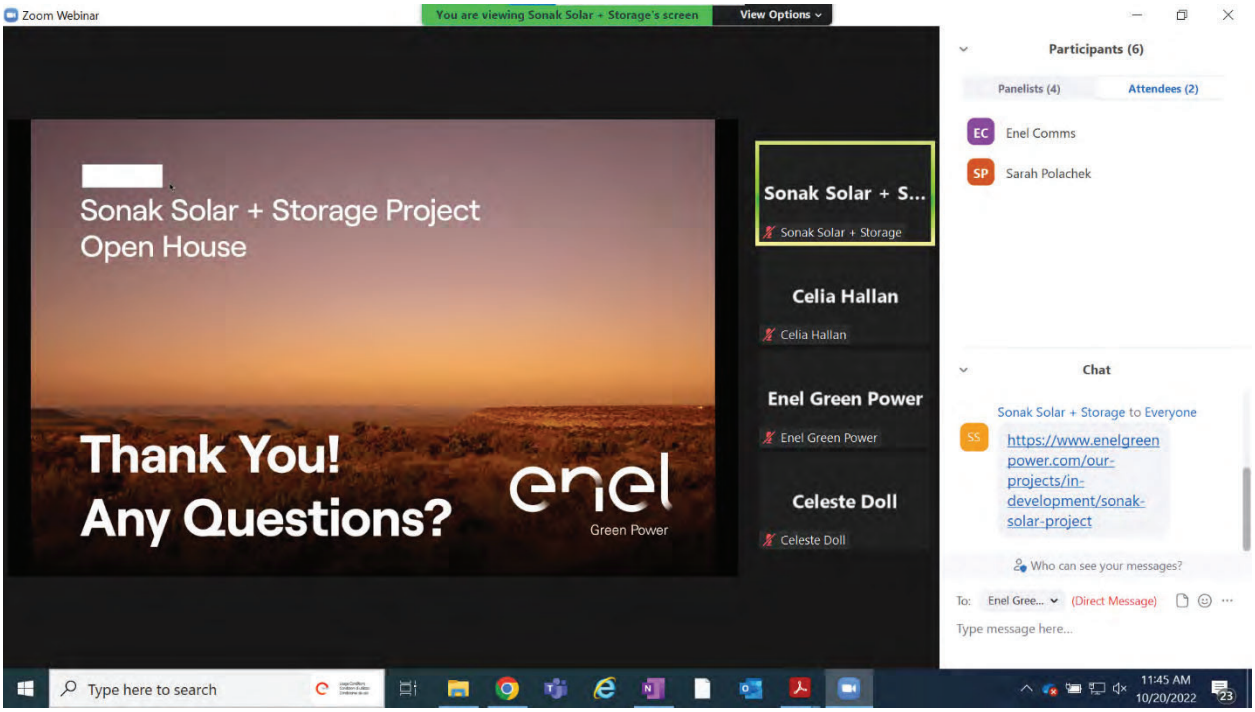
11:00 am – 12:00 pm: Virtual Neighborhood Meeting

- 11:00am: Zoom Webinar is opened for the Virtual Neighborhood Meeting. Community members can call in by phone, or join by computer from enelgreenpower.com/sonak, as informed by the neighborhood meeting invitation.
- 11:15am: No community members have joined the Virtual Neighborhood Meeting. Celia Hallan gives PowerPoint presentation on the Sonak Project. The presentation is recorded.
- 11:45am: PowerPoint presentation concludes. Floor is opened for Q&A. No community members have joined, but a link to the Sonak Project website is posted in the chat for any community members who do join to ask questions or leave comments.
- 12:00pm: Zoom Webinar is closed. Virtual Neighborhood Meeting ends. No community members in attendance.

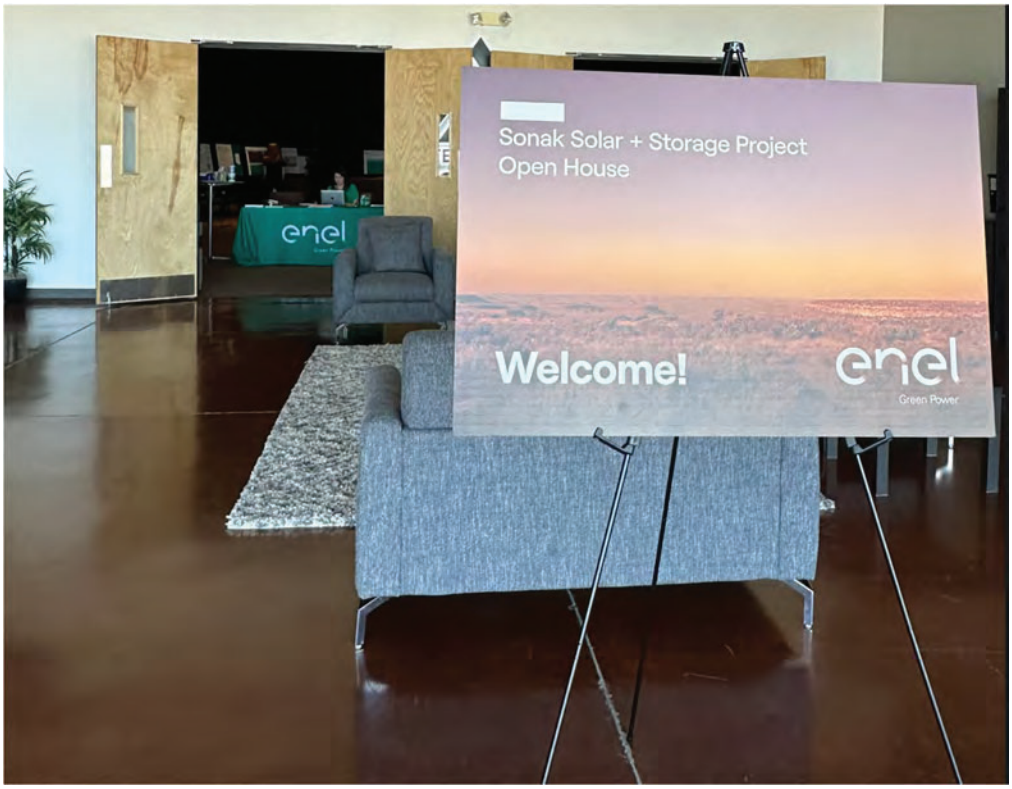
4:00 pm – 9:00 pm: In-Person Neighborhood Meeting

- 3:00pm: Sonak Project team arrives at After the One Church in Arizona City, AZ and sets up welcome table with sign-in sheets, project fact sheets, and contact information, project information boards, and comment card tables for the Neighborhood Meeting.
- 4:00pm: Doors opened for In-Person Neighborhood Meeting
- 4:00pm – 9:00pm: Sonak Project team greets community members arriving for Neighborhood Meeting. Team members bring community members around project information boards, answer questions, and provide comment cards. Total of three adult community members attend and sign in using sign-in sheet. Community members asked the following questions:
    - How will you deal with flooding on the site or along Sunland Gin Road?
    - Will construction and operation of the Project create dust?
    - How close is the Project to the Silverbell Estates? Will it affect the Silverbell Estates?
    - Will Enel be upgrading roads for the project?
    - How long will construction last?
    - We are not familiar with the Battery Storage technology. What are you planning?
    - How tall will the panels be?
    - Is this project a done deal? What are the next steps for the Project?
- 9:00pm: Doors closed for In-Person Neighborhood Meeting.

Attachment A: Virtual Neighborhood Meeting Screenshot, 11:45am, 10/20/2022



Attachment B: In-Person Neighborhood Meeting Photos, 10/20/2022




enel
Green Power



In-Person Meeting Attendee Sign In Sheet

enel

Green Power

First Name	Last Name	Address	Email	Phone	Do you want to receive email updates?	Signature
Pauline	Utecht Wright	14599W Moonchild Ln	flowerchilimom@hotmail.com	5207052900	☑	Pauline Utecht Wright
Martin Smith	Smith	13774W Scorpio Ave	MartinSmith4957 Yahoo.com	260-273-0685	☑	
Debra	Potter	12802W Viejo Day	—	—	☐	
					☐	
					☐	
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Created With Tiny Scanner

Landowner List

Obtained from Pinal County, AZ Assessor Website on August 16, 2023

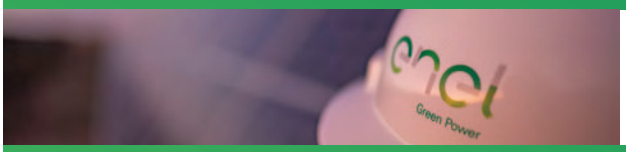
Real Property Owner	Street	City	State	Parcel ID	1200 FEET
AHMADIYYA MOVEMENT IN ESLAM INC USA	4720 W COUNTRYSIDE WAY	TUCSON	AZ	408-11-036A	X
AUZA JOSEPH A	353 E WILEY WAY	CASA GRANDE	AZ	409-09-002G	X
AUZA JOSEPH A SHEEP CO LLC	353 E WILEY WAY	CASA GRANDE	AZ	409-09-0040	X
BARNES VERNON LESTER, BARNES PATRICIA G	3095 S TREKELL RD	CASA GRANDE	AZ	409-06-005B	X
BUELL SHARON LEE TR	4074 E PARK AVE	GILBERT	AZ	409-06-005F	X
BURRUEL ARNOLDO B & JUDITH K					X
DJ & R INVESTMENTS LLC	3537 E CAMINO CIR	MESA	AZ	409-02-002B	X
GREENE RESERVOIR FLOOD CONTROL DISTRICT	1 E WASHINGTON ST STE 1600	PHOENIX	AZ	409-39-0020	X
KHAN UROOJ SAYEED	8729 N MOONFIRE DR	TUCSON	AZ	409-02-002F	X
MAZZOLA ROBERT J & MAZZOLA JENNIFER M					
MUHAMMAD DENNIS & KELMER	6814 W GAR WAY	LAVEEN	AZ	409-02-002C	X
RDH SAWTOOTH FARM LLC	7114 E STETSON DR STE 400	SCOTTSDALE	AZ	500-50-006C	X
RDH SAWTOOTH FARM LLC	7114 E STETSON DR STE 400	SCOTTSDALE	AZ	500-50-007A	X
RDH SAWTOOTH FARM LLC	7114 E STETSON DR STE 400	SCOTTSDALE	AZ	500-50-007B	X
RDH SAWTOOTH FARM LLC	7114 E STETSON DR STE 400	SCOTTSDALE	AZ	500-50-006D	X
RDH SAWTOOTH FARM LLC	7114 E STETSON DR STE 400	SCOTTSDALE	AZ	500-50-0010	X
SALMONS BRANDON & SUNSHINE, BARNES CHRIS	11597 N BELLARIVA DR	CASA GRANDE	AZ	409-39-0010	X
SAWTOOTH MTN LLC	2028 S HIGHLAND MESA RD	FLAGSTAFF	AZ	409-02-002C	X
STATE TRUST LAND				500-50-7000	X
SUPERSTITION RING LLC	PO BOX 47638	PHOENIX	AZ	409-01-003E	X
SUPERSTITION RING LLC	PO BOX 47638	PHOENIX	AZ	409-01-003G	X

BUREAU OF LAND MANAGEMENT, ATTN: LESLIE A. UHR					
HERNANDEZ SABRINA	8477 W CORONADO DR	ARIZONA CITY	AZ	409-02-002H	X
DAWNAISHAREGINAKELMER DARK LLC	2002 E ROESER RD	PHOENIX	AZ	409-02-002J	X
KATEN MARKUS ANTHONY	10559 W ANGELS LN	PEORIA	AZ	409-02-002D	X
MUHAMMAD DENNIS	2002 E ROESER RD	PHOENIX	AZ	409-02-002K	X
AYOBYS SOLUTIONS LLC	2558 E WIER AVE	PHOENIX	AZ	409-02-002L	X
Real Property Owner	**Street**	**City**	**State**	**Parcel ID**	**600 FEET**
MUHAMMAD DENNIS	2002 E ROESER RD	PHOENIX	AZ	409-02-002K	X
AYOBYS SOLUTIONS LLC	2558 E WIER AVE	PHOENIX	AZ	409-02-002L	X

*Highlighted names were previously listed but no longer found on Pinal County Assessor Webpage.

Notice Mailer



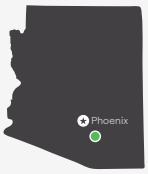




Sonak Solar + Storage Project
Open House

Enel Green Power North America
2175 NW Raleigh St., Suite 110
Portland, OR 97210

About Sonak Solar



- Located in rural Pinal County, 10 miles south of Arizona City
- Generates new tax revenue for schools and public services
- Creates jobs and generates local spending during construction
- Helps preserve Arizona's environment
- Supports America's energy independence

Scan with your smartphone to learn more.

We Want To Hear From You

Please join Enel Green Power for an Open House to learn more about the Sonak Solar Project in Pinal County. The event is come-and-go, and our team will be there to answer questions and discuss the project.

October 20, 2022
4-9 p.m.

After the One Church
13325 S Tacna Rd, Arizona City, AZ 85123

Can't make it in-person? We also have a virtual option:

October 20, 2022
11 a.m. - 12 p.m.

Virtual joining information will be available on enelgreenpower.com/sonak on the morning of Oct.20.

Your feedback is important to us as we aim to ensure this project benefits the county for years to come.

We hope to see you there!

Questions? Please contact:

Celia Hallan
Project Development Manager
Enel Green Power North America
(978) 806-6743
Celia.Hallan@enel.com



Enel Green Power

Enel Green Power in North America is a leading developer, long-term owner and operator of renewable energy plants with a presence in 14 U.S. states and one Canadian province. The company operates 64 plants with a managed capacity of over 8 GW powered by wind, geothermal and solar energy.

Stay Connected www.enelgreenpower.com/sonak

enel Green Power

APPENDIX E

Preliminary Drainage Report

ENEL

SONAK SOLAR PROJECT

PRELIMINARY DRAINAGE STUDY



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SONAK SOLAR PROJECT

PRELIMINARY DRAINAGE STUDY

ENEL

PRELIMINARY DRAINAGE STUDY

PROJECT NO.: 31300042.K
DATE: DECEMBER 2022

WSP

WSP.COM

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A.3.2 SOILS MAP

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1 INTRODUCTION

1.1 PROJECT OVERVIEW

This Preliminary Drainage Report was prepared by WSP on behalf of ENEL to address drainage at the proposed Sonak Solar Project (SS Project). The project consists of a 323 megawatt alternating current (MWac) photovoltaic (PV) solar plant situated on approximately 1,867 acres of land within Pinal County, Arizona, approximately ten (10) miles south of Arizona City (Figure 1.1).

The purpose of this Preliminary Drainage Report is to establish the hydrology for the 100-year and 10-year storm events and provide flow depths and velocities that will be used to provide solar equipment elevations (panels, inverters, and pads) and O&M building pad elevation.

1.2 PROJECT DESCRIPTION

The Project site is located in Pinal County, Arizona, approximately 10 miles south of Arizona City. Access to the project site is via Sunland Gin Road on the east side and Pearce Road to the south. The site is located within portions of Township 9 South (T9S), Range 6 East (R6E), Section 36, T10S, R6E, Sections 1 and 12, and T10S, R7E, Section 6. The Project consists of a PV solar farm with a nameplate capacity of 323 MWac on approximately 1,867 acres of land. At present, the land is primarily cultivated crops.

The PV array facilities will be located within the project boundary and the entire facility will be enclosed by security fencing. Major components include;

- PV modules/arrays
- Solar trackers or fixed support structures
- Direct current (DC) or alternating current (AC) collection cable and combiner or switch boxes
- Solar power inverters and medium-voltage transformers
- Battery energy storage system (BESS)
- Electrical collection system
- Onsite substation
- Administration/operations and maintenance (O&M) building
- Revegetation of ground cover

1.3 EXISTING SITE CONDITIONS

The project site is currently in agricultural use. The overall slope of the land is less than 0.2% and drains generally north. Since a majority of the land is used for agricultural and individual fields are generally leveled for irrigation efficiency, the breaks between fields are terraced to accommodate the overall ground slope. This terracing also appears to be driven by the gravity-fed irrigation supply that is sourced by nearby irrigation canals such as the Central Main Canal. The proposed solar development intends to utilize the nearly level farm fields on the site for the layout of solar panel arrays. Site conditions can be found on Figure 1.2.

There is a Federal Emergency Management Agency (FEMA) designated Zone A (100-year) flood zone within Greene Wash as identified on Figure 1.2. The flood zone meanders southeast to northwest. The project site is outside the limits of the Zone A flood zone and development of the site is not anticipated to have any negative impacts on the flood zone.

1.4 PROPOSED SITE CONDITIONS

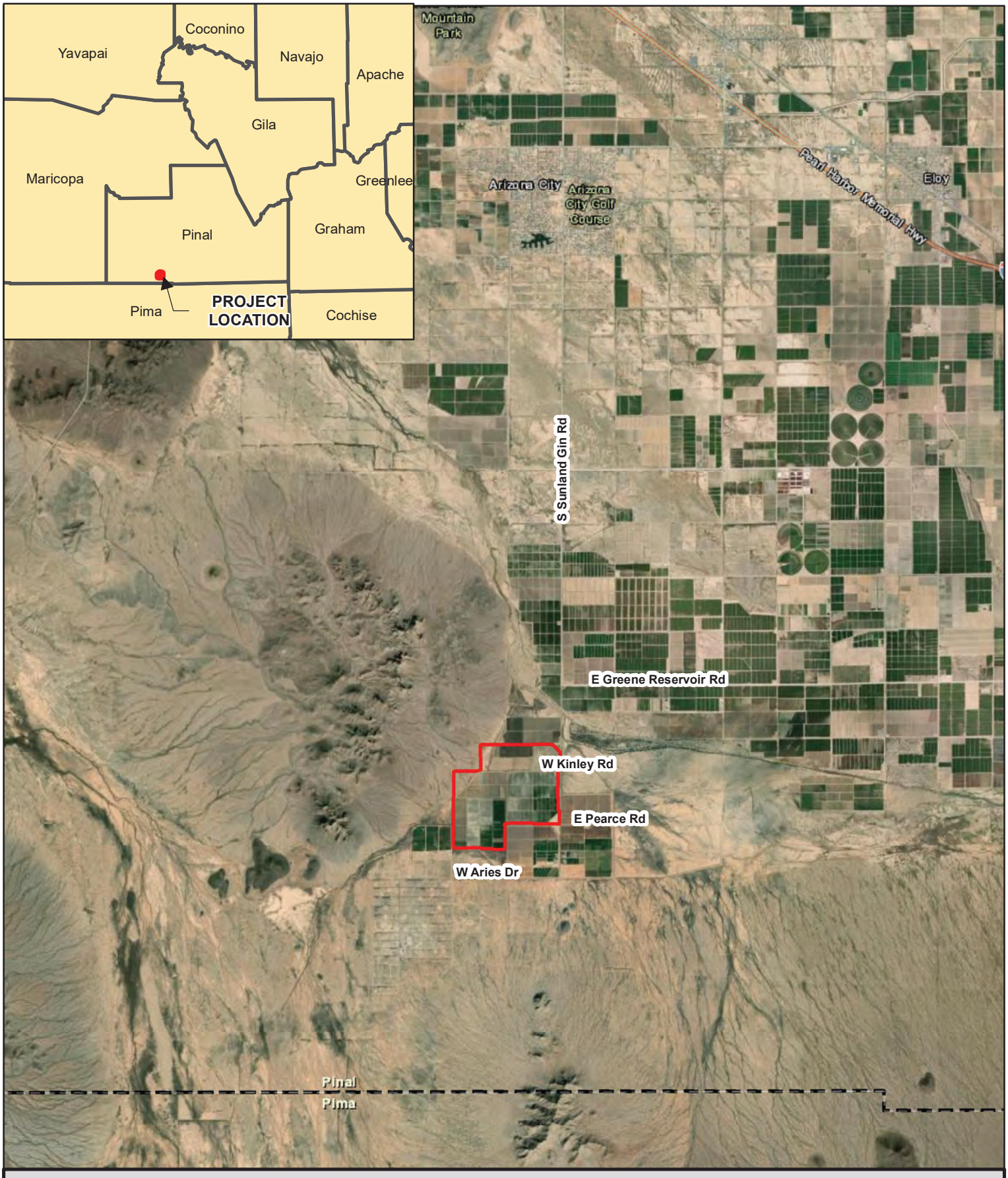
The Sonak Solar Project is a greenfield solar project that will connect to the existing transmission network. The Project will be constructed with bifacial PV modules. The solar panels will be mounted on racks, with the panels 2 to 3 feet above the ground. The ground surface beneath the panels will be open except for the foundation piles, with surface runoff flowing below and around the solar arrays. The areas under the panels will be seeded with low-maintenance native vegetation that will maintain and, in some areas, enhance the hydrologic characteristics of the site.

Rainfall landing on the panels will drip off the bottom edge and either infiltrate or travel overland as sheet flow. The flat topography and grass will reduce the velocity and scour potential. Upon completion, BESS, gravel roads, equipment pads, and other impervious surfaces will cover approximately 2 to 3% of the site, with the remainder of the site being grassed.

1.5 PURPOSE OF REPORT

The purpose of this report is to establish the 100-year and 10-year storm flow depths and velocities across the site and present a preliminary stormwater management plan for the SS Project. This report presents an overview of the hydrologic methods, input parameters, and 100-year and 10-year hydrologic and hydraulic model results. This report is organized as follows:

- Section 1 provides general project background;
- Section 2 presents previous studies related to the project;
- Section 3 discusses hydrologic & hydraulic analysis;
- Section 4 presents hydrologic and hydraulic results;
- Section 5 provides the conclusion; and,
- Section 6 lists the references.



Sonak Solar

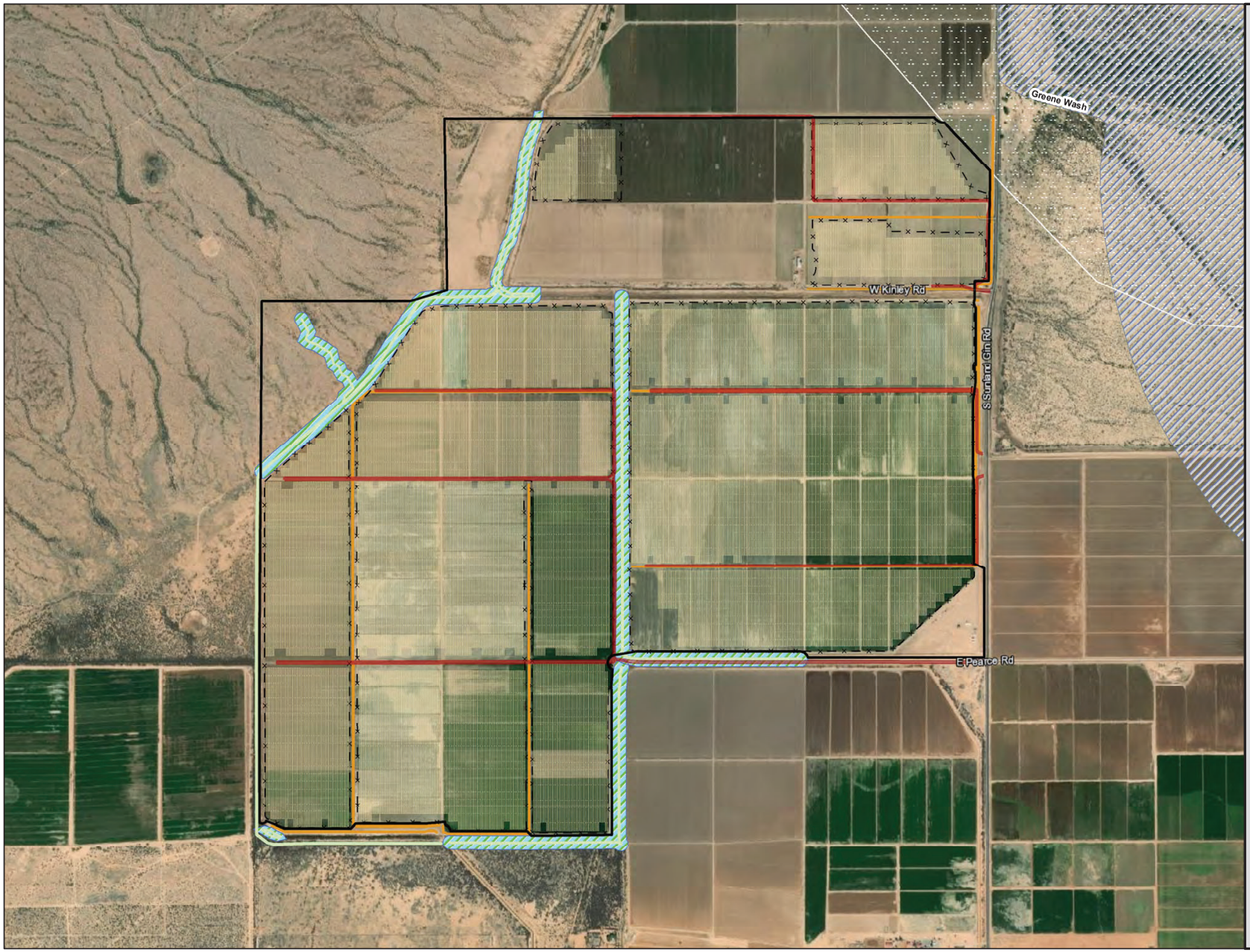
Legend

- Project Limits
- County Boundary

N

0 1 2 4 Miles

Vicinity Map
Figure 1.1



Sonak Solar

Legend

- Project Limits
- Proposed Road
- Proposed Panels
- Proposed Fence
- Ditch
- Wetlands
- Wetlands Buffer
- Designated Major Open Space
- Zone A Flood Zone

N

0 500 1,000 2,000

Feet

Site Map
Figure 1.2

2 PREVIOUS STUDIES

2.1 FLOOD INSURANCE RATE MAPS

The FEMA publishes Flood Insurance Rate Maps (FIRM) that delineate special flood hazard areas (SFHAs) subject to flooding by the 1% annual chance (100-year) storm event. Other Flood Areas identified as Zone X (shaded) are defined by FEMA as areas of 0.2% annual chance (500-year) flood; areas of 1% annual chance flood with average depths of less than 1 foot, or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

Figure 2.1 is a reproduction of the FIRM panels for Pinal County where the Project is located. According to FIRM Number 04021C2325E, Panel 2325 of 2575, effective date December 4, 2007, the Project is not within a Special Flood Hazard Area and is identified as unshaded Zone X, areas outside the 0.2% annual chance floodplain.

There is an existing Zone A (100-year) flood zone east of the site. The project site is outside the limits of the Zone A flood zone and development of the site is not anticipated to have any negative impacts on the flood zone.

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' NAVD 88. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations shown in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 12. The **horizontal datum** was NAD 83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These **flood elevations must be** compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1992 or later.

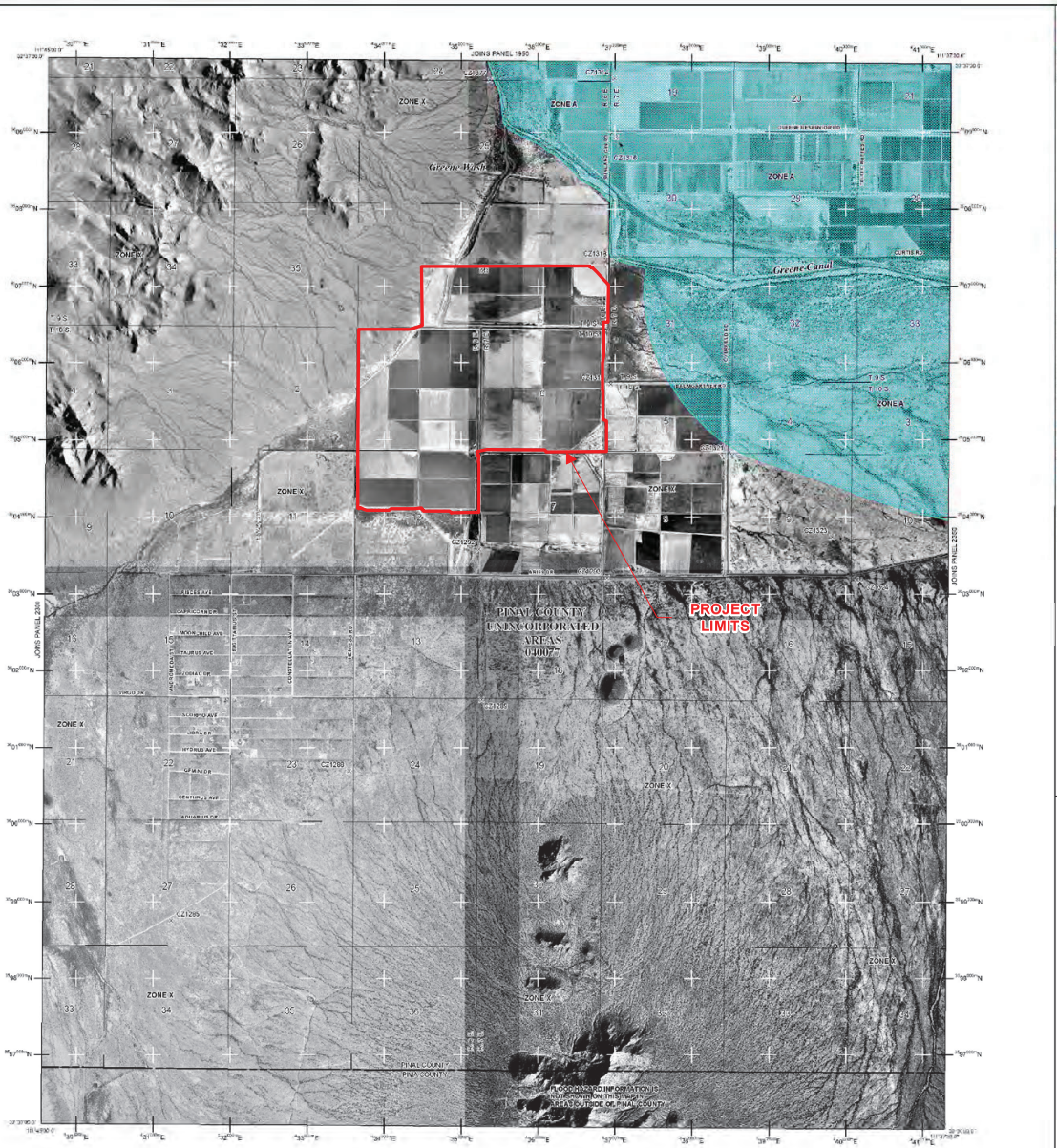
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, an accompanying Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A — No base flood elevations determined.
- ZONE AE — Base flood elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR — Area of Special Flood Hazard formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no base flood elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4220000 m — 1000-meter Universal Transverse Mercator grid values, zone 12
- 600000 FT — 5000-foot grid ticks: Arizona State Plane coordinate system, central zone (FIPSZONE 0202), Transverse Mercator
- DX5510 x — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
December 4, 2007
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
300 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2325E

FIRM
FLOOD INSURANCE RATE MAP
PINAL COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 2325 OF 2575
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PINAL COUNTY UNINCORPORATED AREAS	040077	2325	E

Figure 2.1

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04021C2325E

EFFECTIVE DATE
DECEMBER 4, 2007

Federal Emergency Management Agency

3 HYDROLOGIC AND HYDRAULIC METHODS

The following sections describe the methods and criteria used to develop the model and input parameters. Results of the model and hydraulic calculations are presented in Section 4 of this report.

3.1 DATA SOURCES

Input data for the hydrologic and hydraulic models were obtained from a variety of sources. This information is summarized in Table 3.1 below:

Table 3.1 Data Sources

DATA	PURPOSE	SOURCE	FORMAT
Elevation	Development of FLO-2D model	LIDAR Survey (Provided by ENEL)	Survey
Elevation	Development of FLO-2D Model	USGS National Map Viewer Download (Publicly available)	Raster
Land use	Estimating precipitation losses (infiltration)	National Land Cover Database	Raster
Soil Types	Estimating precipitation losses (infiltration)	NRCS SSURGO Database (Web Soil Survey)	Shapefile
Preciptiation	100-year and 10-year precipitation depths	NOAA Atlas 14, Vol. 1	PDF
Project Boundary	Horizontal limits of FLO-2D model	ENEL	CAD Drawing
FEMA Flood Zones	Reference	NFHL Data-County	Shapefile
Aerial Photography	Reference	ArcGIS Map Service	Raster

3.2 SITE HYDROLOGY

The project site is located in Greene Wash watershed (HUC 12-150503030306), which drains northwest. Unnamed washes drain through the center of the project site from north to south, and east to west. Onsite runoff from the site is sheet flow draining to these unnamed washes and then to Greene Wash north of the project site. The site is also surrounded by unnamed ditches and berms which potentially intercept and redirect offsite flow.

3.2.1 OFFSITE DRAINAGE

Figure 3.1 shows five upstream subbasins that drain to the ditches in the vicinity of the project site. Offsite subbasins drain toward the project site from west, south, and east. Subbasin OFF1 drains from northwest to southeast. Subbasins OFF2 through OFF5 drain from south to north. The offsite subbasins consist mostly of shrub/scrub and herbaceous land that drain to several ditches and berms in the vicinity of the project site that intercept and potentially redirect offsite flow.

3.2.2 LAND USE

According to the National Land Cover Database (NLCD), the project is located on land designated as cultivated crops within the areas of the site that are proposed to be developed. Existing land use for the project site is shown in Figure A.4.1.

3.2.3 SOILS

Soil properties influence the relationship between rainfall and runoff because soils have differing rates of infiltration. The National Resources Conservation Service (NRCS) has divided soils into various soil associations for a set of soils and soil characteristics using map unit symbol (MUSYM). MUSYM is used to define infiltration parameters for a soil type. MUSYM for the project site is shown in Figure A.4.2.

3.3 MODELS

The hydrologic and hydraulic analysis were modeled using FLO-2D software. FLO-2D is a 2-dimensional software that allows for a rain-on-grid analysis. Two (2) models were prepared for this report to provide results for pre-development condition for the 100-year and 10-year storms.

The following subsections address input parameters used to develop the flood models.

3.3.1 PRECIPITATION

ENEL requested hydrologic and hydraulic analysis of the 100-year, 24-hour, and 10-year, 24-hour storm events. Precipitation values were obtained from NOAA Atlas 14 Point Precipitation Frequency Estimates: AZ. The approximate location of the site was located on the interactive map and rainfall depths were obtained in tabular and graphical form. Rainfall depths of 3.84 inches and 2.47 inches correspond to the 100-year, 24-hour, and 10-year, 24-hour storm events, respectively. PDF output from the NOAA Atlas 14 is included in Appendix A.1.

3.3.2 STORM DISTRIBUTION

For the rainfall-runoff model, a 24-hour event with a 15-minute time interval and Type II temporal distribution was used for the 100-year and 10-year storm events. The NRCS Type II distribution was selected based on Figure B-2 in TR-55 (United States Department of Agriculture, NRCS, 1986). Type II storms are characterized by low intensity rainfall at the beginning of the event, with less than 25% of the precipitation occurring during the first 11 hours. This is followed by an hour of heavy rainfall (approximately 40% of the total), with the remaining 1/3 of the total precipitation occurring over the next 12 hours. For all simulations, the precipitation is assumed to fall uniformly throughout the watershed at any given time step.

3.3.3 GRID SIZE AND NODES

A 50-foot by 50-foot grid size was modeled in FLO-2D. This results in sufficient model resolution to evaluate flow patterns within the site without runtime becoming excessive. Also, grid size smaller than 50-foot by 50-foot was computationally unfeasible. Outflow nodes were placed along the edge of the model to indicate flow leaving the model boundary.

3.3.4 TOPOGRAPHY

ENEL provided WSP with on-site elevation data. Figure 3.2 shows existing 5-foot contours based on the provided LIDAR survey. Supplemental elevation data was needed outside of the project boundary for the model. Elevation data (LIDAR) for outside the study area was obtained from the USGS National Map 3DEP Downloadable Data Collection (United States Geological Survey, 2022), using the 1/3 arc-sec data set. A Digital Elevation Model for the study area was developed from this data. All GIS data are in the NAD 1983 Arizona Central State Plane Coordinate System (feet). Unless noted otherwise, all elevation data in this report is based on the NAVD88 datum.

3.3.5 GREEN-AMPT LOSS PARAMETERS

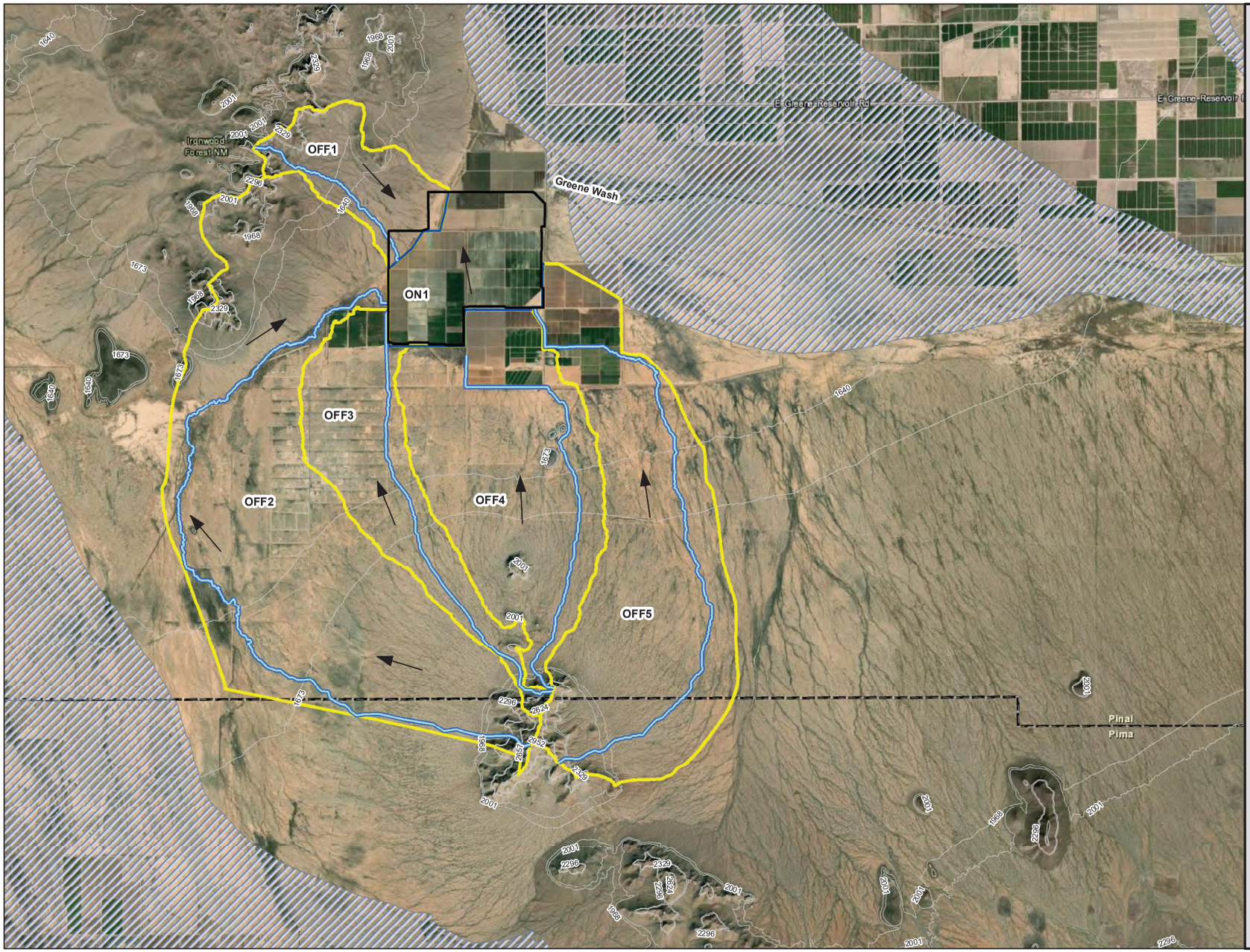
Green-Ampt method was used to compute rainfall loss. The loss parameters were based on soil and land use layers. Input parameters for the Green-Ampt loss calculations include hydraulic conductivity, soil suction, volumetric moisture deficiency, soil storage depth and the percent impervious area. These parameters were obtained from ADOT Highway Drainage Design Manual (HDDM) Appendix B (ADOT, 2014) and included in Appendix A.4.

3.3.6 MANNING'S N

FLO-2D uses Manning's n coefficients to account for the effects of surface roughness. The Manning's n values used in FLO-2D are specific to unsteady overland flow computations, which tend to be significantly higher than Manning's n values specific to steady state, open channel flow computations. Manning's n was applied based on the land use mentioned in **Error! Reference source not found.**. Flow resistance factors were obtained from Table 4 of the FLO-2D Reference Manual (Appendix A.6).

Table 3.2 Summary of Land Uses and Manning's n for FLO-2D Models

DESCRIPTION	LU VALUE	FLO-2D MANNING'S N RANGE	MODEL MANNING'S N
Open Water	11	N/A	0.80
Developed, Open Space	21	0.02 – 0.05	0.04
Developed, Low Intensity	22	0.02 – 0.05	0.04
Developed, Medium Intensity	23	0.02 – 0.05	0.04
Shrub/Scrub	52	0.30 – 0.40	0.35
Herbaceous	71	0.30 – 0.40	0.35
Hay/Pasture	81	0.05 – 0.25	0.15
Cultivated Crops	82	0.06 – 0.22	0.10
Woody Wetlands	90	0.17 – 0.48	0.4
Emergent Herbaceous Wetlands	95	0.17 – 0.48	0.40



Sonak Solar

Legend

- Project Limits
- Drainage Basin
- Longest Flowpath
- Zone A Flood Zone
- County Boundary

N

0 0.5 1 2

Miles

Watershed Map
Figure 3.1



Sonak Solar

Legend

- Project Limits
- 5' Contours
- Zone A Flood Zone

N

0 500 1,000 2,000

Feet

Topography Map
Figure 3.2

4 HYDROLOGIC AND HYDRAULIC ANALYSIS RESULTS

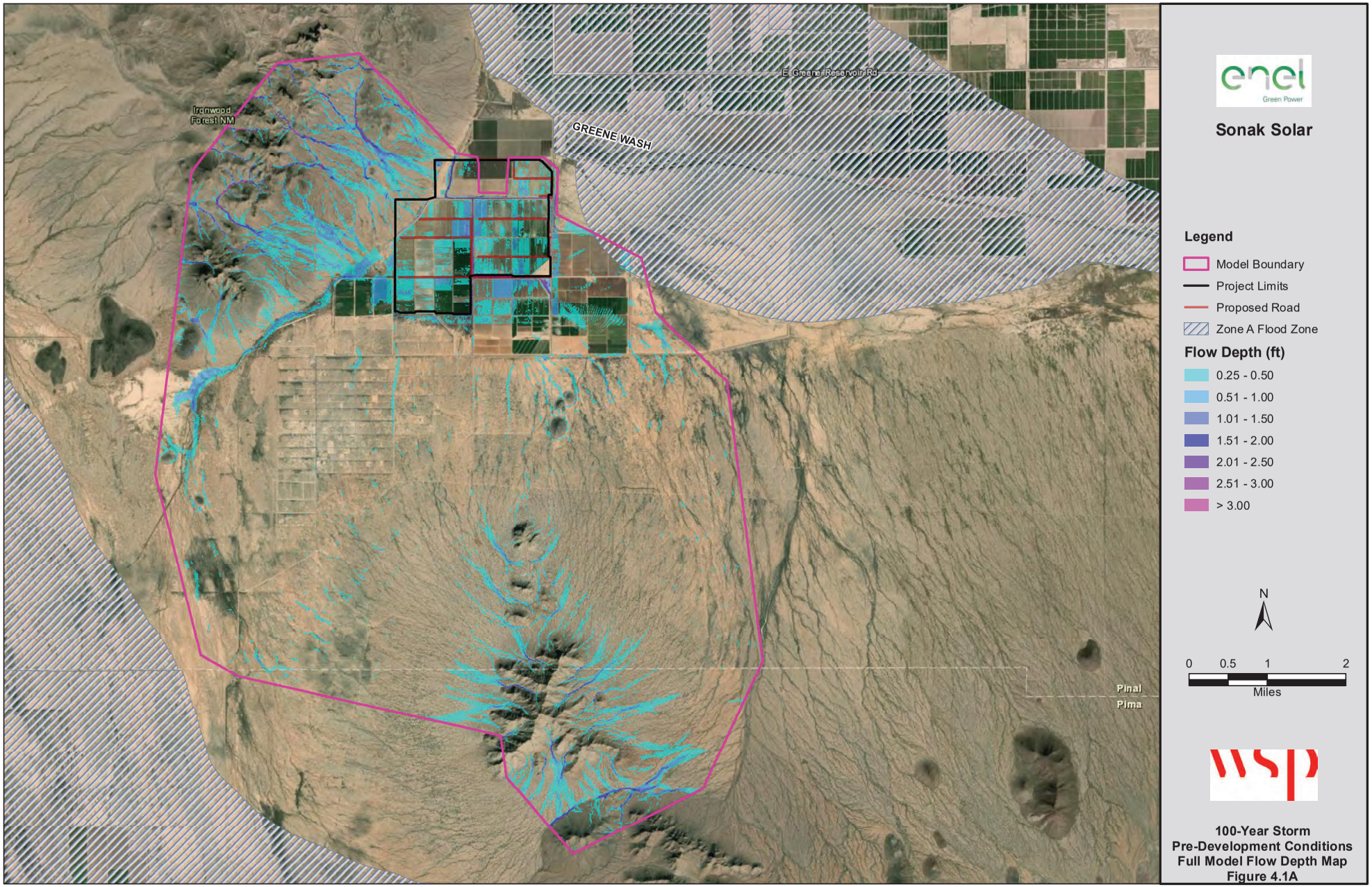
This section presents the results of the 100-year and 10-year hydrologic and hydraulic models. Multiple figures have been prepared to illustrate the pre-development model results.

4.1 PRE-DEVELOPMENT CONDITION MODEL RESULTS

Figures 4.1a-b and 4.2a-b present the 100-year flow depths and velocities at the project site, respectively. Figures 4.3a-b and 4.4a-b present the 10-year flow depths and velocities at the project site, respectively. Note that flow depths less than 0.25 feet and velocities less than 0.25 feet/second (ft/s) are not shown for clarity.

The development area is agricultural land that mildly slopes north. The ditches and berm in the vicinity of the project area keep most of the offsite flows out of the development area. Offsite flow from Subbasins OFF4 and OFF5 contributes to the ditch that drains west and then north through the center of the site. During 100-year event, some of the flows from this ditch enters into the project area resulting in a flow depth as high as 1.1 ft. The majority of the proposed array locations experience flooding to a depth of 1 foot or less. For the 10-year event, flow depths at the development area vary from zero to 0.6 feet. 10-year flow depths do not exceed 4-inches at the proposed access roads and do not exceed 8-inches within the development area.

Velocities for the 100-year storm are less than 1.0 ft/s within the development areas with maximum velocity reaching up to a non-erosive 0.7 ft/s. For the 10-year event, velocities at the development area vary from zero to 0.3 ft/s.


Ironwood Forest NM
E Greene Reservoir Rd
GREENE WASH
Pinal
Pima
Sonak Solar
Legend
Model Boundary
Project Limits
Proposed Road
Zone A Flood Zone
Flow Depth (ft)
0.25 - 0.50
0.51 - 1.00
1.01 - 1.50
1.51 - 2.00
2.01 - 2.50
2.51 - 3.00
> 3.00
N
0 0.5 1 2
Miles
100-Year Storm
Pre-Development Conditions
Full Model Flow Depth Map
Figure 4.1A