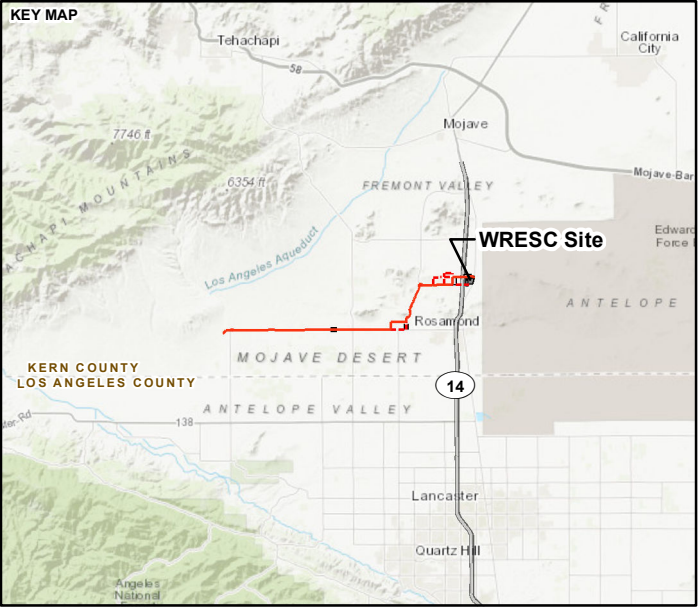


DOCKETED

Docket Number:	21-AFC-02
Project Title:	Willow Rock Energy Storage Center
TN #:	254813
Document Title:	Hi Res Figures V1 File 1 of 2
Description:	N/A
Filer:	Michele Sims
Organization:	WSP
Submitter Role:	Applicant Consultant
Submission Date:	3/1/2024 5:55:05 PM
Docketed Date:	3/4/2024

PATH: G:\Hydrosoft\Area\09_PROJECTS\31406639_003_Hydrosoft\Area\09_PROJECTS\31406639_003_01_0102_F12_Rev0_WRESC_W_Berm.mxd PRINTED ON: 2024-02-21 AT: 2:31:43 PM



REFERENCE(S)
1. WRESC SITE RENDERING - KIEWIT 2024
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEODATA, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
GEM A-CAES LLC

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
RENDERING OF WILLOW ROCK STORAGE CENTER WITH
ARCHITECTURAL BERM

	CONSULTANT	YYYY-MM-DD	2024-02-21
	DESIGNED	MK	
	PREPARED	MK	
	REVIEWED	SCH	
	APPROVED	VG/LL	

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	1-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1in

PATH: G:\Hydrosoft\Area\09_PROJECTS\31406639_003_Hydrosoft\Area\09_PROJECTS\31406639_003_0102_F-13_Rev0_WRESC_WO_Berm.mxd PRINTED ON: 2024-02-21 AT: 2:57:34 PM



REFERENCE(S)

1. WRESC SITE RENDERING - KIEWIT 2024
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEBCO, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
GEM A-CAES LLC

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
RENDERING OF WILLOW ROCK STORAGE CENTER WITHOUT
ARCHITECTUAL BERM

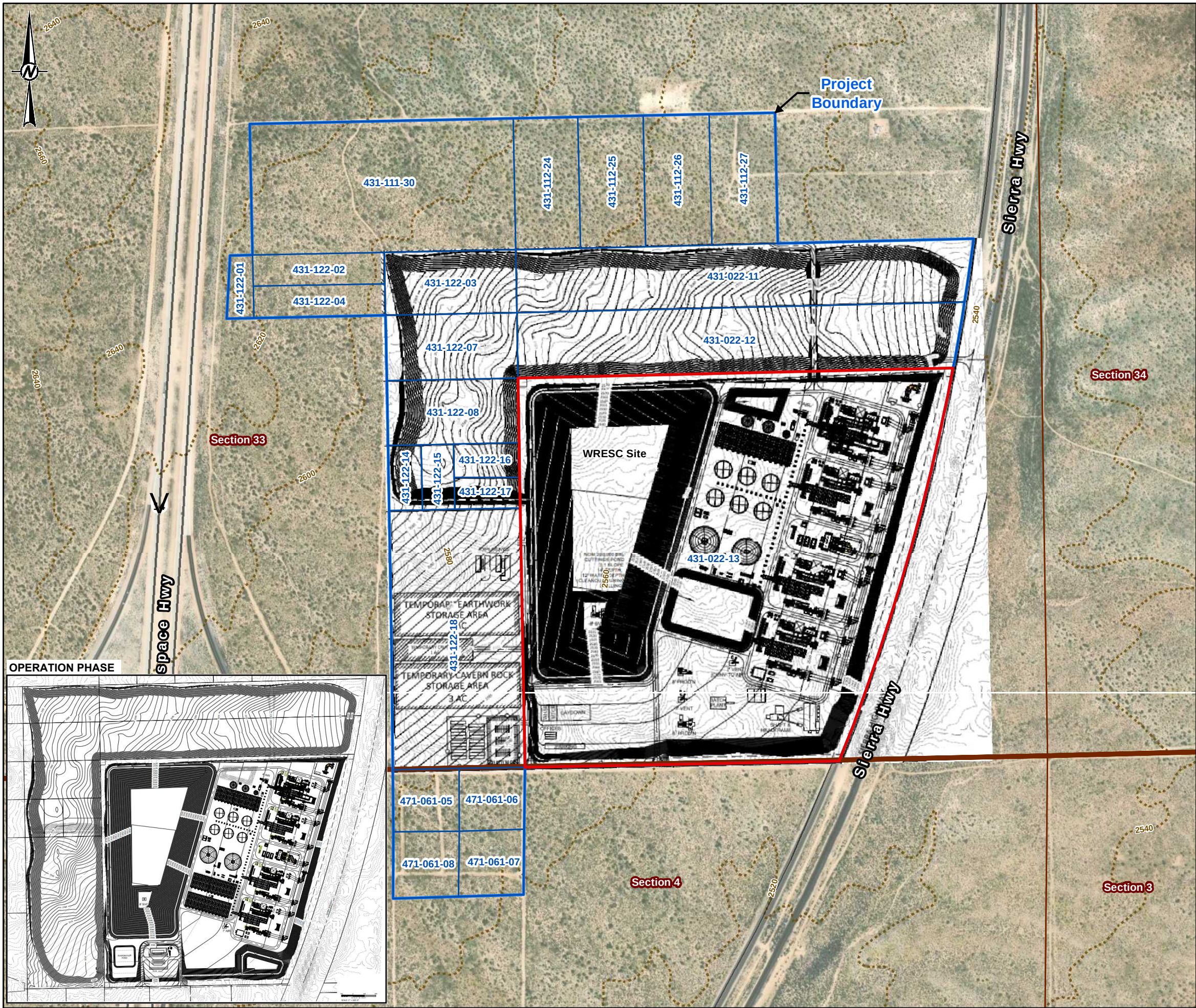
	CONSULTANT	YYYY-MM-DD	2024-02-21
	DESIGNED	MK	
	PREPARED	MK	
	REVIEWED	SCH	
	APPROVED	VG/LL	

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	1-3

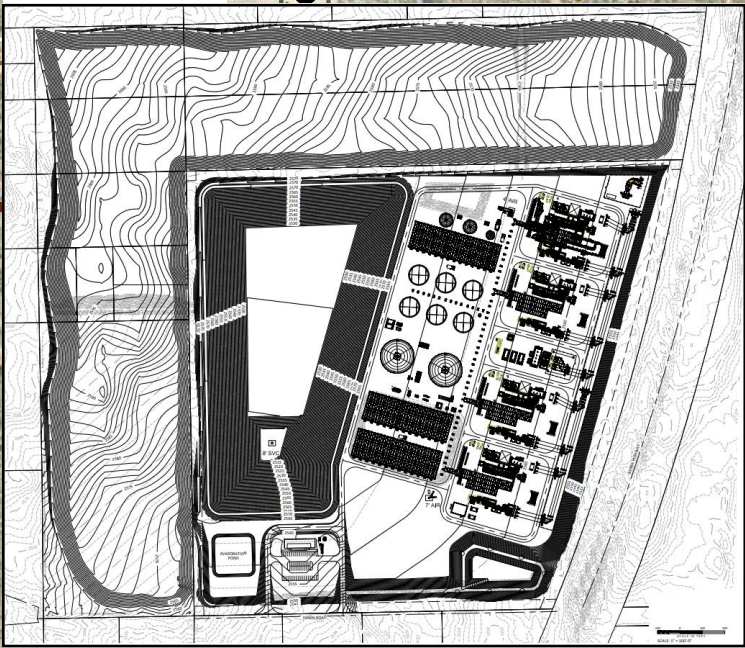
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1in

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OPERATION PHASE



LEGEND

- WRES Site
- Other Project Parcel
- Project Boundary
- PLSS Township and Range
- PLSS Section

KEY MAP

The key map shows the location of the WRES site within the Mojave Desert region. It includes labels for Tehachapi, Mojave, Rosamond, Lancaster, and Quartz. The map also shows the Los Angeles Aqueduct and the Mojave Desert. A scale bar indicates 0, 500, and 1,000 feet.

REFERENCE(S)

- WRES SITE PLAN - KIEWIT 2024
- PLSS - CALIFORNIA STATE GEOPORTAL PLSS DB, 2023
- PARCEL BOUNDARIES - KERN COUNTY, 2023
- COORDINATE SYSTEM: NAD 1983 STATE PLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEBCO, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

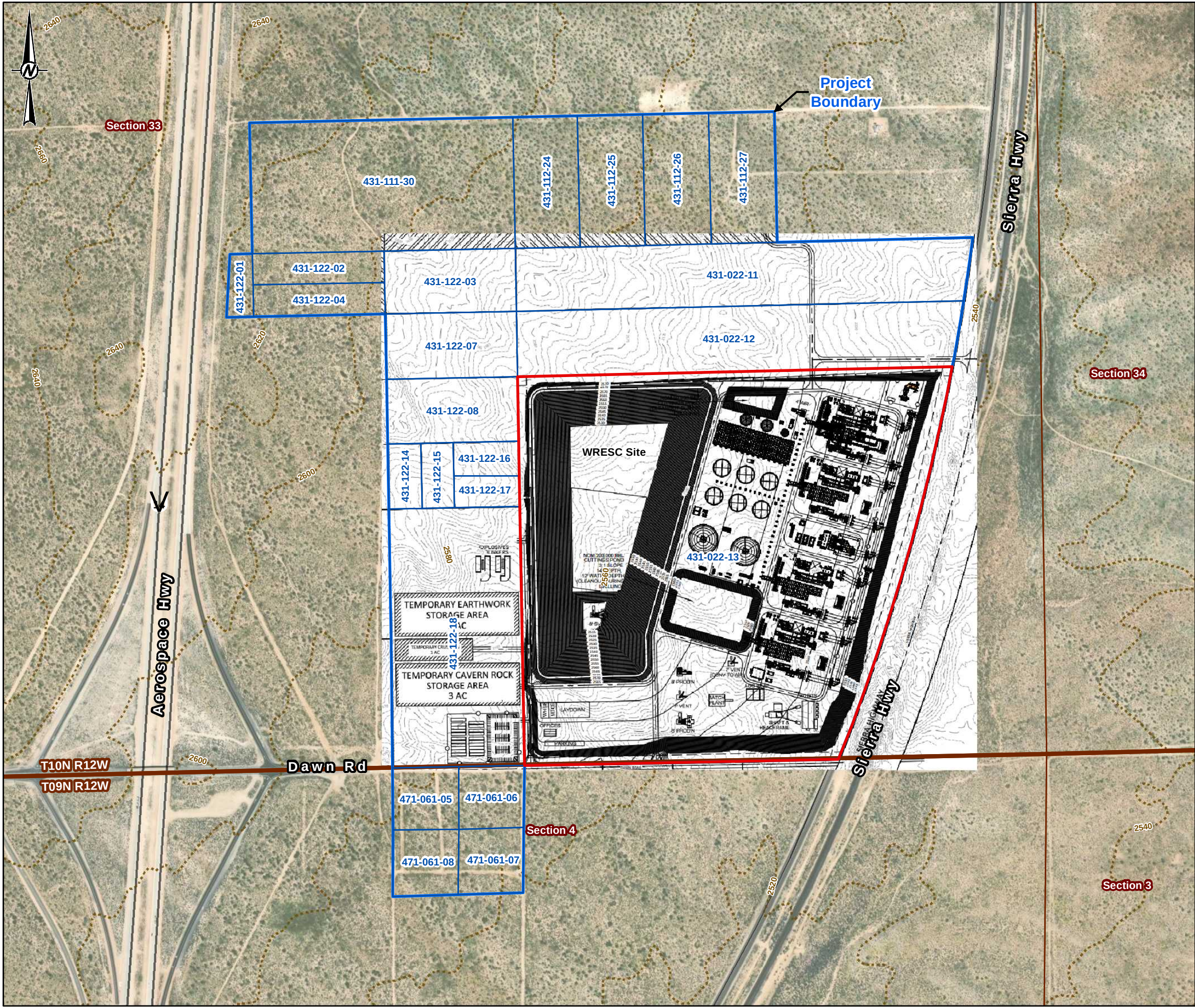
PROJECT LOCATION MAP OF WILLOW ROCK ENERGY
STORAGE CENTER WITH ARCHITECTUAL BERM
(CONSTRUCTION PHASE)

CONSULTANT	YYYY-MM-DD	2024-02-22
DESIGNED	MK	
PREPARED	MK	
REVIEWED	SCH	
APPROVED	VG/LL	

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	1-4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

- WRESC Site
- Other Project Parcel
- Project Boundary
- PLSS Township and Range
- PLSS Section

KEY MAP

0 500 1,000
1" = 500 feet FEET

REFERENCE(S)

- WRESC SITE PLAN - KIEWIT 2024
- PLSS - CALIFORNIA STATE GEOPORTAL PLSS DB, 2023
- PARCEL BOUNDARIES - KERN COUNTY, 2023
- COORDINATE SYSTEM: NAD 1983 STATE PLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEBCO, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

PROJECT LOCATION MAP OF WILLOW ROCK ENERGY
STORAGE CENTER WITHOUT ARCHITECTURAL BERM
(CONSTRUCTION PHASE)

CONSULTANT	YYYY-MM-DD	2024-02-22
DESIGNED	MK	
PREPARED	MK	
REVIEWED	SCH	
APPROVED	VG/LL	

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	1-5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Route Options 1-6, Aboveground
- Route Options 1-6, Underground

Project Components

- WRESC Site
- Other Project Parcel
- Project Boundary
- SCE Whirlwind Substation

KEY MAP

0 8,000 16,000
1" = 8,000 feet FEET

REFERENCE(S)

1. TRANSMISSION LINES - GEM A-CAES LLC
2. PARCEL BOUNDARIES - KERN COUNTY GIS DEPT.
3. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
4. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP, GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

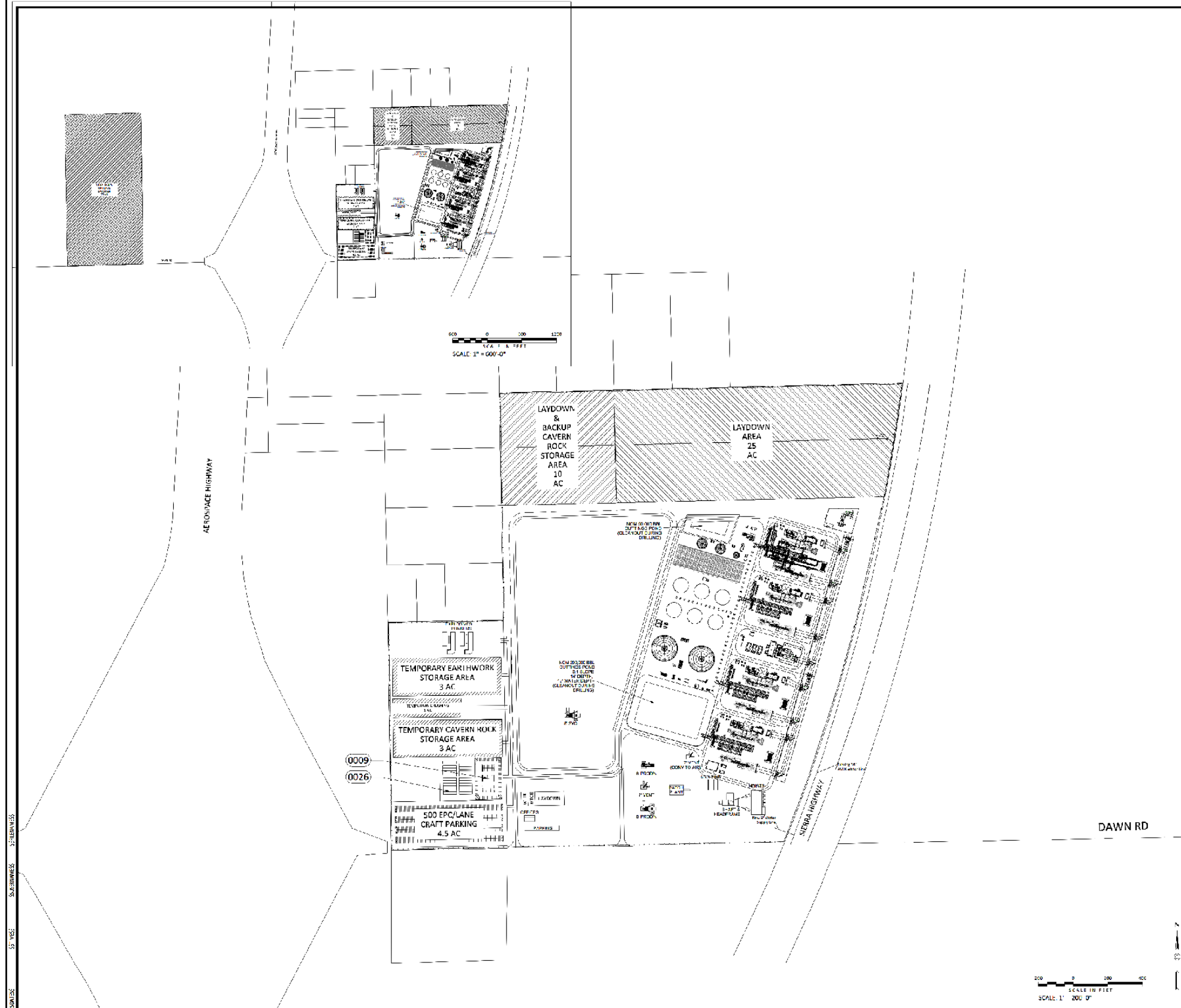
PROJECT SITE AND FACILITIES MAP

CONSULTANT	YYYY-MM-DD	2024-02-20
	DESIGNED	MK
	PREPARED	MK
	REVIEWED	SCH
	APPROVED	VG/LL

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	1-6

1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

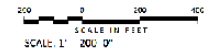
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NOTES:
1. TWO OPTIONS FOR THE MINING/CAVERN SHAFTS ARE DEPICTED AS FOLLOWS:
OPTION A - ONE 24' MINING SHAFT AND TWO 8' WATER SHAFTS.
OPTION B - TWO 8' WATER SHAFTS, TWO 8' CONSTRUCTION SHAFTS, AND ONE 8' SHAFT IN PLACE OF THE 24' MINING SHAFT.

LEGEND:
0009 CONSTRUCTION PARKING
0026 CONSTRUCTION TRAILERS

- PRELIMINARY -
NOT FOR CONSTRUCTION



0 50 100 200 FEET	
HYDROSTOR WILLOW ROCK ENERGY STORAGE CENTER	
Hydrostor	
Kiewit	
SITE PLAN CONSTRUCTION PHASE - WITHOUT BERM	
DATE: 2024-02-22 BY: [Signature] CHECKED: [Signature] APPROVED: [Signature]	PROJECT NO.: 20045352-SP-002



REFERENCE(S)
1. WRESC SITE RENDERING - KIEWIT 2024
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
GEM A-CAES LLC

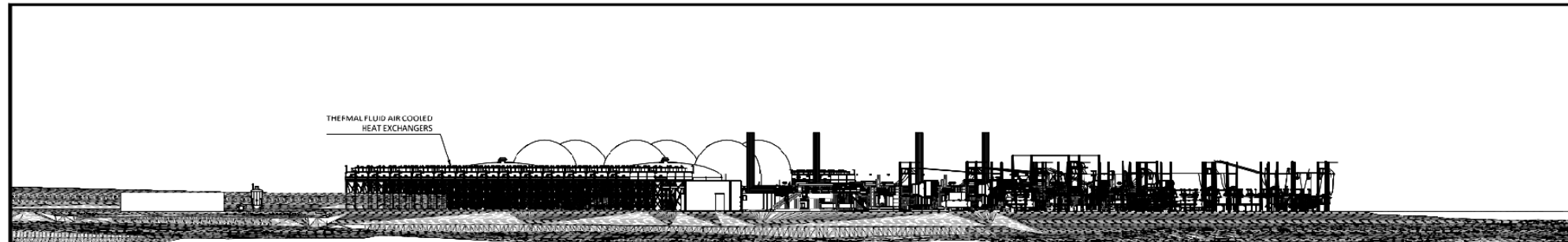
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
WRESC SITE AND CONSTRUCTION LAYDOWN/PARKING - NO
ARCHITECTURAL BERM OPTION

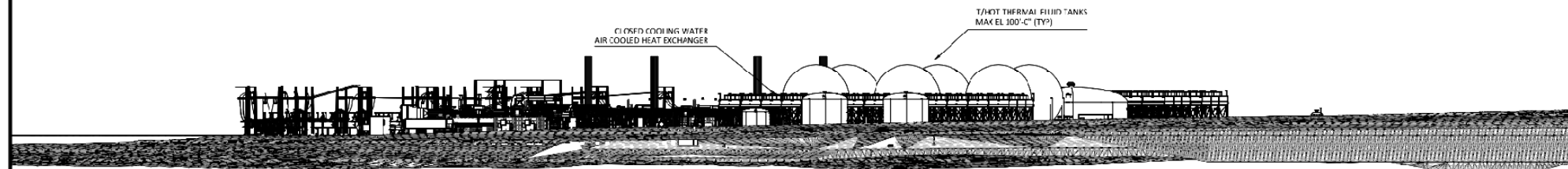
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		REVIEWED	SCH
		APPROVED	VG/LL



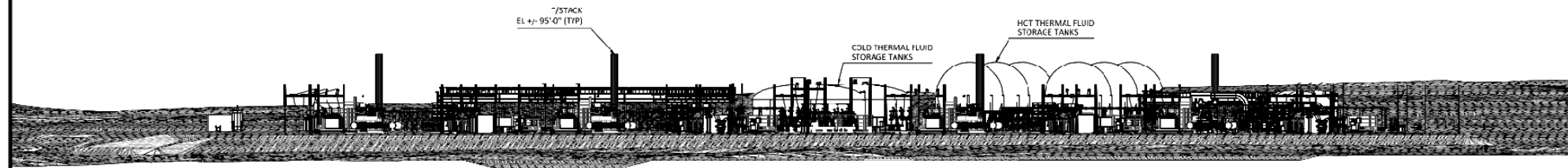
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



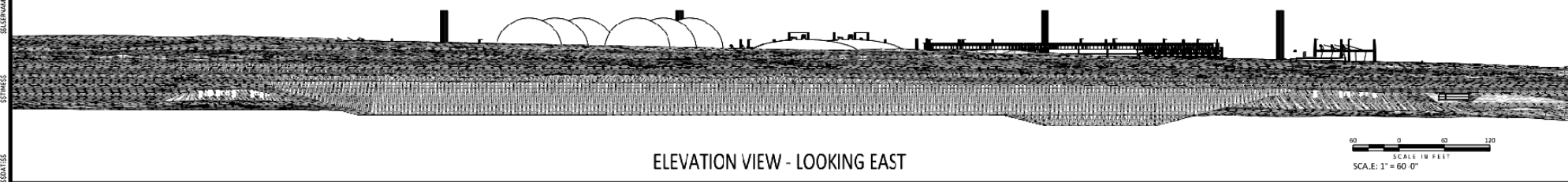
ELEVATION VIEW - LOOKING NORTH



ELEVATION VIEW - LOOKING SOUTH



ELEVATION VIEW - LOOKING WEST



ELEVATION VIEW - LOOKING EAST

NOTES:

- PRELIMINARY -
NOT FOR CONSTRUCTION

D	ISSUED FOR A/E			
F	SUBJECT/STAFF		S. GAMER	01-11
REV	DESIGNED		CHECKED BY	DA
HYDROSTOR WILLOW ROCK ENERGY STORAGE CENTER				
 HYDROSTOR		 Kiewit		
 Kiewit				
ELEVATION V EWS OPERATIONS PHASE - WITH BERM				
PROJECT NO. 20045352-EL-001 CONTRACT NO. 20045352-EL-001		DRAWING NO. 20045352-EL-001		
I. SUBMITTAL 1. ELEVATION 2. ELEVATION 3. ELEVATION 4. ELEVATION		20045352-EL-001		



REFERENCE(S)

1. WRESC SITE RENDERING - KIEWIT 2024
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP.,
GEOBC, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI,
ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT

GEM A-CAES LLC

PROJECT

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

WRESC SITE ELEVATION PROFILE - WITH ARCHITECTURAL BERM OPTION

CONSULTANT

YYYY-MM-DD 2024-02-22

DESIGNED	MK
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PREPARED	MK
----------	----

REVIEWED	SCH
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APPROVED VG/LL

PROJECT NO.

CONTROL

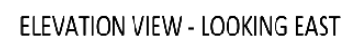
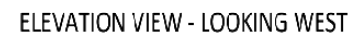
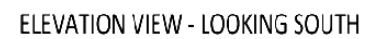
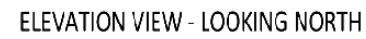
REV.

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FIGURE

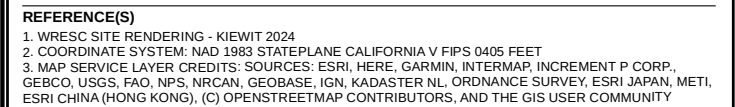
2-5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



- PRELIMINARY -
NOT FOR CONSTRUCTION

60 0 60 120
SCALE IN FEET
SCALE 1" = 60' C"

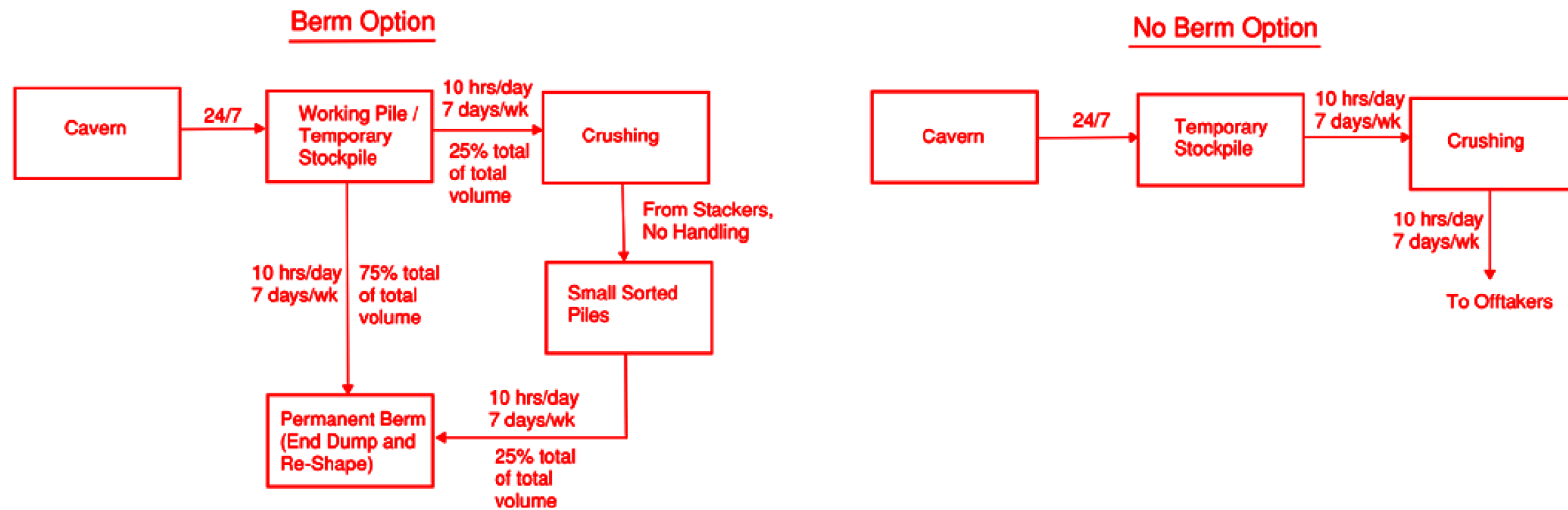


PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
**WRESC SITE ELEVATION PROFILE – NO ARCHITECTURAL
BERM OPTION**

WSP

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	2-6



REFERENCE(S)

1. WRESC SITE RENDERING - KIEWIT 2024

CLIENT

GEM A-CAES LLC

PROJECT

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

ROCK CRUSHING OPERATION PROCESS DIAGRAM WITH AND WITHOUT BERM OPTIONS

CONSULTANT

WS |

YYYY-MM-DD 2024-02-22

DESIGNED	MK
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PREPARED	MK
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REVIEWED	SCH
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APPROVED VG/LL

PROJECT NO.
31406639.003

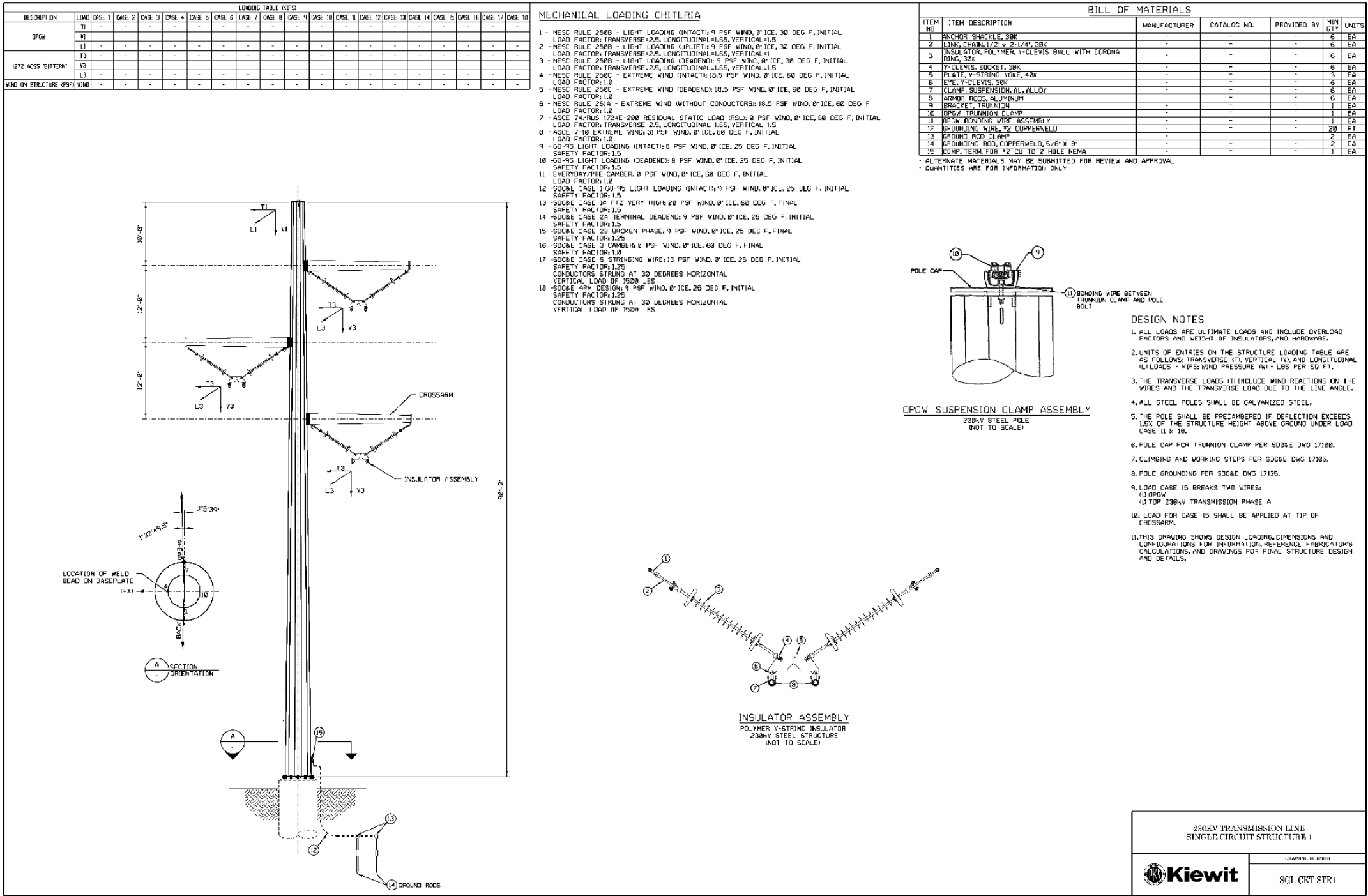
CONTROL
01

REV.
0

FIGURE 2-7

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8/25/2023 12:08:55 PM Christopher Heck J:\IPD\IBD\STD\Design Resources\Typical Details\OHX\Single Circuit Structure 1.dgn



REFERENCE(S)
1. 230KV TRANSMISSION LINES SINGLE CIRCUIT STRUCTURE 1 (GL CKT STR1) - KIEWIT 2023

CLIENT
GEM A-CAES LLC

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
REPRESENTATIVE TRANSMISSION POLE, STRUCTURE 1

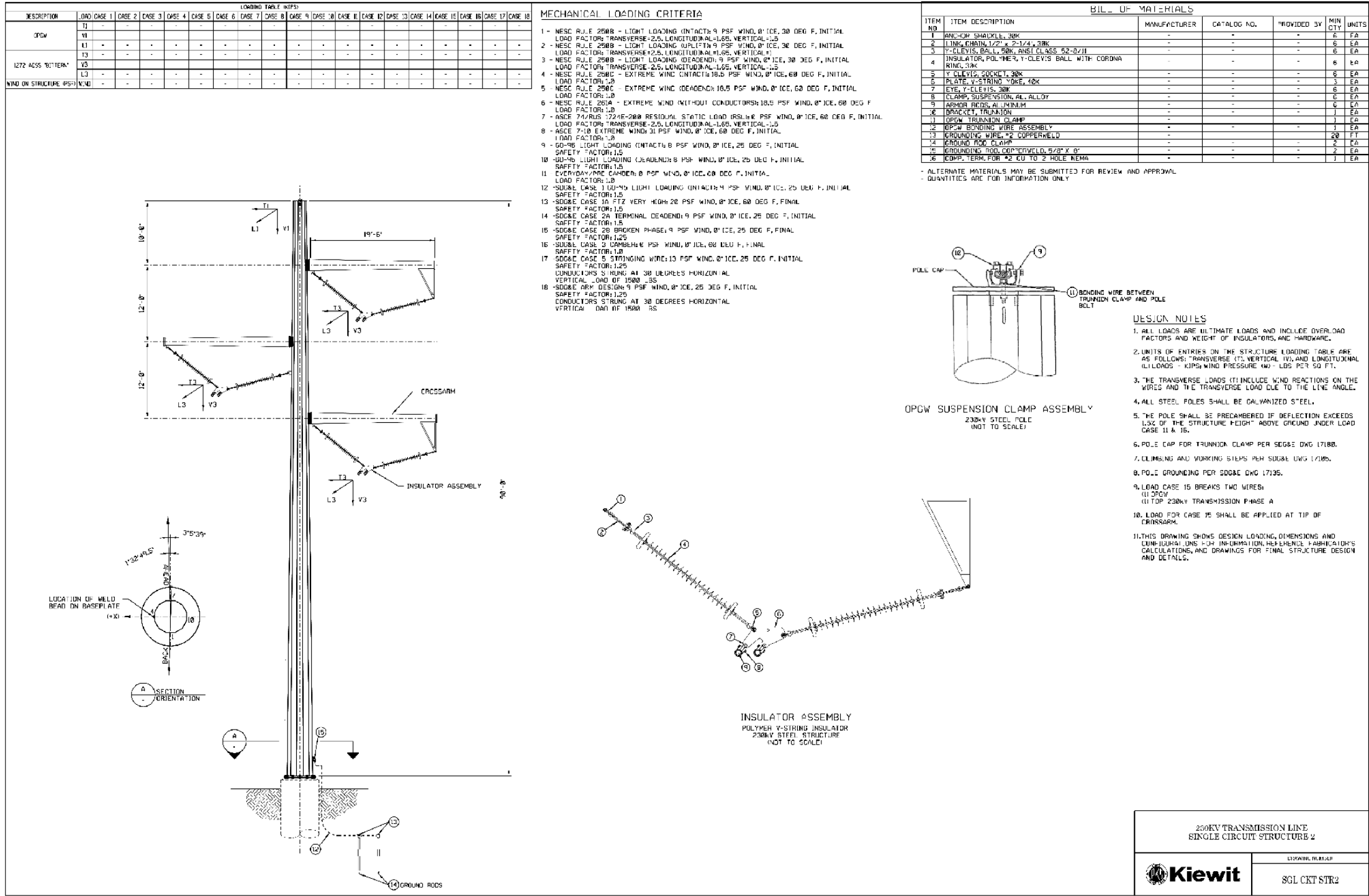
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	PREPARED	SHL	
	REVIEWED		
	APPROVED		

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	3-1a

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

J:\IPD\IBD\ISTD\Design Resources\Typical Details\OHX\Single Circuit Structure 2.dgn Christopher Heck 12:09:04 PM 8/25/2023

J:\IPD\IBD\ISTD\Design Resources\Typical Details\OHX\Single Circuit Structure 2.dgn



REFERENCE(S)
1. 230KV TRANSMISSION LINESINGLE CIRCUIT STRUCTURE 2 (GL CKT STR2) - KIEWIT 2023

CLIENT
GEM A-CAES LLC

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
REPRESENTATIVE TRANSMISSION POLE, STRUCTURE 2

CONSULTANT
wsp
YYYY-MM-DD
2024-02-23
DESIGNED
SHL
PREPARED
SHL
REVIEWED
APPROVED

PROJECT NO. 31406639.003 CONTROL 01 REV. 0 FIGURE 3-1b

1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B


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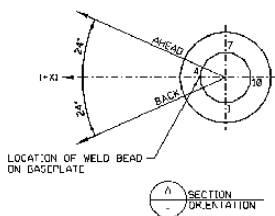
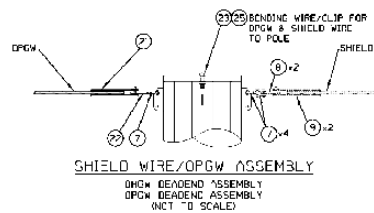
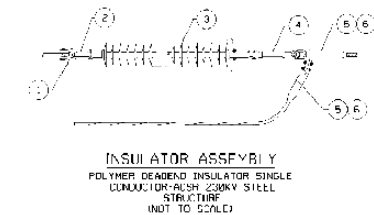
MEC-ANALYTIC LOADING CRITERIA

1- NBSF RULE 206R - LIGHT LOADING CONTACTS 9 PSF WIND, 0 ICE, 30 DEG F, INITIAL
   L2 FACTOR TRANSVERSE 2.5, L2 FACTOR LONGITUDINAL 1.0, VERTICAL 1.0
2- NBSF RULE 206R - LIGHT LOADING (IMPACT) 9 PSF WIND, 0 ICE, 30 DEG F, INITIAL
   L2 FACTOR TRANSVERSE 2.5, L2 FACTOR LONGITUDINAL 1.0, VERTICAL 1.0
3- NBSF RULE 206R - LIGHT LOADING (IMPACT) 9 PSF WIND, 0 ICE, 30 DEG F, INITIAL
   L2 FACTOR TRANSVERSE 2.5, L2 FACTOR LONGITUDINAL 1.0, VERTICAL 1.0
4- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
5- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
6- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
7- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
8- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
9- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
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   L2 FACTOR L2
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   L2 FACTOR L2
17- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
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18- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
19- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2
20- NBSF RULE 206R - EXTREME WIND CONTACTS 16.5 PSF WIND, 0 ICE, 60 DEG F, FINAL
   L2 FACTOR L2

```

DESIGN NOTES

1. ALL LOADS ARE ULTIMATE LOADS AND INCLUDE OVERLOAD FACTORS AND WEIGHT OF INSULATORS, AND HARDWARE.
2. UNITS OF ENTRIES ON THE STRUCTURE LOADING TABLE ARE AS FOLLOWS: INTERMEDIE 11.1V, 1CAL, 0.4V AND LOGE 10.4V, 1.1V, 0.4V, 0.4V AND PRESSURE 4.0 - 1.65 PER 53 FT.
3. THE TRANSVERSE LOADS (7) INCLUDE WIND REACTIONS ON THE WIRES AND THE TRANSVERSE LOAD DUE TO THE LINE ANGLE.
4. ALL STEEL POLES SHALL BE GALVANIZED STEEL.
5. THE POLE SHALL BE PREHARDENED 1/2 DEFLECTION EXCEEDS 1/2 INCH OF THE STRUCTURE AS MEASURED AFTER BENDING UNDER LOAD 1/2 IN 16.
6. POLE 1/4 FT. HORIZONTAL CLAMP PER SUGGE DNE 17186.
7. CLIMBING AND WORKING STEPS PER SUGGE DNE 17185.
8. POLE 1/4 FT. HORIZONTAL CLAMP PER SUGGE DNE 17120.
9. 300 LBS IS BREAKS TWO WIRES:
10. DPC
11. 100V 230V4 TRANSMISSION PHASE 4.
10. LOAD FOR CASE 5 SHALL BE APPLIED AT TIP OF CROSSARM.
11. THIS DRAWING SHOWS DESIGN LOADING, DIMENSIONS AND CONFIGURATIONS FOR INFORMATION. REFERENCE FABRICATORS' SPECIFICATIONS, AND DRAWINGS FOR FINAL STRUCTURE DESIGN AND DETAILS.



230KV TRANSMISSION LINE SINGLE CIRCUIT STRUCTURE 0	
 Kiewit	DESIGNING PURPOSE
	SGL CKT STR3

CLIENT
GEM A-CAES LLC

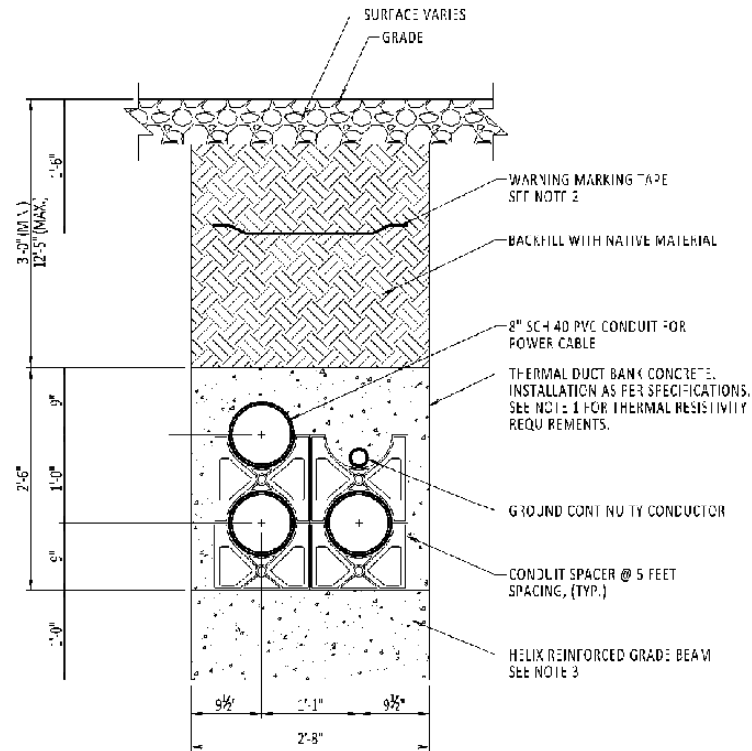
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
REPRESENTATIVE TRANSMISSION POLE, STRUCTURE 3

CONSULTANT	YYYY-MM-DD	2024-02-23
	DESIGNED	SHL
	PREPARED	SHL
	REVIEWED	
	APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	3-1

PATH: G:\Hydro\env\Ansat99_PROJECT\31406639.003_Hydro\enr\enr_Section3_and_31406639.003_Production\XDFIGURES\enr\31406639.003_01_0004_F32_Rev0_Kiewit_CIE.mxd PRINTED ON: 2024-02-23 AT: 9:22:57 AM



8" PVC CONDUIT
2 X 2 HELIX DUCT BANK
SCALE 3/8" = 1'-0"

NOTES:

1. THE THERMAL RESISTIVITY OF THE DUCT BANK CONCRETE SHALL BE NO MORE THAN 55° C-cm/W.
2. CONTRACTOR TO INSTALL WARNING MARKING TAPE ABOVE THE DUCT BANK AS SHOWN. CABLE MARKING TAPE SHALL BE PROVIDED BY THE CONTRACTOR TO COVER THE ENTIRE UNDERGROUND LENGTH OF THE CONCRETE DUCT BANK. CABLE MARKING TAPE WILL BE PER THE SPECIFICATION. THE TAPE SHALL BE INSTALLED FLAT AND DIRECTLY ABOVE THE DUCT BANK WITH THE PRINTED SIDE UP. TAPE SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS.
3. CONTRACTOR SHALL USE APPROVED HELIX REINFORCED CONCRETE MIX DESIGN FOR SUPPORT OF THE DUCT BANK (SLOU P.3.1.1).
4. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR HELIX REINFORCED CONCRETE (ACI-318) AND CAST-IN-PLACE CONCRETE SPECIFICATION, CLASS I.
5. 3 INCH MINIMUM EDGE TO EDGE SPACING SHALL BE MAINTAINED BETWEEN CONDUITS AT ALL LOCATIONS.



- PRELIMINARY -
NOT FOR CONSTRUCTION

A	revision description		
	1st Init./Last Name	2nd Init./Last Name	date
REV	DESIGN BY	CHECKED BY	DATE
KIEWIT DETAIL DRAWING STANDARDS UNDERGROUND TRANSMISSION LINES			
8" PVC CONDUIT 2X2 HELIX DUCT BANK			
ENGINEER/DRN/CHK ORIG. NAME		DRAWING NUMBER	
LEAD ENG		DS1132	
ENG. BY/CR			
PROJ. MGR			

REFERENCE(S)

1. 8" PVC CONDUIT 2X2 HELIX DUCT BANK (DS1132) - KIEWIT 2023

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

230-KILOVOLT UNDERGROUND CABLE INSTALLATION
EXAMPLE

CONSULTANT



YYYY-MM-DD 2024-02-23

DESIGNED SHL

PREPARED SHL

REVIEWED

APPROVED

PROJECT NO.
31406639.003

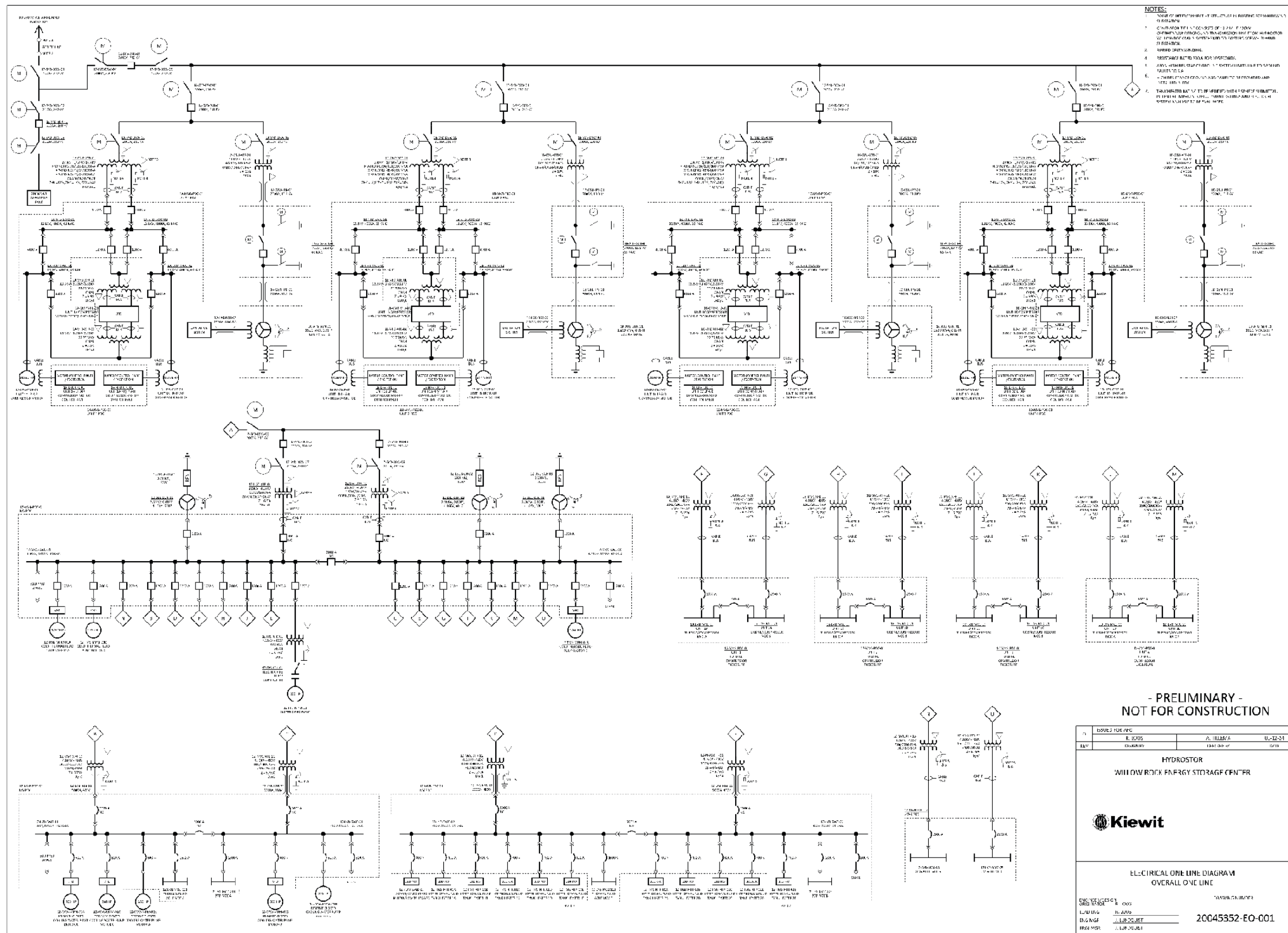
CONTROL
01

REV.
0

FIGURE
3-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

1 in



REFERENCE(S)
1. ELECTRICAL ONE LINE DIAGRAM OVERALL ONE LINE (20045352-EO-001) - KIEWIT 2024

CLIENT
GEM A-CAES LLC

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

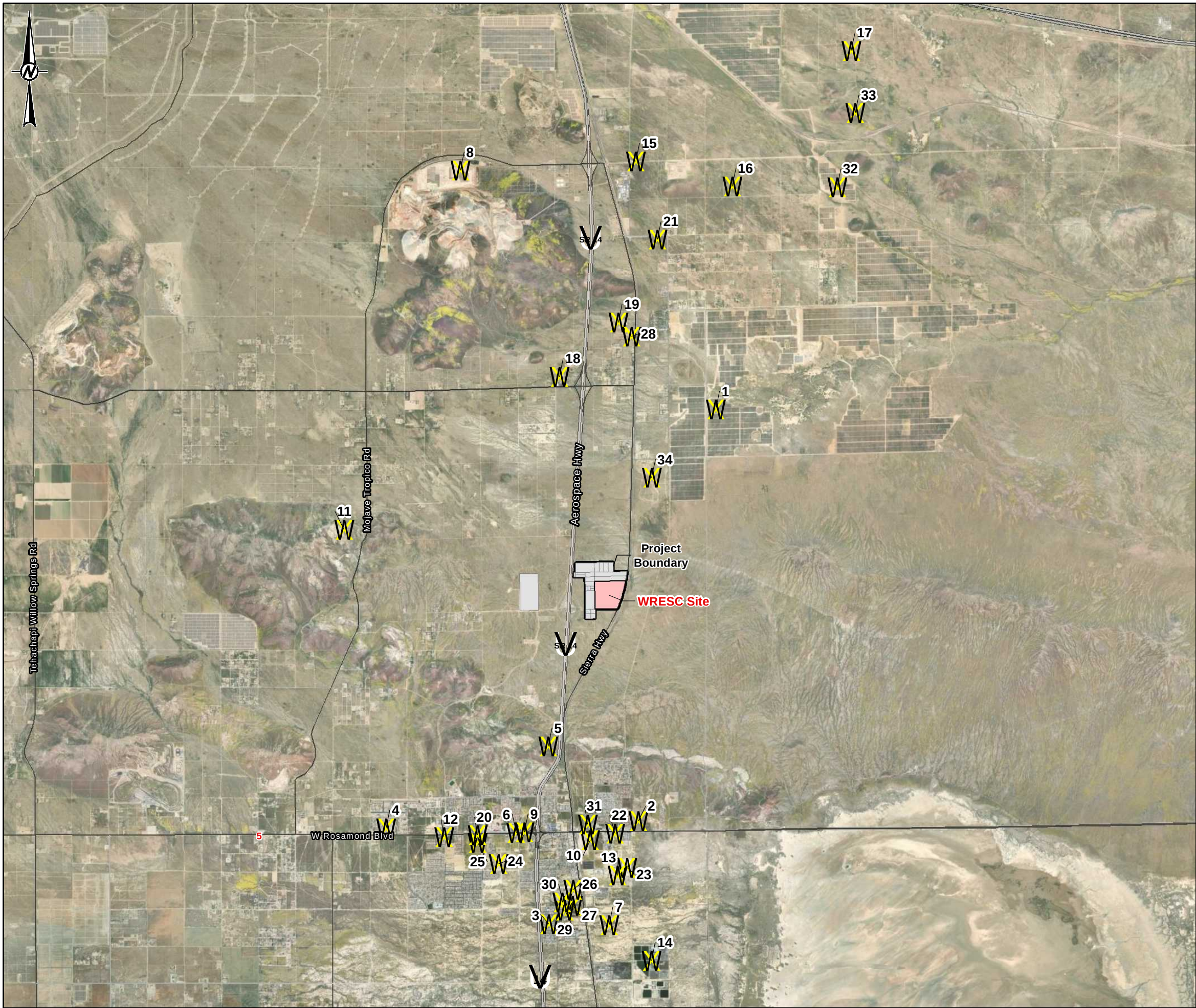
TITLE
ELECTRICAL ONE-LINE DIAGRAM

CONSULTANT	YYYY-MM-DD	2024-02-23
DESIGNED	SHL	
PREPARED	SHL	
REVIEWED		
APPROVED		

PROJECT NO.	CONTROL	REV.	FIGURE
31406639.003	01	0	3-3



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LEGEND

W Cumulative Projects

Project Components

- WRESC Site
- Other Project Parcels
- Project Boundary

KEY MAP

0 7,000 14,000

1" = 7,000 feet FEET

REFERENCE(S)

1. CUMULATIVE PROJECTS - KERN COUNTY PLANNING AND NATURAL RESOURCES DEPARTMENT

2. PARCEL BOUNDARIES - KERN COUNTY GIS DEPT.

3. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

4. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP, GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

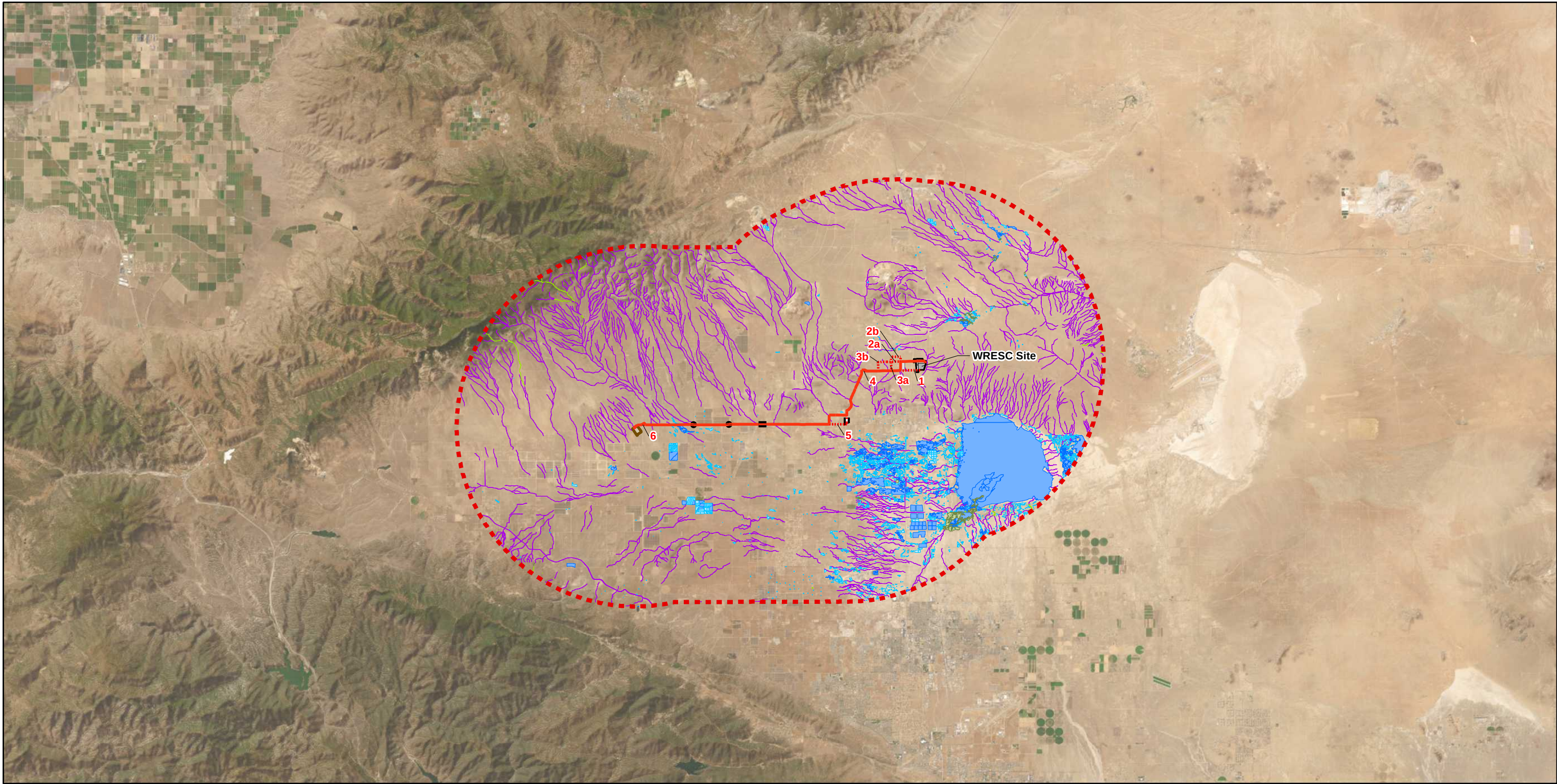
CUMULATIVE PROJECTS

	CONSULTANT	YYYY-MM-DD	2024-02-19
	DESIGNED	SHL	
	PREPARED	SHL	
	REVIEWED	SH	
	APPROVED	VG/LL	

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.0-2

1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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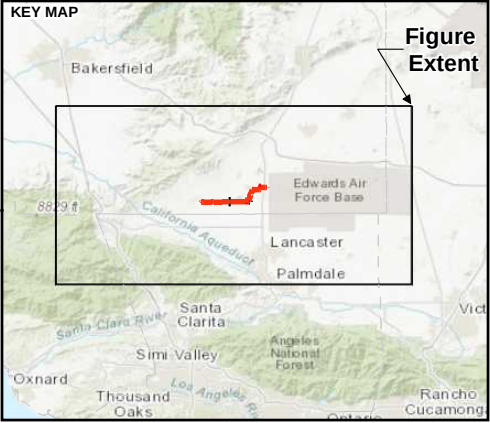
LEGEND

- Wetland Type**

 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
- Proposed Transmission Line**

 - Preferred Route, Aboveground
 - Preferred Route, Underground
 - Route Options 1-6, Aboveground
- Route Options 1-6, Underground**

 - WRESC Site
 - Other Project Parcels
 - Project Boundary
 - SCE Whirlwind Substation
 - 10 Mile Buffer Around Transmission Line
- Project Components**



CLIENT		
GEM A-CAES LLC		
CONSULTANT		
	YYYY-MM-DD	2024-02-26
	DESIGNED	MK
	PREPARED	MK
	REVIEWED	SC
	APPROVED	SH

REFERENCE(S)			
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET			
2. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY			
SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY			
PROJECT			
WILLOW ROCK ENERGY STORAGE CENTER			
SUPPLEMENTAL AFC			
TITLE			
NATIONAL WETLANDS INVENTORY - 10 MILE BUFFER AROUND TRANSMISSION LINE			
PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	HY.04	0	5.2-1a

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

Critical Habitat Type

- Arroyo (=arroyo southwestern) toad
- Buena Vista Lake ornate Shrew
- California condor
- California red-legged frog
- Conservancy fairy shrimp
- Desert tortoise

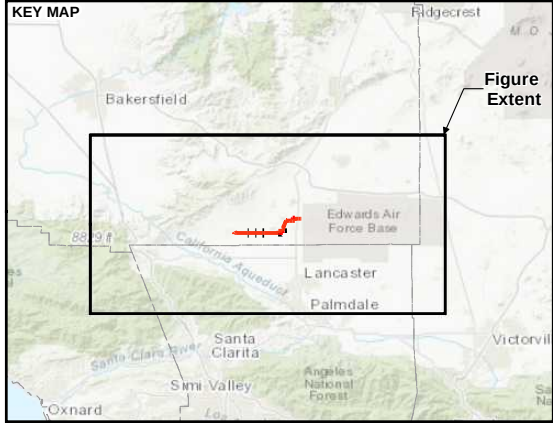
Proposed Transmission Line

- Southwestern willow flycatcher
- Vernal pool fairy shrimp
- Preferred Route, Aboveground
- Preferred Route, Underground
- Route Options 1-6, Aboveground

Project Components

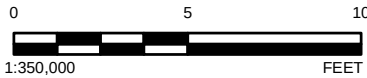
- WRESC Site
- Other Project Parcels
- Project Boundary
- SCE Whirlwind Substation

Route Options 1-6, Underground



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YYYY-MM-DD	2024-02-27
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	VG/LL

REFERENCE(S)

1. CRITICAL HABITAT FROM THE US FISH & WILDLIFE SERVICE DATA PORTAL, 2023
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P

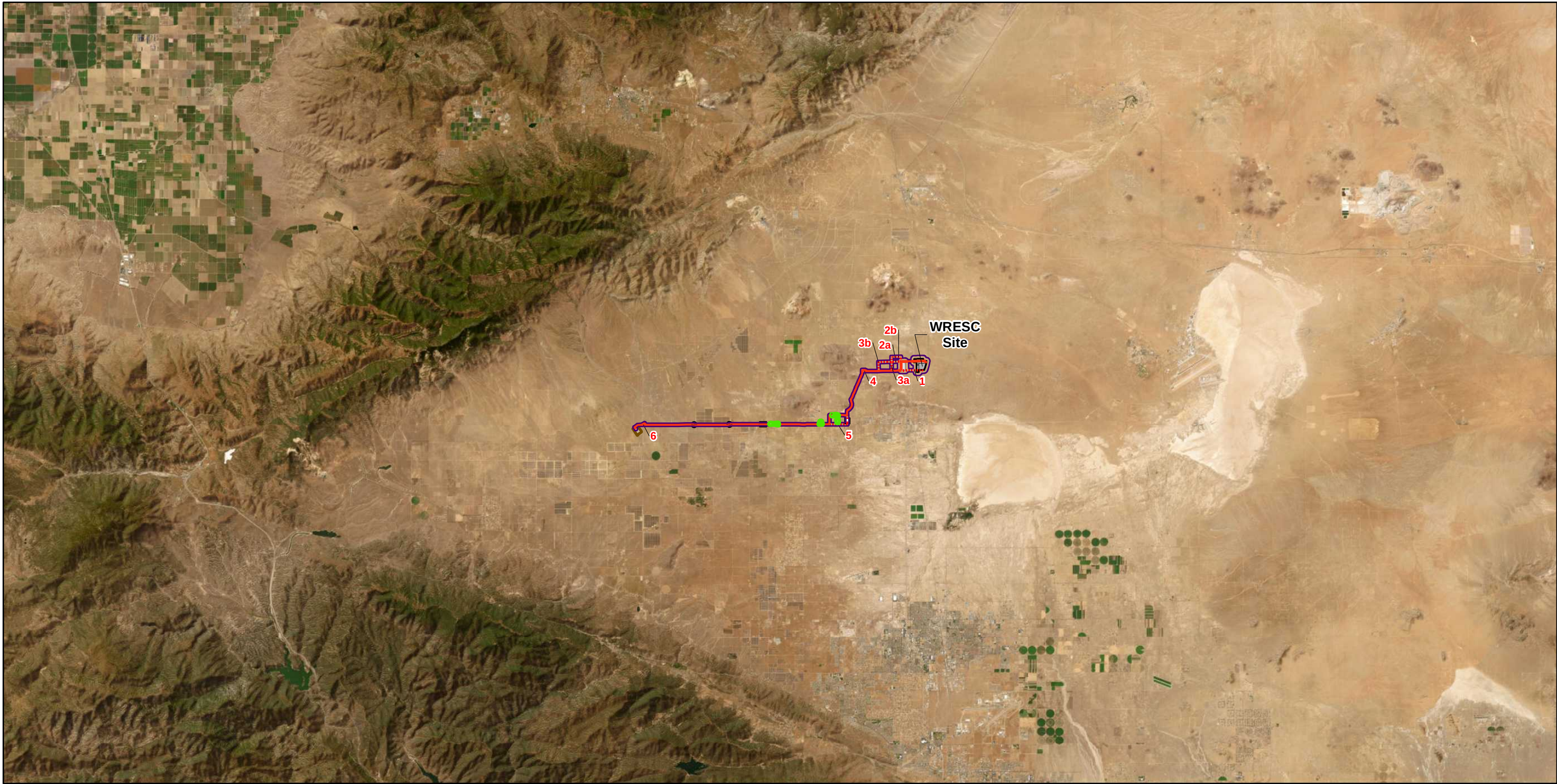
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
CRITICAL HABITAT

PROJECT NO.	PHASE	REV.	FIGURE
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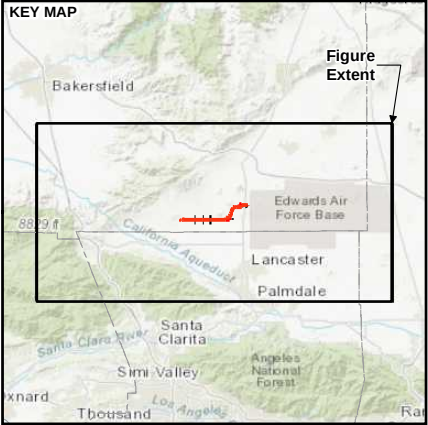
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LEGEND

- CNDDDB Sensitive-Species Common Name**
- Alkali mariposa-lily
- Proposed Transmission Line**
- Preferred Route, Aboveground
 - Preferred Route, Underground
 - Route Options 1-6, Aboveground
 - Route Options 1-6, Underground
- Project Components**
- WRESC Site
 - Other Project Parcels
 - Project Boundary
 - Project Survey Area
 - SCE Whirlwind Substation



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YYYY-MM-DD	2024-02-28
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	VG/LL

NOTE(S)

1. THE SURVEY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

1. CA DEPT OF CONSERVATION, 2023 - CNDDDB SPECIAL STATUS PLANTS
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

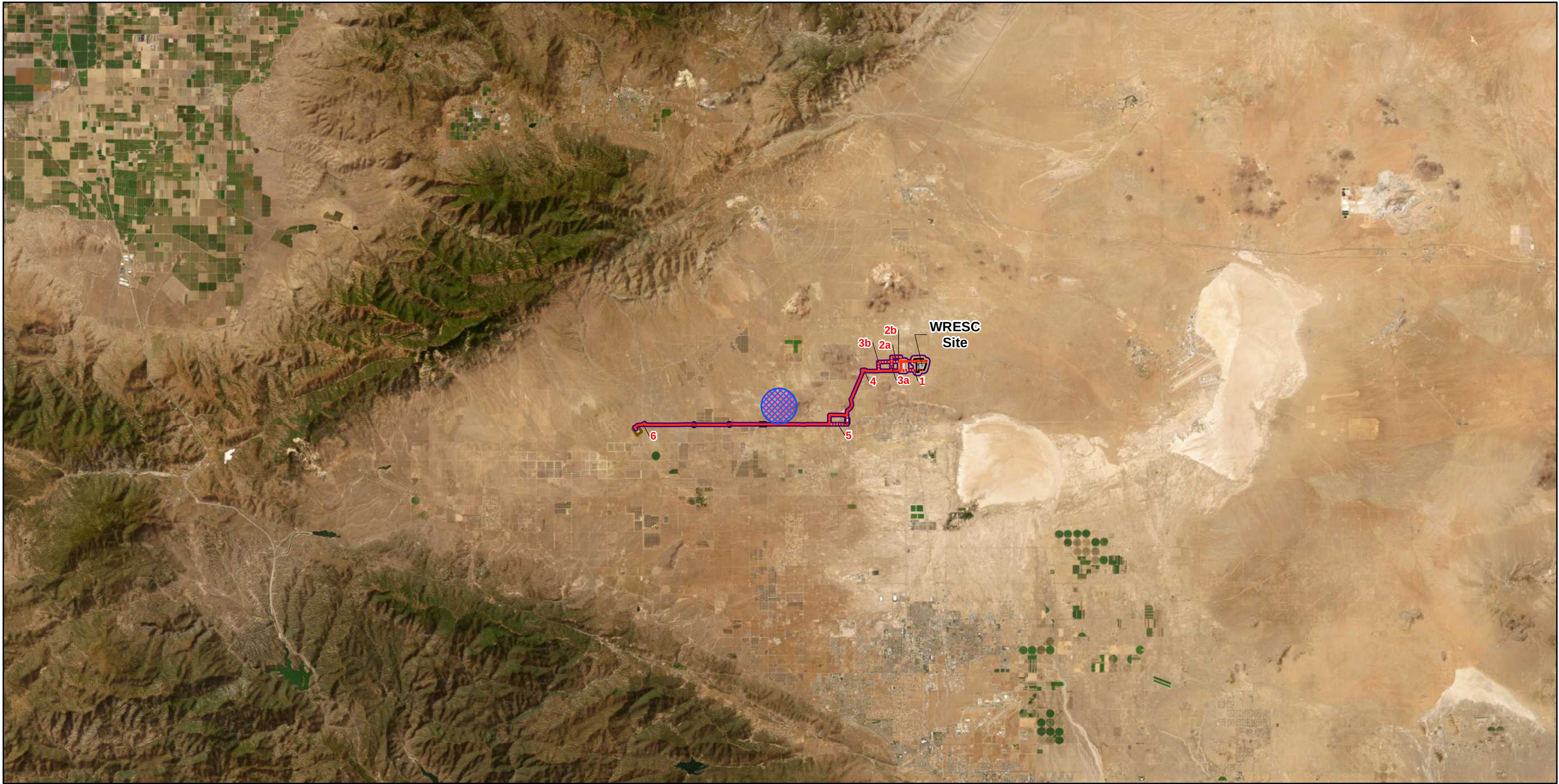
TITLE
POTENTIALLY OCCURING SPECIAL-STATUS SPECIES - PLANTS

PROJECT NO.	PHASE	REV.	FIGURE
31406639.000	01.LBR	0	5.2-4a

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

Sensitive Wildlife Common Name

- American badger
- Horn's milk-vetch

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Route Options 1-6, Aboveground
- Route Options 1-6, Underground

Project Components

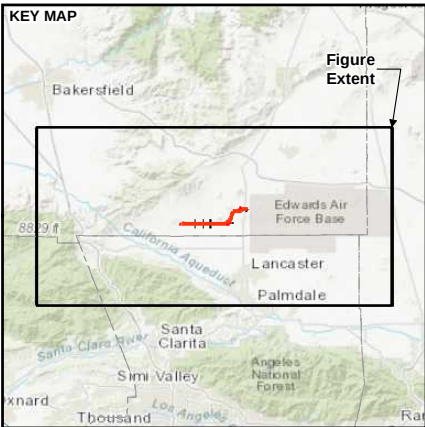
- WRESC Site

- Other Project Parcels

- Project Boundary

- Project Survey Area

- SCE Whirlwind Substation



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GEM A-CAES LLC

CONSULTANT



YYYY-MM-DD	2024-02-28
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	VG/LL

NOTE(S)

- THE SURVEY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

- CA DEPT OF CONSERVATION, 2023 - CNDDB SPECIAL STATUS WILDLIFE
- COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

POTENTIALLY OCCURING SPECIAL-STATUS SPECIES - PLANTS

PROJECT NO.
31406639.000

PHASE
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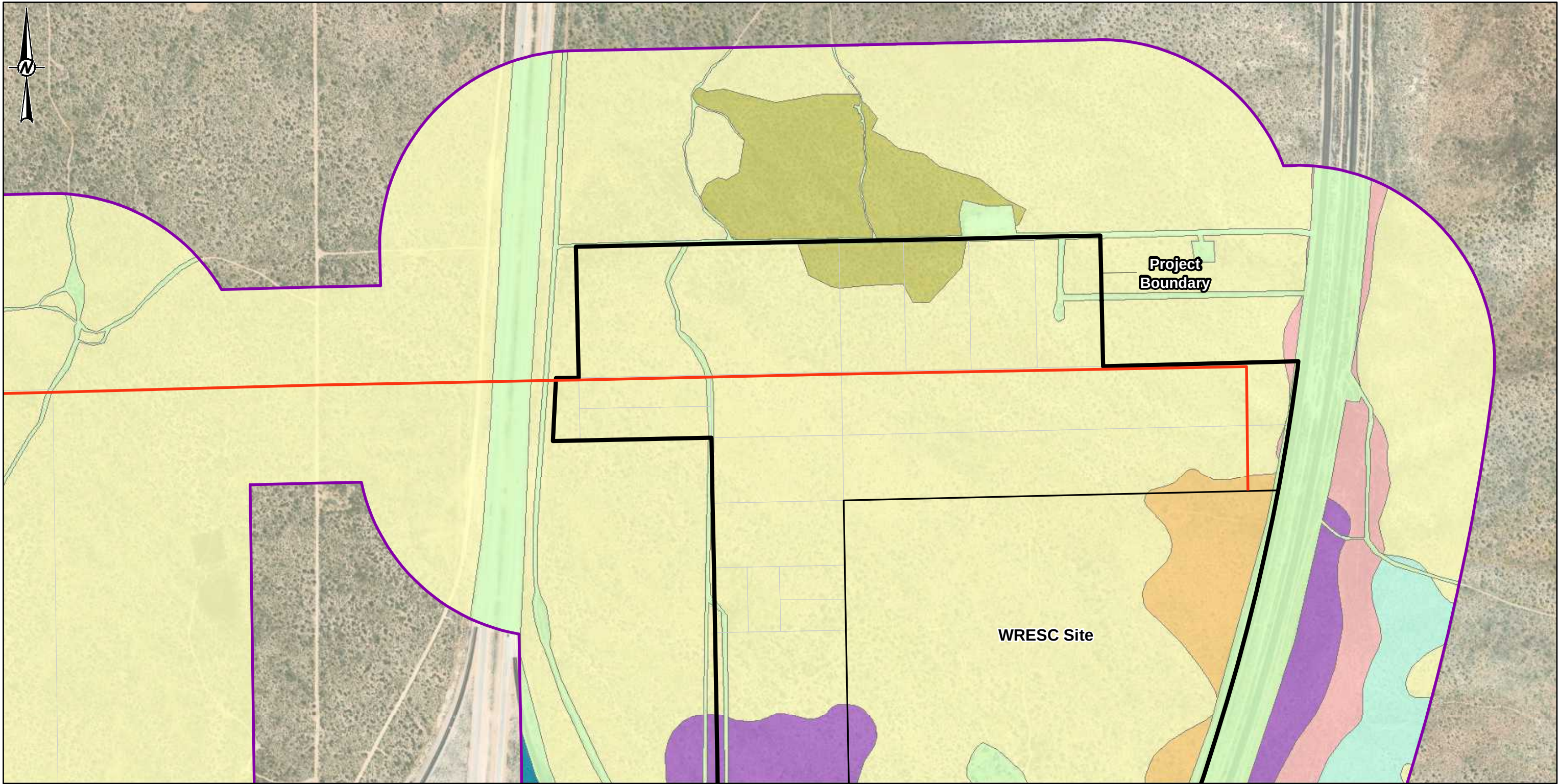
REV.
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FIGURE
5.2-4b

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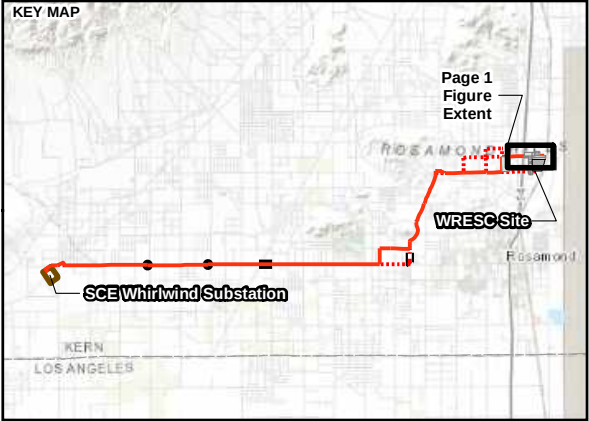
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LEGEND

- Vegetation Class**
- Allscale scrub (ASSC)
 - Cheesebush Scrub (CHBS)
 - Creosote bush - white bursage scrub (CBWS)
 - Creosote bush scrub (CBS)
 - Disturbed/Developed (DH-DEV)
 - Needleleaf rabbitbrush scrub (NRS)
 - Rubber rabbitbrush scrub (RRS)
 - White Bursage Scrub (WBS)
- Proposed Transmission Line**
- Preferred Route, Aboveground
- Project Components**
- WRESC Site
 - Other Project Parcels
 - Project Boundary
 - Project Survey Area



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YYYY-MM-DD	2024-02-28
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)

1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

1. CADF - VEGETATION CLASSES
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 1 OF 16

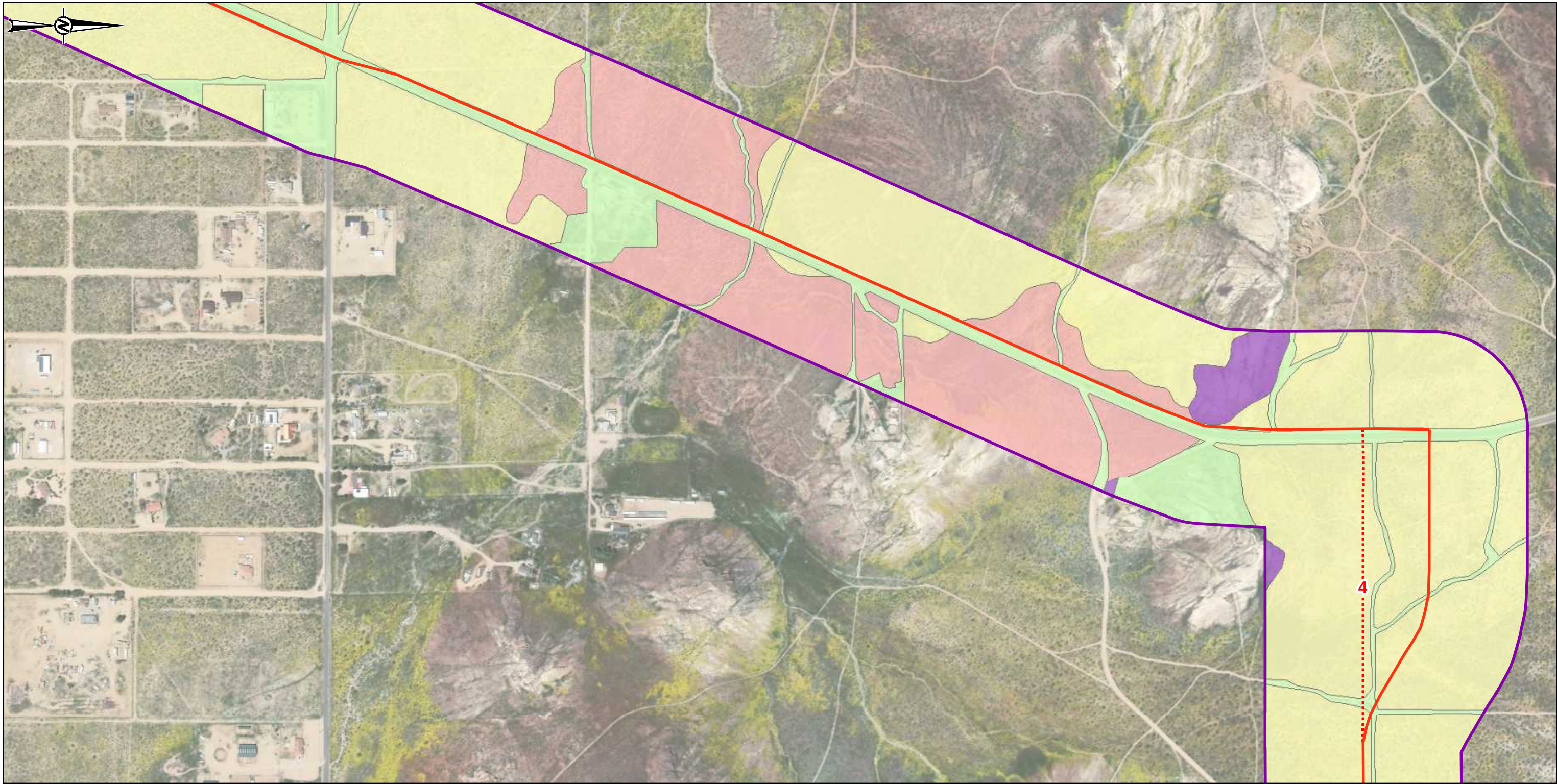
PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-1

1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-1

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-5

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LEGEND

Vegetation Class

Allscale scrub (ASSC)

Creosote bush - white bursage scrub (CBWS)

Disturbed/Developed (DH-DEV)

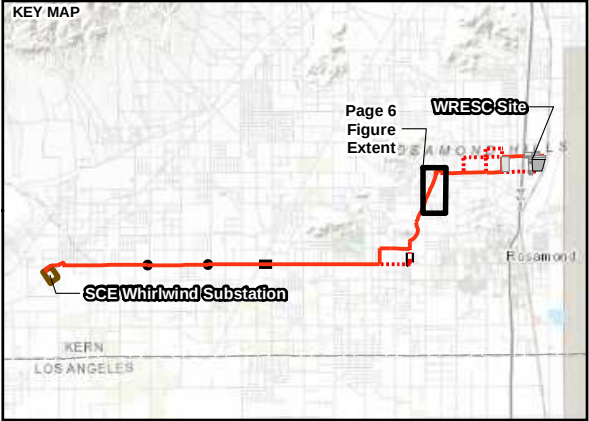
White Bursage Scrub (WBS)

Proposed Transmission Line

Preferred Route, Aboveground

Route Options 1-6, Aboveground

Project Survey Area



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DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)

1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

1. CDFW - VEGETATION CLASSES

2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER

SUPPLEMENTAL AFC

TITLE

VEGETATION MAP

MAP BOOK PAGE 6 OF 16

PROJECT NO.

31406639.003

PHASE

01

REV.

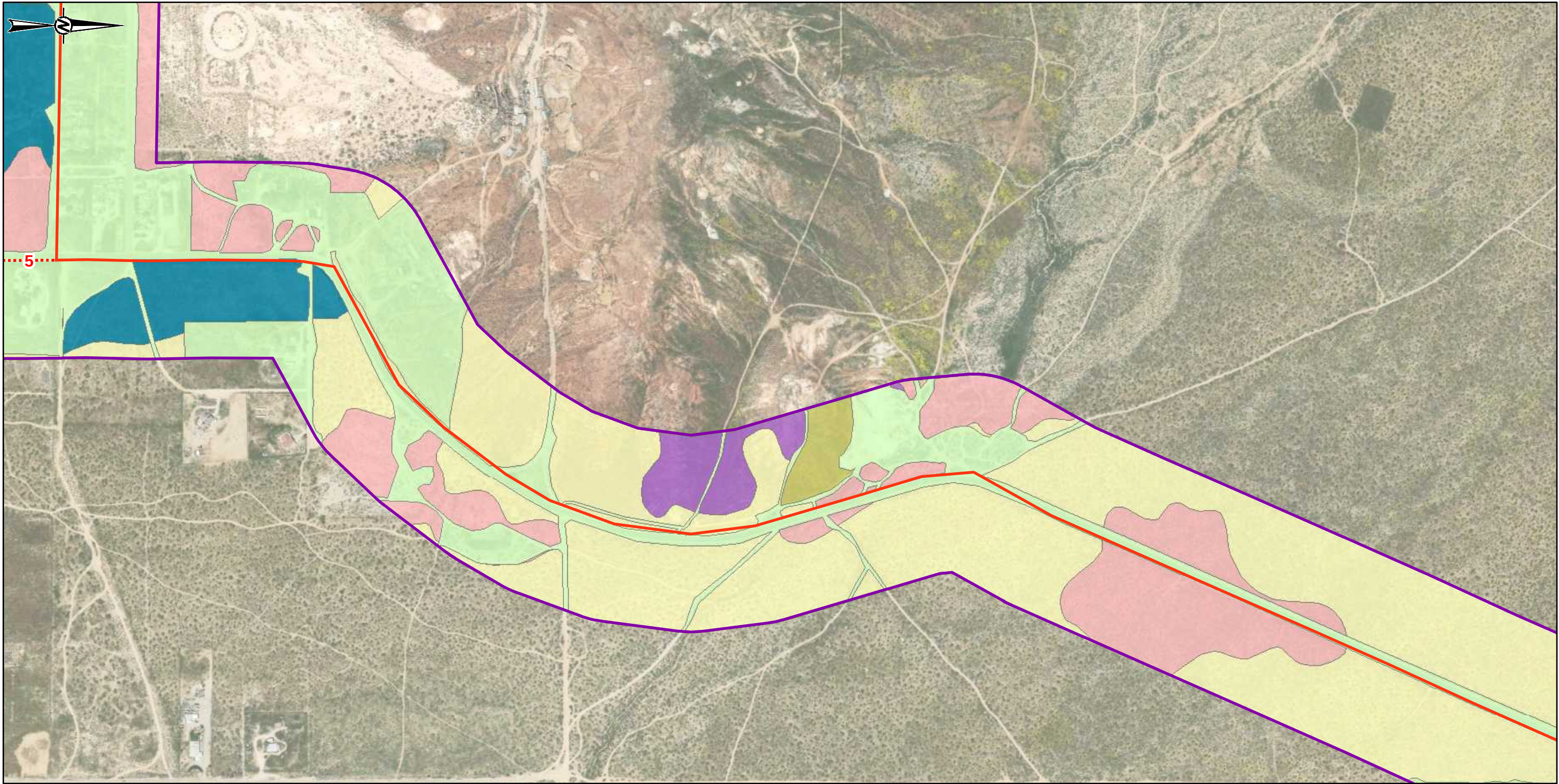
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FIGURE

5.2-5-6

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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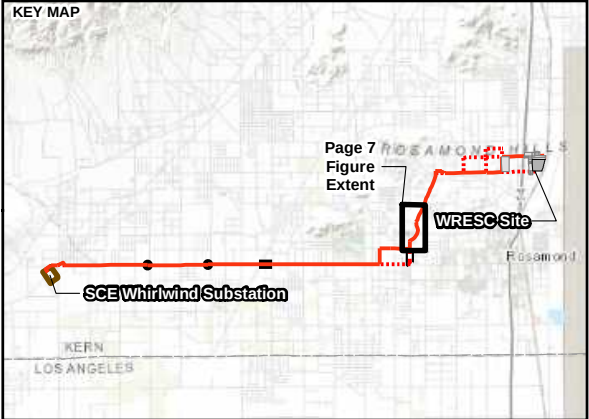
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Creosote bush - white bursage scrub (CBWS)
- Creosote bush scrub (CBS)
- Disturbed/Developed (DH-DEV)
- Rubber rabbitbrush scrub (RRS)
- White Bursage Scrub (WBS)

Proposed Transmission Line

- Preferred Route, Aboveground
- Route Options 1-6, Aboveground
- Project Survey Area



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GEM A-CAES LLC

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YYYY-MM-DD	2024-02-28
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)
1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)
1. CALDFW - VEGETATION CLASSES
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

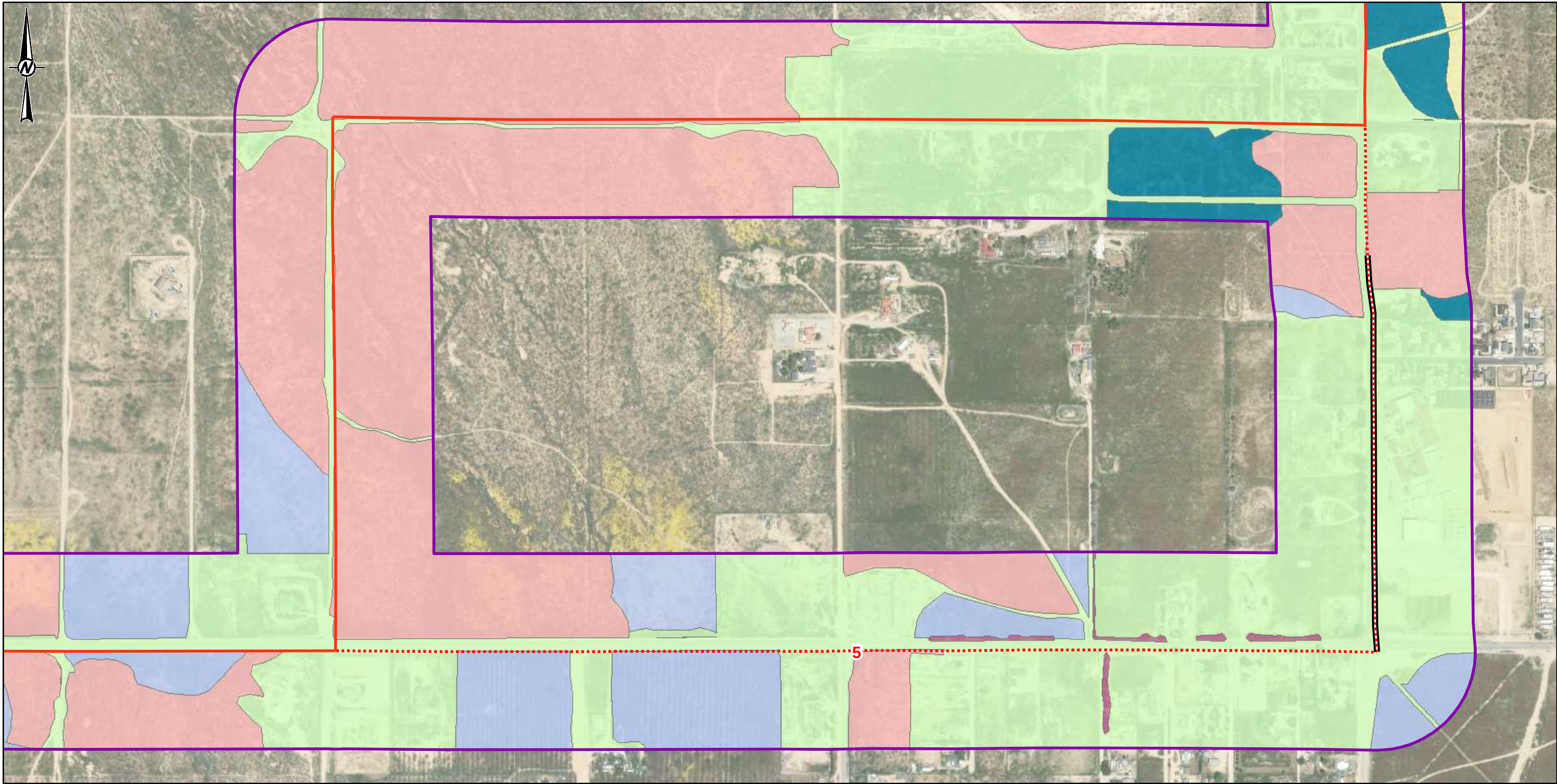
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
**VEGETATION MAP
MAP BOOK PAGE 7 OF 16**

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-7

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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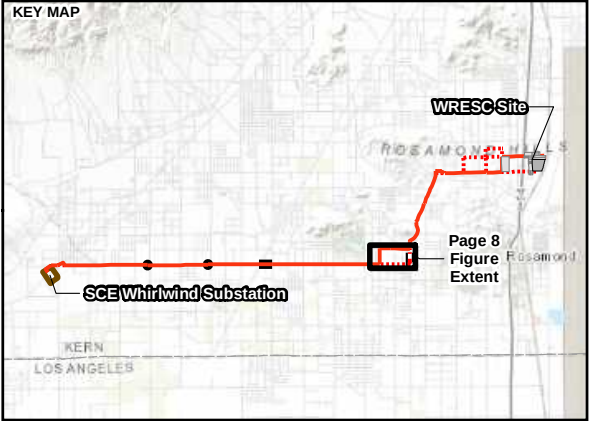
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Creosote bush - white bursage scrub (CBWS)
- Disturbed/Developed (DH-DEV)
- Non-Native (NNGF)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)
- Tamarisk Thickets (TTH)

Proposed Transmission Line

- Preferred Route, Aboveground
- Route Options 1-6, Aboveground
- Route Options 1-6, Underground
- Project Survey Area



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GEM A-CAES LLC

CONSULTANT



YYYY-MM-DD	2024-02-28
DESIGNED	MK
PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)
1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)
1. CADFW - VEGETATION CLASSES
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
**VEGETATION MAP
MAP BOOK PAGE 8 OF 16**

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-8

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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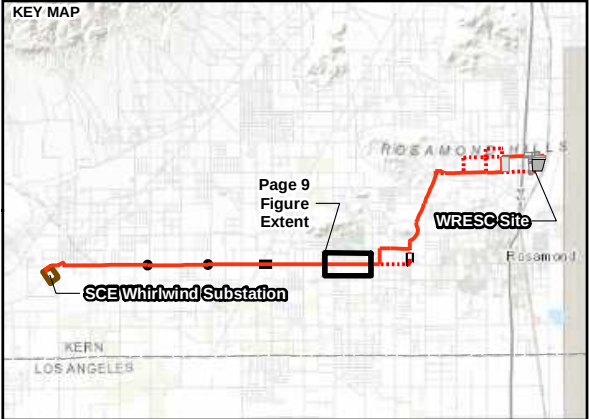
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Cheesebush Scrub (CHBS)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)
- White Bursage Scrub (WBS)

Proposed Transmission Line

- Preferred Route, Aboveground
- Project Survey Area



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PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)

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REFERENCE(S)

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- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
**VEGETATION MAP
MAP BOOK PAGE 9 OF 16**

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-9

1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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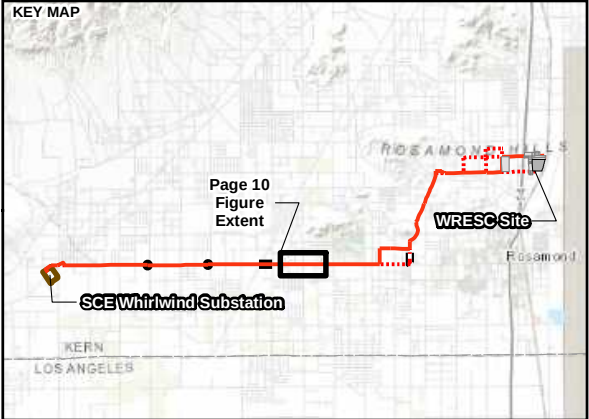
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Cheesebush Scrub (CHBS)
- Creosote bush - white bursage scrub (CBWS)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)

Proposed Transmission Line

- Preferred Route, Aboveground
- Project Survey Area



DO NOT RELEASE

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0 500 1,000
1:6,000 MILES

NOTE(S)

1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

1. CDFW - VEGETATION CLASSES
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

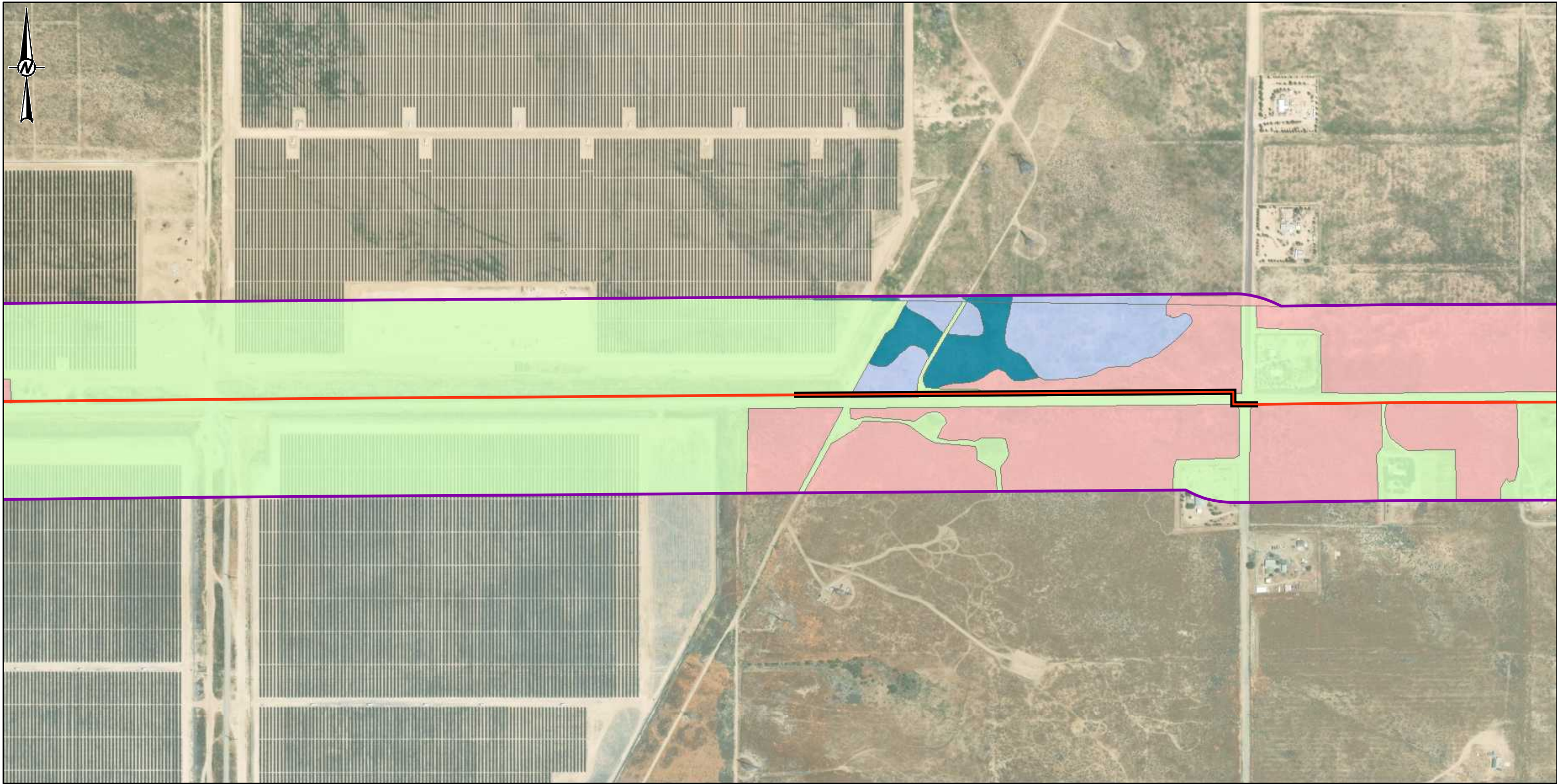
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 10 OF 16

PROJECT NO. 31406639.003	PHASE 01	REV. 0	FIGURE 5.2-5-10
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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

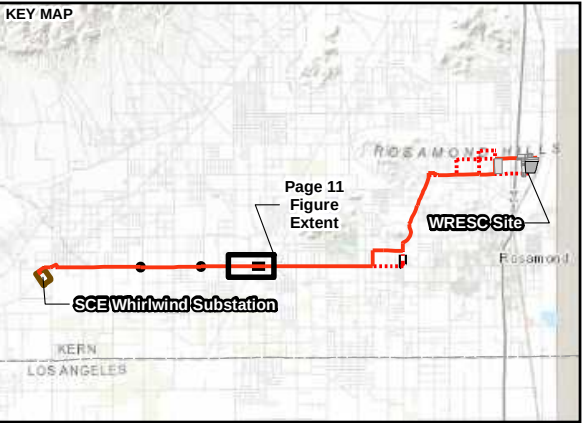
Vegetation Class

- Allscale scrub (ASSC)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground

Project Survey Area



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REVIEWED	SC
APPROVED	SH

NOTE(S)

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REFERENCE(S)

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- COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

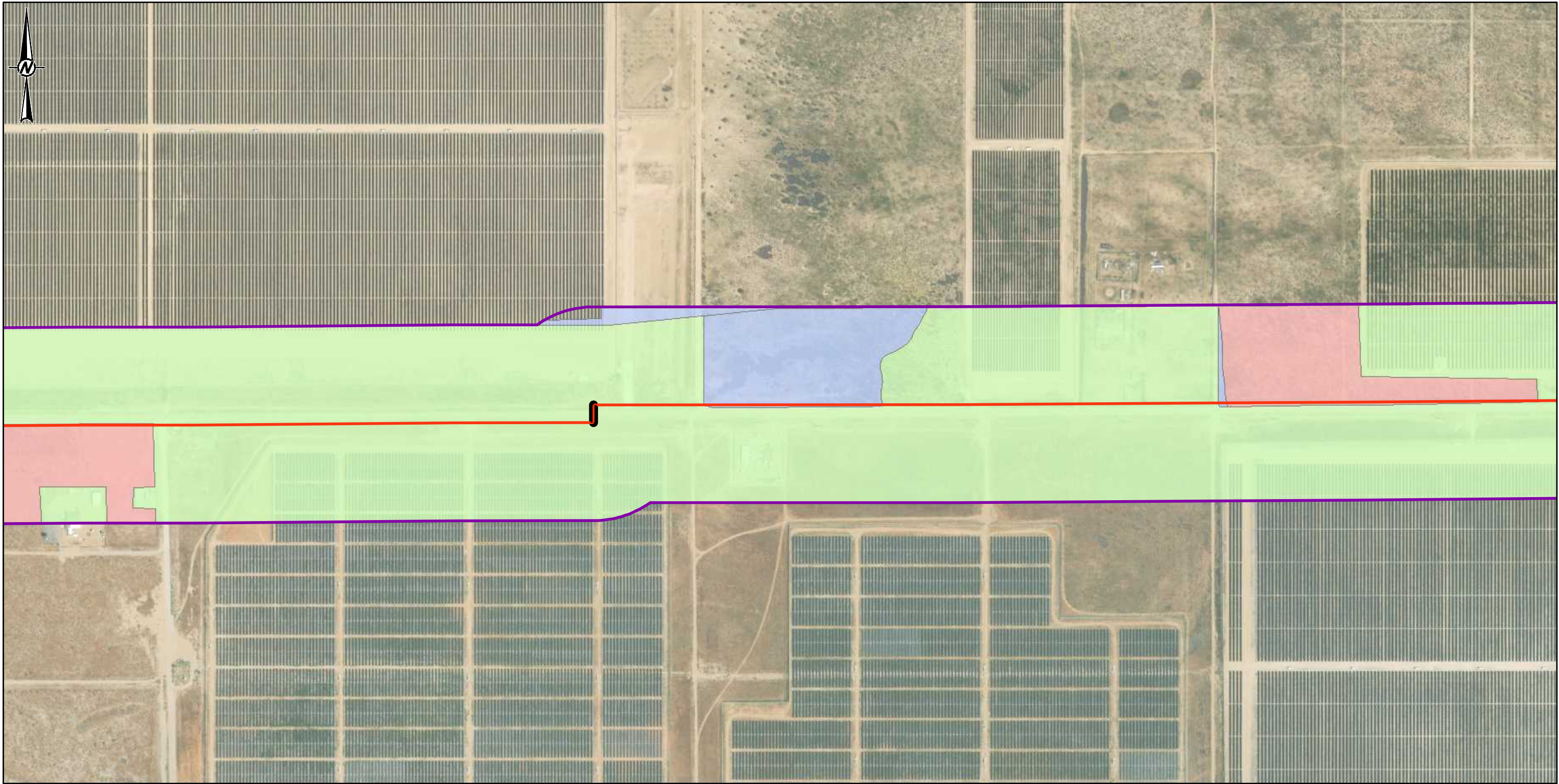
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 11 OF 16

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-11

1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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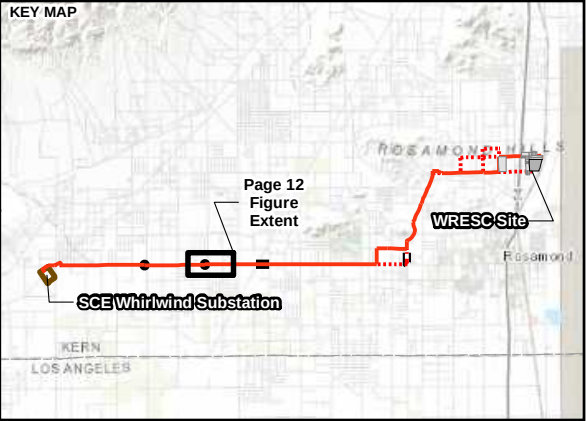
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Project Survey Area



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PREPARED	MK
REVIEWED	SC
APPROVED	SH

NOTE(S)

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REFERENCE(S)

- CADFW - VEGETATION CLASSES
- COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

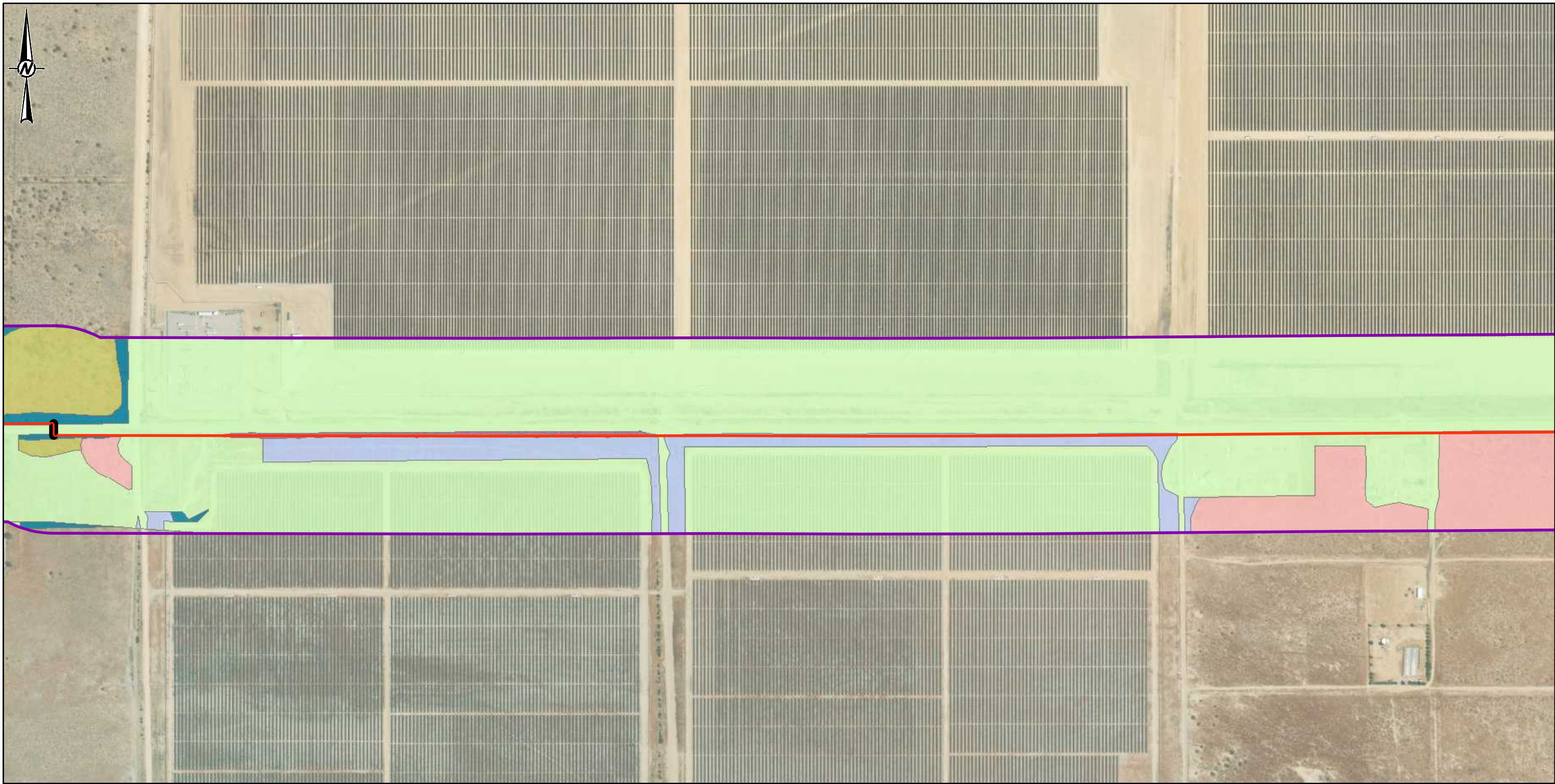
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 12 OF 16

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B





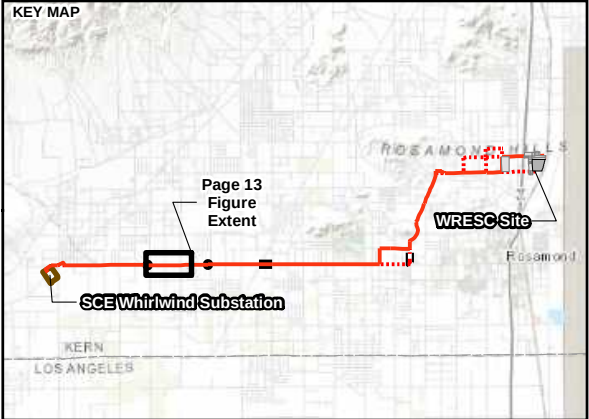
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Creosote bush scrub (CBS)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)
- Tamarisk Thickets (TTH)

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Project Survey Area



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APPROVED	SH

NOTE(S)

1. STUDY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

1. CALIFORNIA - VEGETATION CLASSES
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
3. MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

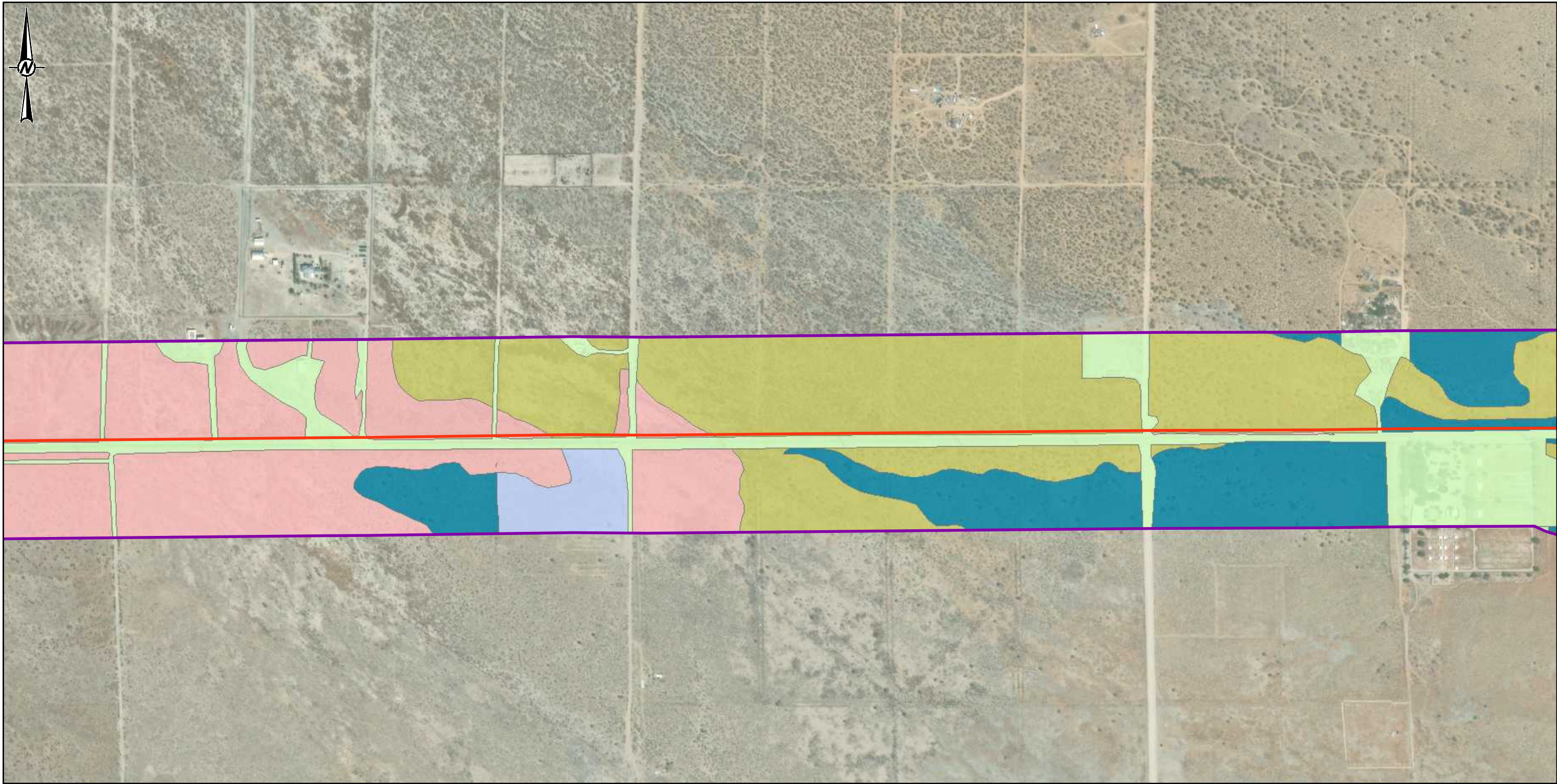
TITLE
**VEGETATION MAP
MAP BOOK PAGE 13 OF 16**

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-13

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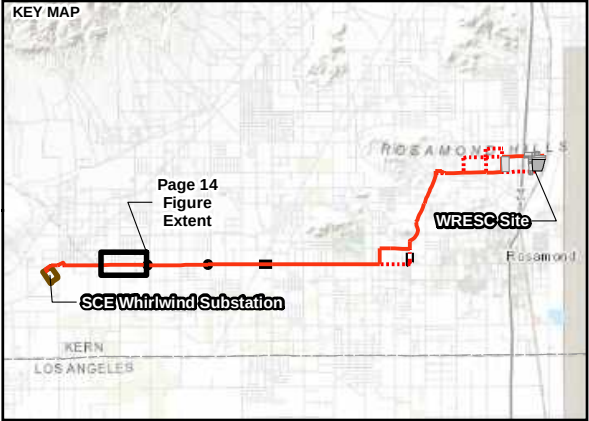
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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LEGEND

- Vegetation Class**
- Allscale scrub (ASSC)
 - Creosote bush scrub (CBS)
 - Disturbed/Developed (DH-DEV)
 - Non-Native Grassland and Forbes (NNGF)
 - Rubber rabbitbrush scrub (RRS)
- Proposed Transmission Line**
- Preferred Route, Aboveground
- Project Survey Area**



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REVIEWED	SC
APPROVED	SH

NOTE(S)

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PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 14 OF 16

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-14

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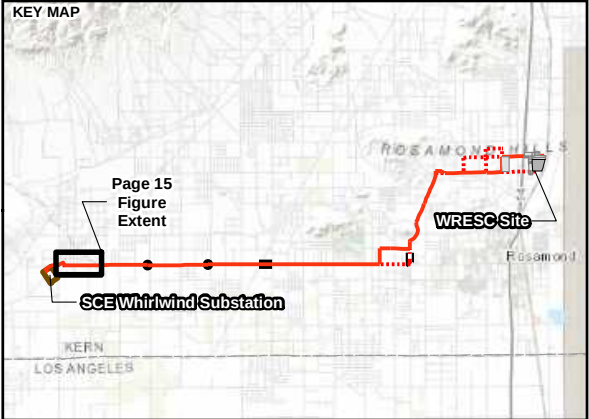
LEGEND

Vegetation Class

- Allscale scrub (ASSC)
- Cheesebush Scrub (CHBS)
- Creosote bush scrub (CBS)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)
- Rubber rabbitbrush scrub (RRS)

Proposed Transmission Line

- Preferred Route, Aboveground
- Route Options 1-6, Aboveground
- SCE Whirlwind Substation
- Project Survey Area



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0 500 1,000
1:6,000 MILES

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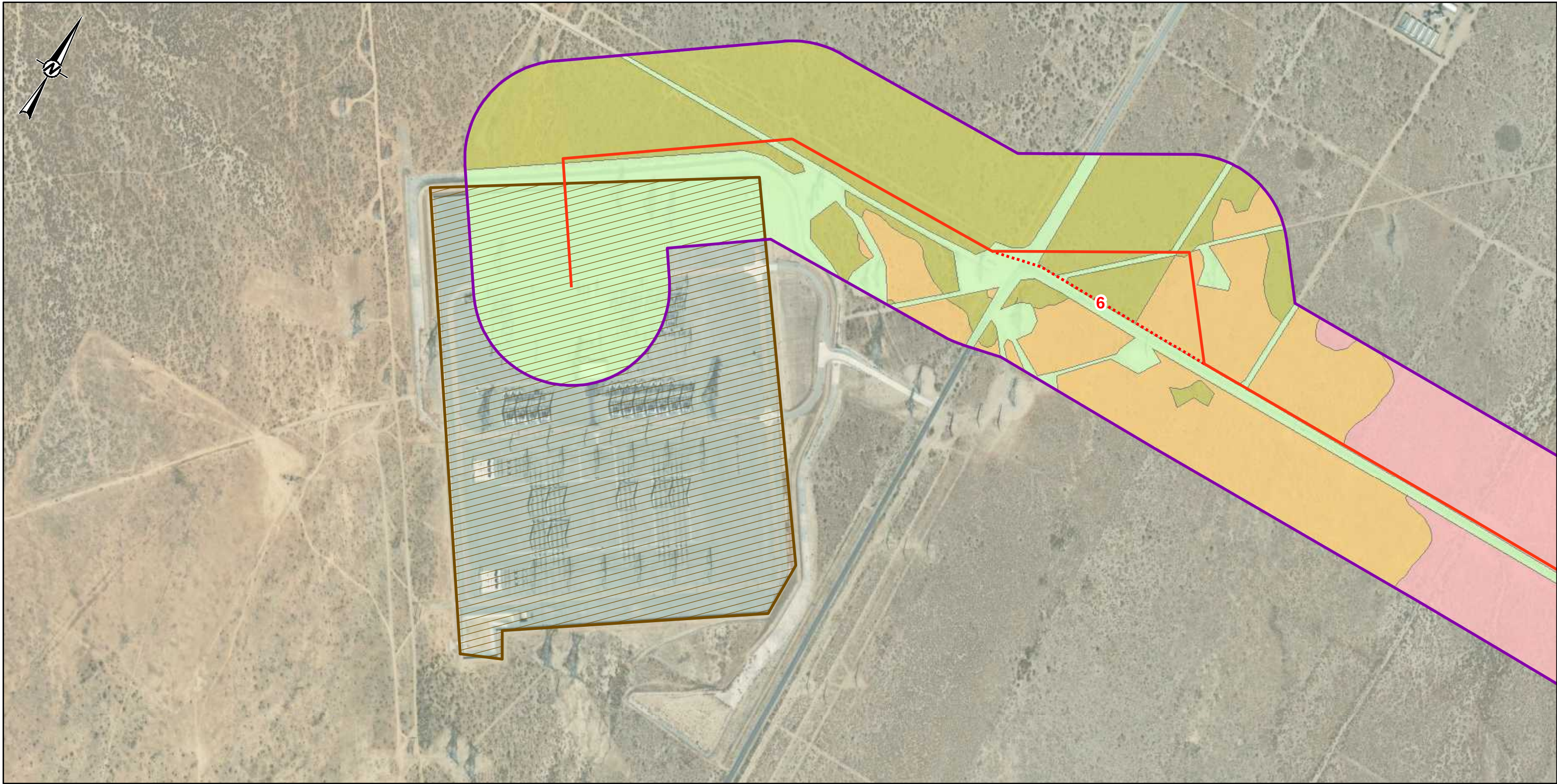
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
**VEGETATION MAP
MAP BOOK PAGE 15 OF 16**

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-15

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LEGEND

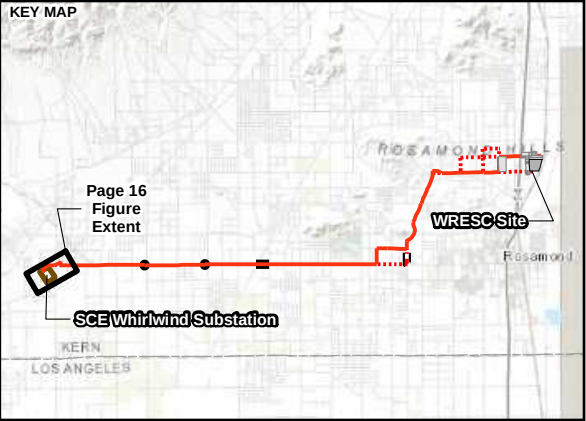
Vegetation Class

- Allscale scrub (ASSC)
- Cheesebush Scrub (CHBS)
- Creosote bush scrub (CBS)
- Disturbed/Developed (DH-DEV)
- Non-Native Grassland and Forbes (NNGF)

Proposed Transmission Line

- Preferred Route, Aboveground

- Route Options 1-6, Aboveground
- SCE Whirlwind Substation
- Project Survey Area



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PREPARED	MK
REVIEWED	SC
APPROVED	SH

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PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
VEGETATION MAP
MAP BOOK PAGE 16 OF 16

PROJECT NO.	PHASE	REV.	FIGURE
31406639.003	01	0	5.2-5-16

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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LEGEND

Sensitive Plant Species Common Name

- Alkali Mariposa Lily
- Sagebrush Ioefflingia

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Route Options 1-6, Aboveground
- Route Options 1-6, Underground

Project Components

- WRESC Site

- Other Project Parcels

- Project Boundary

- Project Survey Area

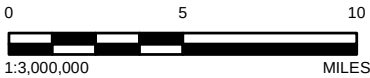
- Portions of the Survey Area Not Surveyed

- SCE Whirlwind Substation



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PREPARED	MK
REVIEWED	SC
APPROVED	VG/LL

NOTE(S)

- THE SURVEY AREA IS CALCULATED BASED ON A 500 FT BUFFER AROUND TRANSMISSION LINES AND A 1000 FT BUFFER AROUND PROJECT PARCELS.

REFERENCE(S)

- WSP 2022, 2023 - SPECIAL STATUS PLANT OBSERVATION DATA
- COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
- MAP SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
OBSERVED SPECIAL-STATUS SPECIES - PLANTS

PROJECT NO.	PHASE	REV.	FIGURE
31406639.000	01.LBR	0	5.2-6a

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1 in

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LEGEND

Common Name

- Black-tailed Jackrabbit
- Crotch's bumblebee
- Loggerhead Shrike
- Swainson's hawk

Proposed Transmission Line

- Preferred Route, Aboveground
- Preferred Route, Underground
- Route Options 1-6, Aboveground
- Route Options 1-6, Underground

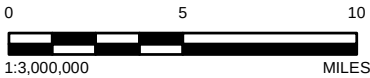
Project Components

- WRESC Site
- Other Project Parcels
- Project Boundary
- Project Survey Area
- Portions of the Survey Area Not Surveyed
- SCE Whirlwind Substation



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PREPARED	MK
REVIEWED	SC
APPROVED	VG/LL

NOTE(S)

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REFERENCE(S)

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- COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET
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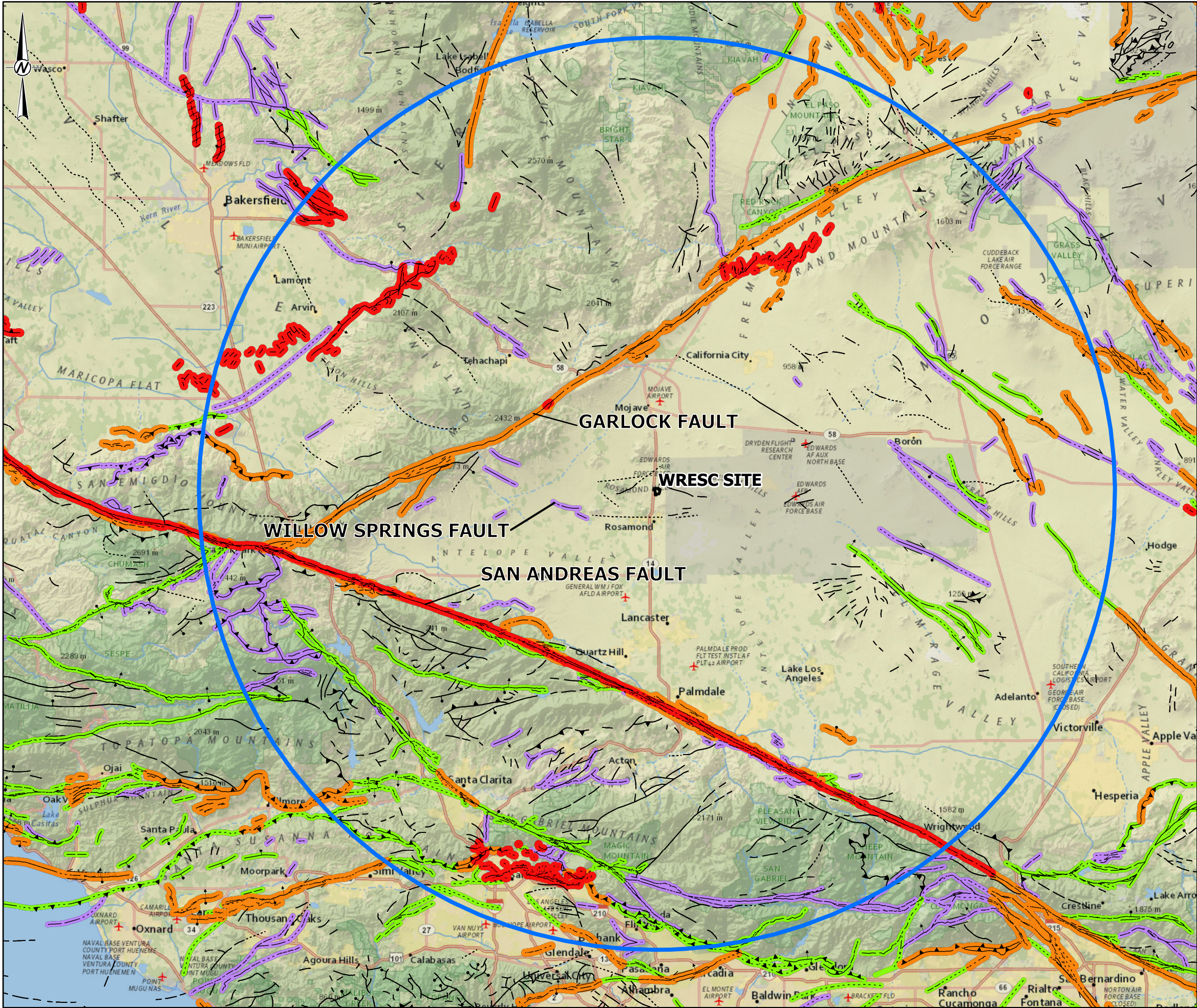
PROJECT
WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE
OBSERVED SPECIAL-STATUS SPECIES - WILDLIFE

PROJECT NO.	PHASE	REV.	FIGURE
31406639.000	01.LBR	0	5.2-6b

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in



LEGEND

PROJECT BOUNDARY

62 MILE RADIUS

REPRESENTATION: CGS.DOC.PREQT_FLTS_POLYLINE_REP

<ALL OTHER VALUES>

FAULT, CERTAIN

FAULT, APPROX. LOCATED

FAULT, CONCEALED

THRUST FAULT, CERTAIN

THRUST FAULT, APPROX. LOCATED

THRUST FAULT, APPROX. LOCATED, QUERIED

FAULT, CERTAIN (BALL AND BAR)

FAULT, APPROX. LOCATED (BALL AND BAR)

FAULT, CONCEALED (BALL AND BAR)

REPRESENTATION: CGS.DOC.QT_FLT_VER3_PRINT_020410_FI_REP

FAULT, CERTAIN

FAULT, APPROX. LOCATED

FAULT, APPROX. LOCATED, QUERIED

FAULT, INFERRED, QUERIED

FAULT, CONCEALED

FAULT, CONCEALED, QUERIED

THRUST FAULT, CERTAIN

THRUST FAULT, APPROX. LOCATED

THRUST FAULT, CONCEALED

DEXTRAL FAULT, CERTAIN

DEXTRAL FAULT, APPROX. LOCATED

DEXTRAL FAULT, CONCEALED

SINISTRAL FAULT, CERTAIN

SINISTRAL FAULT, APPROX. LOCATED

SINISTRAL FAULT, CONCEALED

THRUST FAULT, CERTAIN (2)

THRUST FAULT, APPROX. LOCATED (2)

THRUST FAULT, CONCEALED (2)

FAULT, CERTAIN (BALL AND BAR)

FAULT, APPROX. LOCATED (BALL AND BAR)

FAULT, CONCEALED (BALL AND BAR)

DEXTRAL FAULT, CERTAIN (BALL AND BAR)

FAULT, CONCEALED, QUERIED (BALL AND BAR, 2)

FAULT, CERTAIN (DIP)

FAULT, APPROX. LOCATED (DIP)

FAULT, CONCEALED (DIP)

REVERSE FAULT, CERTAIN

REVERSE FAULT, APPROX. LOCATED

REVERSE FAULT, CONCEALED

REPRESENTATION: CGS.DOC.PREQT_FLTS_POLYLINE_REP

<ALL OTHER VALUES>

FAULT, CERTAIN

FAULT, APPROX. LOCATED

FAULT, CONCEALED

THRUST FAULT, CERTAIN

THRUST FAULT, APPROX. LOCATED

THRUST FAULT, APPROX. LOCATED, QUERIED

FAULT, CERTAIN (BALL AND BAR)

FAULT, APPROX. LOCATED (BALL AND BAR)

FAULT, CONCEALED (BALL AND BAR)

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V
FIPS 0405 FEET

2. FAULT DATA: [HTTPS://GIS.CONSERVANCY.CA.GOV/SERVER/REST/SERVICES/CGS/FAULTACTIVITYMAPCA/MAPSSEVER](https://gis.conservancy.ca.gov/server/rest/services/CGS/FAULTACTIVITYMAPCA/MAPSSEVER)

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC

TITLE

FAULT MAP

CONSULTANT	YYYY-MM-DD	2024-02-28
DESIGNED	JAM	
PREPARED	JAM	
REVIEWED	LK	
APPROVED	RPCE	

PROJECT NO.

31406639.003

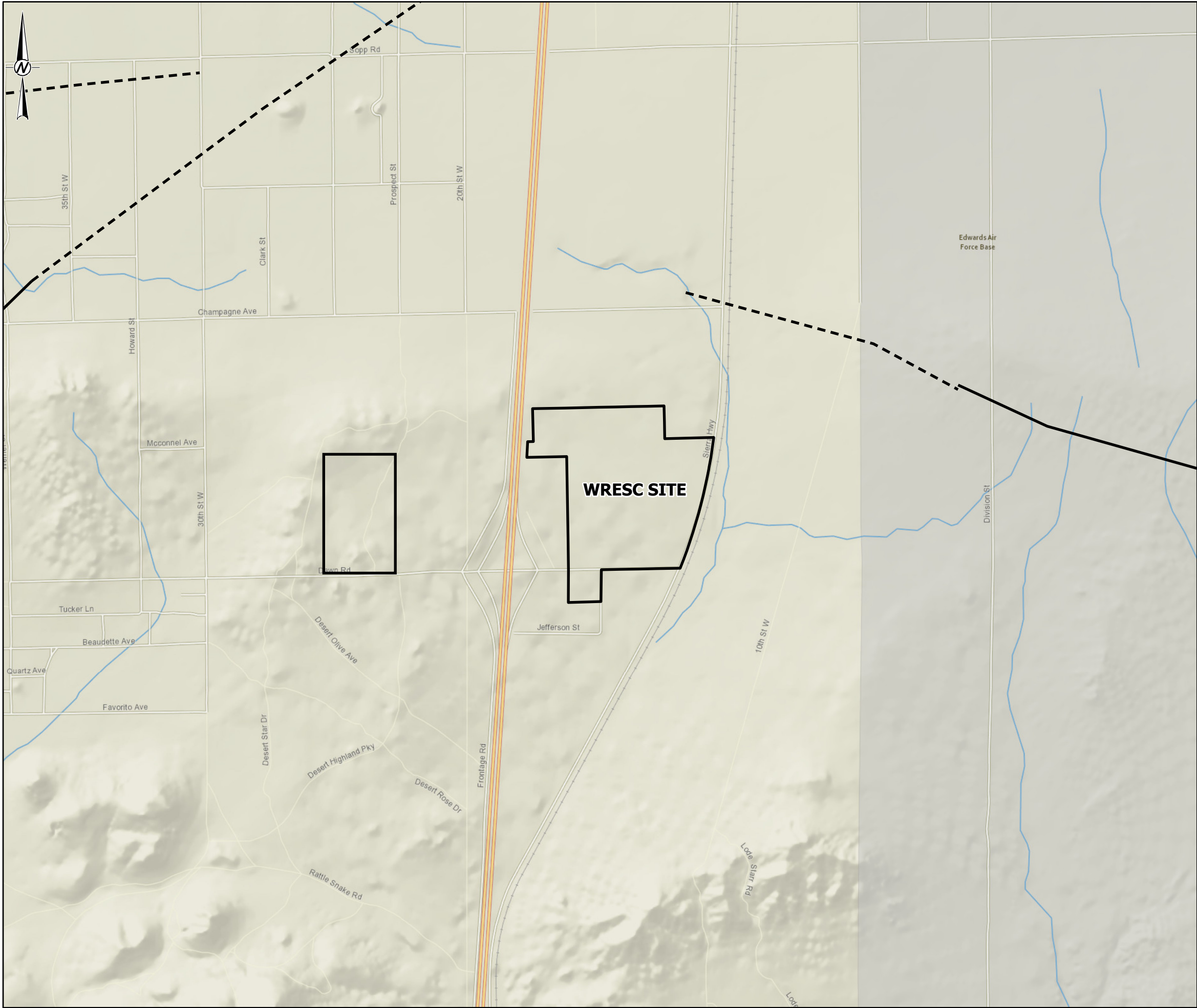
FIGURE

5.4-1a

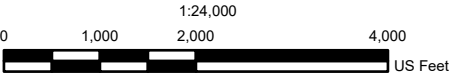
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25mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PATH: G:\Hydrosoft\Annel\09_PROJECTS\31406639.000_Hydrosoft\Annel_Geohazard\02_PRODUCTION\XDF\FIGURES\Rev0\Figures\4-1b.aprx PRINTED ON: AT: 1/21/24 AM



- LEGEND**
- PROJECT BOUNDARY
 - FAULT, CERTAIN
 - FAULT, CONCEALED



REFERENCE(S)
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V
FIPS 0405 FEET
2. 2010 FAULT DATA: [HTTPS://GIS.CONSERVACION.CA.GOV/SERVER/REST/SERVICES/CGS/FAULTACTIVITYMAPCA/MAPSERVER](https://gis.conservacion.ca.gov/server/rest/services/CGS/FAULTACTIVITYMAPCA/MAPSERVER)

CLIENT
GEM A-CAES LLC

PROJECT
**WILLOW ROCK ENERGY STORAGE CENTER
SUPPLEMENTAL AFC**

TITLE
FAULT MAP

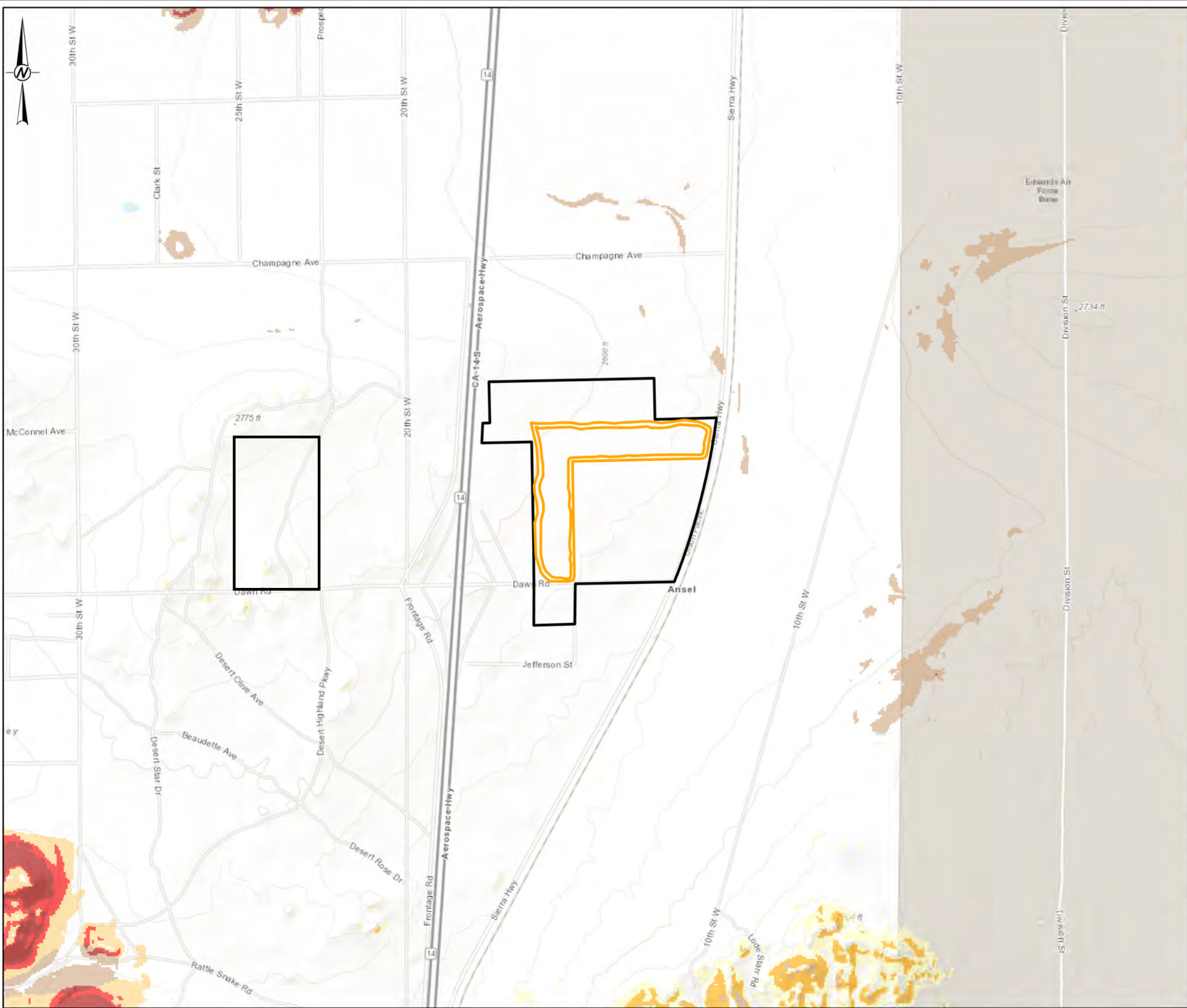
CONSULTANT	YYYY-MM-DD	2024-02-28
	DESIGNED	JAM
	PREPARED	JAM
	REVIEWED	LK
	APPROVED	RPCE

PROJECT NO.
31406639.003

FIGURE
5.4-1b

IF THIS MEASUREMIEN DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm



LEGEND

PROJECT BOUNDARY

ARCHITECTURAL BERM

LANDSLIDE SUSCEPTIBILITY MAP

0

III

V

VI

VII

VIII

IX

X

0 0.15 0.3 0.6 Miles

1:19,000

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

2. LANDSLIDE DATA: [HTTPS://GIS.CONSERVACION.CA.GOV/SERVER/REST/SERVICES/CGS/GEOLOGIC_MAP_OF_CALIFORNIA/FEATURESERVER](https://gis.conservacion.ca.gov/server/rest/services/CGS/GEOLOGIC_MAP_OF_CALIFORNIA/FEATURESERVER)

CLIENT

GEM A-CAES LLC

PROJECT

WILLOW ROCK ENERGY STORAGE CENTER

SUPPLEMENTAL AFC

TITLE

LANDSLIDE SUSCEPTIBILITY MAP

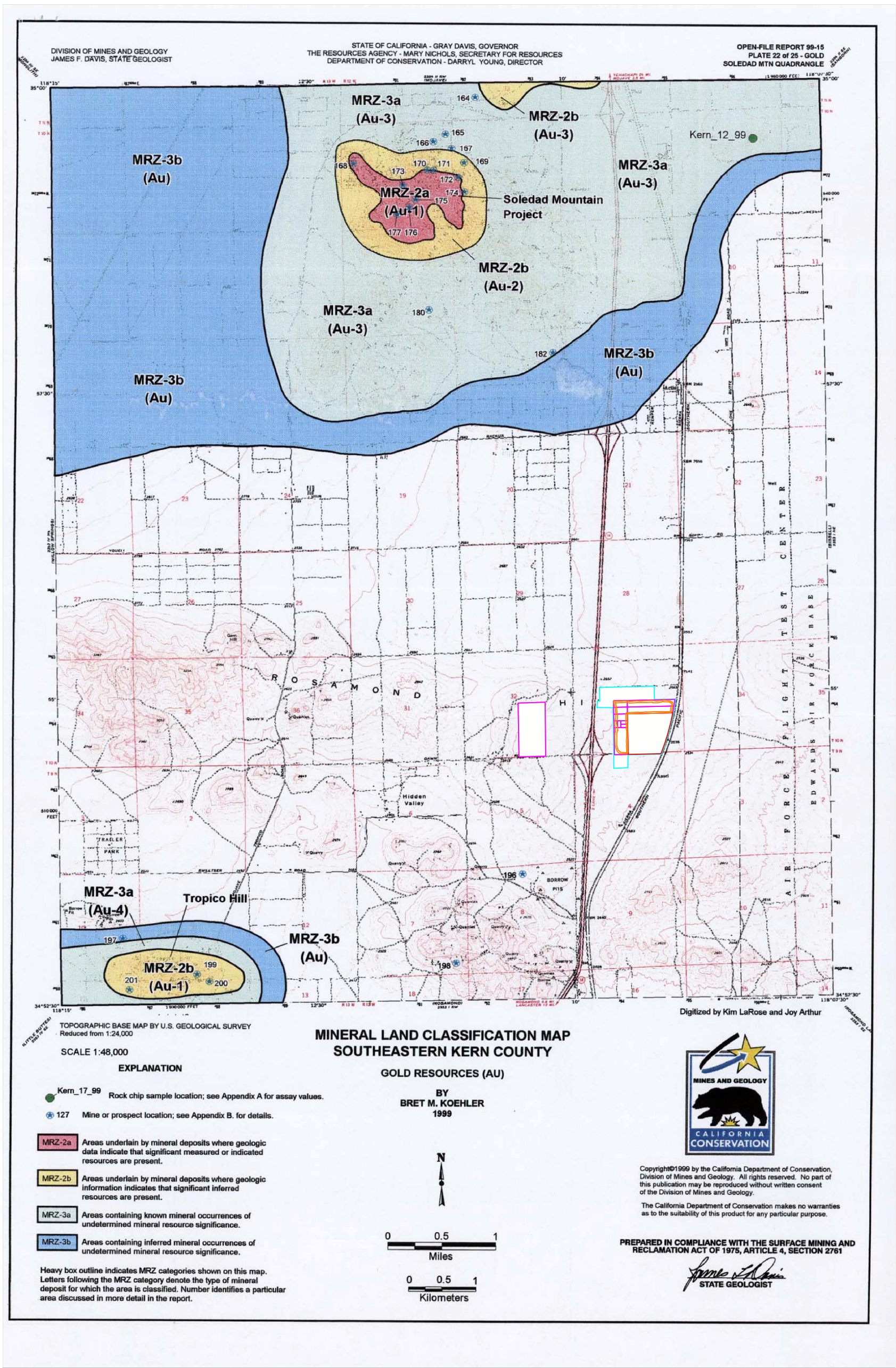
CONSULTANT	YYYY-MM-DD	2024-01-19
DESIGNED	JAM	
PREPARED	JAM	
REVIEWED	RPCE	
APPROVED	VG/L	

PROJECT NO.

31406639.003

FIGURE

5.4-3



LEGEND	
	PERMANENT IMPACT PARCEL
	ARCHITECTURAL BERM
	WRESC SITE
	TEMPORARY IMPACT PARCEL

CLIENT
GEM A-CAES LLC

CONSULTANT



YYYY-MM-DD	2024-01-22
DESIGNED	JAT
PREPARED	JAT
REVIEWED	RPCE
APPROVED	RPCE

PROJECT
WILLOW ROCK ENERGY STORAGE CENTER SUPPLEMENTAL
AFC

TITLE
MINERAL LAND CLASSIFICATION MAP
GOLD RESOURCES

PROJECT NO.
31406639.003

FIGURE
5.4-4