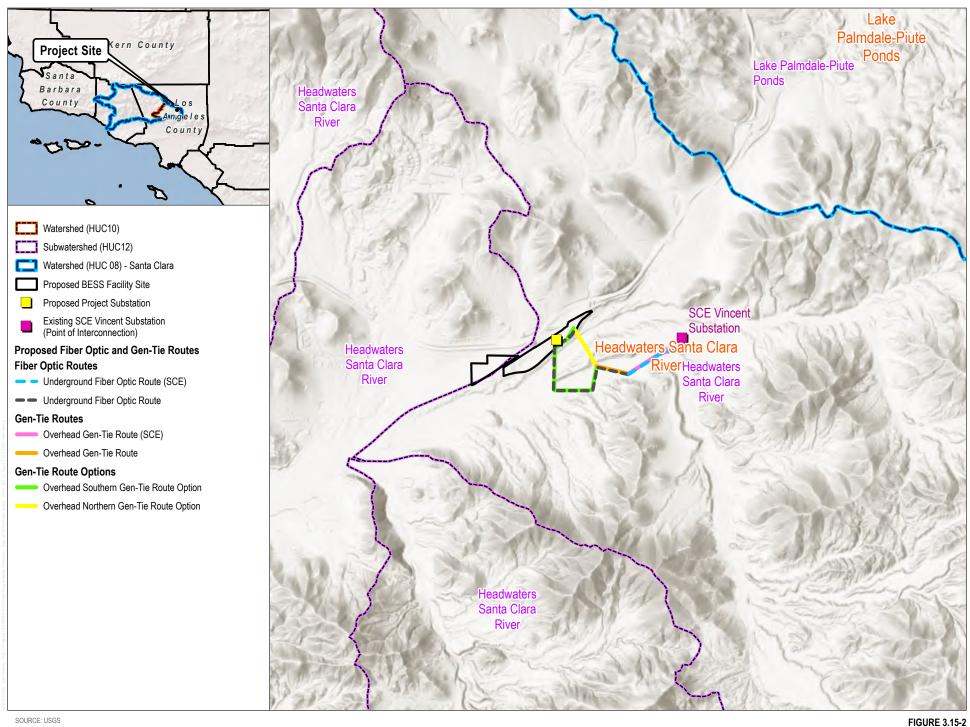
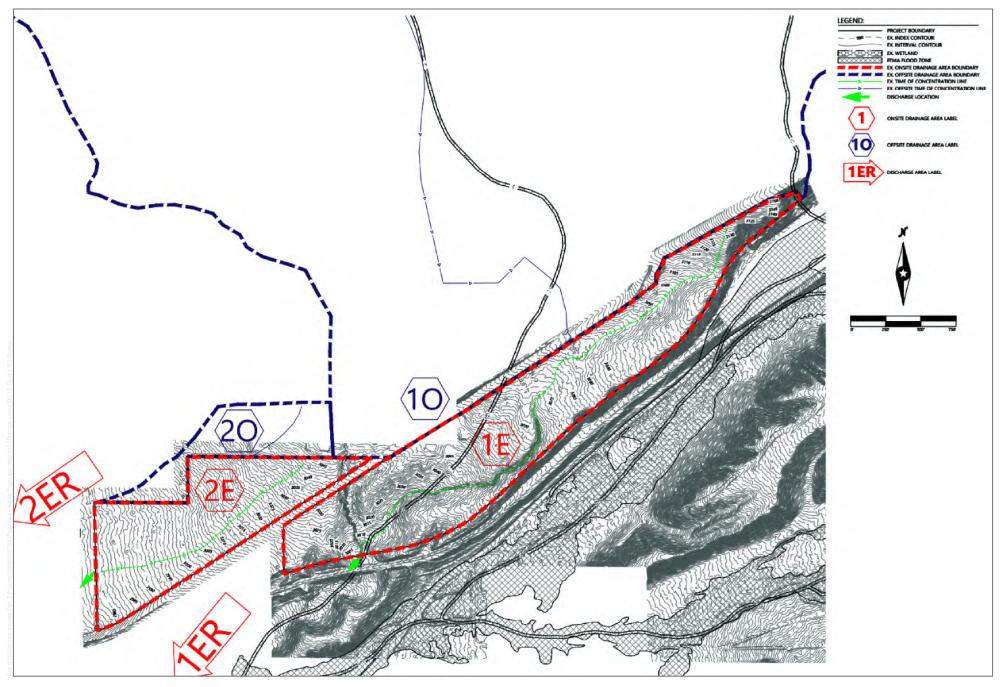
DOCKETED		
Docket Number:	25-OPT-02	
Project Title:	Prairie Song Reliability Project	
TN #:	266608	
Document Title:	Data Request Response 2_Part 5	
Description:	N/A	
Filer:	Erin Phillips	
Organization:	Dudek	
Submitter Role:	Applicant Consultant	
Submission Date:	bmission Date: 10/15/2025 11:25:37 AM	
Docketed Date:	10/15/2025	



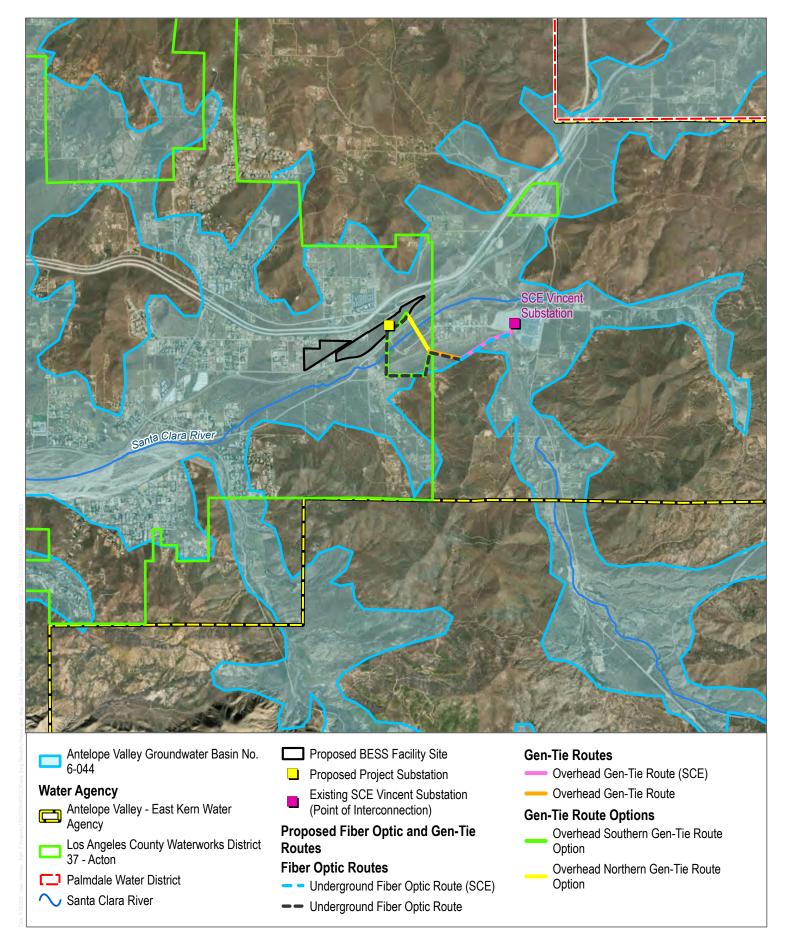
DUDEK

2,500 5,000 Feet



SOURCE: Westwood

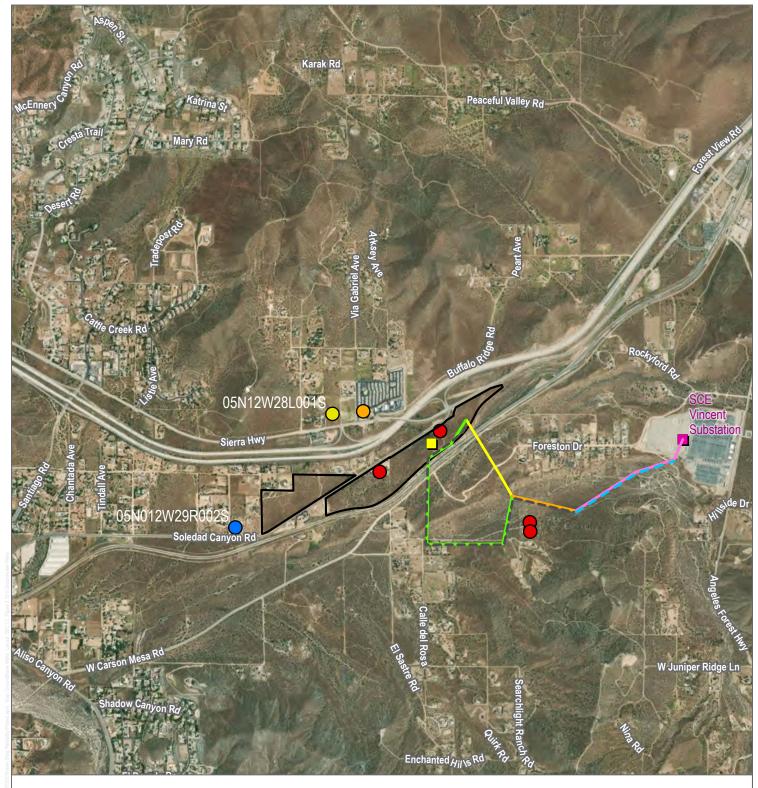
FIGURE 3.15-3 Local Drainage Features



SOURCE: DWR, RWQCB

DUDEK

FIGURE 3.15-4



Proposed BESS Facility Site

Groundwater Well

- Water Level & Quality Data
- Water Quality Data
- Observed Onsite Well
 - Water Level Data

- Proposed Project Substation
- Existing SCE Vincent Substation (Point of Interconnection)

Fiber Optic Routes

- Underground Fiber Optic Route (SCE)
- Underground Fiber Optic Route

Gen-Tie Routes

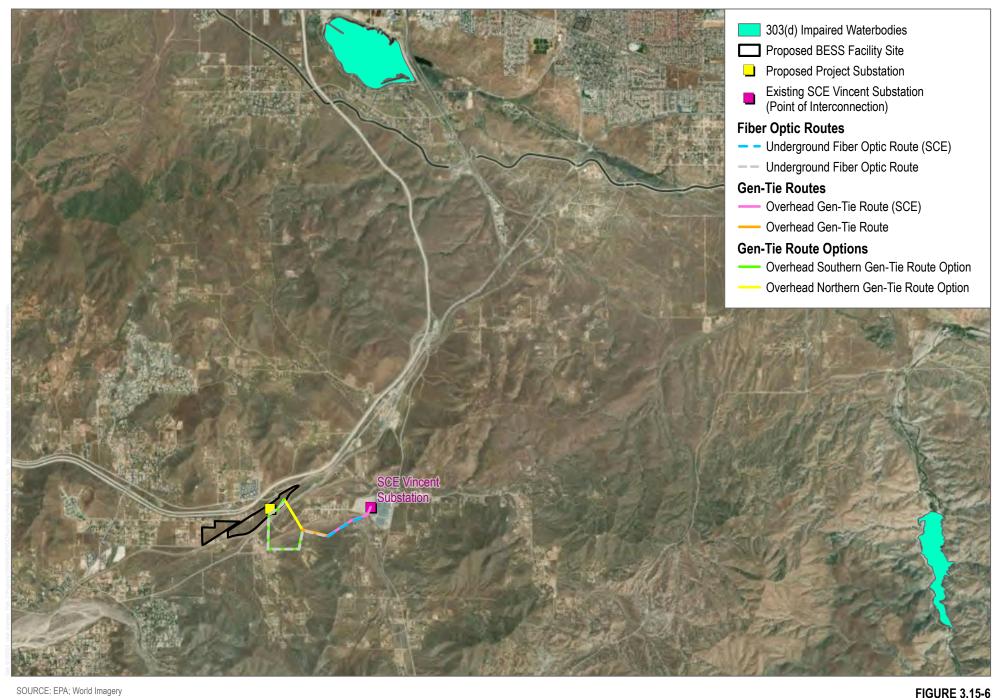
- Overhead Gen-Tie Route (SCE)
- Overhead Gen-Tie Route

Gen-Tie Route Options

- Overhead Southern Gen-Tie Route Option
- Overhead Northern Gen-Tie Route Option

SOURCE: SWRCB, DWR, USGS

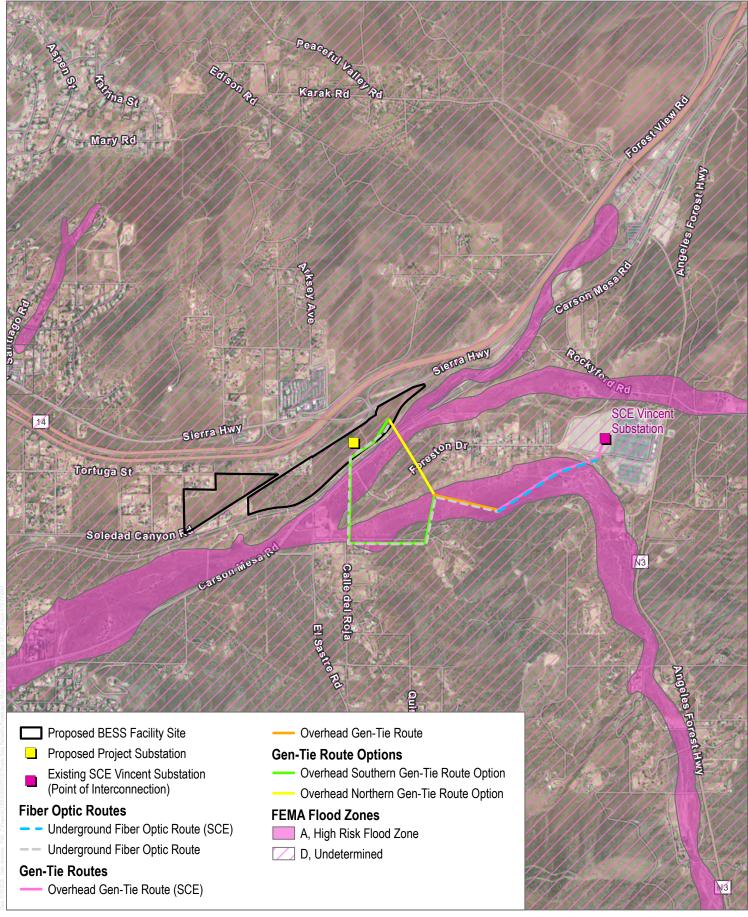
FIGURE 3.15-5



SOURCE: EPA; World Imagery

DUDEK

Impaired Waterbodies



SOURCE: FEMA

DUDEK

Attachment 25

Appendix 3.15A - Hydrology Report

Attachment J: Hydrology Report



HYDROLOGY STUDY

Prairie Song Reliability Project

Los Angeles County, California MARCH 7, 2025

PREPARED FOR:

PREPARED BY:

Prairie Song Reliability Project LLC

Westwood

Westwood

Hydrology Study

Prairie Song Reliability Project

Los Angeles County, California

Prepared For:

Prairie Song Reliability Project LLC

Prepared By:

Westwood 12701 Whitewater Drive, Suite 300 Minnetonka, MN 55343 (952) 937-5150

Project Number: Roo36369.01

Date: March 7, 2025

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Exhibits

Exhibit 1: Location Map

Exhibit 2: Base Hydrologic Map

Exhibit 3: USGS, FEMA, and NWI Wetlands Map

Exhibit 4: Soils Map

Exhibit 5: Landcover Map

Exhibit 6: Curve Number and Topographic Source Map

Exhibit 7: Existing 100-Year Max Flood Depth Map

Exhibit 7A: Existing 100-Year Max Flood Depth Project Area Map

Exhibit 8: Existing 100-Year Peak Velocity Map

Exhibit 8A: Existing 100-Year Peak Velocity Project Area Map

Exhibit 9: Existing 100-Year Peak Scour Project Area Map

Exhibit 10: Proposed 100-Year Max Flood Depth Map

Exhibit 10A: Proposed 100-Year Max Flood Depth Project Area Map

Exhibit 11: Proposed 100-Year Peak Velocity Map

Exhibit 11A: Proposed 100-Year Peak Velocity Project Area Map

Exhibit 12: Proposed 100-Year Peak Scour Project Area Map

Exhibit 13: 100-Year 24-Hour Spatially Varied Rainfall Depths Map

Appendices

Appendix A: NOAA Atlas 14 Precipitation Data – Project Area

Appendix B: Curve Number Table

Appendix C: FEMA Flood Insurance Rate Map (FIRM)

Executive Summary

The purpose of this study is to analyze and review the existing and proposed hydrology of the Prairie Song Reliability Project (Project or Site) and any impacts that the hydrology may play in the design of the proposed BESS facility.

The Project Site is proposed on approximately 70 acres and is located within Los Angeles County, California, approximately 3 miles northeast of the city of Acton in Los Angeles County, California. The Site is located on varying terrain that generally slopes to the southwest. The modeled watershed area encompasses approximately 53 square miles and generally slopes west.

The 100-year existing analysis shows low water depths and low velocities (Exhibits 7 through 8A) across the majority of the Site. Higher flood depths and velocities exist to the south of the site surrounding the Santa Clara River and onsite in a channelized area that flows into the Santa Clara River. Minimal velocities and scour are expected on site except within areas of channelization. The proposed conditions 100-year analysis shows similar results to that of the existing conditions except for variations caused by onsite proposed grading.

Based on experience with similar projects, the majority of the Site is suitable for the planned development by avoiding or designing to areas of high flood depths.

1.0 Data Sources

Table 1 – Data Sources

Task	Format	Source	Use
Elevation	1m DEM PrairieSong.las	National Map Prairie Song Reliability Project LLC	FLO-2D Model Elevations
Proposed Grading	PrairieSong ~1.DWG PrairieSong ~2.DWG PrairieSong Pole and Access Roads CIVIL FILE.dwg	Prairie Song Reliability Project LLC	Proposed FLO- 2D Model Elevations
Crop Data	Shapefile	USDA 2013 Crop Data Layer	Landcover
Soils	Shapefile	USGS SSURGO Dataset	Curve Numbers
Precipitation	PDF File	NOAA Atlas 14	Design Storms
HUC-12 Drainage Boundary	Shapefile	USGS	Define Model Extents
Site Boundary	BESS Site.kmz	Prairie Song Reliability Project LLC	Define Model Extents
2014 Aerial Photography	ArcGIS Map Service	USDA FSA	Reference
FEMA Flood Zones	PDF; Shapefile	FEMA	Reference
Culvert Locating and Sizing	Imagery/Field Provided	Prairie Song Reliability Project LLC	Culvert Modeling

2.0 Coordinate System

Table 2 – Coordinate System Used

Projection	State Plane Coordinate System	
Zone	California Zone V (FIPS 405)	
Datum	NAD83	
Planar Units	Feet (U.S. Survey)	

3.0 Existing Conditions

3.1 Project Location

The Project Site is approximately 70 acres and is located within Los Angeles County, California. The Project Site is located approximately 6 miles south of Palmdale, California, with the nearest town being Acton in Los Angeles County, California, 3 miles southwest of the Project Area (Exhibit 1).

3.2 Watershed Hydrology

The modeled watershed area encompasses approximately 52 square miles that generally slopes to the west. The watershed area contains steep ridgelines that direct runoff from the north, south, and east toward the center of the modeled area. Many unnamed tributaries originate within the south portion of the modeled watershed, flowing north into the Santa Clara River. The Santa Clara River originates in the northeast portion of the modeled watershed area, flowing west to the south of the project site. The elevation ranges drastically within the modeled watershed area, causing varying rainfall depths throughout the model which are discussed later in the report.

3.3 Onsite Conditions

The Project is located on moderate terrain that slopes to the southwest toward the Santa Clara River (Exhibit 2). The Project contains varying slopes from 2% to greater than 10%, with steeper slopes existing in the southwest portion of the Site. An unnamed tributary to the Santa Clara River runs through the site from northeast to southwest.

US Fish and Wildlife Service National Wetlands Inventory (NWI Wetlands) provides information on the distribution of US wetlands and are shown in Exhibit 3. The NWI Wetlands dataset is not all-inclusive and other wetlands not shown may exist. The landcover on the Project area is primarily shrubland (Exhibit 6) and contains soils belonging to Hydrologic Soil Group (HSG) A (Exhibit 5). Typically, A soils are sands and are highly infiltrative.

The main potential hydrologic issues on Site pre-project are flooding and erosive velocities surrounding the channelized area onsite.

3.4 FEMA Flood Zones

FEMA has completed a study to determine flood hazards for the selected location; the project area is covered by FIRM panel o6037Co885G (Appendix C). The Project does not contain any FEMA Flood Hazard zones (Exhibits 3, 7, and 7A).

The California Department of Water Resources (DWR) has also conducted their own study to identify flood-prone areas within the state. This study, which mapped

flood zones and floodplains for the 100-year, 200-year, and 500-year floods, has been created to supplement the studies that have been conducted by FEMA. The 100-year flood zones, referred to as "Flood Awareness Zones", were reviewed for the project watershed. The project area does not contain any 100-year Flood Awareness Zones. See Exhibits 3 and 7 for mapped Flood Awareness Zones within the modeled watershed and surrounding areas.

4.0 Proposed Conditions

4.1 Proposed Conditions

The proposed use of the site will be a battery storage facility. At this time the location of the BESS facility has been determined and 30% layouts determined. The Project should be designed to minimize grading and maintain existing drainage patterns. 100-year flow rates for 30% culverts were determined to help maintain existing flow paths to and from the Site. Please see the Stormwater Management Report prepared by Westwood for calculated culvert flow rates.

4.2 Post-Construction Stormwater Management

The Project should comply with all county and state stormwater management requirements, as outlined in the Stormwater Management Report that Westwood has prepared dated March 7, 2025. As the Project design progresses, local stormwater management requirements should be reviewed to confirm that all applicable requirements have been identified and met.

5.0 FLO-2D Modeling

5.1 FLO-2D Modeling Overview

FLO-2D is a physical process model that routes rainfall runoff and flood hydrographs over flow surfaces or in channels using the dynamic wave approximation to the momentum equation. FLO-2D offers advantages over 1-D models and unit hydrograph methods by allowing for breakout flows and visualization of flows across a potential site. The primary inputs are a DTM (elevation data), curve numbers, and precipitation. Major culverts impacting the site were modeled based on aerial imagery provided by Google Earth (Exhibit 7-12). Culvert sizes and invert elevations may vary from field conditions.

A FLO-2D model with 35-foot grid cells was utilized to model the watershed within and directly impacting the Project Site.

5.2 Elevation Data

The elevation data input into the FLO-2D model was 1m DEM data from USGS The National Map for offsite extents and the areas onsite utilized topography data

provided by Prairie Song Reliability Project LLC. (Exhibit 6). Proposed grading from the 30% plans provided by Prairie Song Reliability Project LLC was utilized for modeling onsite proposed conditions within the FLO-2D model. This data was exported as a single digital terrain model (DTM), which is read directly into FLO-2D.

5.3 Watershed Soils and Land Cover

USDA-NRCS SSURGO soil data provides soil types within the Project boundary and full coverage of the contributing watershed. Soils are classified as Hydrologic Soil Group (HSG) A within the Project boundary (Exhibit 4). Land cover was obtained from the USDA 2013 Crop Data Layer. Exhibit 5 displays the land cover classes for the entire watershed. Curve numbers were applied to each grid cell in the FLO-2D model based on intersecting the grid with the curve numbers (Exhibit 6).

5.4 Precipitation

Precipitation data was downloaded from NOAA Atlas 14 (Appendix A) and used for the FLO-2D analysis for the 100-Year, 24-Hour storm event. Using the 100-Year rainfall depth for this location allows for the best initial analysis in order to determine the worst areas of flooding and erosion. Due to the variance in rainfall patterns throughout the watershed, a spatially varied rainfall pattern based on Atlas 14 rainfall data was utilized within the model. Each grid cell within the FLO-2D model was assigned a location-specific 100-year, 24-hour rainfall depth. The 100-year 24-hour rainfall depths obtained from Atlas 14 for the entire watershed varied from 4.43 inches to 15.13 inches with the Site experiencing depths around 4.90 inches. See Exhibit 13 for the spatially varied 100-year 24-hour rainfall depths throughout the modeled watershed. Rainfall inputs were distributed based on a site-specific nested Atlas 14 distribution pattern.

6.0 Flood Analysis Results

6.1 Existing Conditions Flood Analysis

The 100-year existing analysis shows low water depths and velocities (Exhibits 7 through 8A) across the majority of the Site. During a 100-year storm, the flood depths across the majority of the Project Area are less than 0.5 feet with velocities less than 1 foot/second. There is an unnamed flow path that flows southwest bisecting the middle of the Site. This flow path can experience flood depths exceeding 1 foot and velocities exceeding 2 feet/second. The Santa Clara River flows to the south of the Site and through the proposed gen-tie area and can cause higher flood depths and velocities to occur. See Table 3 below for a breakdown of flood depths within the Project Site. FEMA Zone A and AE differ slightly from the FLO-2D results. This is likely attributed to FLO-2D using more recent and better

defined topography data and differences in modeling techniques between the two results.

Table 3 – Existing Flood Depths Onsite

Peak Flow Depth (ft)	Percentage of Project Area Covered by Existing Peak Flow Depths
0.00 - 0.49	97.4%
0.50 - 1.00	1.8%
1.01 - 1.50	0.7%
1.51 - 2.00	0.1%
2.01 - 2.50	<0.1%
2.51 - 3.00	<0.1%
3.01 - 4.00	<0.1%
4.01 - 6.00	<0.1%
6.01+	<0.1%

See Exhibits 7 through 8A for areas within the Project with higher flood depths and velocities during the existing conditions 100-year storm event.

6.2 Proposed Conditions Flood Analysis

The 100-year analysis of the proposed conditions shows similar flooding patterns to those of the existing conditions, but with slight variations in flood depths around the unnamed flow path in the central portion of the Site. The grading of this area has altered the flooding within and surrounding the flow path. Please refer to the prepared Stormwater Management Report for construction and post-construction design of this area.

Table 4 – Proposed Flood Depths Onsite

Peak Flow Depth (ft)	Percentage of Project Area Covered by Proposed Peak Flow Depths
0.00 - 0.49	97.7%
0.50 - 1.00	1.9%
1.01 - 1.50	0.3%
1.51 - 2.00	<0.1%
2.01 - 2.50	<0.1%
2.51 - 3.00	<0.1%
3.01 - 4.00	<0.1%
4.01 - 6.00	<0.1%
6.01+	<0.1%

See Exhibits 10 through 11A for areas within the Project with higher flood depths and velocities during the proposed 100-year storm event.

6.3 Scour

Minimal scour is expected onsite except in areas where flow is channelized (Exhibit 9 and 12). The scour depths calculated for this Project are based on HEC-18 Pier Scour Equations of a 6-inch-wide pile perpendicular to flow. Scour calculations consist of local scour only with unarmored soils and pile bases to provide the conservative local scour results. These scour results do not account for general, rill, or gully scour.

7.0 Recommendations

Based on experience on similar projects, the Site is suitable for the planned development and hydrologic concerns can be addressed by either avoiding areas of high flood depths and velocities or through detailed engineering design.

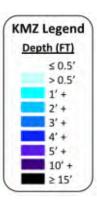
8.0 Next Steps

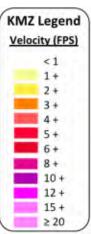
- 1. Final engineering design should account for the flood depths and velocities presented in Exhibits 7-8A and 10-11A.
- 2. Facilities to be elevated 1' above the 100-year, 24-hour peak flood elevations.

3. Stormwater management should be revisited to ensure the final design meets the local and state requirements.

9.0 Included Output Files

- 1. Shapefile of 100-Year Rain Event Flow Depth 2025-03-05 PrairieSong ExistingFlowDepthatCell 100yr24hr.shp *Attribute "ID" = Grid Cell Number* Attribute "VAR" = Max Flow Depth (Feet)
- 2. Shapefile of 100-Year Rain Event Velocity 2025-03-05 PrairieSong ExistingVelocityatCell 100yr24hr.shp *Attribute "ID" = Grid Cell Number Attribute "VAR" = Max Velocity (Feet/Second)*
- 3. Shapefile of 100-Year Rain Event Flow Depth 2025-03-05 PrairieSong ProposedFlowDepthatCell 100yr24hr.shp *Attribute "ID" = Grid Cell Number* Attribute "VAR" = Max Flow Depth (Feet)
- 4. Shapefile of 100-Year Rain Event Velocity 2025-03-05_PrairieSong_ProposedVelocityatCell_100yr24hr.shp *Attribute "ID" = Grid Cell Number* Attribute "VAR" = Max Velocity (Feet/Second)
- 5. KMZ of FLO-2D Results 2025-03-05_ PrairieSong _FLO-2DResults.kmz Overlay in Google Earth for graphical representation.

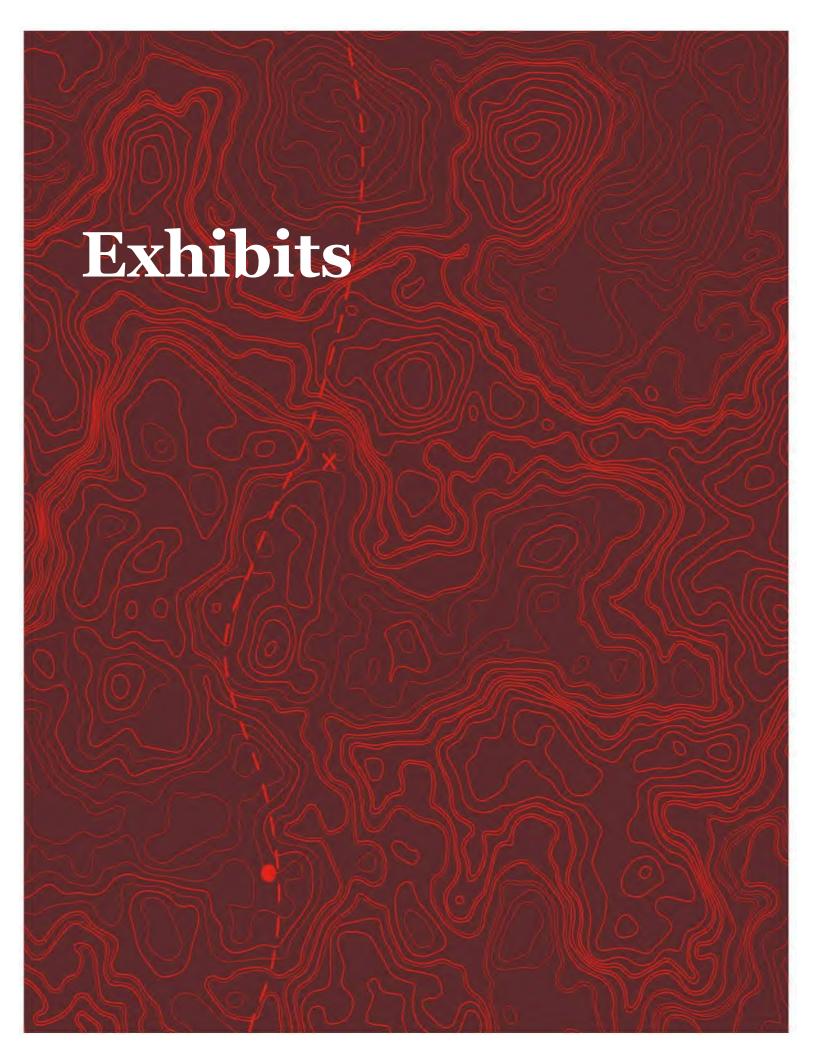


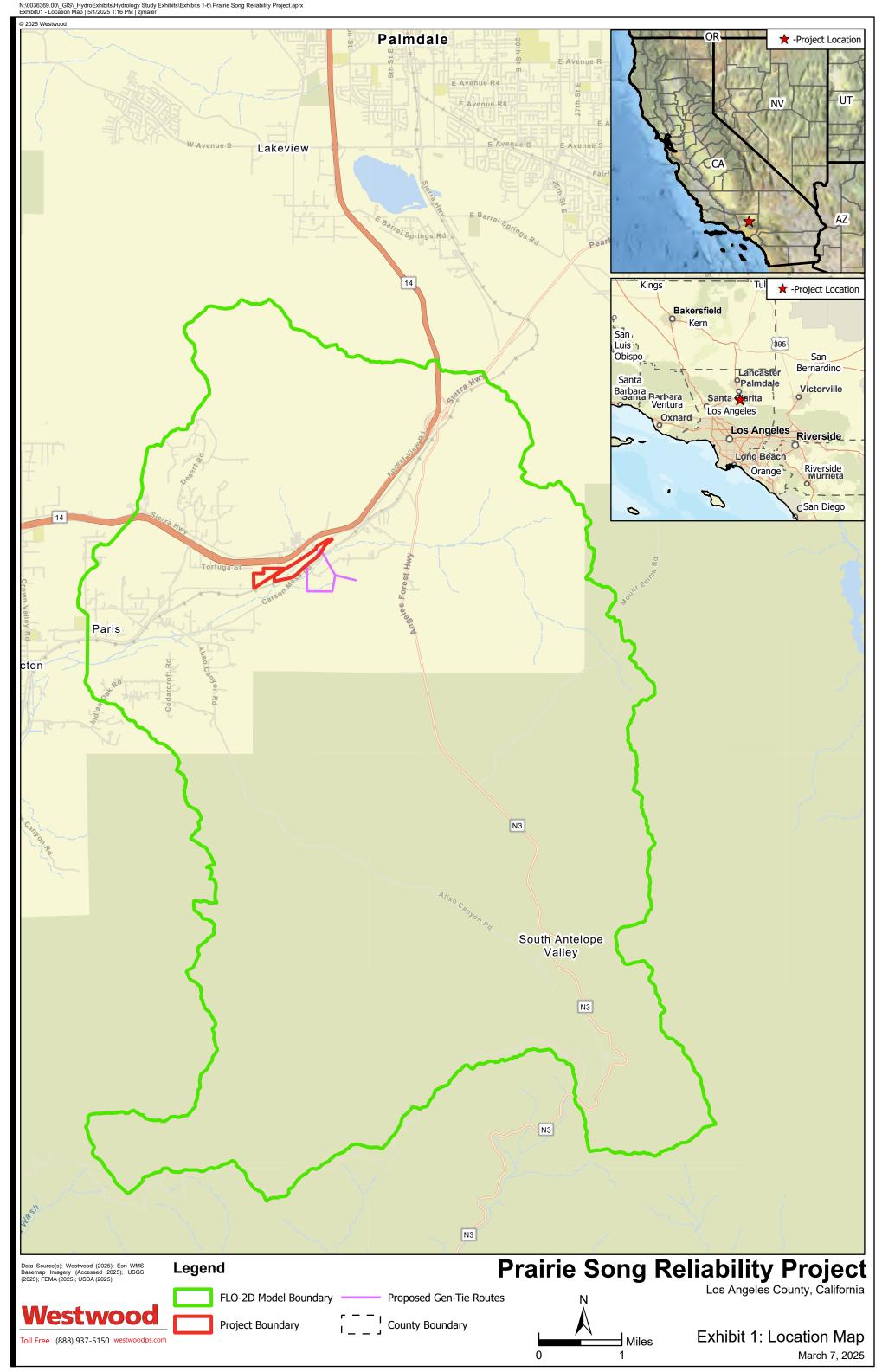


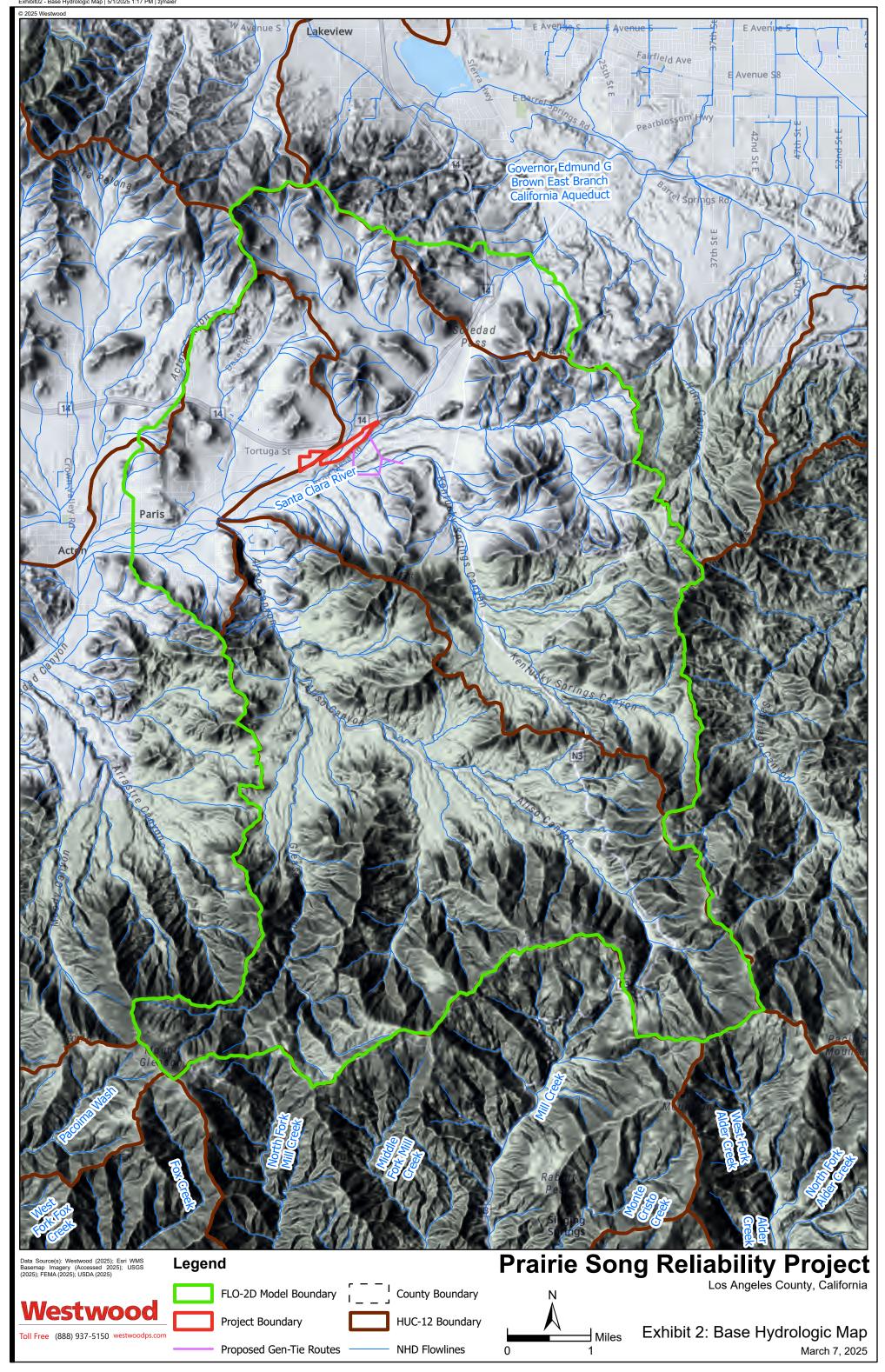
10.0 References Cited

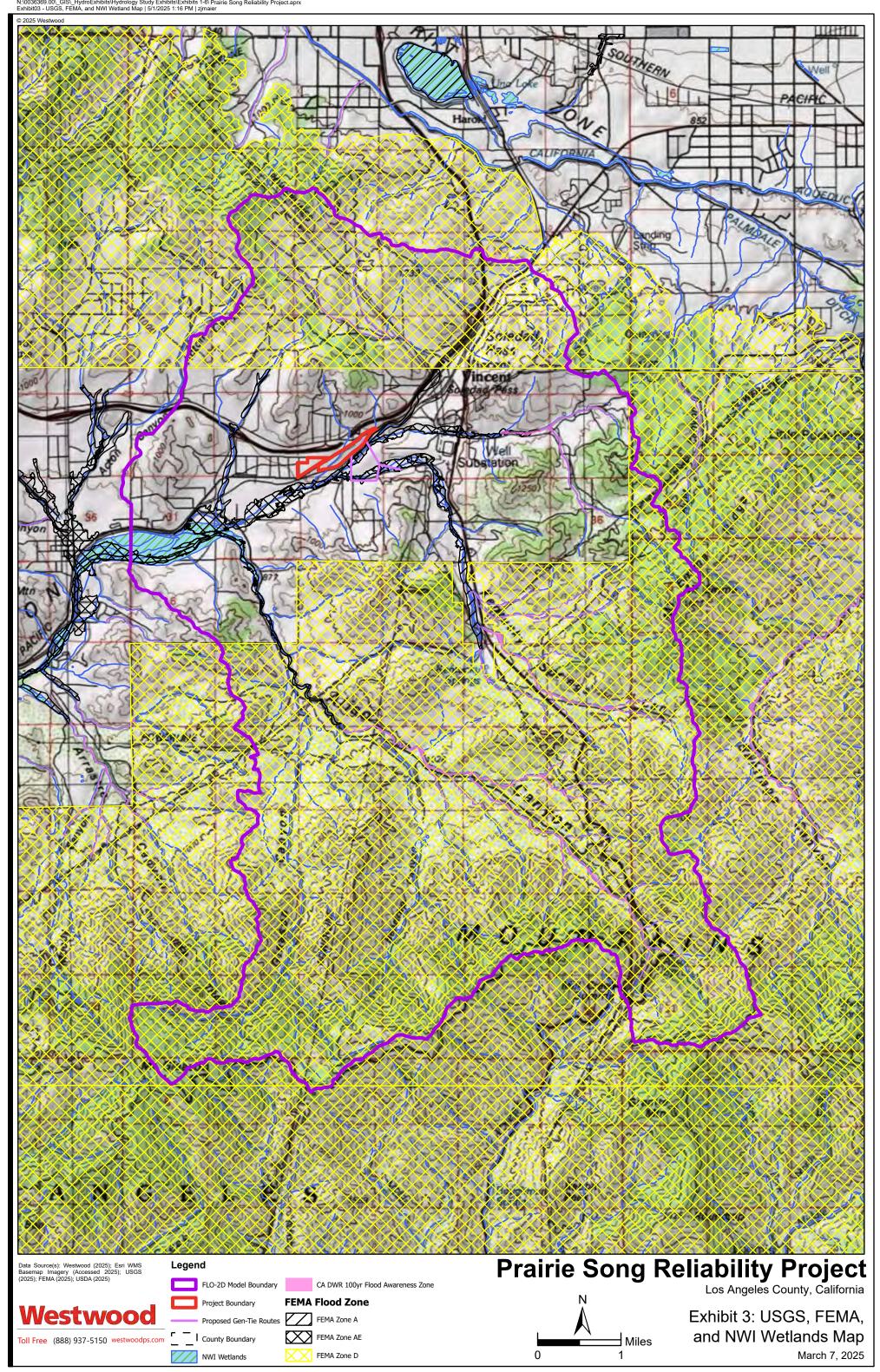
National Engineering Handbook, Part 630 Hydrology. Chapter 9 Hydrologic Soil-Cover Complexes. USDA. NRCS. 210-VI-NEH, July 2004

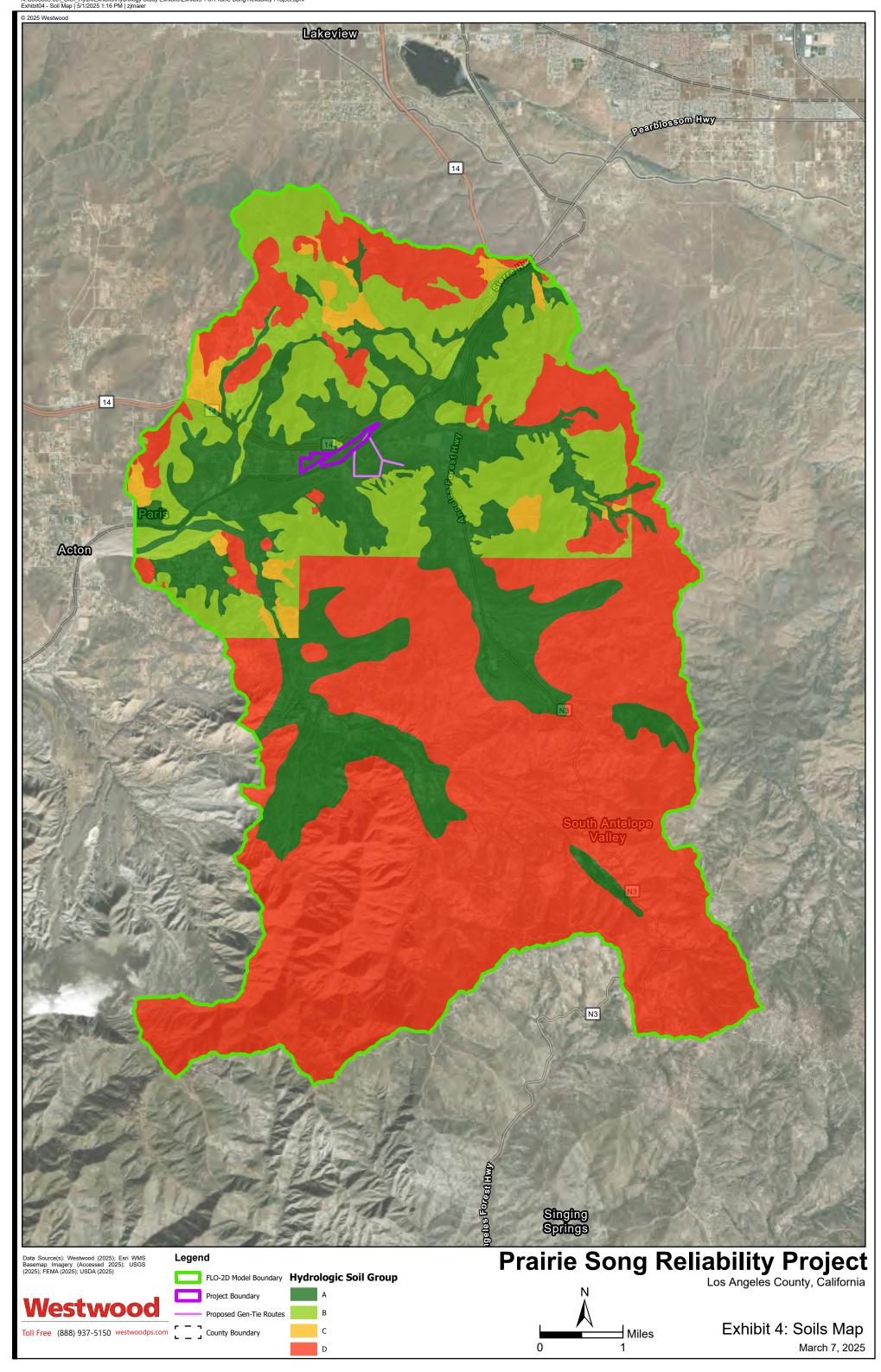
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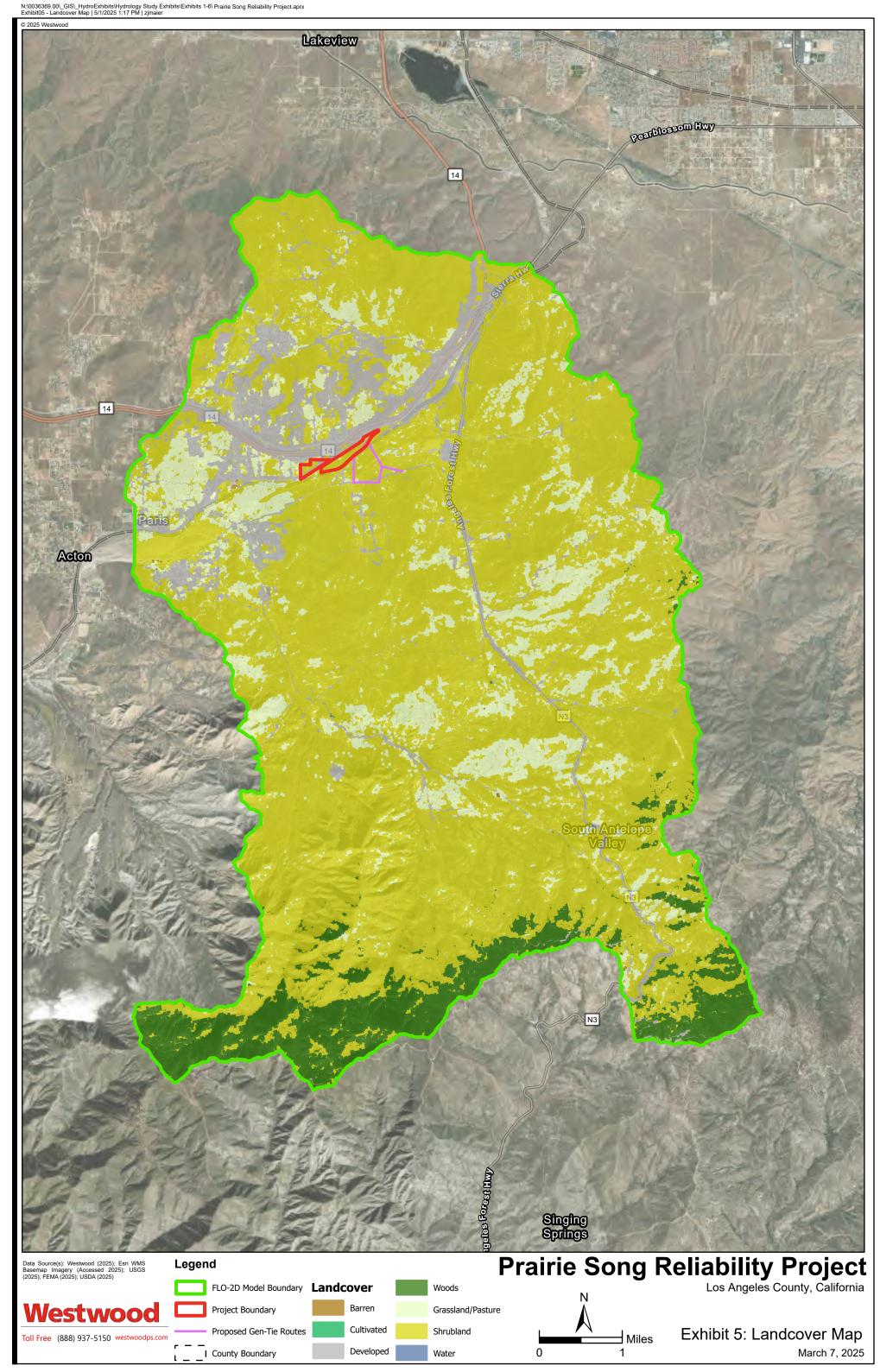


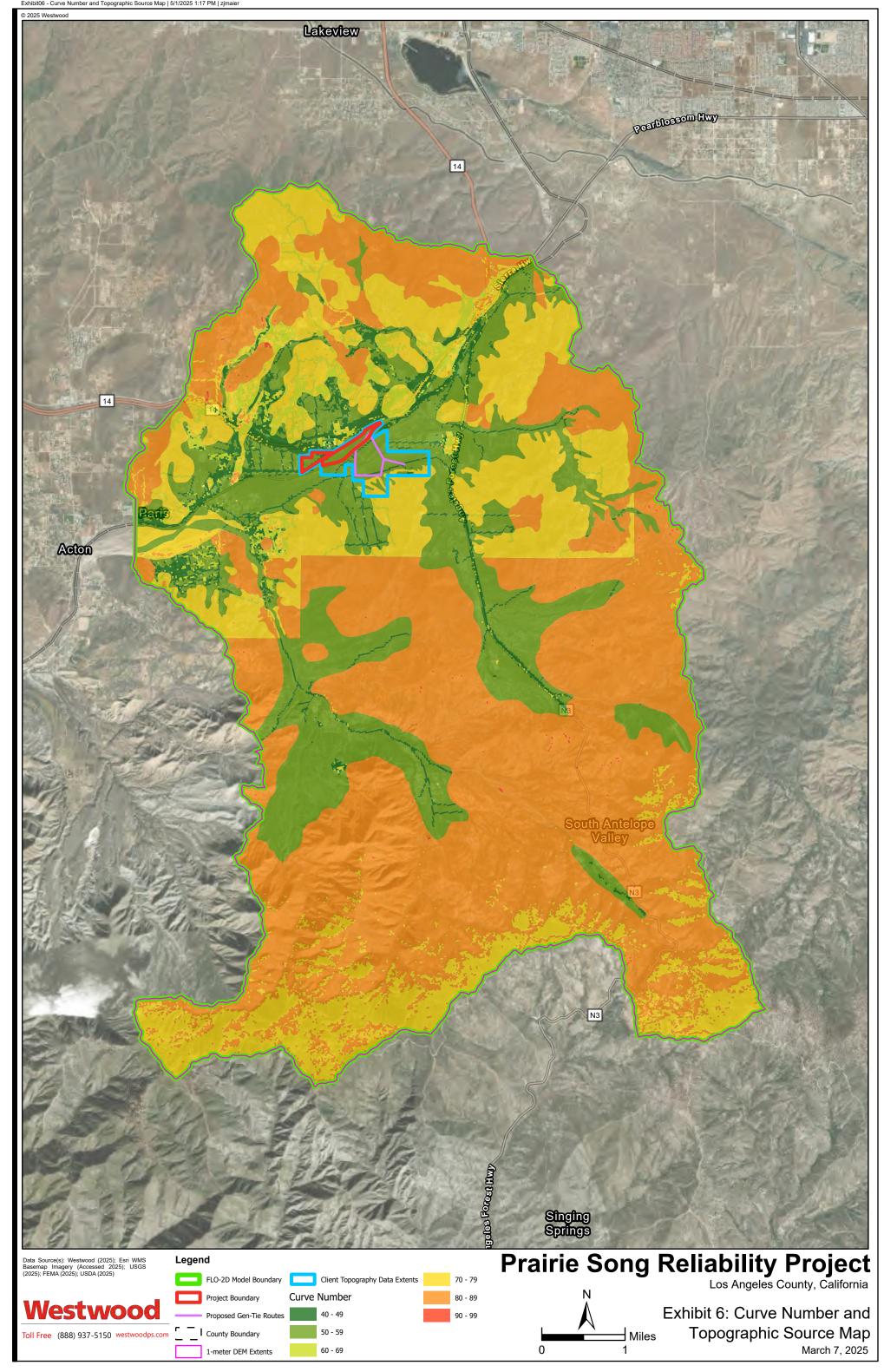


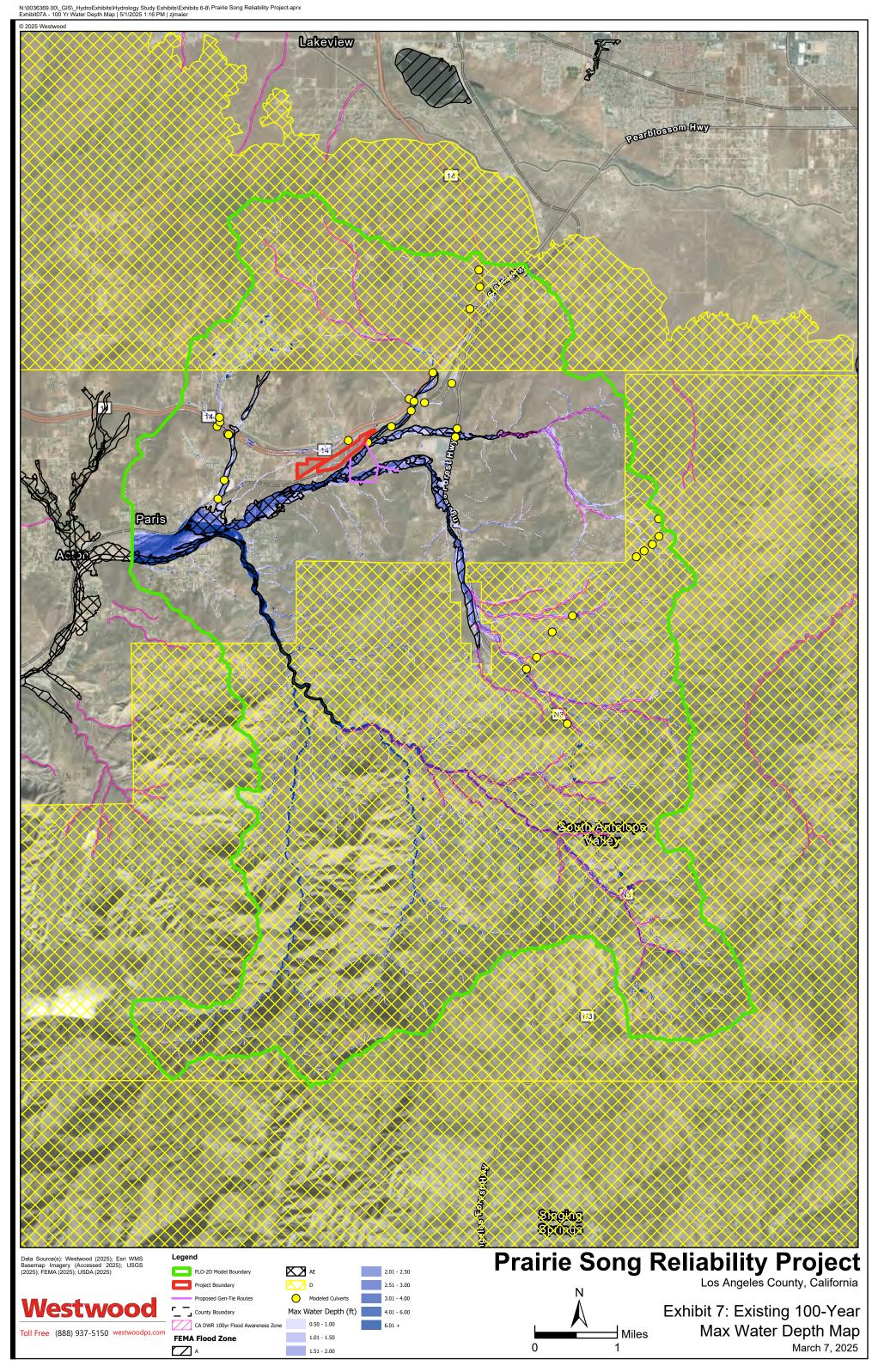


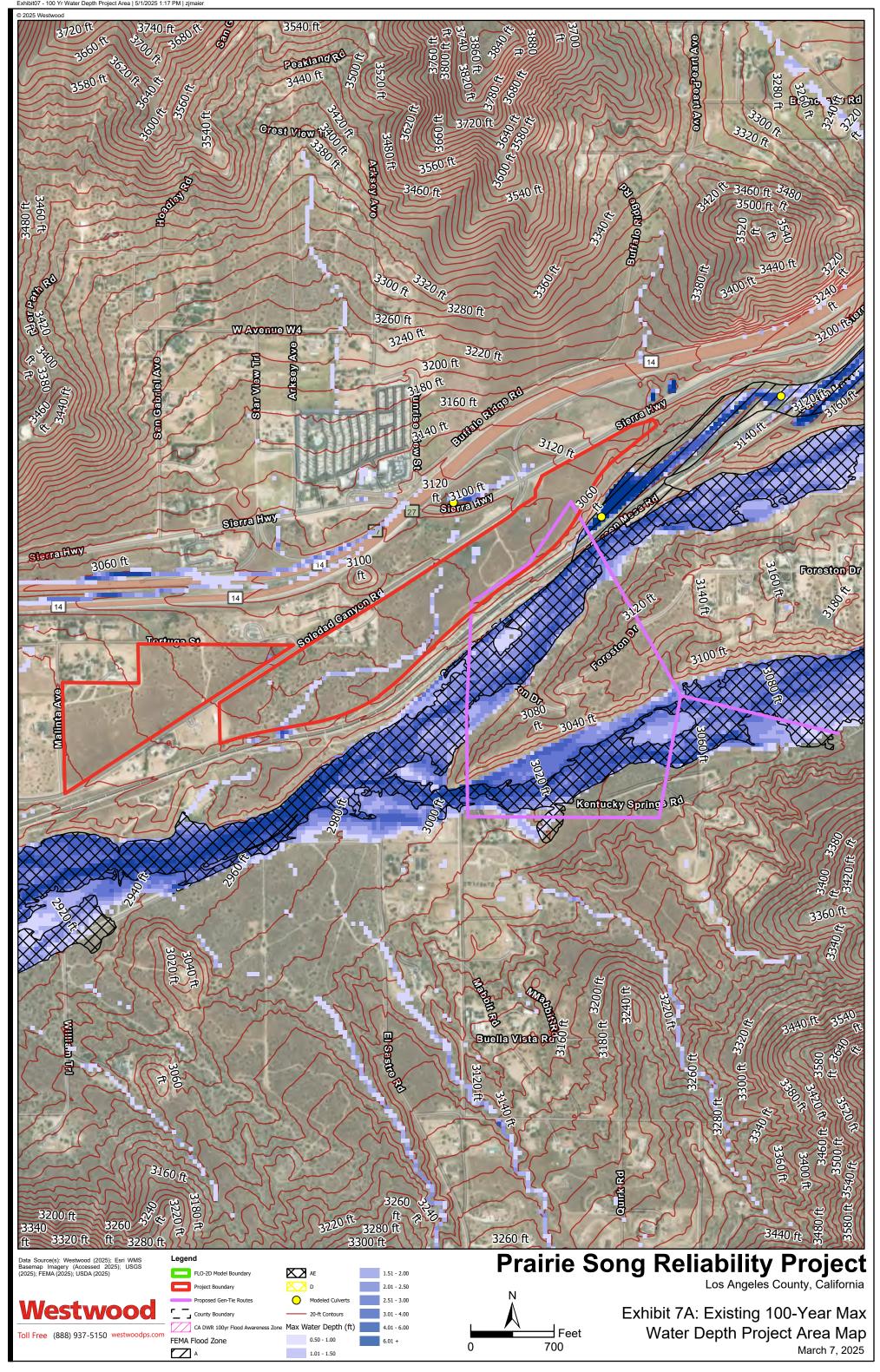


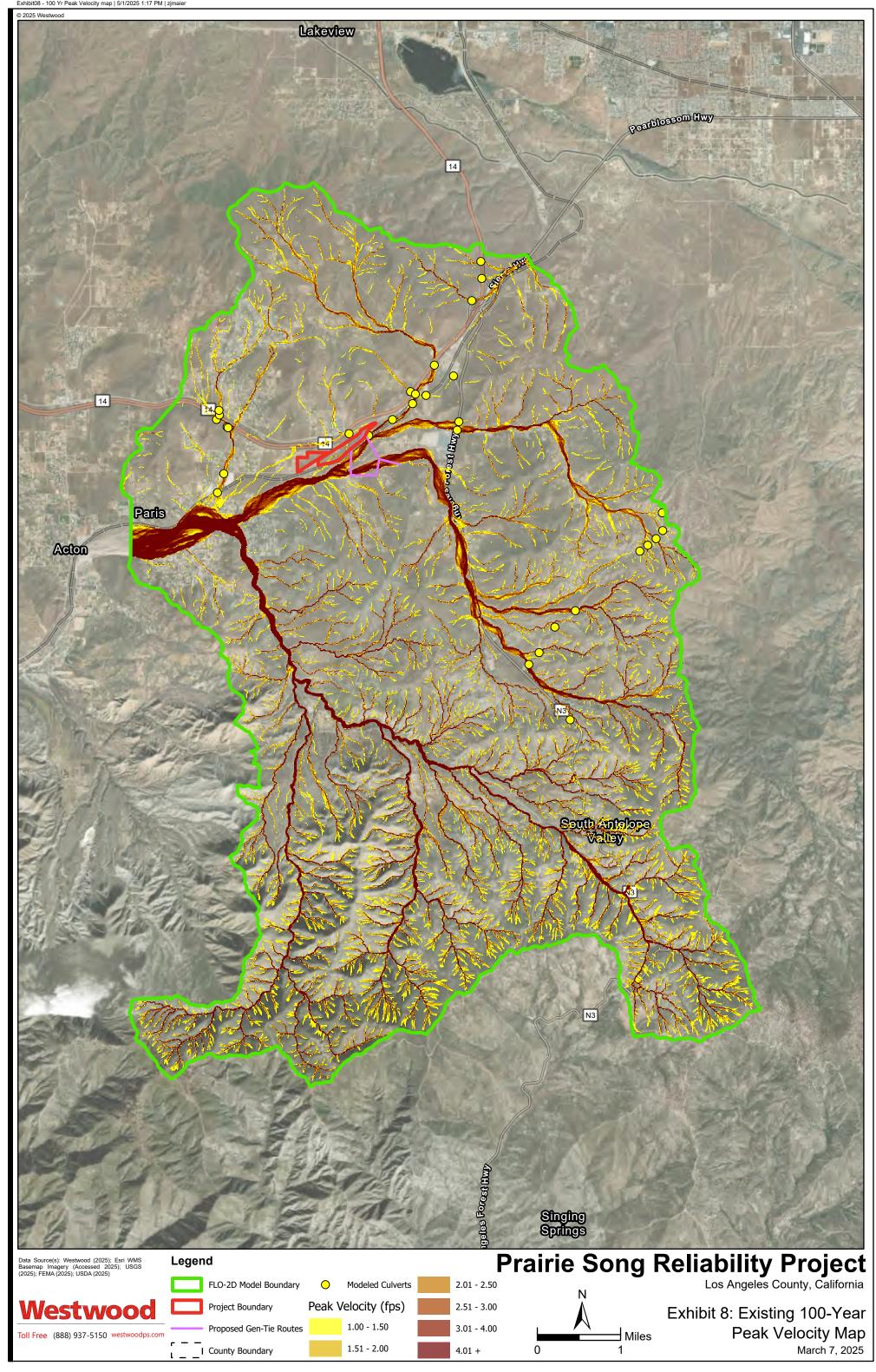


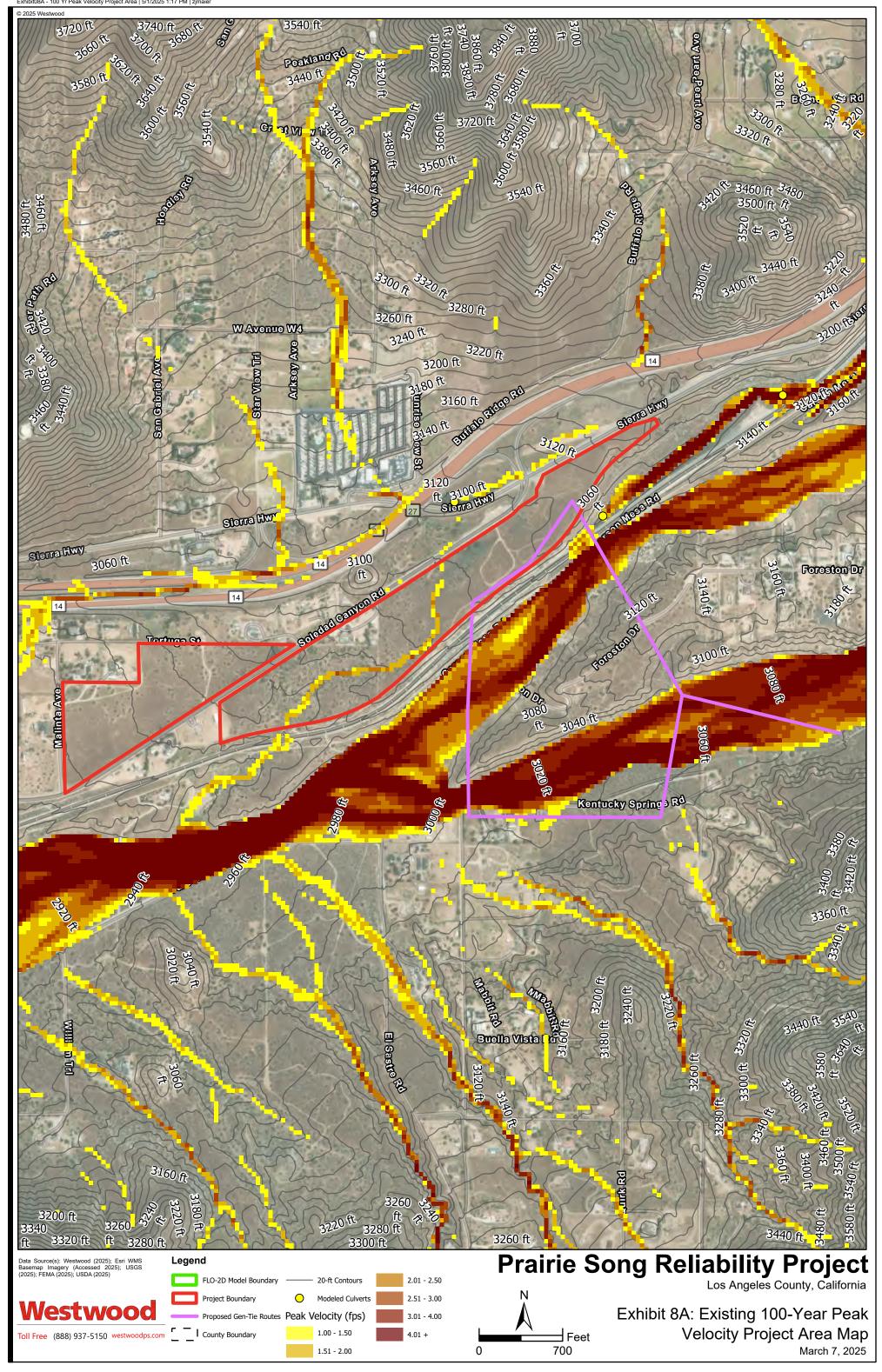


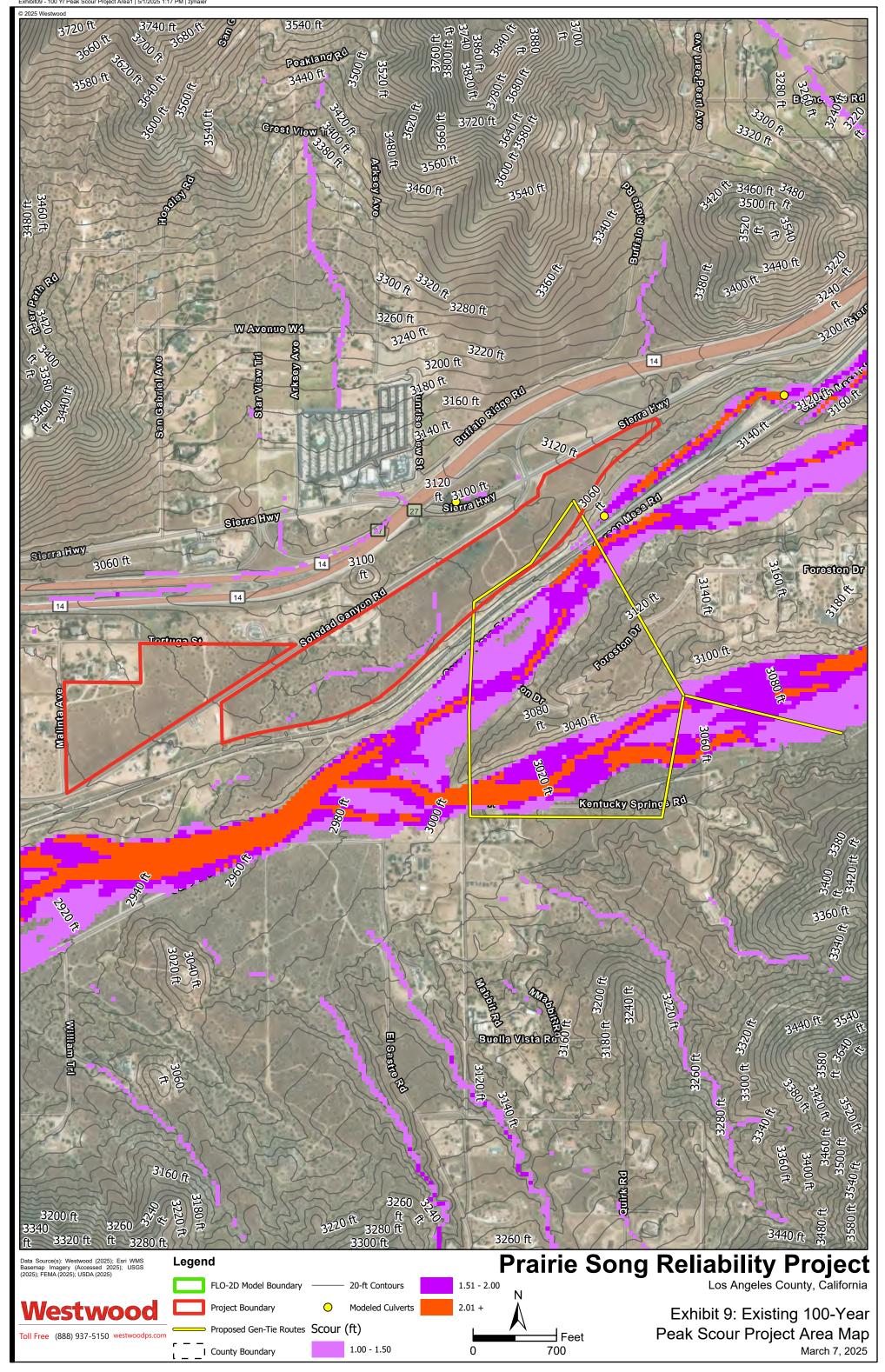


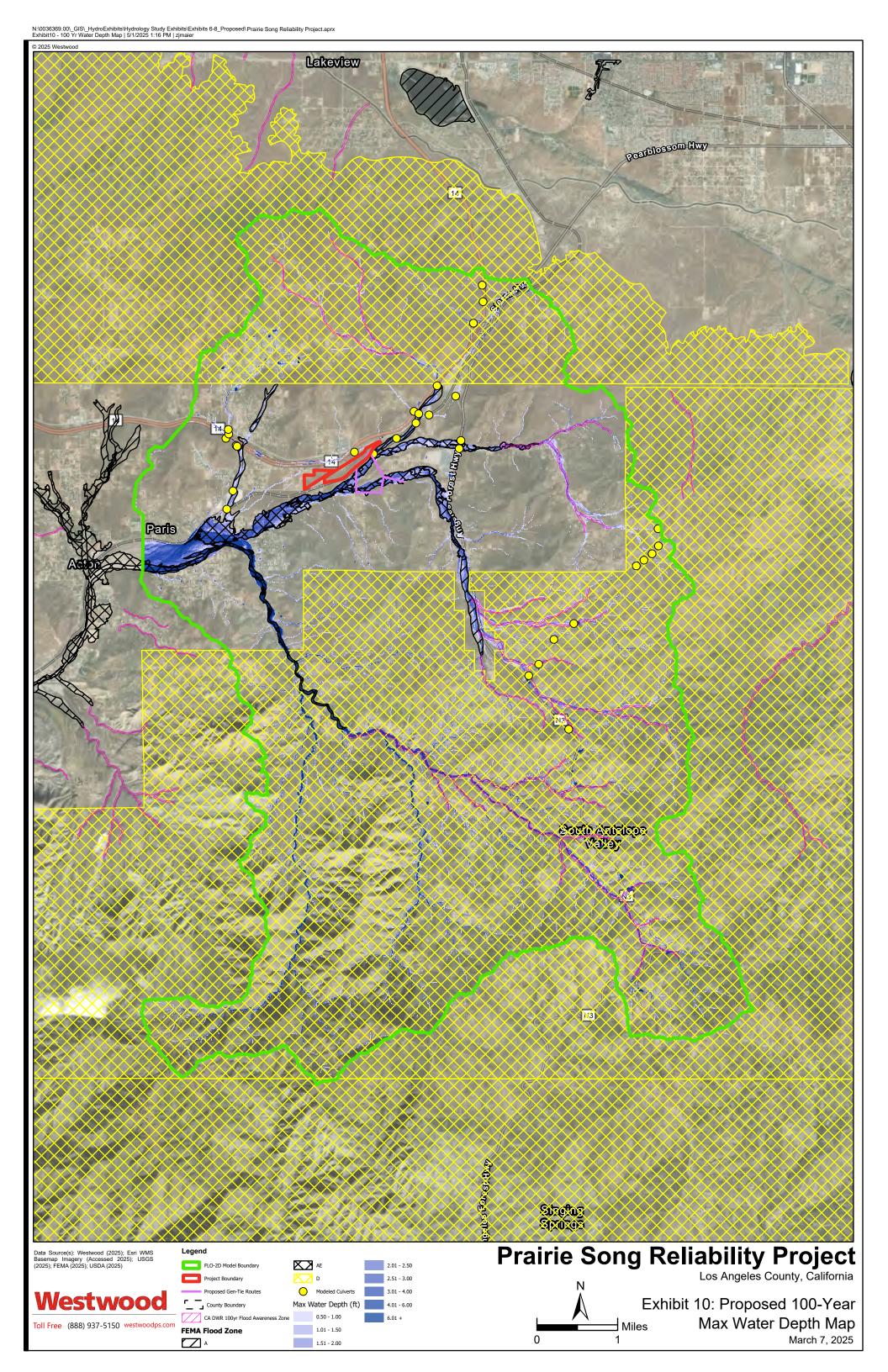


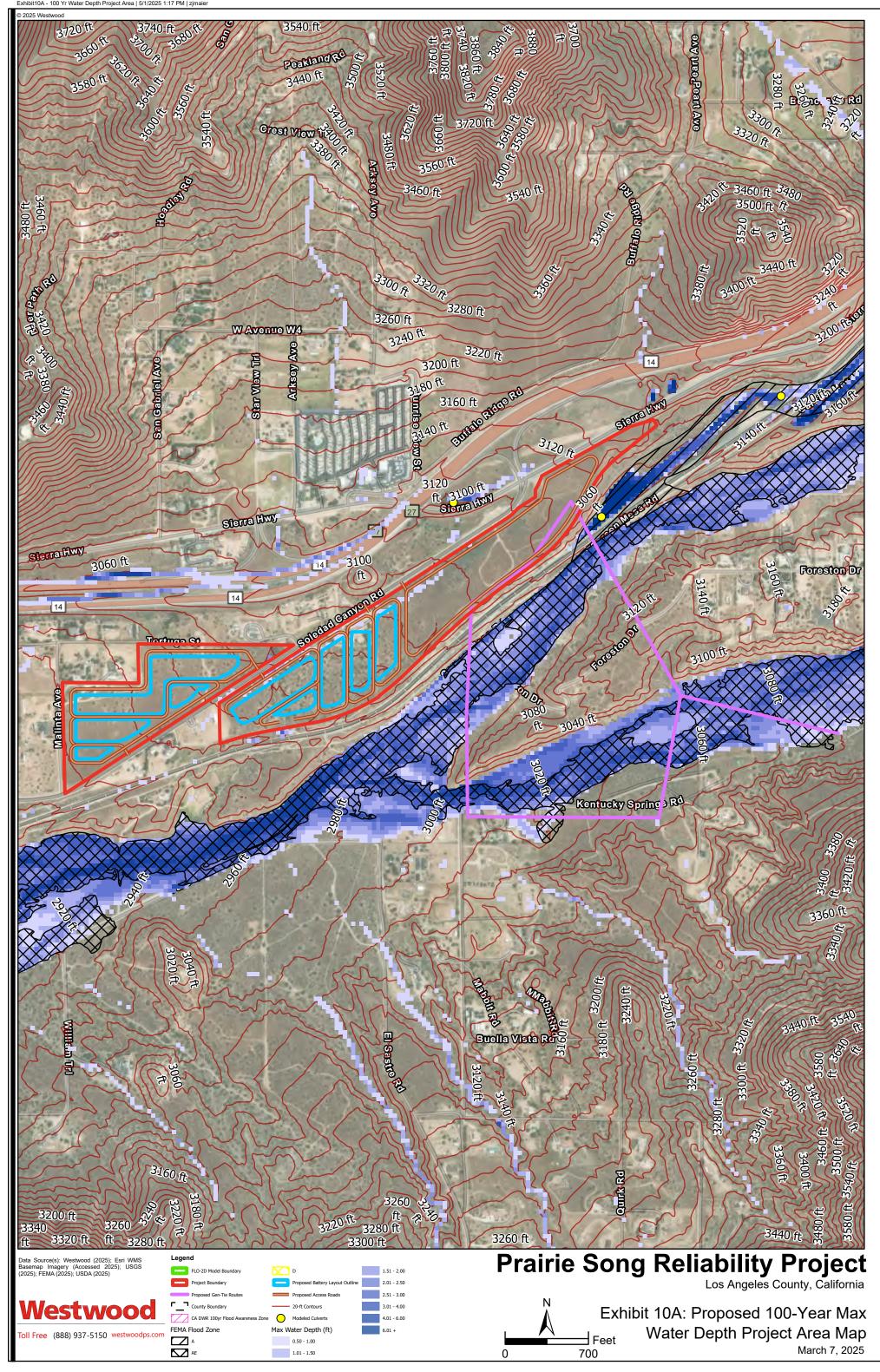


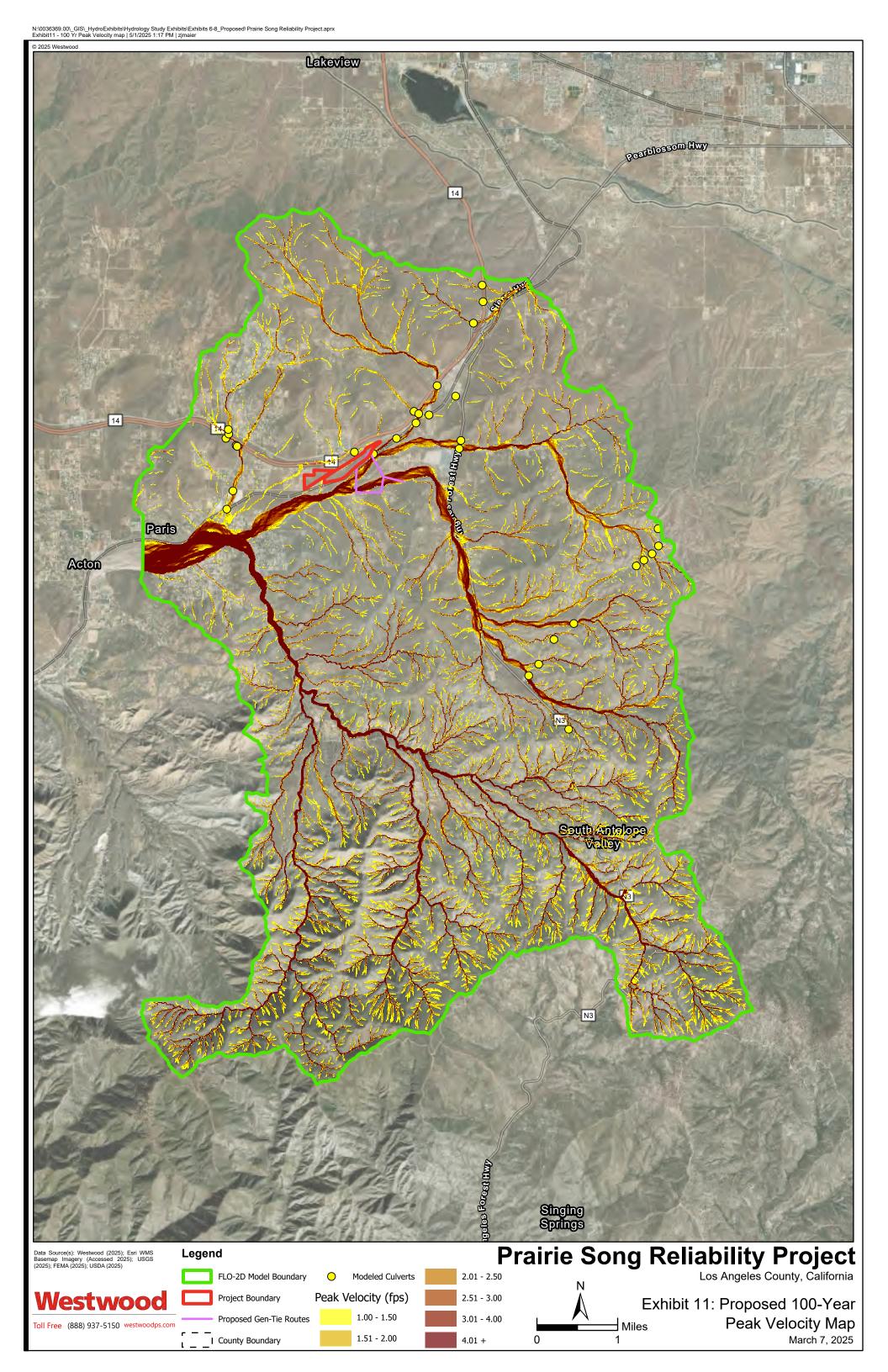


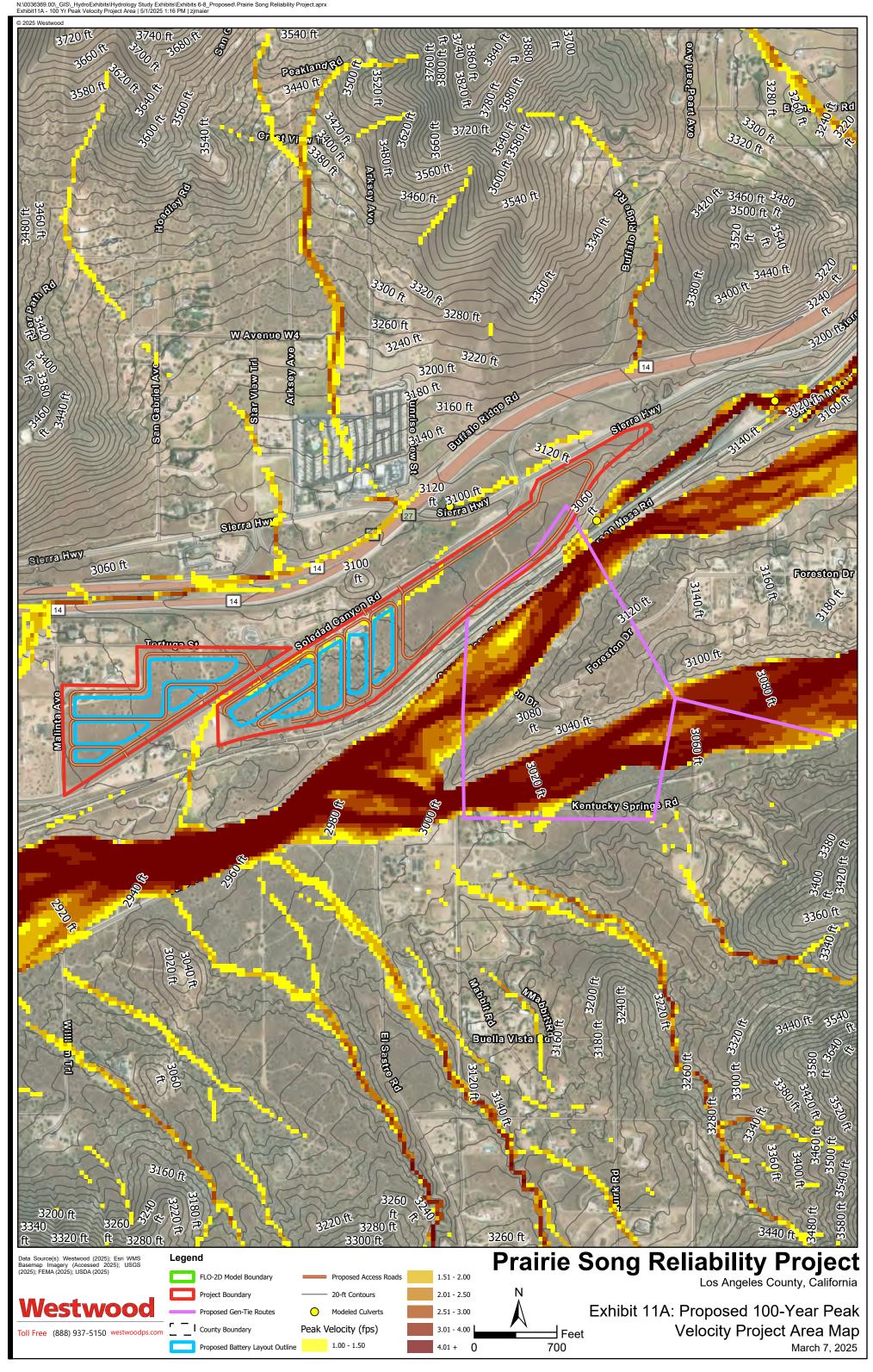


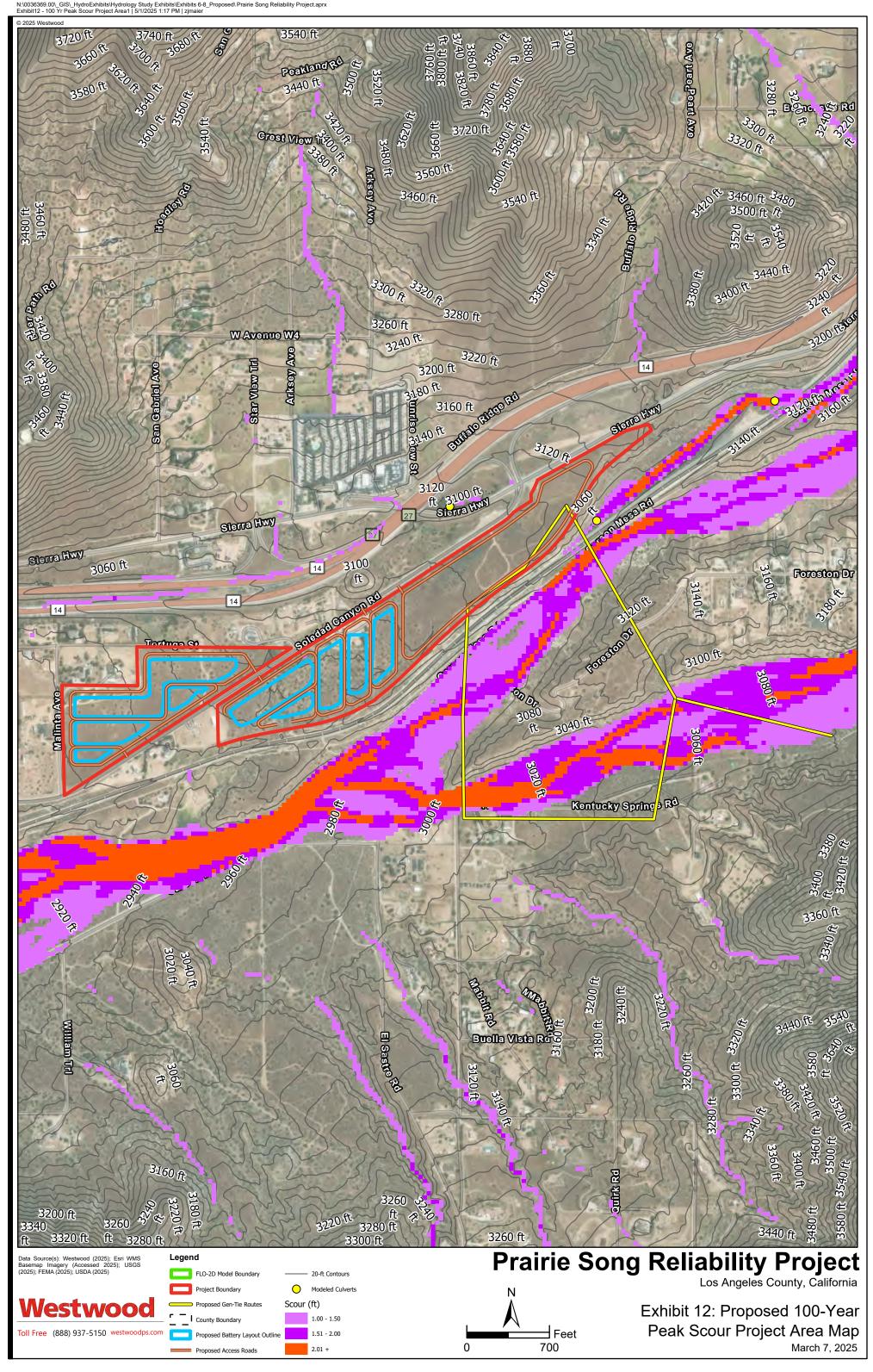


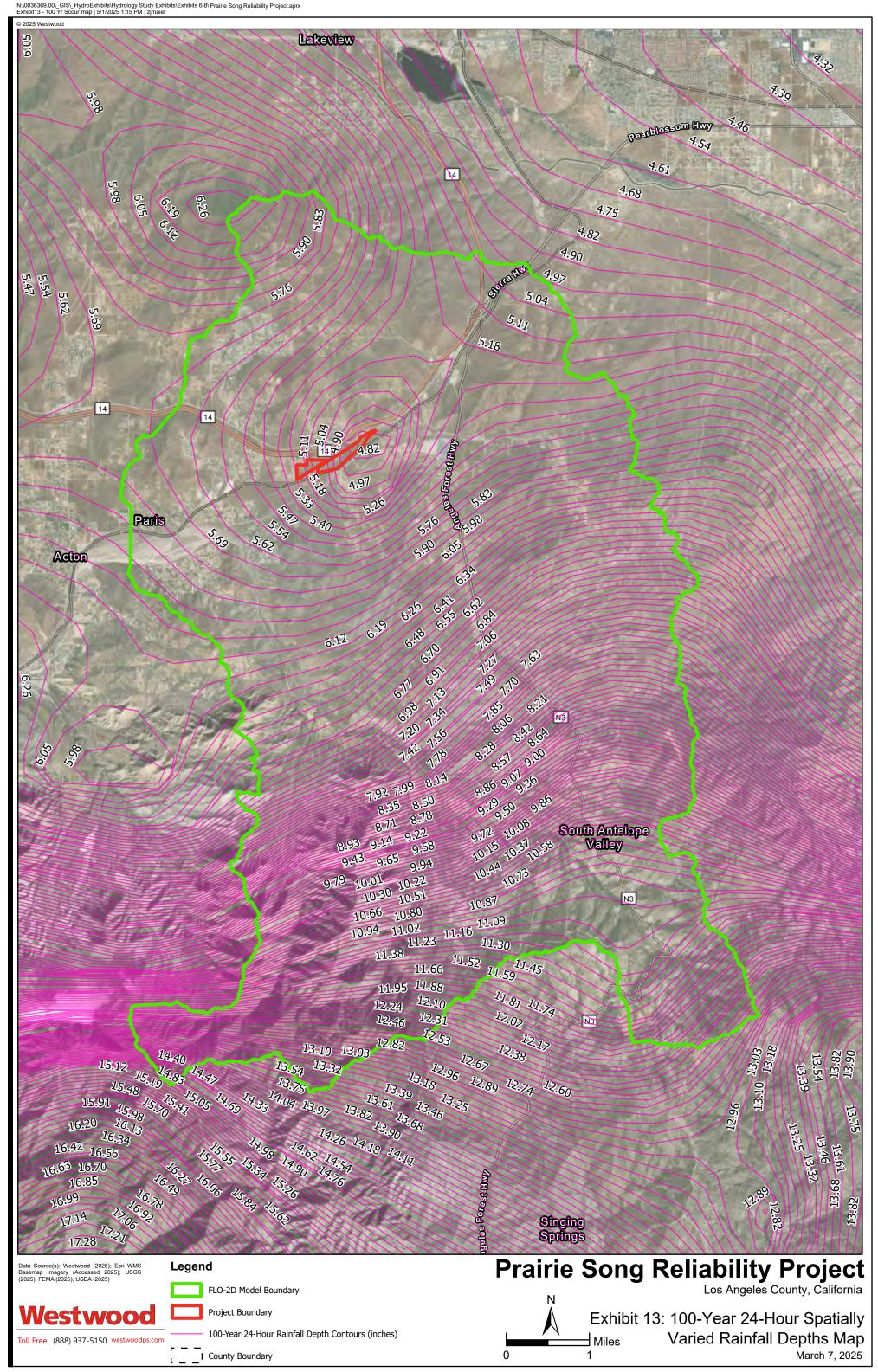


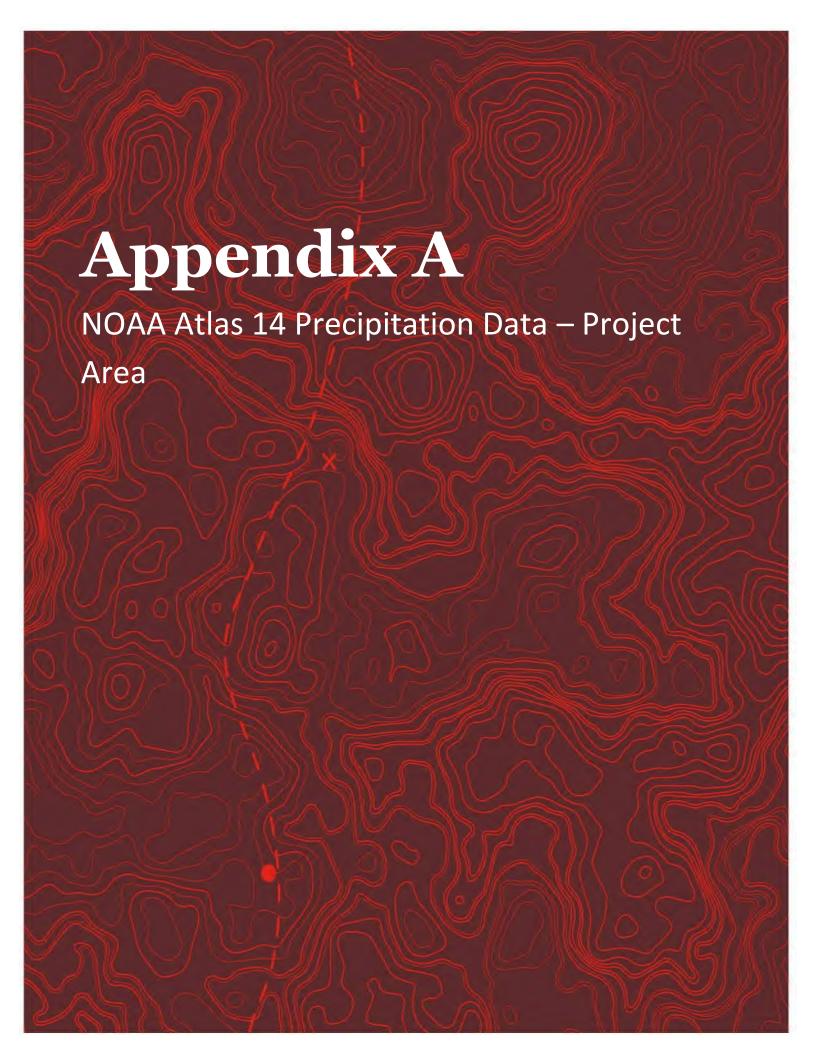














NOAA Atlas 14, Volume 6, Version 2 Location name: Acton, California, USA* Latitude: 34.4848°, Longitude: -118.1333° Elevation: 3092.38 ft**

* source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF tabular | PF graphical | Maps & aerials

PF tabular

PD	PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹									
Duration		Average recurrence interval (years)								
Duration	1	2	5	10	25	50	100	200	500	1000
5-min	0.075 (0.063-0.092)	0.100 (0.083-0.122)	0.134 (0.111-0.163)	0.163 (0.134-0.201)	0.205 (0.163-0.261)	0.239 (0.186-0.311)	0.275 (0.208-0.368)	0.315 (0.231-0.432)	0.370 (0.261-0.531)	0.415 (0.282-0.617)
10-min	0.108 (0.090-0.131)	0.143 (0.119-0.174)	0.192 (0.159-0.234)	0.234 (0.192-0.288)	0.294 (0.233-0.375)	0.343 (0.266-0.446)	0.395 (0.299-0.527)	0.451 (0.331-0.620)	0.530 (0.373-0.761)	0.595 (0.404-0.885)
15-min	0.131 (0.108-0.159)	0.173 (0.144-0.211)	0.232 (0.192-0.283)	0.283 (0.232-0.348)	0.355 (0.282-0.453)	0.415 (0.322-0.540)	0.478 (0.361-0.638)	0.545 (0.401-0.750)	0.642 (0.452-0.920)	0.720 (0.489-1.07)
30-min	0.183 (0.152-0.223)	0.243 (0.201-0.295)	0.325 (0.269-0.397)	0.396 (0.325-0.488)	0.498 (0.395-0.635)	0.581 (0.451-0.757)	0.669 (0.506-0.894)	0.764 (0.561-1.05)	0.899 (0.633-1.29)	1.01 (0.685-1.50)
60-min	0.255 (0.212-0.310)	0.337 (0.280-0.411)	0.452 (0.374-0.553)	0.551 (0.452-0.679)	0.693 (0.549-0.883)	0.808 (0.627-1.05)	0.931 (0.704-1.24)	1.06 (0.781-1.46)	1.25 (0.881-1.80)	1.40 (0.953-2.09)
2-hr	0.377 (0.313-0.458)	0.499 (0.414-0.608)	0.667 (0.552-0.815)	0.809 (0.663-0.996)	1.01 (0.800-1.29)	1.17 (0.907-1.52)	1.34 (1.01-1.79)	1.52 (1.11-2.08)	1.77 (1.24-2.53)	1.97 (1.34-2.92)
3-hr	0.474 (0.394-0.577)	0.629 (0.521-0.765)	0.837 (0.693-1.02)	1.01 (0.831-1.25)	1.26 (0.998-1.61)	1.46 (1.13-1.90)	1.66 (1.25-2.22)	1.87 (1.38-2.58)	2.17 (1.53-3.11)	2.40 (1.63-3.57)
6-hr	0.680 (0.565-0.827)	0.902 (0.748-1.10)	1.20 (0.993-1.47)	1.45 (1.19-1.78)	1.80 (1.42-2.29)	2.07 (1.60-2.69)	2.35 (1.78-3.14)	2.64 (1.94-3.64)	3.05 (2.15-4.38)	3.37 (2.29-5.01)
12-hr	0.914 (0.759-1.11)	1.22 (1.01-1.48)	1.63 (1.35-1.99)	1.96 (1.61-2.42)	2.44 (1.93-3.10)	2.81 (2.17-3.65)	3.19 (2.41-4.26)	3.59 (2.64-4.93)	4.14 (2.91-5.93)	4.57 (3.11-6.79)
24-hr	1.24 (1.10-1.43)	1.66 (1.47-1.92)	2.23 (1.97-2.58)	2.71 (2.37-3.16)	3.37 (2.85-4.06)	3.89 (3.23-4.78)	4.43 (3.58-5.58)	4.99 (3.93-6.47)	5.78 (4.36-7.81)	6.40 (4.67-8.95)
2-day	1.50 (1.33-1.73)	2.03 (1.80-2.34)	2.75 (2.42-3.18)	3.35 (2.93-3.90)	4.19 (3.55-5.05)	4.86 (4.03-5.97)	5.55 (4.49-6.99)	6.28 (4.94-8.14)	7.30 (5.51-9.86)	8.11 (5.92-11.3)
3-day	1.67 (1.48-1.92)	2.27 (2.01-2.62)	3.09 (2.73-3.58)	3.79 (3.32-4.41)	4.76 (4.03-5.73)	5.54 (4.59-6.81)	6.35 (5.14-8.00)	7.21 (5.67-9.34)	8.41 (6.35-11.4)	9.38 (6.85-13.1)
4-day	1.76 (1.56-2.03)	2.42 (2.14-2.79)	3.31 (2.92-3.83)	4.06 (3.56-4.73)	5.13 (4.34-6.18)	5.98 (4.96-7.35)	6.87 (5.56-8.66)	7.82 (6.16-10.1)	9.16 (6.92-12.4)	10.2 (7.47-14.3)
7-day	1.99 (1.77-2.30)	2.74 (2.43-3.16)	3.77 (3.33-4.36)	4.66 (4.08-5.43)	5.92 (5.01-7.13)	6.94 (5.75-8.53)	8.01 (6.49-10.1)	9.17 (7.22-11.9)	10.8 (8.17-14.6)	12.2 (8.87-17.0)
10-day	2.13 (1.89-2.46)	2.94 (2.60-3.39)	4.06 (3.59-4.70)	5.03 (4.40-5.86)	6.42 (5.44-7.73)	7.54 (6.26-9.28)	8.74 (7.08-11.0)	10.0 (7.90-13.0)	11.9 (8.98-16.1)	13.4 (9.78-18.7)
20-day	2.51 (2.23-2.89)	3.50 (3.10-4.03)	4.88 (4.31-5.64)	6.07 (5.32-7.08)	7.81 (6.61-9.40)	9.22 (7.65-11.3)	10.7 (8.69-13.5)	12.4 (9.74-16.0)	14.7 (11.1-19.9)	16.6 (12.1-23.3)
30-day	2.89 (2.56-3.32)	4.03 (3.56-4.64)	5.63 (4.97-6.51)	7.02 (6.15-8.18)	9.04 (7.66-10.9)	10.7 (8.86-13.1)	12.4 (10.1-15.7)	14.3 (11.3-18.6)	17.0 (12.8-23.0)	19.2 (14.0-26.9)
45-day	3.38 (3.00-3.89)	4.71 (4.17-5.43)	6.57 (5.80-7.59)	8.16 (7.15-9.51)	10.5 (8.87-12.6)	12.3 (10.2-15.2)	14.3 (11.6-18.1)	16.5 (13.0-21.3)	19.5 (14.7-26.3)	21.9 (16.0-30.7)
60-day	3.81 (3.38-4.38)	5.30 (4.69-6.11)	7.37 (6.50-8.51)	9.13 (8.00-10.6)	11.7 (9.88-14.0)	13.7 (11.4-16.9)	15.9 (12.8-20.0)	18.2 (14.3-23.5)	21.4 (16.2-28.9)	24.0 (17.5-33.5)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

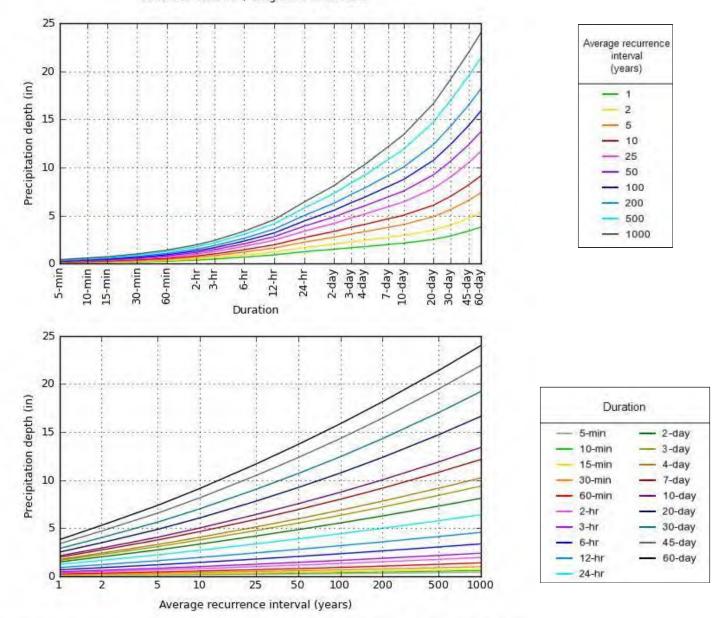
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves Latitude: 34.4848°, Longitude: -118.1333°



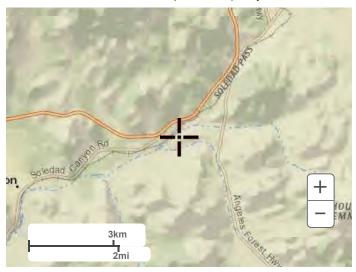
NOAA Atlas 14, Volume 6, Version 2

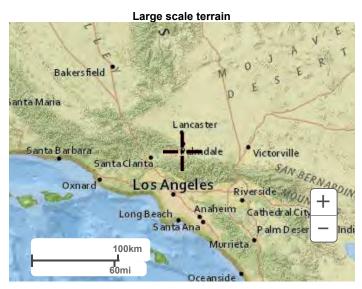
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Maps & aerials

Small scale terrain







Large scale aerial



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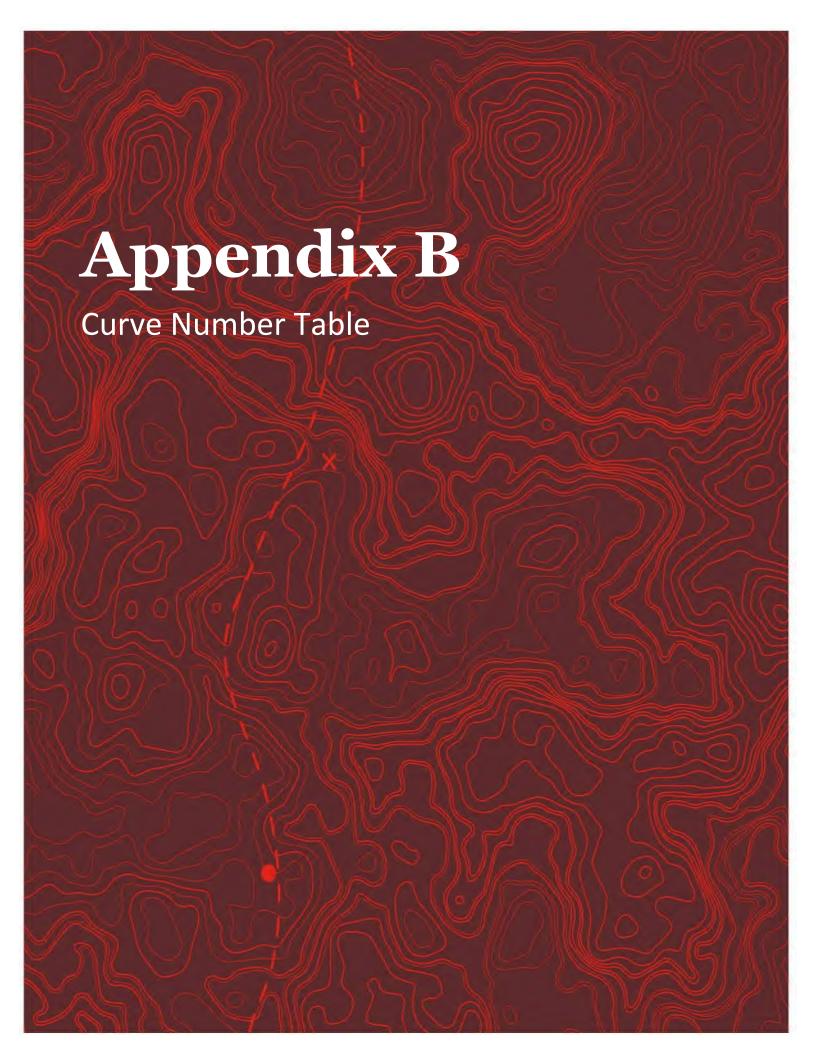
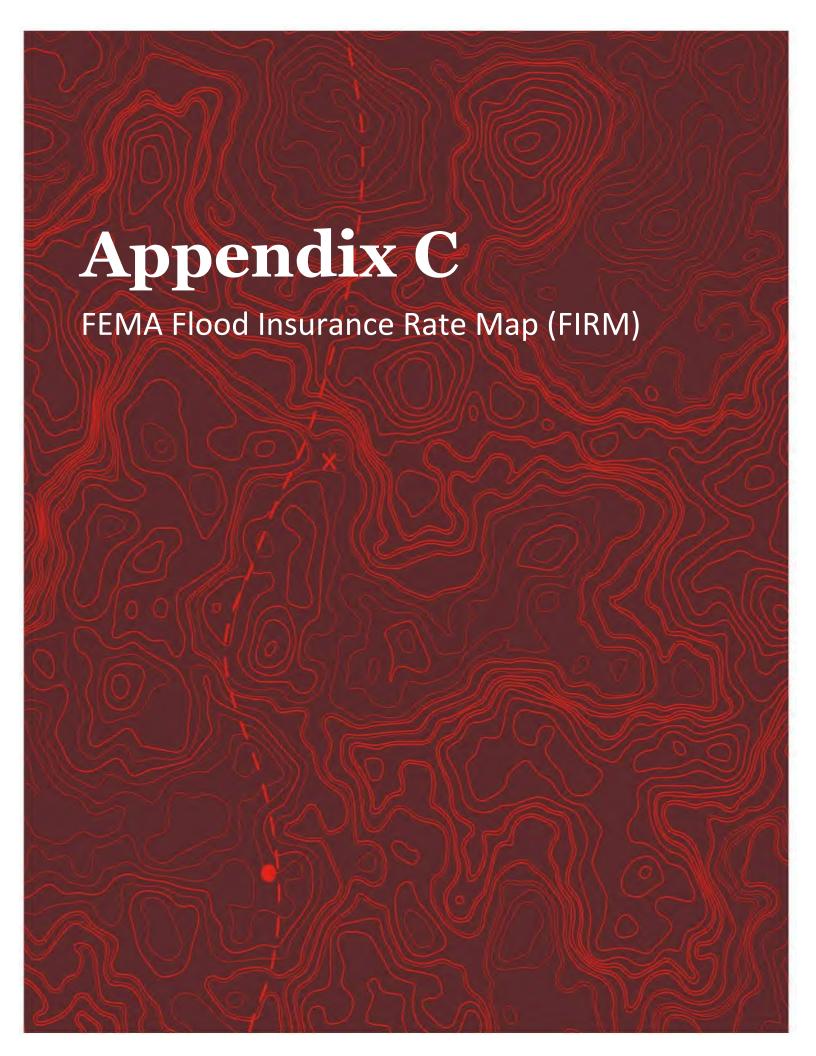


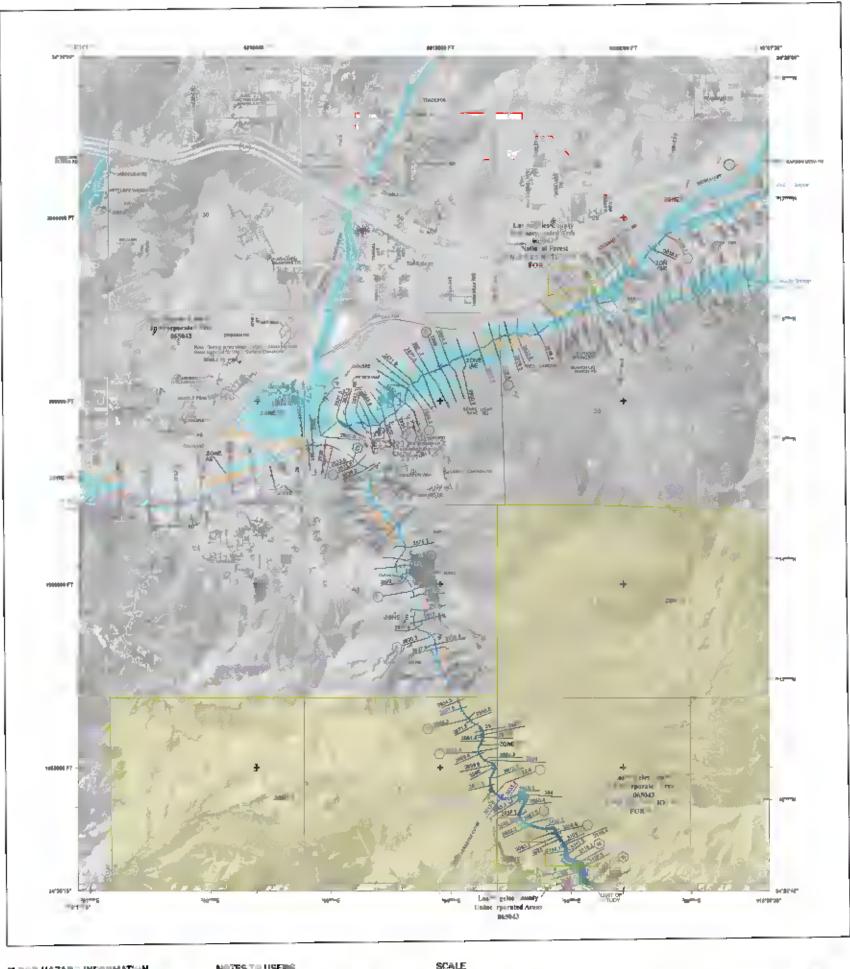
Table 2. Semi-Arid Curve Numbers (adapted from NEH 630)

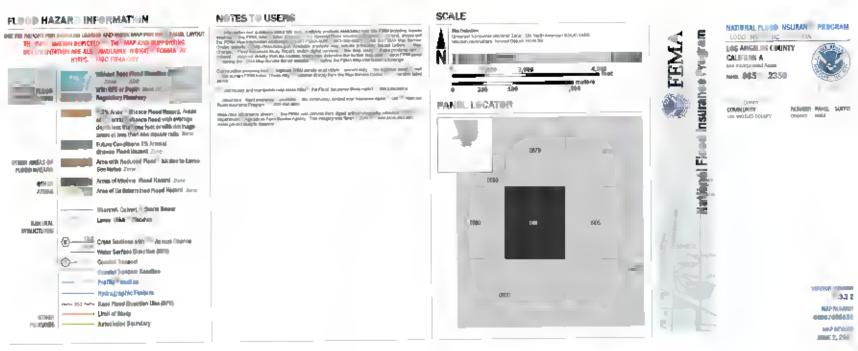
					Soil Type*	urve Number Soil Type*		
Class Value		Classification Description			С	D	W	
er	11	Open Water - areas of open water, generally with less than 25% cover of vegetation or soil.	98	98	98	98	3	
Water	12	Perennial Ice/Snow - areas characterized by a perennial cover of ice and/or snow, generally greater than 25% of total cover.	98	98	98	98	3	
7		Developed, Open Space - areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20% of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes	46	65	77	82	,	
Developed		Developed, Low Intensity - areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20% to 49% percent of total cover. These areas most commonly include single-family housing units.	61	75	83	87	,	
Deve	23	Developed, Medium Intensity – areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50% to 79% of the total cover. These areas most commonly include single-family housing units.	77	85	90	95		
	24	Developed High Intensity -highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80% to 100% of the total cover.	89	92	94	95	5	
Barren	31	Barren Land (Rock/Sand/Clay) - areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.	77	86	91	94		
Forest	41	Deciduous Forest - areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75% of the tree species shed foliage simultaneously in response to seasonal change.	43	55	70	77	,	
	42	Evergreen Forest - areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75% of the tree species maintain their leaves all year. Canopy is never without green foliage.	43	55	70	77	,	
	43	Mixed Forest - areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75% of total tree cover.	43	55	70	77	,	
land		Dwarf Scrub - Alaska only areas dominated by shrubs less than 20 centimeters tall with shrub canopy typically greater than 20% of total vegetation. This type is often co-associated with grasses, sedges, herbs, and non-vascular vegetation.	55		81	89	,	
Shrubland	52	Shrub/Scrub - areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions	55	71	81	89	,	
Sr	71	Grassland/Herbaceous - areas dominated by gramanoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.	55	71	81	89	,	
Herbaceous	72	Sedge/Herbaceous - Alaska only areas dominated by sedges and forbs, generally greater than 80% of total vegetation. This type can occur with significant other grasses or other grass like plants, and includes sedge tundra, and sedge tussock tundra.	55	71	81	89)	
	73	Lichens - Alaska only areas dominated by fruticose or foliose lichens generally greater than 80% of total vegetation.	55	71	81	89	,	
		Moss - Alaska only areas dominated by mosses, generally greater than 80% of total vegetation.	55					
Sain	81	Pasture/Hay – areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20% of total vegetation.	55	71	81	89	,	
Planted/Culti Vated	82	Cultivated Crops – areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20% of total vegetation. This class also includes all land being actively tilled	67					
7	83	This class also includes all land being actively filled Small Grains	63		83			
ds		Woody Wetlands - areas where forest or shrubland vegetation accounts for greater than 20% of vegetative cover and the soil or substrate is periodically saturated with or covered with water.	45					
Wetlan ds		Emergent Herbaceous Wetlands - Areas where perennial herbaceous vegetation accounts for greater than 80% of vegetative cover and the soil or substrate is periodically saturated with or covered with water.	45	66	77	83	3	

^{*}A/D, B/D and C/D soils lumped as D soils, W denotes water

**Curve Numbers for NLCD Codes 41-43 have been increased from 30 to 43 as many of these areas are partially grazed Woods-grass combination.







Attachment 26

Section 3.17, Worker Health and Safety - Redline Version

3.17 Worker Health and Safety

This subsection summarizes the worker health and safety issues that may be encountered during construction, operation, and decommissioning of the Prairie Song Reliability Project (Project). The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

Because of the subject matter, this subsection follows a slightly different format than other subsections in Chapter 3. Instead of a standard discussion of affected environment followed by the Project's environmental consequences and proposed mitigation measures for significant impacts, this subsection contains worker safety information, including the laws, ordinances, regulations, and standards (LORS), that apply to the proposed Project.

- Section 3.17.1 describes the environmental setting related to the proposed Project.
- Section 3.17.2 describes the health and safety programs in terms of analyses conducted to identify hazards and also the safety compliance and training programs that will be established on site.
- Section 3.17.3 discusses the applicable LORS.
- Section 3.17.4 lists the regulatory agencies involved and key agency contacts.
- Section 3.17.5 provides information regarding required permits and permitting schedules.

3.17.1 Environmental Setting

The Project site is in the Antelope Valley area of unincorporated Los Angeles County, California, south of State Route 14, approximately 3 miles northeast of the unincorporated community of Acton. The site consists of undeveloped lands, a residence, and disturbed dirt roads. Land uses in the immediate vicinity of the Project site include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines. The nearest incorporated municipality to the Project site is the City of Palmdale, which is approximately 4 miles to the northeast.

Climate in the Project area is characterized as a dry-summer Mediterranean climate with hot summers and mild winters. Summers are typically sunny and dry, with temperatures reaching into the upper 80s to mid-90s degrees Fahrenheit during the day. Winters are fairly mild, with temperatures rarely dropping below freezing. Rainfall is minimal during the summer months, but increases in winter months.

The Phase I Environmental Site Assessments did not identify any recognized environmental conditions (RECs), conditional RECs, or historical RECs associated with the Project site (see Appendices 3.5A-1 and 3.5A-2). Although not identified as RECs, the Phase I Environmental Site Assessments identified evidence of unauthorized dumping along dirt access roads north of the railroad property, potential for contaminants in railway corridors, and potential for asbestos because some on-site structures were constructed as early as 1980. Conformance with applicable federal, state, and local ordinances related to the proper handling and disposal of potential hazardous material waste will be implemented during Project construction (e.g., CalRecycle, U.S. Environmental Protection Agency, Department of Toxic Substances Control). In addition, Antelope Valley Air Quality Management District requirements for asbestos surveys and notification prior to demolition, and implementation of Mitigation Measure (MM) HAZ-1 to

address potential contaminated soil associated with the adjacent railroad will apply. See Section 3.5, Hazardous Materials Handling, for additional details.

3.17.2 Impact Analysis

3.17.2.1 Impact Evaluation Criteria

This section addresses the California Energy Commission's requirement to evaluate worker health and safety per Appendix B of Title 20, California Code of Regulations, Section 1704.

3.17.2.2 Hazard Analysis

Workers could be potentially exposed to activities that pose potential safety hazards. A hazard analysis is included to evaluate the hazards and assess control measures. The analysis identifies the hazards anticipated during construction, operation, and decommissioning, and indicates what safety programs should be developed and implemented to avoid, mitigate, and appropriately manage those hazards. The hazard analysis for Project construction and decommissioning activities is provided in Table 3.17-1, and the hazard analysis prepared for Project operation is provided in Table 3.17-2. The types of hazards anticipated during construction, operation, and decommissioning are similar; thus, there is duplication in the tables.

Programs and plans described in this section set forth the methods that will be followed to achieve health and safety objectives. The programs or plans will be in written and electronic formats that will be kept at specific locations in the facility and readily available to staff and first responders. Each program or plan will contain job-specific training requirements that are translated into detailed training courses. These courses will be taught to construction and operation personnel, as needed.

Table 3.17-1. Construction Hazard Analysis

Activity	Hazard*	Control		
Operating motor vehicles and heavy equipment	 Employee injury and property damage from collisions between people and equipment 	 Motor Vehicle and Heavy Equipment Safety Program 		
Operating forklifts	 Same as heavy equipment 	Forklift Operation Program		
Trenching and excavating	 Employee injury and property damage from the collapse of trenches and excavations or exposure to fumes or vapors that have collected in the trench/excavation 	Excavation/Trenching ProgramConfined Space Training		
Working at elevated locations	 Falls from the same level and elevated areas 	 Fall Prevention Program Scaffolding/Ladder Safety Program Articulating Boom Platforms Program Working at Heights 		
Using cranes	 Property damage from falling loads Employee injuries from falling loads Injuries and property damage from contact with crane 	 Crane and Material Handling Program Critical Lift Studies, as necessary 		

Table 3.17-1. Construction Hazard Analysis

Activity	Hazard*	Control			
		Crane Operator Certification			
Working with flammable and combustible liquids	■ Fire/spills	 Fire Protection and Prevention Program Housekeeping and Material Handling and Storage Program Spill Prevention, Countermeasure, and Control Plan (Appendix 3.5C) 			
Hot work (including cutting and welding)	 Employee injury and property damage from fire Exposure to fumes during cutting and welding Eye exposure to ultraviolet and infrared radiation during cutting and welding 	 Hot Work Safety Program Respiratory Protection Program Employee Exposure Monitoring Program PPE Program Fire Protection and Prevention Program 			
Inspecting and maintaining temporary systems during construction activities	 Injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical) 	Electrical Safety ProgramLO/TO Program			
Working on electrical equipment and systems	 Contact with live electricity and energized equipment 	Electrical Safety ProgramLO/TO ProgramPPE Program			
Exposure to hazardous waste	 Working with or having the potential to be exposed to contaminated soil, groundwater, or debris during construction 	 Hazardous Waste Program 			
Entering confined spaces	 Injury from physical and chemical hazards 	 Permit-required Confined-Space Entry Program Air monitoring requirements LO/TO Program PPE Program 			
General construction activities	 Injury from hand and portable power tools 	 Hand and Portable Power Tool Safety Program PPE Program Powder-Actuated Tools Program 			
	 Injury and/or property damage from inadequate walking and working surfaces 	 Housekeeping and Material Handling and Storage Program 			
	Exposure to occupational noise	Hearing Conservation ProgramPPE Program			
	 Injury from improper lifting and carrying materials and equipment 	Back Injury Prevention Program			
	 Injury to head, eye/face, hands, body, feet, and skin 	PPE Program			
	 Exposure to hazardous gases, vapors, dusts, and fumes, including wildfire smoke 	Hazard Communication ProgramRespiratory Protection ProgramPPE Program			

Table 3.17-1. Construction Hazard Analysis

Activity	Hazard*	Control
		Air Monitoring Program
	Exposure to various hazardsReporting of hazardous conditions during construction	Injury and Illness Prevention Program
	 Heat and cold stress (i.e., heat illness) 	 Heat and Cold Stress Monitoring Control Program, including a Heat Illness Prevention Plan (outdoor/indoor)
Working outdoors and in remote areas	Employees working alone outdoors could suffer an injuryLightning strike during a storm	Working Alone/Person-DownPlanLightning Procedure

Notes: LO/TO = lock-out/tag-out; PPE = personal protective equipment

Table 3.17-2. Operation Hazard Analysis

Activity	Hazard*	Control		
Operating motor vehicles and heavy equipment	 Injury and property damage from collisions between people and equipment 	 Motor Vehicle and Heavy Equipment Safety Program 		
Operating forklifts	 Same as heavy equipment 	 Forklift Operation Program 		
Trenching and excavating	 Injury and property damage from the collapse of trenches and excavations 	Excavation/Trenching ProgramConfined Space Training		
Working at elevated locations	 Falls from the same level and elevated areas 	 Fall Prevention Program Scaffolding/Ladder Safety Program Working at Heights 		
Using cranes and derricks	 Property damage from falling loads Injuries from falling loads Injuries and property damage from contact with crane or derrick 	 Crane and Material Handling Program Critical Lift Studies, as necessary Crane Operator Certification 		
Working with flammable and combustible liquids	■ Fire/spills	 Fire Protection and Prevention Program Spill Prevention, Countermeasure, and Control Plan (Appendix 3.5C) 		
Working with hazardous materials	 Injury from chemical burns, inhalation, digestion, and absorption 	 Safe Use Handling Procedures Job-Specific Training PPE Program Spill Response Procedures, including implementation of a Spill Prevention, Countermeasure, and Control Plan (Appendix 3.5C) Emergency Response Program 		

The hazards and hazard controls provided are generic to construction activities. During various phases of construction, additional hazard analysis will be performed to evaluate the relevant hazards more specifically and to develop appropriate controls.

Table 3.17-2. Operation Hazard Analysis

Activity	Hazard*	Control
Exposure to hazardous waste	 Personnel who are working with or have the potential to be exposed to contaminated soil, groundwater, or debris during operation 	Hazardous Waste Program
Hot work (including cutting and welding)	 Injury and property damage from fire Exposure to fumes during cutting and welding Eye exposure to ultraviolet and infrared radiation during cutting and welding 	 Hot Work Safety Program Respiratory Protection Program Employee Exposure Monitoring Program PPE Program Fire Protection and Prevention Program Hexavalent Chromium Program
Troubleshooting and maintaining systems and general operational activities	 Injury and property damage from contact with hazardous energy sources (e.g., electrical, thermal, and mechanical) 	Electrical Safety ProgramLO/TO Program
Working on electrical equipment and systems	Contact with live electricity	Electrical Safety ProgramPPE Program
Entering confined spaces	 Injury from physical and chemical hazards 	Confined-Space ProgramLO/TO ProgramPPE Program
General operation activities	 Injury from hand and portable power tools 	Hand and Portable Power Tool Safety ProgramPPE Program
	 Injury and property damage from inadequate walking and work surfaces 	 Housekeeping and Material Handling and Storage Program
	Overexposure to occupational noise	Hearing Conservation ProgramPPE Program
	 Injury from improper lifting and carrying of materials and equipment 	Back Injury Prevention Program
	 Injury and property damage from unsafe driving 	Safe Driving Program
	 Exposure to hazardous gases, vapors, dusts, and fumes, including wildfire smoke 	 Hazard Communication Program Respiratory Protection Program PPE Program Employee Exposure Monitoring Program
	 Reporting and repairing hazardous conditions 	 Injury and Illness Prevention Program
	 Heat and cold stress (e.g., heat illness) 	 Heat and Cold Stress Monitoring and Control Program, including Heat Illness Prevention Plan (outdoor/indoor)
	Ergonomic injuries	Ergonomic Awareness Program
Working outdoors	 Employees working alone outdoors could suffer an injury 	Working Alone/Person-Down Plan

Table 3.17-2. Operation Hazard Analysis

Activity	Hazard*	Control		
	 Lightning strikes during a storm 	Lightning ProcedureHeat Stress Training and Management		
Biological hazards	Wildlife hazards	 Emergency Response Plan Working Alone/Person-Down Plan Pest Management Protocol 		

Notes: LO/TO = lock-out/tag-out; PPE = personal protective equipment

3.17.2.3 Training and Safety Programs

To protect the safety and health of workers during construction, operation, and decommissioning activities associated with the Project, health and safety programs designed to mitigate hazards and comply with applicable regulations will be implemented. Periodic audits will be performed by qualified individuals to determine whether proper work practices are being used to mitigate hazardous conditions and to evaluate regulatory compliance. The following subsections contain information on the anticipated content of the health and safety programs.

3.17.2.3.1 Construction and Decommissioning Health and Safety Program

Safety programs will be developed and implemented during construction and decommissioning activities. These programs and their major components are outlined below.

Injury and Illness Prevention Program

- Philosophy and safety commitment
- Safety leadership and responsibilities
- Accountability
- Employee communication
- Planning "job hazard analysis and pre-task"
- Compliance with work rules and safe work practices
- Measuring compliance and effectiveness of prevention methods, and inspections/audits
- Communicating about performance and implementing necessary improvements
- Training and other communication requirements

Fire Protection and Prevention Program

- General requirements
- Housekeeping and proper material storage
- Employee alarm/communication system
- Portable fire extinguishers
- Fixed firefighting equipment

^{*} The hazards and hazard controls provided are generic to operations. During various phases of operation additional hazard analysis will be performed to evaluate the relevant hazards more specifically and to develop appropriate controls.

- Fire control and containment
- Flammable and combustible liquid storage
- Dispensing and disposing of flammable liquids
- Service and refueling areas
- Training

Personal Protective Equipment Program

- Personal protective devices
- Hazard analysis
- Training
- Head protection
- Eye/face protection
- Body protection
- Hand protection
- Foot protection
- Skin protection
- Fall protection
- Electrical arc flash protection
- Respiratory protection
- Hearing protection

First Aid, CPR, and Automated External Defibrillator

- General requirements
- Written program
- Training
- Maintenance

Emergency Response Action Program/Plan

- Emergency procedures for the protection of personnel, equipment, the environment, and materials:
 - Fire and emergency reporting procedures
 - Response actions for accidents involving personnel and/or property
 - Site assembly and emergency evacuation route procedures
- Reporting and notification procedures for emergencies and contacts, including off-site and local authorities:
 - Alarm and communication systems
- Spill response, prevention, and control action plan (refer to Section 3.5, Hazardous Materials Handling, and Appendix 3.5C (Draft Spill Prevention Control and Countermeasure Plan)
 - Emergency response equipment
 - Emergency personnel (response team) responsibilities and notification roster

- Training requirements

Construction Safety Programs

Motor Vehicle and Heavy Equipment Safety Program

- Operation and maintenance of vehicles
- Inspection
- Personal protective equipment (PPE)
- Training

Forklift Operation Program

- Trained and certified operators
- Fueling operations
- Safe operating parameters
- Training

Excavation/Trenching Program

- Shoring, sloping, and benching requirements
- California Occupational Safety and Health Administration (Cal/OSHA) permit requirements
- Inspection
- Access and egress

Fall Protection Program

- Evaluation of fall hazards
- Protective devices
- Training

Scaffolding/Ladder Safety Program

- Inspection of equipment
- Load ratings
- Safe operating parameters
- Operator training

Crane and Material Handling Program

- Certified and licensed operators
- Inspection of equipment
- Load ratings

- Safe operating parameters
- Training

Hazardous Waste Program

- Evaluation of hazards
- Training
- Air monitoring
- Medical surveillance
- Health and Safety Plan preparation
- Documentation procedures

Hot Work Safety Program

- Welding and cutting procedures
- Acetylene and fuel gas safety procedures
- Fire watch
- Hot work permit
- PPE
- Training
- Documentation procedures

Employee Exposure Monitoring Program

- Exposure evaluation
- Monitoring requirements
- Reporting results
- Medical surveillance
- Training
- Documentation procedures
- Protection from wildfire smoke
 - Monitoring forecast and current air quality index for fine particulate matter (PM2.5) of 151 or greater when there is exposure to wildfire smoke
 - Communication
 - Training
 - Controls (e.g., providing enclosed buildings, structures, or vehicles where the air is filtered; changing work schedules/reducing work intensity; respiratory protective equipment)

Electrical Safety Program

- Grounding procedures
- Overhead and underground utilities

- Utility clearance
- Assured Grounding Program/Ground Fault Circuit Interrupters
- Training
- Documentation procedures

Lock-Out/Tag-Out (LO/TO) Program

- Allocation of devices (e.g., locks, tags, and adaptors)
- Lock-out/tag-out (LO/TO) sequencing
- Types/magnitudes of energy
- Types/locations of machines
- Verification
- Training
- Documentation procedures

Permit-Required Confined-Space Entry Program

- Air monitoring and ventilation requirements
- Rescue procedures
- LO/TO and blocking, blinding, and blanking requirements
- Permit completion
- Training
- Documentation procedures

Hand and Portable Power Tool Safety Program

- Guarding and proper operation
- Training

Powder-Actuated Tool Safety Program

- Operator qualifications
- Inspection requirements
- Repair requirements
- Storage requirements
- Training

Housekeeping and Material Handling and Storage Program

- Storage requirements
- Walkways and work surfaces
- Equipment handling requirements
- Training

Hearing Conservation Program

- Identifying high-noise environments
- Exposure monitoring
- Medical surveillance requirements
- Hearing-protective devices
- Training

Back Injury Prevention Program

- Proper lifting and material handling procedures
- Training

Hazard Communication Program

- Labeling requirements
- Storage and handling
- Safety data sheets
- Chemical inventory
- Training
- Documentation procedures

Respiratory Protection Program

- Selection and use
- Storage
- Fit testing
- Medical requirements
- Inspection and repair
- Training
- Documentation procedures

Heat and Cold Stress Monitoring and Control Program, including Heat Illness Prevention Plan (Outdoor/Indoor)

- Prevention and control (e.g., clean drinking water, access to shade or cool down areas, cool down periods)
- High-heat procedures
- Monitoring (i.e., measure temperatures and heat index and maintain records)
- Emergency response procedures
- Acclimatization for new workers during a 14-day period and all workers during a heat wave
- Training

- Establish, implement, and maintain a written Outdoor Heat Illness Prevention Plan that includes procedures
 for providing drinking water, shade, preventative rest periods, close observation during acclimatization,
 high-heat procedures, training, and prompt emergency response
- Establish, implement, and maintain a written Indoor Heat Illness Prevention Plan that includes procedures
 for providing drinking water, cool-down areas, rest periods, close observation during acclimatization,
 assessment and measurement of heat, training, prompt emergency response, and feasible
 control measures

3.17.2.3.2 Operations Health and Safety Program

Upon completion of construction and commencement of operations, the construction Health and Safety Plan will transition into an operation-oriented program reflecting the hazards and controls during operation. The following outline sets forth the topics that will be included in the Operations Health and Safety Program.

Injury and Illness Prevention Program

- Personnel with the responsibility and authority to implement the program
- Safety and health policy
- Work rules and safe work practices
- System for ensuring that employees comply with safe work practices
- Employee communications
- Identification and evaluation of workplace hazards
- Methods and/or procedures for correcting unsafe or unhealthy conditions, work practices, and work procedures in a timely manner based on the severity of the hazards
- Specific safety procedures (see Operations Health and Safety Program, below)

First Aid, CPR, and Automated External Defibrillator

- General requirements
- Written program
- Training
- Maintenance
- Documentation

Fire Protection and Prevention Program

- General requirements
- Fire hazard inventory, including ignition sources and mitigation
- Housekeeping and proper materials storage
- Employee alarm/communication system
- Portable fire extinguishers
- Fixed firefighting equipment
- Fire control

- Flammable and combustible liquid storage
- Use of flammable and combustible liquids
- Dispensing and disposal of liquids
- Training
- Personnel to contact for information on program contents

The following Project-specific hazards, control procedures, and fire protection systems will be included and discussed in the Operational Fire Protection and Prevention Plan.

Vegetation Management

All battery components for the BESS will be installed on concrete pads or pilings. The fenced BESS yard, on-site substation, and access roads will be surfaced with crushed rock and asphalt. O&M activities will include spot removal of any vegetation growth within the BESS and on-site substation areas as needed. As such, no combustible vegetation will be present within these areas.

For Project site areas outside of the BESS and on-site substation fence lines, O&M staff will inspect areas adjacent to the facility and gen-tie line to monitor vegetation management needs. All non-landscaping combustible vegetation will be mechanically cleared to the property line around the fenced BESS yard and on-site substation to maintain defensible space. The ground clearing, low fire fuel landscaping, and BESS yard management will create a fire break of at least 100 feet between neighboring properties and any BESS enclosure.

Additionally, vegetation management will occur along the gen-tie corridor and around the associated transmission towers up to the Point of Change of Ownership (POCO) in accordance with the North American Electric Reliability Corporation transmission vegetation management standards and California Fire Code requirements. All combustible vegetation will be mechanically cleared to a minimum of 10 feet around electric poles to maintain defensible space. Additionally, vegetation will not be allowed to encroach within 10 feet of conductors under any condition (accounting for maximum sag and horizontal wind sway). The gen-tie corridor from the POCO to the Vincent Substation will be managed by SCE according to their vegetation management standards.

Per MM-WF-4 (see Section 3.16, Wildfire), as a further means of ensuring the vegetation management is maintained per this requirement, the proposed Project applicant or current owner will obtain an inspection and report from a County-authorized Wildland Fire Safety Inspector by June 1 of each year, certifying that vegetation management activities throughout the BESS facility site and gen-tie corridor up to the POCO have been performed pursuant to this plan. The gen-tie corridor from the POCO to the Vincent Substation will be managed by SCE according to their vegetation management standards. This effort further ensures vegetation maintenance and compliance.

On-Site Fuel Management

The hazardous materials used during operations will include gasoline, renewable diesel, and lubricants. These hazardous materials will be stored in temporary stationary tanks with secondary containment and will be located within the construction laydown area or near the O&M building. Operations workers will use drip trays under the fueling nozzle to prevent spillage during refueling. Equipment will be bonded and grounded to prevent static electricity buildup and discharge. Additionally, the fuel tanks will have secondary containment spill trays within which the fuel tanks will sit. These secondary containment spill trays will be sized to hold the entire amount of the fuel tank should a failure result in release of a full tank. Finally, spill kits will be maintained on site in the event that

a spill occurs outside of the spill trays. A qualified employee will perform training for all operations workers to educate them on the proper methods for refueling and spill cleanup.

A spill prevention, control, and countermeasure plan will be developed and implemented prior to receiving hazardous materials (including fuel) on site in excess of reportable quantities during construction and operation.

Red Flag Warnings (Extreme Fire Ignition Avoidance)

MM-WF-1, Extreme Fire Day Ignition Avoidance and Fire Patrols, would be implemented during operations as well as construction. The National Weather Service defines a Red Flag Warning as environmental conditions where warm temperatures, very low humidities making vegetation dry and flammable, and stronger winds are expected to combine to produce an increased risk of fire danger. A Red Flag Warning is issued for a stated period by the National Weather Service using pre-determined criteria to identify particularly critical wildfire danger in a particular geographic area. Any work that would generate sparks or open flames, including activities involving heat or sparks, outdoor burning, and using power tools, shall temporarily cease during Red Flag Warnings to reduce the risk of starting a wildfire, unless the work is surrounded by at least 100 feet of fuel-free defensible space. The site superintendent or operations supervisor will coordinate with personnel to determine which low fire hazard activities may occur. Should the Los Angeles County Fire Department (LACoFD) or similar entity declare a Red Flag Warning affecting the Project site, the same work activity restrictions occurring during National Weather Service Red Flag Warning periods shall apply.

The Project will implement ongoing fire patrols during the fire season. The Project site is in a State Responsibility Area, so the Project will defer to the agency in charge. The Site Safety Director (SSD) will be assigned as fire patrol to monitor work activities when an activity risk exists for fire compliance. The SSD will verify proper tools and equipment are on site, assess any fire agency work restrictions, and serve as a lookout for fire starts, including staying behind (e.g., a fire watch) to make certain no residual fire exists. Fire watch may be performed by any site personnel. The SSD or delegate will perform routine patrols of the Project site during the fire season, equipped with a portable fire extinguisher and communications equipment. Project staff will notify the LACoFD of the name and contact information of the current SSD in the event of any change.

Battery Energy Storage Systems Enclosures and Transformers

Operational incidents involving BESS enclosures and transformers will be covered under the Project Emergency Response Plan, Hazard Mitigation Analysis, and trainings to address potential incidents and responses.

Fire Protection Systems

Site-specific fire protection systems will be addressed in the Project Emergency Response Plan, Hazard Mitigation Analysis, and Alternative Materials and Methods Review (AMMR) submittals to the California Energy Commission Compliance Project Manager and LACoFD. The site-specific fire protections include two 40,000-gallon water tanks; hydrants spaced no more than 300 feet apart; defensible space designed into the Project footprint; smoke alarms in buildings and portable fire extinguishers; and the remote monitoring and alarm systems designed into the BESS enclosures, visual cameras that cover the BESS yard, and visual and audible alarms in the BESS yards.

Emergency Response Action Program/Plan

Emergency escape procedures and emergency escape route assignments

- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after emergency evacuation has been completed
- Rescue and medical duties for those employees performing them
- Spill response, prevention, and control action plan (refer to Section 3.5, Hazardous Materials Handling, and Appendix 3.5C, Draft Spill Prevention Control and Countermeasure Plan)
- Fire and emergency reporting procedures
- Alarm and communication system
- Personnel to contact for information on plan contents
- Training requirements

Personal Protective Equipment Program

- Hazard analysis and prescription of PPE
- Personal protective devices
- Head protection
- Eye and face protection
- Body protection
- Hand protection
- Foot protection
- Skin protection
- Sanitation
- Safety belts and lifelines for fall protection
- Protection for electrical shock
- Medical services and first aid/blood-borne pathogens
- Respiratory protective equipment
- Hearing protection
- Life safety
- Training

Operations Health and Safety Program

Motor Vehicle and Heavy Equipment Safety Program

- Operation and maintenance of vehicles
- Inspections
- PPE
- Training

Forklift Operation Program

Trained and certified operators

- Fueling operations
- Safe operating parameters
- Training

Excavation/Trenching Program

- Shoring, sloping, and benching requirements
- Cal/OSHA permit requirements
- Inspection
- Air monitoring
- Access and egress
- Documentation procedures

Fall Protection Program

- Evaluation of fall hazards
- Protection devices
- Training

Scaffolding/Ladder Safety Program

- Construction and inspection of equipment
- Proper use
- Training

Articulating Boom Platforms Program

- Inspecting equipment
- Load ratings
- Safe operating parameters
- Operator training

Hot Work Safety Program

- Welding and cutting procedures
- Acetylene and fuel gas safety
- Fire Watch
- Hot work permit
- PPE
- Training
- Documentation procedures

Workplace Ergonomics Program

- Identification of personnel at risk
- Evaluation of personnel
- Workplace and job activity modifications
- Training
- Documentation procedures

Employee Exposure Monitoring Program

- Exposure evaluation
- Monitoring requirements
- Reporting results
- Medical surveillance
- Training
- Electrical Safety Program
- Grounding procedure
- Overhead and underground utilities
- Utility clearance
- Training
- High-voltage switching
- Documentation procedures
- Protection from wildfire smoke
 - Monitoring forecast and current air quality index for fine particulate matter (PM2.5) of 151 or greater when there is exposure to wildfire smoke
 - Communication
 - Training
 - Controls (e.g., providing enclosed buildings, structures, or vehicles where the air is filtered; changing work schedules/reducing work intensity; respiratory protective equipment)

LO/TO Program

- Allocation of LO/TO devices (e.g., locks, tags, and adaptors)
- Machine-specific LO/TO procedures
- Steps for verification of isolation
- Training (Affected and Authorized and Interaction with Energized Electrics)
- Annual program review

Permit-Required Confined-Space Entry Program

- Air monitoring and ventilation requirements
- Rescue procedures

- LO/TO and blocking, blinding, and blanking requirements
- Permit completion
- Training
- Documentation procedures

Hand and Portable Power Tool Safety Program

- Guarding and proper operation
- Training

Housekeeping and Material Handling and Storage Program

- Storage requirements
- Walkways and work surfaces
- Equipment handling requirements
- Training
- Documentation procedures
- Hazardous material reporting and documentation

Hearing Conservation Program

- Identifying high-noise environments
- Exposure monitoring
- Medical surveillance requirements
- Hearing-protective devices
- Training
- Documentation procedures

Back Injury Prevention Program

- Proper lifting and material handling procedures
- Training

Hazard Communication Program

- Labeling requirements
- Storage and handling
- Safety data sheets
- Chemical inventory
- Training
- Documentation procedures

Respiratory Protection Program

- Selection and use
- Storage
- Fit testing
- Medical requirements
- Inspection and repair
- Training
- Documentation procedures

Heat and Cold Stress Monitoring and Control Program, including Heat Illness Prevention Plan (Outdoor/Indoor)

- Prevention and control (e.g., clean drinking water, access to shade or cool down areas, cool down periods)
- High-heat procedures
- Monitoring (i.e., measure temperatures and heat index and maintain records)
- Emergency response procedures
- Acclimatization for new workers during a 14-day period, and all workers during a heat wave
- Training
- Establish, implement, and maintain a written Outdoor Heat Illness Prevention Plan that includes procedures
 for providing drinking water, shade, rest periods, close observation during acclimatization, high-heat
 procedures, training, and prompt emergency response
- Establish, implement, and maintain a written Indoor Heat Illness Prevention Plan that includes procedures
 for providing drinking water, cool-down areas, rest periods, close observation during acclimatization,
 assessment and measurement of heat, training, prompt emergency response, and feasible
 control measures

Safe Driving Program

- Inspection and maintenance of vehicles
- Training

3.17.2.3.3 Safety Training

To ensure that employees recognize and understand how to protect themselves from potential hazards, comprehensive training programs for construction and operation will be implemented, as indicated in Tables 3.17-3 and 3.17-4. Each of the safety procedures developed to control and mitigate potential site hazards will require some form of training. Training will be delivered in a variety of ways depending on the requirements of Cal/OSHA standards, the complexity of the topic, the characteristics of the workforce, and the degree of risk associated with each of the identified hazards.

Tables 3.17-3 and 3.17-4 summarize the safety training programs that will be provided to construction and operations personnel, respectively.

Table 3.17-3. Construction Training Program

Training Course	Target Employees
Injury and Illness Prevention Training	All
Emergency Response Action Program/Plan	All
Personal Protective Equipment Training	All
Motor Vehicle and Heavy Equipment Safety	Employees working on, near, or with heavy equipment or vehicles
Training Forklift Operation Training	
Forklift Operation Training	Employees operating forklifts
Excavation/Trenching Safety Training	Employees involved with trenching or excavating
Fall Protection Training	Employees working at heights greater than 6 feet required to use fall protection
Scaffolding/Ladder Safety Training	Employees required to erect or use scaffolding
Crane Safety Training	Employees supervising or performing crane operations
Fire Protection and Prevention Training	Employees responsible for handling and storing flammable or combustible liquids or gases
Hazard Communication Training	Employees handling or working with hazardous materials
Hazardous Waste	Employees handling or excavating hazardous waste
Hot Work Safety Training	Employees performing hot work
Electrical Safety Training	Employees performing lock-out/tag-out (LO/TO) or working on systems that require LO/TO activities
	Employees required to work on electrical systems and equipment, or use electrical equipment and cords
Permit-Required Confined-Space Entry Training	Employees required to supervise or perform confined-space entry activities
Hand and Portable Power Tool Safety Training	Employees who will be operating hand and portable power tools
Powder-Actuated Tool Safety Training	Employees who will be operating powder-actuated tools
Heat Stress and Cold Stress Safety Training	Employees who will be exposed to temperature extremes
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	Employees supervising or driving motor vehicles
Respiratory Protection Training	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All
First Aid, CPR, and Automated External Defibrillator	AII
Worker Exposure Awareness Training	All
Worker Environmental Awareness Training	All

Table 3.17-4. Operations Training Program

Training Course	Target Employees
Injury and Illness Prevention Training	All
Emergency Action Plan	All
Personal Protective Equipment Training	All
Excavation/Trenching Safety training	Employees involved with trenching or excavating

Table 3.17-4. Operations Training Program

Training Course	Target Employees
Scaffolding/Ladder Safety Training	Employees required to erect or use scaffolding
Fall Protection Training	Employees required to use fall protection
Forklift Operator Training	Employees operating forklifts
Crane Safety Training	Employees supervising or performing crane operations
Workplace Ergonomics	Employees performing repetitive activities
Fire Protection and Prevention Training	Employees responsible for handling and storing batteries or flammable or combustible liquids or gasses
Hot Work Safety Training	Employees performing hot work
Electrical Safety Training	Employees performing lock-out/tag-out or required to work on electrical systems and equipment
Permit-Required Confined-Space Entry	Employees required to supervise or perform confined-space entry
Hand and Portable Power Tool Safety Training	Employees operating hand and portable power tools
Heat Stress and Cold Stress Safety Training	Employees exposed to temperature extremes
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	Employees supervising or driving motor vehicles
Hazard Communication Training	Employees handling or working around hazardous materials
Respiratory Protection Program	All employees required to wear respiratory protection
Fire Protection and Prevention Training	All
First Aid, CPR, and Automated External Defibrillator	All
Worker Exposure Awareness Training	All
Worker Environmental Awareness Training	All

In addition, an in-person training program will be developed for the local municipal fire departments, other local agencies, and site personnel. The applicant will consult with the local emergency management agencies, unified program agencies, and local first response agencies identified by LACoFD through its AMMR process to determine the agencies that should be invited to participate in the training. The program will include classroom training to familiarize the audience with the BESS equipment and safety features. The course will outline the actions to be taken during a BESS emergency to mitigate risk and ensure the safety of personnel operating on the scene of the incident. Topics will include but not be limited to emergency situation responsibilities; immediate emergency response actions; first responders recommended actions by scenario; maps, figures, and failure safety areas; BESS enclosure specifics; cell information; transformer information; recommended PPE; on-site hazards; fire protection systems; and post incident operations.

3.17.2.4 Fire Protection

Fire protection at the site will involve facilities designed in compliance with the California Fire Code. The BESS will consist of National Fire Protection Association (NFPA) 855 Standard compliance and UL certified systems. These systems will include built-in failsafe and cooling systems designed to prevent thermal runaway and engineered design to limit the spread of fire. Each BESS enclosure will be NFPA 855, NFPA 68, and NFPA 69 compliant. Each

BESS enclosure will be equipped with an automatic fire alarm and linkage control system, an explosion relief system, a combustible gas detection and alarm system, and an exhaust system. If any abnormality is detected, the battery system controller will connect to a local controller via ethernet for alarm signaling, control of the battery container shutdown, and control of the system for corresponding logic control. Additional details regarding the proposed remote monitoring capabilities of the facility are included below. Fire hydrants will be located throughout the site and will be served by an on-site water tank and pump house (Appendix 2A, Site Plan, PSR-BE-201 Fire Safety and Water Circulation Plan). Traditional water fire suppression will be used to prevent the spread of fire to surrounding equipment.

Based on an evaluation of the proposed Project and the fire environment at the Project site, the following elements will be incorporated into the Project to address fire protection:

- Project to be compliant with 2022 California Fire Code, 1206, Electrical Energy Storage Systems.
- Compliance with Los Angeles County Fire Department (LACoFD) Alternative Materials and Methods ReviewAMMR requirements and approval (initial correspondence from LACoFD Los Angeles County Fire Department regarding the Alternative Materials and Methods Review_AMMR is included as Appendix 3.17F). The Project applicant is committed to completing the LACoFD AMMR process as a condition of certification. During the AMMR review process, LACoFD will determine which local emergency management agencies, unified program agencies, and local first response agencies the applicant will coordinate with in developing its emergency response and emergency action plan.
- Minimum 8-foot-tall block wall surrounding the BESS facility.
- 20-foot fuel modification zone of gravel or similar surface.
- 10-foot fuel modification zone for vegetation maintenance around outside perimeter of fence.
- Maintenance of fuel modification zones twice-yearly or more as needed.
- Hydrants spaced approximately 300 feet apart throughout the BESS facility.
- Two 40,000-gallon fire water tanks on site. The fire water tanks will be NFPA 22 compliant and connected to fire hydrants throughout the site via a dry, underground, NFPA 24 compliant private fire service main. The size of the outlets on the fire hydrants will be coordinated with the <u>LACoFDLos Angeles County Fire Department</u>.
- Multiple access (five) driveways into the BESS facility per County of Los Angeles standards; access to the BESS facility will be provided via Knox boxes at each gate or other means as coordinated with first responders.
- Internal access roads per County of Los Angeles standards.
- Each section of the BESS field will have primary and secondary access points to allow first responders safe access to the area regardless of the location of the event.

Fire Water Storage and Flow Rates

A representative fire code analysis was provided to ensure compliance of the fire water storage and flow rate amounts with local fire requirements (see Appendix 3.17A). The representative fire code analysis determined that a 5,497-gallon water capacity will be required to respond to a transformer, vehicle, or control house enclosure fire. However, two 40,000-gallon water tanks are proposed as part of the Project. The 40,000-gallon water supply in each tank will provide an initial water supply for up to 5 hours for cooling exposures, controlling smoke, or

extinguishing small vegetation fires. During these initial 5 hours, a shuttle service can be set up by the fire service to provide additional water to the site if it is required.

Hazard Mitigation Analysis, Emergency Response Plan, and Community Risk Assessment

In addition, a Hazard Mitigation Analysis will be prepared and implemented during Project operations. As required by NFPA 855, the Hazard Mitigation Analysis will be prepared in compliance with UL 9540A and include consideration of potential thermal runaway fault conditions occurring within a single battery storage rack, cell module, or cell array (i.e., cell level, module level, unit level, and installation level). The analysis will include mitigation measures to prevent flammable gases released during a fire, battery overcharging, and other abnormal operating conditions within the BESS from creating an explosion hazard that could injure workers or emergency first responders.

An Emergency Response Plan, consistent with Senate Bill 38, will also be prepared in coordination with local public safety agencies and implemented during Project operations. Outlines of the Hazard Mitigation Analysis for the Power Titan II and the current Project design and an outline Emergency Response Plan that will be prepared are included as part of this application (Appendix 3.17B and Appendix 3.17C).

A representative Community Risk Assessment showing the release and dissipation of materials during a thermal event will be prepared and submitted to the LACOFDLos Angeles County Fire Department. The representative Community Risk Assessment will be used to inform the LACOFD Los Angeles County Fire Department of required safety precautions and PPE necessary at various distances and times during and from a thermal event. The representative Community Risk Assessment is included in Appendix 3.17D of this application. The representative Community Risk Assessment plume analysis was performed using the Process Hazard Analysis Software Tools (PHAST) consequence modeling to model pre-combustion gas dispersion and their associated consequences based on the gas composition and release dynamics described in the UL 9540A cell/module/unit level tests. UL 9540A test results are provided in Appendix 3.17E. The report considered all potential release scenarios and consequence extents for pre-combustion battery vent gas release scenarios. Scenarios for pre-combustion releases included the five-cell UL 9540A module level test-based release, and hypothetical scenarios for a full-volume module release, a full-volume rack of eight modules each, and a full-volume release of the entire 48-module enclosure. Analysis of results for all pre-combustion battery vent gas release scenarios show that there are no significant hazards that extend significantly beyond the nearest property boundary for both the flammable and toxic portions of the cloud. For additional details, please refer to Appendix 3.17D.

Remote Monitoring Capabilities

To enhance safety and response effectiveness during an incident involving a BESS enclosure, a comprehensive remote monitoring framework is proposed to supplement the monitoring and maintenance conducted by on-site staff. This framework includes a dedicated Remote Operation Center, advanced fire alarm control panels, and robust air/water sampling plans, all designed to support the incident commander and local first response agencies (Table 3.17-5).

Table 3.17-5. Remote Monitoring Framework

Remote Monitoring	
Capability	<u>Description</u>
Remote Operation Center	A 24/7 Remote Operation Center will be established to monitor and control critical equipment at the BESS site. This center will provide real-time data on key parameters, such as temperature, hydrogen levels, smoke, voltage, and amperage. This continuous monitoring enables rapid detection of anomalies, allowing for proactive response measures to mitigate potential incidents. If any abnormality is detected, the system sends a signal to the station-level alarm host through the battery supply panel module external terminal, which will alert the Remote Operation Center, for early warning of fire and to control the battery system with the corresponding logic control.
Incident Command Center Support	In the unlikely event of an incident, the Remote Operation Center will work in tandem with the local BESS ERC, which will serve as the Incident Command Center until emergency services and subject matter experts arrive on site. The ERC will assist in coordinating firefighter efforts and supporting emergency personnel during an incident. Both the Remote Operation Center and ERC will have round-the-clock access to site cameras, enabling remote troubleshooting and real-time coordination to streamline incident response.
Integrated System Management Unit	The Power Titan II has an integrated BMU that tracks the performance, voltage, current, and state of charge of the cells (among many other data points). The BMU is a layered system, where each battery module has its own BMU that monitors cell performance and communicates information to the BSC. The BSC is provided at the cabinet level and collects node signals from the BMU and fire protection system and relays the signals to the local controller or emergency management system for shutdown protection of the battery system. The BMS data is monitored remotely 24/7 by the Remote Operation Center.
Mini Fire Alarm Control Panel	The BESS cabinet is equipped with a gaseous fire extinguishing system, an automatic fire alarm and linkage control system, a combustible gas detection and alarm system, and an exhaust system. It is equipped with combustible gas detectors, smoke detectors, and temperature detectors. If any abnormality is detected, the system sends a signal to the station-level alarm host through the battery supply panel external terminal for early warning of fire and to control the battery system with the corresponding logic control.
Air and Water Sampling Plans	Within the BESS enclosures, gas and humidity sensors provided by original equipment manufacturers will deliver live readings of hydrogen levels, temperature, and smoke. These sensors are invaluable to firefighters, as they provide real-time data on potential explosivity and the current status of the incident, enabling safer and more effective response strategies. Additionally, a site-wide weather station will be installed to monitor environmental conditions, including wind speed, wind direction, ambient temperature, humidity, and barometric pressure. This data will further inform response efforts by providing critical context about the site's environmental conditions during an incident.

Note: BESS = battery energy storage system; ERC = emergency response contractor; BMU = battery management unit; BSC = battery system controller.

In summary, the proposed remote monitoring capabilities—encompassing a 24/7 Remote Operation Center, emergency response contractor–supported incident command center, mini fire alarm control panels and color camera systems, and comprehensive air/water sampling—will significantly enhance the ability of incident commanders and first responders to manage BESS enclosure incidents efficiently and safely.

LACoFD The Los Angeles County Fire Department-will provide an initial response in the event of a fire or emergency spill. The two closest fire stations are Station 80 at 1533 W. Sierra Highway, Acton, CA 93510, and Station 131 at 2629 East Avenue, South Palmdale, CA 93550. Station 80 is approximately 0.2 miles north of the BESS facility and Station 131 is approximately 6.0 miles northeast of the BESS facility.

3.17.2.4.1 Los Angeles County Fire Department Requirements

The Project design incorporates design measures to comply with LACoFD requirements for minimum separation and setback distances, primarily guided by NFPA 855 2023 edition (Standard for the Installation of Stationary Energy Storage Systems). NFPA 855 addresses fire and explosion risks in energy storage facilities, including BESS installations. The Project ensures compliance through fire-resistant enclosures equipped with safety features, including smoke/fire detection sensors, ground fault detection, alarms, and electrical contact disconnection. Containers are spaced to prevent fire propagation, aligning with NFPA 855 and LACoFD guidelines. We understand that while the Los Angeles County Fire Code (LACFC) adopts a limited scope of standards for BESS enclosures, NFPA 855 provides detailed guidance for larger installations like this Project.

Separation Distances Within Battery Energy Storage System Enclosure Groupings

NFPA 855 Section 15.5 and LACFC Section 1207.5.1 specify required distances between BESS enclosures within BESS groupings (e.g., clusters of BESS enclosures) designed to prevent thermal runaway propagation by maintaining minimum separation distances. The standard states that individual BESS enclosures should be separated by at least 3 feet in all directions, including along walls or between opposing units, unless manufacturer documentation from large-scale fire testing (e.g., UL 9540A tests) shows a lack of propagation between units and the authority-having jurisdiction approves the reduced spacing.

The Project design includes groupings of two (2) BESS enclosures, each spaced 5 7/8 inches apart (see Sheet PSR-BE-100_S001 in Appendix 2A). This spacing is supported by UL 9540A test results provided in Appendix 3.17E.

<u>Separation Distances Between Adjacent Battery Energy Storage System Groupings</u>

NFPA 855 and LACFC Section 1207.5.1 specify a minimum of 3 feet separation in all directions (horizontal and vertical, where applicable) between adjacent BESS groupings. Spacing is calculated from the outer edges of BESS enclosures. Compliance is verified through site plans submitted to the authority-having jurisdiction, requiring no computational methods beyond geometric measurements.

The Project exceeds the adjacent BESS grouping separation standard. Within rows, BESS groupings are spaced 4 feet 11 inches from adjacent groupings and medium-voltage transformers. BESS units and medium voltage transformers are separated by at least 12 feet 7 inches across rows. Refer to Sheet PSR-BE-100 S001 in Appendix 2A for a plan and profile view of these dimensions.

Setback Distances to Nearest Exposures

LACFC Section 1207.8.3 requires that minimum setback distances to exposures (e.g., lot lines, public ways, buildings, stored combustible materials, hazardous materials, high-piled stock, other exposure hazards, and vegetation) is 10 feet.

The Project exceeds these standards:

- BESS enclosures are set back 100 feet from all property lines.
- Soledad Canyon Road is between 10 and 20 feet from the Project's property line, resulting in an approximately 110-foot setback to the public thoroughfare.
- The 0&M buildings are approximately 30 feet away from the nearest BESS enclosure.
- Hazardous and combustible materials will be stored in the O&M buildings or storage containers at the end of the Project substation. The minimum distance to any hazardous or combustible materials would be approximately 30 feet.
- BESS enclosures are set back a minimum of 60 feet from vegetation. In all instances, there would be a solid wall separating a BESS enclosure and any vegetation.
- The two operations and maintenance buildings within the BESS yards are separated from the nearest BESS enclosure by approximately 30 feet.

Refer to Sheet PSR-SE-101 S001 in Appendix 2A (TN: 265873) for setbacks from walls, roadways, and occupiable spaces. Landscaping details are provided in Appendix 2B (TN: 264410).

3.17.2.5 Water Quality

3.17.2.5.1 Construction and Decommissioning

During construction and decommissioning, water will be required for common construction-related purposes, including dust suppression, soil compaction, and grading. A sanitary water supply will not be required during construction or decommissioning because restroom facilities will be portable units, serviced by licensed providers. Drinking water will be provided via portable water coolers. Construction and decommissioning water is anticipated to be purchased from the Palmdale Water District and trucked to the Project site.

3.17.2.5.2 Operations

During operations, an existing groundwater well will provide water for washroom and sanitary facilities associated with the on-site O&M facility. Water quality testing will be conducted prior to occupancy. Drinking water will be provided via portable water coolers.

3.17.3 Laws, Ordinances, Regulations, and Standards

Construction, operation, and decommissioning of the Project will be conducted in accordance with all applicable LORS. Table 3.17-<u>6</u>5 summarizes the federal, state, and local LORS relating to worker health and safety. Table 3.17-<u>6</u>5 also provides a summary of the applicable national consensus standards.

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
Federal				
Title 29 Code of Federal Regulations Part 1910	Contains the minimum occupational safety and health standards for general industry in the United States.	OSHA	The Project will implement procedures that will follow OSHA standards during construction and operation. Health and safety	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
			training and PPE will be provided for all employees.	
Title 29 Code of Federal Regulations Part 1926	Contains the minimum occupational safety and health standards for construction industry in the United States.	OSHA	The Project will implement procedures that will follow OSHA standards during construction and operation. Health and safety training and PPE will be provided for all employees.	Sections 3.17.2.3.1 through 3.17.2.3.3: Tables 3.17-3 and 3.17-4
State*				
California Occupational Safety and Health Act, 1970 (Title 8 California Code of Regulations)	Establishes minimum safety and health standards for construction and general industry operations in California.	Cal/OSHA	The Project will implement health and safety programs, and training will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 339	Lists hazardous substances requiring special handling and communication.	Cal/OSHA	Training will be provided under the Hazard Communication Program and Hazardous Waste Program.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1509	Requires a written safety program for construction sites.	Cal/OSHA	The Project will implement health and safety programs, and training will be provided to construction workers prior to construction and operations employees prior to operation. Specifically, the IIPP will address the requirement.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1528 et seq. and 3380 et seq.	Covers PPE requirements and general safety for construction workers.	Cal/OSHA	Training on the PPE Program will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1597 et seq. and 1590 et seq.	Governs equipment and operation of vehicles used exclusively on construction sites. Outlines safety requirements for private roadways and earthmoving operations on construction sites.	Cal/OSHA	All construction workers and operation employees will be trained on the Safe Driving Program. Construction workers and operations employees working on, near, or with heavy equipment will also be trained on the Motor Vehicle and Heavy Equipment Safety Program.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1604 et seq.	Governs the design. installation, operation, inspection. and maintenance of personnel hoists used during construction, alteration, or demolition of buildings and structures.	Cal/OSHA	Construction workers responsible for the oversight or conduct of hoisting and rigging will be trained on Fall Protection. Scaffolding/Ladder Safety, and Crane Safety Programs prior to Project construction.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1620 et seq. and 1723 et seq.	Addresses scaffolding safety standards. Includes fall protection requirements.	Cal/OSHA	Construction workers responsible for the oversight or conduct of hoisting and rigging will be trained on Fall Protection. Scaffolding/Ladder Safety. and Crane Safety Programs prior to Project construction.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
8 California Code of Regulations 1709 et seq.	Covers concrete and masonry construction safety.	Cal/OSHA	Project design will comply with requirements for steel reinforcing, concrete pouring, and structural steel erection operations. Detailed structural engineering drawings of the proposed seismic anchoring that are prepared, reviewed, and approved by a licensed structural engineer will be provided to the CEC during the plan check process. Preliminary structural engineering drawings are included in this application.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 1920 et seq.	Provides requirements for fire protection systems.	Cal/OSHA	Project design will incorporate requirements for fire protection systems, and training on the Fire Protection and Prevention Program will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 2300 et seq. and 2320 et seq.	Addresses general electrical safety orders— covers installation, maintenance, and protection of electrical systems.	Cal/OSHA	Training on the Electrical Safety Program will be provided to construction workers and operations employees required to work on electrical systems and equipment.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 2395 et seq.	Includes wiring design and protection standards.	Cal/OSHA	Training on the Electrical Safety Program will be provided to construction workers and operations employees required to work on electrical systems and equipment.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 2700 et seq.	Addresses electrical equipment safety, including grounding and circuit protection.	Cal/OSHA	Training on the Electrical Safety Program will be provided to construction workers and operations employees required to work on electrical systems and equipment.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3200 et seq.	Covers general workplace safety, including walking, surfaces, ventilation, and lighting.	Cal/OSHA	Health and safety training will be provided to operations employees prior to Project operation. Specifically, the IIPP will address the requirement.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3203 et seq.	Requires employers to establish, implement, and maintain a written IIPP that includes Responsibility Assignment, Compliance System, Communication System, Hazard Identification and Evaluation, Training & Instruction, Recordkeeping, etc.	Cal/OSHA	Health and safety training will be provided to operations employees prior to Project operation. Specifically, the IIPP will address the requirement.	Sections 3.17.2.3.1 through 3.17.2.3.3: Tables 3.17-3 and 3.17-4

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

	Requirements/	Administering		Opt-In Application
LORS	Applicability	Agency	Project Conformity	Reference
8 California Code of Regulations 3270 et seq. and 3209 et seq.	Addresses emergency exits and egress routes.	Cal/OSHA	Training on Emergency Response Action Program/Plan will be provided to all construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3301 et seq.	Addresses housekeeping and sanitation standards.	Cal/OSHA	Health and safety training will be provided to operations employees prior to Project operation. Specifically, the IIPP will address the requirement.	Sections 3.17.2.3.1 through 3.17.2.3.3: Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3360 et seq.	Addresses ergonomics, specifically repetitive motion injuries.	Cal/OSHA	Training on the IIPP and PPE Program will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3: Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3395	Applies to all outdoor places of employment, such as those in the agriculture, construction, and landscaping industries. For outdoor workplaces, employers must take steps to protect workers from heat illness. Some of the requirements include providing water, shade, rest, and training. The Project will comply with the regulation and prepare and implement a Heat Illness Prevention Plan.	Cal/OSHA	Training on the IIPP will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
Title 8 California Code of Regulations 3396	Applies to most indoor workplaces, such as restaurants, warehouses, and manufacturing facilities, where temperatures can get high. For indoor workplaces where the temperature reaches 82°F, employers must take steps to protect workers from heat illness. Some of the requirements include providing water, rest, cool-down areas, methods for cooling down the work area under certain conditions, and training. The Project will comply with the regulation and prepare and implement a Heat Illness Prevention Plan.	Cal/OSHA	Training on the IIPP will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
8 California Code of Regulations 3511 et seq. and 3555 et seq.	Covers machine guarding and mechanical equipment safety.	Cal/OSHA	Training on the Motor Vehicle and Heavy Equipment Safety Program will be provided to construction workers and operations employees working on. near. or with heavy equipment. Training on the Hand and Portable Power Tool Safety Program will also be provided to all construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3649 et seq. and 3700 et seq.	Covers powered industrial trucks (e.g., forklifts) and material handling equipment.	Cal/OSHA	Training on the Safe Driving Program and the Forklift Operation Program will be provided to all construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 3940 et seq.	Covers safety for compressed gas systems.	Cal/OSHA	Training on the Electrical Safety Program will be provided to construction workers and operations employees required to work on electrical systems and equipment.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5109 et seq. and 5110 et seq.	Includes emergency medical services and first aid requirements.	Cal/OSHA	Training on the IIPP and First Aid. CPR. and Automated External Defibrillator Program will be provided to construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5139 et seq	Establishes minimum standards to protect employees from harmful exposure to dusts, fumes, mists, vapors, and gases.	Cal/OSHA	Training on the Respiratory Protection Program will be provided to construction workers and operations employees required to wear respiratory protection.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
Title 8 California Code of Regulations Section 5141, Valley Fever	Requires employers to prevent harmful exposures to airborne contaminants—including fungal spores that cause valley fever (Coccidioidomycosis)—through a hierarchy of controls. The Project will meet requirements for preventing respiratory illness such as valley fever by implementing construction and operations health and safety programs, respiratory protection programs, and fugitive dust control best management practices. Please refer to MM-AO-4.	Cal/OSHA	Training on the Respiratory Protection Program will be provided to construction workers and operations employees required to wear respiratory protection. Training on the IIPP will be provided to all construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
Title 8 California Code of	Requires employers to determine employee	Cal/OSHA	The Project's Employee Exposure Awareness Program will incorporate	Sections 3.17.2.3.1 through 3.17.2.3.3;

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

	1			
LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
Regulations Section 5141.1m Protection from Wildfire Smoke	exposure to fine particulate matter (PM2.5) for worksites at the start of each shift and periodically thereafter as needed. Employers must implement measures and controls to protect workers when the current Air Quality Index is 151 or greater, including communication systems. training, engineering controls, changes to work schedules or procedures, providing respiratory protection, and other measures.		air quality and wildfire monitoring requirements and controls.	Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5150 et seq	Includes ventilation standards for indoor air quality.	Cal/OSHA	Training on the Confined-Space Entry Program will be provided to construction workers and operations employees required to supervise or perform confined- space entry.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5155 et seq.	Protects workers from harmful exposure to airborne substances.	<u>Cal/OSHA</u>	Training on the Respiratory Protection Program will be provided to construction workers and operations employees required to wear respiratory protection. Training on the IIPP will be provided to all construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5160 et seq.	Establishes the minimum safety standards for the use, handling, and storage of hazardous substances.	Cal/OSHA	Health and safety training programs including Hot Work, Hazard Communication, Hazardous Waste, and IIPP will be provided to construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5184 et seq.	Applies to stationary battery systems used for emergency, standby, or uninterrupted power. Requires systems to include approved equipment and procedures to detect and control failures.	Cal/OSHA	Cal/OSHA requirements for storage battery systems are addressed through Project design.	Section 3.17.2.4; Table 3.17-6 (see NFPA information)
8 California Code of Regulations 5185 et seq.	Covers safe handling of batteries.	Cal/OSHA	Cal/OSHA requirements for storage battery systems are addressed through Project design.	Section 3.17.2.4: Table 3.17-6 (see NFPA information)
8 California Code of Regulations 5192 et seq.	Governs hazardous waste site operations and emergency response activities involving hazardous substances.	Cal/OSHA	Training on Emergency Response Action Program/Plan will be provided to all construction workers prior to construction and operations employees prior to operation.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
8 California Code of Regulations 5193 et seq.	Protects workers from exposure to infectious materials.	Cal/OSHA	Training on the IIPP will be provided to all construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5194 et seq.	Ensures that employees are informed about hazardous chemicals they may encounter at work.	Cal/OSHA	Health and safety training programs including Hazard Communication, Hazardous Waste, and IIPP will be provided to construction workers and operations employees.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 5405 et seq 5426 et seq 5465 et seq 5500 et seq 5521 et seq 5545 et seq 5554 et seq 5565 et seq 5583 et seq., and 5606 et seq.	Includes General Industry Safety Orders— specifically the sections dealing with flammable liquids, gases, vapors, and industrial plant safety. These regulations span Articles 141 through 151 and are designed to prevent fires, explosions, and chemical exposure in workplaces that handle hazardous substances.	Cal/OSHA	Training on Flammable and Combustible Liquid Storage and Handling will be provided for all construction workers and employees responsible for the handling and storage of such materials.	Sections 3.17.2.3.1 through 3.17.2.3.3; Tables 3.17-3 and 3.17-4
8 California Code of Regulations 6150 et seq., 6151 et seq., 6165 et seq., 6170 et seq., and 6175 et seq.	Includes fire protection standards for general industry workplaces. These sections focus on fire extinguishers, fire suppression systems, and emergency preparedness.	Cal/OSHA	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	Section 3.17.2.4
Title 24, Part 3, California Electrical Code	Requirements for electrical safety, which include the Uniform Electrical Code, Title 24, Part 3.	Cal/OSHA	Detailed electrical system design information has been provided to the CEC for review as part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	Section 3.17.2.4
Title 24, Part 9, Chapter 12, Section 1207, Title 24, Part 9, Chapter 6, Section 608	California Fire Code requirements for stationary storage battery systems.	Cal/OSHA	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	Section 3.17.2.4
Health and Safety Code Sections 25500 through 25541	Requirements for the preparation of a Hazardous Material Business Plan that details emergency response plans for a hazardous material emergency at the facility.	Cal/OSHA	The facility will be required to prepare and submit an HMBP for hazardous materials stored on site. HMBPs are submitted through CERS online; submittals then go to Los Angeles County for review and further inspection. HMBPs are updated annually, or within 30 days of a change in hazardous material or waste storage at a facility.	Section 3.5.2.3.2 and Section 3.5.5.2

Table 3.17-<u>6</u>5. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
Local				
Specific hazardous material handling requirements	Hazardous materials used or stored must conform to the Uniform Fire Code.	Los Angeles County Department of Public Health, Environmental Health; Los Angeles County Fire Department, Health Hazardous Materials Division	The facility will be required to prepare and submit an HMBP for hazardous materials stored on site. HMBPs are submitted through CERS online; submittals then go to Los Angeles County for review, and further inspection. HMBPs are updated annually, or within 30 days of a change in hazardous material or waste storage at a facility.	Section 3.5.2.3.2 and Section 3.5.5.2
Hazardous Materials Business Plan	Los Angeles County Fire Department is the designated Certified Unified Program Agency and is responsible for administering Hazardous Materials Business Plans.	Los Angeles County Fire Department, Health Hazardous Materials Division	The facility will be required to prepare and submit an HMBP for hazardous materials stored on site. HMBPs are submitted through CERS online; submittals then go to Los Angeles County for review, and further inspection. HMBPs are updated annually, or within 30 days of a change in hazardous material or waste storage at a facility.	Section 3.5.2.3.2 and Section 3.5.5.2
Industry Standard				
National Fire Protection Association (NFPA) 855 Standard for the Installation of Stationary Energy Storage Systems	NFPA 855 provides guidelines regarding the minimum requirements for mitigating the potential hazards associated with the battery energy storage system. Although not codified in state or local LORS, NFPA 855 is included here as an industry standard that the Project will meet.	Los Angeles County Fire DepartmentN/A	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>
NFPA 850 Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations	NFPA 850 provides recommendations for fire protection for electric generating plants and high voltage direct current converter stations.	Los Angeles County Fire Department N/A	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>
NFPA 72 National Fire Alarm and Signaling Code	NFPA 72 provides guidelines regarding the installation of the fire alarm system.	Los Angeles County Fire Department N/A	As part of plan check, fire alarm system design information will be submitted to the CEC for review and approval to ensure the Project is compliant with the applicable portions of the National Fire Alarm Code.	Section 3.17.2.4

Table 3.17-<u>65</u>. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Project Conformity	Opt-In Application Reference
NFPA 69 Standard on Explosion Prevention Systems	NFPA 69 provides standards for the design, installation, operation, maintenance, and testing of systems for the prevention of explosions by means of the following methods: (1) control of oxidant concentration, (2) control of combustible concentration, (3) predeflagration detection and control of ignition sources, (4) explosion suppression, (5) active isolation, (6) passive isolation, (7) deflagration pressure containment, and (8) passive explosion suppression.	Los Angeles County Fire Department N/A	Explosion prevention system design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>
NFPA 68 Standard on Explosion Protection by Deflagration Venting	NFPA 68 provides standards for explosion protection by deflagration venting.	Los Angeles County Fire Department N/A	Explosion venting system design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>
NFPA 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances	NFPA 24 provides guidelines regarding the installation of private fire service mains and fire hydrants.	Los Angeles County Fire Department N/A	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>
NFPA 22 Standard for Water Tanks for Private Fire Protection	NFPA 22 provides guidelines regarding the installation of water tanks.	Los Angeles County Fire Department N/A	Detailed fire protection design information has been provided to the CEC for review as a part of the opt-in application process. The Project will complete additional reviews as part of plan check prior to construction.	<u>Section 3.17.2.4</u>

Notes: LORS = Laws, Ordinances, Regulations, and Standards; OSHA = Occupational Safety and Health Administration; PPE = personal protective equipment; Cal/OSHA = California Occupational Safety and Health Administration; IIPP = Injury and Illness Prevention Program; CEC = California Energy Commission; NFPA = National Fire Protection Association; HMBP = hazardous materials business plan; CERS = California Environmental Reporting System; N/A = not applicable.

3.17.4 Agencies and Agency Contacts

Applicable agency contacts for worker health and safety are shown in Table 3.17-76.

^{*} State and local approvals will be superseded by California Energy Commission approval of the Project under the Opt-In Program.

Table 3.17-76. Agencies and Agency Contacts

Issue/Approval	Agency	Applicability
Worker Health and Safety	Cal/OSHA, Regional Office (Region 4) Hassan Adan, Region 4 Manager 800 Royal Oaks Drive, Suite 105 Monrovia, CA 91016 626.471.9122 DOSHREG4Monrovia@dir.ca.gov	Incident reporting
	Van Nuys District Office Vacant, District Manager 6150 Van Nuys Boulevard, Suite 405 Van Nuys, CA 91401 818.901.5403 DOSHVN@dir.ca.gov	
Hazardous Materials Business Plan*	Los Angeles County Fire Department, Health Hazardous Materials Division Mario Tresierras, Division Chief 5825 Rickenbacker Road Commerce, CA 90040 323.890.4045 Fire-HHMDCERS@fire.lacounty.gov	Hazardous materials compliance
Plan check review*	Los Angeles County Fire Department, Fire Prevention Division Richard H. Stillwagon, Division Chief 5823 Rickenbacker Road Commerce, CA 90040 323.890.4243 richard.stillwagon@fire.lacounty.gov	Fire protection compliance

Notes: Cal/OSHA = California Occupational Safety and Health Administration

3.17.5 Permits and Permit Schedule

Table 3.17-8 lists the permits related to worker health and safety and the permit schedule. GHowever, given the California Energy Commission's preemptive authorities under applicable state law, there are no additional applicable permits or permit schedule for worker health and safety.

Table 3.17-8. Permits and Permit Schedule for Worker Health and Safety

<u>Permit</u>	<u>Agency</u>	<u>Status</u>
Trenching and excavation permit	Any Cal/OSHA district or field office	Will be obtained prior to construction
Erecting structure over 36 feet in height or erecting scaffolding over 36 feet in height	Any Cal/OSHA district or field office	Will be obtained prior to construction

^{*} Approval of the Hazardous Materials Business Plan from the Los Angeles County Fire Department will be superseded by California Energy Commission (CEC) approval of the Project under the Opt-In Program. In addition, Project plan approval from the Los Angeles County Fire Department will be superseded by CEC approval of the Project under the Opt-In Program.

Confined spaces	Any Cal/OSHA district or field office	Will be obtained prior to construction
Building and grading permits, including fire extinguishing and fire	Los Angeles County*	Will be obtained prior to construction
suppression systems review		

Notes: Cal/OSHA = California Occupational Safety and Health Administration.

^{*} The issuance of permits from these agencies will be superseded by California Energy Commission (CEC) approval of the Project under the Opt-In Program.

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Attachment 27

Appendix 3.17G - Sungrow PTII Confirmation



Re: Sungrow NFPA Report Approval

From @sungrow-na.com>

Date Mon 9/15/2025 2:42 PM

To @sungrowamericas.com>

@sungrowamericas.com>

Hello Garrett,

Pardon the delayed response, Sungrow approves using the UFPA 68 and 69 reports. Regarding thermal incidents with Power Titan 2, Sungrow has had none.

Thank you,



From:

Sent: Monday, September 15, 2025 12:17 PM

To: Garrett Lehman sungrowamericas.com>

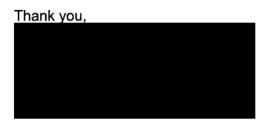
Subject: RE: Sungrow NFPA Report Approval

[EXTERNAL EMAIL] This email was sent from outside Sungrow.

Check the sender's email address carefully for misspellings or impersonation. Do not click links, open or download attachments, or respond unless you have verified the sender through a known contact method. Be cautious of unusual requests, urgent language, or unexpected attachments. If in doubt, report it to your IT Department.

Hi

Hope you are well rested after a busy but productive week at the show. Would you be able to provide us a response by EOD today on this?



From: Garrett Lehman

Sent: Monday, September 8, 2025 10:50 AM

To: @sungrowamericas.com>

Subject: Re: Sungrow NFPA Report Approval



Just bringing this back to the top of your email.

We are currently working on a permitting application using the PTII system for an upcoming project in CAISO. Do we have Sungrow's approval to include the UFPA 68 and 69 reports in our package?

Also, do you have any information on the number of thermal incidents that have occurred with the PTII? The permitting agency is asking.

Thanks

Garrett Lehman



From:

Sent: Wednesday, September 3, 2025 11:28 AM

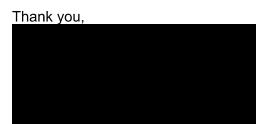
To: @sungrowamericas.com

Cc: Garrett Lehman

Subject: Sungrow NFPA Report Approval



We are currently working on a permitting application using the PTII system for an upcoming project in CAISO. Do we have Sungrow's approval to include the UFPA 68 and 69 reports in our package?



Attachment 28

Updated Appendix 2A - Update Site Plan Package

Section 2.0

Project Description Appendices 1 of 4

Appendix 2A
Site Plan Package
1 of 2

DWG. NO.	DRAWING TITLE		
PSR-SE-101_S001	GENERAL ARRPSREMENT		
PSR-SE-101_S002	PROJECT SITE PLAN		
PSR-SE-102_S001	LIGHTING PLAN		
PSR-SE-103_S001	DISTRIBUTION LINE RE-ROUTE		
PSR-SE-402_S001	TYPICAL 34.5KV SWITCHYARD SECTIONS		
PSR-SE-402_S002	TYPICAL 34.5KV SWITCHYARD SECTIONS 2		
PSR-SE-403_S001	TYPICAL SPARE PART CONTAINER SECTIONS		
PSR-SE-014_S001	500KV SWITCHYARD TYPICAL SECTION VIEW		
PSR-SE-014_S007	500KV SWITCHYARD TYPICAL SECTION VIEW 2		
PSR-SE-015_S002	TYPICAL 500KV SWITCHYARD ELECTRICAL EQUIPMENT ENCLOSURE		
PSR-SE-015_S005	TYPICAL SUBSTATION BATTERY BACKUP ENCLOSURE SECTIONS		

PRAIRIE SONG RI	ELIABILITY PROJECT DRAWING LIST (SUBSTATION ELECTRICAL)
DWG. NO.	DRAWING TITLE
PSR-SE-001_S001	SINGLE LINE

PRAIRIE SONG RELIABILITY PROJECT DRAWING LIST (T-LINE) DWG. NO. DRAWING TITLE PRAIRIE SONG RELIABILITY 500kV TRANSMISSION LINE COVER PAGE PSR-TL-001 CONSTRUCTION NOTES AND DRAWING LIST PSR-TL-002 PSR-TL-003 S001 NORTH ROUTE: PLAN AND PROFILES PSR-TL-003 S002 SOUTH ROUTE: PLAN AND PROFILES SOUTH ROUTE: PLAN AND PROFILES (CONT.) PSR-TL-003 S003 PSR-TL-003 S004 SCE DESIGN: PLAN AND PROFILES PSR-TL-004 SITE OVERVIEW PSR-TL-005 DELTA MONOPOLE SUSPENSION STRUCTURE MONOPOLE DEADEND STRUCTURE (0°-55°) PSR-TL-006 MONOPOLE DEADEND STRUCTURE (55°-90°) PSR-TL-007 MONOPOLE DEADEND STRUCTURE (90°-140°) PSR-TL-008 PSR-TL-009 DHA-4 LATTICE TOWER

	HOL	D INFORMATION	
NO.		DESCRIPTION	
APPRO SAFET' WORK INSTAL	PRIATE PRECA Y OF ALL PEOF SITE, INCLUDIA LER'S PERSON	LLER SHALL TAKE ALL AUTIONS TO ENSURE THE PLE LOCATED ON THE NG CONTRACTOR'S/ NNEL (OR THAT OF ITS)) PERFORMING THE WORK.	
000 00	· ·	ASE INFORMATION	
REV.	DATE	DESCRIPTION	
0A	3/31/2025	ISSUED FOR PERMIT	
0B	5/16/2025	ISSUED FOR PERMIT	
SPECIF PROJE I HERE DOCUM MY DIR THAT I ENGINI	MENT WAS PRE RECT PERSONA AM A DULY LIC EER UNDER TH LIFORNIA.	ISSUED FOR PERMIT - 15474.001 HAT THIS ENGINEERING EPARED BY ME OR UNDER AL SUPERVISION AND CENSED PROFESSIONAL HE LAWS OF THE STATE PRELIMINARY PURPOSES	
PREPA REVIEW APPRO	P.E. P.E. RED BY: CA WED BY: JT OVED BY: ODIFICATION C	BICKETT LICENSE #95825 BR-001.DWG AF/JN P OR ADDITION TO THIS BANIZATION OTHER THAN	
SARGE	ENT & LUNDY, I		

CHICAGO, ILLINOIS 60603-5780

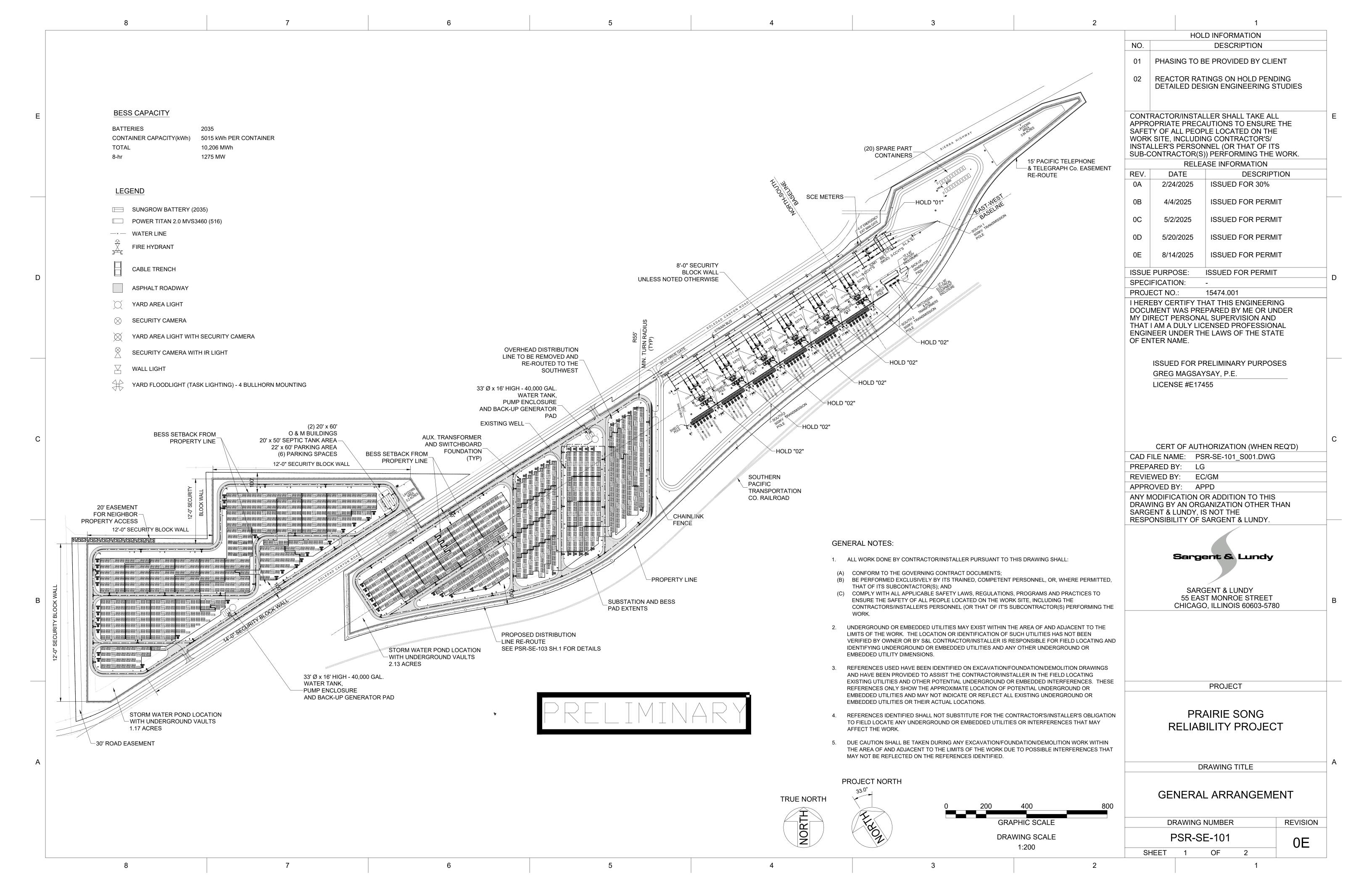
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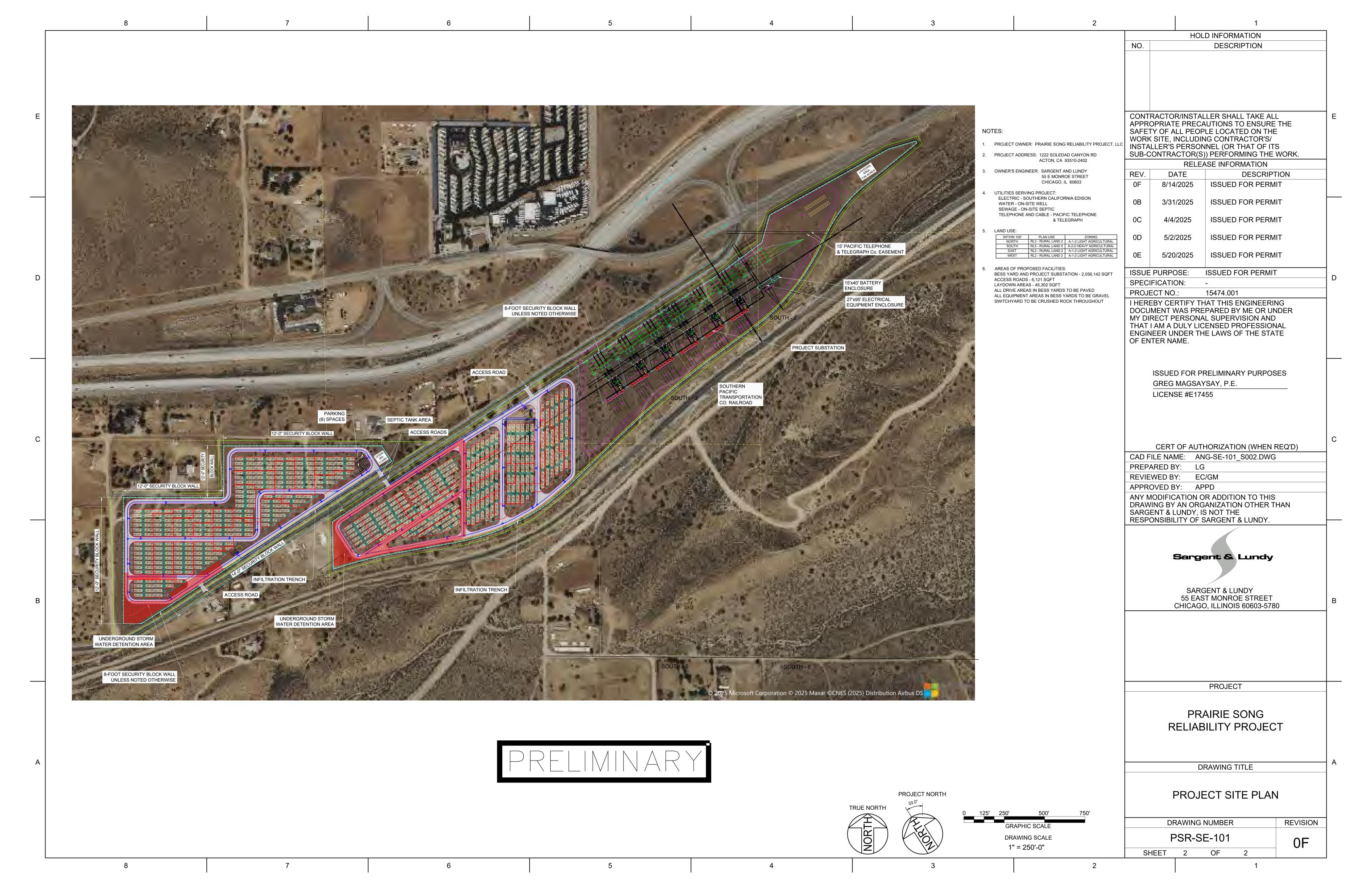
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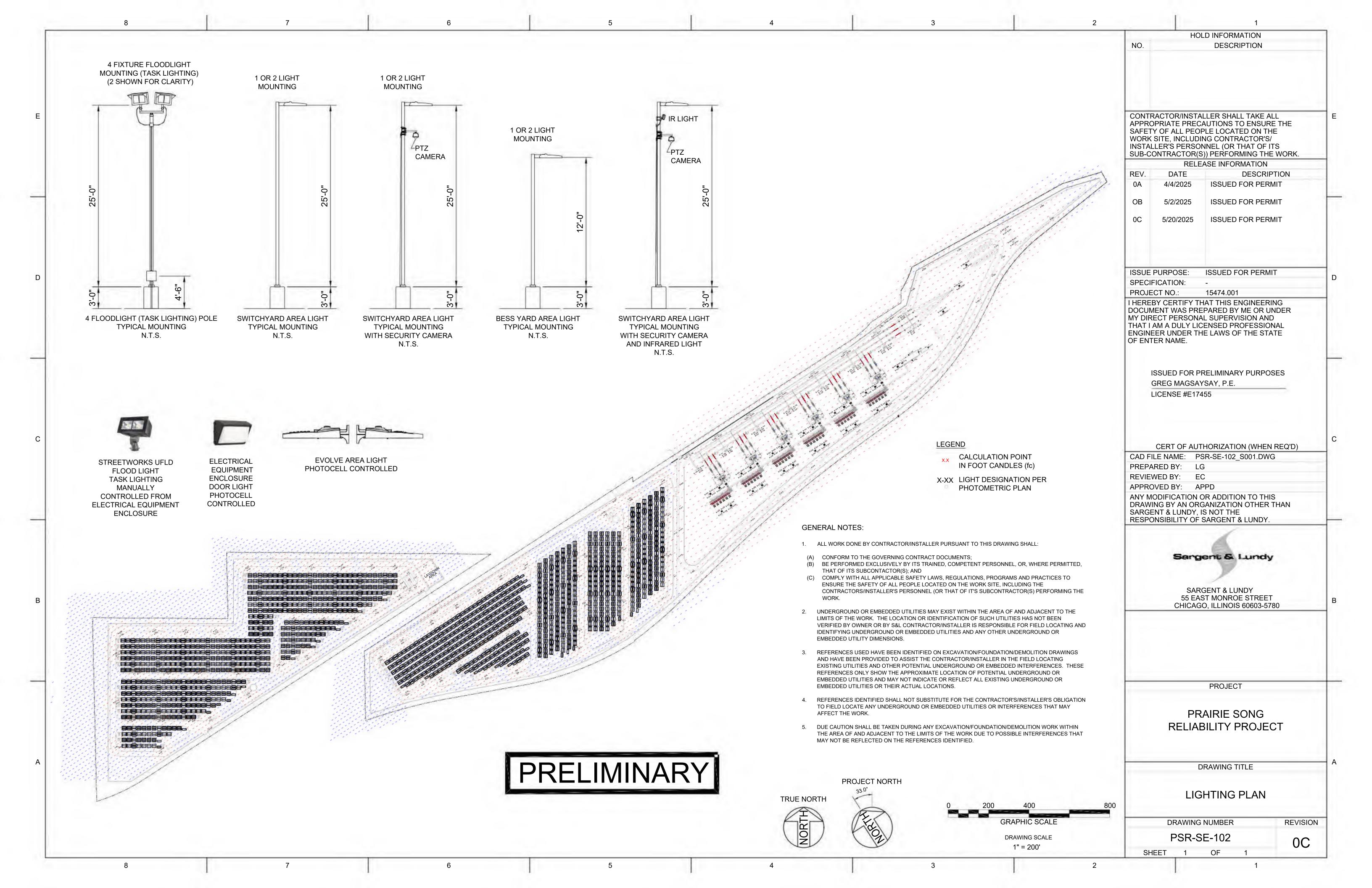
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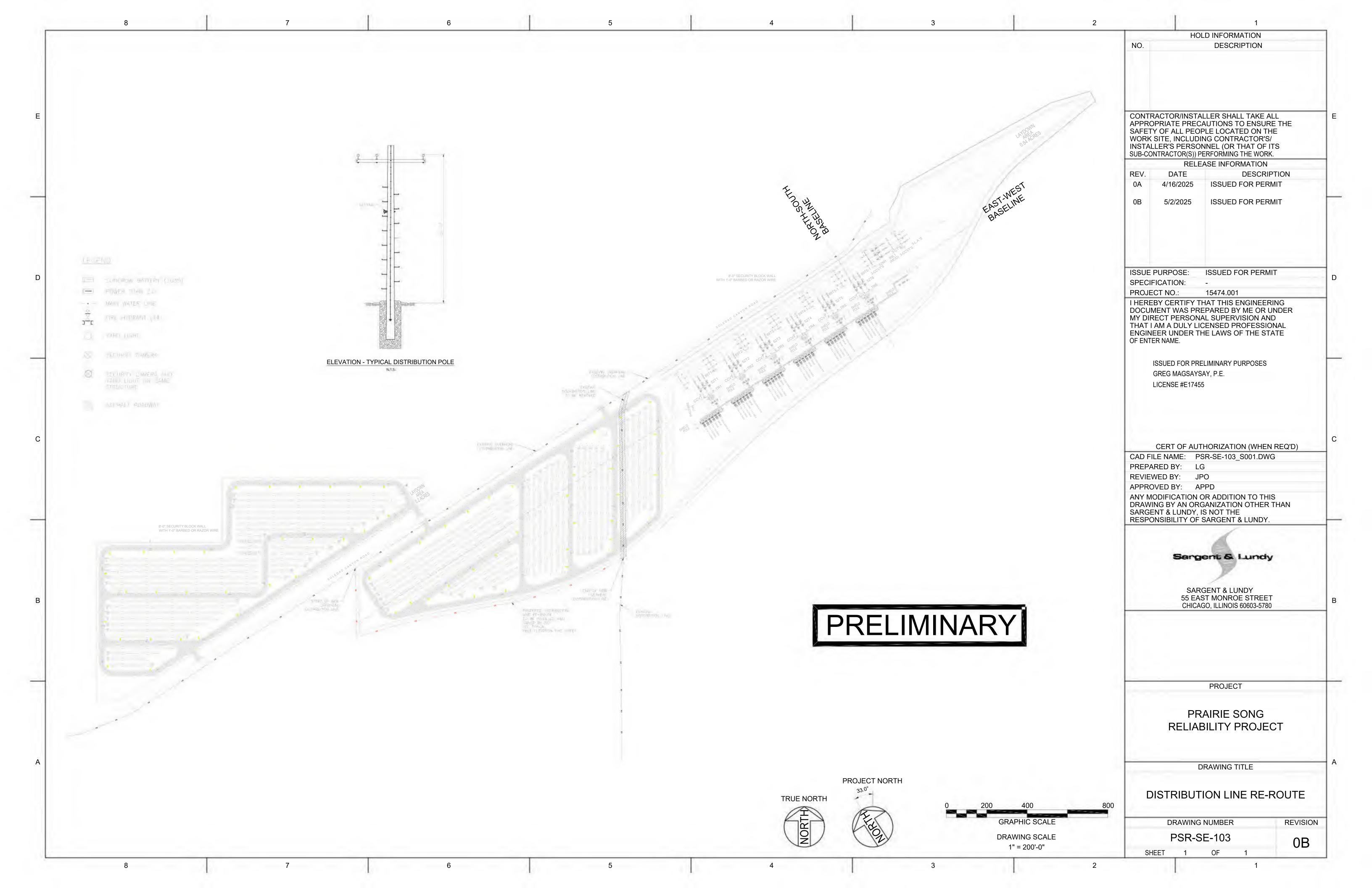
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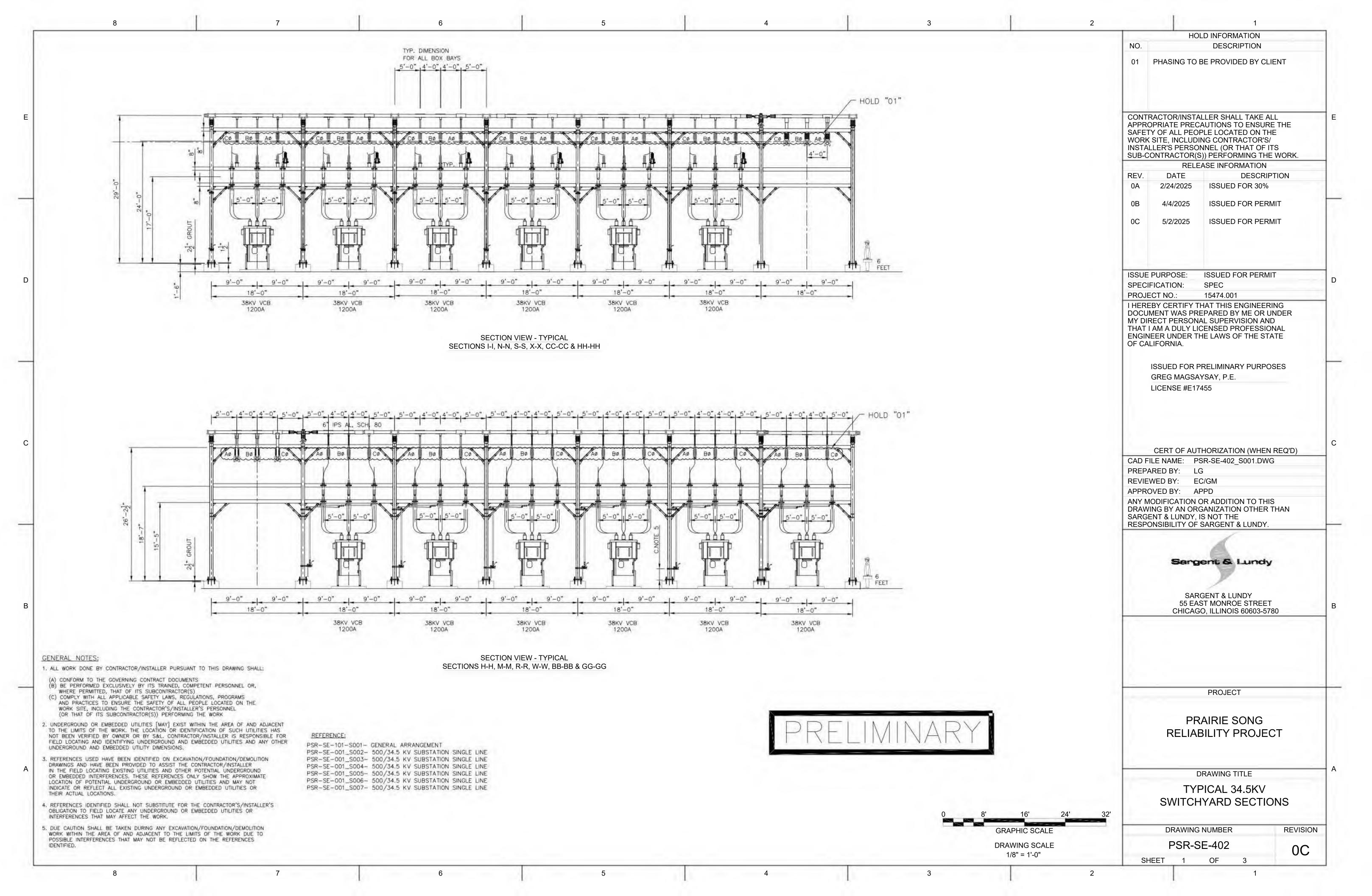
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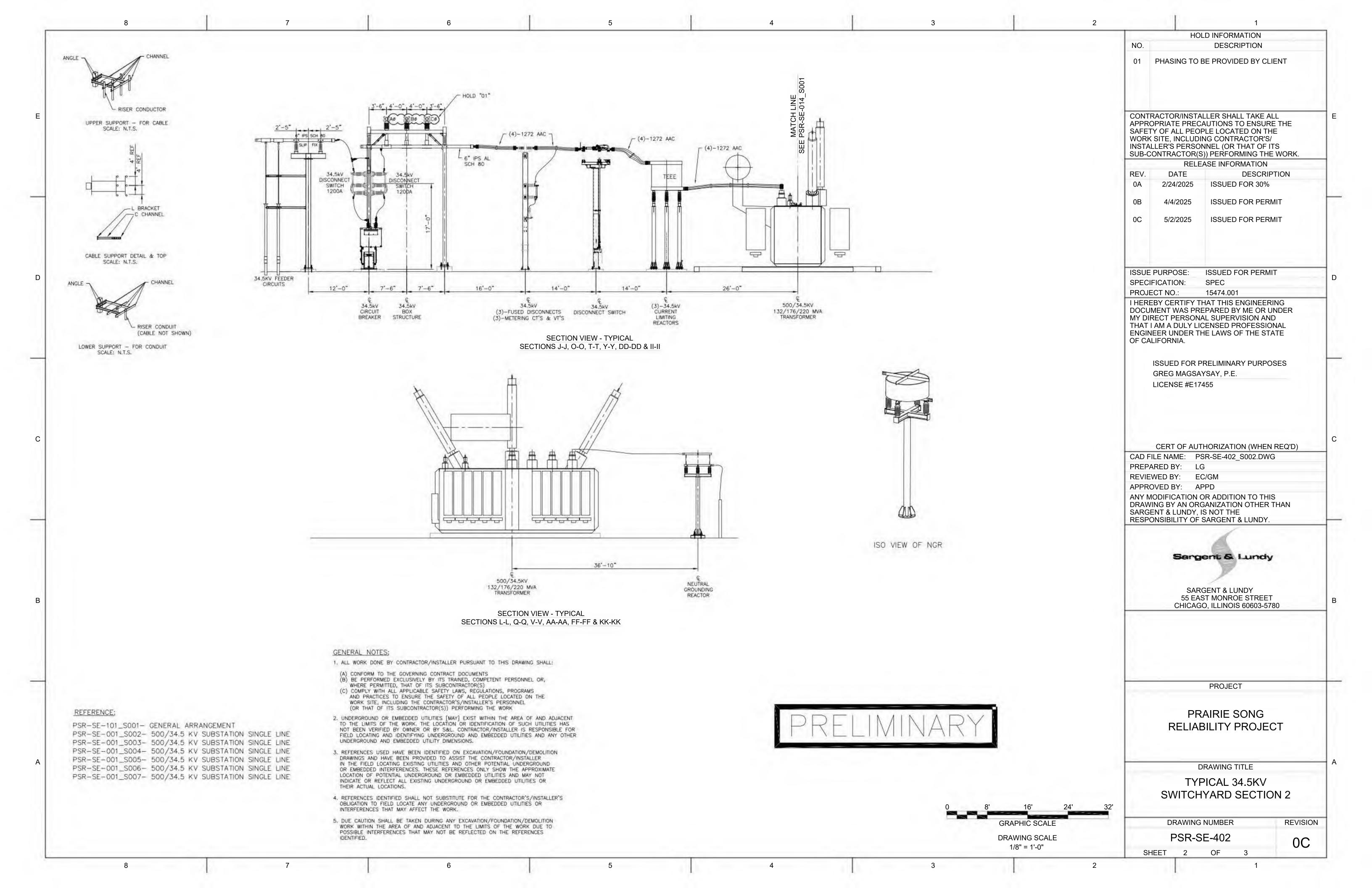


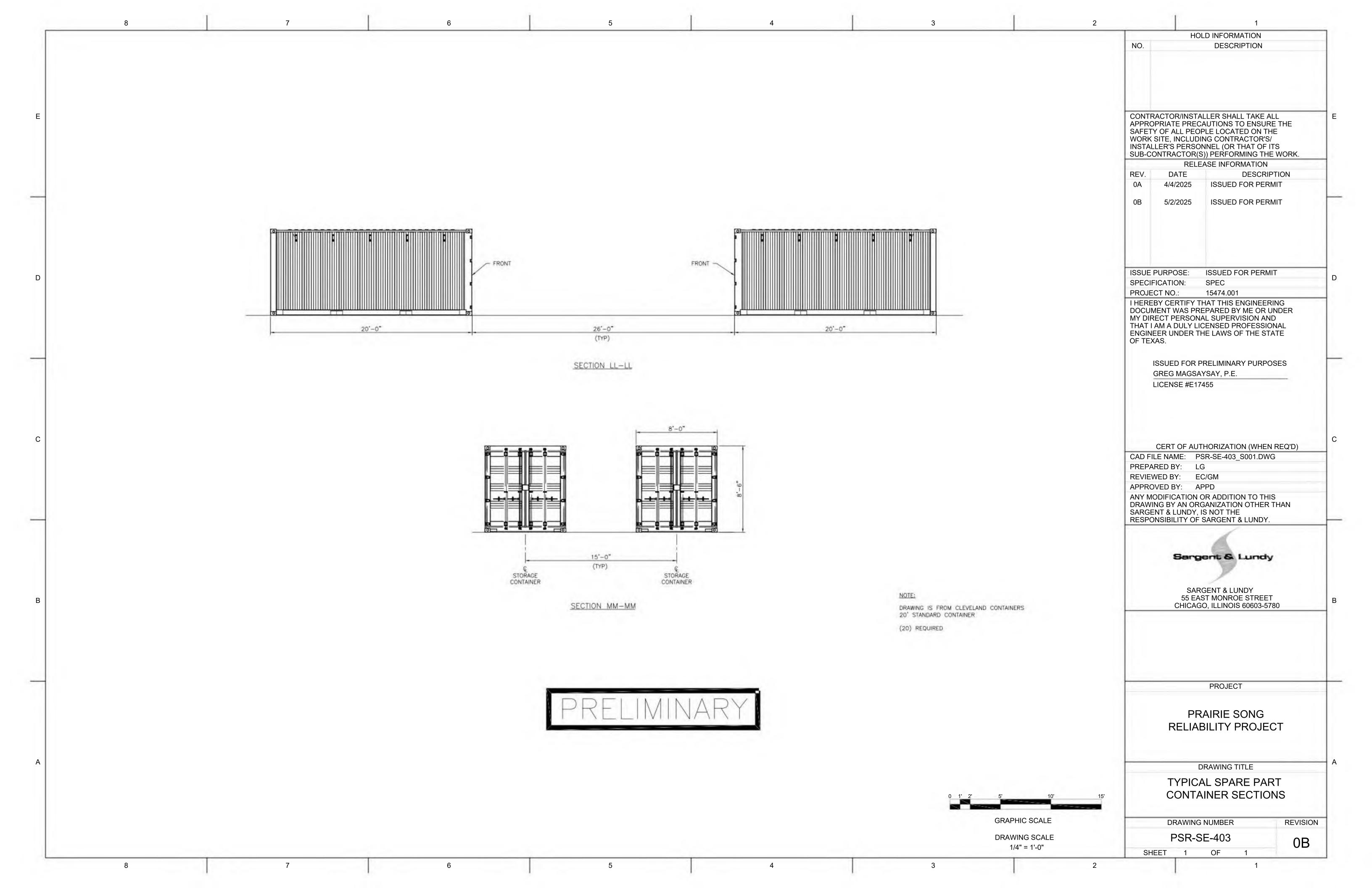


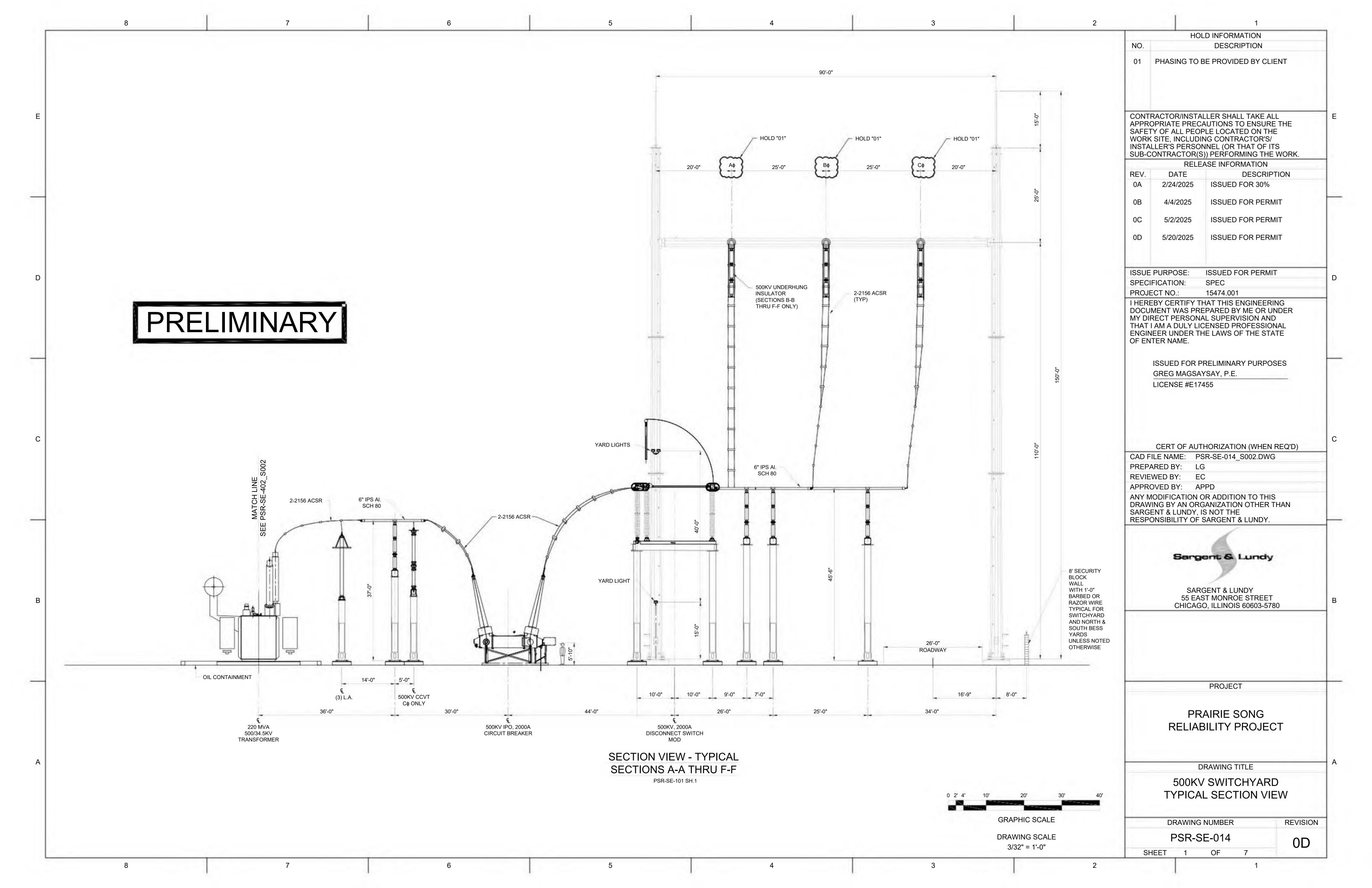


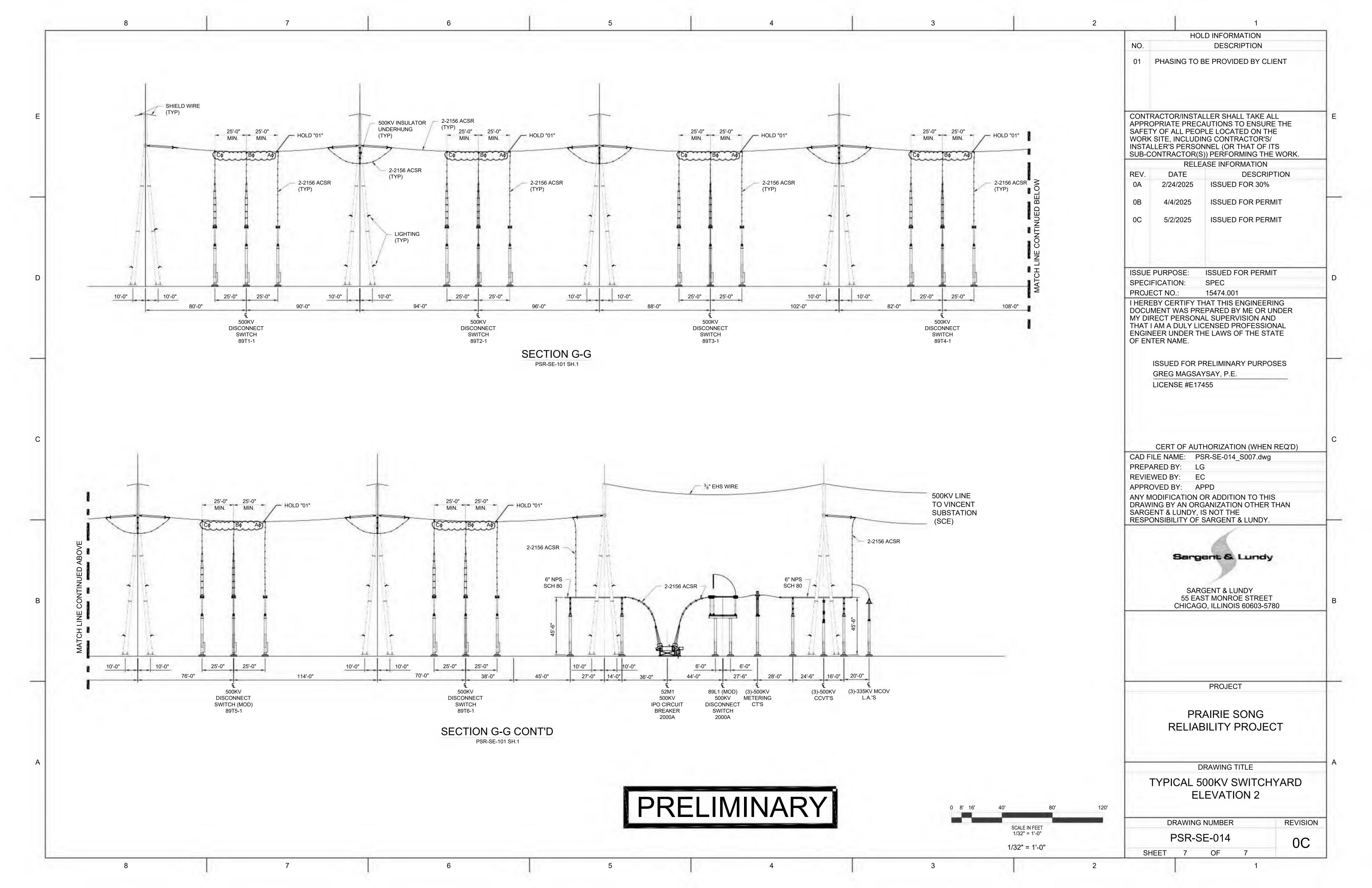


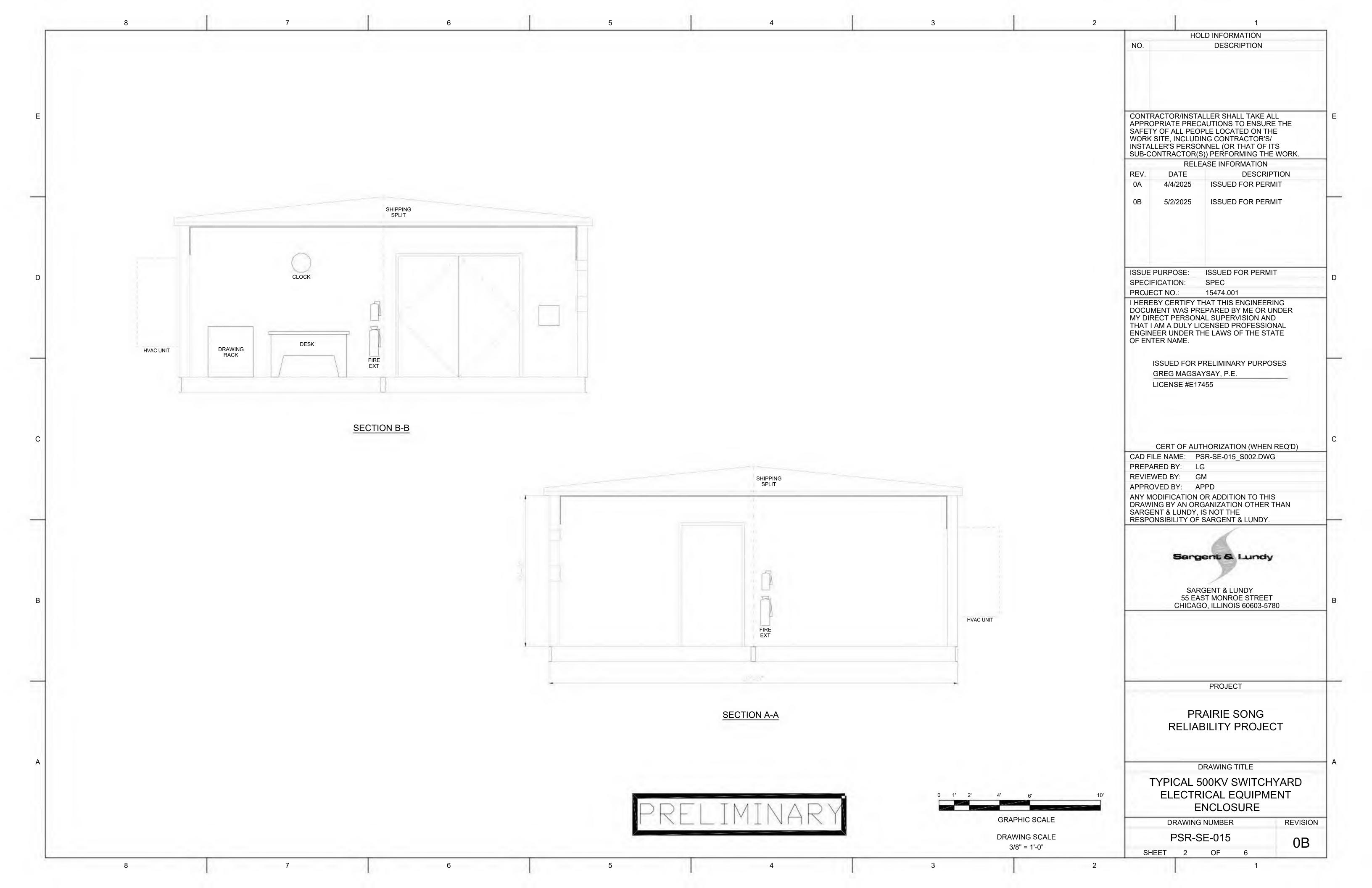


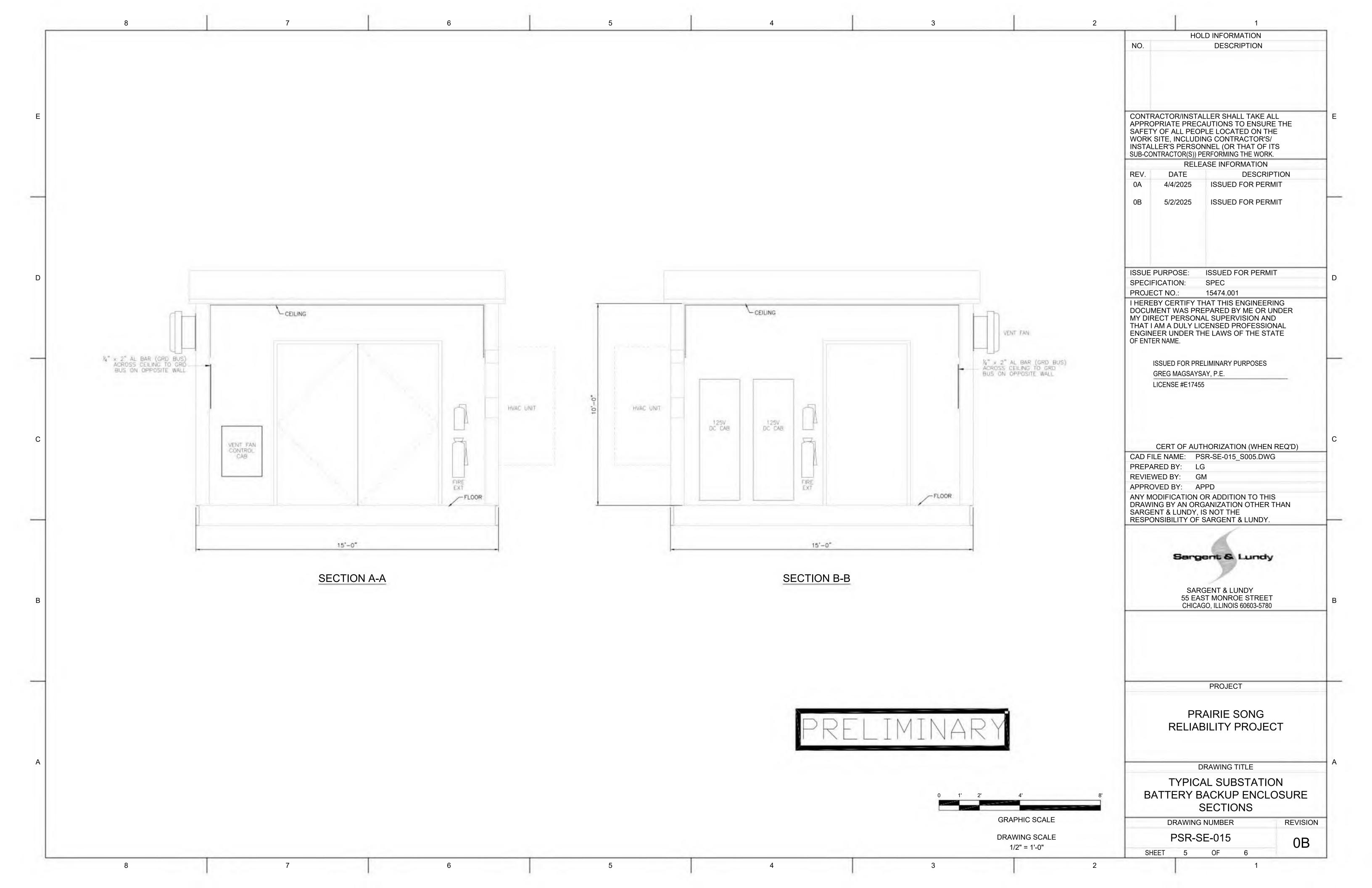


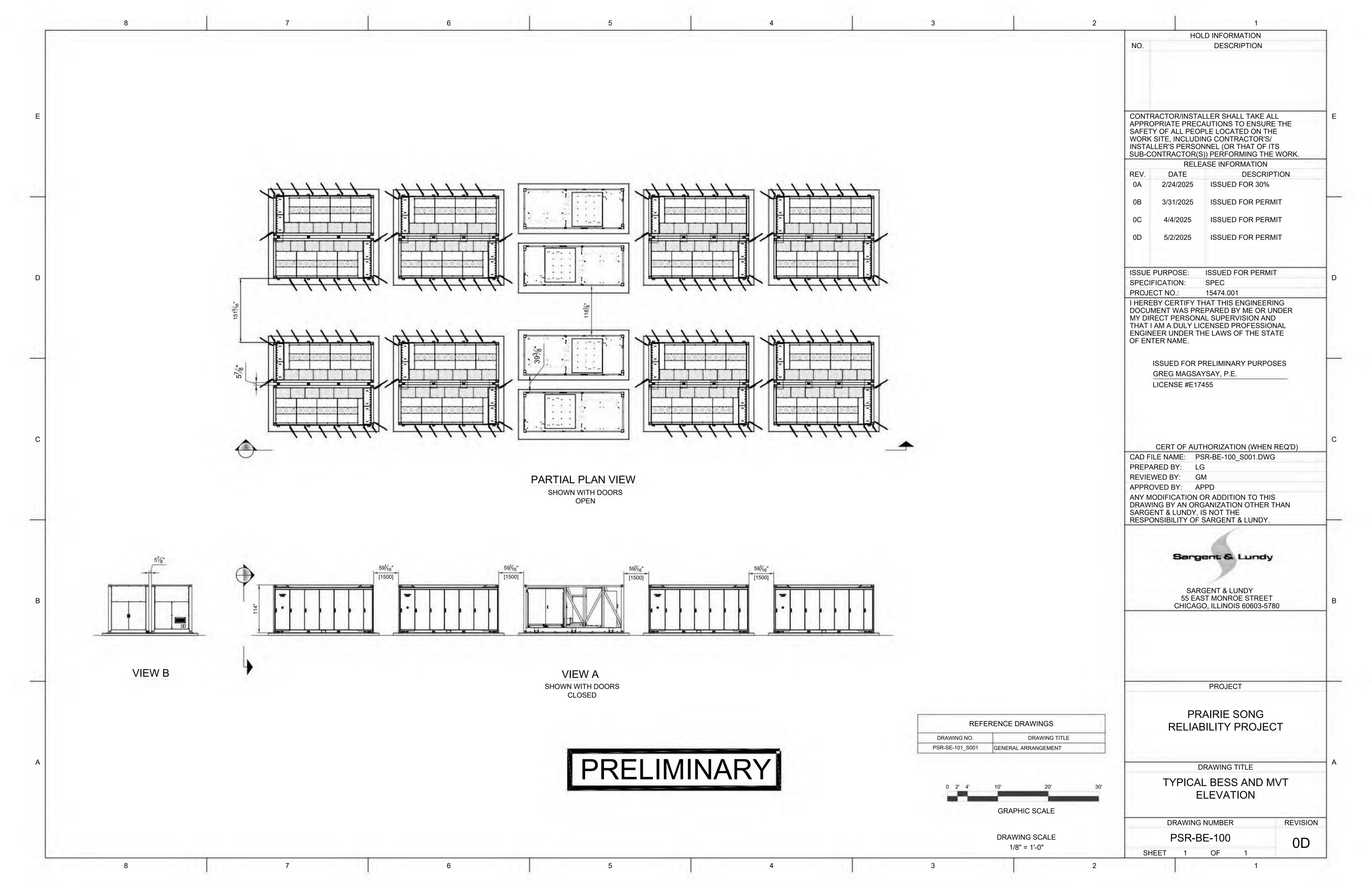


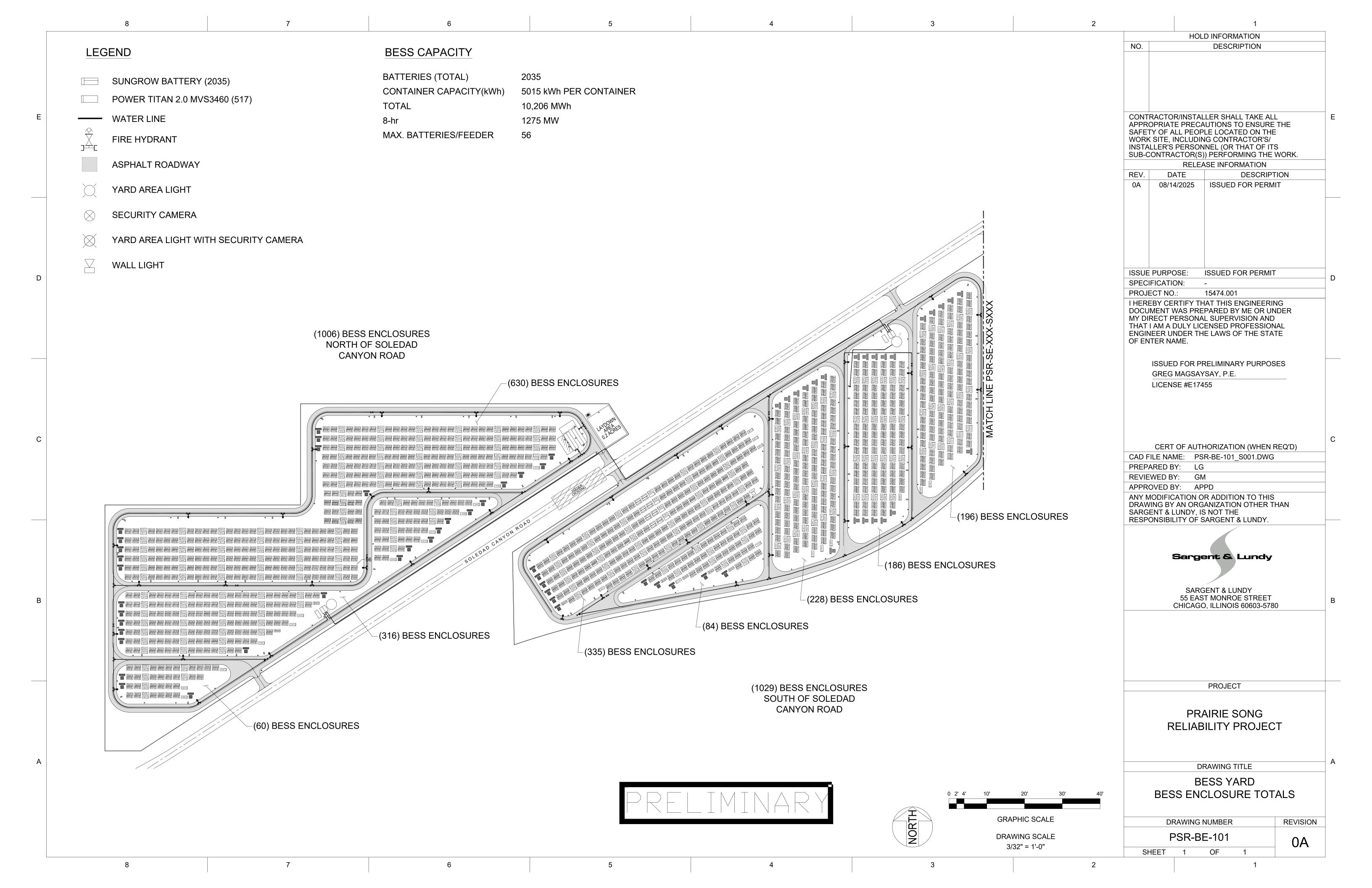


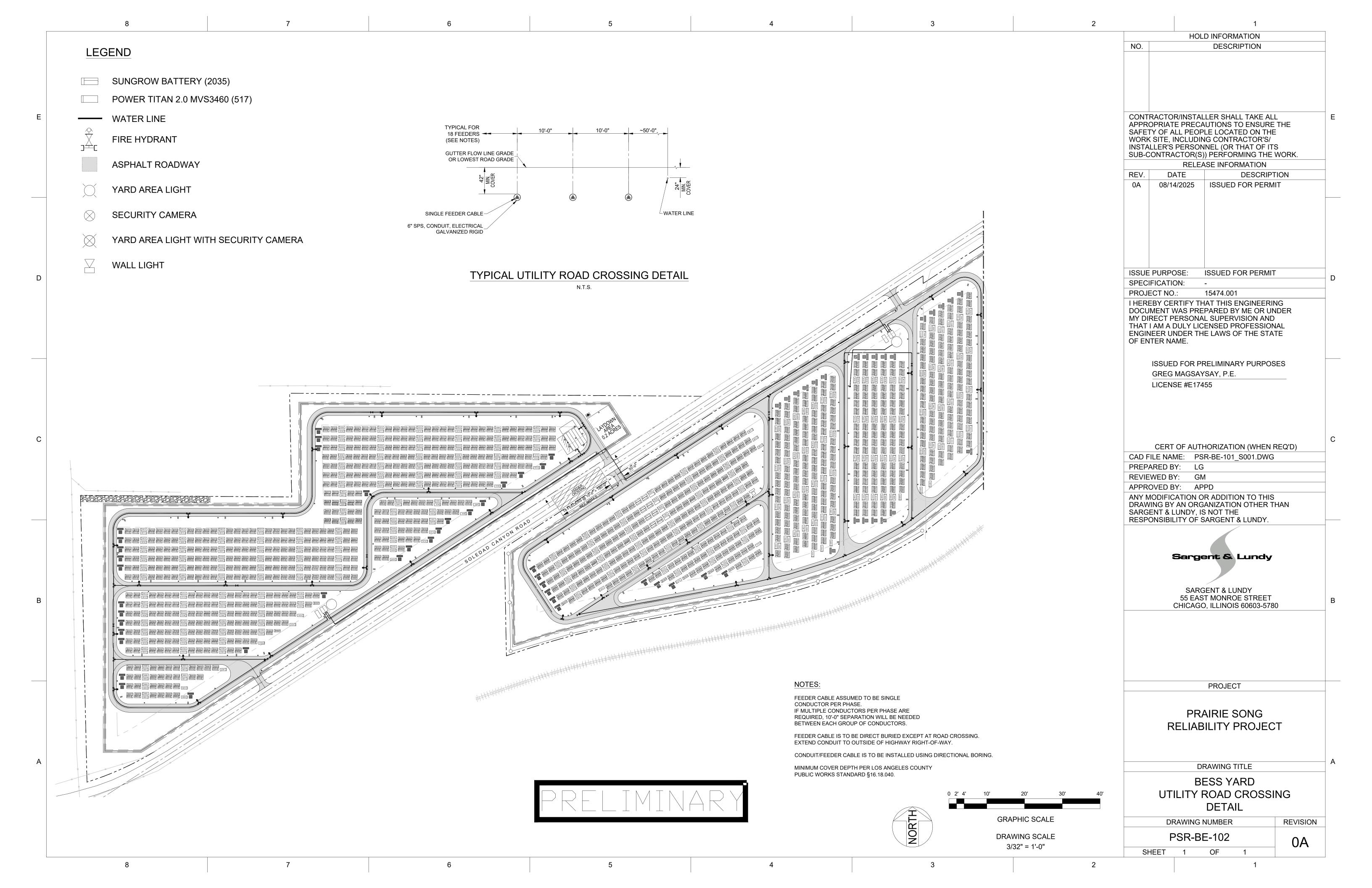


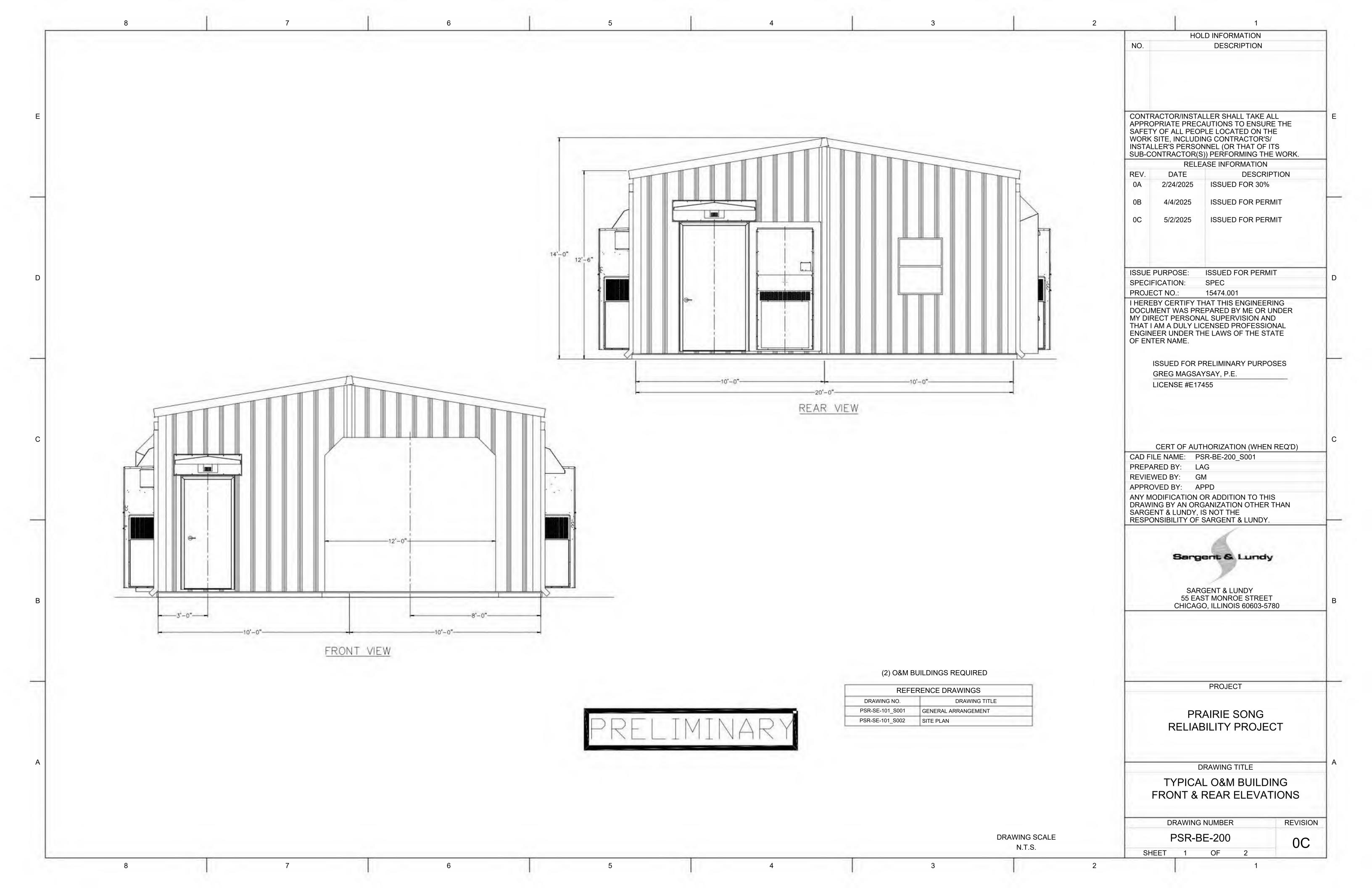


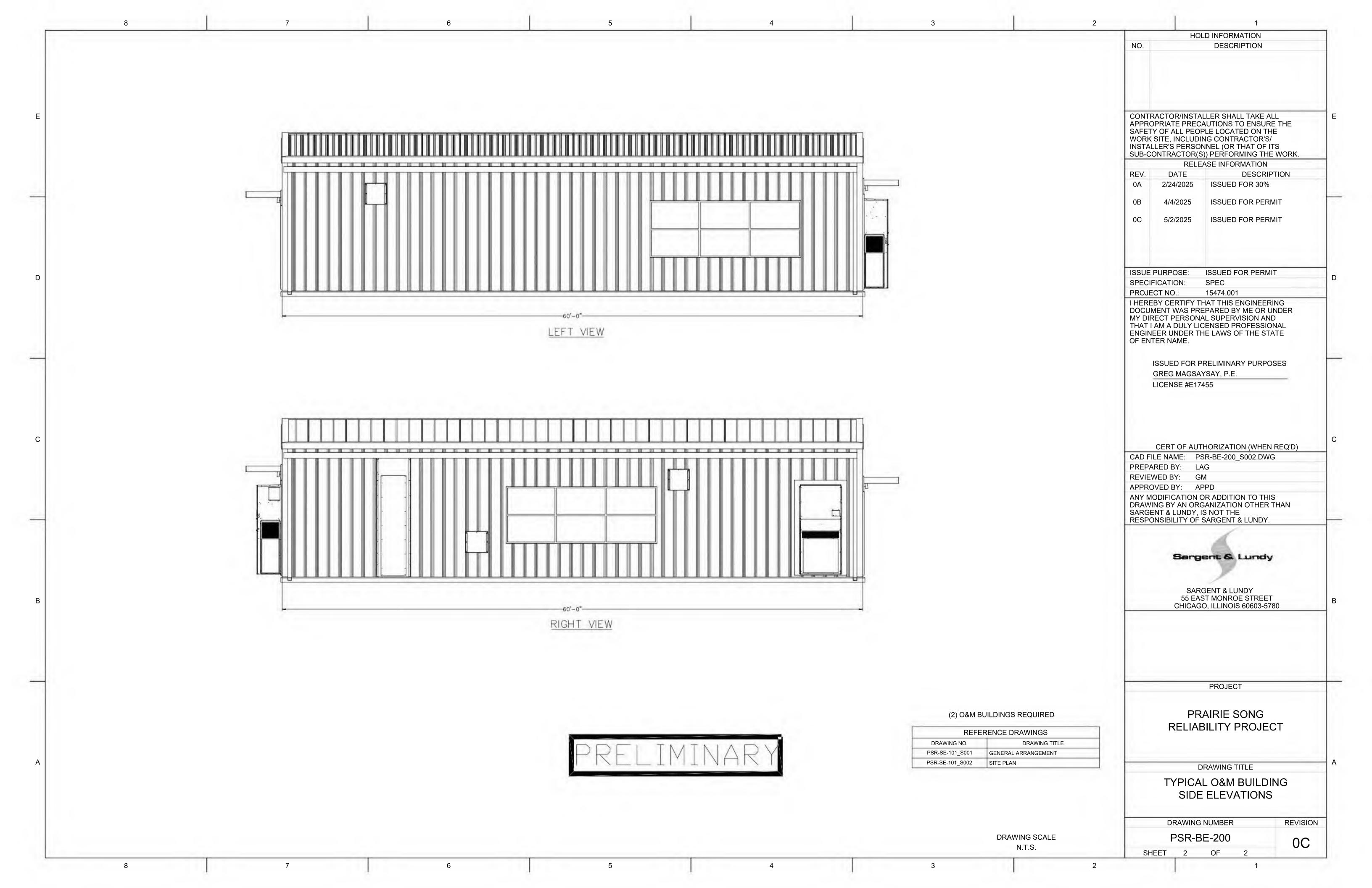


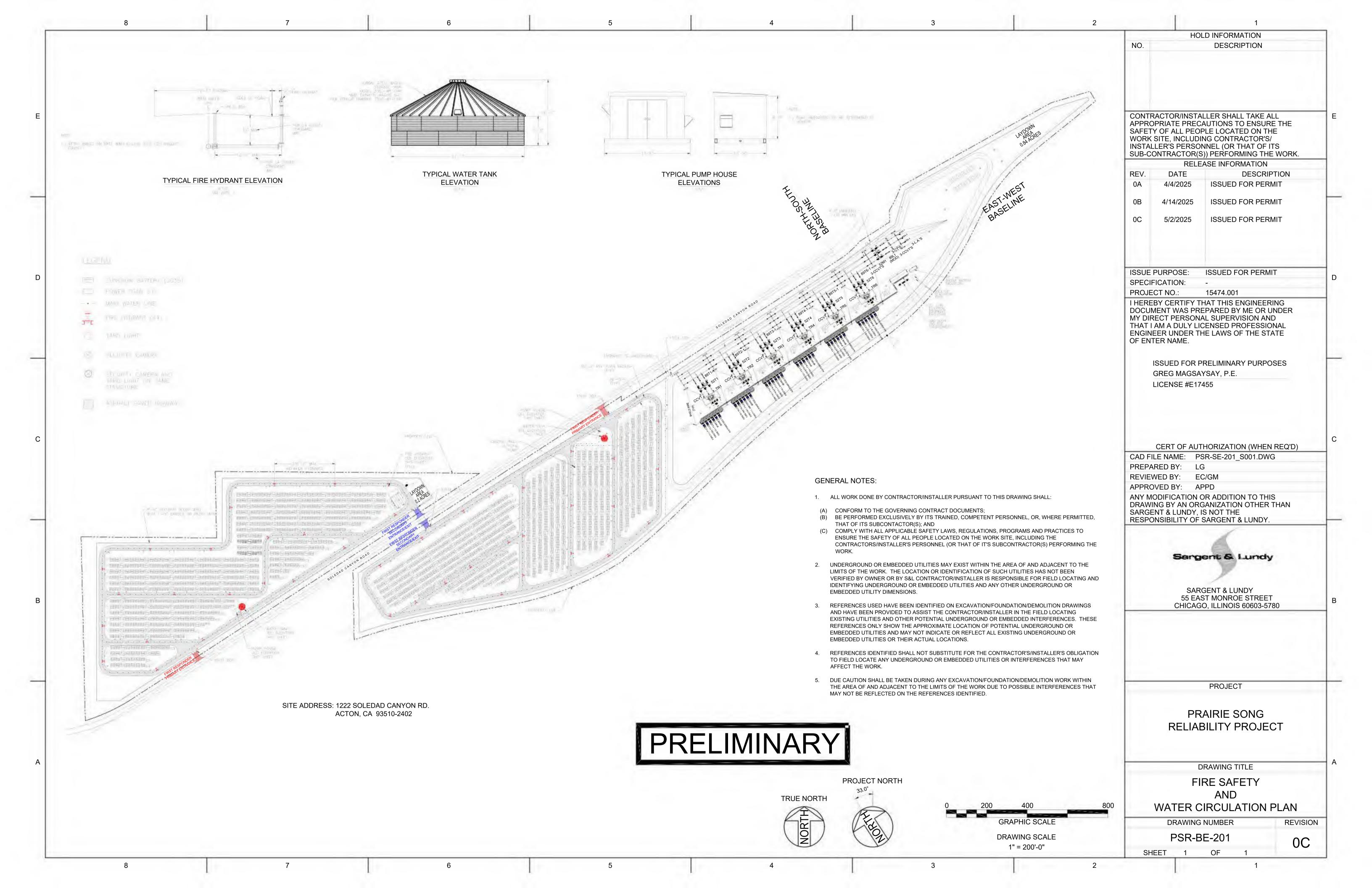




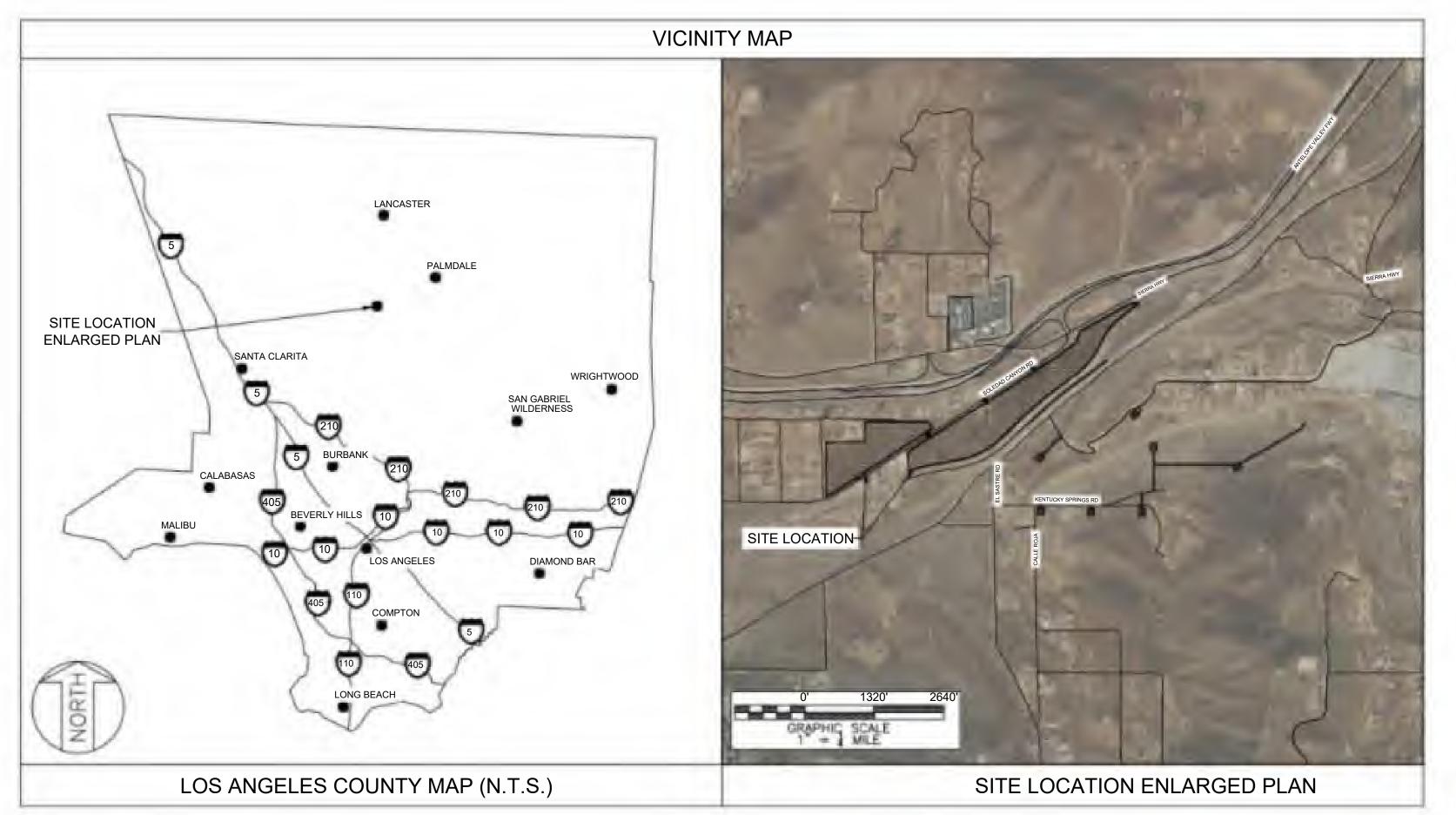








PRAIRIE SONG RELIABILITY PROJECT LLC LOS ANGELES COUNTY, CALIFORNIA PRAIRIE SONG RELIABILITY PROJECT



PREPARED FOR: PRAIRIE SONG RELIABILITY PROJECT LLC

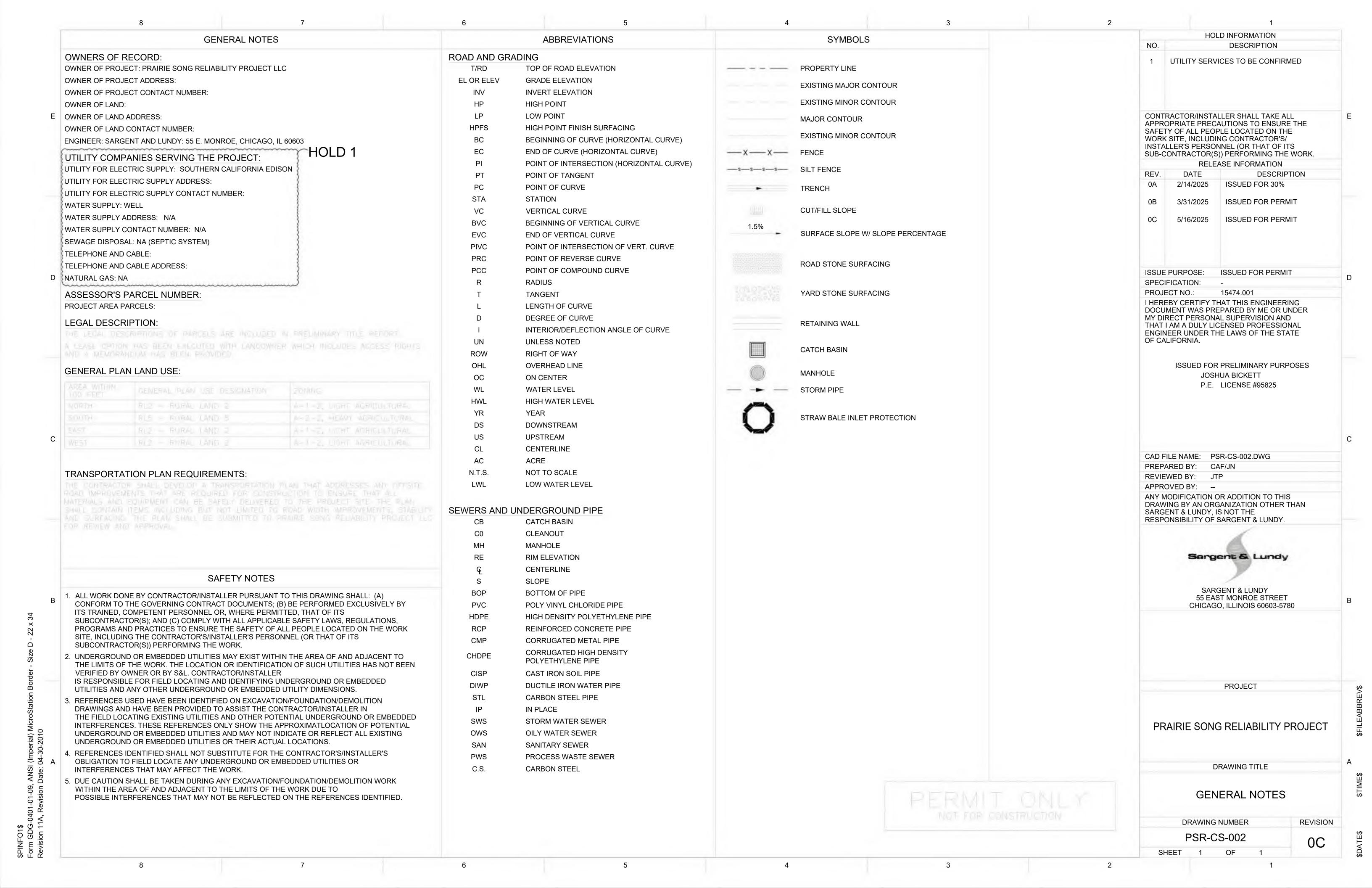
PREPARED BY: **SARGENT & LUNDY** 55 E. MONROE ST. CHICAGO, IL 60603

DESCRIPTION INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK. RELEASE INFORMATION DATE DESCRIPTION **ISSUED FOR 30%** 2/14/2025 **ISSUED FOR PERMIT ISSUED FOR PERMIT** 5/16/2025 **ISSUED FOR PERMIT ISSUE PURPOSE:** SPECIFICATION: PROJECT NO.: 15474.001 DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL OF CALIFORNIA. ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT P.E. LICENSE #95825 CAD FILE NAME: PSR-CS-001.DWG PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY. Sergent & Lundy SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780 PROJECT PRAIRIE SONG RELIABILITY PROJECT DRAWING TITLE **COVER SHEET** DRAWING NUMBER REVISION PSR-CS-001 SHEET

HOLD INFORMATION

PRAIRIE SONG RELIABILITY PROJECT DRAWING LIST	
DWG. NO.	DRAWING TITLE
PSR-CS-001	COVER SHEET
PSR-CS-002	GENERAL NOTES
PSR-C5-004 S001-S013	GRADING AND DRAINAGE PLAN
PSR-CS-004 5014	GEN-TIE PULL SITES AND LAYDOWN AREA OVERVIEW
PSR-CS-005 S001	GRADING SECTIONS SHEET 1
PSR-CS-005 S002	GRADING SECTIONS SHEET 2
PSR-CS-006 S001	GRADING & DRAINAGE DETAILS
PSR-CS-007 S001-S006	EROSION & SEDIMENT CONTROL PLAN
PSR-CS-008 S001	EROSION & SEDIMENT CONTROL DETAILS
PSR-CS-008 S002	EROSION & SEDIMENT CONTROL DETAILS
PSR-CS-009	UNDERGROUND STORMWATER DETENTION BASIN DETAILS
PSR-CS-010	ENERGY DISSIPATOR DETAILS

NOT FOR CONSTRUCTION



CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK. RELEASE INFORMATION

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ISSUE PURPOSE: **ISSUED FOR PERMIT** SPECIFICATION: PROJECT NO.: 15474.001 I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

OF CALIFORNIA.

ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT P.E. LICENSE #95825

GRAPHIC SCALE 1" = 30'

NOTES

- 1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY: TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025.
- 2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.
- 3. ESTIMATED QUANTITIES CUT: 130 CY

FILL: 370 CY

12" TOPSOIL STRIP: 1950 SY NET: 240 CY FILL

CAD FILE NAME: PSR-CS-004 S001.DWG PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.



SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

PRAIRIE SONG RELIABILITY PROJECT

REFERENCE DRAWINGS

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/FOUNDATION/DEMOLITION WORK.

DRAWING TITLE

GEN-TIE GRADING AND DRAINAGE PLAN

DRAWING NUMBER

PSR-CS-004 S001 OF

N 1998800 N 1998700

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REVISION

CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK. RELEASE INFORMATION

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ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT

P.E. LICENSE #95825

GRAPHIC SCALE 1" = 30'

NOTES

- 1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY: TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025.
- 2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.

3. ESTIMATED QUANTITIES

CUT: 70 CY FILL: 700 CY

12" TOPSOIL STRIP: 2620 SY NET: 630 CY FILL

APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.

CAD FILE NAME: PSR-CS-004 S002.DWG

PREPARED BY: CAF/JN

REVIEWED BY: JTP



SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

REFERENCE DRAWINGS

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/FOUNDATION/DEMOLITION WORK.

PRAIRIE SONG RELIABILITY PROJECT

DRAWING TITLE

GEN-TIE GRADING AND DRAINAGE PLAN

DRAWING NUMBER

PSR-CS-004 S002 SHEET 1 OF

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N 1998400

N 1998300

N 1998200

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REVISION

CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK. RELEASE INFORMATION

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> ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT

> > P.E. LICENSE #95825

CAD FILE NAME: PSR-CS-004 S003.DWG PREPARED BY: CAF/JN

REVIEWED BY: JTP APPROVED BY: --

OF CALIFORNIA.

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SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

REFERENCE DRAWINGS

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK

UTILITIES AND OTHER POSSIBLE UNDERGROUND OR EMBEDDED INTERFERENCES WITH

GRAPHIC SCALE 1" = 60'

NOTES

TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025. 2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.

1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY:

3. ESTIMATED PAD QUANTITIES

12" TOPSOIL STRIP: 1520 SY

12" TOPSOIL STRIP: 2410 SY

4. ESTIMATED ACCESS ROAD QUANTITIES

CUT: 50 CY FILL: 760 CY

NET: 710 CY FILL

NET: 80 CY CUT

CUT: 180 CY FILL: 100 CY

IS TO BE PERFORMED.

REFERENCES RELATING TO THE UNDERGROUND OR EMBEDDED UTILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING THOSE THE WORK.

THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/FOUNDATION/DEMOLITION WORK.

PRAIRIE SONG RELIABILITY PROJECT

DRAWING TITLE

GEN-TIE GRADING AND DRAINAGE PLAN

DRAWING NUMBER

PSR-CS-004 S003

REVISION

N 1998400

N 1998200

TRACT 14

N 1998000

N 1998600

TRACT 12

N 1997800SS ACREAGE

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OF

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0A	2/14/2025	ISSUED FOR 30%
0B	3/31/2025	ISSUED FOR PERMIT
0C	5/16/2025	ISSUED FOR PERMIT

RELEASE INFORMATION

ISSUE PURPOSE: **ISSUED FOR PERMIT**

SPECIFICATION: PROJECT NO.:

15474.001

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> ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT P.E. LICENSE #95825

CAD FILE NAME: PSR-CS-004 S004.DWG

PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --

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SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

PRAIRIE SONG RELIABILITY PROJECT

REFERENCE DRAWINGS

GRAPHIC SCALE 1" = 60'

NOTES

TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025.

2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.

1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY:

3. ESTIMATED PAD QUANTITIES

12" TOPSOIL STRIP: 1410 SY

12" TOPSOIL STRIP: 2320 SY

4. ESTIMATED ACCESS ROAD QUANTITIES

CUT: 75 CY FILL: 495 CY

NET: 420 CY FILL

NET: 30 CY CUT

CUT: 100 CY FILL: 70 CY

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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DRAWING TITLE

GEN-TIE GRADING AND DRAINAGE PLAN

DRAWING NUMBER

PSR-CS-004 S004

REVISION

N 1997700

N 1998500

N 1998300

N 1998100 N 1997900

PARCEL 1 APN: 3056-015-008

OF



PSR-CS-004 S005

OF

THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL

EXCAVATION/FOUNDATION/DEMOLITION WORK.

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0C	5/16/2025	ISSUED FOR PERMIT

RELEASE INFORMATION

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SPECIFICATION:	-
PROJECT NO.:	15474.001
DOCUMENT WAS PR MY DIRECT PERSON THAT I AM A DULY LI	THAT THIS ENGINEERING EPARED BY ME OR UNDER IAL SUPERVISION AND CENSED PROFESSIONAL THE LAWS OF THE STATE

ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT

P.E. LICENSE #95825

PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --

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CAD FILE NAME: PSR-CS-004 S006.DWG



SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

PRAIRIE SONG RELIABILITY PROJECT

REFERENCE DRAWINGS

GRAPHIC SCALE 1" = 30'

NOTES

TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025.

2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.

1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY:

3. ESTIMATED QUANTITIES

12" TOPSOIL STRIP: 1830 SY

CUT: 180 CY

FILL: 585 CY

NET: 405 CY FILL

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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DRAWING TITLE

GEN-TIE GRADING AND DRAINAGE PLAN

DRAWING NUMBER

PSR-CS-004 S006

N 1997000

REVISION

N 1997300

N 1997500

N 1997400

N 1997200

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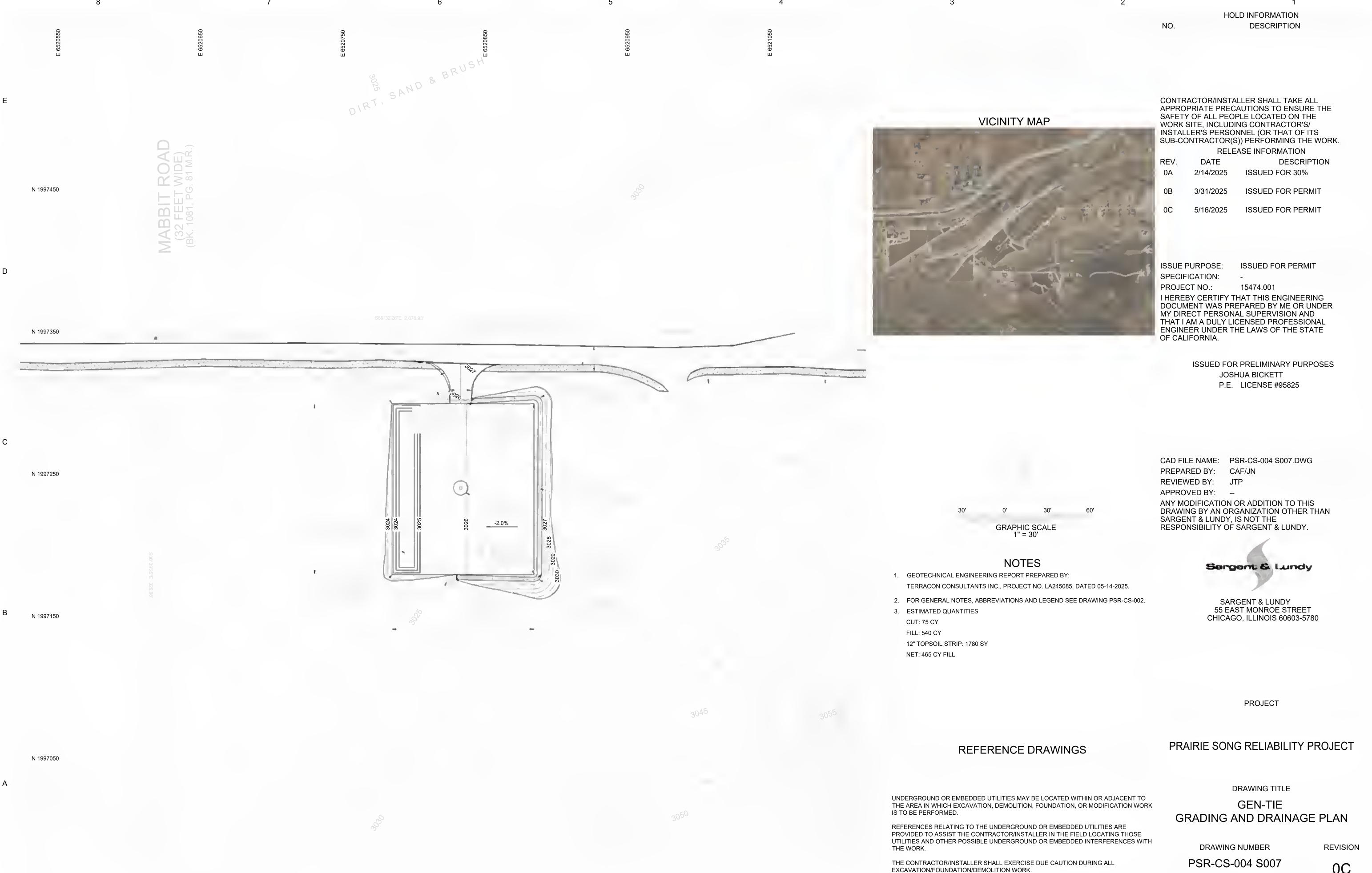
N 1997100

3012 3013

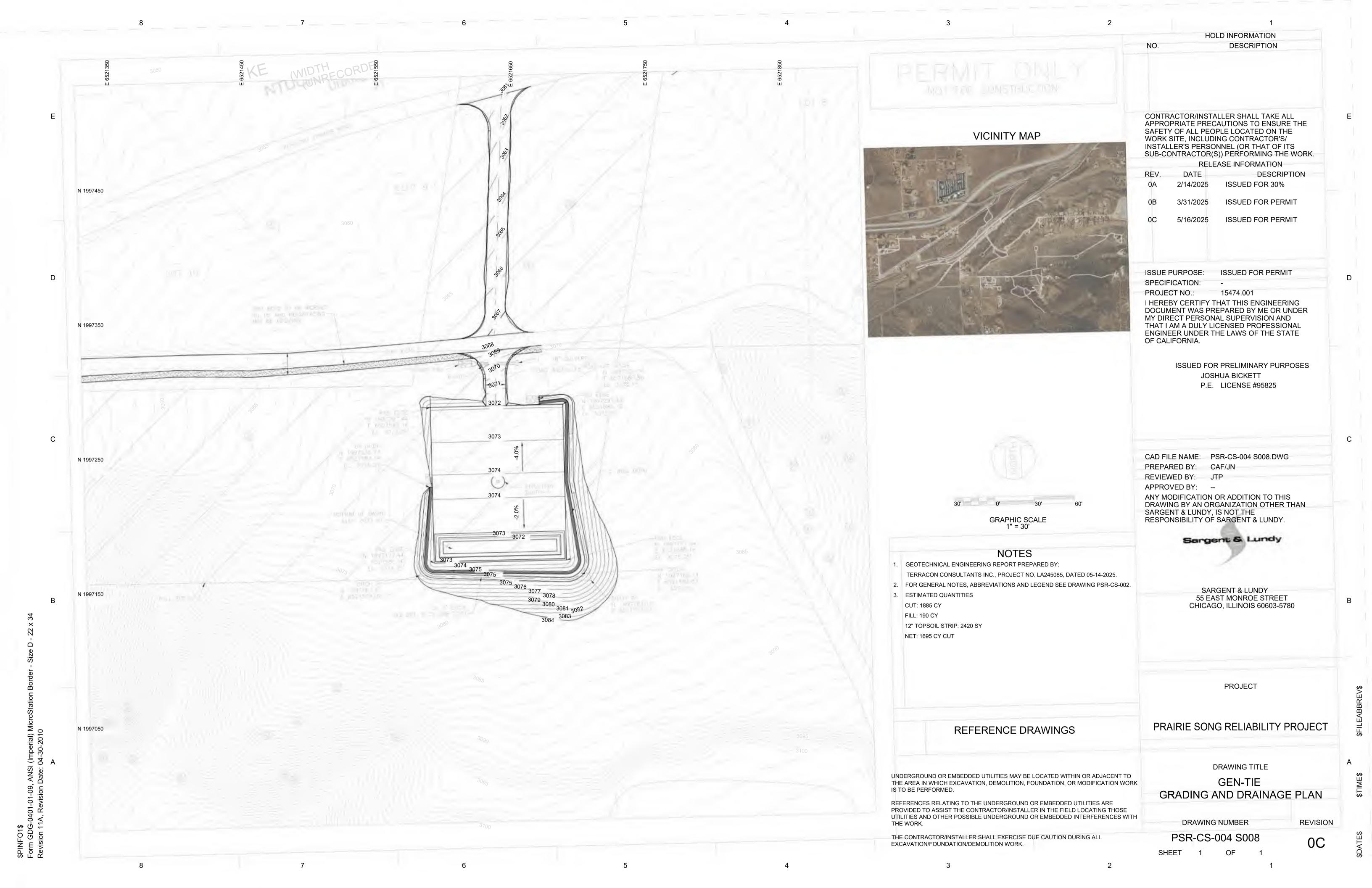
VICTOR TOGHIA, Et Ux.

INST. No. 04-1072502

SHEET 1 OF



OF



CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.

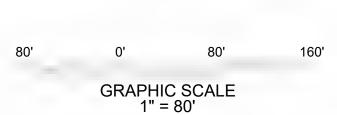
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ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT P.E. LICENSE #95825



NOTES

- 1. GEOTECHNICAL ENGINEERING REPORT PREPARED BY: TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025.
- 2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.
- 3. ESTIMATED QUANTITIES CUT: 47,045 CY

FILL: 151,415 CY 12" TOPSOIL STRIP: 102,875 SY

NET: 104,370 CY FILL

CAD FILE NAME: PSR-CS-004 S009.DWG PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.



SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

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DRAWING TITLE

BESS GRADING AND DRAINAGE PLAN

PRAIRIE SONG RELIABILITY PROJECT

DRAWING NUMBER

PSR-CS-004 S009 OF

REVISION

N 1998650

N 1998450

N 1998250

N 1998050

N 1997850

N 1997650

N 1997450

CL RETAINING WALL T/W EL 2995.50"

8/W EL. 2983.50' (REF)-

CL RETAINING WALL

T/W EL. 2990.10"

B/W EL. 2981.42' (REF)-

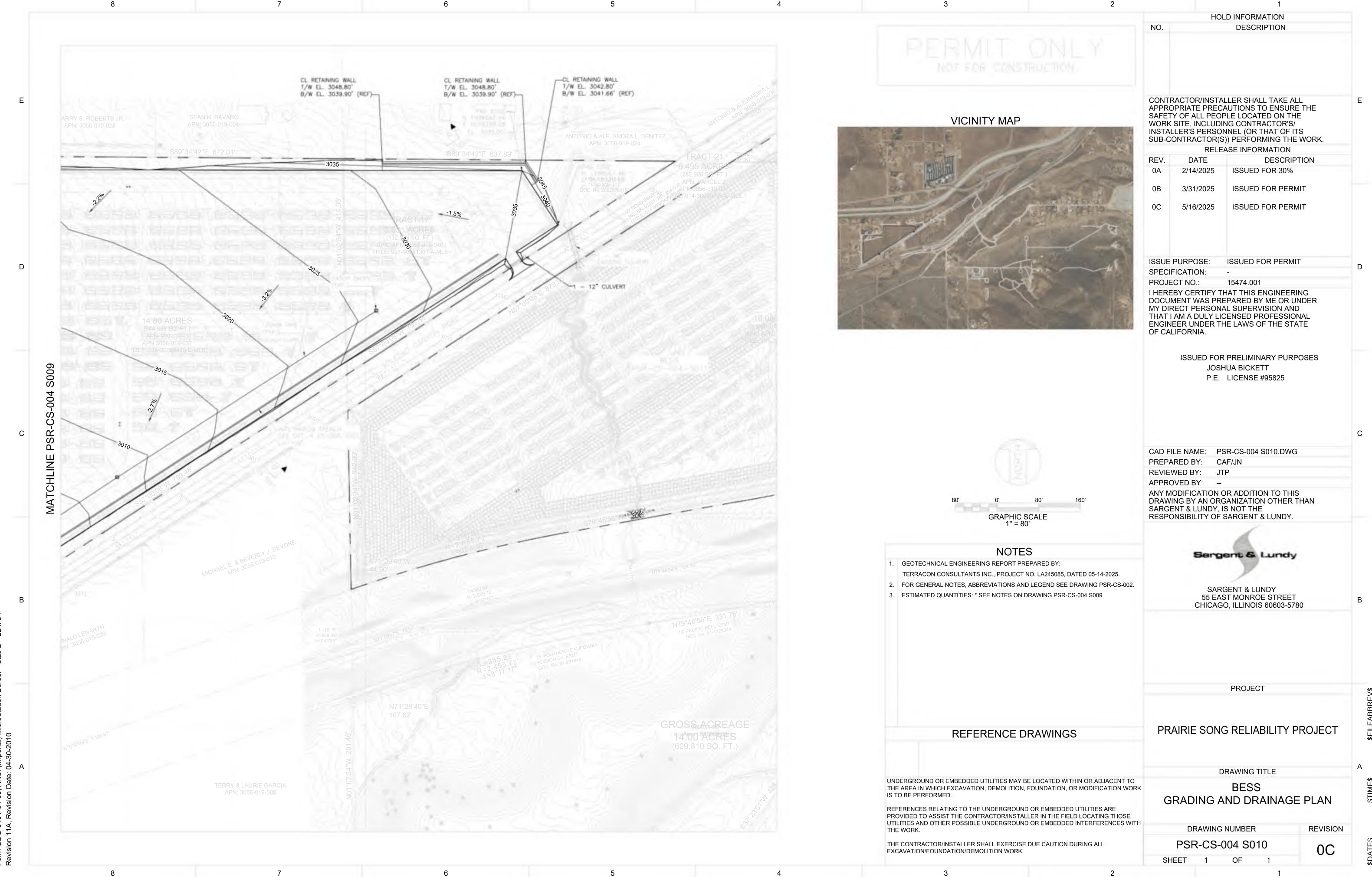
-ADS STORVITECH UNDERGROUND STORWHATER DETENTION SYSTEM 1,330 CHAMBERS REQUIRED

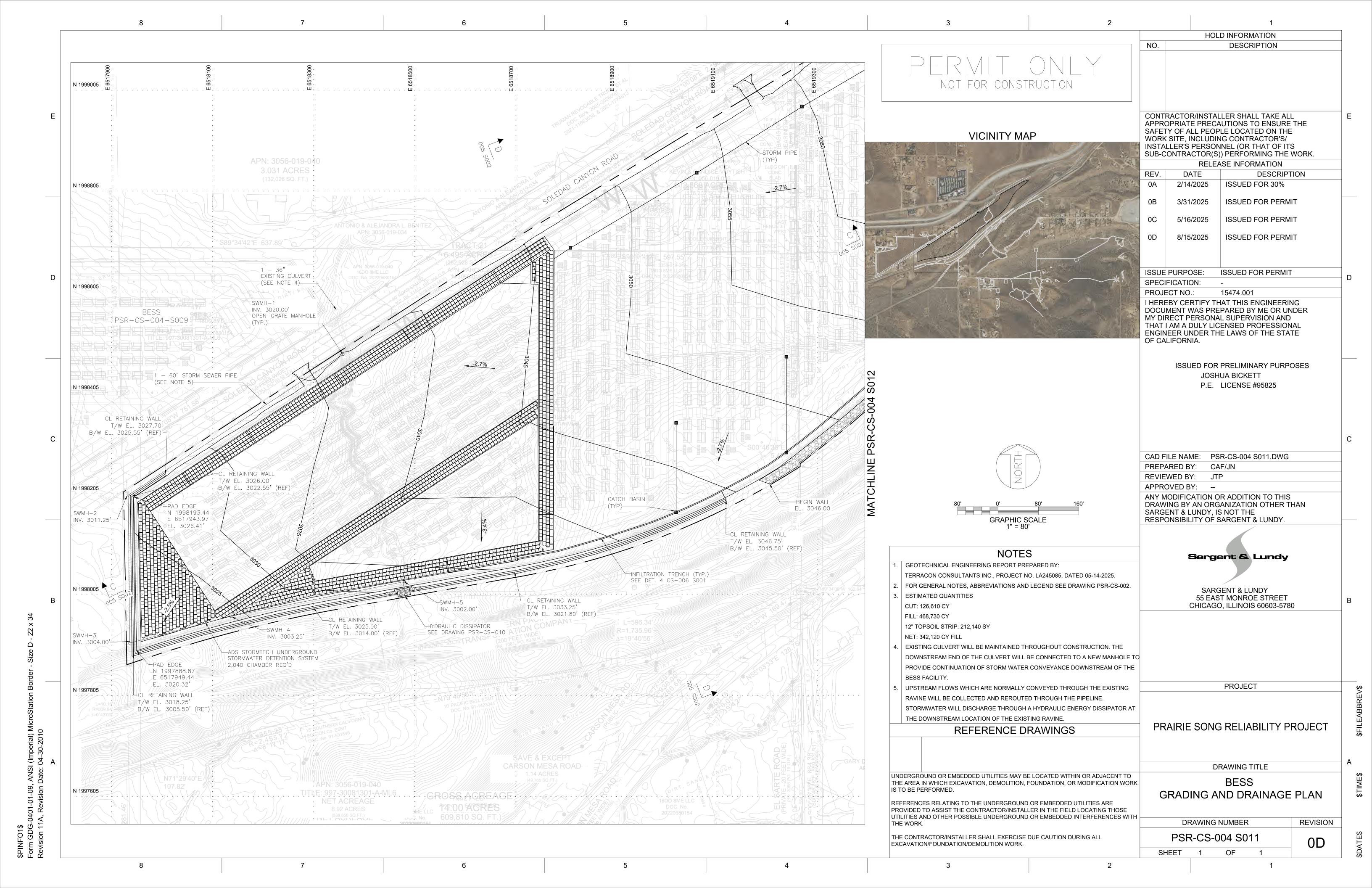
CL RETAINING WALL T/W EL. 3014.80"

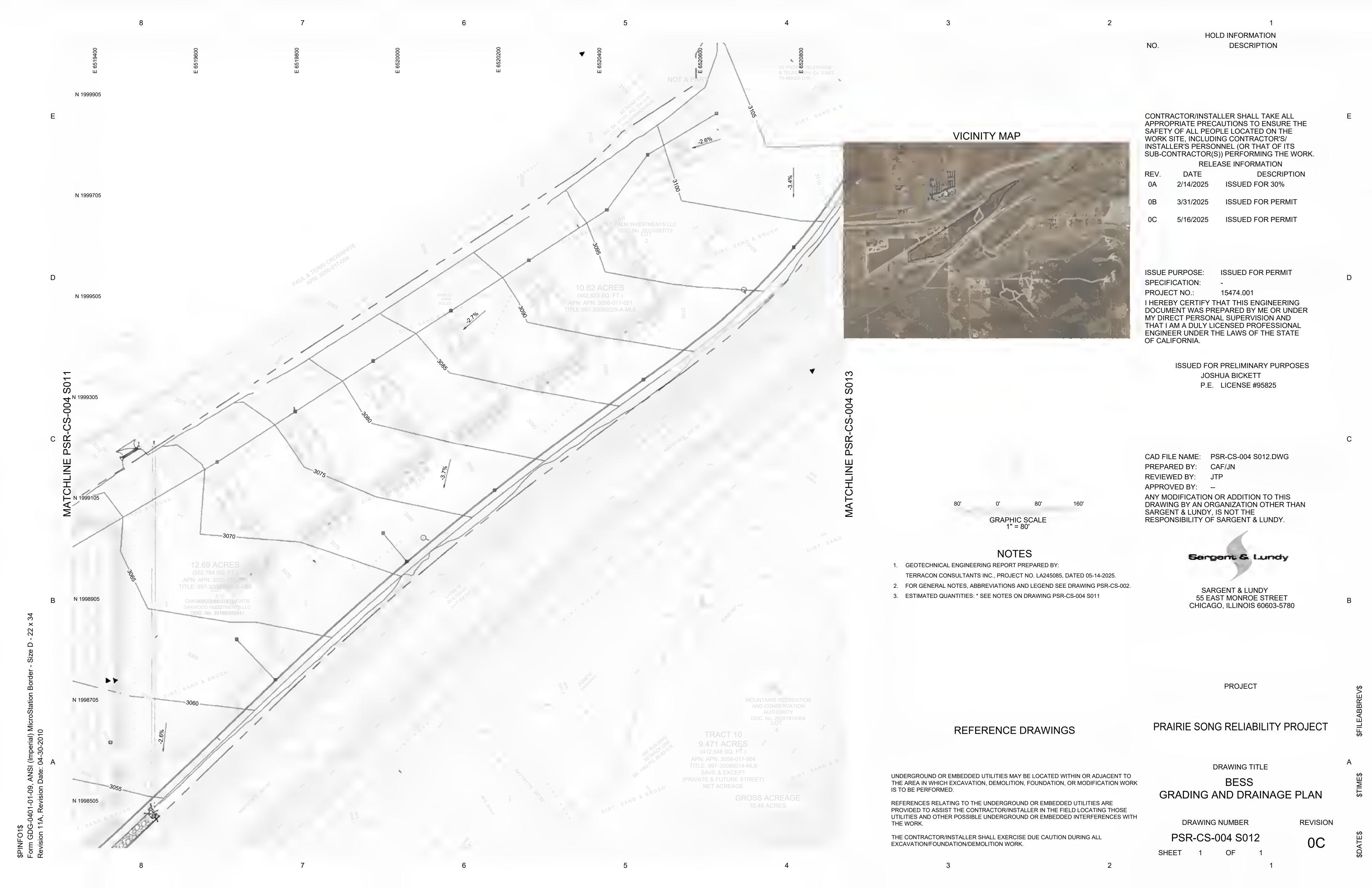
B/W EL. 3004.00' (REF)-

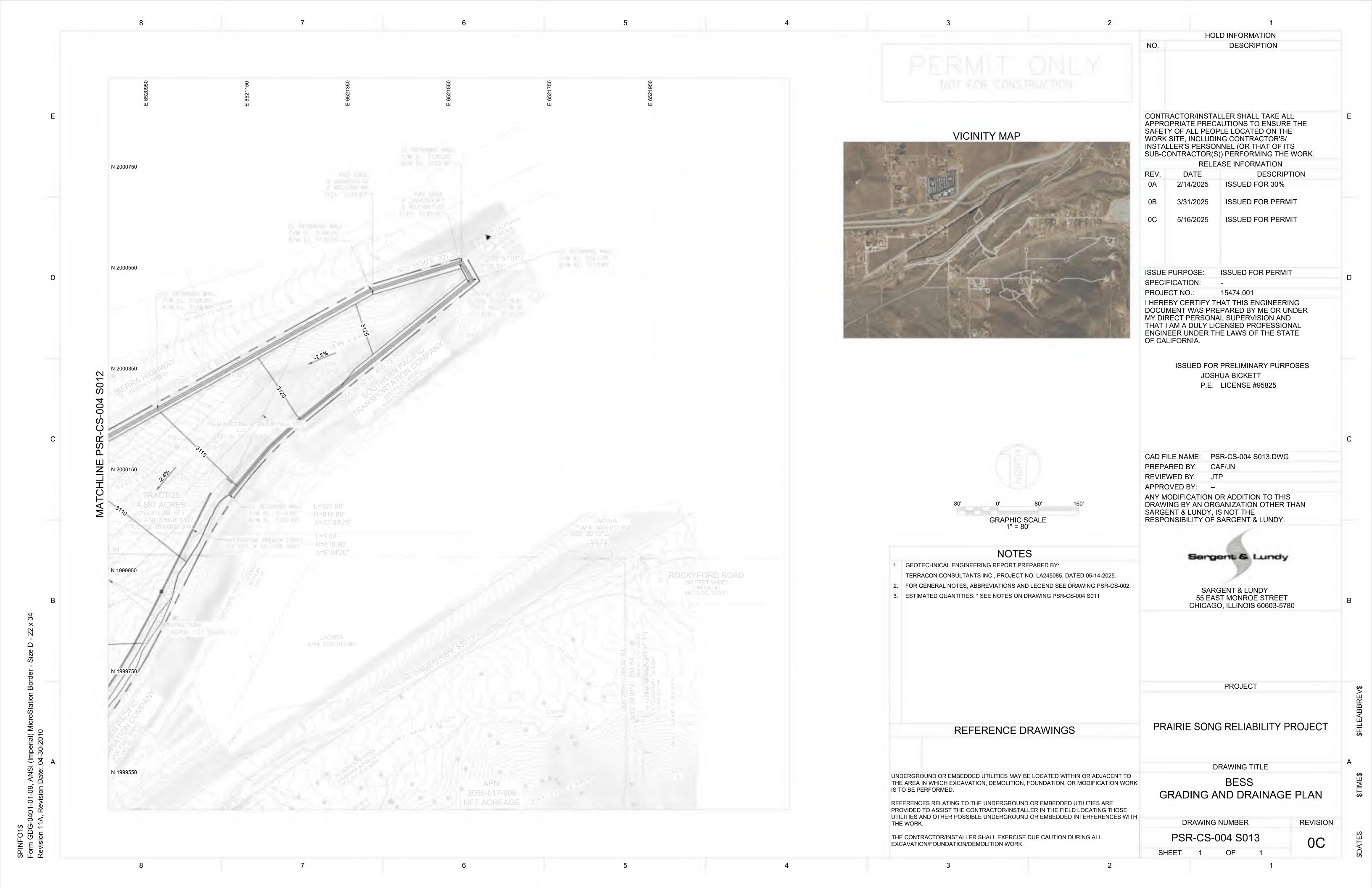
_CATCH BASIN

-1 - 12" CULVERT









HOLD INFORMATION DESCRIPTION

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0B	3/31/2025	ISSUED FOR PERMIT
0C	5/16/2025	ISSUED FOR PERMIT

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> ISSUED FOR PRELIMINARY PURPOSES JOSHUA BICKETT

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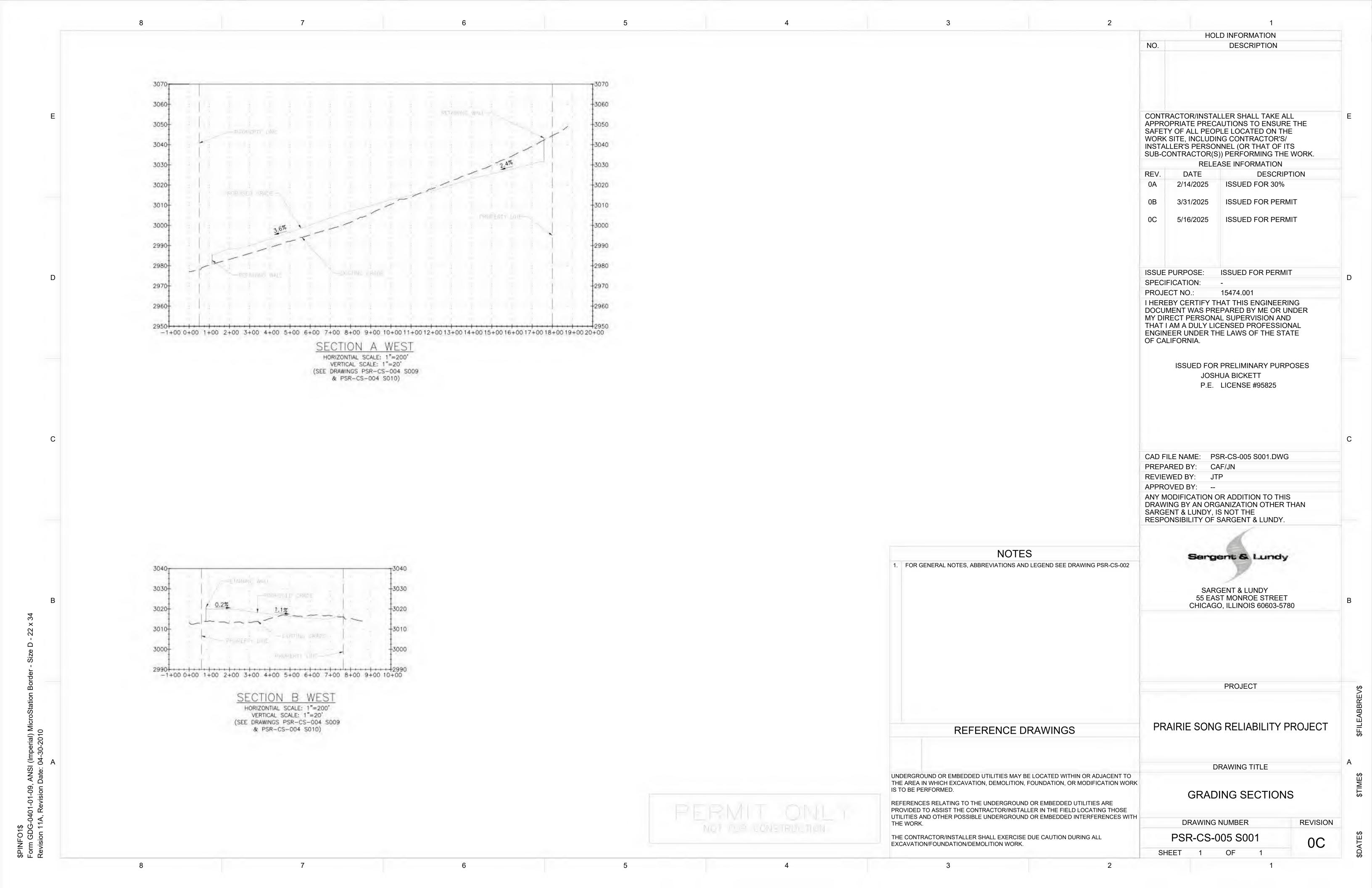


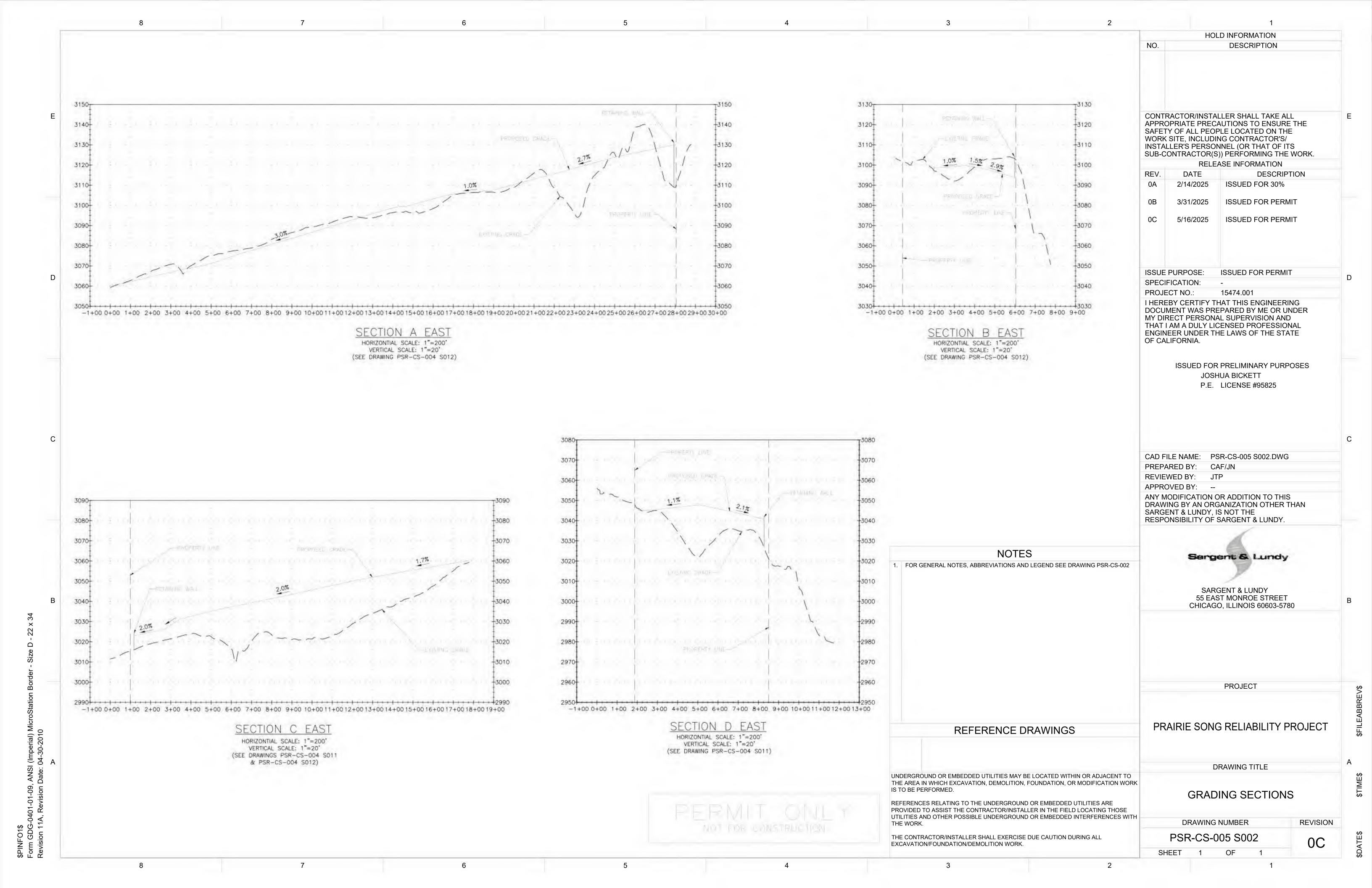
SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

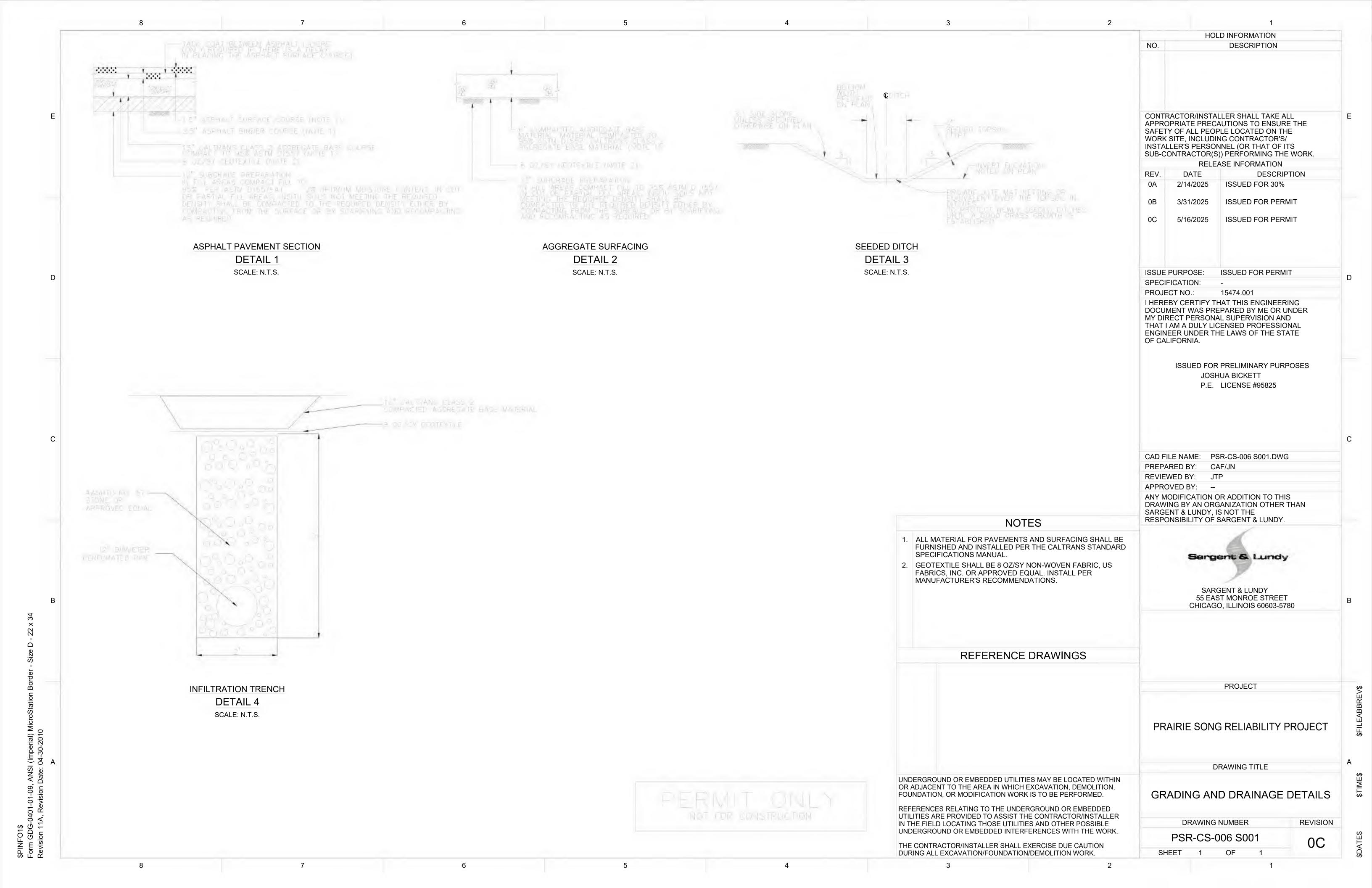
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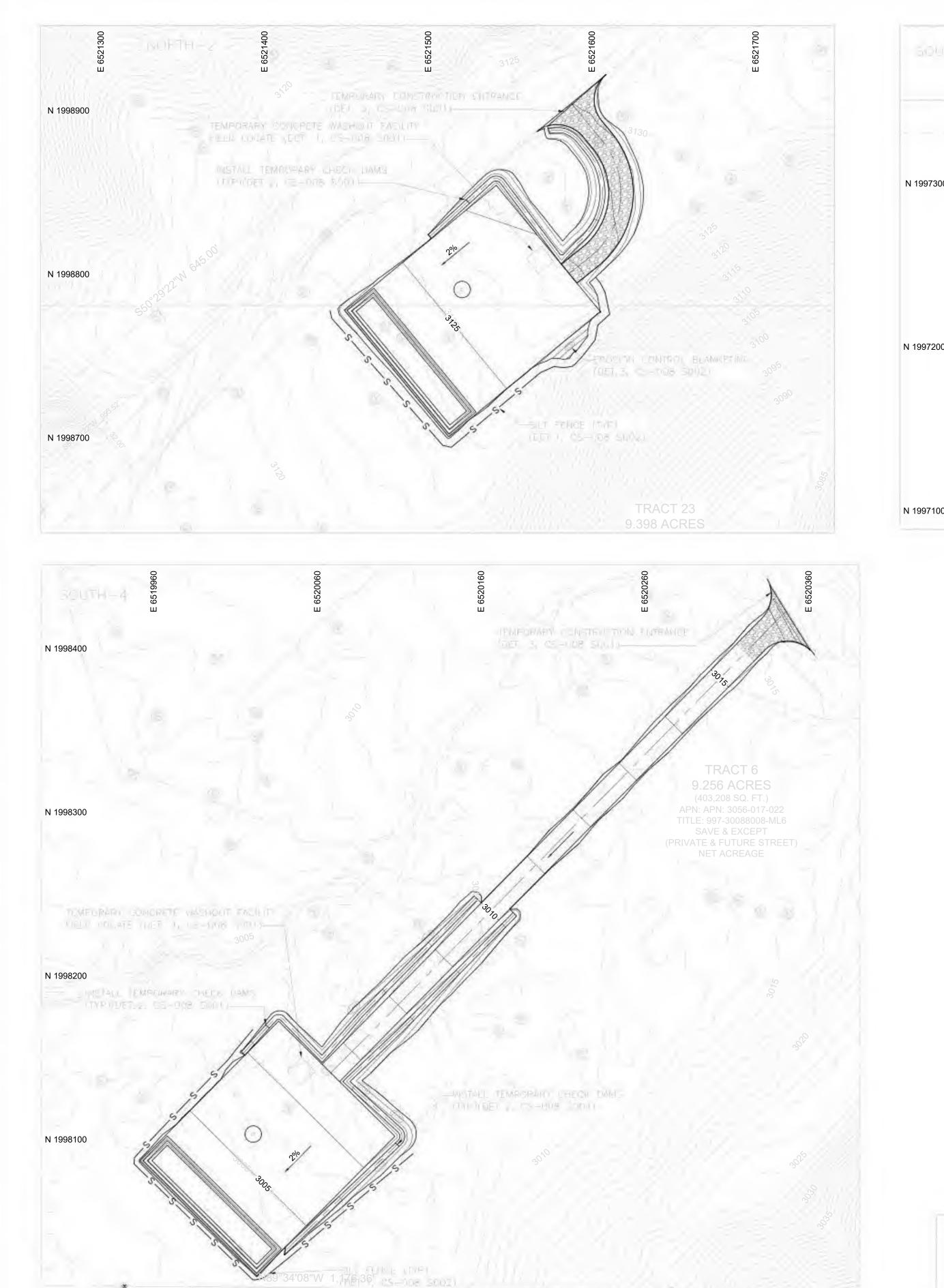
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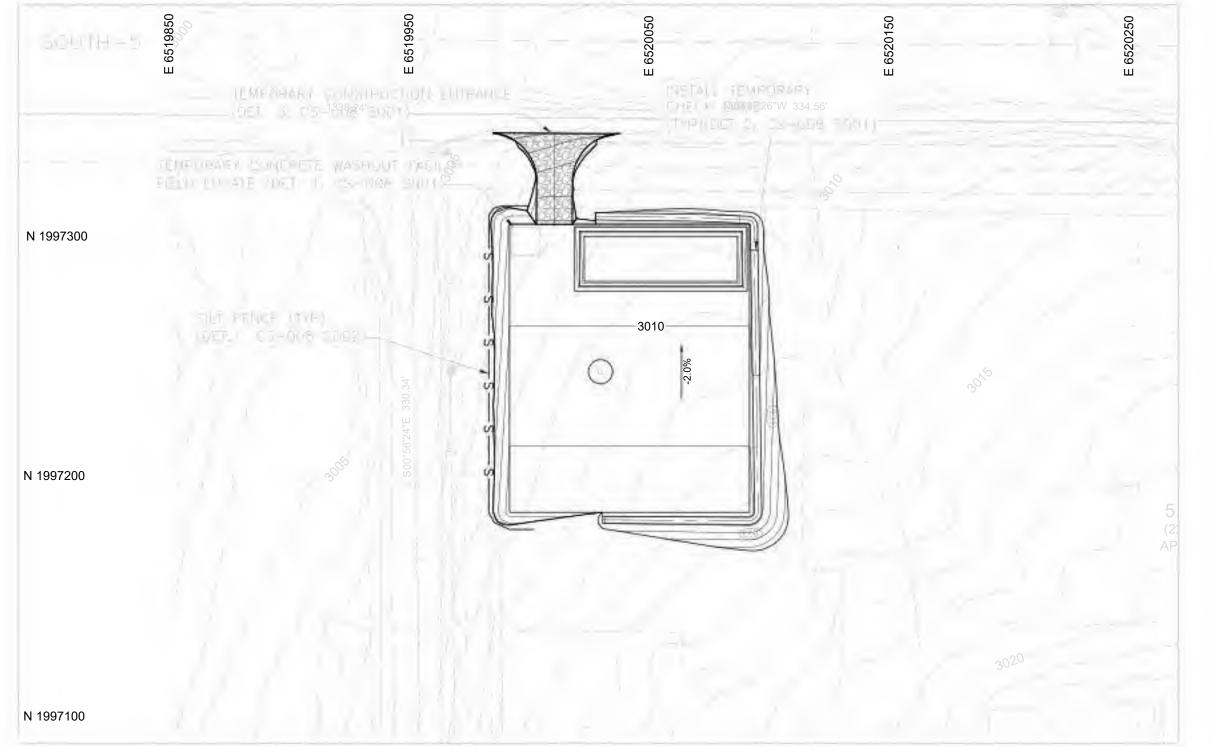
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CAD FILE NAME: PSR-CS-007 S001.DWG PREPARED BY: CAF/JN REVIEWED BY: JTP APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.



HOLD INFORMATION

CONTRACTOR/INSTALLER SHALL TAKE ALL

SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/ INSTALLER'S PERSONNEL (OR THAT OF ITS

DATE

2/14/2025

3/31/2025

5/16/2025

ISSUE PURPOSE:

SPECIFICATION: PROJECT NO.:

OF CALIFORNIA.

APPROPRIATE PRECAUTIONS TO ENSURE THE

SUB-CONTRACTOR(S)) PERFORMING THE WORK.

RELEASE INFORMATION

ISSUED FOR 30%

ISSUED FOR PERMIT

ISSUED FOR PERMIT

ISSUED FOR PERMIT

15474.001

ISSUED FOR PRELIMINARY PURPOSES

JOSHUA BICKETT P.E. LICENSE #95825

I HEREBY CERTIFY THAT THIS ENGINEERING

MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

DOCUMENT WAS PREPARED BY ME OR UNDER

DESCRIPTION

DESCRIPTION

NO.

SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PRAIRIE SONG RELIABILITY PROJECT REFERENCE DRAWINGS

SHEET

DRAWING TITLE

PROJECT

EROSION AND SEDIMENT CONTROL PLAN

DRAWING NUMBER REVISION PSR-CS-007 S001

OF

THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/FOUNDATION/DEMOLITION WORK.

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK

REFERENCES RELATING TO THE UNDERGROUND OR EMBEDDED UTILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING THOSE UTILITIES AND OTHER POSSIBLE UNDERGROUND OR EMBEDDED INTERFERENCES WITH

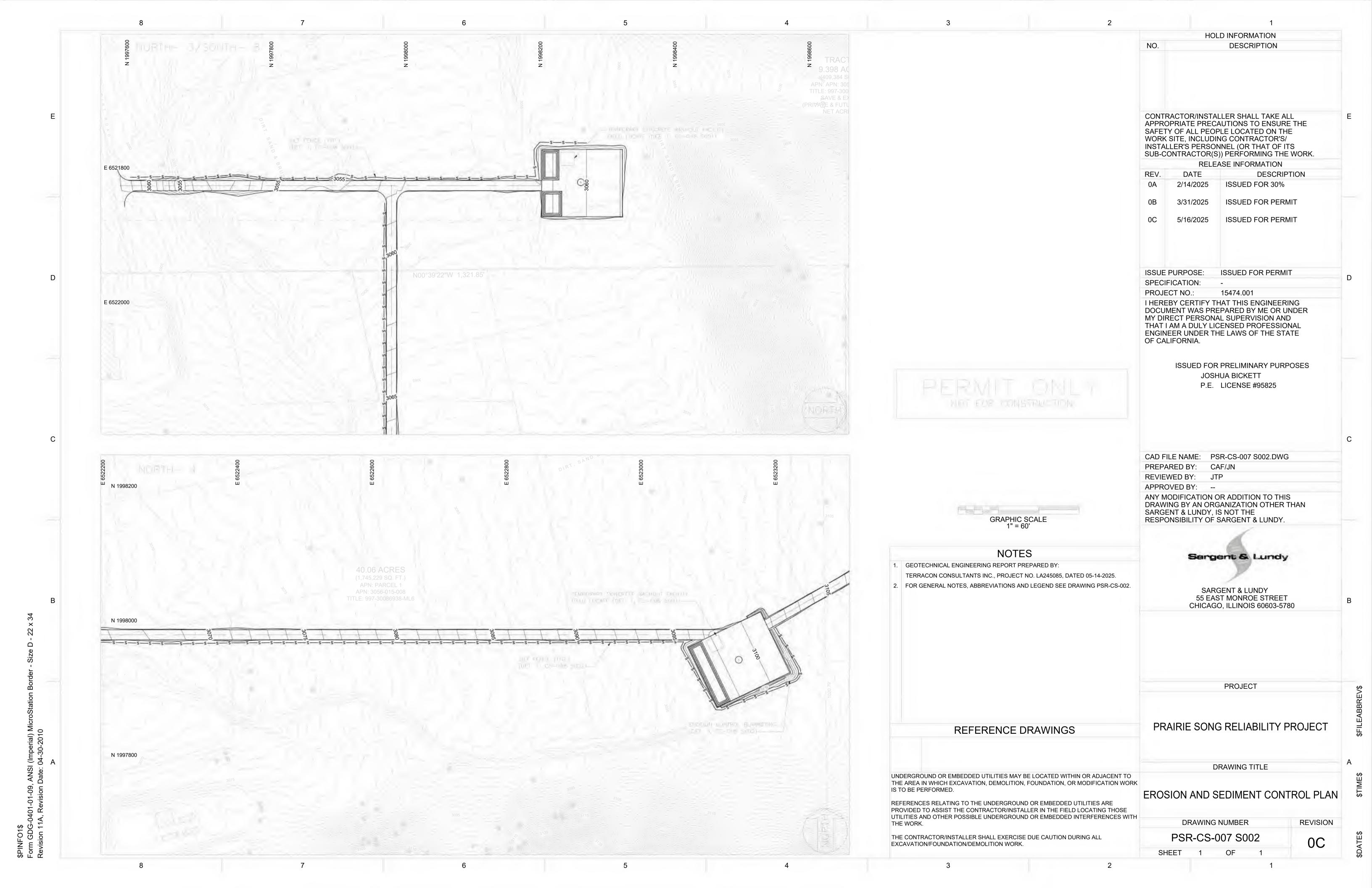
NOTES

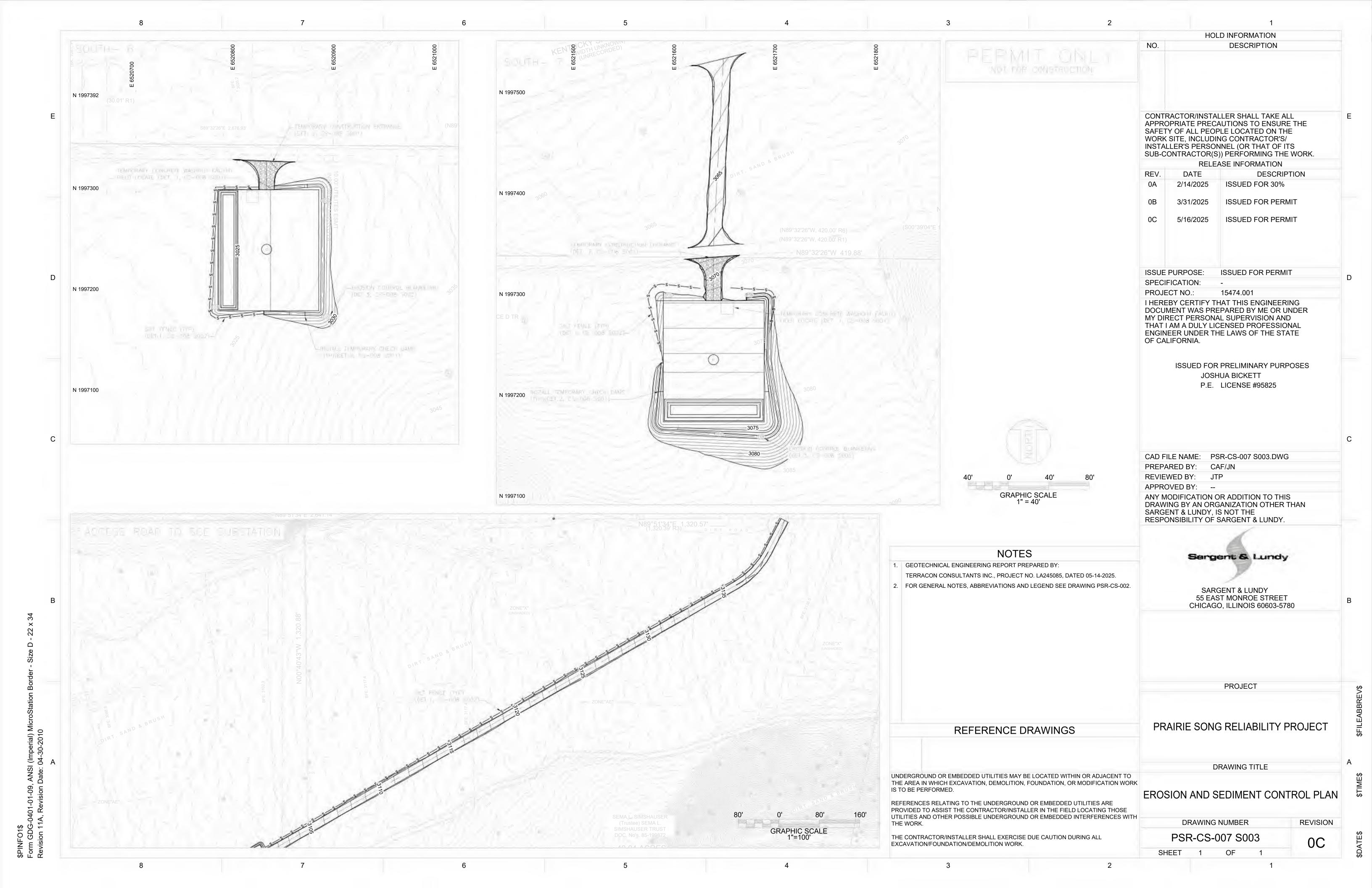
TERRACON CONSULTANTS INC., PROJECT NO. LA245085, DATED 05-14-2025. 2. FOR GENERAL NOTES, ABBREVIATIONS AND LEGEND SEE DRAWING PSR-CS-002.

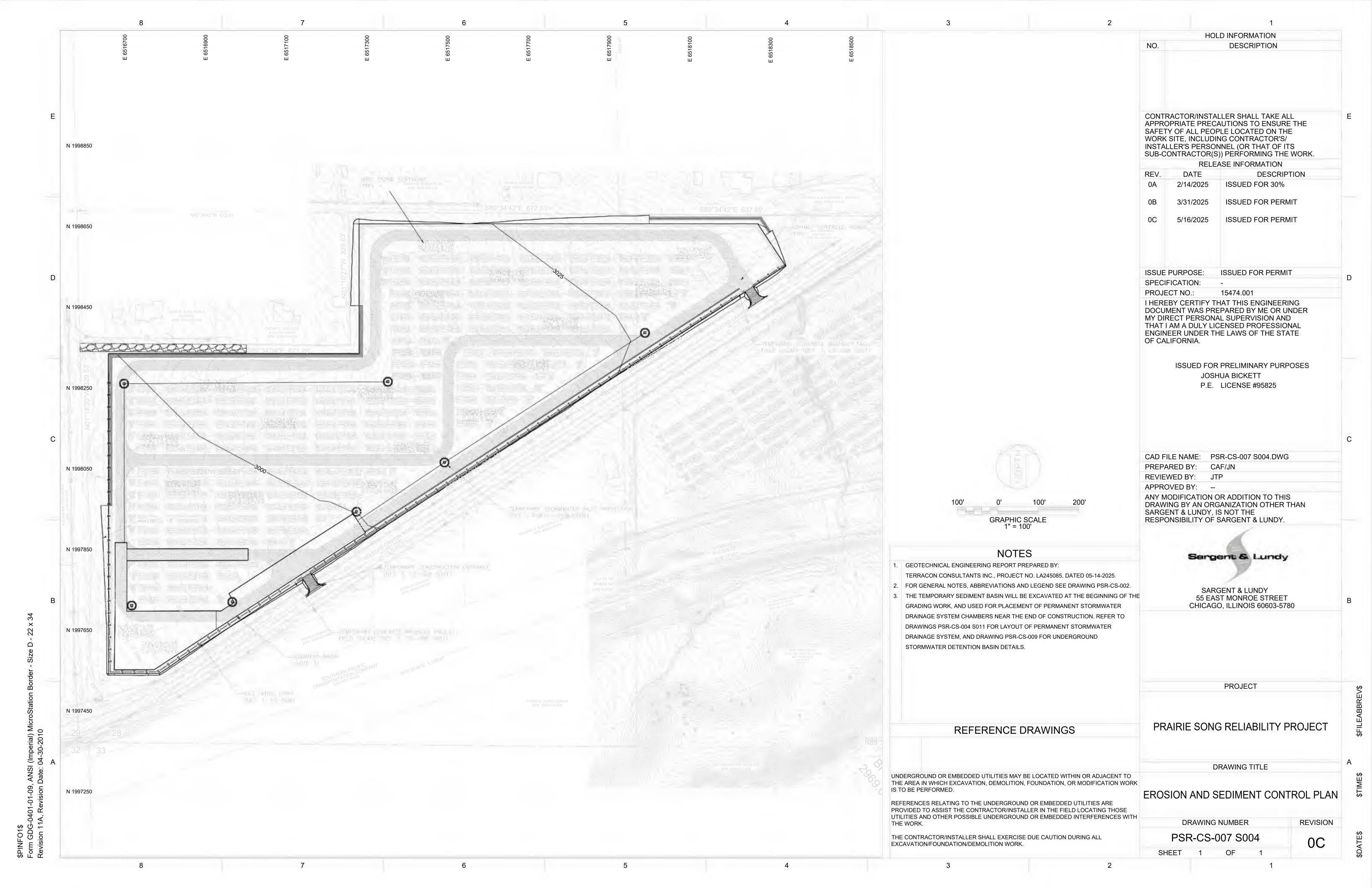
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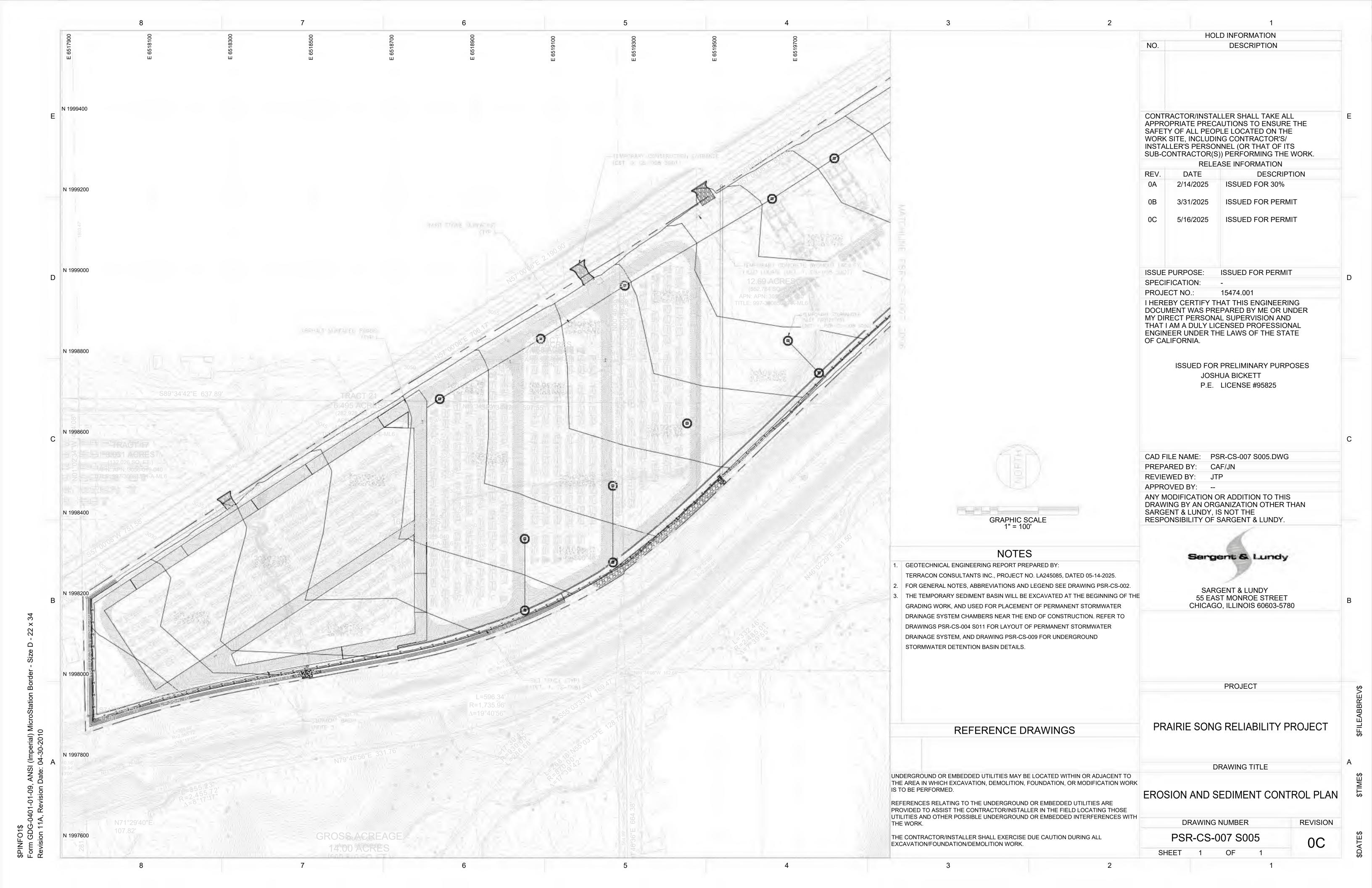
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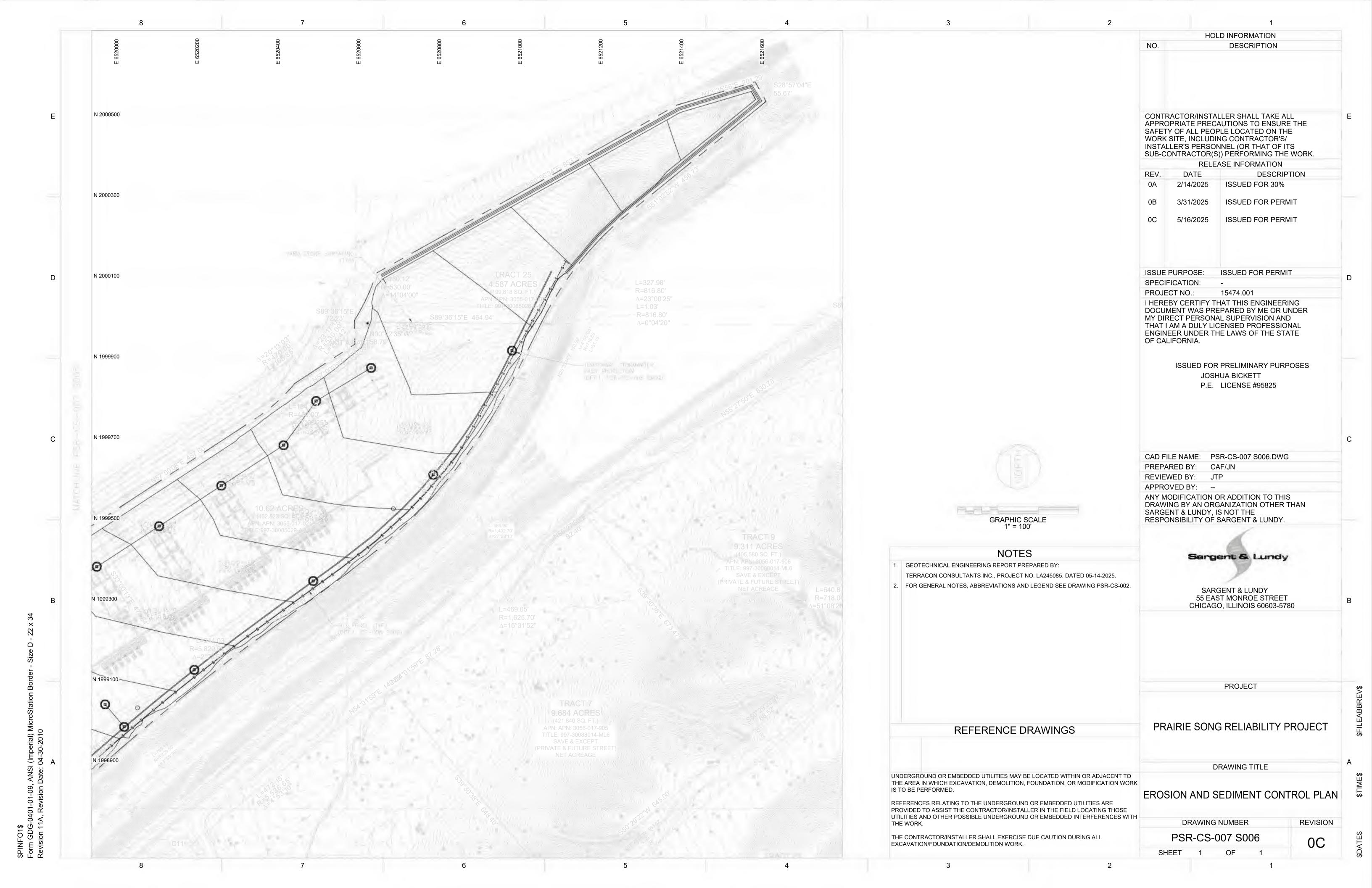
THE WORK.

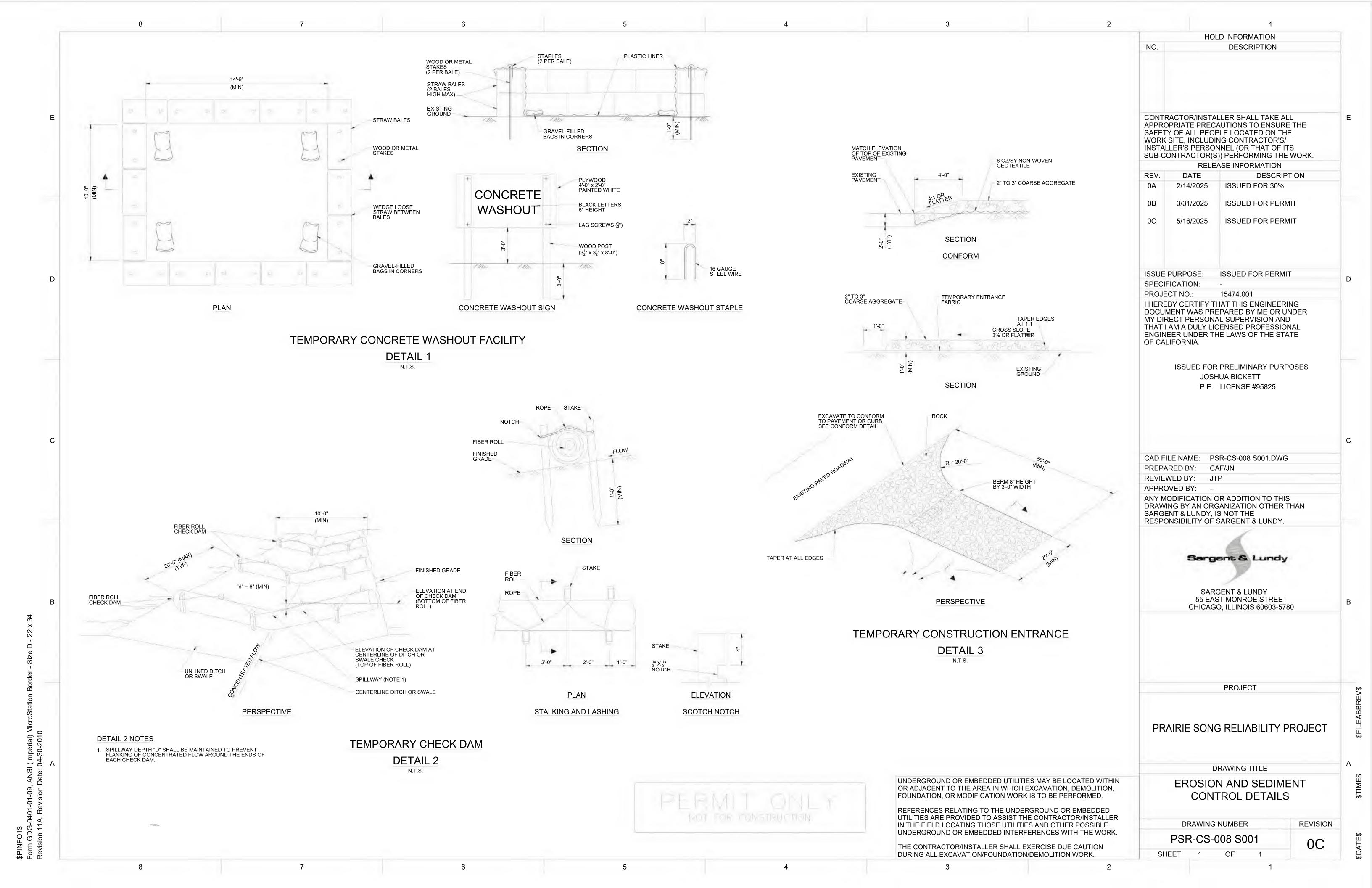


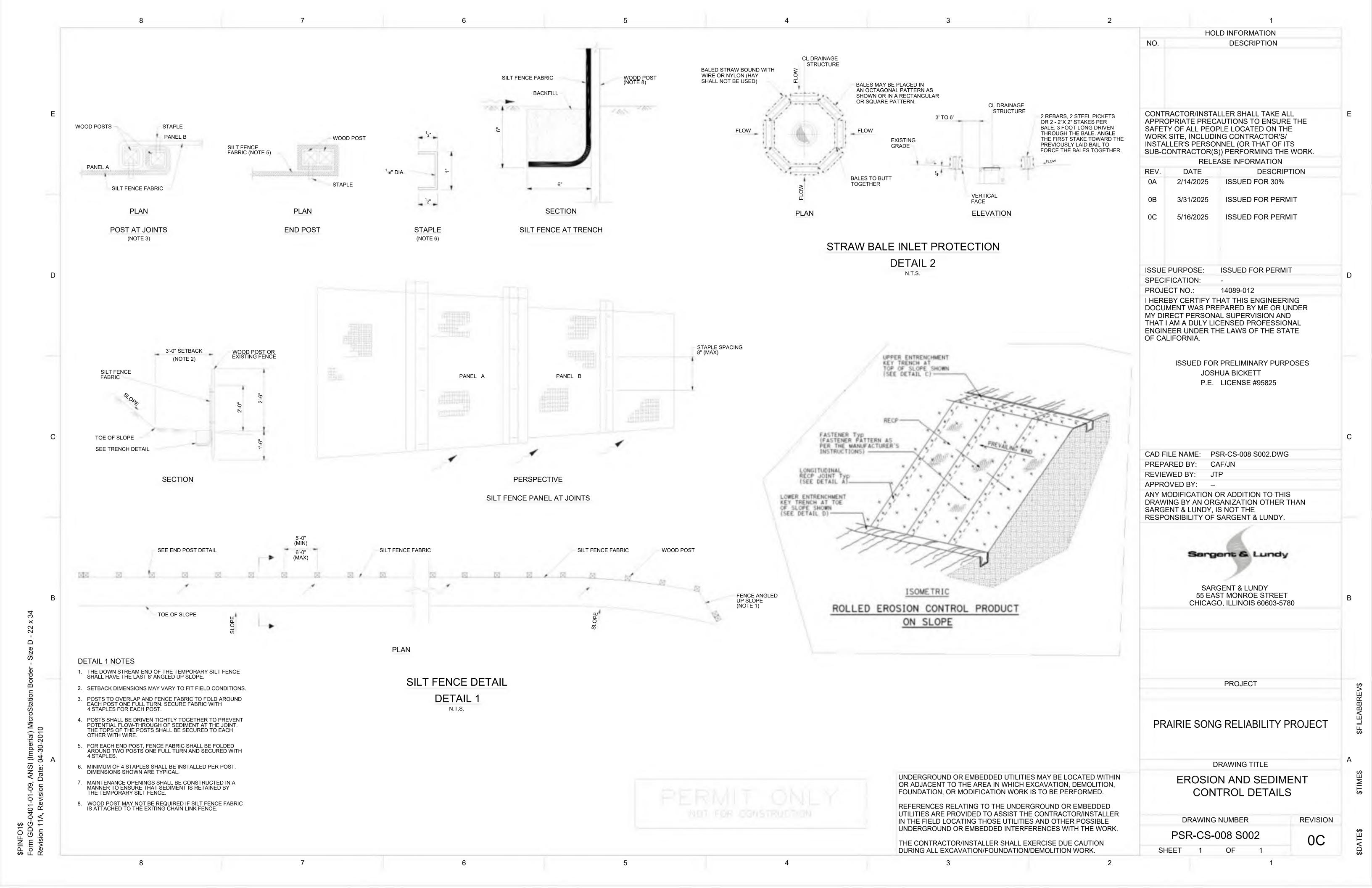












PAVEMENT LAYER (DESIGNED ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL BY SITE DESIGN ENGINEER) AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS D - FINAL FILL *TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, (2.4 m) PERIMETER STONE C - INITIAL FILL INCREASE COVER TO 24" (600 mm). (450 mm) MIN* (SEE NOTE 4) 12" (300 mm) MIN B - EMBEDMENT STONE EXCAVATION WALL **THIS CROSS SECTION DETAIL REPRESENTS (CAN BE SLOPED OR VERTICAL) MINIMUM REQUIREMENTS FOR INSTALLATION. (1140 mm) PLEASE SEE THE LAYOUT SHEET(S) FOR PROJECT SPECIFIC REQUIREMENTS. A - FOUNDATION STONE 9" (230 mm) MIN (SEE NOTE 3) 6" (150 mm) MIN MC-3500 - 77" (1950 mm) - 12" (300 mm) MIN (150 mm) MIN SUBGRADE SOILS **END CAP** (SEE NOTE 3)

> DETAIL 1 N.T.S.

NOTES:

- 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- 2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF THE FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
- 5.1. TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- 5.2. TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
- 5.3. TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION:
- 5.3.1. THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418.
- 5.3.2. TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73°F / 23°C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- 6. STONE MATERIAL FOR LAYERS "A" AND "B" SHALL BE CLEAN, CRUSHED ANGULAR STONE MEETING THE GRADATION REQUIREMENTS OF AASHTO M43, GRADATION NO. 57.
- 7. STONE MATERIAL FOR LAYER "C" SHALL BE CALTRANS CLASS 2 BASE MATERIAL.
- 8. LAYER "D" SHALL CONSIST OF EITHER CLASS 2 BASE MATERIAL OR ASPHALT PAVING PER DETAILS 1 AND 2 ON DRAWING PSR-CS-006 SH001.

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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DESCRIPTION

RELEASE INFORMATION		
REV.	DATE	DESCRIPTION
0A	2/14/2025	ISSUED FOR 30%
0B	3/31/2025	ISSUED FOR PERMIT
0C	5/16/2025	ISSUED FOR PERMIT

ISSUED FOR PERMIT ISSUE PURPOSE: SPECIFICATION: PROJECT NO.: 14089-012 I HEREBY CERTIFY THAT THIS ENGINEERING

DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CALIFORNIA.

ISSUED FOR PRELIMINARY PURPOSES

JOSHUA BICKETT P.E. LICENSE #95825

CAD FILE NAME: PSR-CS-009.DWG

PREPARED BY: CAF/JN

REVIEWED BY: JTP

APPROVED BY: --ANY MODIFICATION OR ADDITION TO THIS DRAWING BY AN ORGANIZATION OTHER THAN SARGENT & LUNDY, IS NOT THE RESPONSIBILITY OF SARGENT & LUNDY.



SARGENT & LUNDY 55 EAST MONROE STREET CHICAGO, ILLINOIS 60603-5780

PROJECT

PRAIRIE SONG RELIABILITY PROJECT

DRAWING TITLE

UNDERGROUND STORMWATER **DETENTION BASIN DETAIL**

DRAWING NUMBER

PSR-CS-009

REVISION

SHEET OF

