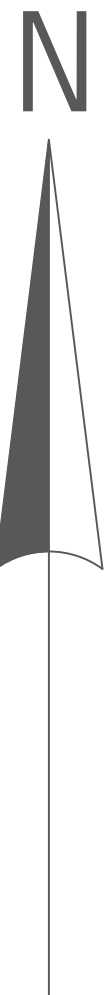


# PHOTOVOLTAIC SYSTEM - CORDEVALLE GOLF COURSE

## 1005 HIGHLAND AVENUE, SAN MARTIN, CA 95046

Vicinity Map:



Contact Info:

GENERAL CONTRACTOR:  
SOLAR TECHNOLOGIES  
23 LAS COLINAS LN., SUITE NO. 106  
SAN JOSE, CA 95119

PREPARER:  
SEAN KENNY  
COMMERCIAL PROJECT MANAGER  
23 LAS COLINAS LN., SUITE NO. 106  
SAN JOSE, CA 95119  
(831) 200-8763

ELECTRICAL ENGINEER:  
NATRON RESOURCES INC.  
1480 MORAGA ROAD, SUITE C #229  
MORAGA, CA 94556

OWNER:  
CORDEVALLE GOLF COURSE  
1005 HIGHLAND AVENUE  
SAN MARTIN, CA 95046

CODE REFERENCES:

- 1. 2019 CALIFORNIA ELECTRICAL CODE (CEC) .
- 2. 2019 CALIFORNIA FIRE CODE (CFC).
- 3. 2019 CALIFORNIA BUILDING CODE (CBC).
- 4. 2019 CALIFORNIA GREEN BUILDING CODE (GBC).

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- S4.1 - SOLAR CANOPY DETAILS

SCOPE OF WORK:

THIS IS A COMMERCIAL SOLAR ROOFTOP AND CANOPY SYSTEM. ALL ELECTRICITY GENERATED IS FOR CONSUMPTION ON SITE.

SYSTEM ELECTRICAL CONNECTION TO MAIN ELECTRICAL SERVICE IS AT 480Y/277V SWITCHGEAR.

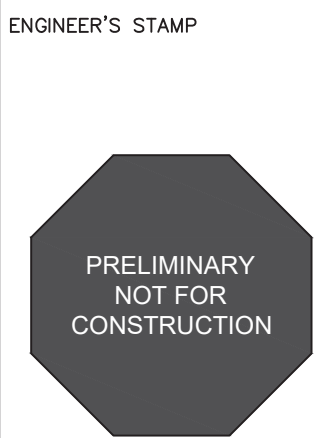
PERMIT SHALL INCLUDE LABOR OF INSTALLING PANELS, RUNNING OF ELECTRICAL CONDUITS, INSTALLATION OF NEW ELECTRICAL EQUIPMENT AND ELECTRICAL CONNECTION TO EXISTING BUILDING SERVICE.

NO BATTERIES REQUIRED AS PART OF THIS PROJECT SCOPE.

System Specifications:

SYSTEM SIZE:	367.8 KWDC, 330 KWAC;
MODULES DETAILS:	(743) TRINA SOLAR TSM-495DEG18MC.20(II) (495 W)
INVERTER DETAILS:	(3) CHINT POWER CPS SCA50KTL-DO/US-480 [480V] (5) CHINT POWER CPS SCA36KTL-DO/US-480 [480V]
ARRAY SQUARE FOOTAGE	19,271.70
ARRAY WEIGHT (LBS)	49,335.20
CONSTRUCTION TYPE	COMMERCIAL
ASHRAE STATION	SALINAS MUNICIPAL AP
ASHRAE 2% HIGH DESIGN TEMP. DB	25
ASHRAE MIN MEAN EXTREME ANNUAL DB	-1

PROJECT TITLE:  
CORDEVALLE GOLF COURSE  
1005 HIGHLAND AVENUE,  
SAN MARTIN, CA 95046  
APN: 77920006



REVISIONS		ISSUE	DATE
A	29-JUL-22	FOR SUBMITTAL	
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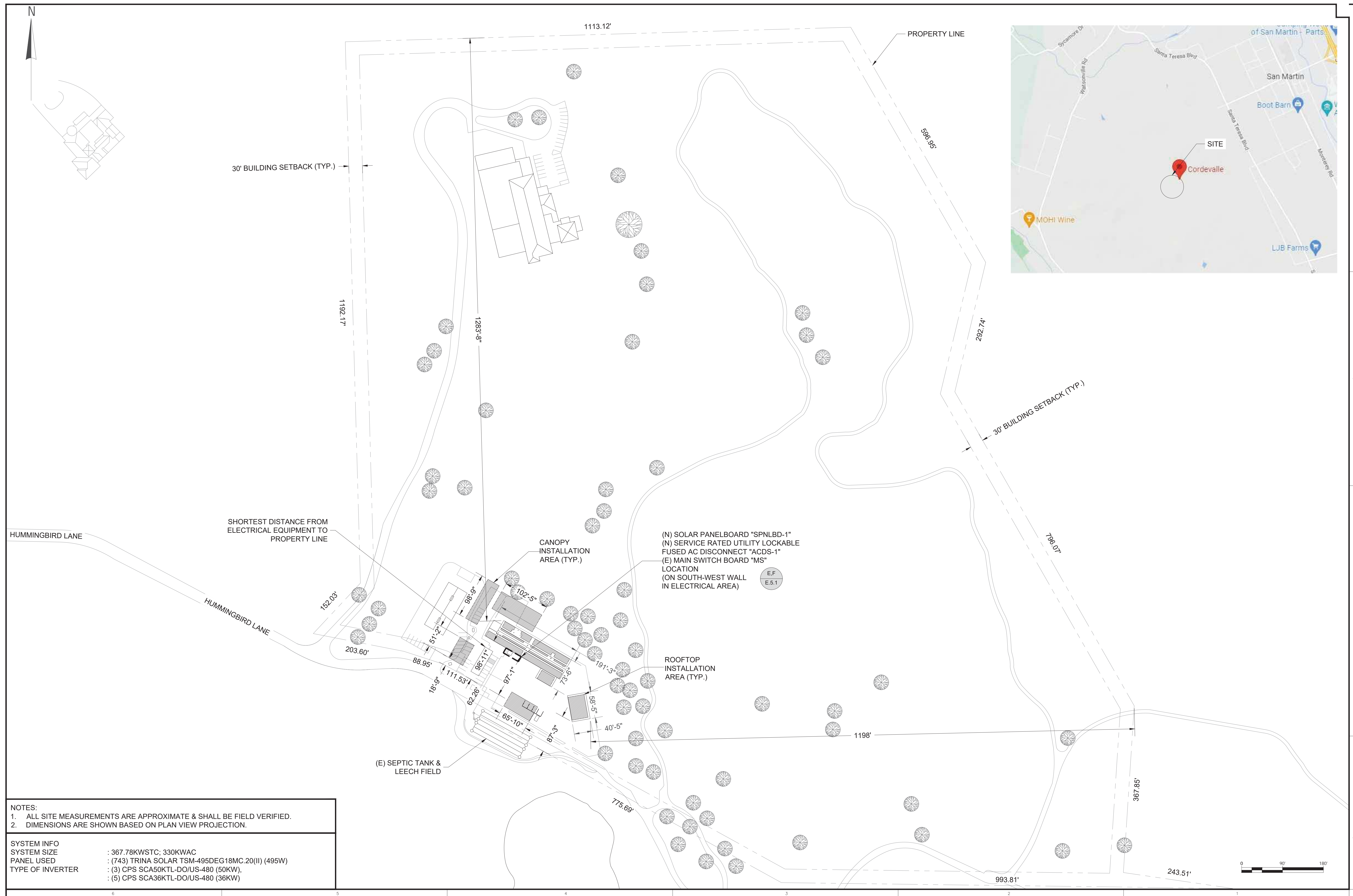
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TITLE PAGE

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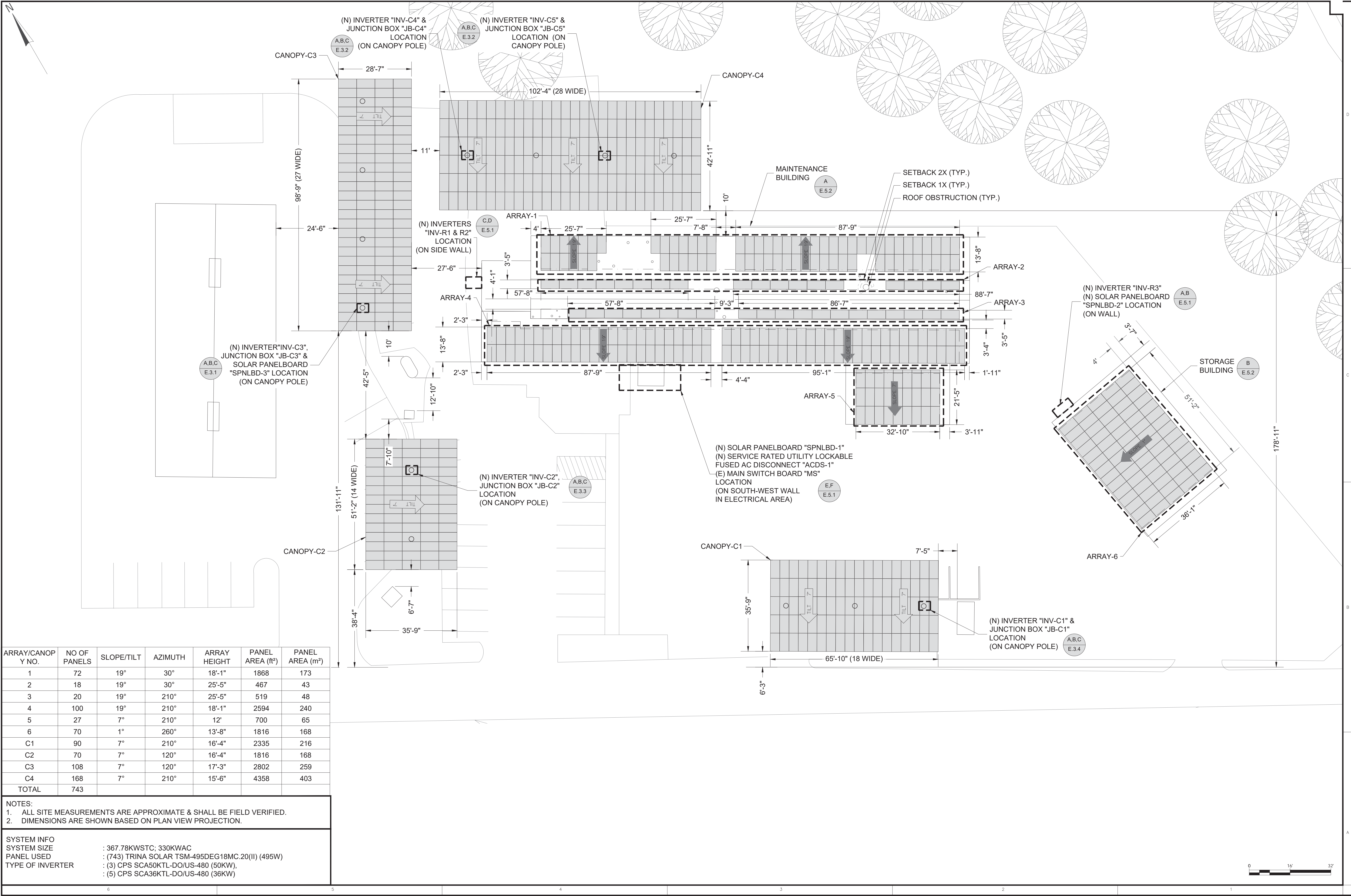
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SHEET TITLE:

## SITE PLAN

SHEET #:  
A.1.1





ARRAY/CANOPY NO.	NO OF PANELS	SLOPE/TILT	AZIMUTH	ARRAY HEIGHT	PANEL AREA (ft²)	PANEL AREA (m²)
1	72	19°	30°	18'-1"	1868	173
2	18	19°	30°	25'-5"	467	43
3	20	19°	210°	25'-5"	519	48
4	100	19°	210°	18'-1"	2594	240
5	27	7°	210°	12'	700	65
6	70	1°	260°	13'-8"	1816	168
C1	90	7°	210°	16'-4"	2335	216
C2	70	7°	120°	16'-4"	1816	168
C3	108	7°	120°	17'-3"	2802	259
C4	168	7°	210°	15'-6"	4358	403
TOTAL	743					

NOTES:  
1. ALL SITE MEASUREMENTS ARE APPROXIMATE & SHALL BE FIELD VERIFIED.  
2. DIMENSIONS ARE SHOWN BASED ON PLAN VIEW PROJECTION.

SYSTEM INFO  
SYSTEM SIZE : 367.78KWSTC; 330KWAC  
PANEL USED : (743) TRINA SOLAR TSM-495DEG18MC.20(II) (495W)  
TYPE OF INVERTER : (3) CPS SCA50KTL-DO/US-480 (50KW),  
: (5) CPS SCA36KTL-DO/US-480 (36KW)

PROJECT TITLE:  
**CORDEVALLE GOLF COURSE**  
1005 HIGHLAND AVENUE,  
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APN: 77920006

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NOT FOR  
CONSTRUCTION

**SOLAR TECHNOLOGIES**  
CLEAN ENERGY SOLUTIONS  
23 LAS COLINAS LN., SUITE NO. 108  
SAN JOSE, CA 95119  
JOB NUMBER: 11806

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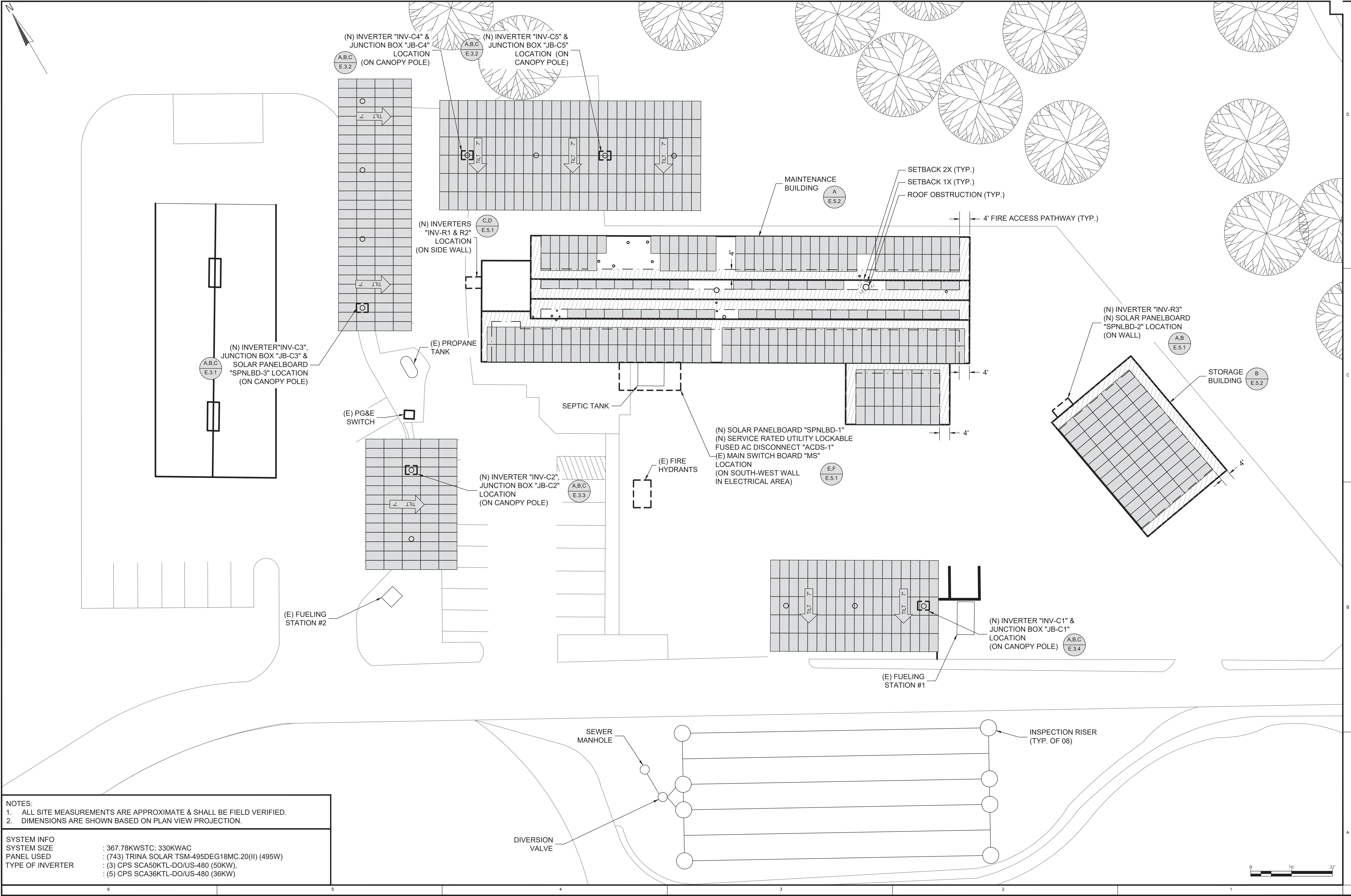
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SHEET TITLE:  
**ARRAY PLAN**

SHEET #:  
A.2.1





PROJECT TITLE:  
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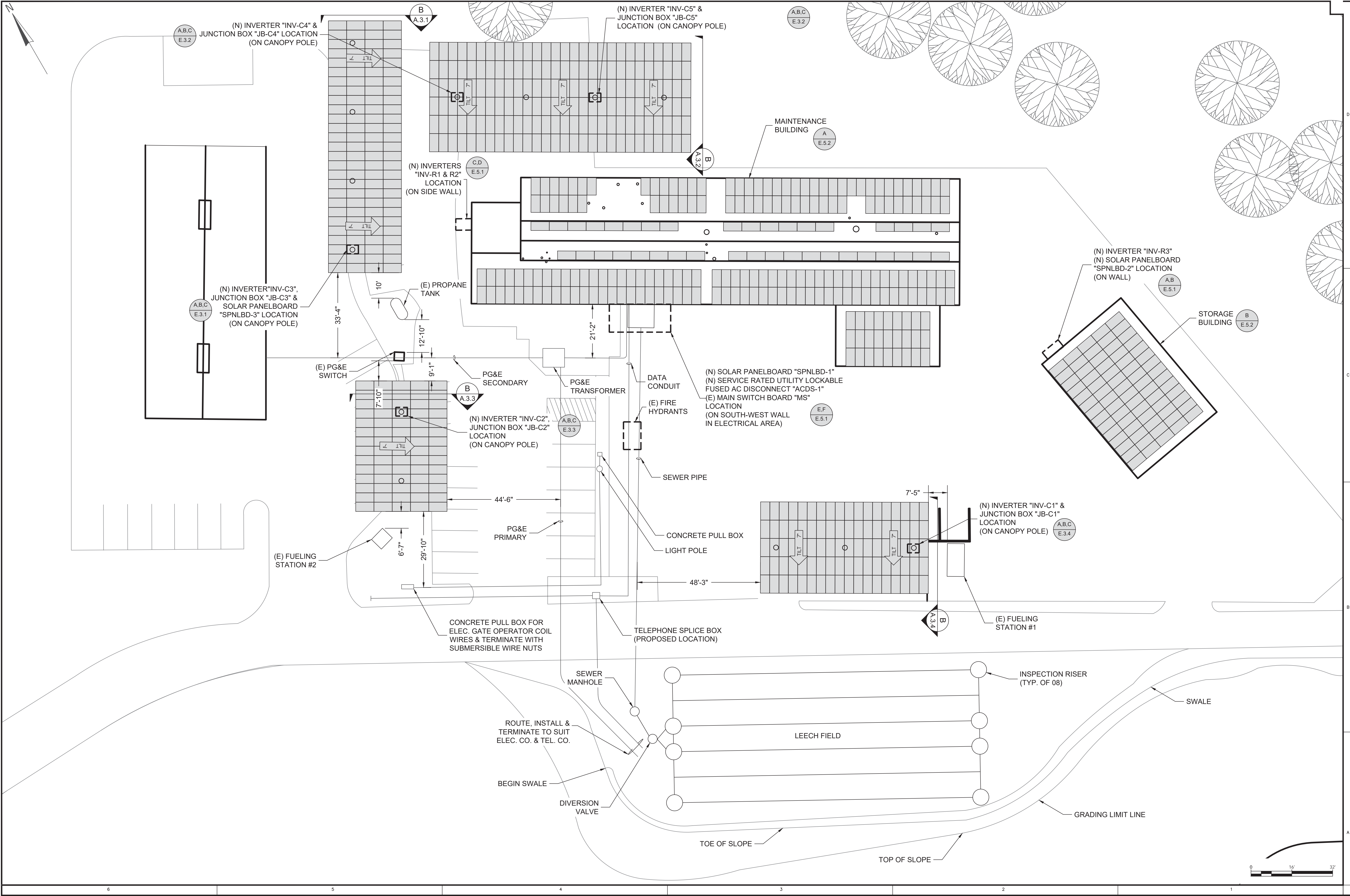
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**FIRE ACCESS PLAN**

SHEET #:  
A.2.2





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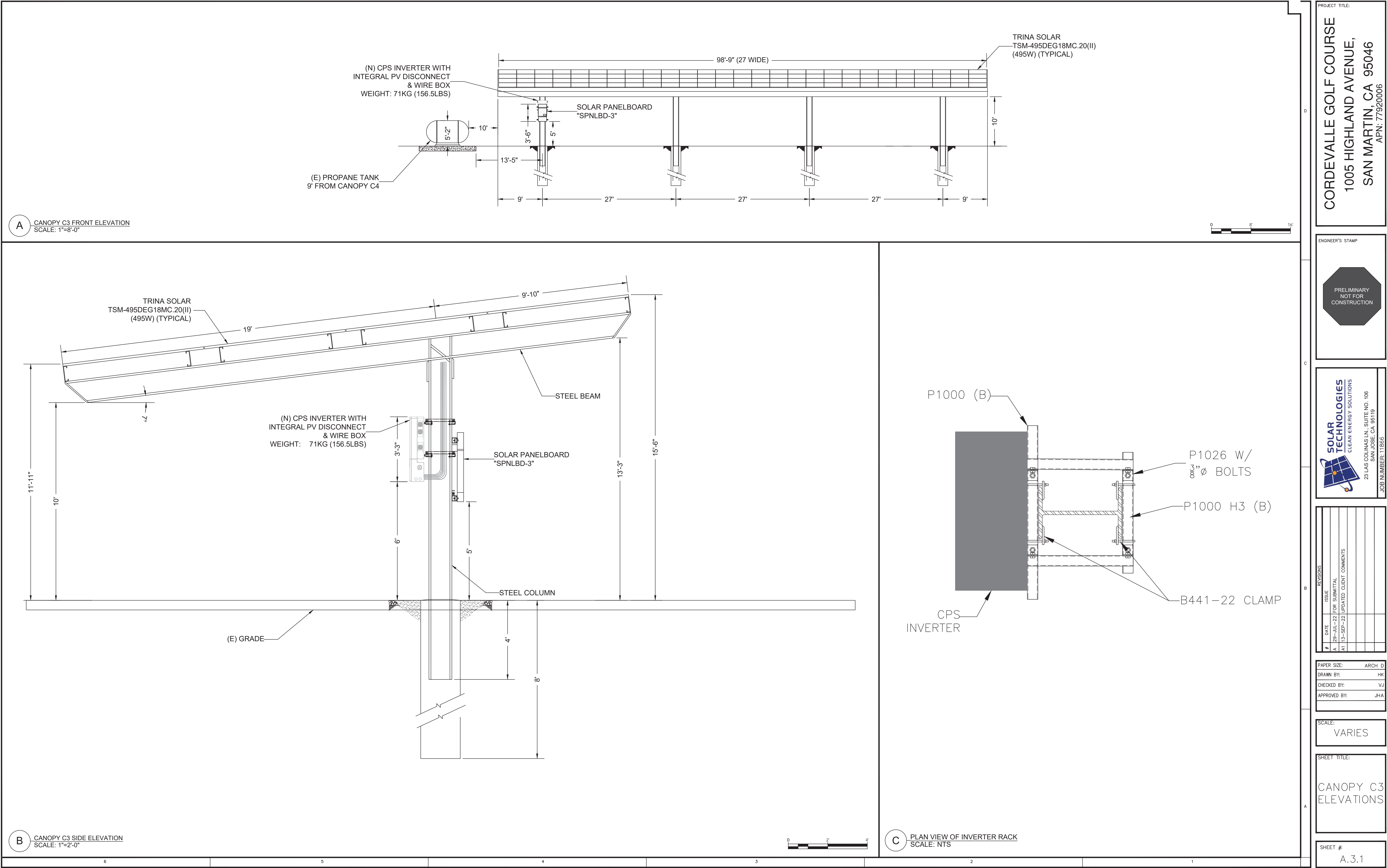
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SHEET TITLE:	UNDERGROUND LOCATE PLAN
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SHEET #:	A.2.3
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PROJECT TITLE:  
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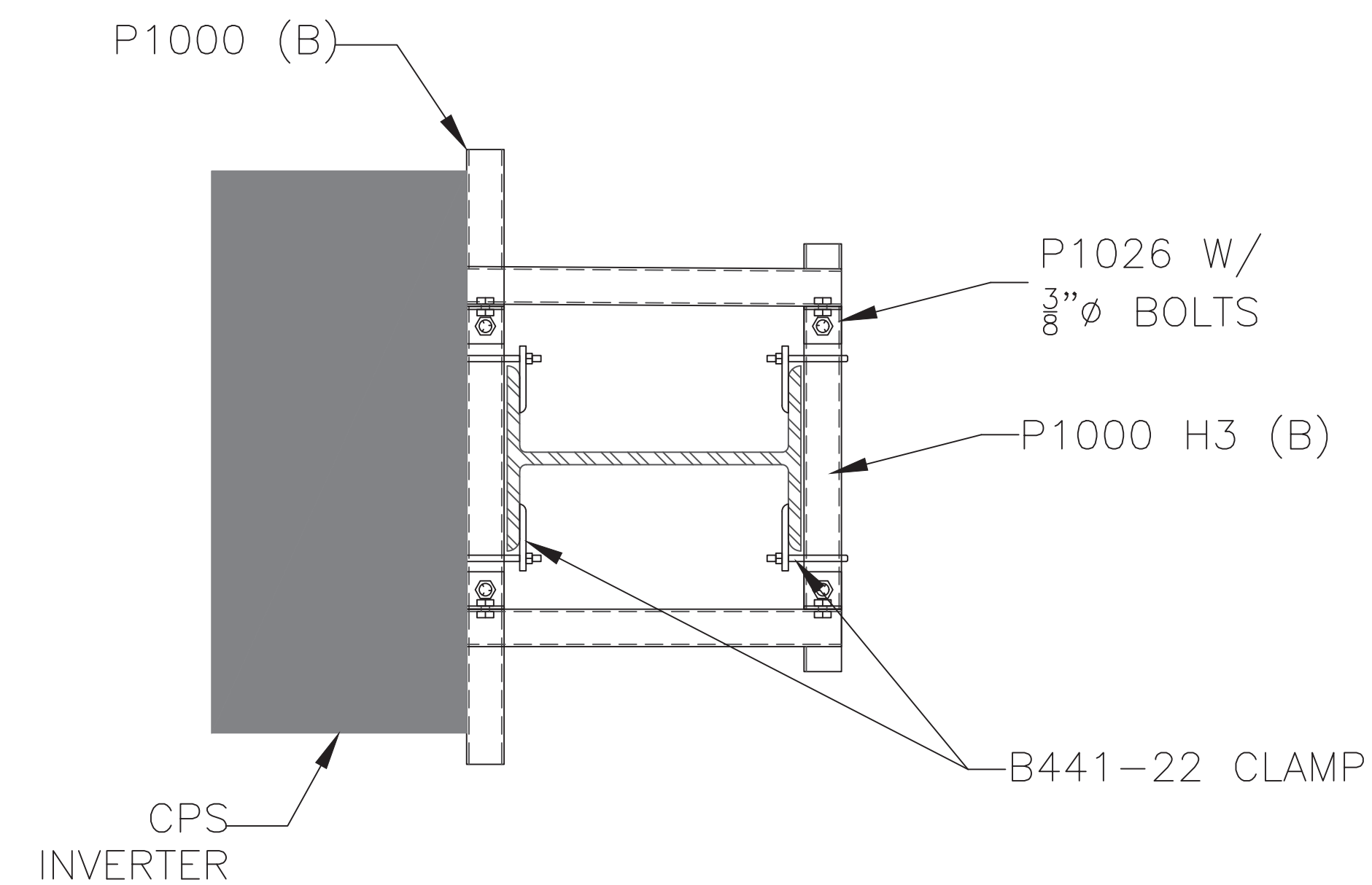
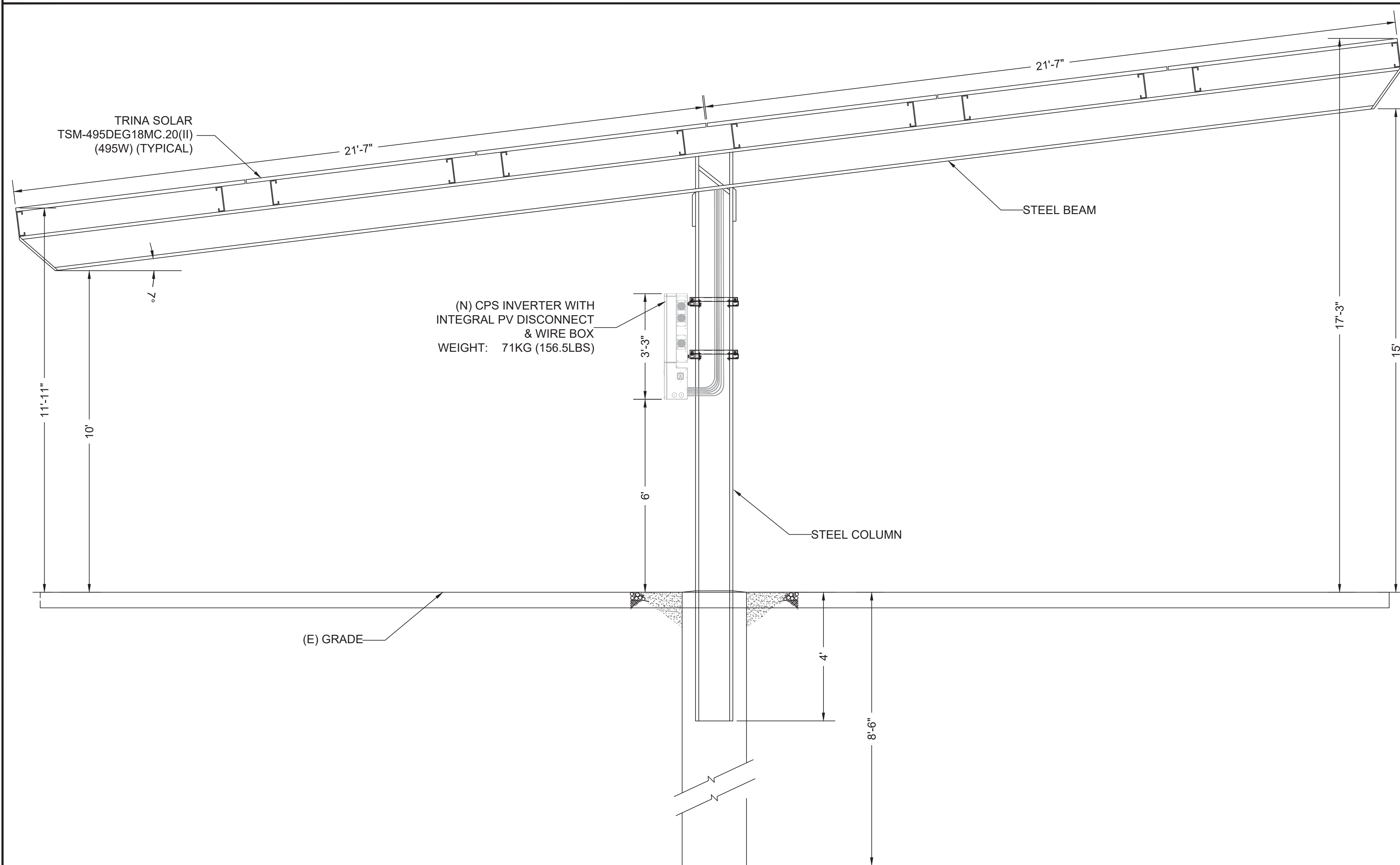
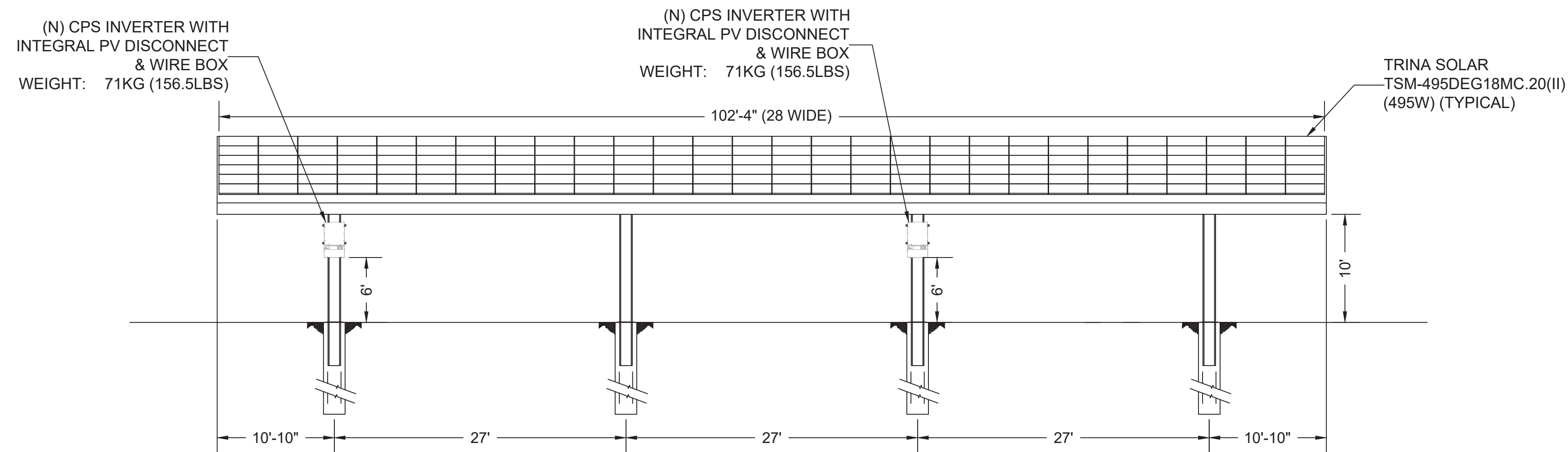
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**CANOPY C3  
ELEVATIONS**

SHEET #:  
A.3.1





PROJECT TITLE:  
CORDEVALLE GOLF COURSE  
1005 HIGHLAND AVENUE,  
SAN MARTIN, CA 95046  
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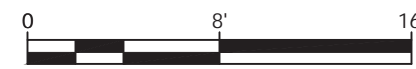
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SHEET TITLE:

CANOPY  
C4  
ELEVATIONS

SHEET #: A.3.2





A



B



C

APN: 77920006



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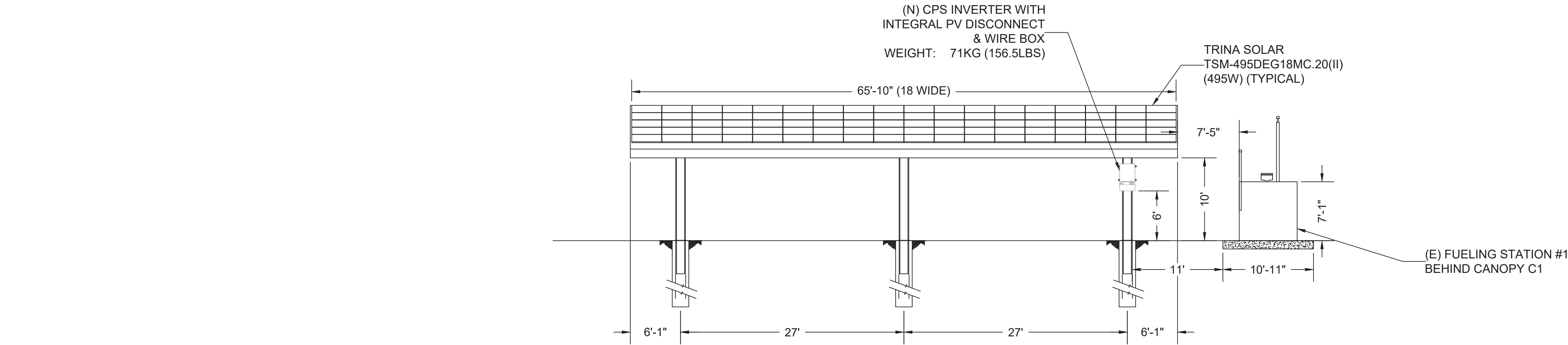
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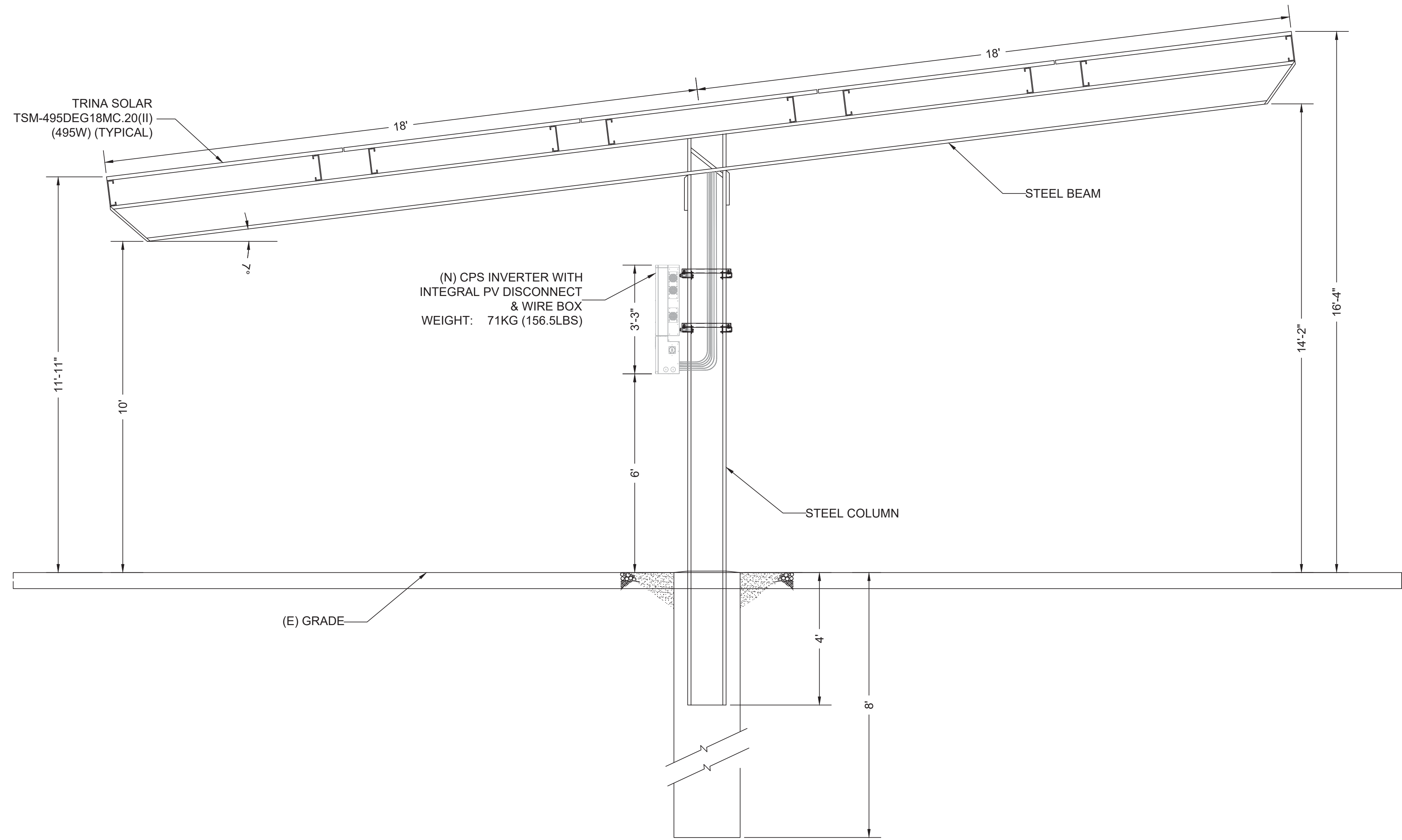
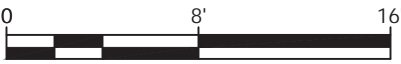
CANOPY C2  
ELEVATIONS

SHEET #:  
A.3.3

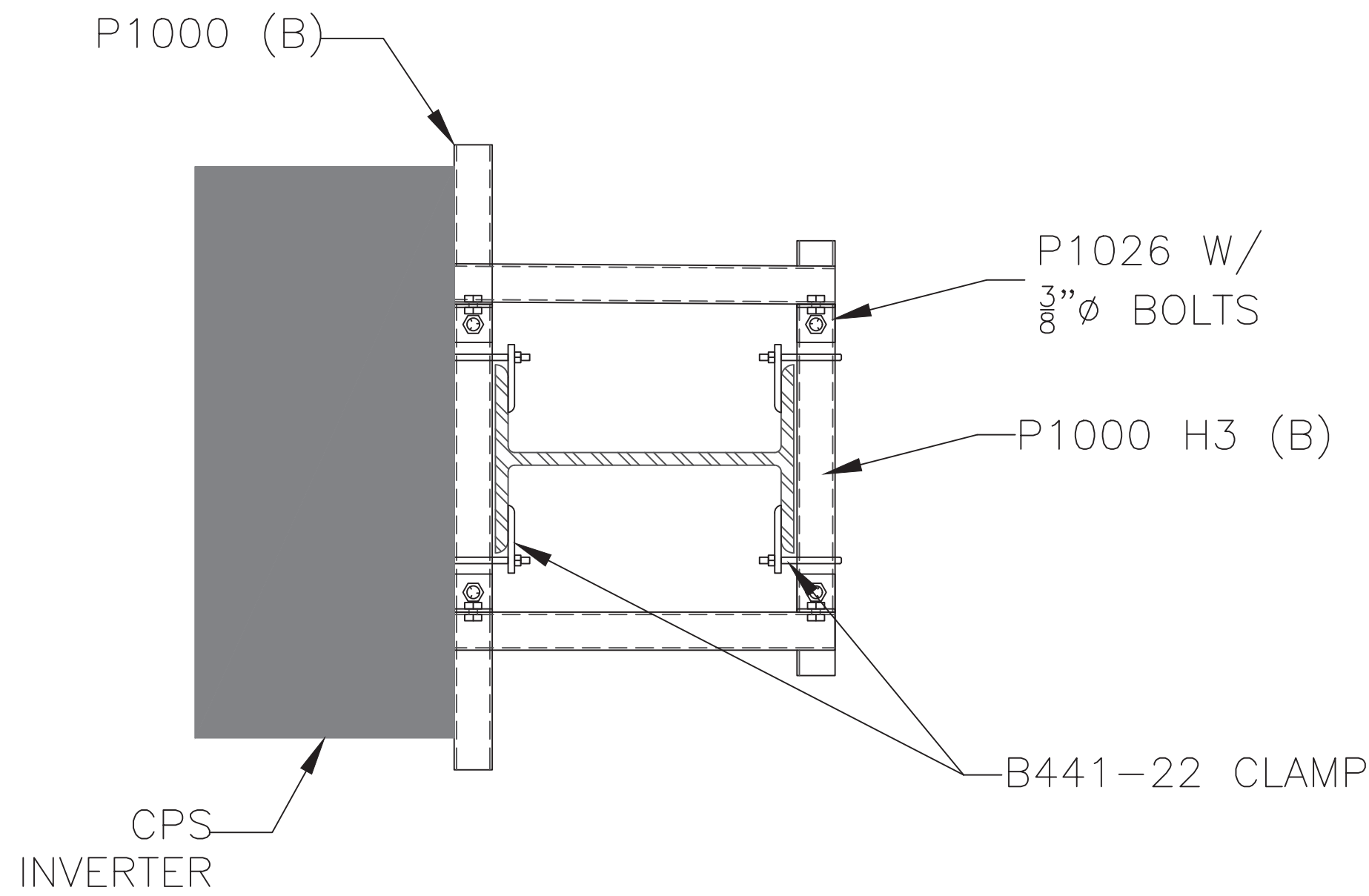




**A** CANOPY C1 FRONT ELEVATION  
SCALE: 1"=8'-0"



**B** CANOPY C1 SIDE ELEVATION  
SCALE: 1"=2'-0"



**C** PLAN VIEW OF INVERTER RACK  
SCALE: NTS

PROJECT TITLE:  
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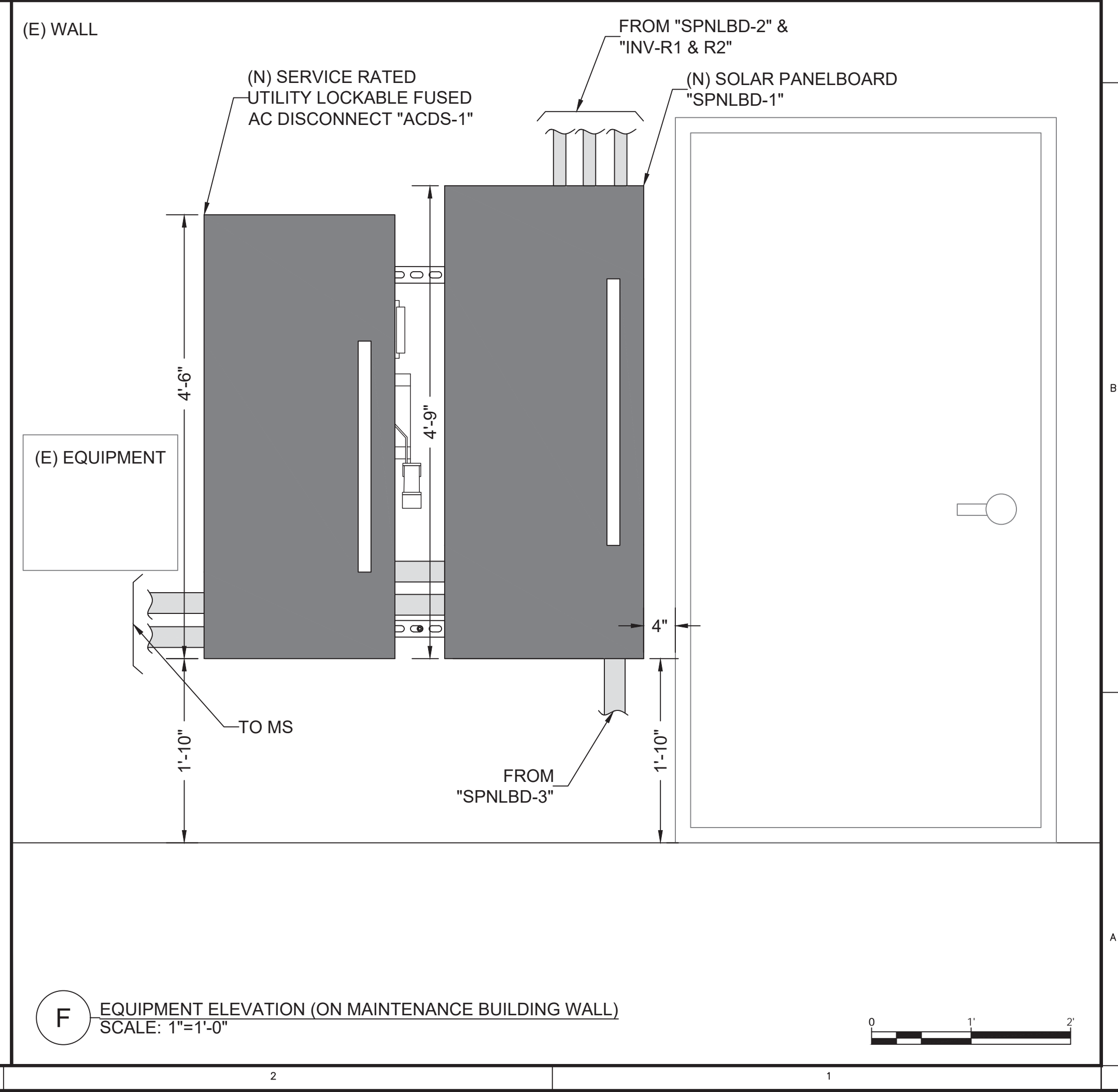
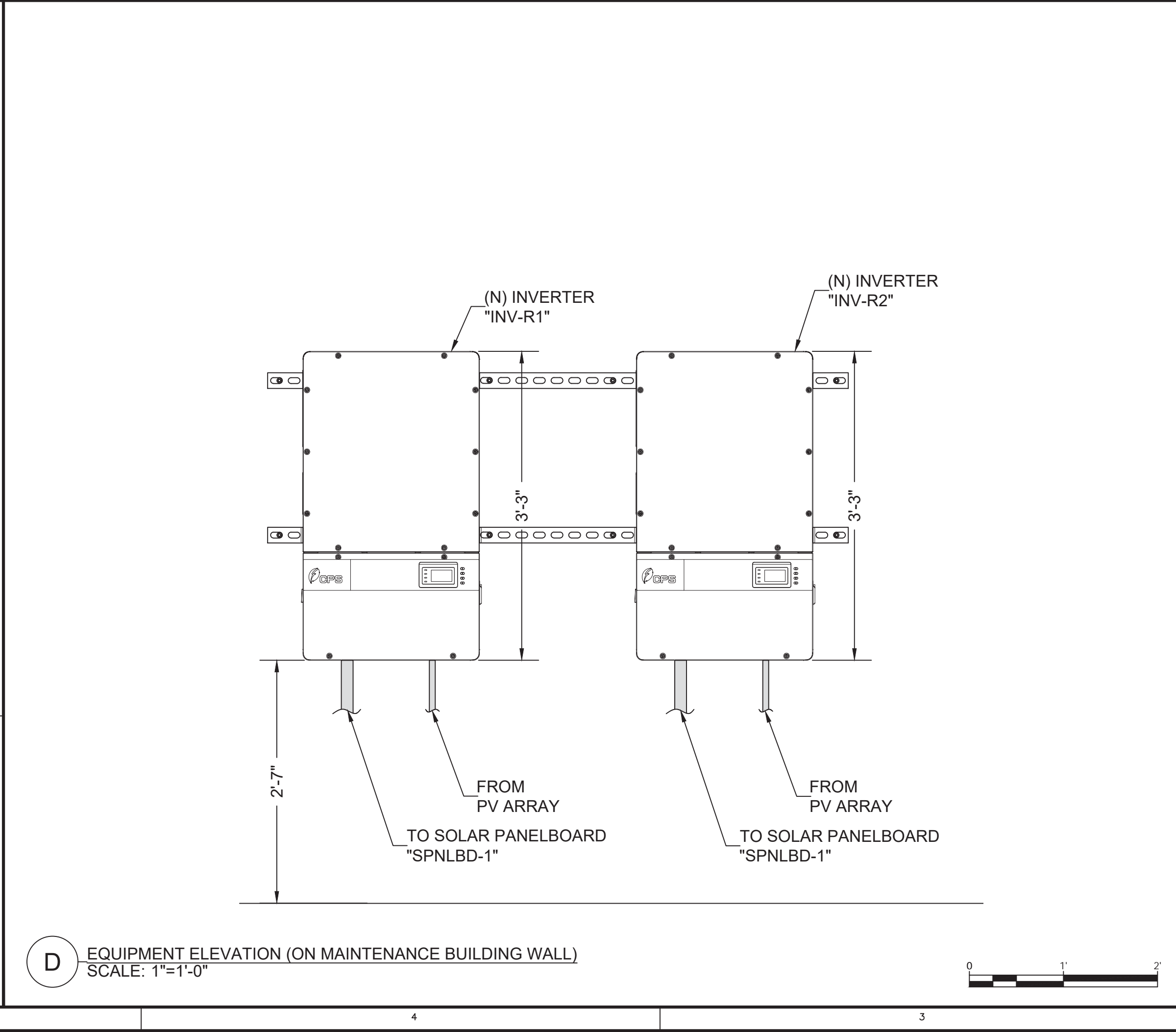
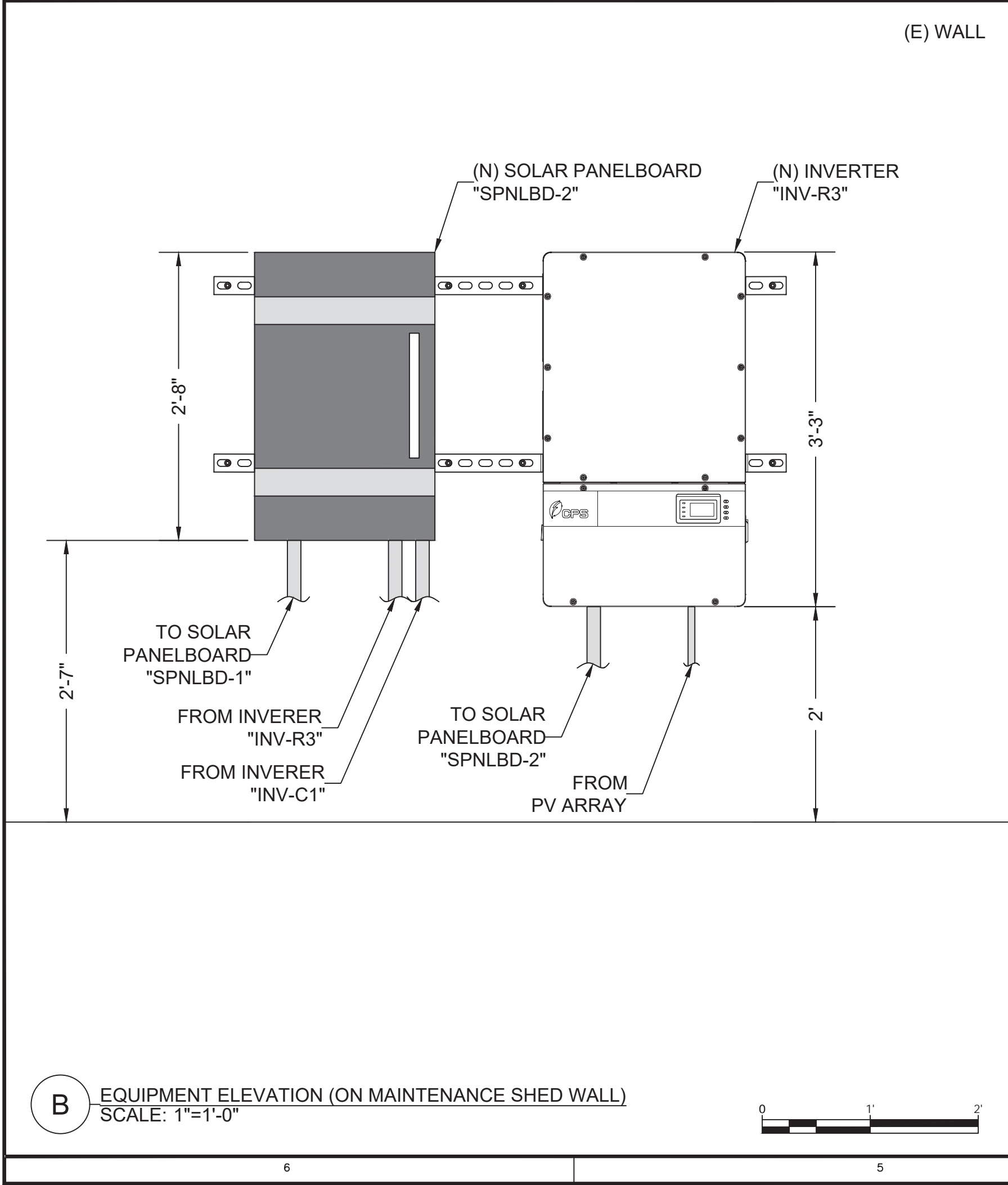
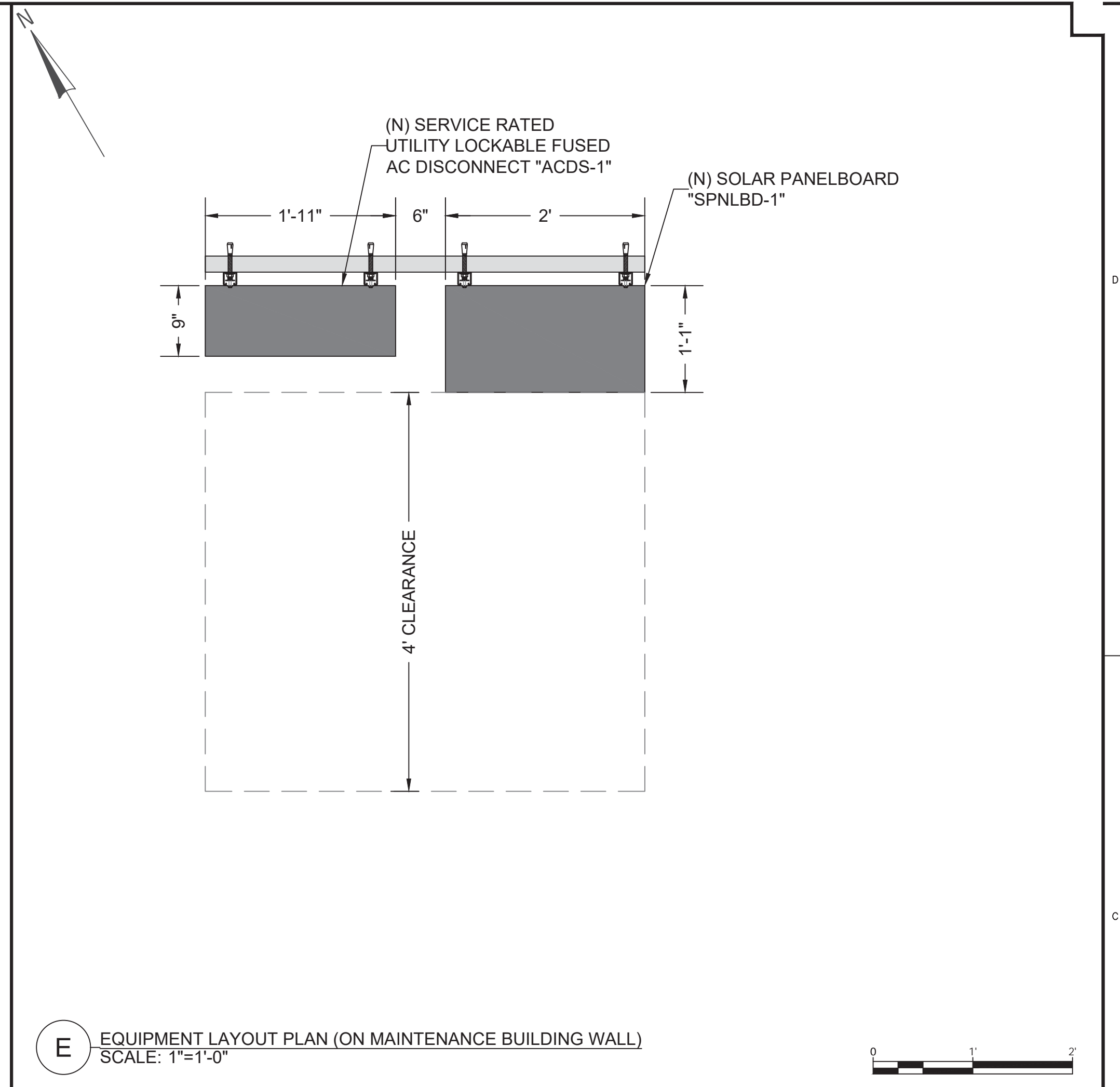
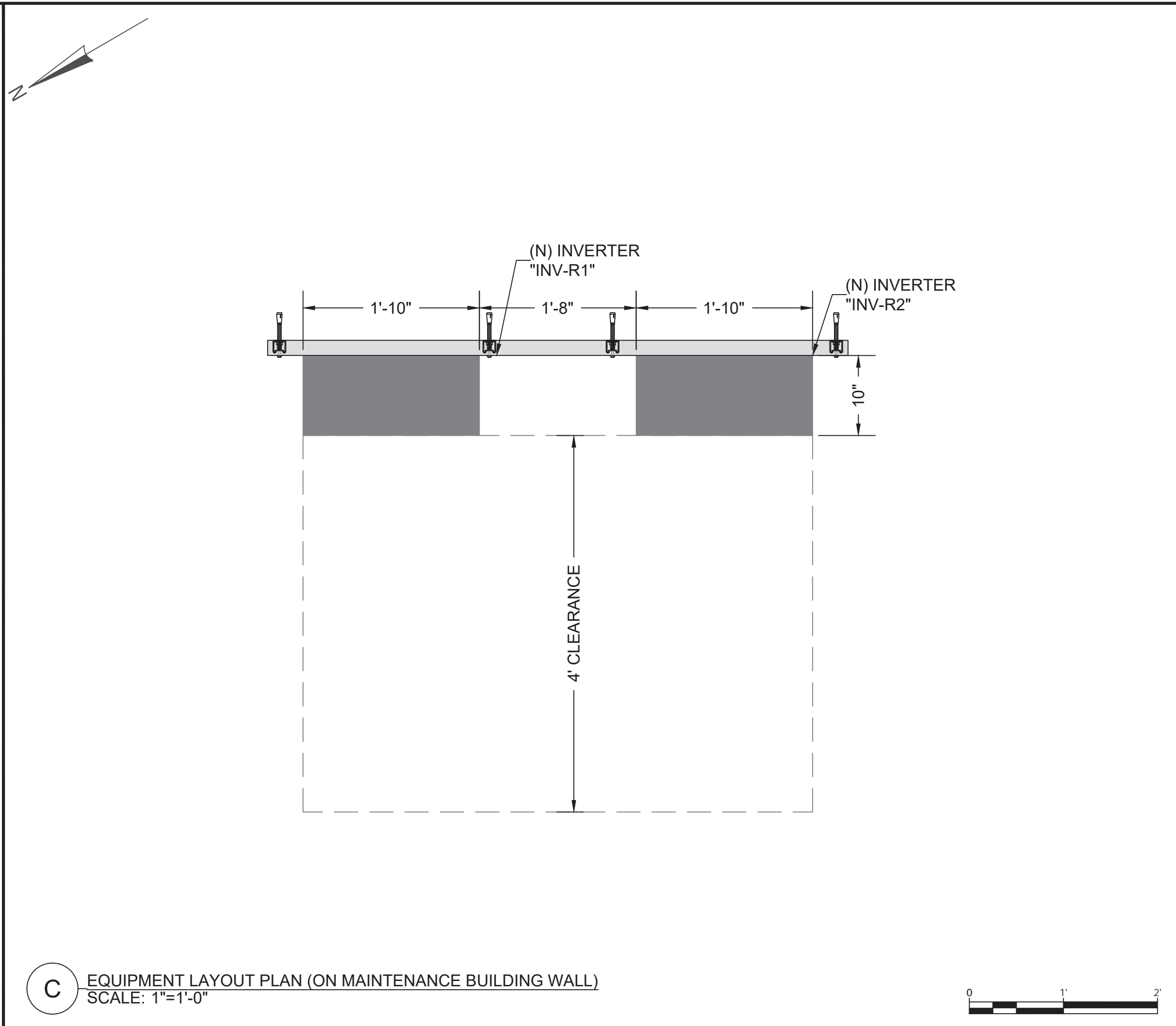
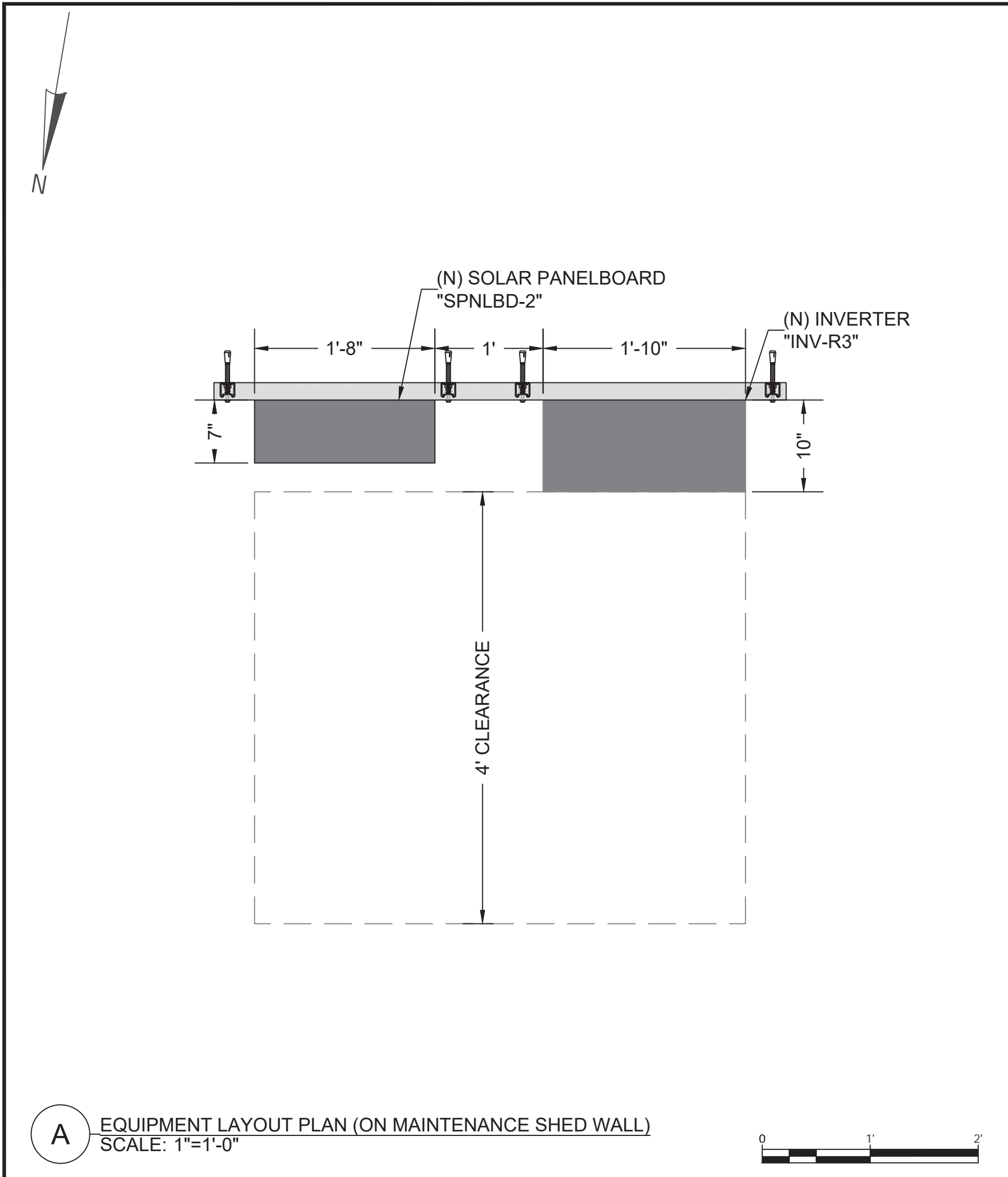
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VARIES

SHEET TITLE:  
**CANOPY C1 ELEVATIONS**

SHEET #:  
A.3.4





PROJECT TITLE:  
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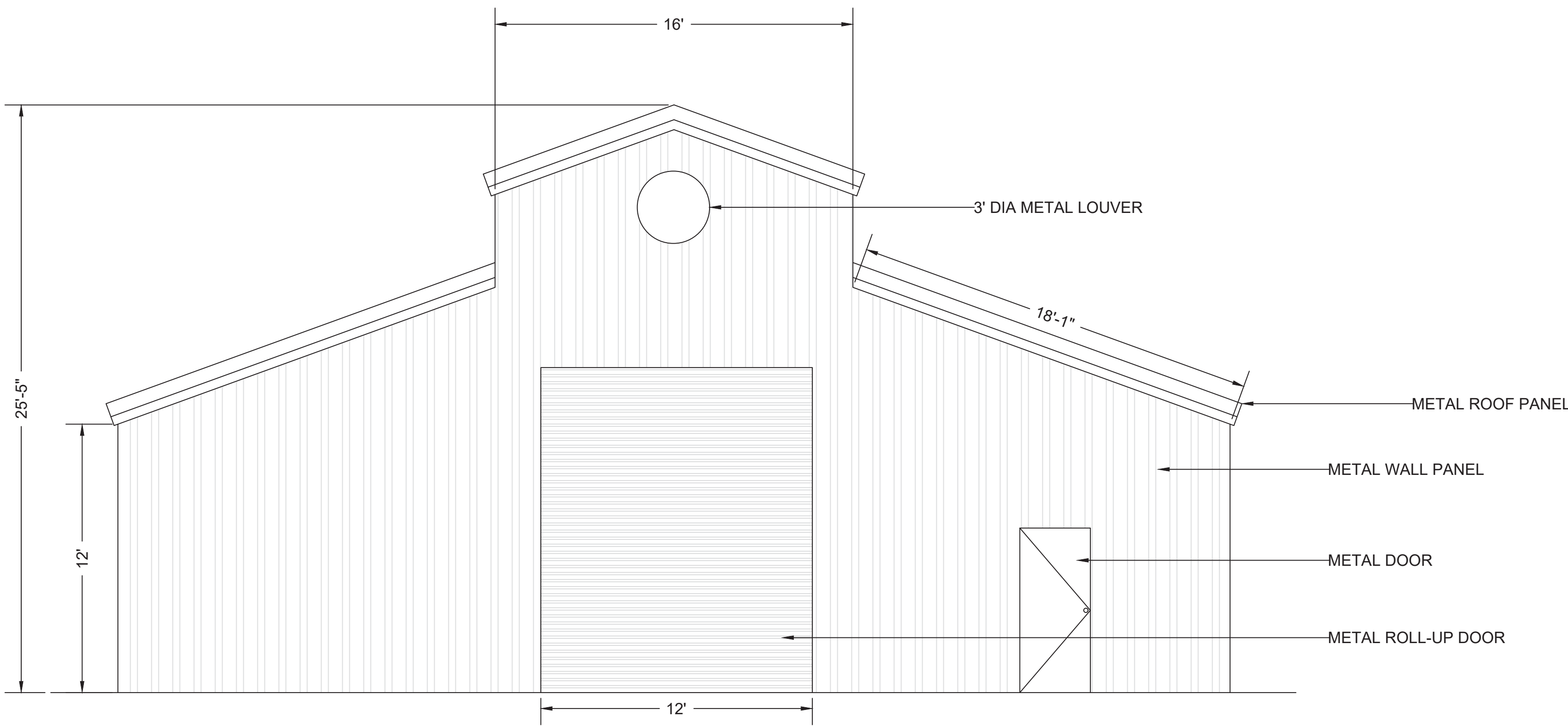
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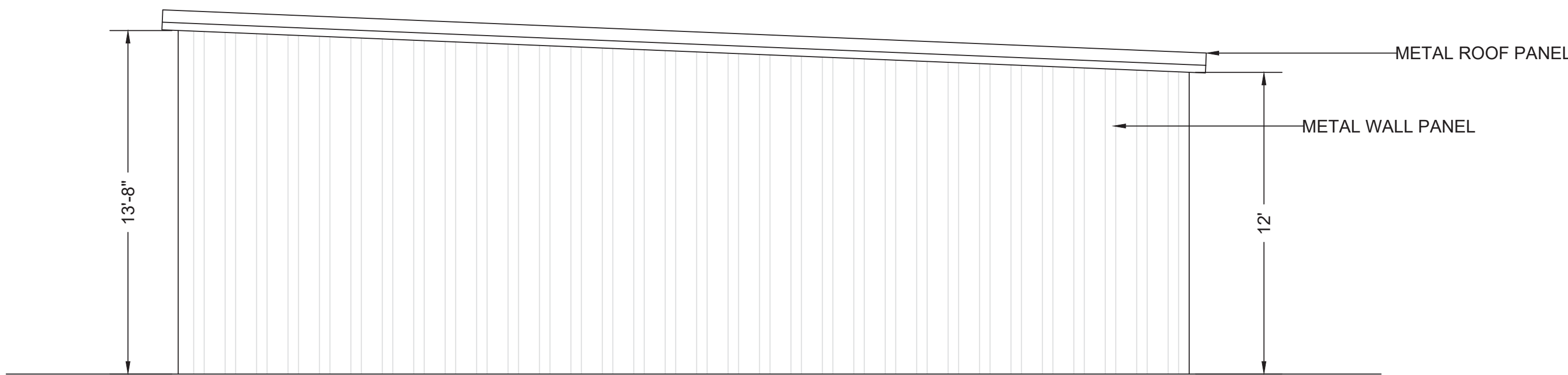
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**EQUIPMENT LAYOUT PLAN**

SHEET #:  
E.5.1





**A** MAINTENANCE BUILDING EAST ELEVATION  
SCALE: 1"=4'-0"



**B** STORAGE BUILDING SOUTH ELEVATION  
SCALE: 1"=4'-0"



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SHEET TITLE:  
**BUILDING  
ELEVATIONS**

SHEET #:  
E.5.2

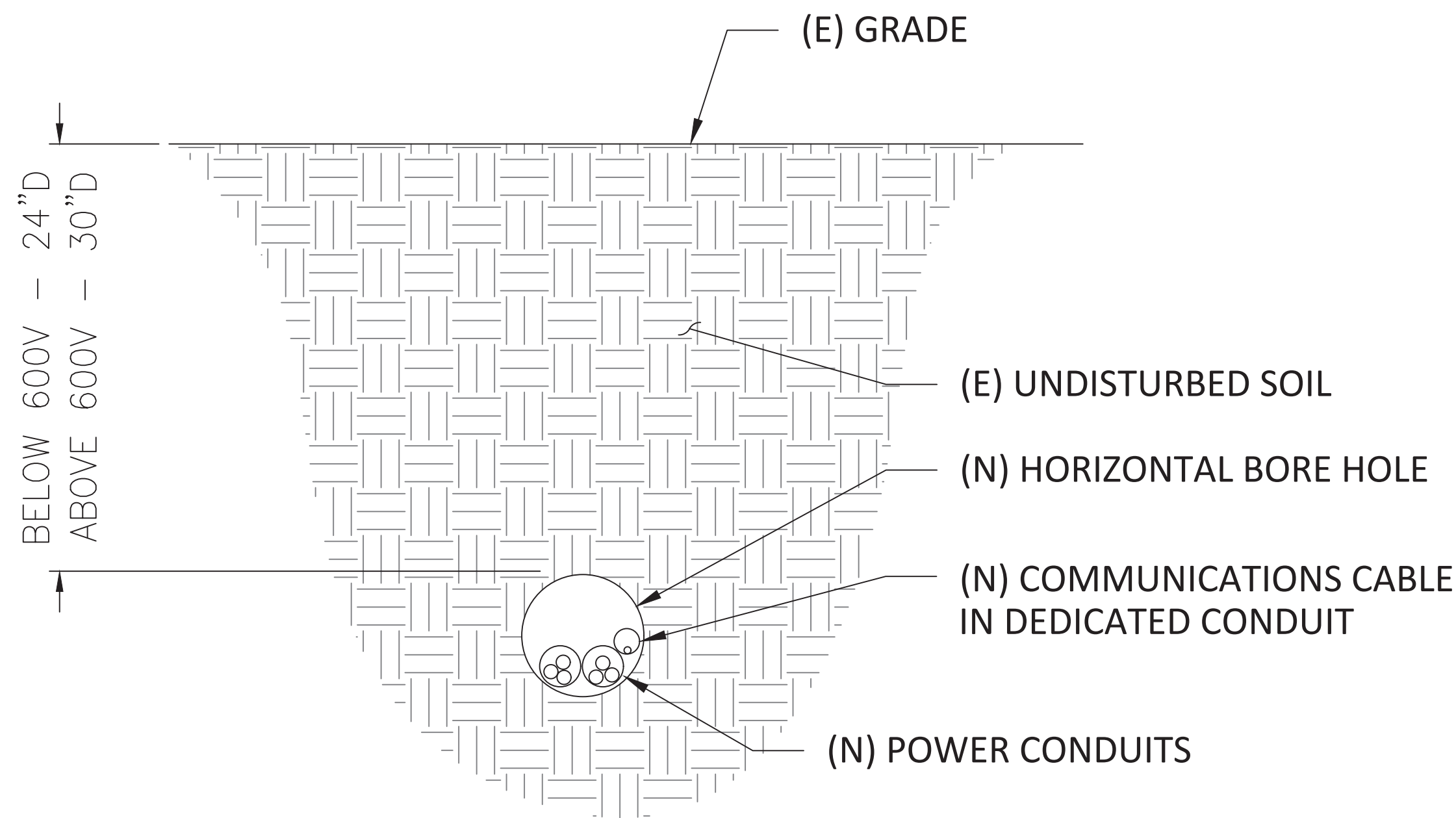




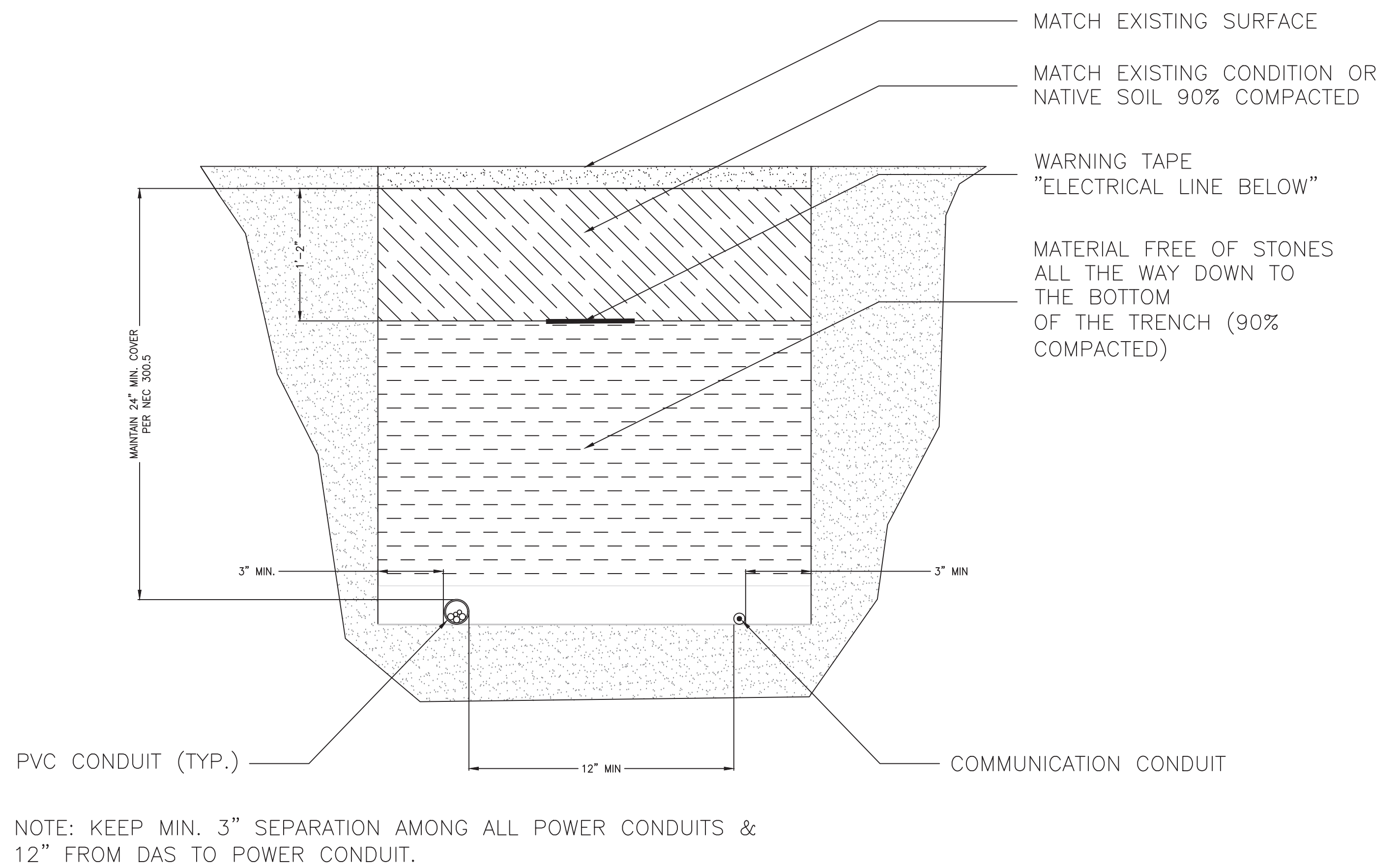


HORIZONTAL BORING NOTES:

1. SLURRY BACKFILL ALL THE BORE PITS AND POTHOLES UNDER PAVEMENT AND SIDEWALKS.
2. CONDUIT SHALL BE HDPE.
3. A SINGLE BORE CASING SHALL NOT HAVE MORE THAN 2 POWER CONDUITS.



**A** TYPICAL BORE DETAIL  
SCALE: NTS



**B** TYPICAL TRENCH DETAIL  
SCALE: NTS

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SHEET TITLE:  
ELECTRICAL  
DETAILS-2

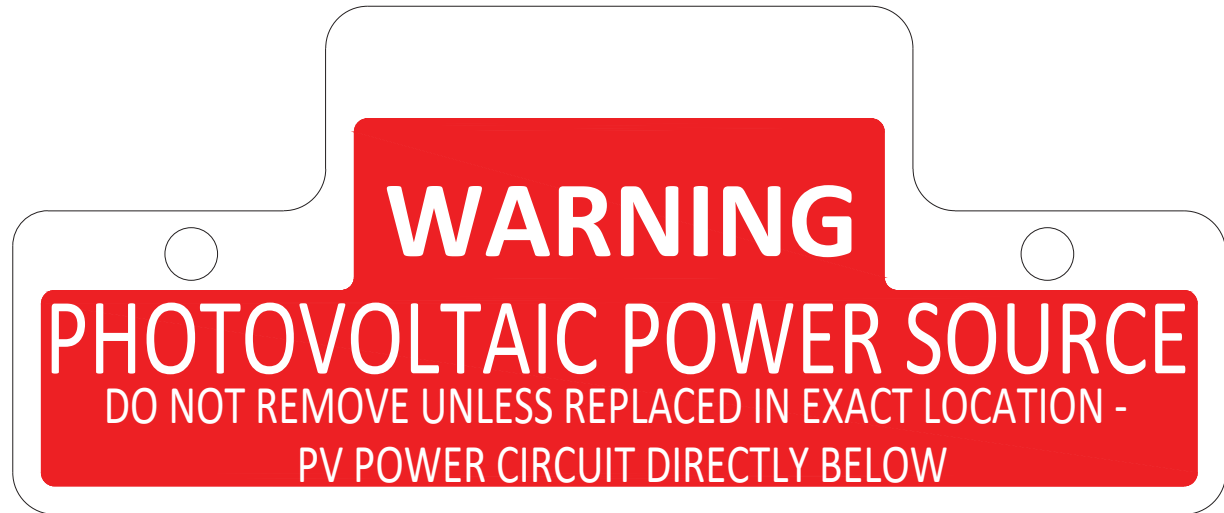
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E.6.2



1 EMT / CONDUIT RACEWAYS, JUNCTION BOXES  
\*(REFLECTIVE MATERIAL REQUIRED)

WARNING: PHOTOVOLTAIC  
POWER SOURCE

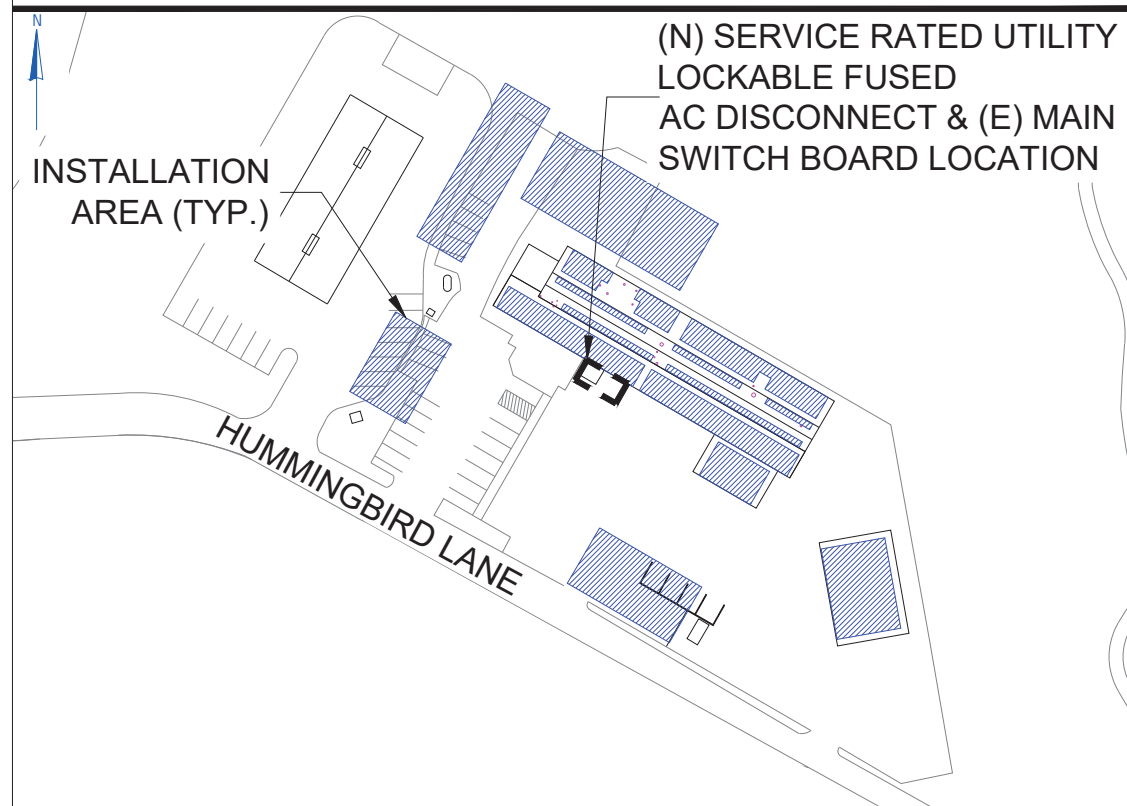
PER NEC 690.31(G)(3) & (4)



PER NEC 690.31(G)(1) - WHERE CIRCUITS ARE EMBEDDED IN BUILT-UP, LAMINATE, OR MEMBRANE ROOFING MATERIALS IN ROOF AREAS NOT COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT.

2 BUILDING / STRUCTURE

CAUTION  
POWER TO THIS SERVICE IS ALSO SUPPLIED  
FROM THE FOLLOWING SOURCES WITH  
DISCONNECTS LOCATED AS SHOWN

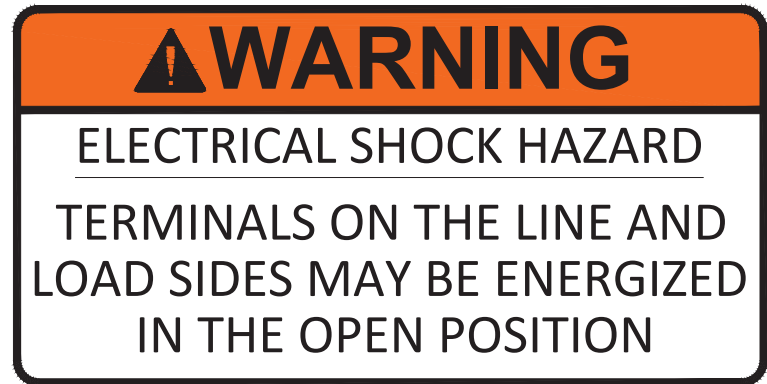


PER NEC 690.56(B) & 705.10

3 PHOTOVOLTAIC SYSTEM AC DISCONNECT

MAIN PHOTOVOLTAIC  
SYSTEM AC DISCONNECT

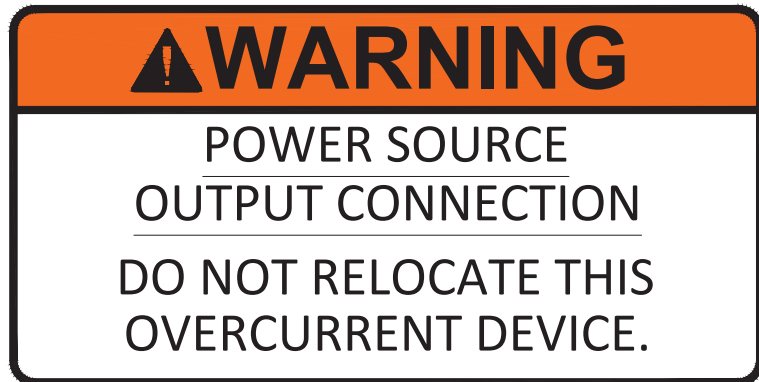
PER NEC 690.13(B)



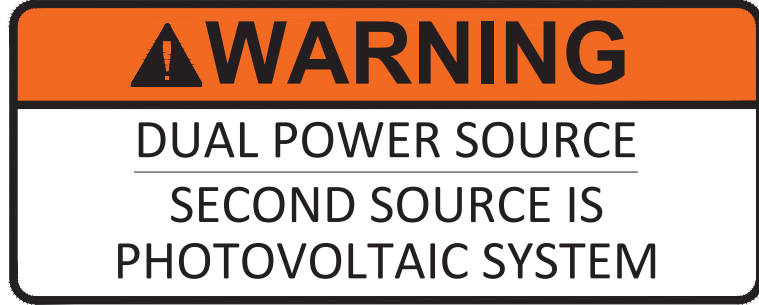
PER NEC 690.13(B)

PHOTOVOLTAIC AC DISCONNECT  
RATED AC OUTPUT CURRENT: 398 A  
NOMINAL OPERATING AC VOLTAGE: 480V

PER NEC 690.54



PER NEC 705.12(B)(2)(3)(b)



PER NEC 705.12(B)(3)

SOLAR POWER SYSTEM EQUIPPED  
WITH RAPID SHUTDOWN

PER NEC 690.56(C)(3)

4 SOLAR PANELBOARD/SWITCHBOARD



PER NEC 705.12(B)(2)(3)(c)

DEDICATED PHOTOVOLTAIC SYSTEM  
COMBINER PANEL NO LOAD SHALL BE  
ADDED TO THIS PANEL

PER NEC 705.12(B)(2)(3)(c)

5 MAIN SERVICE DISCONNECT



PER NEC ARTICLE 110.16(A) AND NFPA 70E ARTICLE 130.5(C)(1),(2),(3)

LABELING REQUIREMENTS FOR ARTICLE 110.16, 690 & 705.12

NEC 110.21 B) Field-Applied Hazard Markings.

Where caution, warning, or danger signs or labels are required by this Code, the labels shall meet the following requirements:

- The marking shall warn of the hazards using effective words, colors, symbols, or any combination thereof.  
Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for suitable font sizes, words, colors, symbols, and location requirements for labels.
- The label shall be permanently affixed to the equipment or wiring method and shall not be handwritten.  
Exception to (2): Portions of labels or markings that are variable, or that could be subject to changes, shall be permitted to be handwritten and shall be legible.
- The label shall be of sufficient durability to withstand the environment involved.  
Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for the design and durability of safety signs and labels for application to electrical equipment.

NEC 110.16 Arc Flash:

(A) General -

Electrical equipment, such as switchboards, switchgear, panelboards, industrial control panels, meter socket enclosures, and motor control centers, that is in other than dwelling units, and is likely to require examination, adjustment, servicing, or maintenance while energized, shall be field or factory marked to warn qualified persons of potential electric arc flash hazards. The marking shall meet the requirements in 110.21(B) and shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

(B) Service Equipment

In other than dwelling units, in addition to the requirements in (A), a permanent label shall be field or factory applied to service equipment rated 1200 amps or more. The label shall meet the requirements of 110.21(B) and contain the following information.

- Nominal system voltage
- Available fault current at the service overcurrent protective devices.
- The clearing time of service overcurrent protective devices based on the available fault current at the service equipment.
- The date the label was applied.

Exception: Service equipment labeling shall not be required if an arc flash label is applied in accordance with acceptable industry practice.

NEC 690.13(B)

Each PV system disconnecting means shall plainly indicate whether in the open (off) or closed (on) position and be permanently marked "PV SYSTEM DISCONNECT" or equivalent. Additional markings shall be permitted based upon the specific system configuration. For PV system disconnecting means where the line and load terminals may be energized in the open position, the device shall be marked with the following words or equivalent.

NEC 690.31(G)(1)

Where circuits are embedded in build up, laminate or membrane roofing materials not covered by PV modules and associated equipment, the location of the circuits shall be clearly marked.

NEC 690.31(G)(3) & (4)

PV dc system circuit labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings, or floors. Spacing between labels or markings, or between a label and a marking, shall not be more than 3 m (10 ft). Labels required in this section shall be suitable for the environment where they are installed.

NEC 690.53

A permanent label for the dc PV power source indicating items (1) through (3) shall be provided by the installer at dc PV system disconnecting means and at each dc equipment disconnecting means required by 690.15. Where a disconnecting means has more than one dc PV power source, the values in 690.53 (1) through (3) shall be specified for each source.

NEC 690.54

All interactive system(s) points of interconnection with other sources shall be marked as an accessible location at the disconnecting means as a power source and with the rated ac output current and the nominal operating ac voltage.

NEC 690.56(B)

Plaques or directories shall be installed in accordance with 705.10.

NEC 690.56(C)(1)(a)

For PV systems that shut down the array and conductors leaving the array shall be labeled accordingly.

NEC 690.56(C)(3)

A rapid shutdown switch shall have a label located on or no more than 1 meter (3 ft) from the switch that includes the following wording.

NEC 705.10

A permanent plaque or directory, denoting the location of all electric power source disconnecting means on or in the premises, shall be installed at each service equipment location and at the location(s) of the system disconnect(s) for all electric power production sources capable of being interconnected. Also see 690.4(d) One sign required for each PV system.

NEC 705.12(B)(2)(3)(b)

Where two sources, one a primary power source and the other another power source, are located at opposite ends of a busbar that contains loads, the sum of 125 percent of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar shall not exceed 120 percent of the ampacity of the busbar. A permanent warning label shall be applied to the distribution equipment adjacent to the back-fed breaker from the power source that displays the following or equivalent wording.

NEC 705.12(B)(2)(3)(c)

The sum of the ampere ratings of all overcurrent devices on panelboards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar. The rating of the overcurrent device protecting the busbar shall not exceed the rating of the busbar. Permanent warning labels shall be applied to distribution equipment displaying the following or equivalent wording.

NEC 705.12(B)(3)

Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources. Circuits if backfed shall be suitable for such operations.

SIGNAGE NOTES:

- SIGNAGE SHALL BE WEATHER RESISTANT. UL 969 SHALL BE USED AS A STANDARD FOR WEATHER RATING.
- ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM 3/8" LETTER HEIGHT FOR HEADERS & 1/4" FOR REST OF THE TEXT. TEXT WITH RED BACKGROUND TO BE OF 3/8" HEIGHT
- DO NOT USE SCREWS FOR SIGNAGE ATTACHMENT, USE ONLY PERMANENT ADHESIVE.

PROJECT TITLE:

CORDEVALLE GOLF COURSE  
1005 HIGHLAND AVENUE,  
SAN MARTIN, CA 95046  
APN: 77920006

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SHEET TITLE:

LABELS &  
MARKINGS

SHEET #:
E.7.1



Mono

Multi

Solutions

THE

Vertex

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

500W+

MAXIMUM POWER OUTPUT

21.0%

MAXIMUM EFFICIENCY

0~+5W

POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716/UL1703 ISO 9001: Quality Management System ISO 14001: Environmental Management System ISO 45001: Greenhouse Gases Emissions Verification ISO45001: Occupational Health and Safety Management System

TMV

TMV

CE

RECYCLE

TMV

TMV

TMV

TMV

Trina Solar

PRODUCTS

TSM-DEG1BMC(200I)

POWER RANGE

475-505W

High customer value

Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time

Lowest guaranteed first year and annual degradation; extended 30-year warranty

Designed for compatibility with existing mainstream system components

Higher return on investment

High power up to 505W

Large area cells based on 210mm silicon wafers and 1/3-cut cell technology

Up to 21.0% module efficiency with high density interconnect technology

Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

High reliability

Minimized micro-cracks with innovative non-destructive cutting technology

Ensured PID resistance through cell process and module material control

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas

Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

Certificated to fire class A

High energy yield

Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications

The unique design provides optimized energy production under inter-row shading conditions

Lower temperature coefficient (-0.35%) and operating temperature

Up to 25% additional power gain from back side depending on albedo

Trina Solar's VERTEX Bifacial Dual Glass Performance Warranty

100%

95.0%

Guaranteed Power

Years

5

10

15

20

25

30

Vertex

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

DIMENSIONS OF PV MODULE(mm)

Front View

Back View

ELECTRICAL DATA (STC)

Peak Power Watts-P <sub>max</sub> (Wp)*	475	480	485	490	495	500	505
Power Tolerance-P <sub>max</sub> (W)	0 ~ +5						
Maximum Power Voltage-V <sub>mp</sub> (V)	41.9	42.2	42.5	42.8	43.1	43.4	43.7
Maximum Power Current-I <sub>mp</sub> (A)	11.34	11.38	11.42	11.45	11.49	11.53	11.56
Open Circuit Voltage-V <sub>oc</sub> (V)	50.5	50.7	50.9	51.1	51.3	51.5	51.7
Short Circuit Current-I <sub>sc</sub> (A)	11.93	11.97	12.01	12.05	12.09	12.13	12.17
Module Efficiency η <sub>a</sub> (%)	19.7	19.9	20.1	20.3	20.5	20.7	21.0

STC Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5

\*Maximum tolerance: +5%

Electrical characteristics with different power bin (reference to 10% irradiance ratio)

Total Equivalent power-P <sub>max</sub> (Wp)	508	514	519	524	530	535	540
Maximum Power Voltage-V <sub>mp</sub> (V)	41.9	42.2	42.5	42.8	43.1	43.4	43.7
Maximum Power Current-I <sub>mp</sub> (A)	12.13	12.18	12.22	12.24	12.29	12.34	12.37
Open Circuit Voltage-V <sub>oc</sub> (V)	50.5	50.7	50.9	51.1	51.3	51.5	51.7
Short Circuit Current-I <sub>sc</sub> (A)	12.77	12.81	12.85	12.89	12.94	12.98	13.02
Irradiance ratio (rear/front)	10%						

ELECTRICAL DATA (NMOT)

Maximum Power-P <sub>max</sub> (Wp)	360	363	367	371	374	378	382
Maximum Power Voltage-V <sub>mp</sub> (V)	39.5	39.8	40.0	40.2	40.5	40.8	41.0
Maximum Power Current-I <sub>mp</sub> (A)	9.09	9.13	9.18	9.21	9.25	9.28	9.33
Open Circuit Voltage-V <sub>oc</sub> (V)	47.7	47.9	48.1	48.3	48.5	48.7	48.8
Short Circuit Current-I <sub>sc</sub> (A)	9.61	9.64	9.67	9.70	9.73	9.77	9.80

NMOT Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s

MECHANICAL DATA

Solar Cells

Monocrystalline

No. of Cells

150 Cells

Module Dimensions

2187\*1102\*35 mm (86.10\*43.39\*1.38 inches)

Weight

30.1 kg (66.4 lb)

Front Glass

2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass

Encapsulant material

POE/EVA

Back Glass

2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)

Frame

35mm(1.38 inches) Anodized Aluminum Alloy

I-box

IP 68 rated

Cables

Photovoltaic Technology Cable 4-core (0.006 inches)<sup>1</sup>, Portals:290/280 mm(11.02/11.02 inches)  
Landscape: 2000/2000 mm(78.74/78.74 inches)

Connector

MC4 EC02 / TS4\*

\*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NMOT (Maximum Module Operating Temperature)	41°C (105°F)
Temperature Coefficient of P <sub>max</sub>	-0.35%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.25%/°C
Temperature Coefficient of I <sub>sc</sub>	0.04%/°C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

24 first year degradation	PACKAGING CONFIGURATION
12 year Product Workmanship Warranty	Modules per box: 30 pieces
30 year Power Warranty	Modules per 40' container: 600 pieces
0.65% Annual Power Attenuation	

(Please refer to product warranty for details)

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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Version number: TSM\_EA\_2020\_A

www.trinasolar.com

CPS

50/60kW, 1000Vdc String Inverters for North America

The 50 & 60kW (55 & 66kVA) medium power CPS three phase string inverters are designed for ground mount, large rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 98.8% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 50/60KTL products ship with either the Standard wire-box or the Rapid Shutdown wire-box, each fully integrated and separable with touch safe fusing, monitoring, and AC and DC disconnect switches. The integrated PLC transmitter in the Rapid Shutdown wire-box enables PVRS5 certified module-level rapid shutdown when used with the Tigo TS4-F/TS4-A-F/TS4-A-2F products and APS RSD-S-PLC/RSD-D products. The CPS FlexOM Gateway enables monitoring, controls and remote product upgrades.

Key Features

NEC 2017/2020 PVRS5 Certified Rapid Shutdown

55 & 66kVA rating allows max rated Active Power @±0.91PF

Selectable Max AC Apparent Power of 50/55kVA and 60/66kVA

NEC 2014/17 compliant & UL listed Arc-Fault circuit protection

15-90° Mounting orientation for low profile roof installs

Optional FlexOM Gateway enables remote FW upgrades

Integrated AC & DC disconnect switches

3 MPPT's with 5 inputs each for maximum flexibility

NEMA Type 4X outdoor rated, tough tested enclosure

UL1741 SA Certified to CA Rule 21, including SA8 through SA18

Separable wire-box design for fast service

Standard 10 year warranty with extensions to 20 years

CPS SCA50KTL-DO/US-480

CPS SCA60KTL-DO/US-480

50/60KTL Standard Wire-box

50/60KTL Rapid Shutdown Wire-box

Chint Power Systems America

6800 Koll Center Parkway, Suite 235 Pleasanton, CA 94566

Tel: 855-594-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowerystems.com

CPS

Technical Data

Model Name

CPS SCA50KTL-DO/US-480

CPS SCA60KTL-DO/US-480

DC Input

Max. PV Power

90kW (33kW per MPPT)

Max. DC Input Voltage

1000Vdc

Operating DC Input Voltage Range

200-950Vdc

Start-up DC Input Voltage / Power

330V / 80W

Number of MPP Trackers

3

MPPT Voltage Range @ PF=0.99

480-850Vdc

Max. PV Short-Circuit Current (I<sub>sc</sub> x 1.25)

204A (68A per MPPT)

Number of DC Inputs

15 inputs, 5 per MPPT

DC Disconnection Type

Load-rated DC switch

DC Surge Protection

Type II MOV, 2800V<sub>dc</sub>, 20kA I<sub>np</sub> (8/20μs)

AC Output

Rated AC Output Power @ PF=0.99 to ±0.91<sup>1</sup>

50kW

60kW

Max. AC Apparent Power (Selectable)

50/55kVA

60/66kVA

Rated Output Voltage

480Vac

Output Voltage Range<sup>2</sup>

422 - 528Vac

Grid Connection Type

3Φ / PE / N (Neutral optional)

Max. AC Output Current @480Vac

60.2/66.2A

72.2/79.4A

Rated Output Frequency

57 - 63Hz

Output Frequency Range<sup>2</sup>

>0.99 (±0.8 adjustable)

<3%

Power Factor

>0.99 (±0.8 adjustable)

Current THD @ Rated Load

<3%

Max. Fault Current Contribution (1 Cycle RMS)

64.1A (1.05/0.88 PU)

Max. OCPS Rating

110A

125A

AC Disconnection Type

Load-break rated AC switch

AC Surge Protection

Type II MOV, 1240V<sub>dc</sub>, 15kA I<sub>np</sub> (8/20μs)

System and Performance

Topology

Transformerless

Max. Efficiency

98.5%

CEC Efficiency

98.5%

Stand-by / Night Consumption

<1W

Environment

Enclosure Protection Degree

NEMA Type 4X

Cooling Method

Variable speed cooling fans

Operating Temperature Range<sup>3</sup>

-22°F to +140°F / -30°C to +60°C

Non-Operating Temperature Range<sup>4</sup>

No low temp minimum to +158°F / +70°C maximum

Operating Humidity

0 to 100%

Operating Altitude

13,123.4ft / 4000m (derating from 9842.5ft / 3000m)

Audible Noise

<60dBA @ 1m and 25°C

Display and Communication

User Interface and Display

LCD+LED

Inverter Monitoring

SunSpec Modbus RS485

Site Level Monitoring

CPS FlexOM Gateway (1 per 32 inverters)

Modbus Data Mapping

CPS

Remote Diagnostics / FW Upgrade Functions

Standard / (with FlexOM Gateway)

Mechanical

Dimensions (HxWxD)

39.4 x 23.6 x 10.24in. (1000 x 600 x 260mm)

Weight

Inverter: 123.5lbs/56kg; Wire-box: 33lbs/15kg

Mounting / Installation Angle<sup>5</sup>

15 to 90 degrees from horizontal (vertical or angled)

AC Termination

MB Stud Type Terminal Block (Wire range: #6 - 3/0AWG CU/AL, Lugs not supplied)

DC Termination<sup>6</sup>

Screw Clamp, Neg. Busbar (RSD version<sup>7</sup>) Wire range: #14 - #6AWG CU

Fused String Inputs (5 per MPPT)<sup>7</sup>

RSD<sup>8</sup> and Standard Wire-box: 20A fuses provided (Fuse values up to 30A acceptable)

Safety

Certifications and Standards

UL1741-SA Ed. 2, UL1699B, CSA-C22.2 NO.107-1-01, IEEE1547a-2014, FCC PART15

Selectable Grid Standard

IEEE 1547a-2014, CA Rule 21, ISO-NE

Smart-Grid Features

Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-Var, Freq-Watt, Volt-Watt

Warranty

Standard

10 years

Extended Terms

15 and 20 years

1) Active Power Derating begins at PF=±0.91 to ±0.9 when Max AC Apparent Power is set to 55 or 66kVA.  
2) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.  
3) Active Power Derating begins at 40°C when PF=0.9 and MPPT 20min, at 45°C when PF=1 and MPPT 20min, and at 80°C when PF=1 and MPPT 15 > 700Vdc.  
4) See user manual for further requirements regarding non-operating conditions.  
5) Shade Cover accessory required for installation angles of 75 degrees or less.  
6) RSD wire-box only includes fuses/fuseholders on the positive polarity, compliant with NEC 2017, 690.9 (C).  
7) Fuse values above 20A have additional spacing requirements or require the use of the Y-Corro Terminal Block. See user manual for details.

CPS

Technical Data

Model Name

CPS SCA3RKT-DO/US-480

DC Input

Max. PV Power

54kW (27kW per MPPT)

Max. DC Input Voltage

1000Vdc

Operating DC Input Voltage Range

240-950Vdc

Start-up DC Input Voltage / Power

320V / 80W

Number of MPP Trackers

2

MPPT Voltage Range

540-800Vdc

Max. PV Short-Circuit Current (I<sub>sc</sub> x 1.25)

125A (82.5A per MPPT)

Number of DC Inputs

10 inputs, 5 per MPPT

DC Disconnection Type

Load rated DC switch

DC Surge Protection

Type II MOV, 2000V<sub>dc</sub>, 10kA I<sub>np</sub> (8/20μs)

AC Output

Rated AC Output Power

36kW

Max. AC Apparent Power

36kVA

Rated Output Voltage

480Vac

Output Voltage Range<sup>2</sup>

422 - 528Vac

Grid Connection Type

3Φ / PE / N (Neutral optional)

Max. AC Output Current @480Vac

43.5A

Rated Output Frequency

60Hz

Output Frequency Range<sup>2</sup>

57 - 63Hz

Power Factor

>0.99 (±0.8 adjustable)

Current THD @ Rated Load

<3%

Max. Fault Current Contribution (1 Cycle RMS)

73.2A

AC Disconnection Type

Load rated AC switch

AC Surge Protection

Type II MOV, 1500V<sub>dc</sub>, 10kA I<sub>np</sub> (8/20μs)

System and Performance

Topology

Transformerless

Max. Efficiency

98.5%

CEC Efficiency

98.0%

Stand-by / Night Consumption

<1W

Environment

Enclosure Protection Degree

NEMA Type 4X

Cooling Method

Variable speed cooling fans

Operating Temperature Range

-22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)

Non-Operating Temperature Range<sup>2</sup>

No low temp minimum to +158°F / +70°C maximum

Operating Humidity

0 to 100%

Operating Altitude

13,123.4ft / 4000m (derating from 6561.7ft / 2000m)

Audible Noise

<50dBA @ 1m and 25°C

Display and Communication

User Interface and Display

LCD+LED

Inverter Monitoring

Modbus RS485

Site Level Monitoring

CPS Flex Gateway (1 per 32 inverters)

Modbus Data Mapping

CPS

Remote Diagnostics / FW Upgrade Functions

Standard / (with Flex Gateway)

Mechanical

Dimensions (HxWxD)

Inverter: 26 x 23.6 x 9.1in. (660 x 600 x 230mm); Wire-box 13.4 x 23.6 x 9.1in. (340 x 600 x 230mm)

Weight

Inverter: 121lbs/55kg; Wire-box: 24lbs/11kg

Mounting / Installation Angle<sup>5</sup>

15 to 90 degrees from horizontal (vertical or angled)<sup>6</sup>

AC Termination

Screw Clamp Terminal Block (Wire range: #14 - 1/0AWG CU/AL)

DC Termination

Screw Clamp Fuse Holder (Wire range: #14 - #6AWG CU)

Fused String Inputs (5 per MPPT)<sup>7</sup>

15A fuses provided (Fuse values up to 30A acceptable)<sup>7</sup>

Safety

Certifications and Standards

UL1741SA-2016, UL1699B, CSA-C22.2 NO.107-1-01, IEEE1547, FCC PART15

Selectable Grid Standard

IEEE 1547-2003, CA Rule 21, ISO-NE

Smart-Grid Features

Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt

Warranty

Standard

10 years

Extended Terms

15 and 20 years

1) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.  
2) See user manual for further requirements regarding non-operating conditions.  
3) Shade Cover accessory required for installation angles of 75 degrees or less.  
4) Fuse values above 20A have additional spacing requirements. See user manual for further details.

Industrial Solutions

Catalog No. TH3366R

Representation Image

Description: 600A 3P HD N3R 600V FUSIBLE

UPC No 783164009187

Home > Switches & Disconnects > Disconnect & Safety Switches > Safety Switches > Heavy Duty

Designed for commercial and industrial applications where safety, high performance and continuity of service are essential. Listed to UL standard 98 enclosed and dead front switches. Suitable for use as service equipment when installed in accordance with the National Electrical Code. Certified to CSA standard 22.2 no. 44A enclosed and dead front switches. Meets or exceeds NEMA ICS1 standard for enclosed switches. Type HD. Fusible and non-fusible switches available (consult BuyLog for interrupt ratings). Quick-make, quick-break mechanism. 60/75 C conductor rating. Full cover interlocks. TH3366R

Descriptors

Category	Heavy Duty
GO Schedule	S1

Specifications

Voltage	600 AC
Amperage	600 A
Poles	3
Wires	3
Fusing	Fusible
Enclosure	NEMA 3R (Outdoor)
Options	None
Wire Range (Cu/Al)	(2) 4-500
240 Vac, NEC Std, 3-ph	75.0 hp
240 Vac, Time Delay, 3-ph	200.0 hp
480 Vac, NEC Std, 3-ph	150.0 hp
480 Vac, Time Delay, 3-ph	400.0 hp
600 Vac, NEC Std, 3-ph	200.0 hp
600 Vac, Time Delay, 3-ph	500.0 hp
250 Vdc	50.0 hp
GSA Compliance	Yes

Classifications

cUL Listed	Yes
UL Listed	Yes

Dimensions

Height	53.5 in
Depth	8.5 in
Width	23.0 in
Weight	136.0 lb

by ABB

electrification.us.abb.com

Catalog No. TH3366R

Created on: 03/23/2022

Page No. 3

Tigo

Flex MLPE

TS4-A-2F

PV Module Advanced Add-On

The TS4-A-2F (Fire Safety) is the advanced add-on rapid shutdown solution that brings smart module functionality to standard PV modules for higher reliability. Ensure safety by upgrading existing PV systems or by adding safety features to new installations.

The TS4-A-2F complies with NEC 2017 690.12 Rapid Shutdown specifications when installed with the Tigo RSS Transmitter or an inverter with built-in Tigo certified transmitter.

Included Features

Enhanced safety for NEC 690.12 rapid shutdown compliance

Easy Installation

Snap to standard module frame or remove brackets for rack mounting

PLC Signaling

Control rapid shutdown with the Tigo RSS Transmitter

Automatic Shutdown

PV array enters rapid shutdown in event of AC grid loss

Installation example: Serial connection of two PV modules to a TS4-A-2F

Module frame specifications for mounting TS4-A

Aluminum Frame

min. 22mm

FRAME THICKNESS RANGE 1.8mm - 3mm

min. 30mm GLASS

FC IC

UL LISTED E469940

Photovoltaic Rapid Shutdown System Equipment, QUV

Tigo

Tigo Energy, Inc. 655 Campbell Technology Pkwy Suite 150, Campbell, California 95008 USA

www.tigoenergy.com P: +1.408.402.0802 F: +1.408.358.6279 | sales@tigoenergy.com

TS4-A-2F SPECIFICATIONS

Environmental

Operating Temperature Range

-40°C to +70°C (-40°F to +158°F)

Outdoor Rating

IP68, NEMA 3R

Mechanical

Dimensions

138.4mm x 139.7mm x 22.9mm

Weight

590g

Electrical

Voltage Range (per input)

16 - 90V

Maximum Output Voltage

180V (90V per input)

Maximum Current (per input)

15A

Maximum Power (total)

1000W

Output Cable Length

1.2m or 2.2m

Connectors

MC4 (standard)

Communication Type

PLC

Rapid Shutdown UL Listed (NEC 2014 & 2017 690.12)

Yes

Rapid shutdown activation of TS4-A-2F requires RSS Transmitter.

ORDERING INFORMATION

Standard

484-00252-12 1500V UL, 1.2m cable, MC4

484-00252-22 1500V UL, 2.2m cable, MC4

For sales info:

sales@tigoenergy.com or 1.408.402.0802

For product info:

Visit [tigoenergy.com/products](https://tigoenergy.com/products)

For technical info:

Visit [support.tigoenergy.com](https://support.tigoenergy.com)

For additional info and product selection assistance, use Tigo's online design tool at [tigoenergy.com/design](https://tigoenergy.com/design)

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PROJECT TITLE:

CORDEVALLE GOLF COURSE

1005 HIGHLAND AVENUE,

SAN MARTIN, CA 95046

APN: 77920006

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SOLAR TECHNOLOGIES

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SAN JOSE, CA 95119

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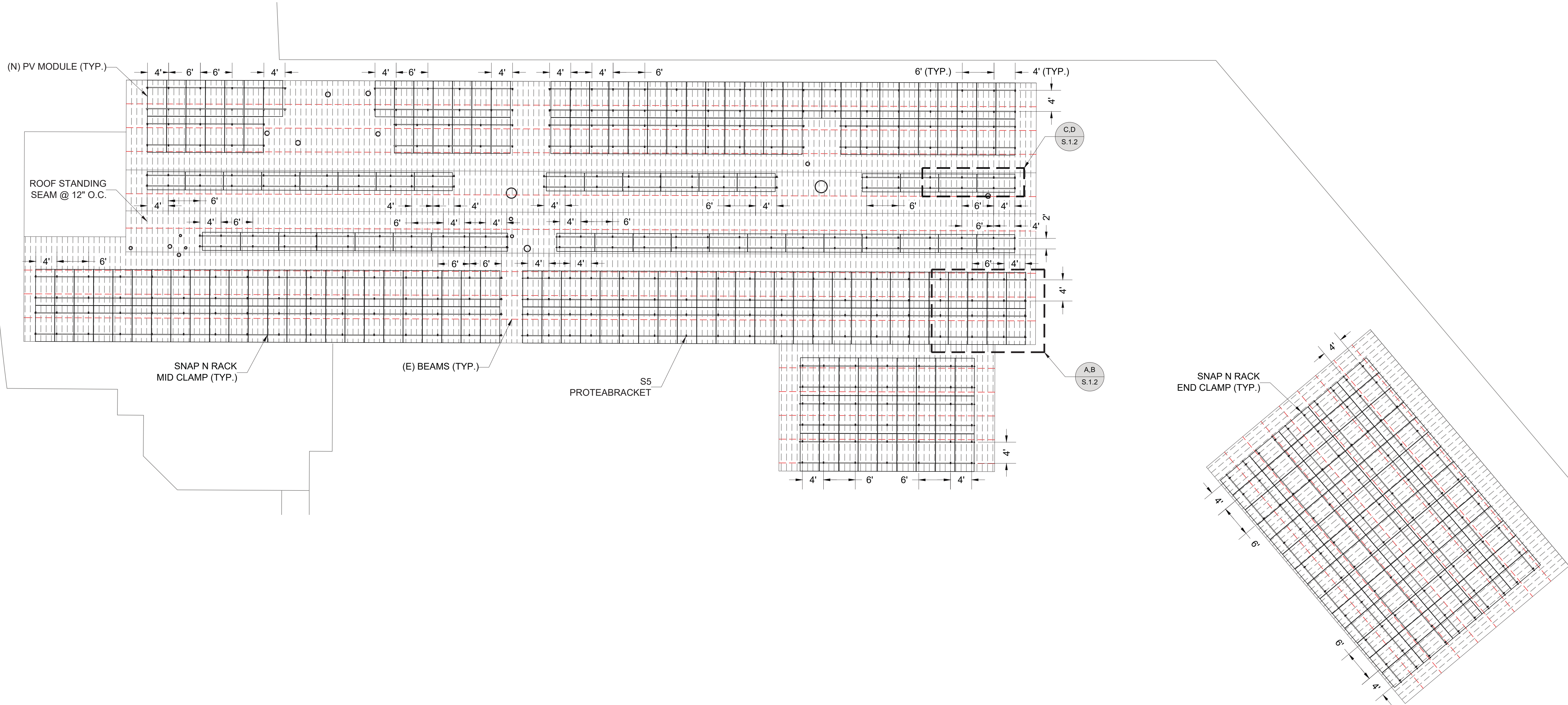
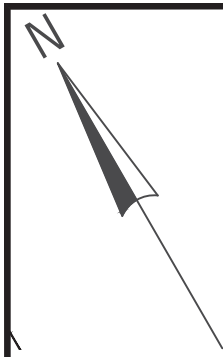
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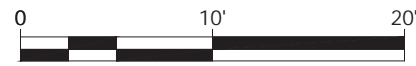
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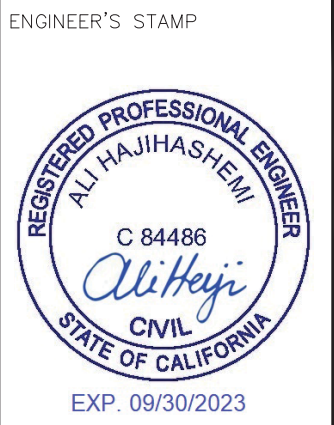


**A** FRAMING PLAN  
SCALE: 1"=8'-0"

- NOTES:
- |                           |     |
|---------------------------|-----|
| 1. SNAP N RACK MID CLAMP: | 564 |
| 2. SNAP N RACK END CLAMP: | 96  |
| 3. S5 PROTEABRACKET:      | 500 |



PROJECT TITLE:  
**CORDEVALLE GOLF COURSE**  
**1005 HIGHLAND AVENUE,**  
**SAN MARTIN, CA 95046**  
APN: 77920006



REVISIONS		DATE	ISSUE
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A		09-AUG-22	FOR SUBMITTAL

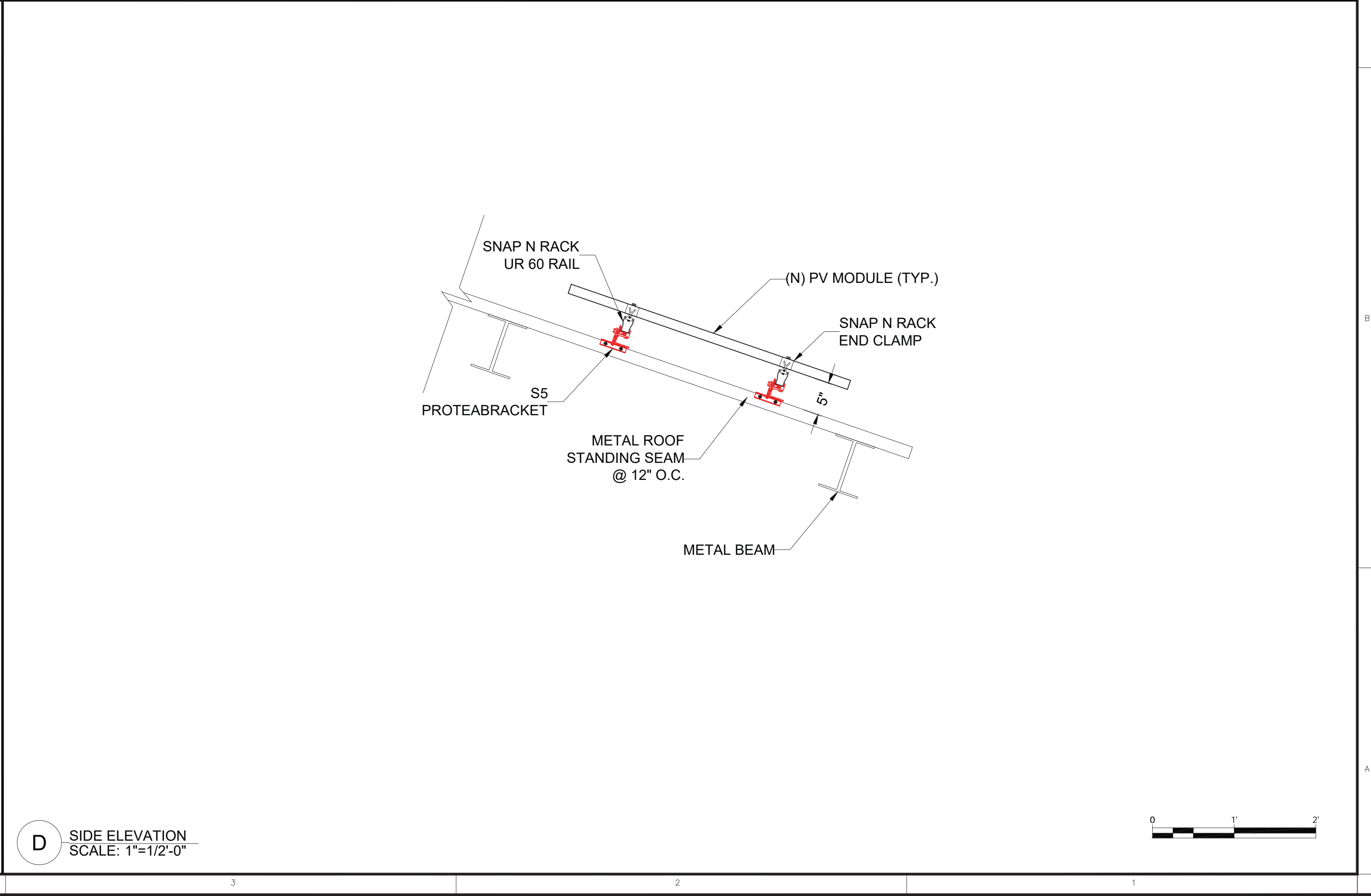
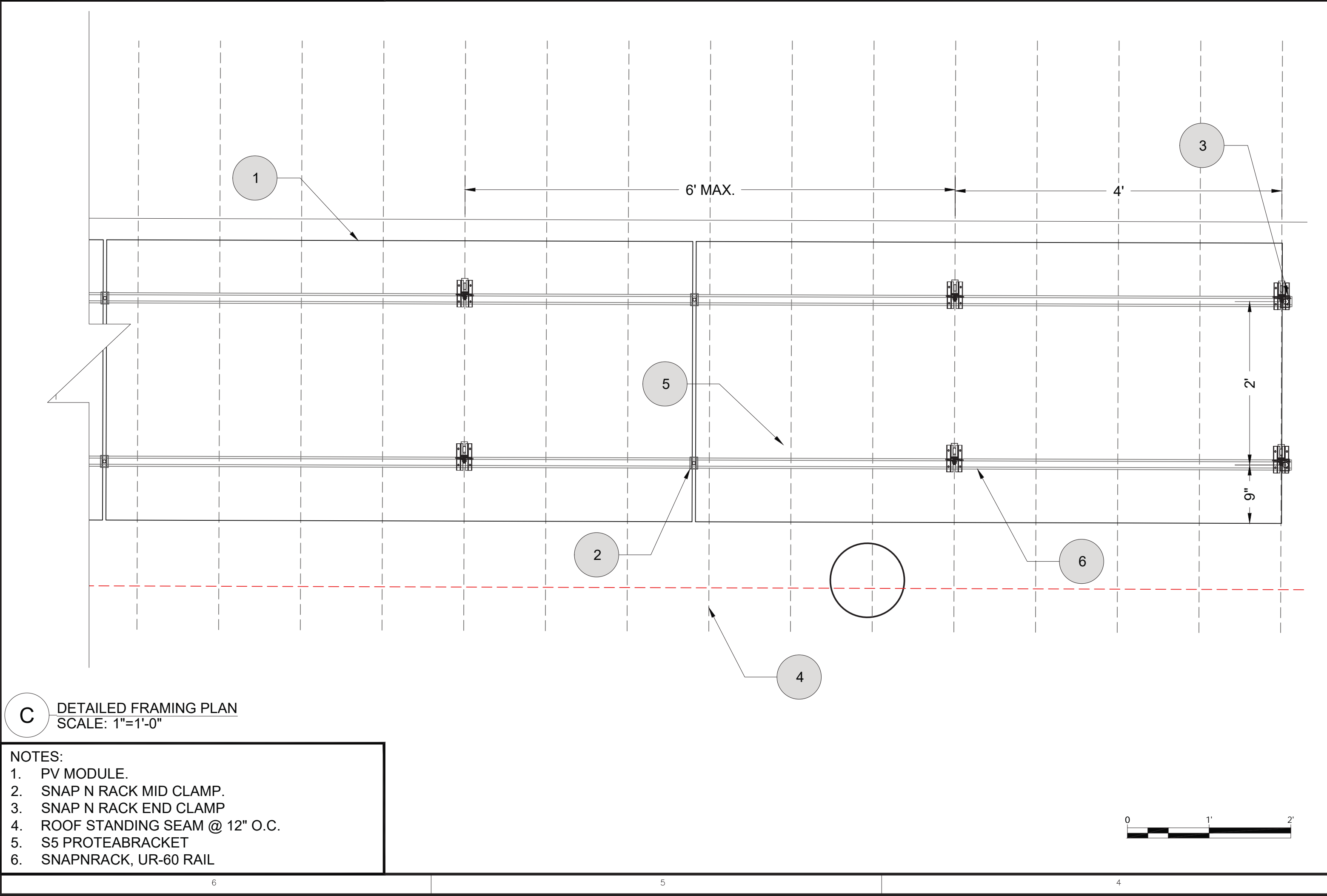
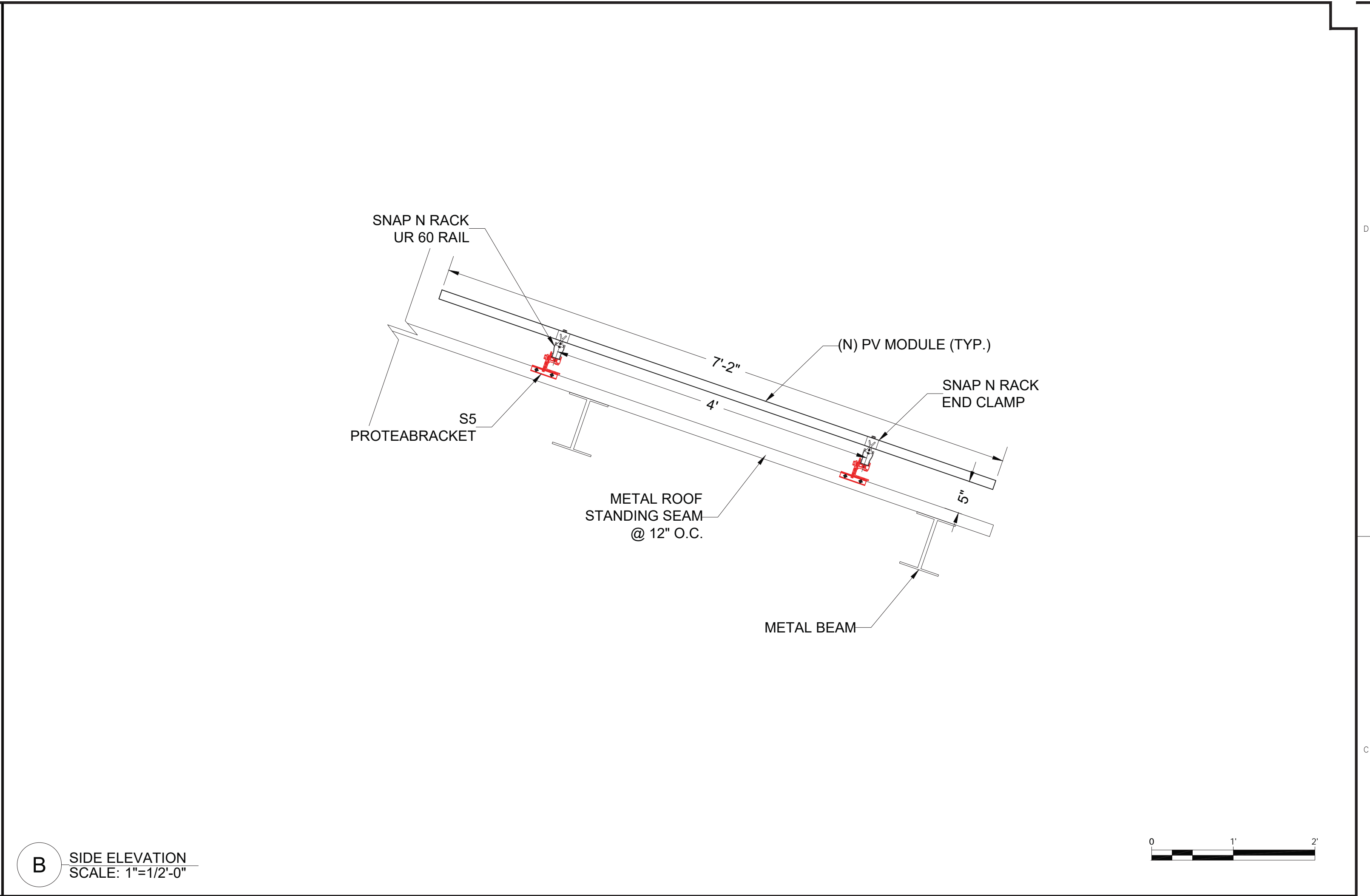
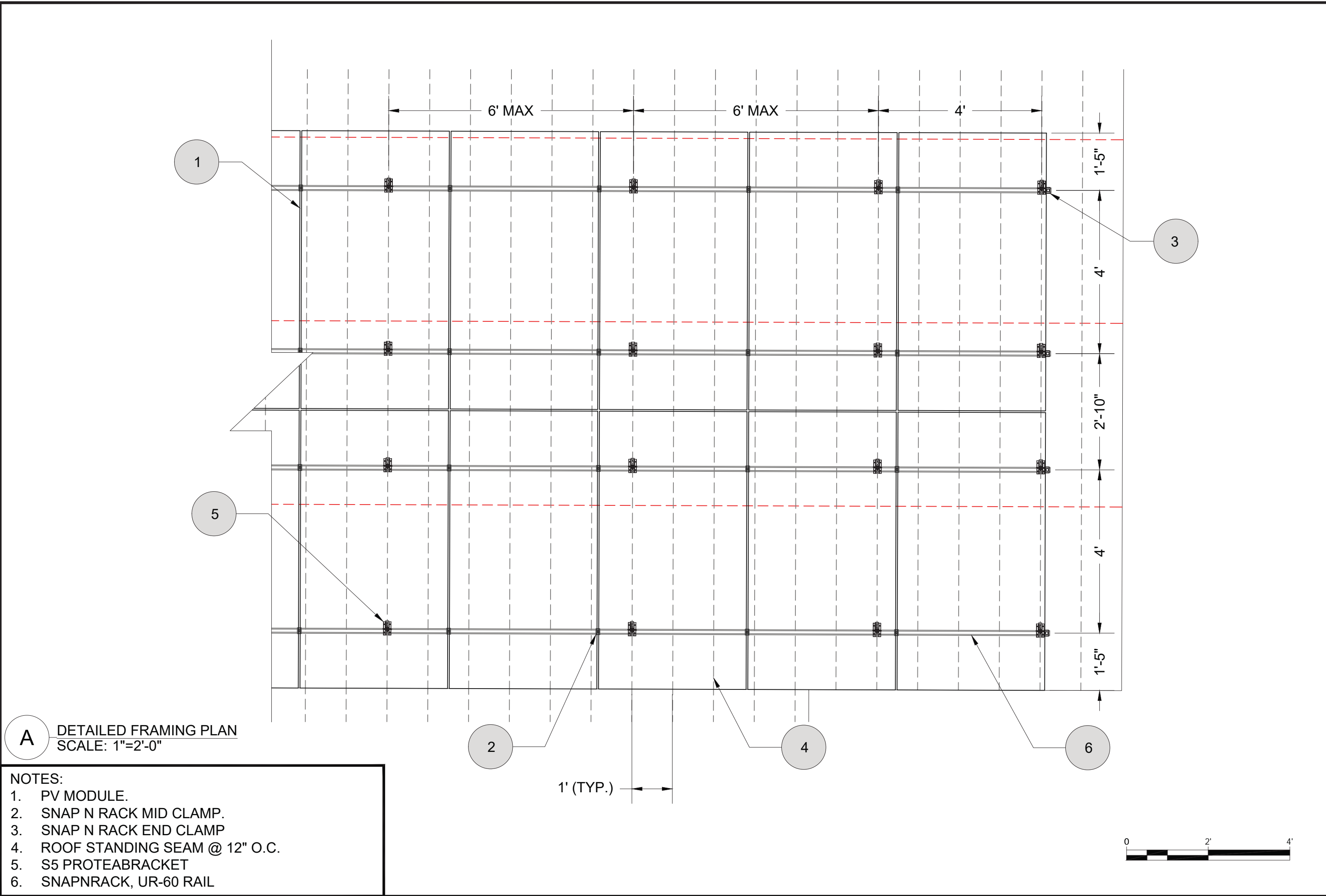
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APPROVED BY:	JHA

SCALE:  
VARIES

SHEET TITLE:  
**ROOF  
FRAMING  
PLAN**

SHEET #:  
S.1.1





PROJECT TITLE:  
**CORDEVALLE GOLF COURSE**  
1005 HIGHLAND AVENUE,  
SAN MARTIN, CA 95046  
APN: 77920006

ENGINEER'S STAMP  
REGISTERED PROFESSIONAL ENGINEER  
C 84486  
*Ali Hajar*  
CIVIL  
STATE OF CALIFORNIA  
EXP. 09/30/2023

**SOLAR TECHNOLOGIES**  
CLEAN ENERGY SOLUTIONS  
SUITE NO. 106, 23 LAS COLINAS LN.  
SAN JOSE, CA 95119  
JOB NUMBER: 11806

REVISIONS	DATE	ISSUE
A	09-AUG-22	FOR SUBMITTAL

PAPER SIZE:	ARCH D
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SHEET TITLE:  
STRUCTURAL  
DETAILS

SHEET #:  
S.1.2







TERMS AND ABBREVIATIONS

ABBRV	TERM
(#)	NUMERICAL QUANTITIES WHEN ENCLOSED IN PARENTHESES
A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ARCH	ARCHITECT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
CBC	CALIFORNIA BUILDING CODE
CP	CAST-IN-PLACE
CD	CONTRACT DOCUMENTS
CJ	CONSTRUCTION JOINT
	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
D	DEPTH
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
EA	EACH
EL	ELEVATION
EQ	EQUAL
EXT	EXTERIOR
EW	EACH WAY
(F)	FUTURE
FF	FINISH FLOOR ELEVATION
FLR	FLOOR
FT	FEET
FG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GSN	GENERAL STRUCTURAL NOTES
HORIZ	HORIZONTAL
I	HOLLOW STRUCTURAL
IBC	SECTION MOMENT OF INERTIA
ID	INSIDE DIAMETER
KIP, K	ONE THOUSAND POUNDS
KLF	KIP PER LINEAR FOOT
L	STEEL ANGLE
LB	POUND
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MCJ	MASONRY CONTROL JOINTS
MECH	MECHANICAL
MFR	MANUFACTURER
NA	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
PERP	PERPENDICULAR
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
REINF	REINFORCING
REQD	REQUIRED
RFI	REQUEST FOR INFORMATION
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATION
STD	STANDARD
T&B	TOP AND BOTTOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/C	WATER TO CEMENT RATIO
W/O	WITHOUT
WL	WINDLOAD

CODE:

2019 EDITION OF THE CALIFORNIA BUILDING CODE (CBC)

DESIGN LOADS:

1. ROOF:

LIVE LOAD (UNREDUCIBLE) \_\_\_\_\_ 12 PSF  
DEAD LOAD \_\_\_\_\_ 8 PSF
2. WIND LOAD:

RISK CATEGORY \_\_\_\_\_ I  
BASIC WIND SPEED, V \_\_\_\_\_ 86 MPH  
EXPOSURE CATEGORY \_\_\_\_\_ C  
IMPORTANCE FACTOR, Iw \_\_\_\_\_ 1.0  
MEAN ROOF HEIGHT: \_\_\_\_\_ 15 FT  
G \_\_\_\_\_ 0.85  
Kd \_\_\_\_\_ 0.85  
Kzt \_\_\_\_\_ 1.0  
Kz \_\_\_\_\_ 0.85  
ENCLOSURE CLASSIFICATION: \_\_\_\_\_ OPEN BUILDING
3. SEISMIC LOADS:

RISK CATEGORY \_\_\_\_\_ I  
IMPORTANCE FACTOR, Ie \_\_\_\_\_ 1.0  
SEISMIC SITE CLASS \_\_\_\_\_ D - DEFAULT  
Ss \_\_\_\_\_ 1.5  
S1 \_\_\_\_\_ 0.6  
SDS \_\_\_\_\_ 1.2  
SD1 \_\_\_\_\_ 0.68  
SDI \_\_\_\_\_ 1.25  
SEISMIC DESIGN CATEGORY \_\_\_\_\_ D  
BASIC SEISMIC FORCE RESISTING SYSTEM: \_\_\_\_\_  
STEEL ORDINARY CANTILEVER COLUMN SYSTEMS  
R \_\_\_\_\_ 1.25  
O \_\_\_\_\_ 1.25  
Cd \_\_\_\_\_ 1.25  
Cs \_\_\_\_\_ 0.800  
BASE SHEAR, V \_\_\_\_\_ 0.800W

GENERAL:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.

2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.

3. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

4. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.

5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

6. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ACTUAL SITE CONDITIONS AND GENERAL CONTRACTOR PRIOR TO START OF CONSTRUCTION. ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE TO ASSIST CONTRACTOR IN VERIFICATION. DO NOT SCALE DIMENSIONS FROM DRAWINGS.

8. ITEMS SHOWN BY OTHER DISCIPLINES WITH REFERENCE TO STRUCTURAL DRAWINGS BUT NOT SHOWN ON THESE STRUCTURAL DRAWINGS SHALL BE CONSIDERED DESIGN BUILT ITEMS. CONTRACTOR SHALL SUBMIT DESIGN BY OTHERS FOR REVIEW

FOUNDATIONS:

1. GEOTECHNICAL CONSULTANT: NINYO & MOORE GEOTECHNICAL & ENVIRONMENTAL SCIENCES CONSULTANTS

2. REPORT NUMBER: 404295001

3. REPORT DATE: JULY 7, 2022

4. SPREAD FOOTINGS SHALL BEAR ON COMPACTED FILL. FOR FILL REQUIREMENTS, SEE SOIL REPORT. DESIGN SOIL BEARING VALUE 1,500 PSF WAS ASSUMED IN ACCORDANCE WITH SOIL CLASS 5 AS DEFINED IN IBC/CBC TABLE 1806.2 "PRESUMPTIVE LOAD-BEARING VALUES". BOTTOM OF FOOTINGS TO BE 2'-0" MINIMUM BELOW FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS AND LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET FOR PERIMETER FOOTINGS. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

5. DRILLED POLE FOUNDATIONS SHALL BEAR ON MACHINE CLEANED, INSPECTED SOIL STRATA. DESIGN LATERAL SOIL BEARING VALUE OF 400 PSF/FT WAS USED IN DESIGN FOR BEDROCK. ALL SOIL ABOVE BEDROCK HAS BEEN IGNORED FOR LATERAL SOIL RESISTANCE DESIGN PURPOSES. DRILLED PIERS SHOULD BE AT LEAST 18 INCHES IN DIAMETER AND SHOULD EXTEND AT LEAST 6 FEET INTO ROCK. POLE FOUNDATIONS WERE DESIGNED IN ACCORDANCE WITH THE PRESCRIPTIVE METHOD OF IBC/CBC SECTION 1807.3.2. FOR TOP OF POLE FOUNDATION ELEVATIONS, SEE FOUNDATION PLANS AND SECTIONS. IF WATER IS ENCOUNTERED DURING DRILLING, STOP AND CONSULT STRUCTURAL ENGINEER OR GEOTECHNICAL ENGINEER FOR RESOLUTION.

SHOP DRAWINGS:

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS AND ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. UNITED STRUCTURAL DESIGN, LLC ASSUMES NO RESPONSIBILITY FOR THE FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW.

2. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTORS REVIEW

3. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.

4. ELECTRONIC FILES OF CONSTRUCTION DOCUMENTS WILL NOT BE MADE AVAILABLE FOR USE AS SHOP DRAWINGS.

5. FIELD VERIFY ALL DIMENSIONS AND FINISHED GRADE PRIOR TO CONSTRUCTION AND PRIOR TO BEGINNING SHOP DRAWINGS

6. THE ENGINEER OF RECORD HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

7. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO THE CONTRACT DOCUMENTS.

8. SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ITEMS ARE CONSTRUCTED ACCORDING TO THE CONTRACT DOCUMENTS.

CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.

3. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND SLAB EDGES, REINFORCING, AND COLUMNS. MECHANICALLY VIBRATE ONLY THE TOP 5 FEET OF DRILLED PIER CONCRETE. REVIBRATE TOP OF DRILLED PIER 15 MINUTES AFTER PLACING CONCRETE.

4. TEST DATA FOR CONCRETE SUBMITTALS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. REFERENCE ACI 318 CHAPTER 5, TABLE R5.3 FOR SPECIFIC REQUIREMENTS.

5. DRILLED PIER CONCRETE SHALL BE CHanneLED TO FREE FALL DOWN THE SHAFT WITHOUT STRIKING THE REINFORCING OR THE SIDES OF THE SHAFT. MAXIMUM HEIGHT OF FREE-FALL IS 15'-0".

6. CONCRETE PROPERTIES:

CONCRETE USE

MINIMUM 28 DAY COMPRESSIVE

STRENGTH

UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE \_\_\_\_\_ 3,000 PSI

PHOTOVOLTAIC PANELS:

1. THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS AND THE DESIGN OF THE PANEL CONNECTIONS TO THE STRUCTURE INCLUDING ALL COMPONENTS REQUIRED TO MAKE THE CONNECTIONS. PHOTOVOLTAIC PANELS, COMPONENTS AND CONNECTIONS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEISMIC LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

2. OWNER TO PROVIDE PANEL CAPABLE OF SUPPORTING IN MANOR IN WHICH IS INTENDED BY THESE DRAWINGS (E. SUPPORTED BY SHORT END, DUAL SUPPORTS, ETC) SUBMIT PANEL SPEC SHEETS FOR REVIEW PRIOR TO PURCHASING ANY PANELS.

3. CONTRACTOR TO VERIFY PV PANELS WITH OWNER PRIOR TO FABRICATION.

4. THIS IS A DEFERRED SUBMITTAL ITEM.

STRUCTURAL STEEL:

1. LATEST AISC AND AWS CODES APPLY. THE WORD APPROVED INSPECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REDEFINED AS REVIEWED.

2. STEEL SHALL BE FINISHED AT LOCATIONS EXPOSED TO WEATHER WITH A CORROSION RESISTANT COATING APPLICABLE TO WEATHER AND EXPOSURE CONDITIONS OF PROJECT LOCATION.

3. WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATORS PLANT.

4. IF IT IS NECESSARY TO SPLICE ANY MEMBER, SPLICE LOCATIONS ARE SUBJECT TO REVIEW BY STRUCTURAL ENGINEER. SPLICES SHALL BE FULL PENETRATION WELDED AND TESTED PER THIS SECTION. INDICATE ALL SPLICE LOCATIONS, AND WELDING PROCEDURES ON SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

5. ALL BEAMS SHALL BE ERECTED WITH THE NATURAL CAMBER UPWARDS.

6. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS.

7. ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.

8. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E80 SERIES FOR ASTM A708 REINFORCING BARS.

9. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.

10. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED.

11. ALL STRUCTURAL STEEL SHALL BE FABRICATED BY A FABRICATOR WITH ANY ONE OF THE FOLLOWING MINIMUM QUALIFICATIONS. QUALIFICATIONS SHALL BE IN EFFECT AT TIME OF BID.

12. AISC CERTIFIED FABRICATOR (STD).

13. STEEL PROPERTIES
  - WIDE FLANGE COLUMNS, BEAMS AND TEES: ASTM A992 (Fy = 50 KSI)
  - STEEL PLATES: ASTM A572 (Fy = 50 KSI)
  - CHANNELS AND ANGLES: ASTM A36 (Fy = 36 KSI)
  - HSS RECTANGULAR STEEL: ASTM A500 Gr. B (Fy = 46 KSI)
  - BOLTS: ASTM A325 OR ASTM A F1852 TWIST-OFF TYPE
    - ANCHOR RODS: ASTM F1554 Gr. 55 (Fy = 55 KSI)

14. STEEL BOLTS SHALL BE PRETENSIONED UNLESS OTHERWISE NOTED AS A SNUG-TIGHT CONNECTION ON THE DRAWINGS OR DETAILS. ONE OF THE FOLLOWING METHODS SHALL BE USED TO ASSURE ADEQUATE PRETENSIONING IS ACHIEVED:
  - TURN-OF-NUT METHOD
  - DIRECT TENSION INDICATOR WASHERS
  - CALIBRATED WRENCH
  - TWIST-OFF TYPE BOLT

STEEL REINFORCING:

1. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS.

2. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL ENGINEER.

3. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.

4. TYPICAL REINFORCING BAR STRENGTHS

5. REINFORCING (WELDABLE): ASTM A706, DEFORMED, Fy = 60 KSI

6. TYPICAL CLEAR CONCRETE COVERAGE
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
  - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER: 2" #6 AND SMALLER: 1 1/2"

ALL OTHERS PER LATEST EDITION OF ACI 318.

COLD-FORMED STEEL FRAMING:

1. ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE AND THE STEEL STUD MANUFACTURERS ASSOCIATION AND I.C.C. ESR-3064(P).

2. STEEL FOR ALL MEMBERS AND FOR ALL STRAPS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI.

3. STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND WHENEVER NOTED ON THE DRAWINGS.

4. ALL MEMBERS SHALL BE SECURELY SEATED FOR FULL BEARING UNLESS NOTED OTHERWISE.

5. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STEEL FRAMING WORK.

6. ALL SCREWS REFERENCED IN THE DRAWINGS FOR LIGHT GAUGE CONNECTIONS SHALL BE DRILL-FLEX BY HILTI OR APPROVED EQUIVALENT (I.C.C. ESR-3332).

7. STEEL STUD SIZES ARE AS INDICATED IN PLANS AND KEYNOTES. THICKNESS REFERENCED IN THE DRAWINGS ARE AS FOLLOWS:
  - 16 GAUGE MATERIAL - 0.059 INCHES
  - 14 GAUGE MATERIAL - 0.075 INCHES
  - 12 GAUGE MATERIAL - 0.105 INCHES
  - 10 GAUGE MATERIAL - 0.134 INCHES

NOTE: THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCTS AS DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95 PERCENT OF THE DESIGN THICKNESS INDICATED ABOVE.

1704.2.5 SPECIAL INSPECTION OF FABRICATORS:

SPECIAL INSPECTION OF FABRICATION OF STRUCTURAL STEEL BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP IS REQUIRED.

EXCEPTION: SPECIAL INSPECTIONS OF FABRICATORS WITH ONE OF THE FOLLOWING QUALIFICATIONS IS NOT REQUIRED:

- INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS)APPROVED FABRICATOR.

• AISC CERTIFIED FABRICATOR (STD).

THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

SPECIAL STRUCTURAL INSPECTIONS:

PER CBC SECTION 1704 AND 1705 SPECIAL INSPECTIONS ARE IN ADDITION TO THE REQUIRED INSPECTION CONDUCTED BY THE BUILDING JURISDICTION PER CBC SECTION 110. THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

1. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER.

2. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

3. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS:
  - CONCRETE INSPECTION - I.C.C. CERTIFICATION IN REINFORCED CONCRETE OR E.I.T. CERTIFICATION
  - STRUCTURAL WELDING INSPECTION
    - VISUAL TESTING - I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR A W.S. CERTIFIED WELD INSPECTOR (C.W.I.).
    - NON-DESTRUCTIVE TESTING - A.W.S. C.W.I.
  - HIGH STRENGTH BOLTING INSPECTION - I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING.
  - SPECIAL CASES - EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.

4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
  - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
  - THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR, THE STRUCTURAL ENGINEER OF RECORD, AND THE ARCHITECT OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
  - UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

5. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
  - NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
  - ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.

6. SPECIAL INSPECTION

- INSPECTION OF FABRICATORS

• INSPECTION OF CONCRETE CONSTRUCTION

• INSPECTION OF STRUCTURAL STEEL

• INSPECTION OF SOILS

SEE TABLES ON GSN FOR ADDITIONAL INFORMATION.

1705.6 SPECIAL INSPECTION OF SOILS

SPECIAL INSPECTION FOR EXISTING SITE SOIL CONDITIONS. FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE AS REQUIRED BY TABLE 1705.6.

TABLE 1705.6: REQUIRED VERIFICATION AND INSPECTION OF SOILS			
VERIFICATION AND INSPECTION TASK		CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	—	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		—	X

2018 1705.3 SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

SPECIAL INSPECTION AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY TABLE 1705.3.

- EXCEPTIONS: SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR:

1. ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDING THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.

2. CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE:

3. THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION.

4. THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPECIFIED COMPRESSIVE STRENGTH,  $f_c$ , NO GREATER THAN 2,500 PSI REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED.

5. CONCRETE SLABS ON GRADE. STEEL REINFORCING STILL REQUIRES SPECIAL INSPECTION.

TABLE 1705.3: REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION				
VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	CBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	—	X		ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3
2. REINFORCING BAR WELDING. a. VERIFY WELDABILITY OF REINFORCING BARS. b. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16". c. INSPECT ALL OTHER WELDS.	—	—	X	AWS D1.4 ACI 318: 26.6.4
5. VERIFYING USE OF REQUIRED DESIGN MIX.	—	X		ACI 318: Ch 19, 26.4.3, 26.4.4
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	—		ACI 318: 26.5
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	—	X		ACI 318: 26.5.3-26.5.5
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	—	X		ACI 318:26.11.2 (b)

Sheet List	
Sheet Number	Sheet Name
S0.1	GENERAL STRUCTURAL NOTES
S2.4	4 PANEL STRUCTURE PLANS
S2.5	5 PANEL STRUCTURE PLANS
S2.6	6 PANEL STRUCTURE PLANS
S4.1	SOLAR CANOPY DETAILS

UNITED  
STRUCTURAL DESIGN LLC



park 'n  
SHADE

CORDEVALLE GOLF COURSE

1005 HIGHLAND AVE.  
SAN MARTIN, CA 95046

No.	Description	Date
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PROJECT NUMBER: 22297  
DRAWN BY: KS  
CHECKED BY: JE  
DATE: 06/29/2022

SHEET NAME  
GENERAL  
STRUCTURAL NOTES

S0.1



SHEET NOTES

- a. FOR STRUCTURE LOCATIONS REFERENCE PROJECT SITE PLAN. COLUMN SPACING AND LOCATIONS SHALL BE COORDINATED WITH PROJECT ARCHITECT OR PROFESSIONAL RESPONSIBLE FOR SITE PLAN.
- b. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DIMENSIONS, ELEVATIONS WHERE SHOWN ARE TO BE USED AS AN AID AND SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
- c. FOR ADDITIONAL INFORMATION, REFERENCE GENERAL STRUCTURAL NOTES.

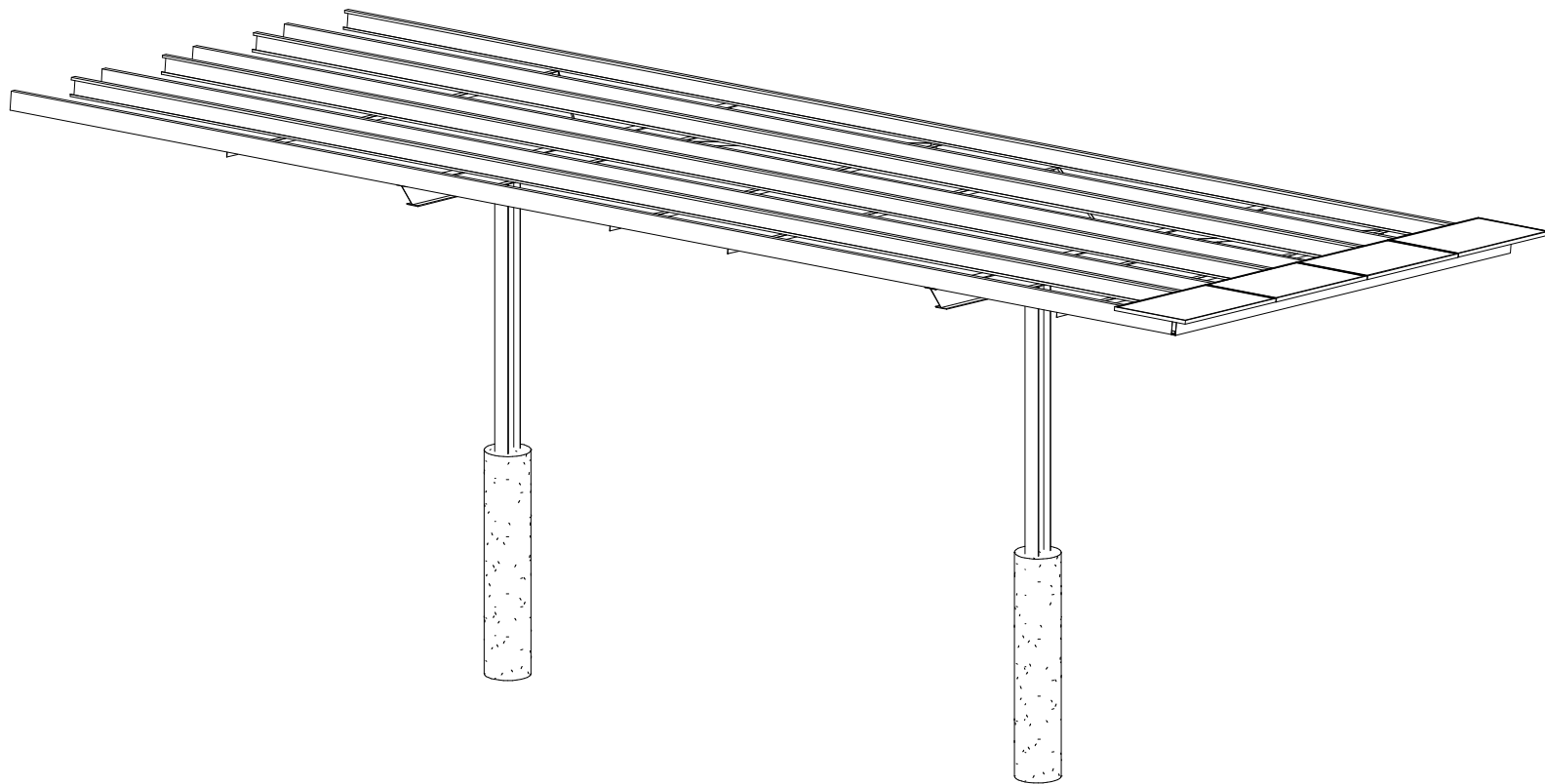
PV PANEL INFORMATION

- A. CONTRACTOR TO VERIFY PANEL INFORMATION PRIOR TO FABRICATION AND ERECTION.
- B. THE PANEL INFORMATION BELOW AND IN THE PLANS WAS PROVIDED BY THE OWNER DURING THE DESIGN PHASE AND PRIOR TO THE START OF CONSTRUCTION. ALL PANEL INFORMATION INDICATED IN THESE DRAWINGS IS FOR REFERENCE ONLY AND SHALL BE VERIFIED WITH THE OWNER, THE ELECTRICAL DRAWINGS AND THE GENERAL CONTRACTOR PRIOR TO FABRICATION AND PRIOR TO CONSTRUCTION.
- C. THE OWNER IS TO PROVIDE A PANEL CAPABLE OF SUPPORTING IN MANOR IN WHICH IS INTENDED BY THESE DRAWINGS (I.E. SUPPORTED BY SHORT END, DUAL SUPPORTS, ETC). SUBMIT PANEL SPEC SHEETS FOR REVIEW PRIOR TO PURCHASING ANY PANELS.
- D. THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS INCLUDING ALL ITS COMPONENTS. PHOTOVOLTAIC PANELS AND ITS COMPONENTS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEISMIC LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE BUILDING CODE

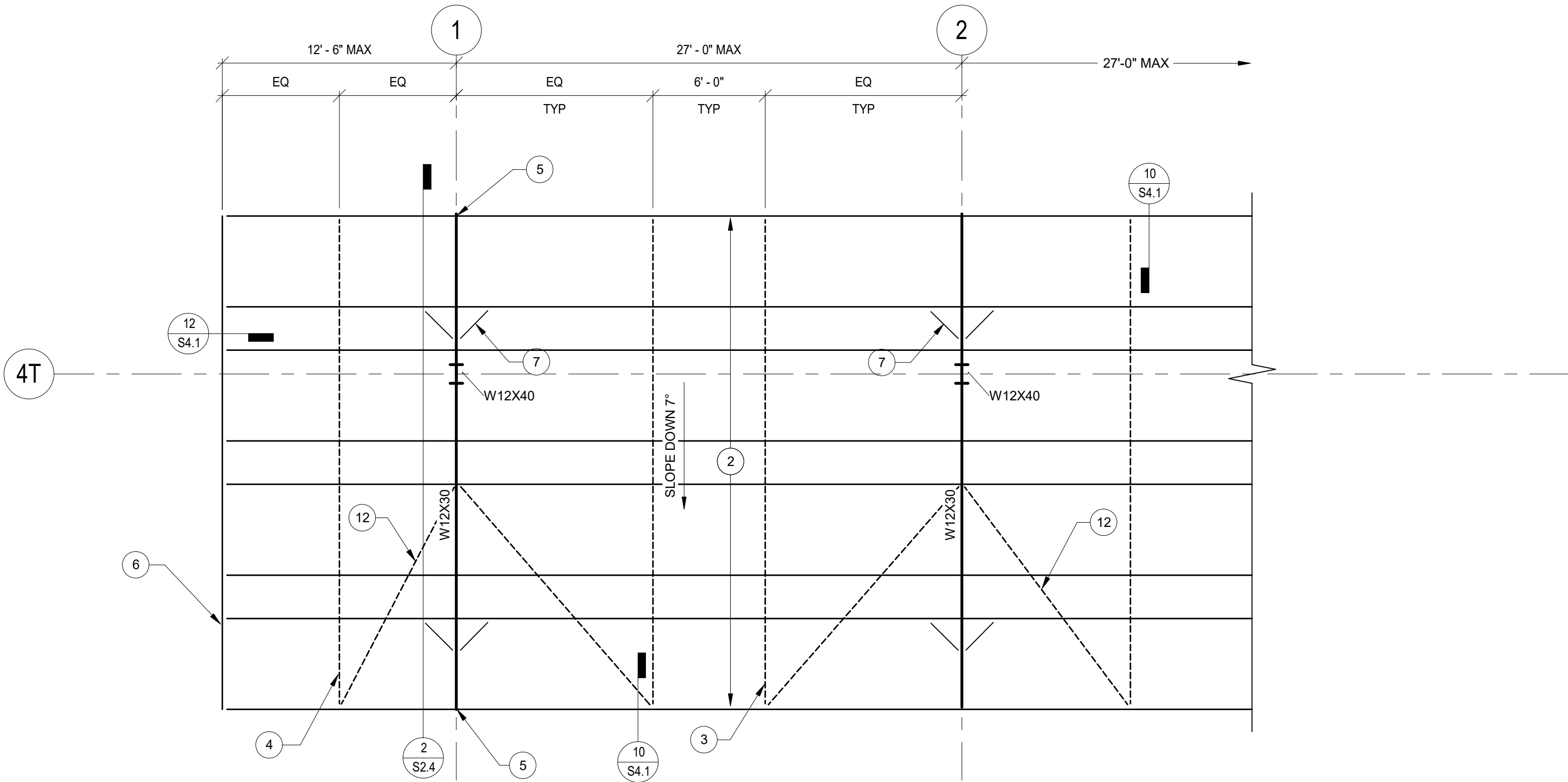
PANEL MODEL	LENGTH	WIDTH
VERTEX	86.1"	43.39"

KEYNOTES

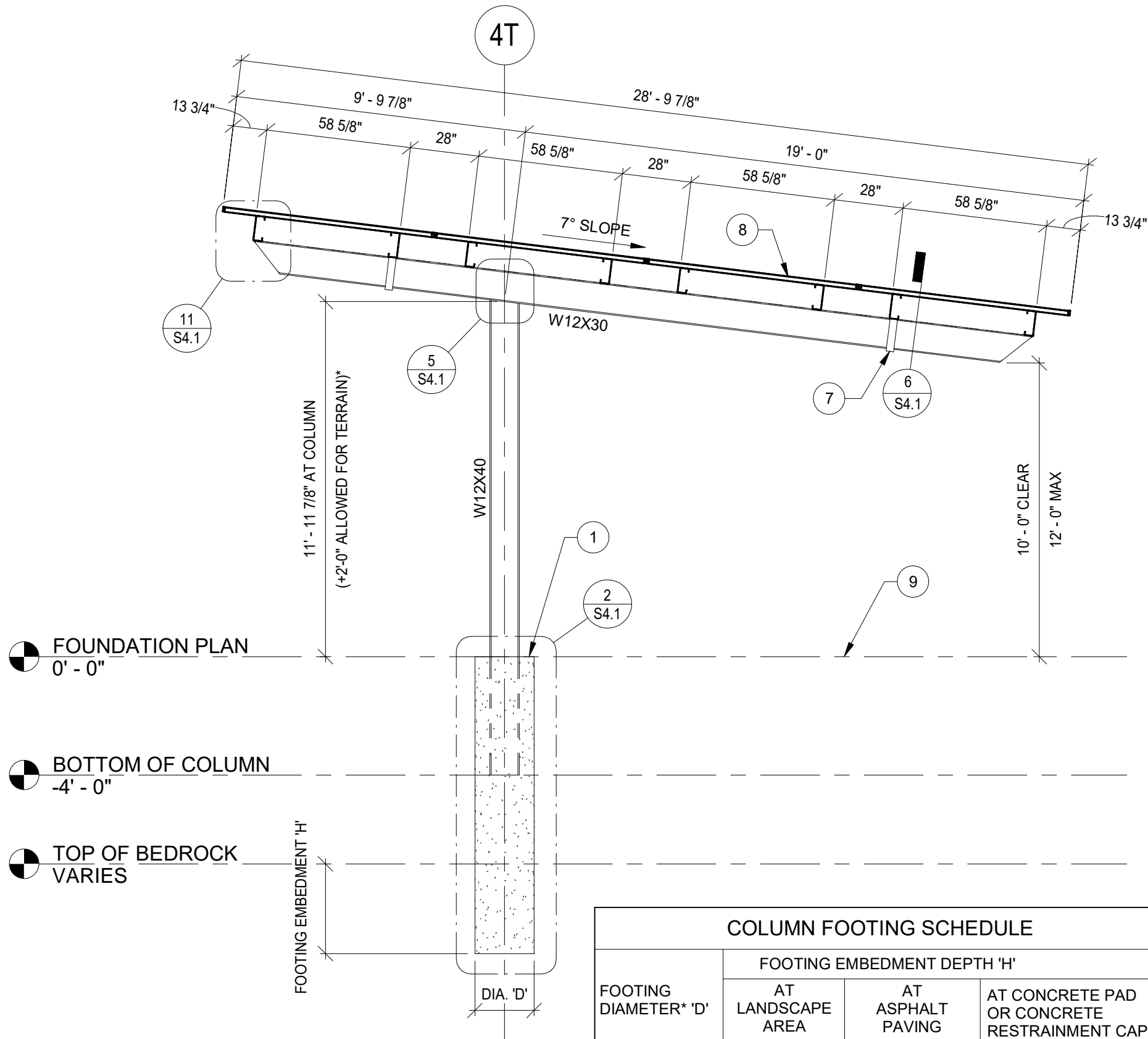
- 1 DRILLED CONCRETE POLE FOOTING. FOR DIAMETER AND EMBEDMENT OF FOOTING SEE FOUNDATION PLAN AND SECTION ON THIS SHEET. SEE DETAIL 2/S4.1 FOR REINFORCING AND STEEL COLUMN ANCHORAGE.
- 2 C9"x3"x14 GAUGE COLD FORMED STEEL PURLINS, TYPICAL. COORDINATE EXACT LOCATION WITH SOLAR PANEL MANUFACTURER SPECIFICATIONS. SEE DETAIL 9/S4.1 FOR MORE INFORMATION ON SECTION.
- 3 SAG ROD AS SHOWN ON PLANS. (1) MINIMUM AT SPANS LESS THAN 18'-0" AND (2) MINIMUM AT SPANS LESS THAN 27'-0". REFERENCE DETAIL 10/S4.1.
- 4 (1) SAG ROD REQUIRED BETWEEN SUPPORT AND CANTILEVER END AS SHOWN. REFERENCE DETAIL 10/S4.1. SAG ROD NOT REQUIRED WHERE CANTILEVER IS LESS THAN 5'-0".
- 5 DO NOT SPLICE PURLINS AT SUPPORT AT CANTILEVER ENDS.
- 6 16 GAUGE END CAP WITH 2" LEGS EACH END OF STRUCTURE.
- 7 BEAM FLANGE BRACES AS SHOWN ON PLANS. REFERENCE DETAIL 6/S4.1 FOR MORE INFORMATION.
- 8 PV MODULE BY OTHERS. ATTACH PER DETAILS.
- 9 FINISHED GRADE. FINISHED GRADE IS DEFINED AS THE LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET OF THE STRUCTURAL COLUMN.
- 12 DIAGONAL SAG ROD BRACING AS SHOWN. ATTACH PER DETAILS 13/S4.1 AND 14/S4.1.



3 4 PANEL T - 7 DEG  
NO SCALE



1 4 PANEL TEE - 7 DEG. FRAMING PLAN  
3/16" = 1'-0"



FOUNDATION PLAN  
0' - 0"

BOTTOM OF COLUMN  
-4' - 0"

TOP OF BEDROCK  
VARIES

COLUMN FOOTING SCHEDULE			
FOOTING DIAMETER* 'D'	FOOTING EMBEDMENT DEPTH 'H'		
	AT LANDSCAPE AREA	AT ASPHALT PAVING	AT CONCRETE PAD OR CONCRETE RESTRAINTMENT CAP PER DETAIL 16/S4.1.
2'-0" DIA.	8'-0"	7'-6"	7'-0"

2 4 PANEL 7 DEG TEE SECTION  
1/4" = 1'-0"



SHEET NOTES

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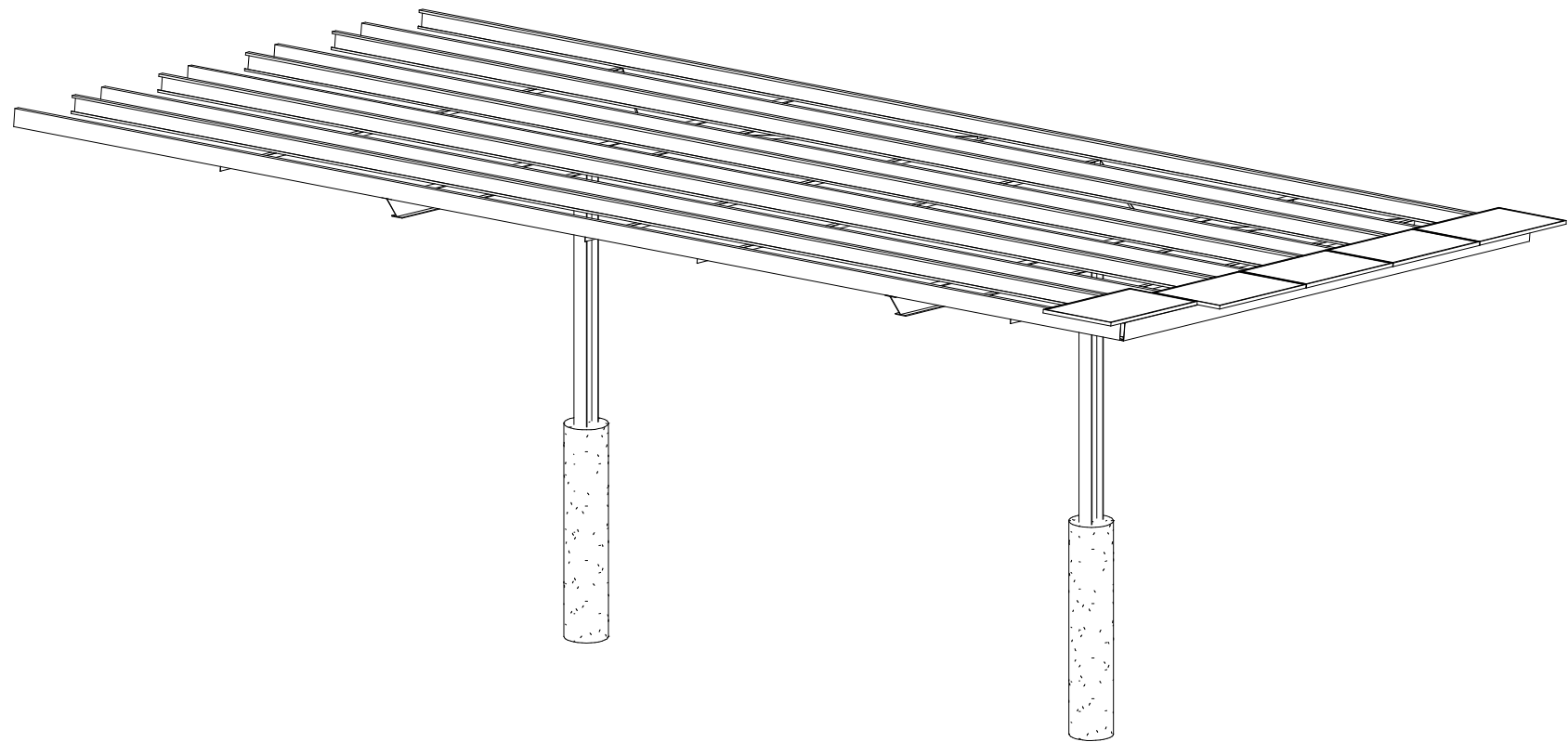
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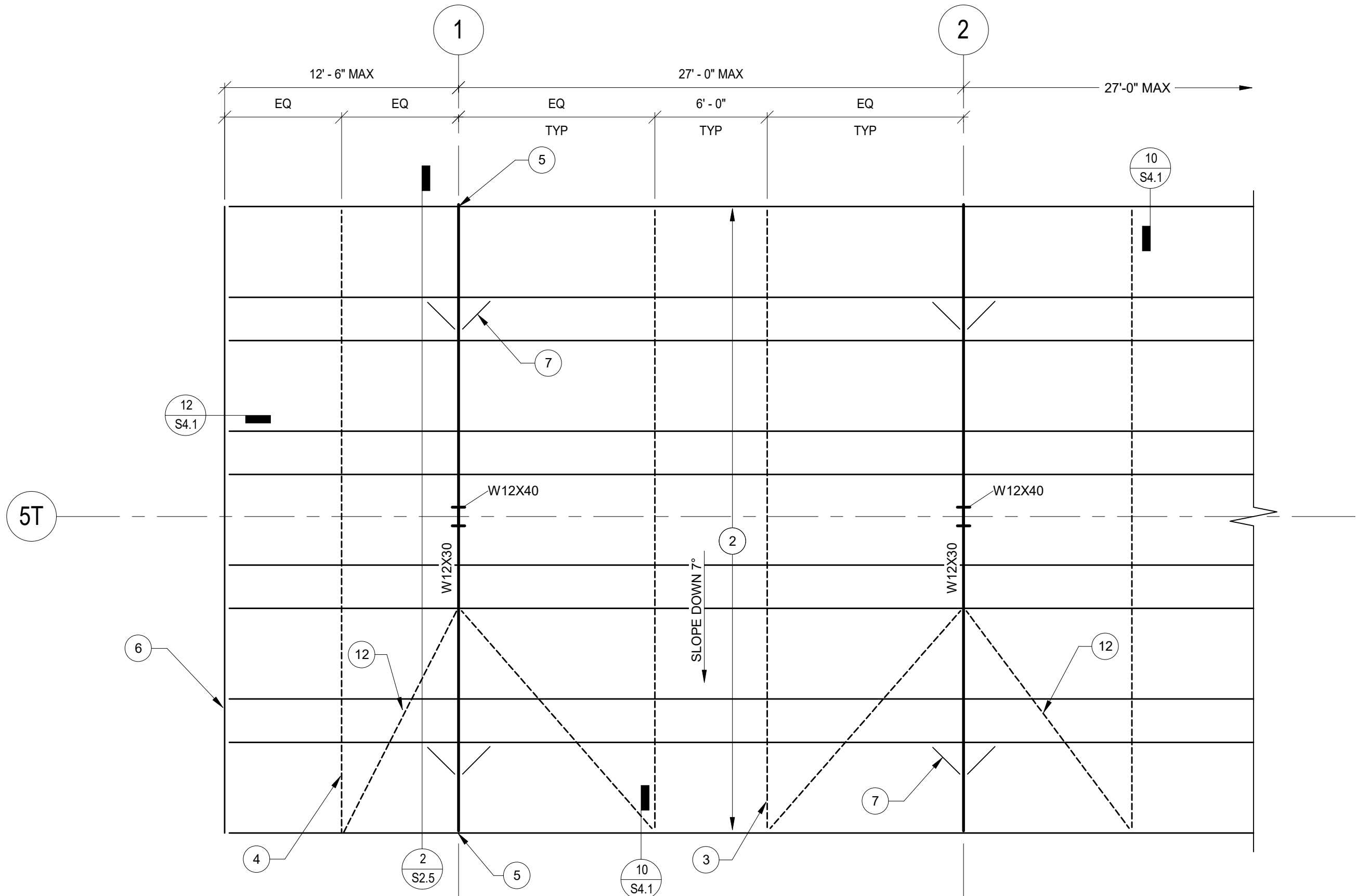
PANEL MODEL	LENGTH	WIDTH
VERTEX	86.1"	43.39"

KEYNOTES

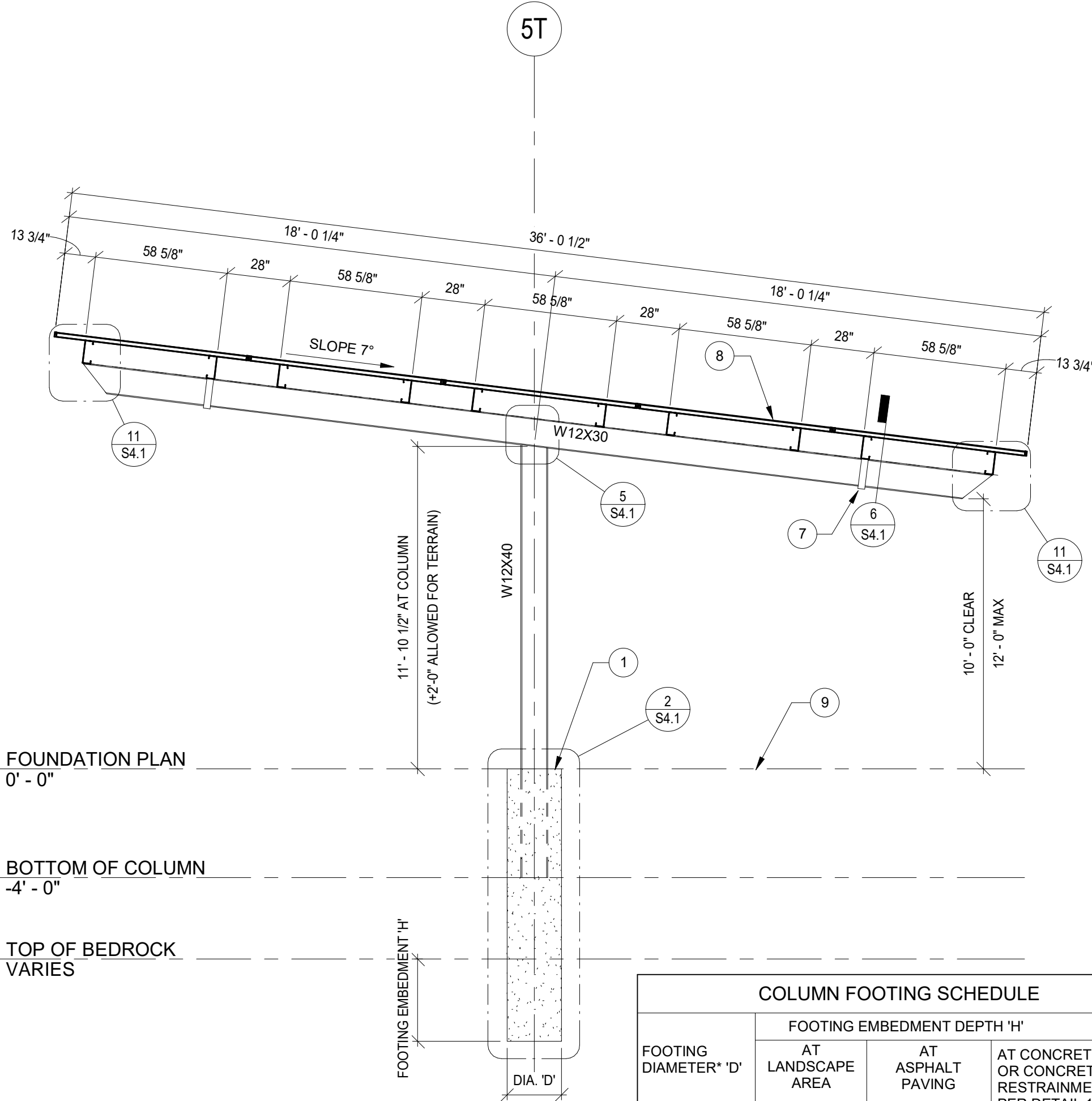
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3 5 PANEL T - 7 DEG  
NO SCALE



1 5 PANEL TEE - 7 DEG. FRAMING PLAN  
3/16" = 1'-0"



FOUNDATION PLAN  
0' - 0"

BOTTOM OF COLUMN  
-4' - 0"

TOP OF BEDROCK  
VARIES

COLUMN FOOTING SCHEDULE			
FOOTING DIAMETER* 'D'	FOOTING EMBEDMENT DEPTH 'H'		
	AT LANDSCAPE AREA	AT ASPHALT PAVING	AT CONCRETE PAD OR CONCRETE RESTRAINTMENT CAP PER DETAIL 16/S4.1.
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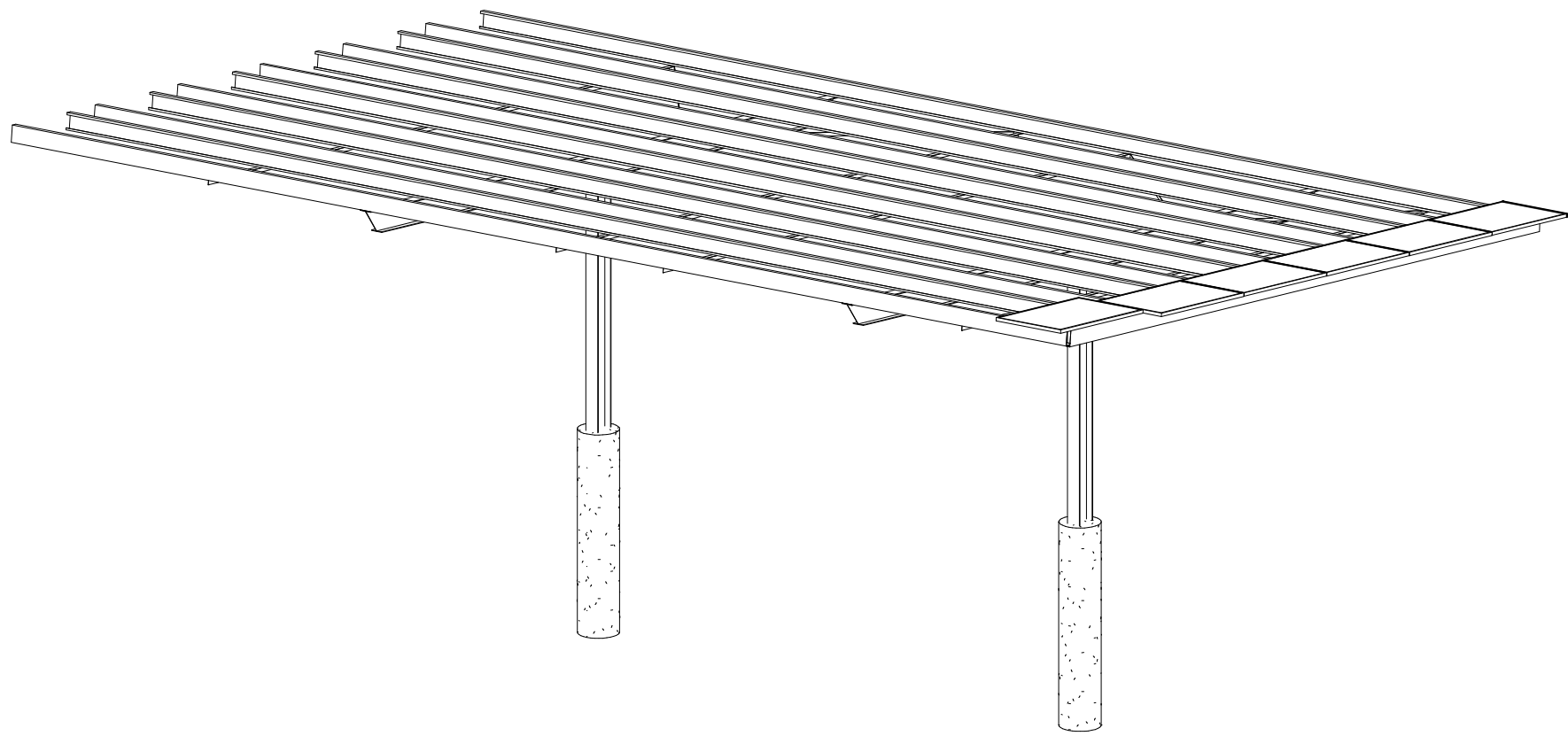
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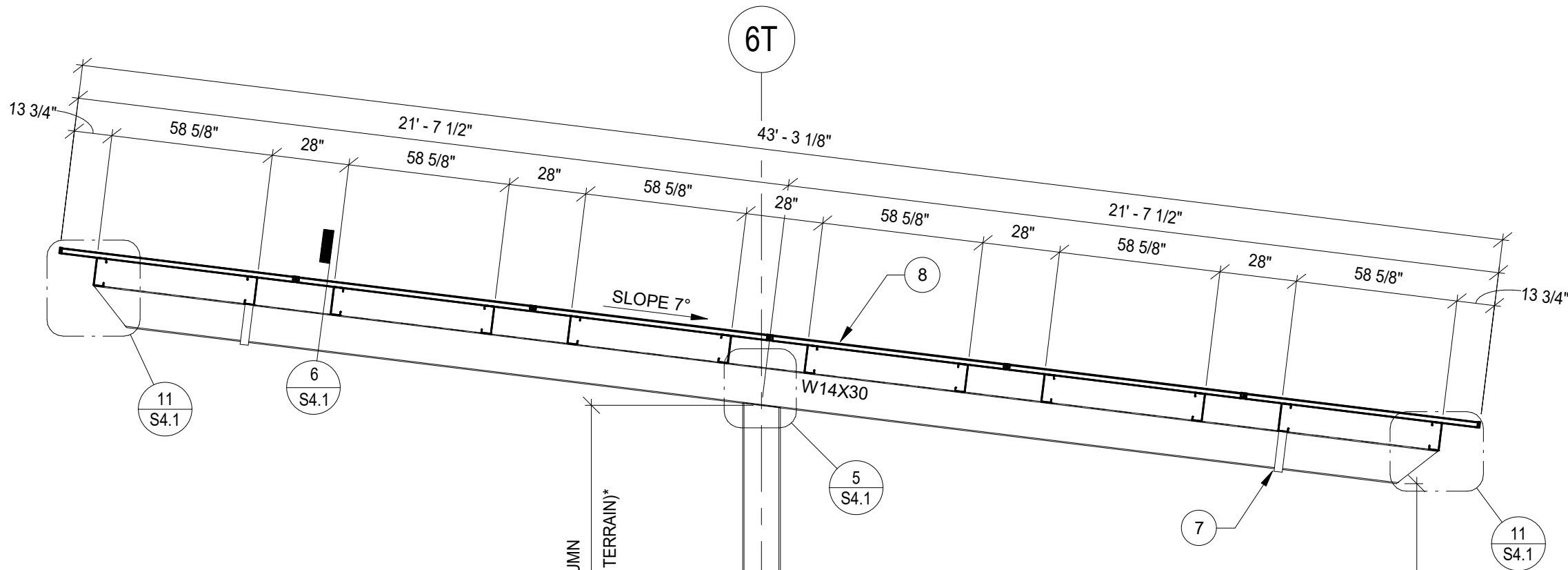
PANEL MODEL	LENGTH	WIDTH
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3 6 PANEL T - 7 DEG  
NO SCALE



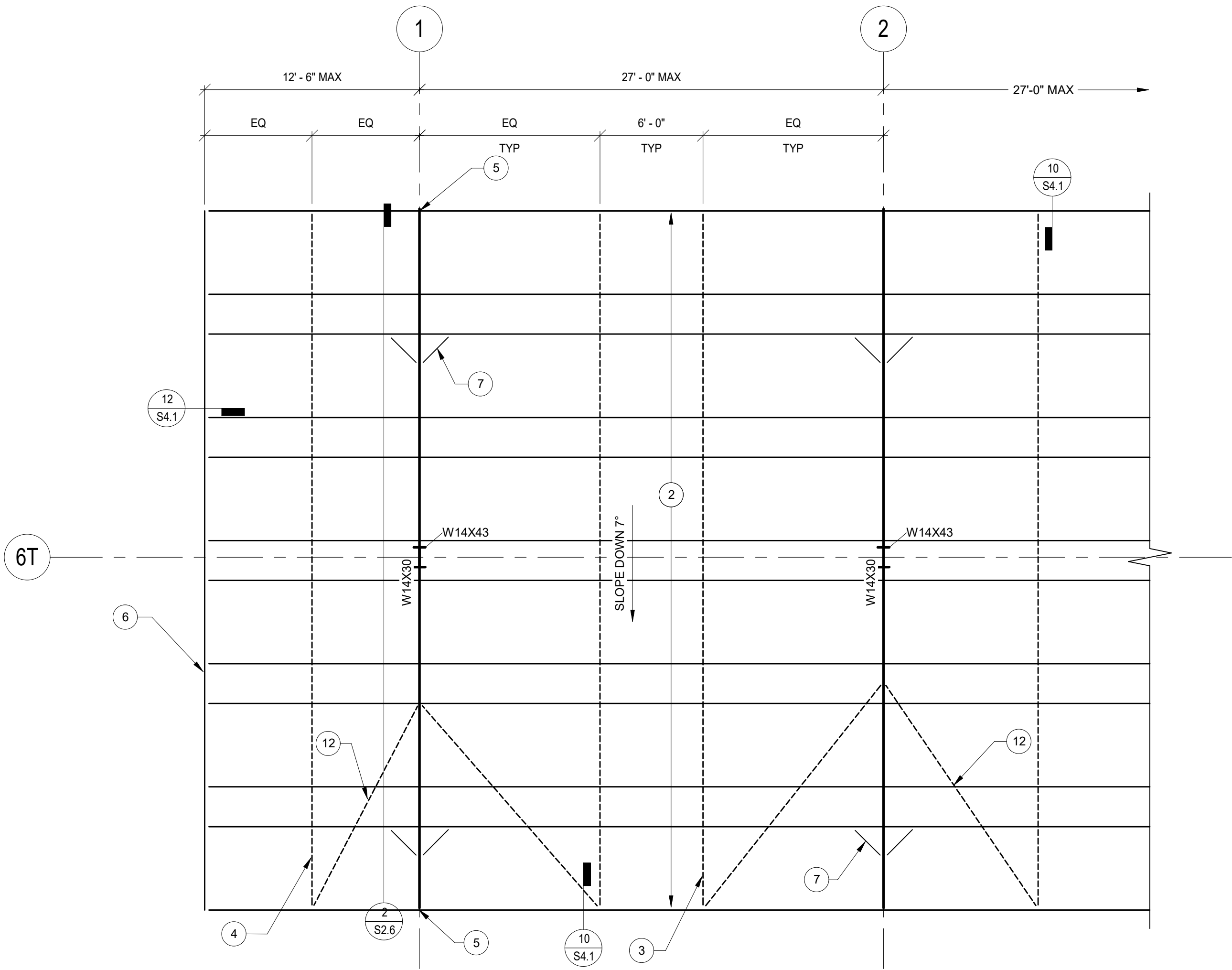
FOUNDATION PLAN  
0' - 0"

BOTTOM OF COLUMN  
-4' - 0"

TOP OF BEDROCK  
VARIES

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2'-0" DIA.	8'-6"	7'-6"	6'-6"

2 6 PANEL 7 DEG TEE SECTION  
1/4" = 1'-0"



1 6 PANEL TEE - FRAMING PLAN  
3/16" = 1'-0"

CORDEVALLE GOLF COURSE

1005 HIGHLAND AVE.  
SAN MARTIN, CA 95046

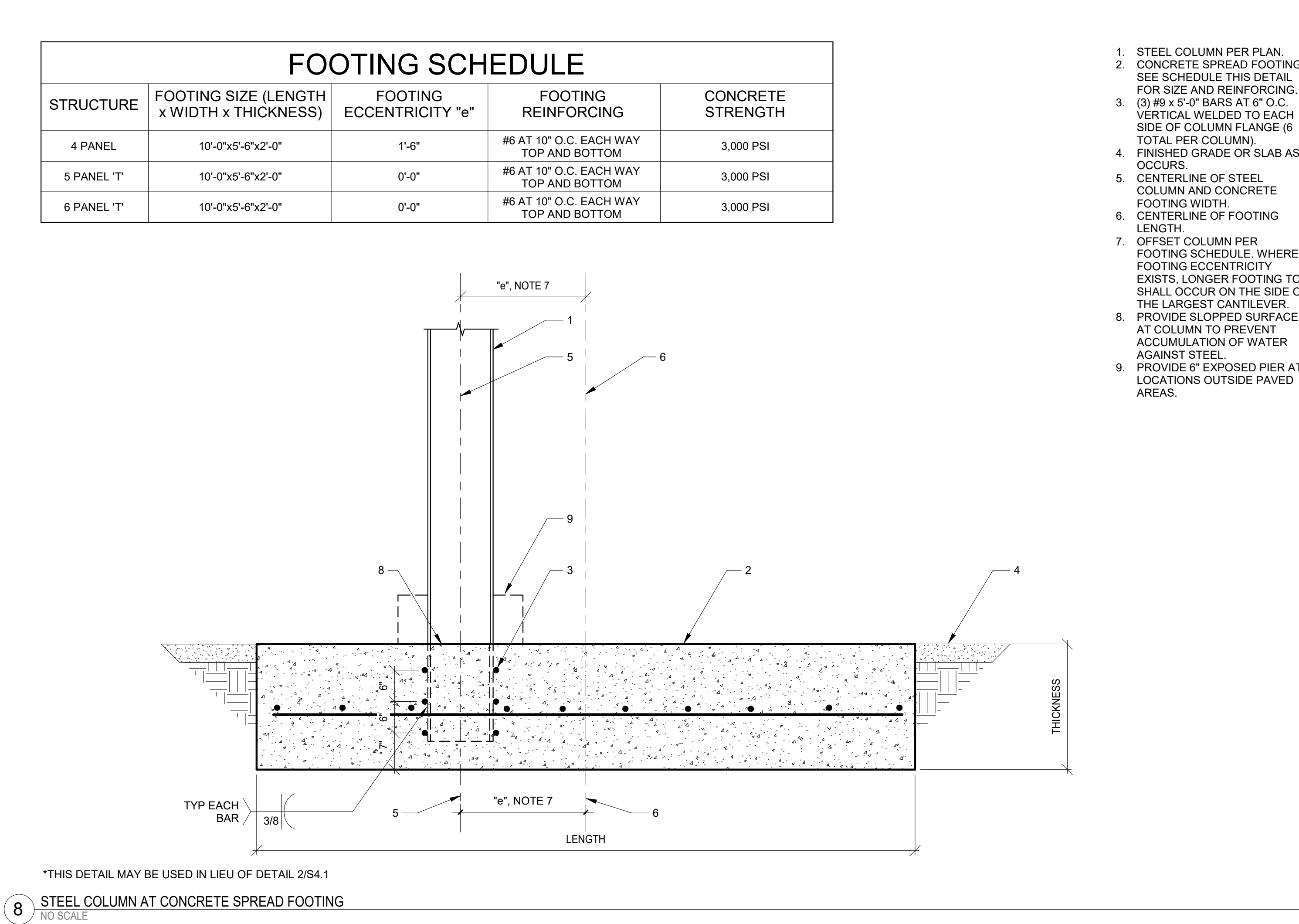
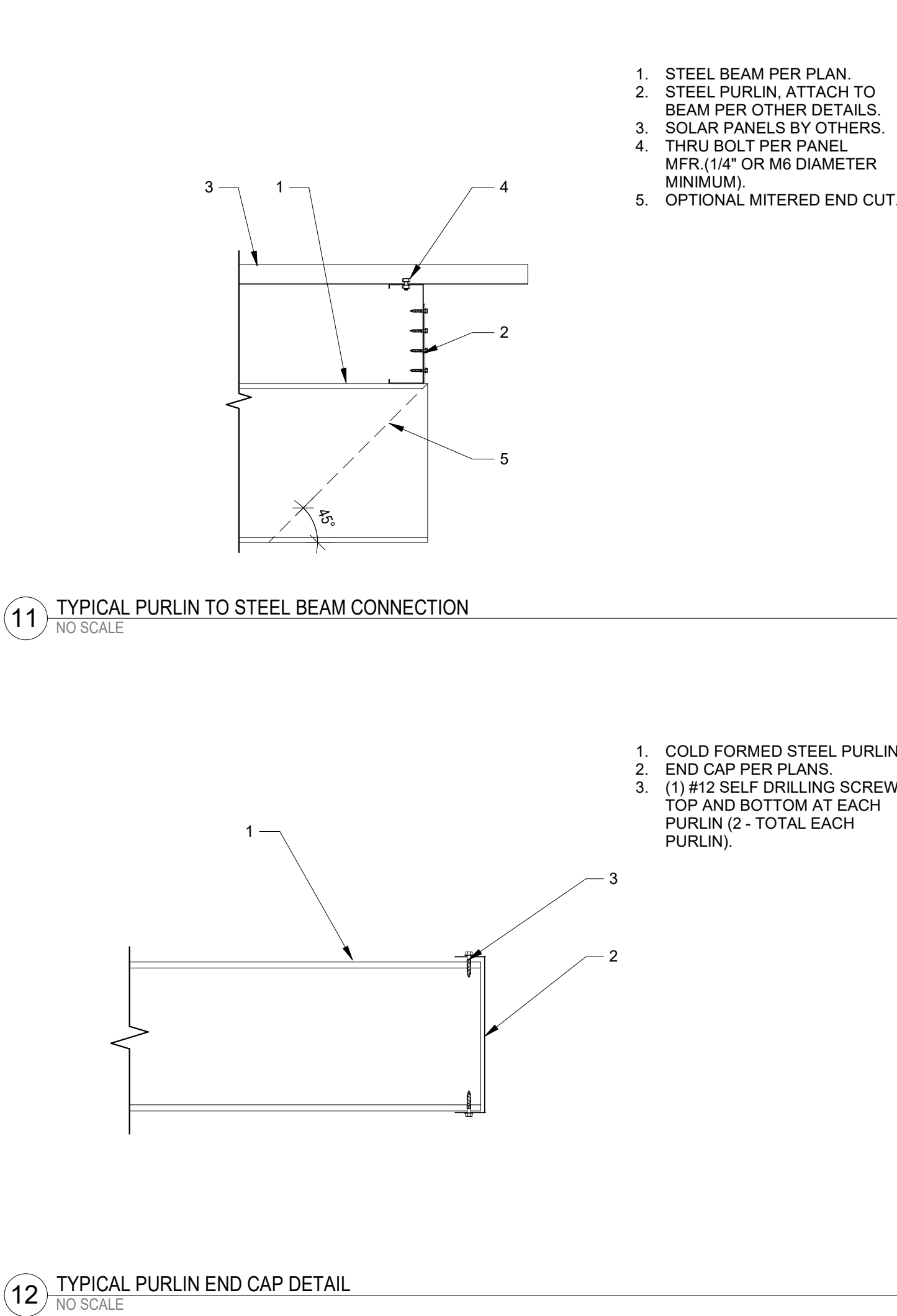
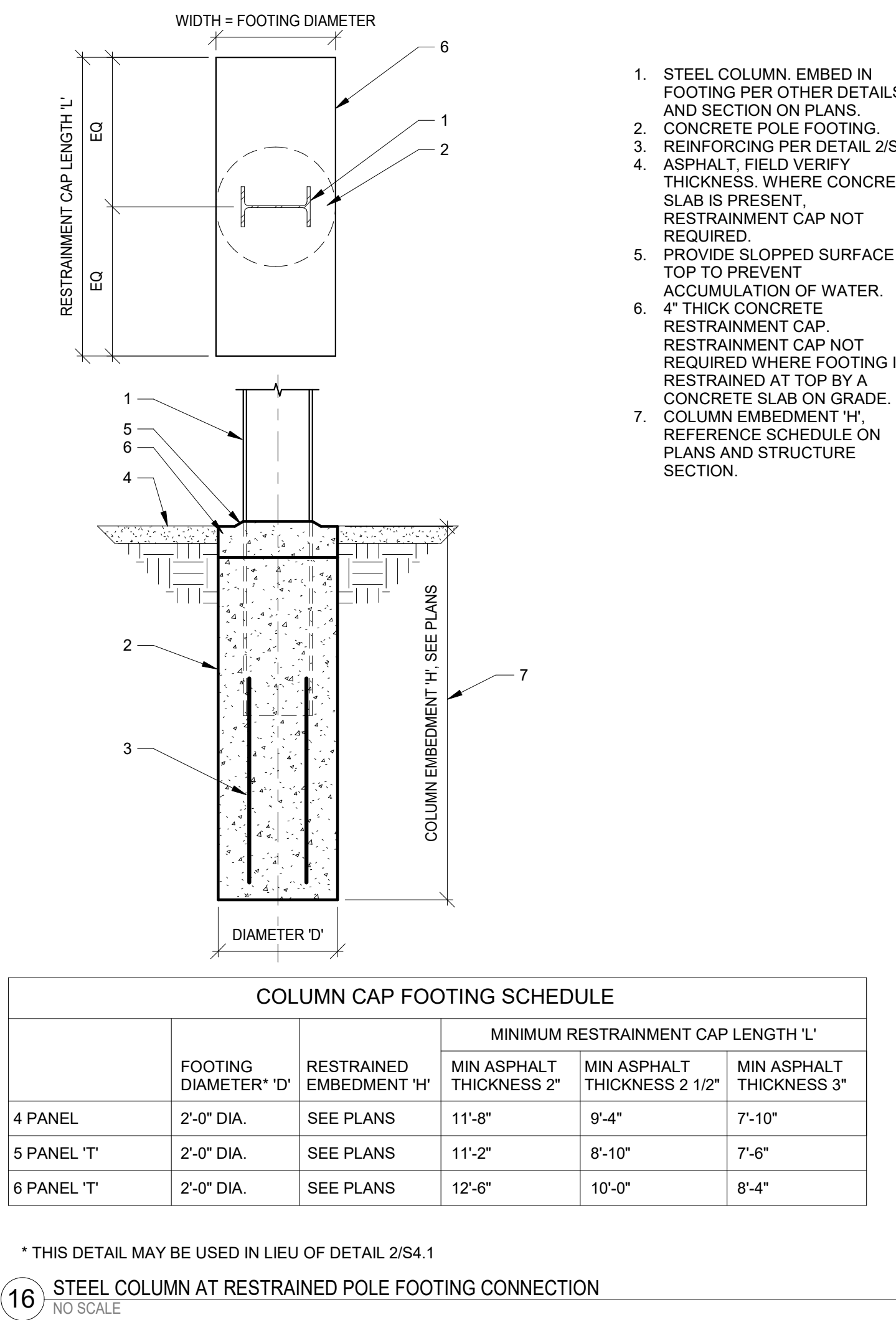
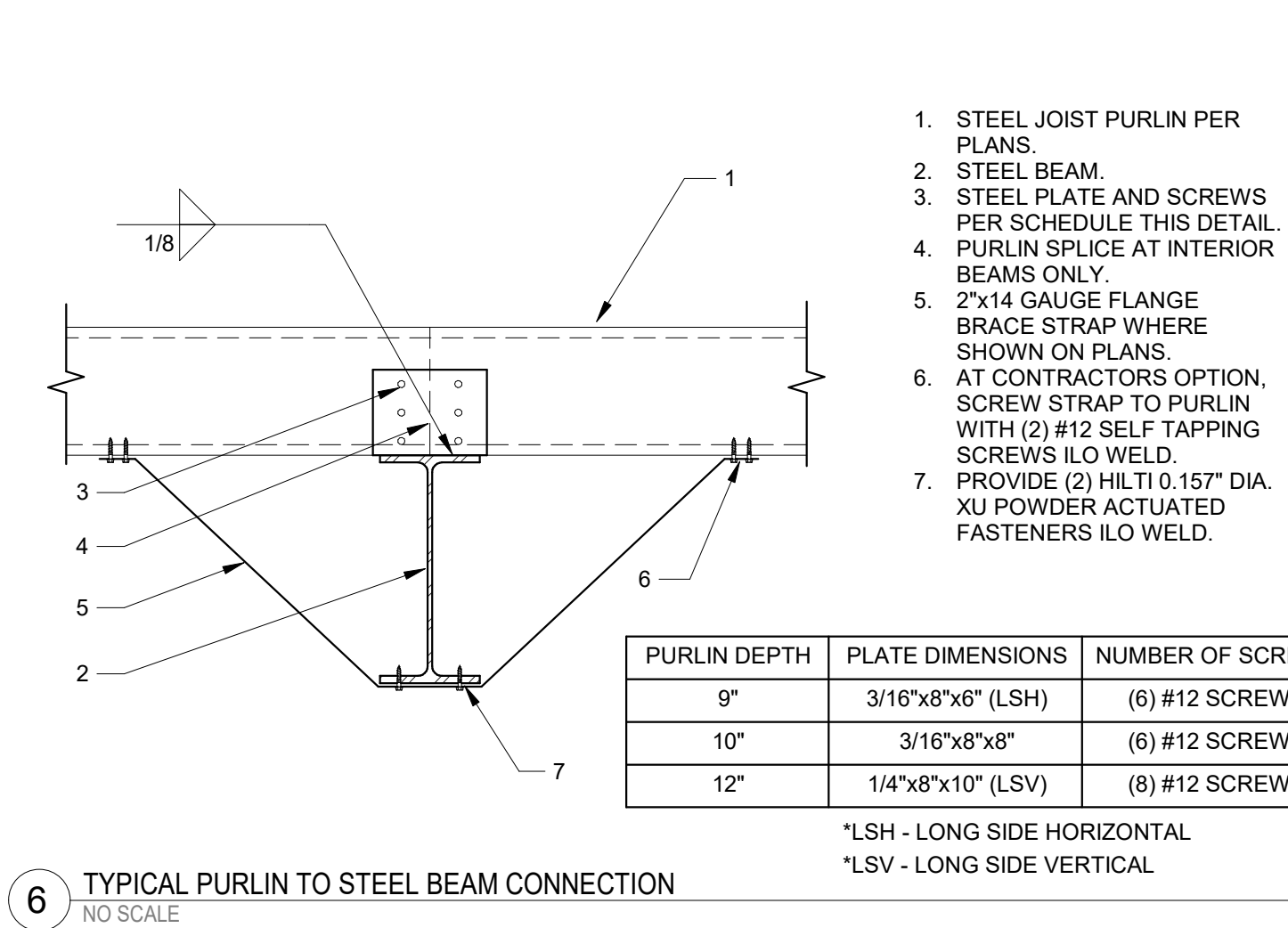
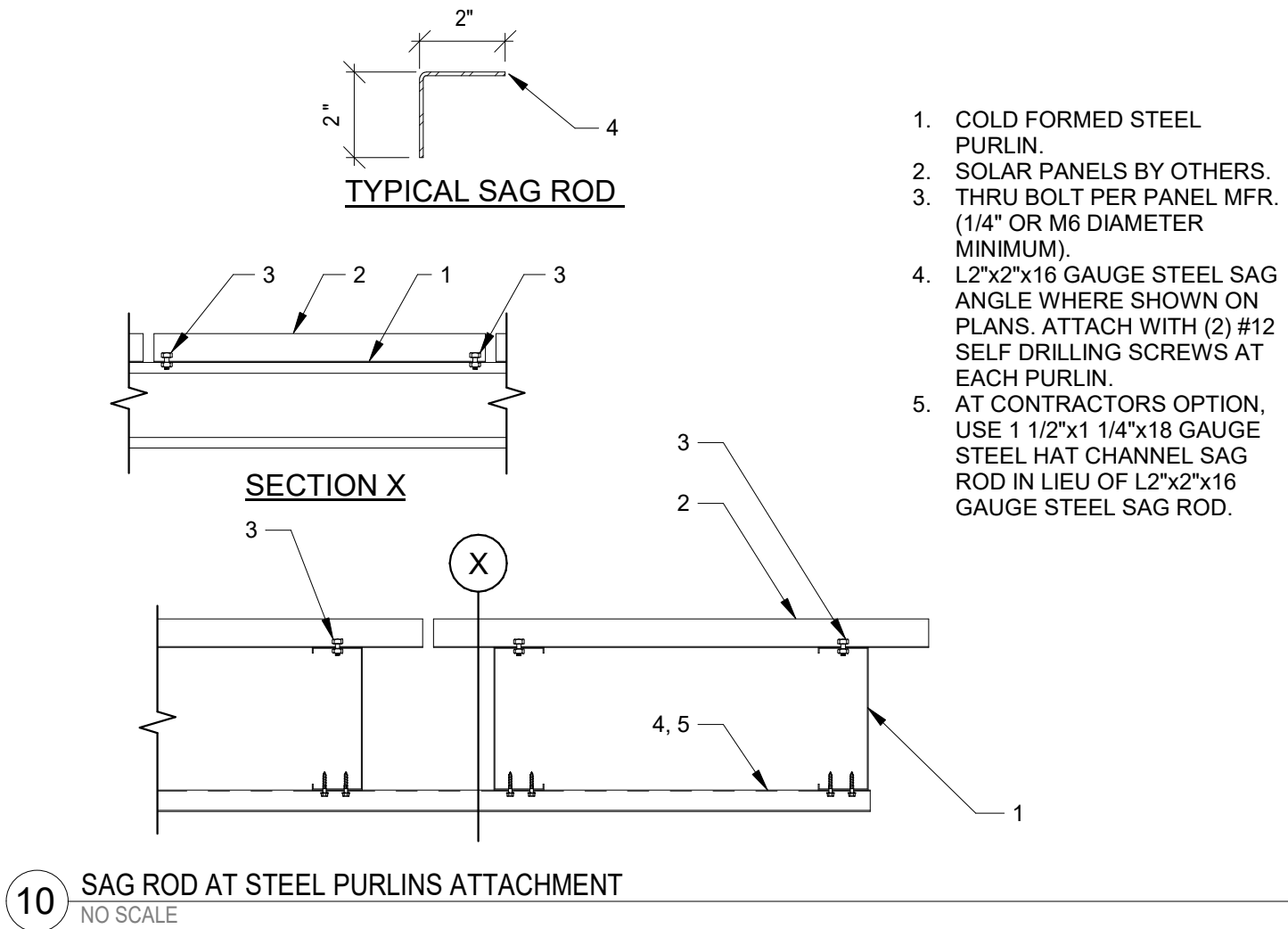
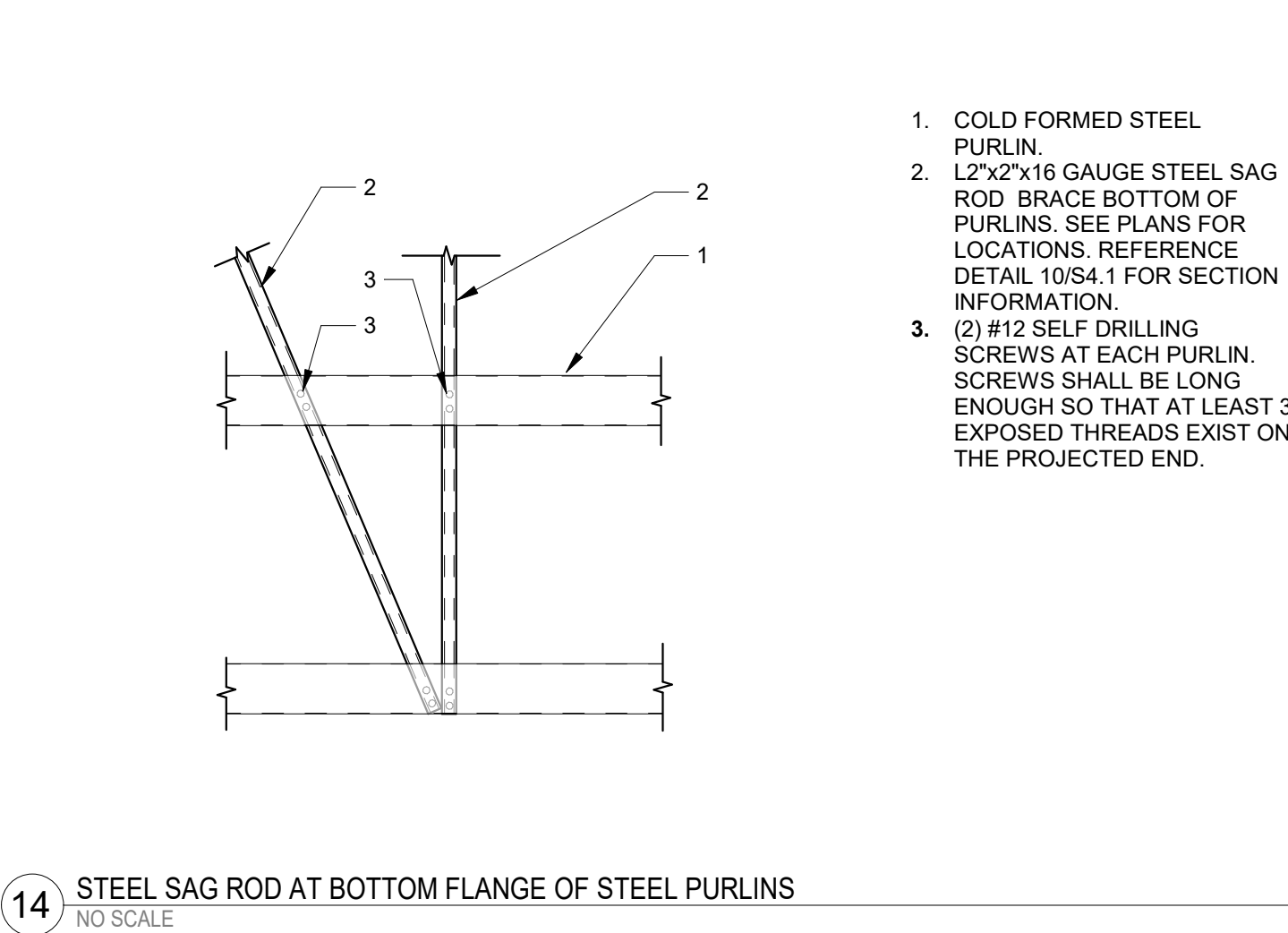
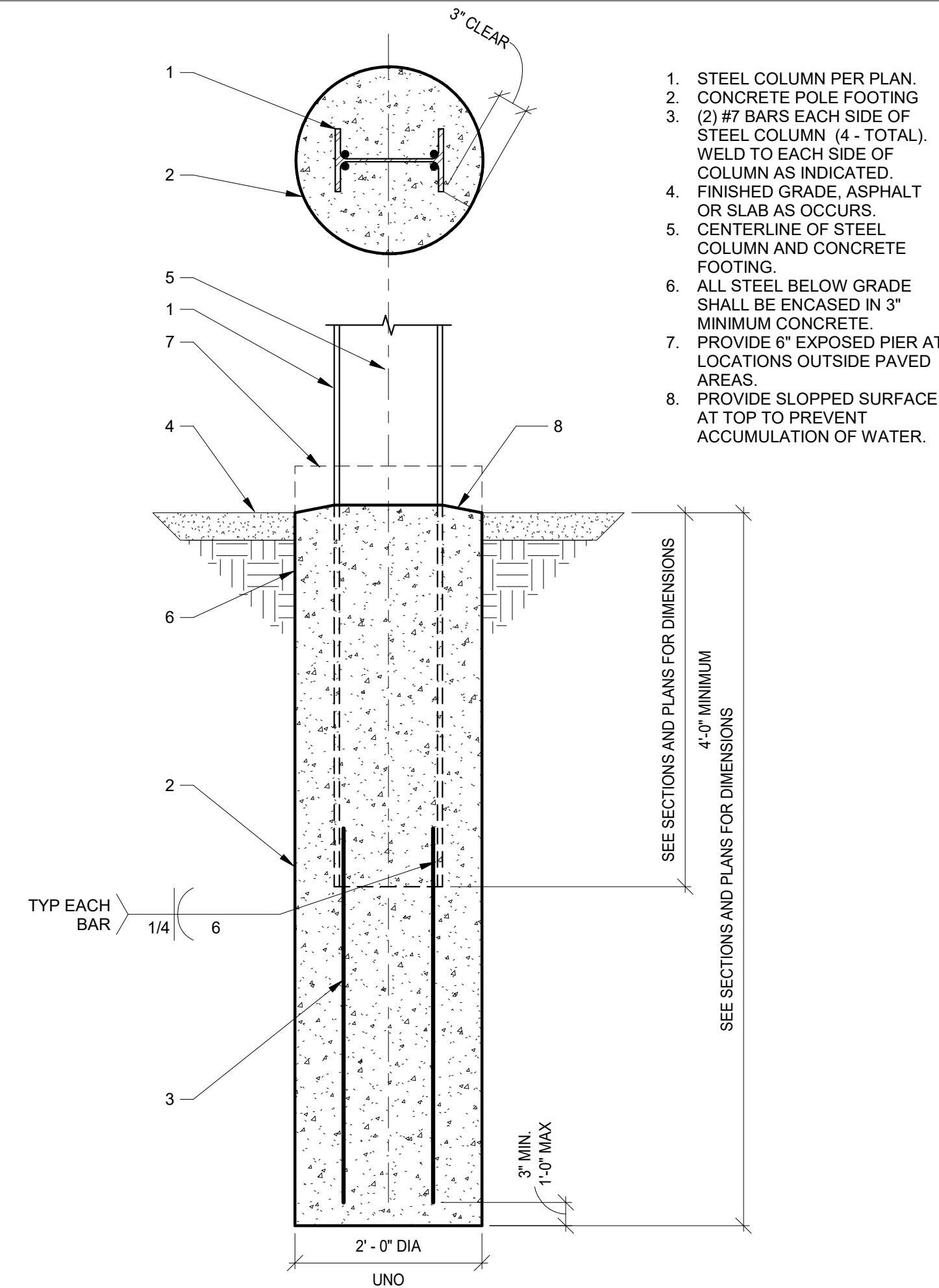
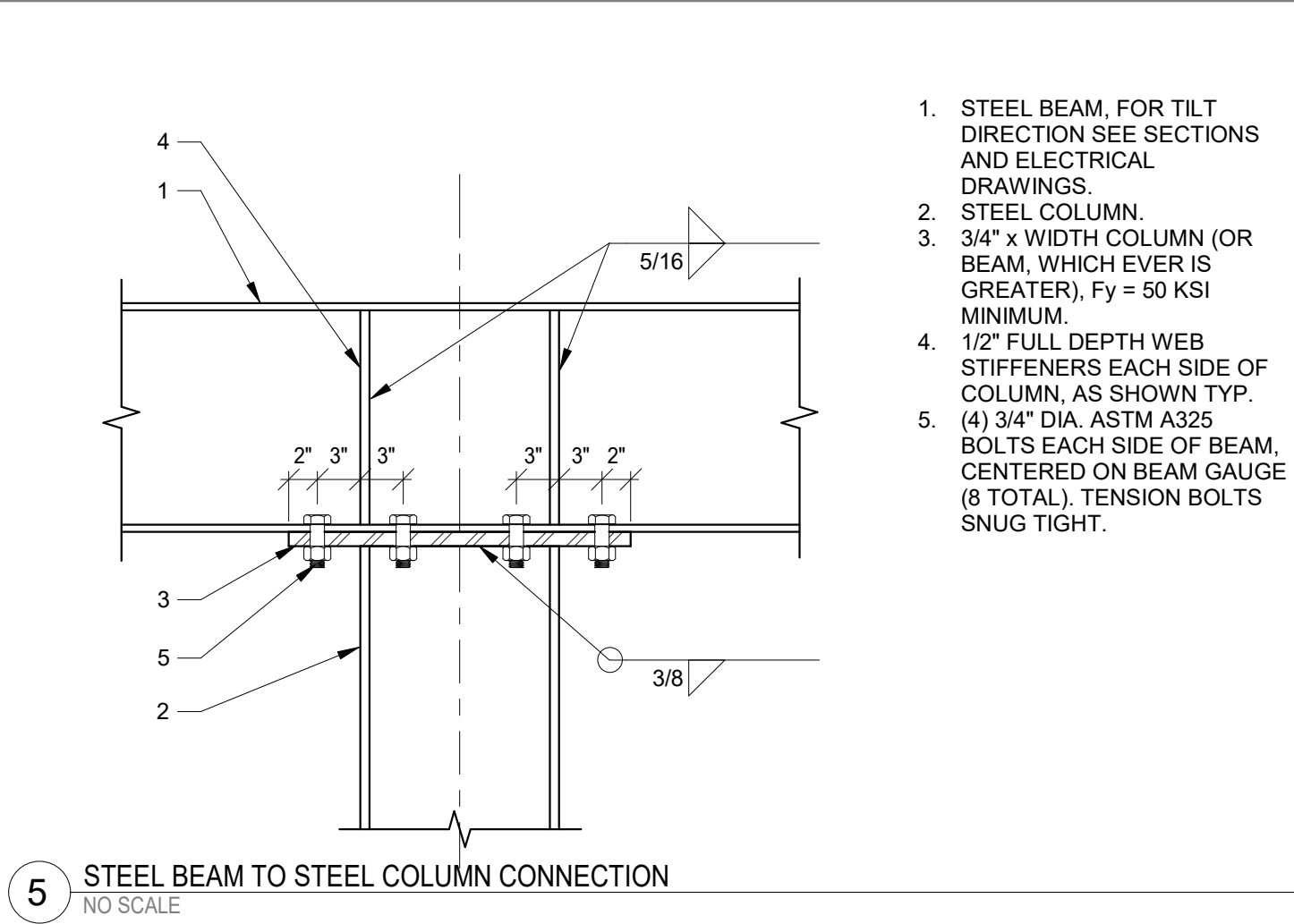
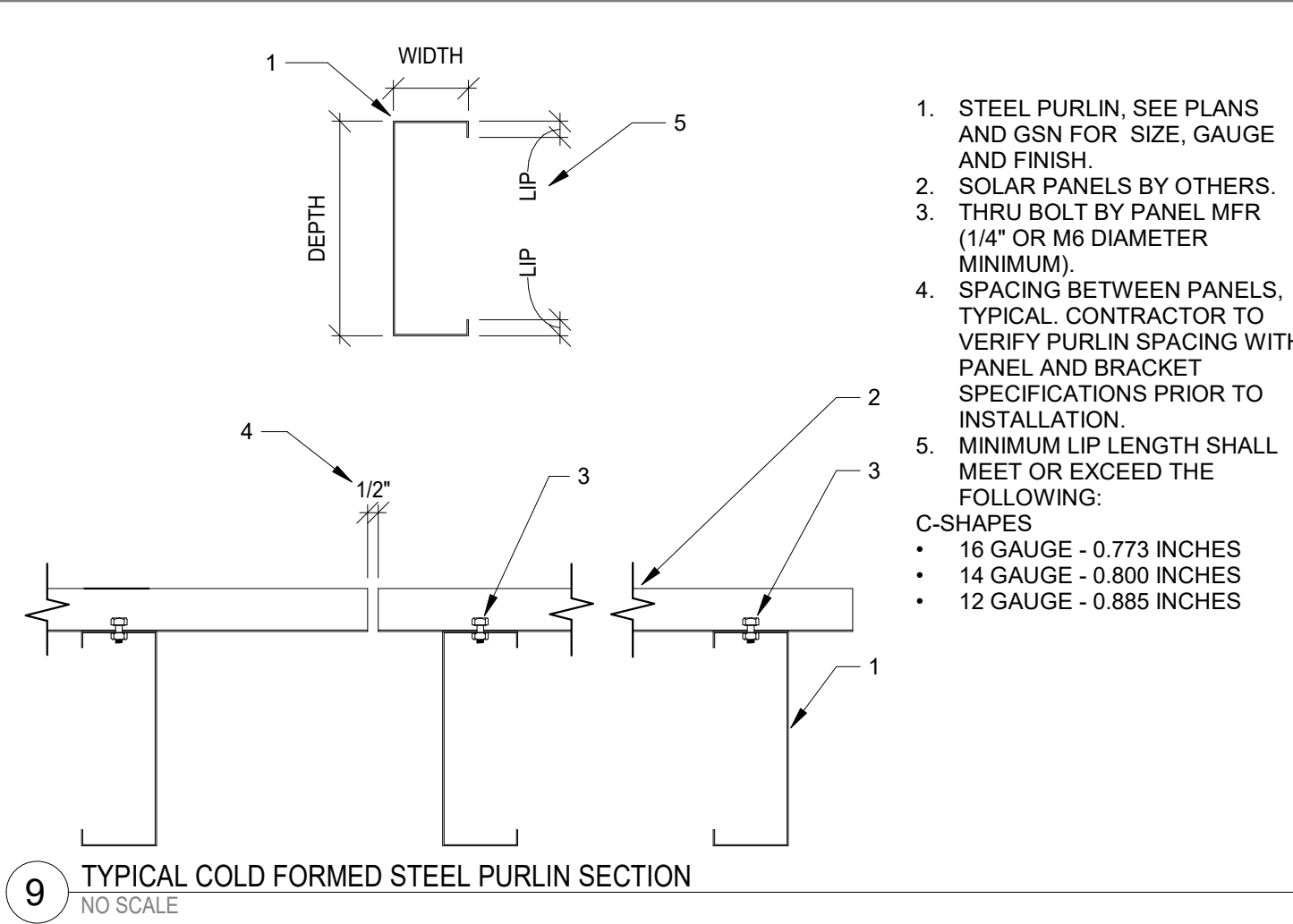
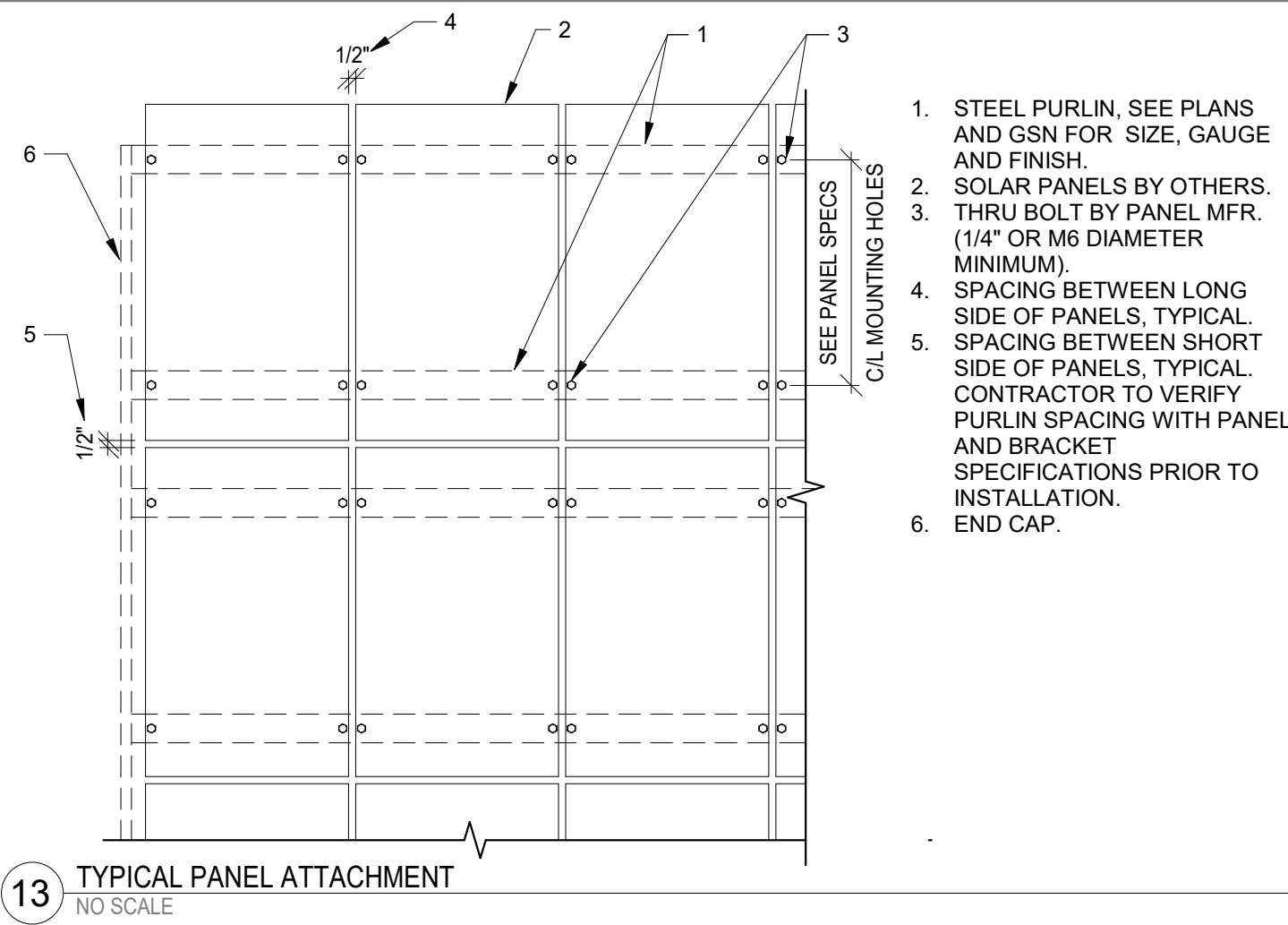
No.	Description	Date
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PROJECT NUMBER:	22297
DRAWN BY:	KS
CHECKED BY:	JE
DATE:	06/29/2022

SHEET NAME  
6 PANEL STRUCTURE  
PLANS

S2.6





UNITED

STRUCTURAL DESIGN LLC

2058 S. Dobson Rd, Suite 10  
Mesa, AZ 85202  
(480) 464-6406

www.unitedstr.com

John B. Elder

LICENSING PROFESSIONAL ENGINEER  
JOHN B. ELDER  
S 6534  
07/28/2022  
STRUCTURAL  
STATE OF CALIFORNIA

park'n  
SHADE

CORDEVALLE GOLF COURSE

1005 HIGHLAND AVE.  
SAN MARTIN, CA 95046

No.	Description	Date
PROJECT NUMBER:	22297	
DRAWN BY:	KS	
CHECKED BY:	JE	
DATE:	06/29/2022	

SHEET NAME

SOLAR CANOPY

DETAILS

S4.1