

GLENDALE UNIFIED SCHOOL DISTRICT

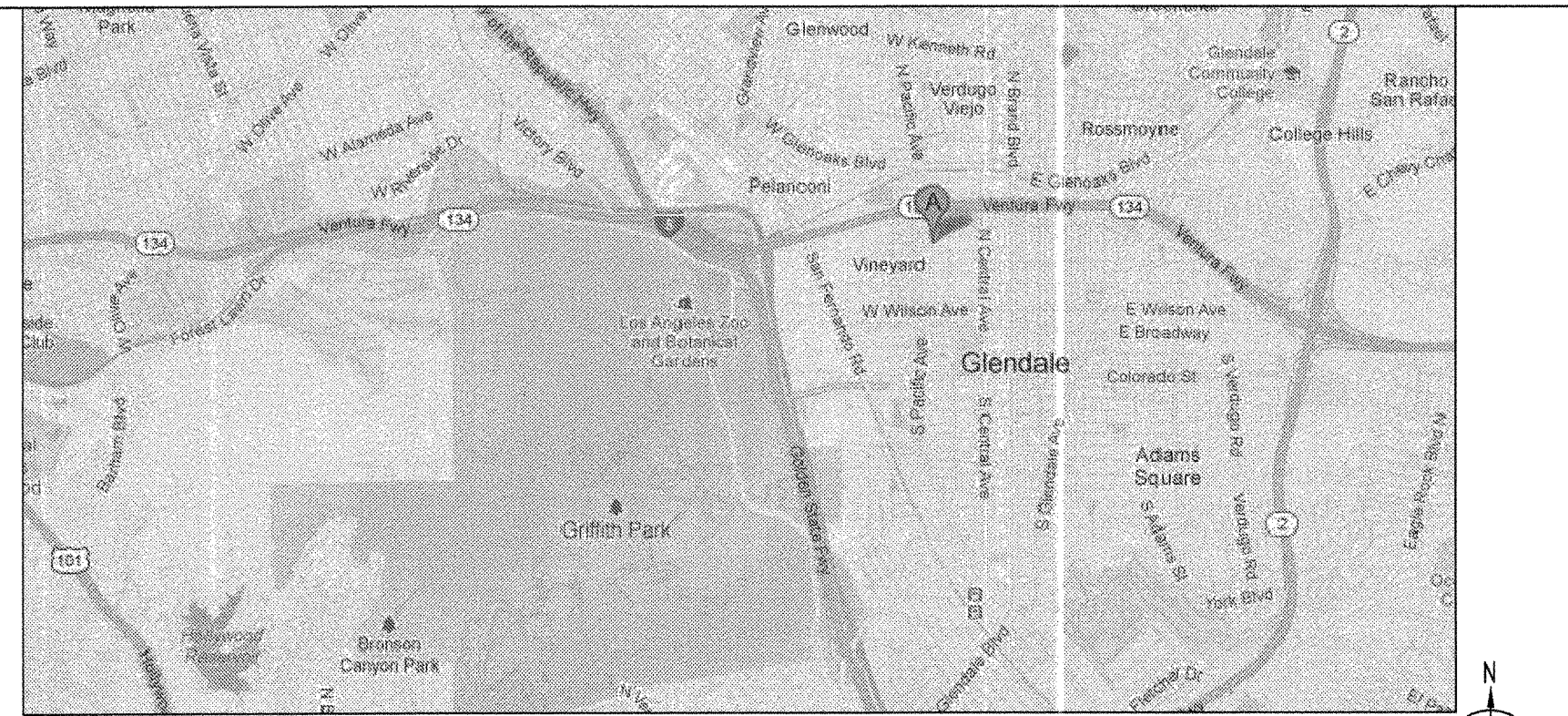
188.16KW DC STC SOLAR PHOTOVOLTAIC SYSTEM COLUMBUS ELEMENTARY SCHOOL - GLENDALE, CA



3055 Clearview Way, San Mateo, CA 94402
 (650) 838-1028 | F (650) 838-1029
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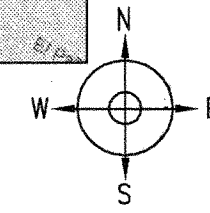
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VICINITY MAP



MAP NOT TO SCALE

425 MILFORD ST
GLENDAL, CA 91203



SCOPE OF WORK

WORK CONSISTS OF INSTALLING PHOTOVOLTAIC (PV) CANOPIES OVER EXISTING SCHOOL PARKING AND PLAYGROUND SPORTS FIELDS. SOLAR POWER SYSTEM CONSISTS OF PV CANOPIES, ELECTRICAL EQUIPMENT CONCRETE PAD, LIGHTING, PV MONITORING AND METERING COMMUNICATIONS AND POWER INTERCONNECT TO THE UTILITY GRID. THE PV CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES FOR UNDERGROUND UTILITIES ASSOCIATED WITH THE PV SOLAR SYSTEM.

SPECIAL NOTES

PROJECT TEAM

DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:
 DAVID STOKES
 QUATRO DESIGN GROUP
 923 E 3RD ST, SUITE 115
 LOS ANGELES, CA 90013
 TEL: (213) 625-1995
 FAX: (213) 625-1997
 EMAIL: dstokes@qdg-architects.com

OWNER:
 GLENDALE UNIFIED SCHOOL DISTRICT
 2223 N. JACKSON ST.
 GLENDALE, CA 91206
 TEL: (818) 241-3111

CIVIL/STRUCTURAL:
 PAUL SCOTT, S.E.
 CARUSO, TURLEY, SCOTT, INC.
 1215 W. RIO SALADO PKWY
 TEMPE, AZ 85281
 TEL: (480) 774-1700

ELECTRICAL ENGINEER:
 CARL BURATTI, P.E.
 BURATTI & ASSOCIATES, INC.
 6345 BALBOA BLVD, Ste 259
 ENCINO, CA 91316
 TEL: (818) 345-7130

ABBREVIATIONS

A	AMPERE	PL	PROPERTY LINES
AC	ALTERNATING CURRENT	PV	PHOTOVOLTAIC
BLDG	BUILDING	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	S	SUBPANEL
C	COMBINER BOX	SCH	SCHEDULE
D	DISTRIBUTION PANEL	SS	STAINLESS STEEL
DC	DIRECT CURRENT	SSD	SEE STRUCTURAL DRAWINGS
EGC	EQUIPMENT GROUNDING CONDUCTOR	STC	STANDARD TESTING CONDITIONS
(E)	EXISTING	SWH	SOLAR WATER HEATER
EMT	ELECTRICAL METALLIC TUBING	TYP	TYPICAL
G	SOLAR GUARD METER	UON	UNLESS OTHERWISE NOTED
GALV	GALVANIZED	UPS	UNINTERRUPTIBLE POWER SUPPLY
GE	GROUNDING ELECTRODE CONDUCTOR	V	VOLT
GND	GROUND	Vmp	VOLTAGE AT MAX POWER
HDC	HOT DIPPED GALVANIZED	Voc	VOLTAGE AT OPEN CIRCUIT
I	CURRENT	W	WATT
Imp	CURRENT AT MAX POWER	3R	NEMA 3R, RAIN TIGHT
INVS	INVERTERS		
Isc	SHORT CIRCUIT CURRENT		
kVA	KILOVOLT AMPERE		
kW	KILOWATT		
LBW	LOAD BEARING WALL		
MIN	MINIMUM		
(N)	NEW		
NEC	NATIONAL ELECTRIC CODE		
NIC	NOT IN CONTRACT		
NTS	NOT TO SCALE		
OC	ON CENTER		
OC	OVERCURRENT PROTECTION		
P	PANEL BOARD		

SHEET INDEX

PV T.O.0	TITLE SHEET
PV A 1	SITE PLAN
PV A 2	FIRE PLAN
PV A 3	STRUCTURAL DETAILS
PV A 4	STRUCTURAL DETAILS
PV A 5	ACCESSIBLE PARKING
PV A 6	ACCESS DETAILS

THE BELOW LISTED DRAWINGS HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS WHO ARE LICENSED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DRAWINGS HAVE BEEN REVIEWED FOR DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS. THESE DRAWINGS ALSO COORDINATE WITH MY PLANS AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT. THE DRAWINGS THAT HAVE BEEN PREPARED BY OTHERS ARE AS FOLLOWS:

PV 1	ELECTRICAL NOTES
PV 2	ELECTRICAL SITE PLAN
PV 3	LINE DRAWING
PV 4	STRING DIAGRAMS
PV 5	MONITORING
PV 6	ELECTRICAL DETAILS
PV 7	SIGNAGE
PV 8	LIGHTING DESIGNS
PV 9	TITLE 24 CONFORMANCE DOCUMENTS

PC-02-112000	FP 1 FULL PORTRAIT GENERAL STRUCTURAL NOTES
	FP 2 FULL PORTRAIT BOX BEAM
	FP 3 FULL PORTRAIT BOX BEAM DETAILS
	FP 4 FULL PORTRAIT BACK TO BACK
PC-02-111999	TP 1 TEE PORTRAIT GENERAL STRUCTURAL NOTES
	TP 2 TEE PORTRAIT BOX BEAM
	TP 3 TEE PORTRAIT BOX BEAM DETAILS
	TP 4 TEE PORTRAIT BACK TO BACK

CODES

GOVERNING CODES:

CALIFORNIA CODE OF REGULATIONS:
 2010 CALIFORNIA ADMINISTRATIVE CODE (CAC).....(PART 1, TITLE 24, CCR)
 2010 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1, AND 2 (PART 2, TITLE 24, CCR)
 (2009 EDITION INTERNATIONAL BUILDING CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA ELECTRICAL CODE.....(PART 3, TITLE 24, CCR)
 (2008 EDITION NATIONAL ELECTRICAL CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA MECHANICAL CODE (CMC).....(PART 4, TITLE 24, CCR)
 (2009 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA PLUMBING CODE (CPC).....(PART 5, TITLE 24, CCR)
 (2009 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA PLUMBING CODE (CPC).....(PART 6, TITLE 24, CCR)
 (2009 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA ENERGY CODE.....(PART 6, TITLE 24, CCR)
 (2008 EDITION CALIFORNIA ENERGY COMMISSION BUILDING ENERGY EFFICIENCY STANDARDS)
 2010 CALIFORNIA FIRE CODE (CFC).....(PART 9, TITLE 24, CCR)
 (2009 EDITION OF INTERNATIONAL FIRE CODE WITH 2010 CALIFORNIA AMENDMENTS)
 2010 CALIFORNIA GREEN CODE.....(PART 11, TITLE 24, CCR)
 2010 CALIFORNIA REFERENCED STANDARDS CODE.....(PART 12, TITLE 24, CCR)
 NFPA 13 - 2010
 NFPA 72 - 2010
REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:
 2010 CBC, CHAPTER 35
 2010 CFC, CHAPTER 45

INSPECTIONS:

ALL INDEPENDENT TESTING AND INSPECTIONS SHALL BE PAID FOR AND SCHEDULED BY THE OWNER (DISTRICT).
 A PROJECT INSPECTOR EMPLOYED BY THE OWNER (DISTRICT) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTIONS OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, 2010 CALIFORNIA BUILDING CODE. A MINIMUM OF A CLASS II (TWO) INSPECTOR SHALL BE USED.

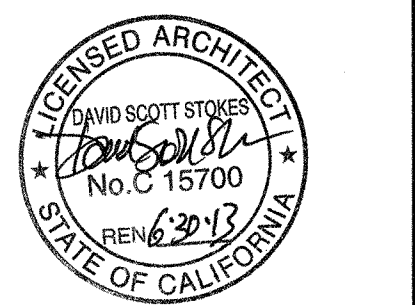
GENERAL NOTES

1. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CHANGE ORDERS APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
3. A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
4. A DSA CERTIFIED INSPECTOR WITH CLASS 2 CERTIFICATION IS REQUIRED FOR THIS PROJECT.
5. A DSA CERTIFIED INSPECTOR WHO IS SPECIFICALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.
6. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THIS PROJECT.

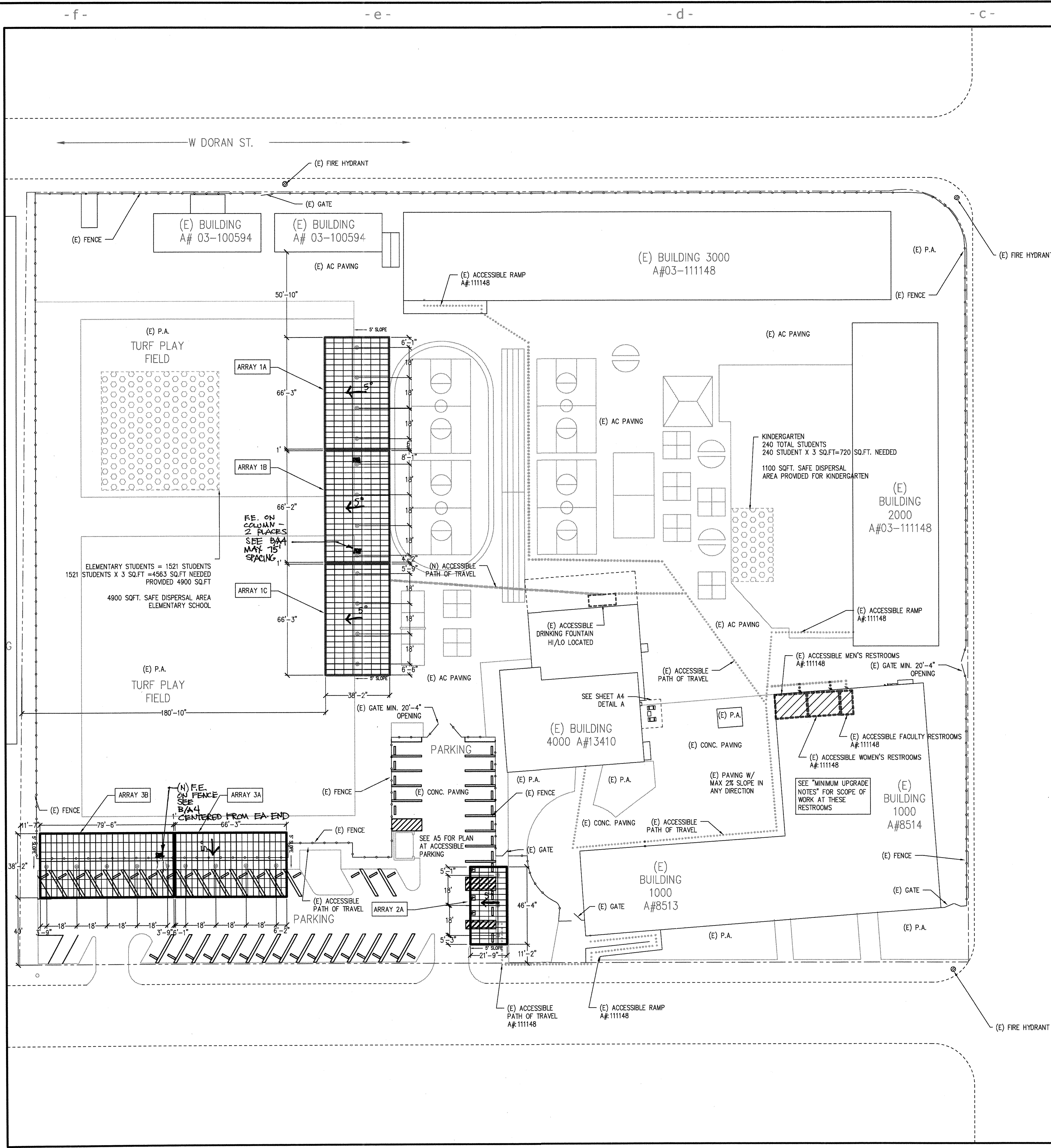
GLENDALE USD - COLUMBUS ELEMENTARY
 188.16 KW PV SYSTEM
 GLENDALE USD - COLUMBUS ELEMENTARY
 425 MILFORD ST
 GLENDALE, CA 91203
 8185070201

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT

APPROX 114571
 ACV: FLS: PLS: SS: SD
 DATE: MAY 22 2012



JOB DETAILS	
PROJECT:	Glendale
WORKSHEET:	(784) YINGLI # YL240P-29b
WORKING SYSTEM:	STEEL SUPPORT STRUCTURES
INSPECTOR:	(2) SOLECTRIA # PVI 82KW-208VAC
MARKET:	GOVT
CHECKED BY:	LEO WU
DATE:	3/22/2012
PAGE NUMBER:	TITLE PAGE
JOB NUMBER:	JB-912070-00
PAGE:	PV T.O.0
REV:	



PROJECT SUMMARY

THIS PROJECT WILL CONSIST OF THE INSTALLATION OF SOLAR PHOTOVOLTAIC CANOPIES OVER PARKING AND PLAYGROUND AREAS AT GLENDALE UNIFIED SCHOOL DISTRICT - COLUMBUS ELEMENTARY SCHOOL.

SOLAR MODULE: YINGLI YL240P-29b
 INVERTER: SOLECTRIA PVI82KW-208VAC

SUPPORT STRUCTURES: FULL CANTILEVER SOLAR SUPPORT STRUCTURE
 TEE SOLAR SUPPORT STRUCTURE

CONSTRUCTION TYPE: IIB
 OCCUPANCY GROUP: A-3
 ALLOWABLE: 9500 SF

CONSTRUCTION TYPE: IIB
 OCCUPANCY GROUP: U
 ALLOWABLE: 8500 SF

ARRAY	WIDTH	LENGTH	AREA	NO. MODULES	KW	TOTAL SQ. FOOTAGE	OCCUPANCY CLASSIFICATION	PRECHECK A#
1A	38'-2"	65'-9"	2508 SQ. FT.	140	33.60	7524 SQ. FT.	A-3	02-111999
1B	38'-2"	65'-9"	2508 SQ. FT.	140	33.60			
1C	38'-2"	65'-9"	2508 SQ. FT.	140	33.60			
2A	21'-9"	46'-0"	1002 SQ. FT.	56	13.44	1002 SQ. FT.	U	02-112000
3A	38'-2"	65'-9"	2508 SQ. FT.	140	33.60	5518 SQ. FT.	U	02-111999
3B	38'-2"	78'-11"	3010 SQ. FT.	168	40.32			
TOTAL				784	188.16			

PARKING ANALYSIS FOR PARKING LOT
 50 STANDARD STALLS (18 ARE SHADED = 36%)
 1 VAN-ACCESSIBLE STALL
 2 ACCESSIBLE STALLS
 53 TOTAL STALLS
 3 ACCESSIBLE STALLS REQUIRED
 3 ACCESSIBLE STALLS PROVIDED
 SHADED ACCESSIBLE STALLS REQUIRED : 36% OF 3 = 1.1
 SHADED ACCESSIBLE STALLS PROVIDED : 3

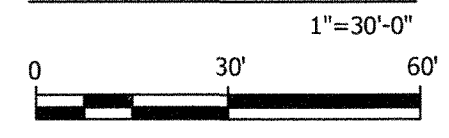
ACCESSIBLE PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX, AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" STRUCTURAL ENGINEER SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

MINIMUM UPGRADE NOTES

- VERIFY AND/OR PROVIDE THE FOLLOWING MINIMUM UPGRADES TO THE TOILET ROOMS:
1. SELF-CLOSING HINGE AT WHEELCHAIR ACCESSIBLE STALL DOOR.
 2. SLIDE BOLT OR FLIP-OVER TYPE LATCH AT WHEELCHAIR ACCESSIBLE STALL DOOR.
 3. LOOP OR U-SHAPED WIRE PULLS BOTH SIDES OF D.P., STALL DOOR, 30"-44" A.F.F.
 4. COAT HOOK AT 48" A.F.F. MAX. AT WHEELCHAIR ACCESSIBLE STALL.
 5. ENTRY DOOR OPERATING PRESSURE TO OPEN 5 LBS. MAXIMUM.
 6. DISPENSERS/WASTE DISPOSAL BINS CAN NOT PROJECT INTO CLEAR SPACE REQUIREMENTS OF ANY FLEXURE.
 7. DISPENSERS AND OTHER PROTRUDING ELEMENTS, WITH LEADING EDGES BETWEEN 21" AND 80" AFF WITHIN THE CIRCULATION SPACE, MAY NOT PROJECT MORE THAN 4" FROM THE WALL.
 8. LOCATE THE WASTE DISPOSAL BIN (INDICATE A SIZE) WHICH WILL NOT ENCROACH INTO ANY FIXTURE, MANUEVERING, OR DOOR CLEARANCE REQUIREMENT.

SITE PLAN



3055 ClearView Way, San Mateo, CA 94402
 T: (650) 538-1028 | F: (650) 538-1029
 (888)-SOL-CITY (765-2489) | www.solarcity.com

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GLENDALE USD - COLUMBUS ELEMENTARY
 188.16 KW PV SYSTEM
 GLENDALE USD - COLUMBUS ELEMENTARY
 425 MILFORD ST
 GLENDALE, CA 91203
 8185070201

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP03 114571
 A.C. FLS FESS ED
 DATE MAY 22 2012



JOB DETAILS

ALIA: Glendale	PAYMENT TYPE: CASH
PROJECT: (784) YINGLI # YL240P-29b	PROJECT MANAGER: D NAVARRO
MOUNTING SYSTEM: STEEL SUPPORT STRUCTURES	
INVERTER: (2) SOLECTRIA # PVI 82KW-208VAC	
MARKET: DESK: MATT RHODE	
GOVT CHECKED BY: LEO WU	
DATE: 3/22/2012	
FILE NAME: SITE PLAN	
JOB NUMBER: JB-912070-00	
PAGE: PV A1	REV:

SCOPE OF WORK

VERIFY EXISTING FIRE LANE MARKING AND/OR PROVIDE NEW FIRE LANE MARKING AS DIRECTED BY LOCAL FIRE AUTHORITY AND AS DESCRIBED BELOW.

FIRE LANE MARKING

SCOPE
 The Fire Department is authorized to direct installation of approved signs or other approved notices for the identification of fire lanes. Identification may include one or more of the following:

REQUIREMENTS

Red Curb Marking:

Curb top and side shall be painted red, and the words, "FIRE LANE" shall be stenciled on the top and side of all red curbs at a maximum interval of 50 feet. Letters shall be three inches (3") in height with a minimum 3/4-inch in stroke.

Alternatively, if the roadway has no curbing, a 12-inch wide red stripe with the words "FIRE LANE" in white may be painted along and parallel with the edge of the roadway. The lettering shall be 8-inches high with a 3/4-inch stroke.

Signage:

Signs shall be of metal construction, measuring 12-inches wide and 18-inches high, and of a reflective type. Plastic or wooden signs are not acceptable. See detail 2.

Signs shall read: "NO STOPPING - FIRE LANE 22500.1 CVC." Lettering shall be not less than one-inch in height and clearly visible from a vehicle.


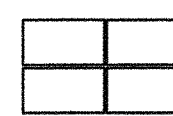
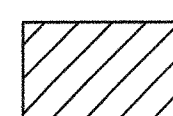

Signs shall be in visible locations and mounted on galvanized metal poles at a height of 80 inches. Signs shall be maintained unobstructed by foliage, etc.

The distance between signs posted along the fire lane shall not exceed 125 feet. Not less than two signs shall be posted for each fire lane. If traffic flows in two directions, signs must be posted so as to be readable from either direction.


Roadway Surface Marking:

Outlining or painting the fire lane area in red with the words "FIRE LANE" in white, at intervals of not more than 50 feet or as otherwise directed by the Fire Department. Size of lettering shall be not less than 24 inches in height and three inches (3") in stroke.

LEGEND

- (N) STRUCTURE POST 
- (N) SOLAR MODULES 
- (E) PREVIOUSLY APPROVED FIRE LANES REMAINING UNCHANGED 
- (E) FENCE 

GLENDALE FIRE DEPARTMENT
 (818) 548-4810
 APR 17 2012

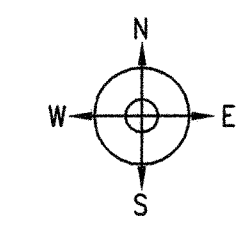
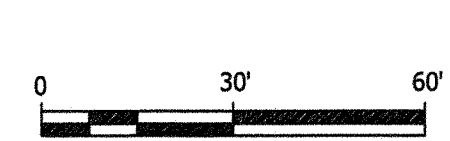
APPROVED BY 
 SUBJECT TO FIELD INSPECTION
 PLS SEE 1.4.4

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APPROX 114571
 AC FL S SS ED
 DATE MAY 22 2012



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3B	38'-2"	78'-11"	3010 SQ. FT.	168	40.32		A-3
TOTAL				784	188.16		

LOCAL FIRE AUTHORITY APPROVAL



LOCAL FIRE AUTHORITY REVIEW
 Local Fire Authority to initial the items as applicable to this project and sign below.

YES NO N/A
 DSA Application #1: _____

Elevators
 Where an Elevator does not meet medical emergency service cab size, per 2010 California Building Code (CBC), the Local Fire Authority approves the use of stairways for emergency rescue and patient transport:

Access Roads
 Access Roads, Fire Lane Markings, and Gate Entrances are in accordance with Title 19, Calif. Code of Regulations & 2010 California Fire Code (CFC) Chapter 5. (Explain in comments section any "NO" answer)

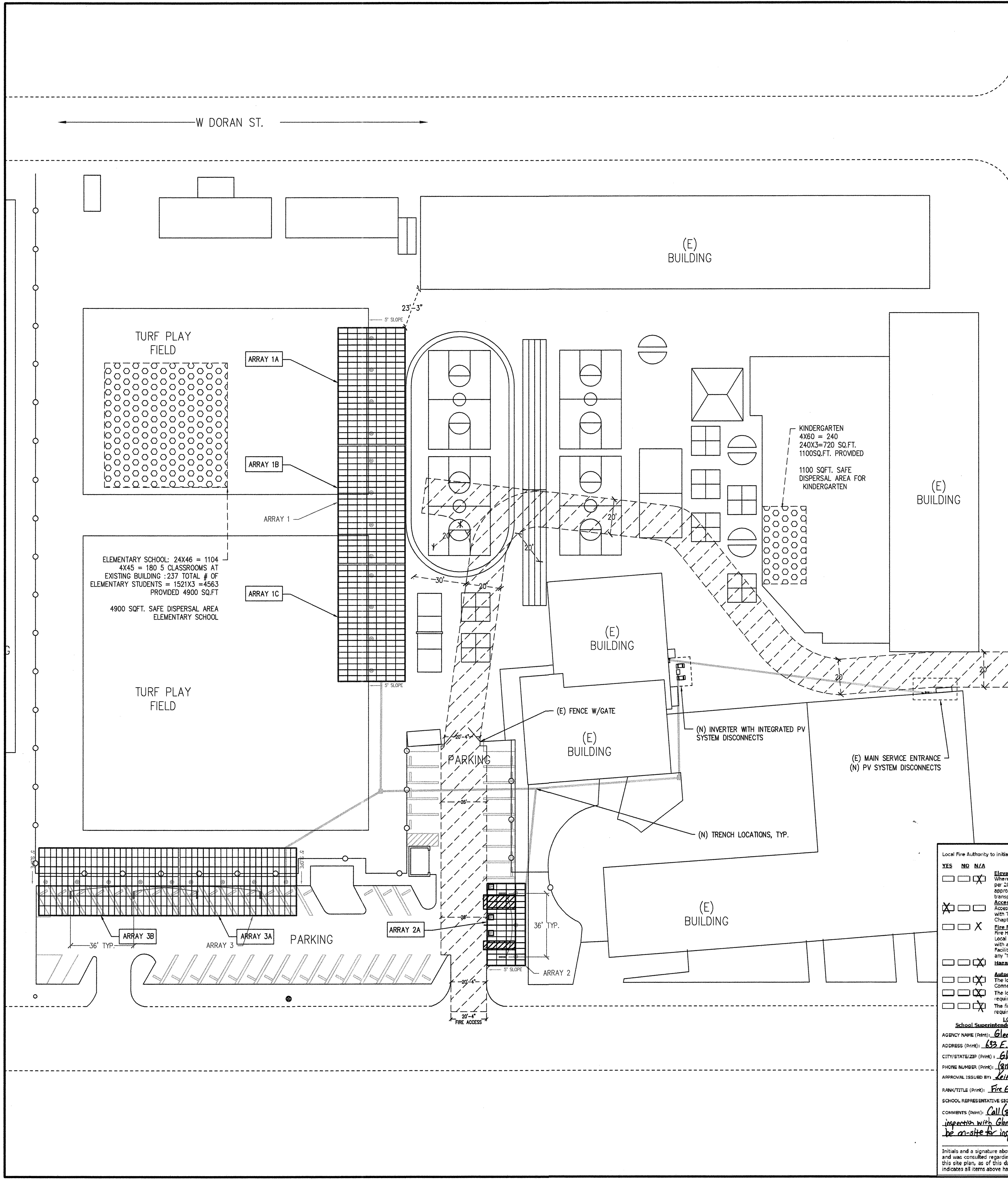
Fire Hydrants
 Fire Hydrant location and distribution are in accordance with 2010 CFC or Local Fire Authority means for providing fire flow may vary from 2010 CFC with an approval signature of the School District Superintendent or Facilities Director. (See DSA Policy 09-01) (Explain in comments section any "NO" answer)

Hazard Severity Zone Area2 (2010 CBC Chapter 7A)

Automatic Fire Suppression Systems (AFSS)
 The location(s) of the proposed Post Indicator Valve (PIV) and Fire Dept. Connection (FDC) meet the requirements of this jurisdiction.
 The location(s) of the Detector Check Valve Assembly (DCVA) meet the requirements of this jurisdiction.
 The fire pump assembly/backflow preventer and other valves meet the requirements of this jurisdiction.

LOCAL FIRE AUTHORITY INFORMATION:
 School Superintendent or Facilities Director Signature when required above:
 AGENCY NAME (PRINT): Glendale Fire Department
 ADDRESS (PRINT): 632 E. Broadway #101
 CITY/STATE/ZIP (PRINT): Glendale, CA 91206
 PHONE NUMBER (PRINT): (818) 548-3203 DATE: 04/13/12
 APPROVAL ISSUED BY: Keith Zimmerman (Signature)
 RANK/TITLE (PRINT): Fire Environmental Safety Specialist
 SCHOOL REPRESENTATIVE SIGNATURE: _____
 COMMENTS (PRINT): Call (818) 548-4810 to schedule "Fire Department Access" inspection with Glendale Fire Department inspector. This plan shall be on-site to inspection.

Initials and a signature above signify that the Local Fire Authority has reviewed the listed items and was consulted regarding their placement and design. The current configuration shown on this fire plan, as of this date, meets with their current standards. Local Stamp Imprint/Signature indicates all items above have been reviewed.



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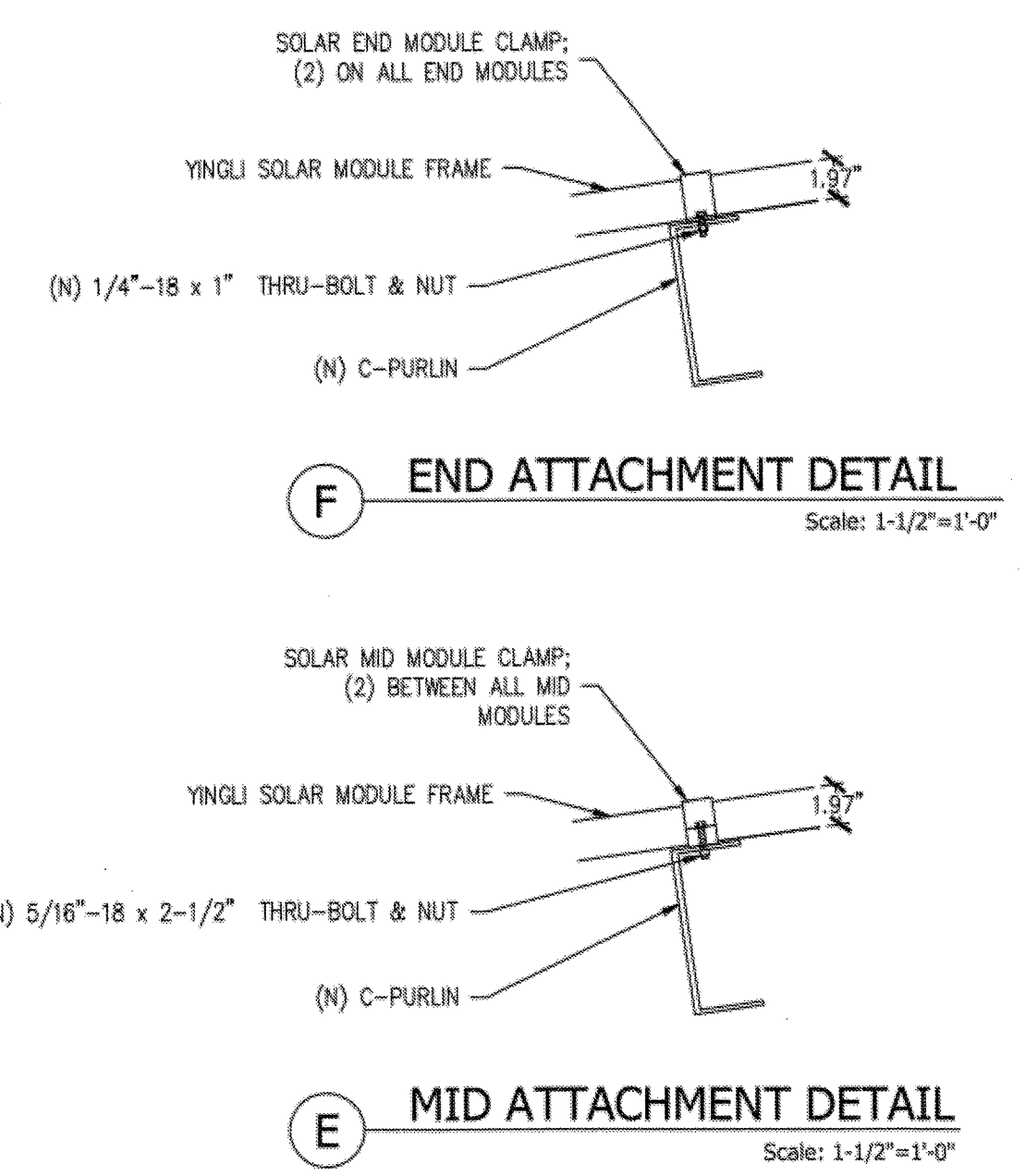
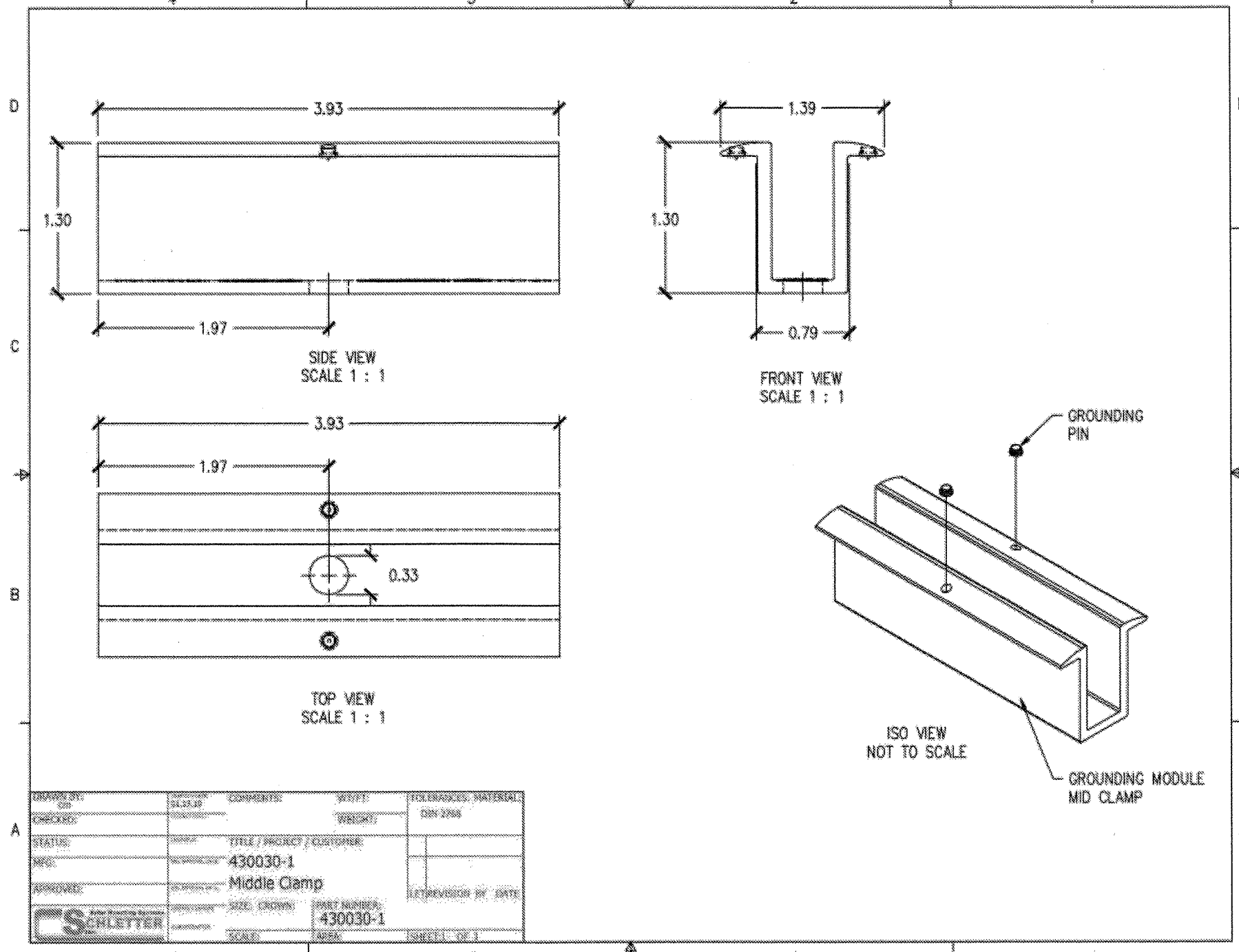
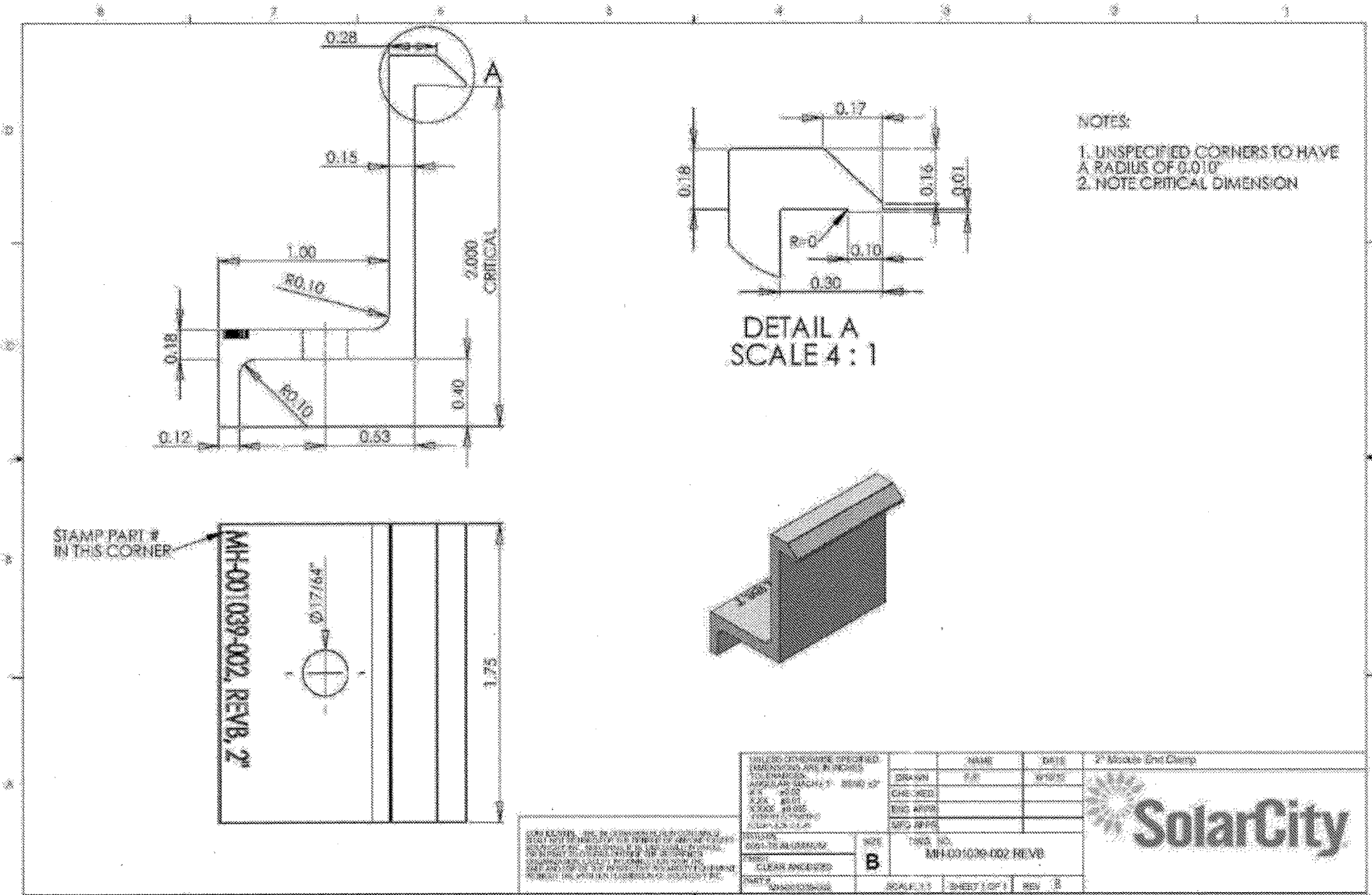
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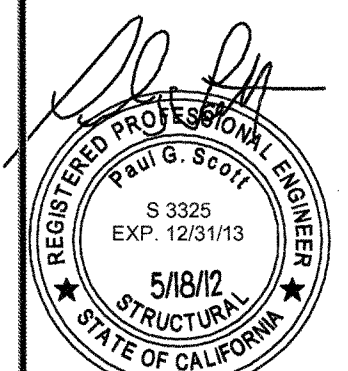
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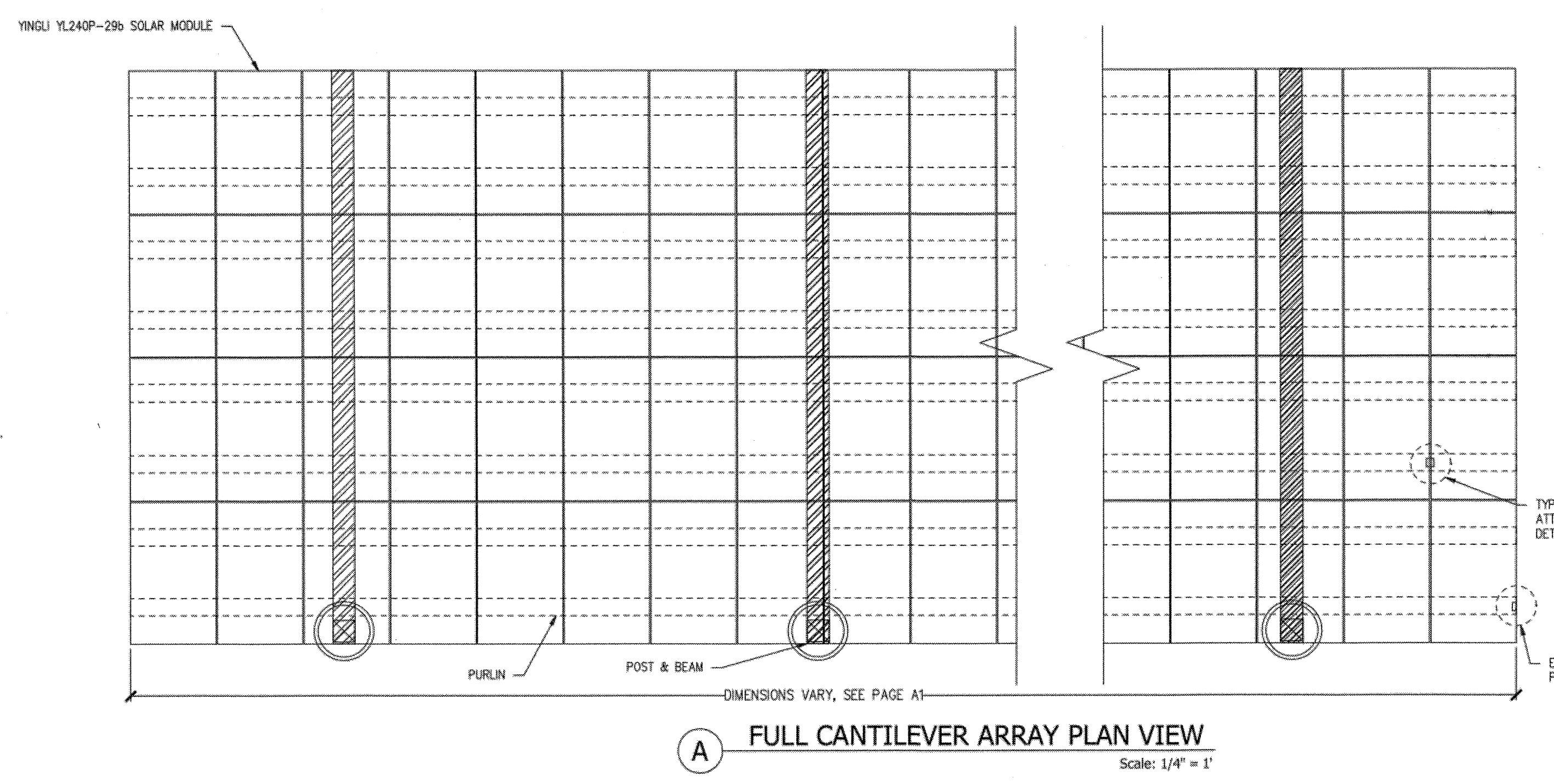
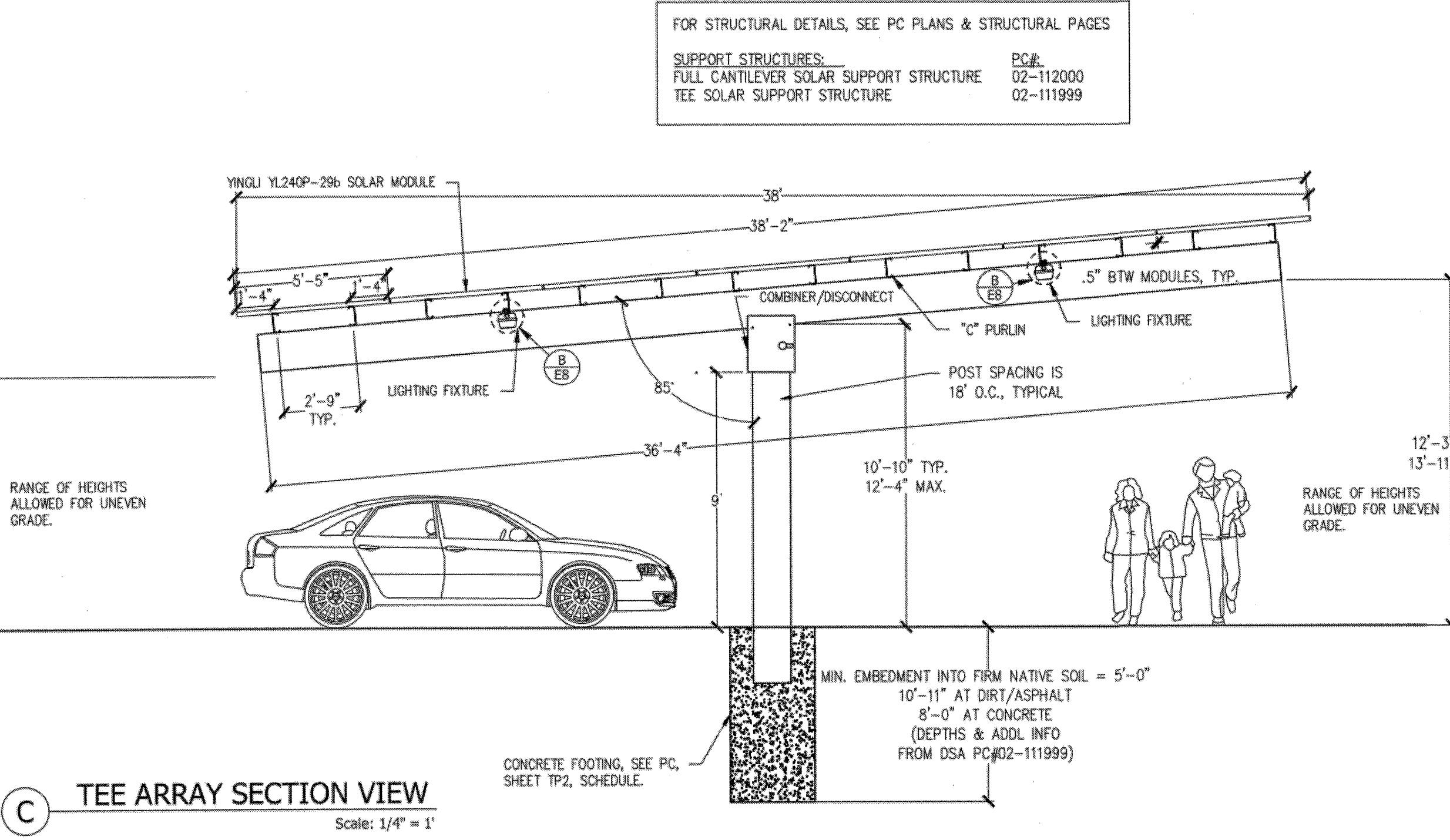
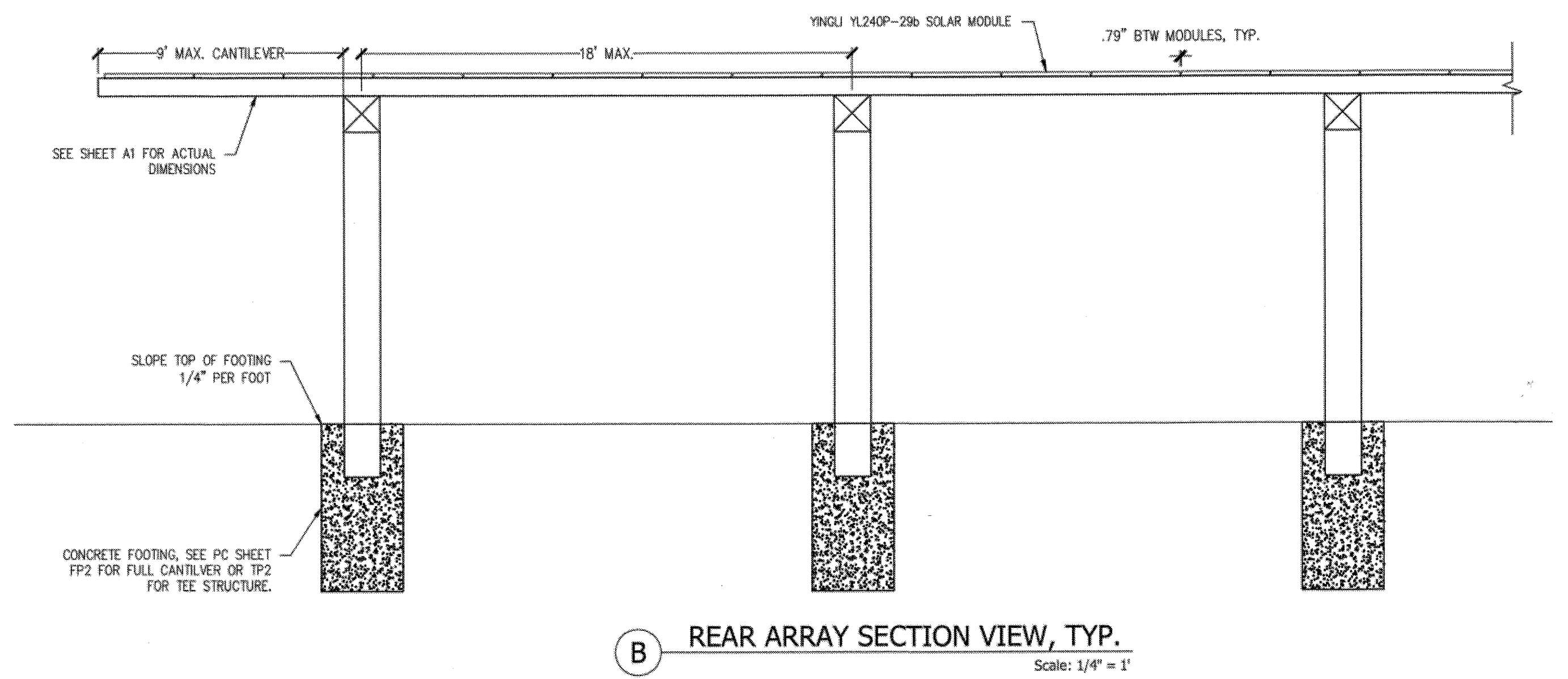
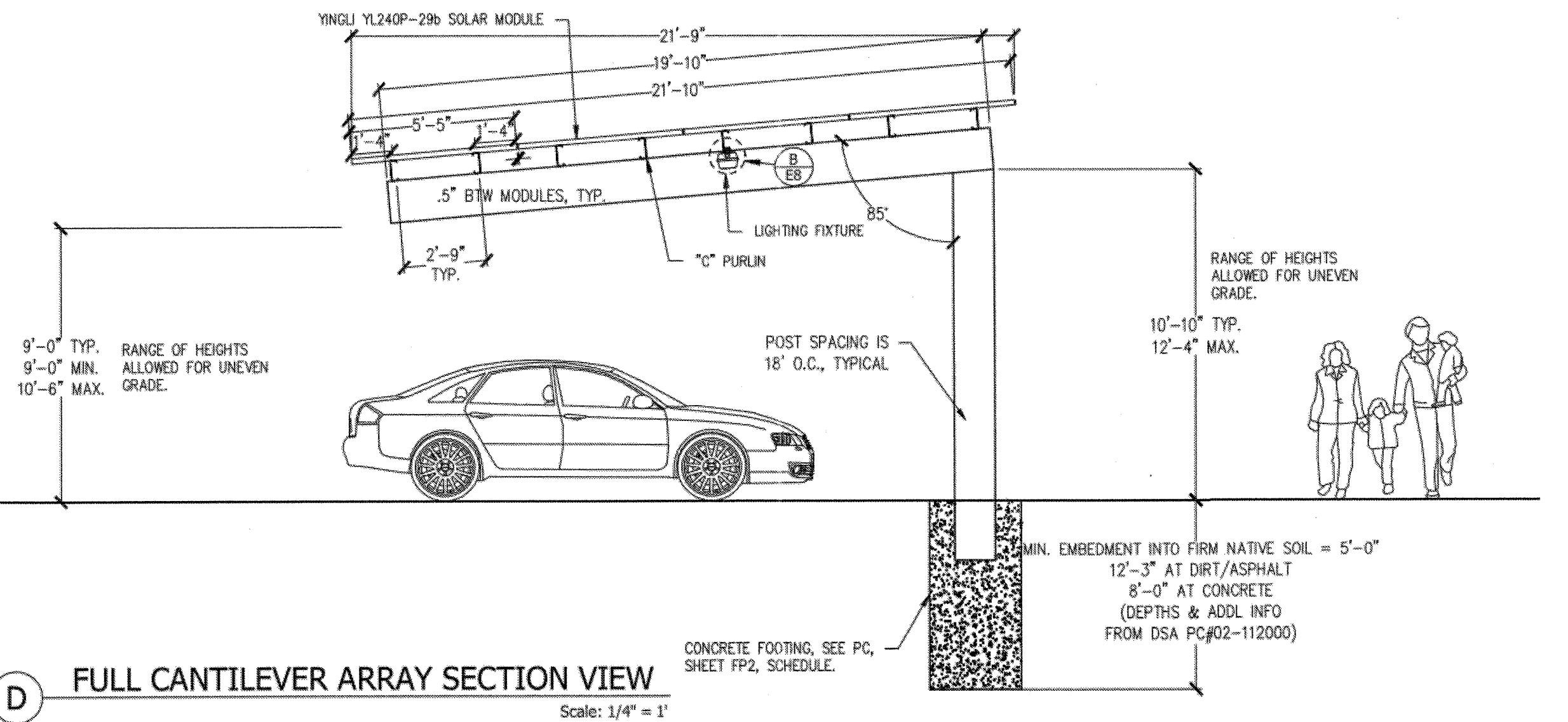
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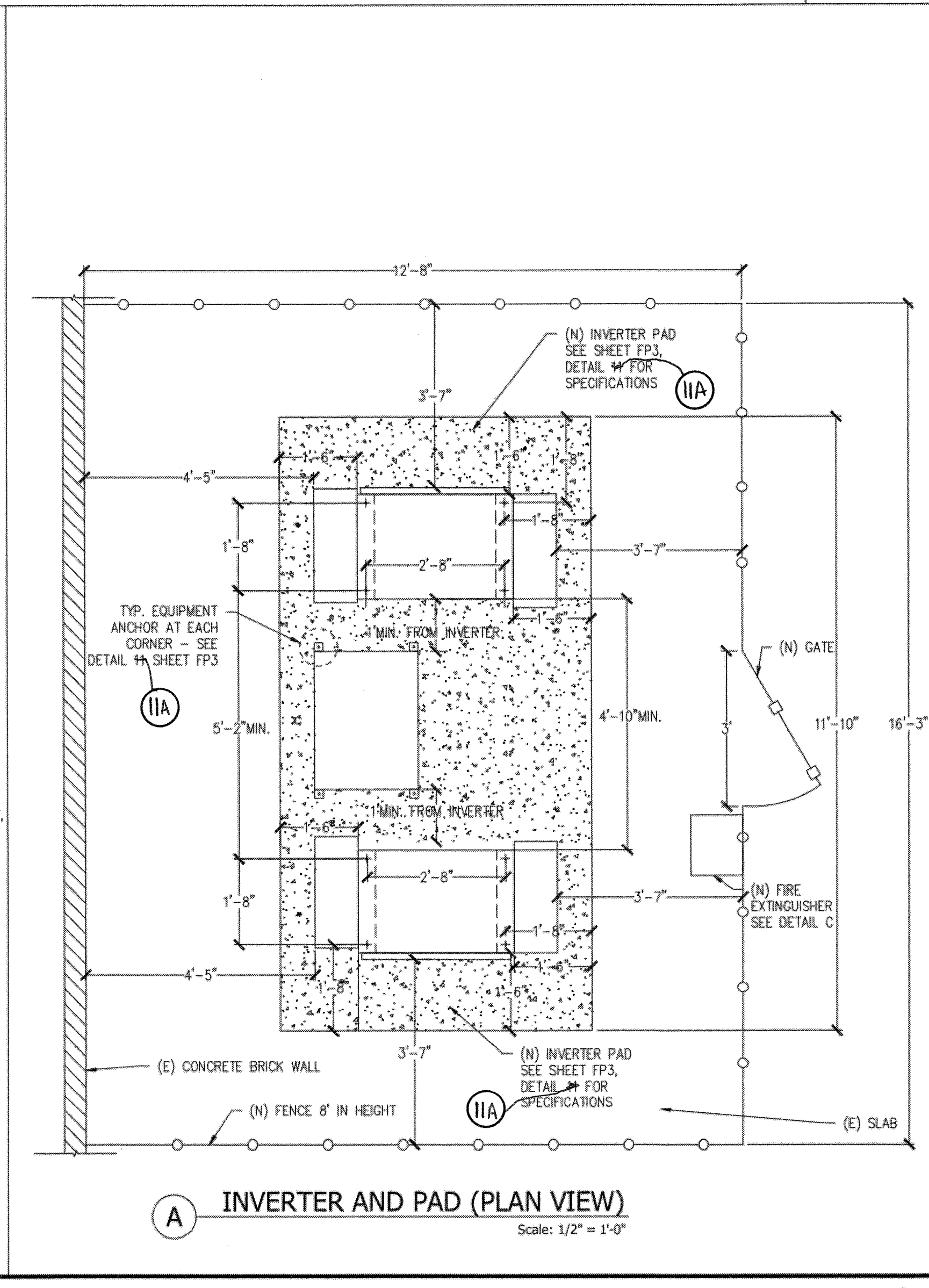
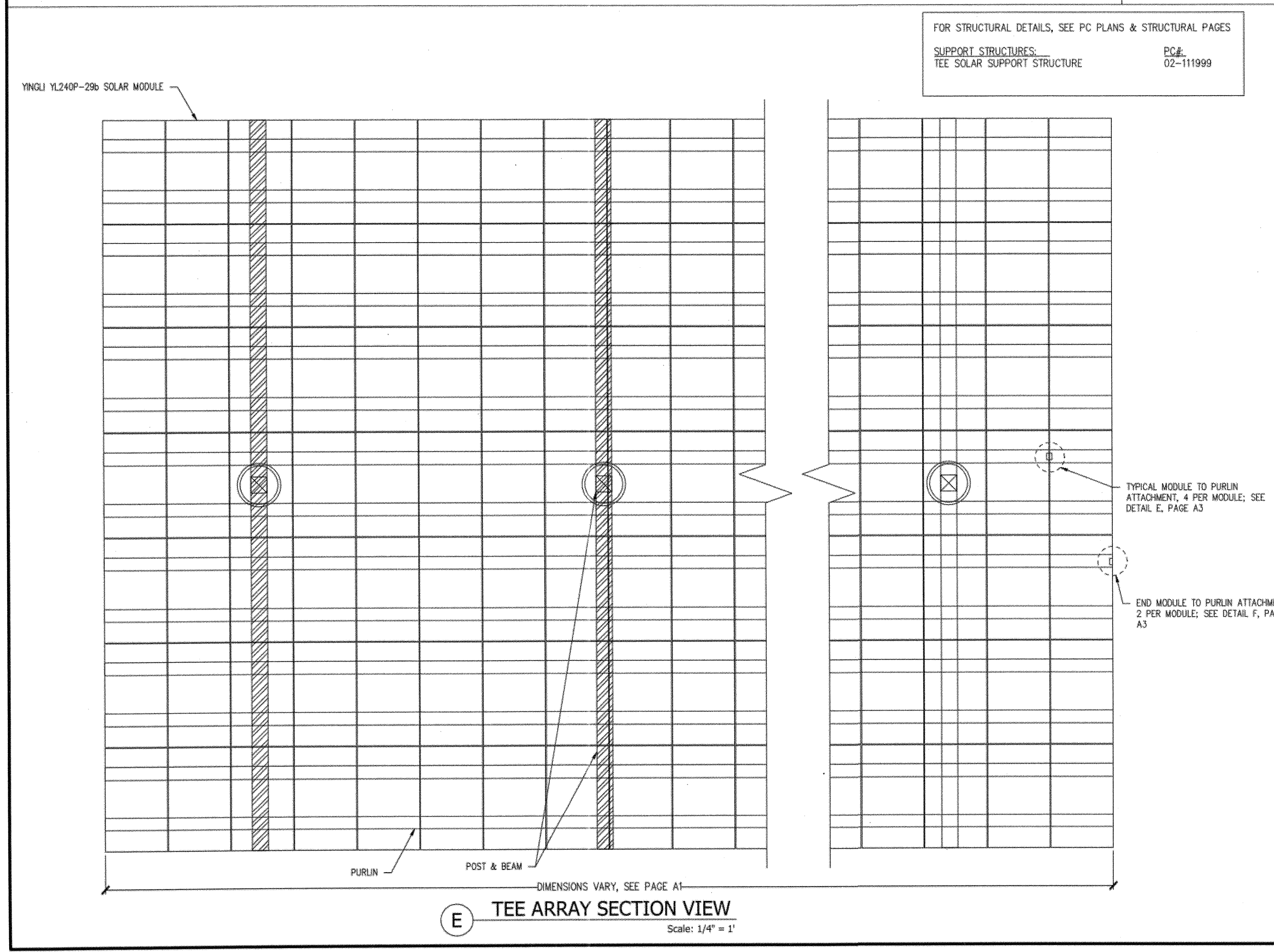
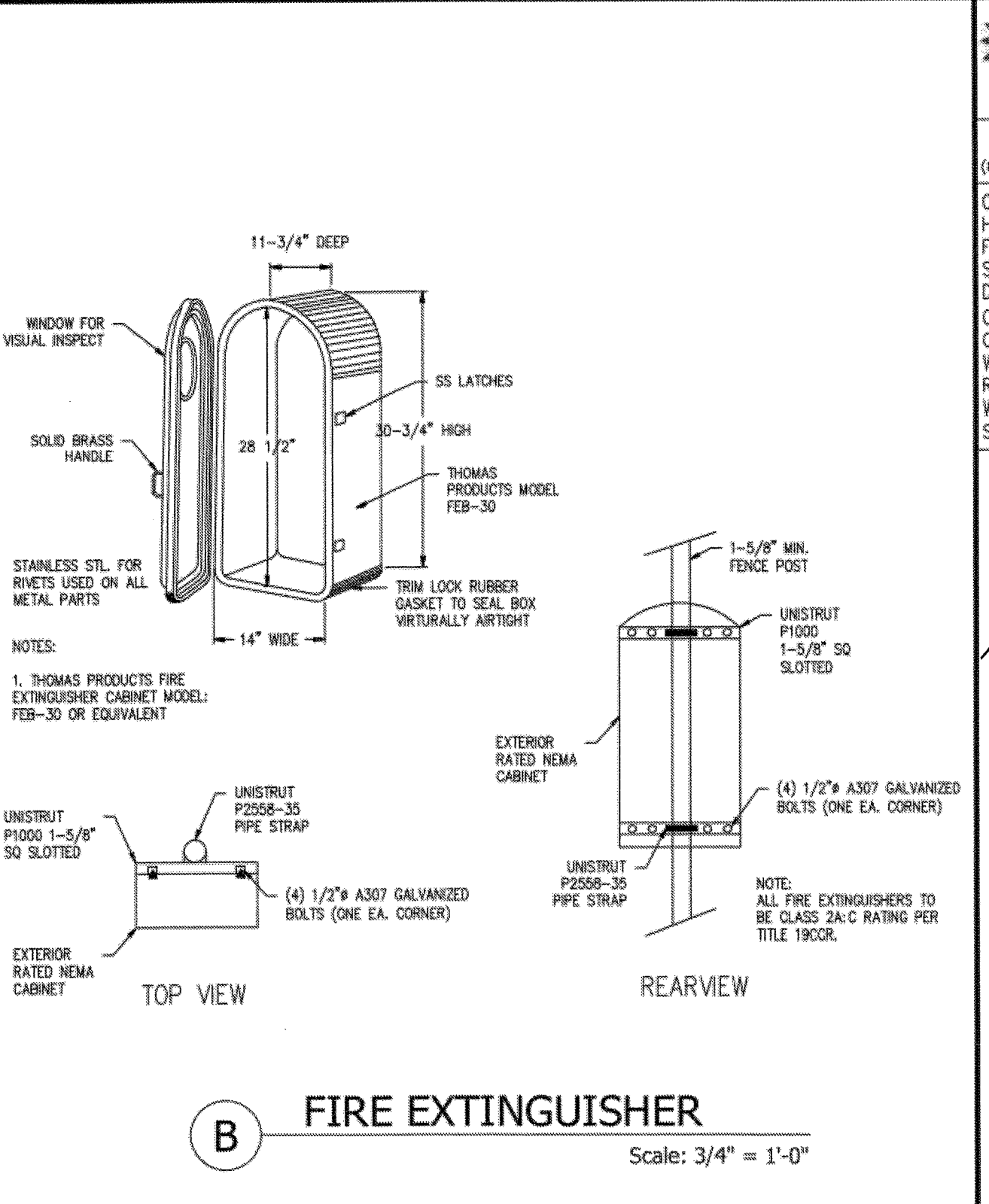
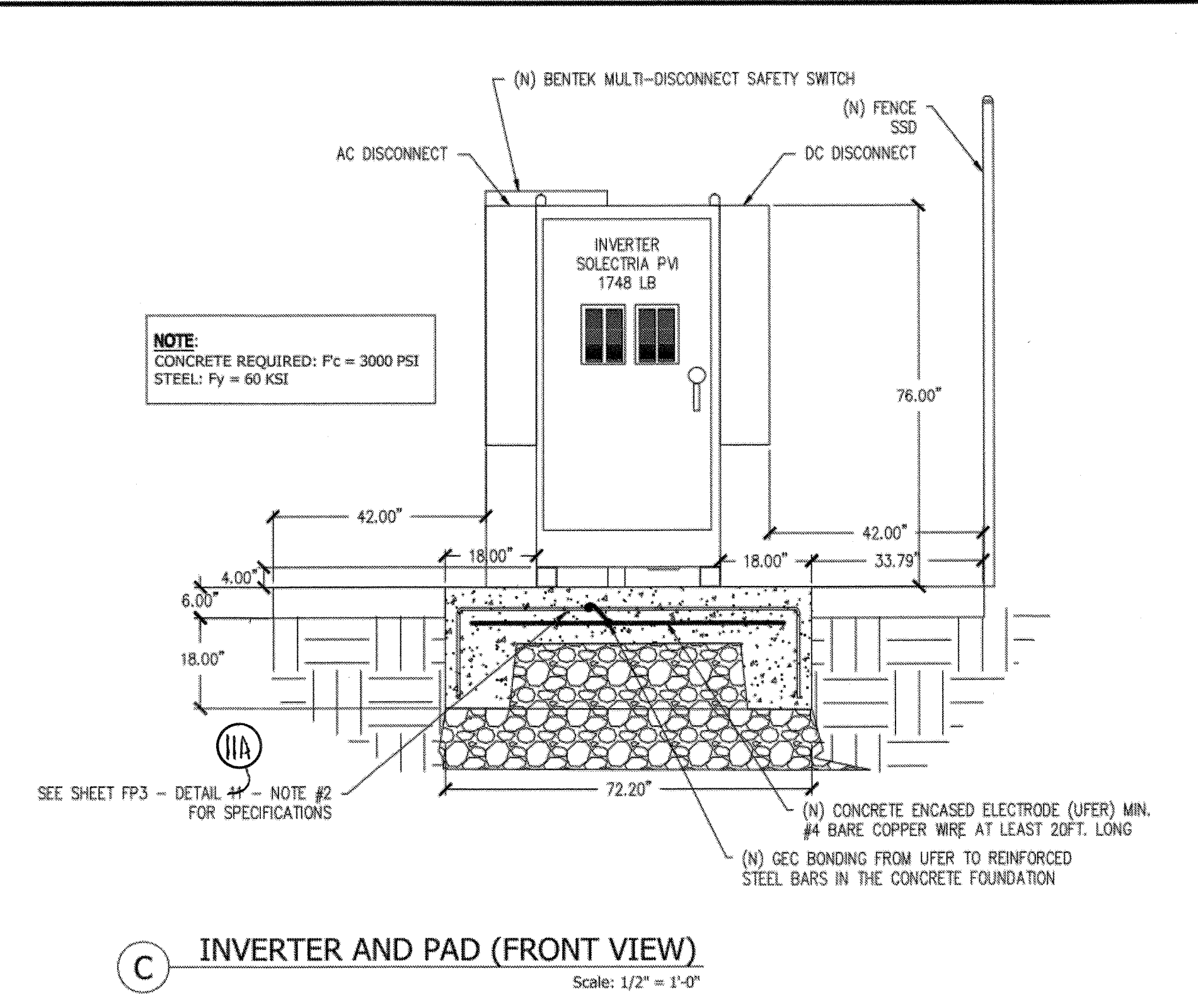
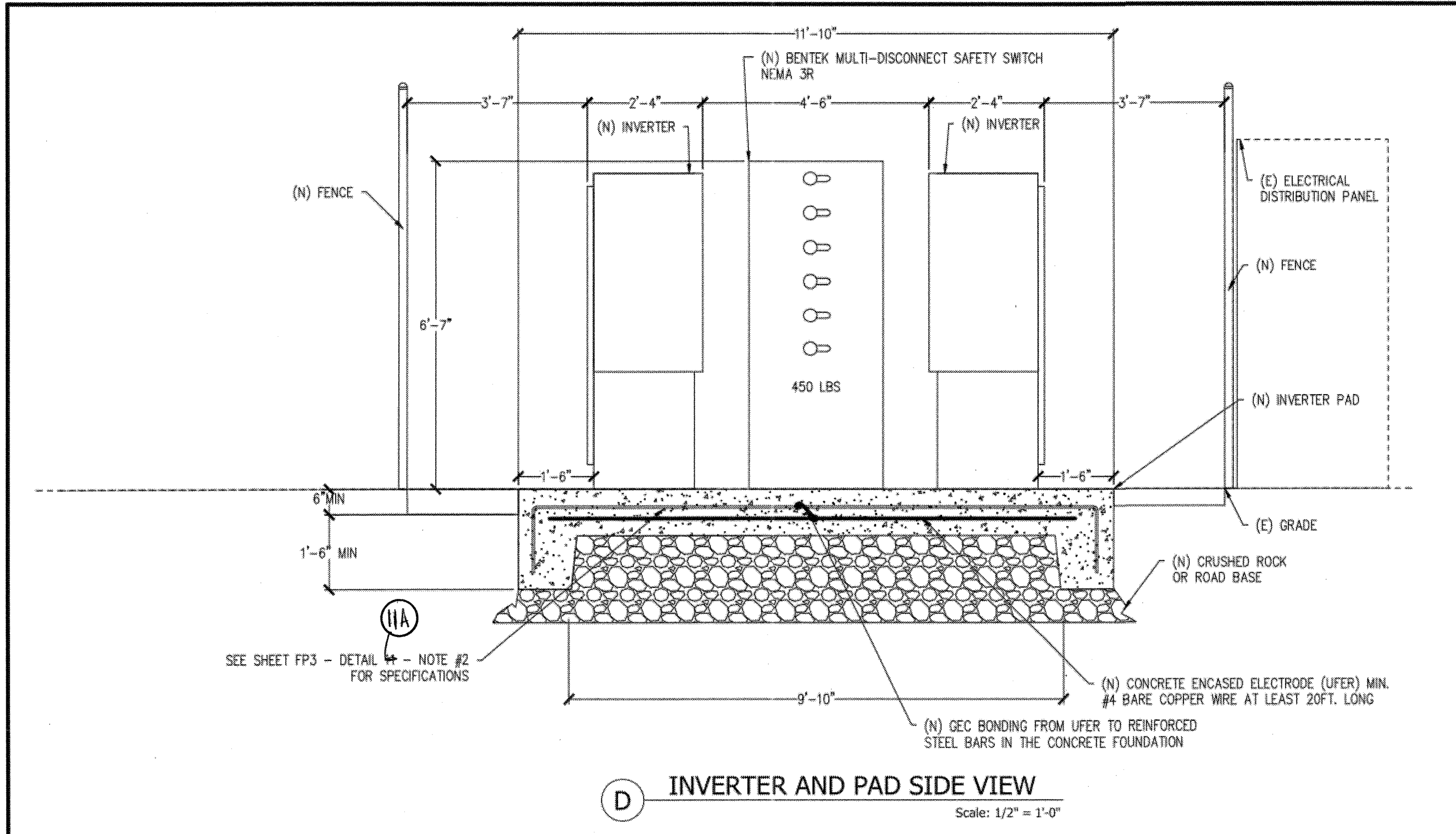
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APPROX 14571
ACR FLS 72 SS 60
DATE: MAY 22 2012

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OTHER AND REVIEW BY:
CARUSO TURLEY SCOTT, INC.
CONSULTING STRUCTURAL ENGINEERS
FOR CORRECTNESS OF STRUCTURAL ITEMS ONLY

ARCHITECT
PAUL G. SCOTT
No. C 15700
RENEWED 12/13
STATE OF CALIFORNIA

JOB DETAILS

Client: Glendale
PROJECT: (784) YINGLI # YL240P-29b
MOUNTING SYSTEM: STEEL SUPPORT STRUCTURES
PROJECT: (2) SOLECTRIA # PVI 82KW-208VAC
MARKET: DESIGN: MATT RHODE
DATE: 3/22/2012
THE NAME: PROJECT MANAGER: D NAVARRO
SECTION VIEWS
JOB NUMBER: JB-912070-00
PAGE: PV A3



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CONSULTING STRUCTURAL ENGINEERS
FOR CORRECTNESS OF STRUCTURAL ITEMS ONLY

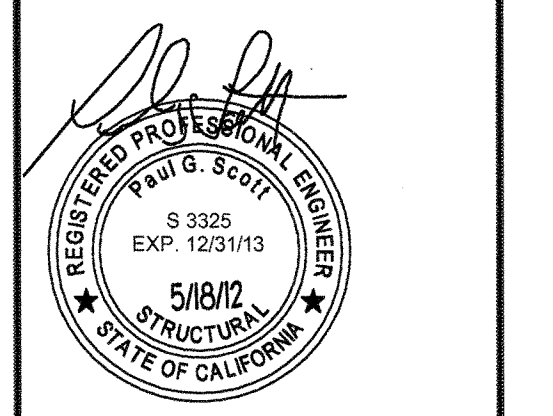
FOUNDATIONS FOR COLUMBUS ELEMENTARY SCHOOL:
SOIL REPORT BY EARTH SYSTEMS SOUTHERN CALIFORNIA; JOB NO. LA-01421-01; DATED APRIL 30, 2012
DRILLED PIER FOOTING DESIGNS: ALLOWABLE LATERAL BEARING PRESSURE = 267 PSF/FT FOR DRILLED PIER FOOTINGS.
SPREAD FOOTING DESIGNS: ALLOWABLE BEARING PRESSURE = 2500 PSF.

REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION PRIOR TO COMMENCEMENT OF EARTHWORK. SOILS ENGINEER SHALL INSPECT FOUNDATION EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.



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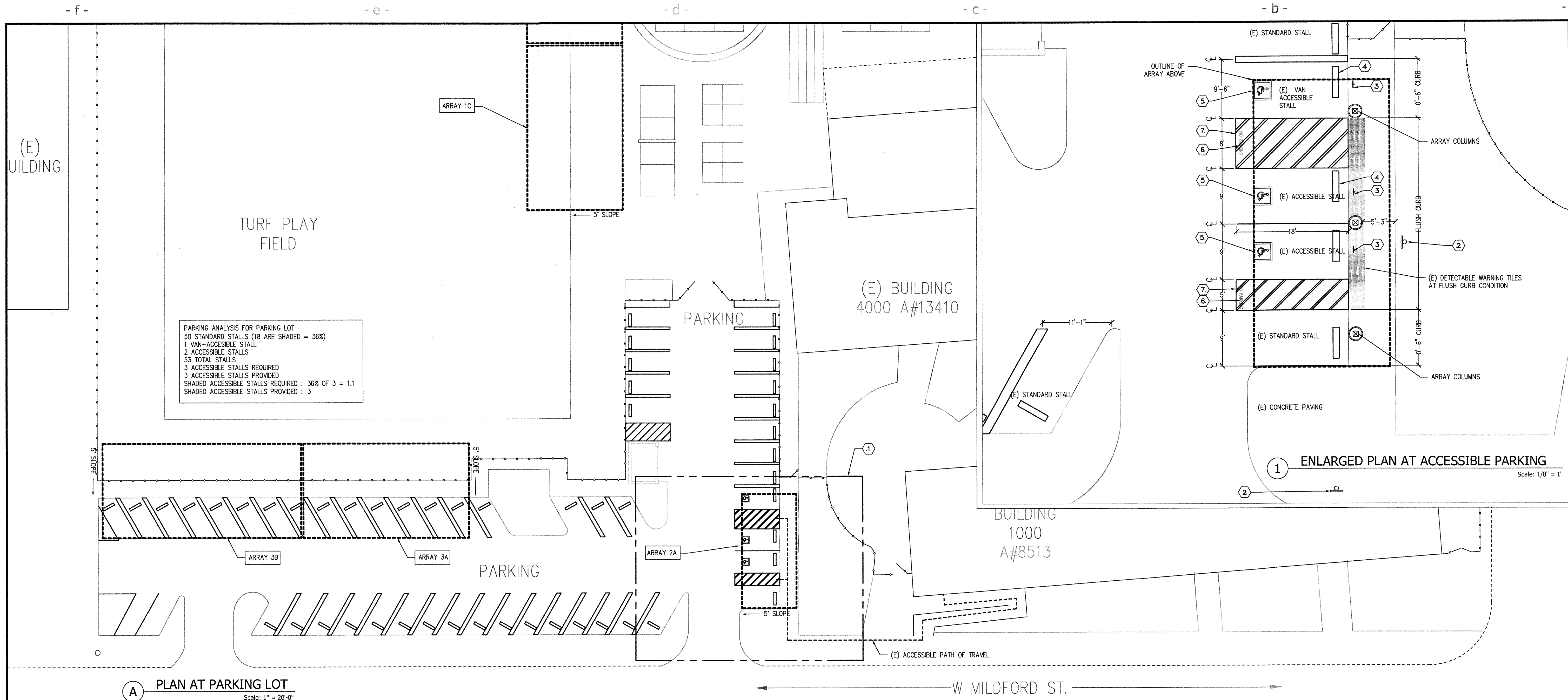


PROJECT: GLENDALE USD - COLUMBUS ELEMENTARY
188.16 KW PV SYSTEM
OWNER: GLENDALE USD - COLUMBUS ELEMENTARY
425 MILFORD ST
GLENDALE, CA 91203
8185070201

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APPROX 11 4 5 7 1
AC: [Signature] PLS: [Signature] SS: [Signature] ED
DATE: MAY 22 2012



JOB DETAILS	
NO:	Glendale
WORKS:	(784) YINGLI # YL240P-296
INSTALLATION:	STEEL SUPPORT STRUCTURES
OWNER:	(2) SOLECTRIA # PVI B2KW-208VAC
MARKET:	DESIGN MATT RHODE
GOVT:	
CHECKED BY:	LEO WU
DATE:	3/22/2012
PAYMENT TYPE:	CASH
FRSE NAME:	SECTION VIEWS
PROJECT NUMBER:	D NAVARRO
JOB NUMBER:	JB-912070-00
PAGE:	PV A4
REV:	



PARKING ANALYSIS FOR PARKING LOT
 50 STANDARD STALLS (18 ARE SHADED = 36%)
 1 VAN-ACCESSIBLE STALL
 2 ACCESSIBLE STALLS
 53 TOTAL STALLS
 3 ACCESSIBLE STALLS REQUIRED
 3 ACCESSIBLE STALLS PROVIDED
 SHADED ACCESSIBLE STALLS REQUIRED : 36% OF 3 = 1.1
 SHADED ACCESSIBLE STALLS PROVIDED : 3

A PLAN AT PARKING LOT
 Scale: 1" = 20'-0"

1 ENLARGED PLAN AT ACCESSIBLE PARKING
 Scale: 1/8" = 1'

KEYNOTES

- ① SEE ENLARGED DETAIL PLAN 1 FOR ARRAY COLUMNS AT (E)ACCESSIBLE PARKING.
- ② (E) "TOW AWAY" SIGN
- ③ EXISTING POLE-MTD. STALL SIGNAGE AT EACH ACCESSIBLE STALL PER DETAIL 11/A6.
- ④ EXISTING WHEEL STOP PER DETAIL 8/A6, TYPICAL AT EACH STALL.
- ⑤ EXISTING PAVEMENT SYMBOL PER SEC 1129B.4 TYPICAL AT EACH ACCESSIBLE STALL.
- ⑥ EXISTING 12-INCH-HIGH WHITE PAINTED LETTERS, TYPICAL AT EACH ACCESS AISLE.
- ⑦ EXISTING PAINTED ACCESS AISLE: 4-INCH-WIDE PAINTED WHITE STRIPES @ 36" o.c. WITH A 4-INCH-WIDE PAINTED BLUE BORDER, TYPICAL.

ACCESSIBLE PATH OF TRAVEL

PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:12 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. MAXIMUM CROSS-SLOPE IS 2% AND MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL IS 5%. P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (1133B.8.2) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (1133B.8.6). ARCHITECT TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 1133B.

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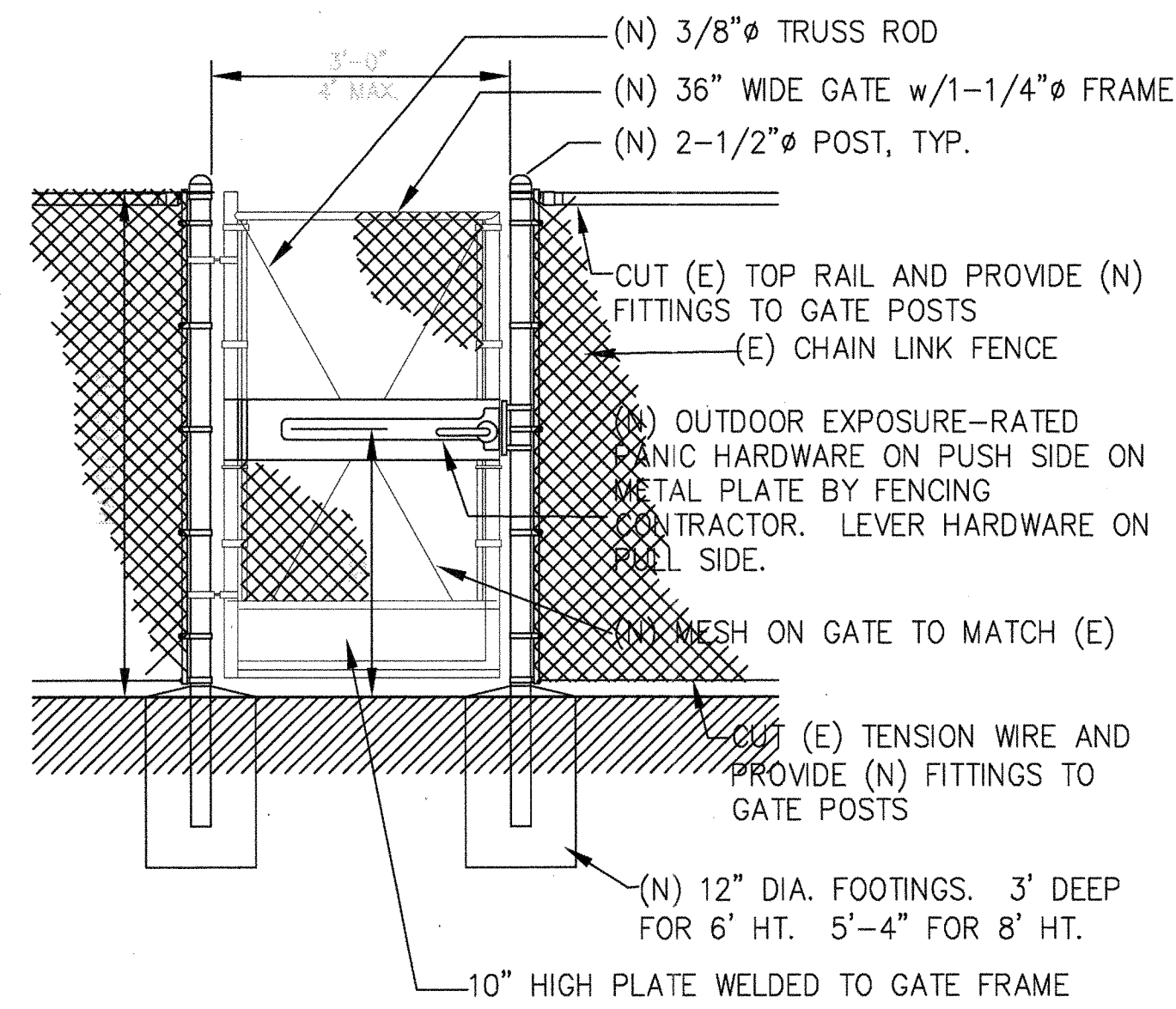
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PROJECT: GLENDALE USD - COLUMBUS ELEMENTARY
 SYSTEM: 188.16 KW PV SYSTEM
 OWNER: GLENDALE USD - COLUMBUS ELEMENTARY
 ADDRESS: 425 MILFORD ST
 GLENDALE, CA 91203
 PROJECT NUMBER: 8185070201

IDENTIFICATION STAMP
 CIV. OF THE STATE ARCHITECT
 APPROVED 114571
 DATE MAY 22 2012

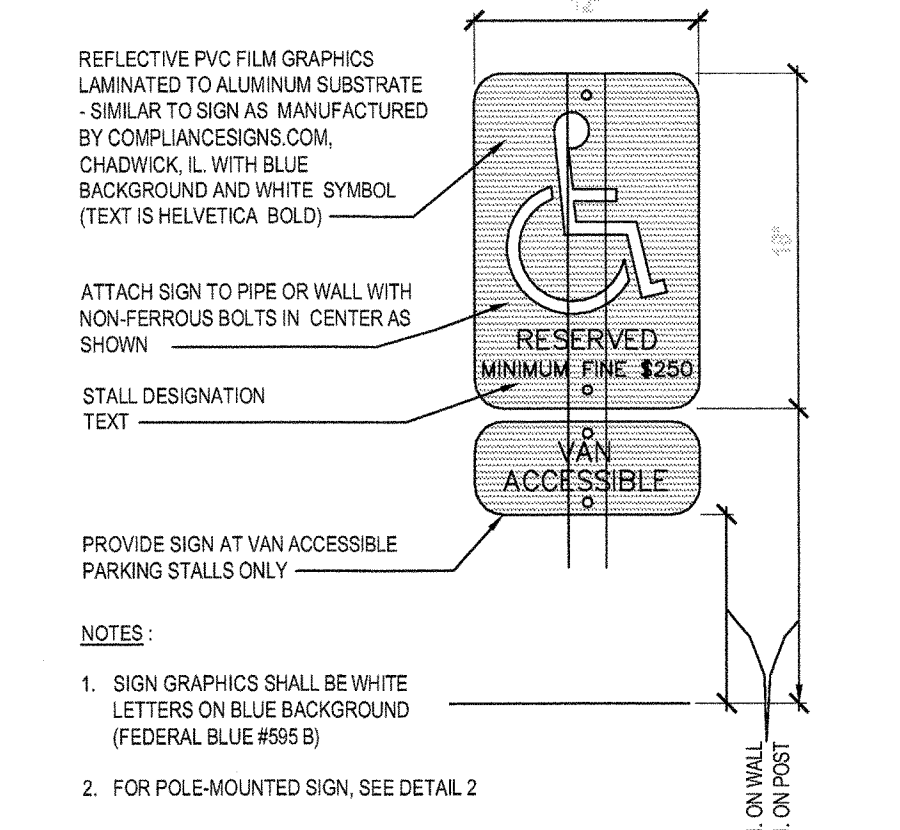


JOB DETAILS	
PROJECT:	Glenndale
WORKSHEET:	(784) YINGLI # YL240P-29b
MOUNTING SYSTEM:	STEEL SUPPORT STRUCTURES
PROVIDER:	(2) SOLECTRIA # PV 82KW-20BVAC
MARKET:	GOVT
DESIGNED BY:	LEO WU
DATE:	3/22/2012
FILE NAME:	ACCESSIBLE PARKING
PAYMENT TYPE:	CASH
PROJECT MANAGER:	D NAVARRO
JOB NUMBER:	JB-912070-00
PAGE:	PV A5



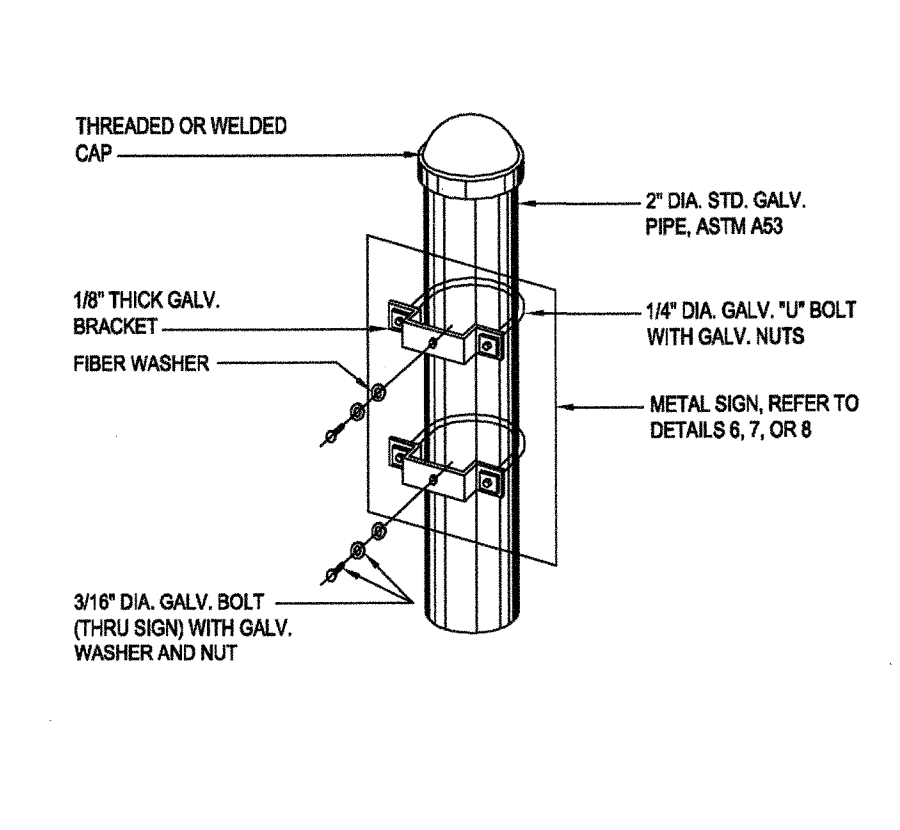
13 TYPICAL GATE DETAIL

G821 REF. SCALE: N.T.S.



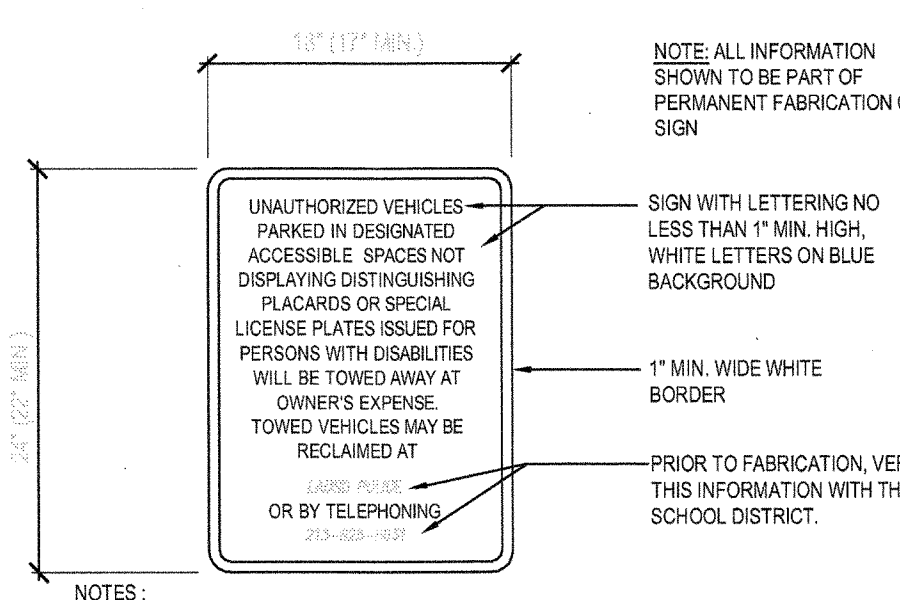
11 ACCESSIBLE STALL SIGN

G821 REF. SCALE: N.T.S.



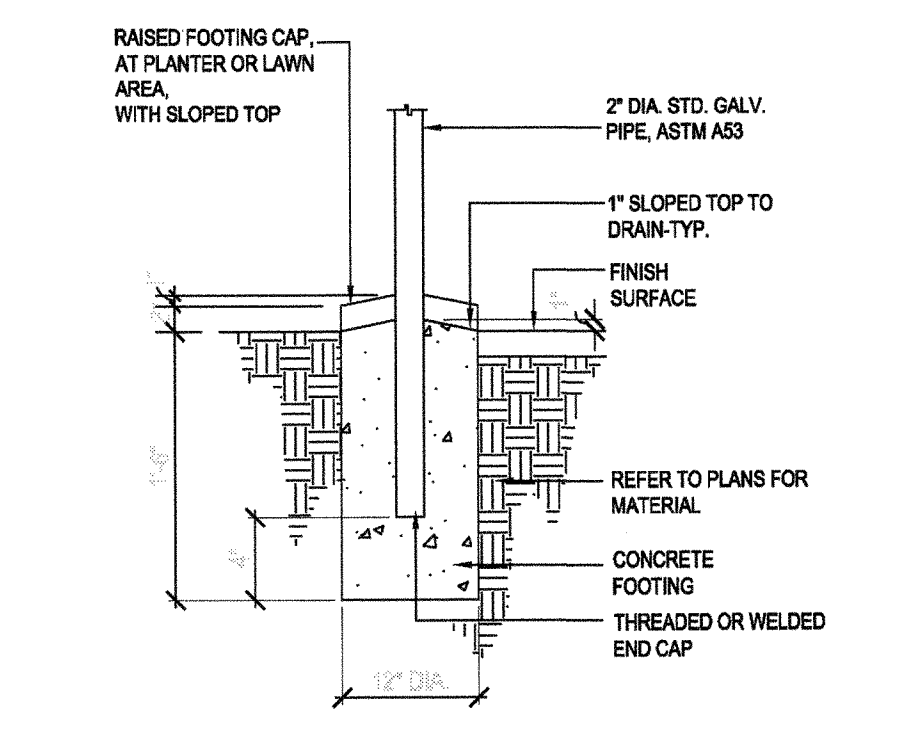
7 SIGN FACE ANCHORING

G821 REF. SCALE: N.T.S.



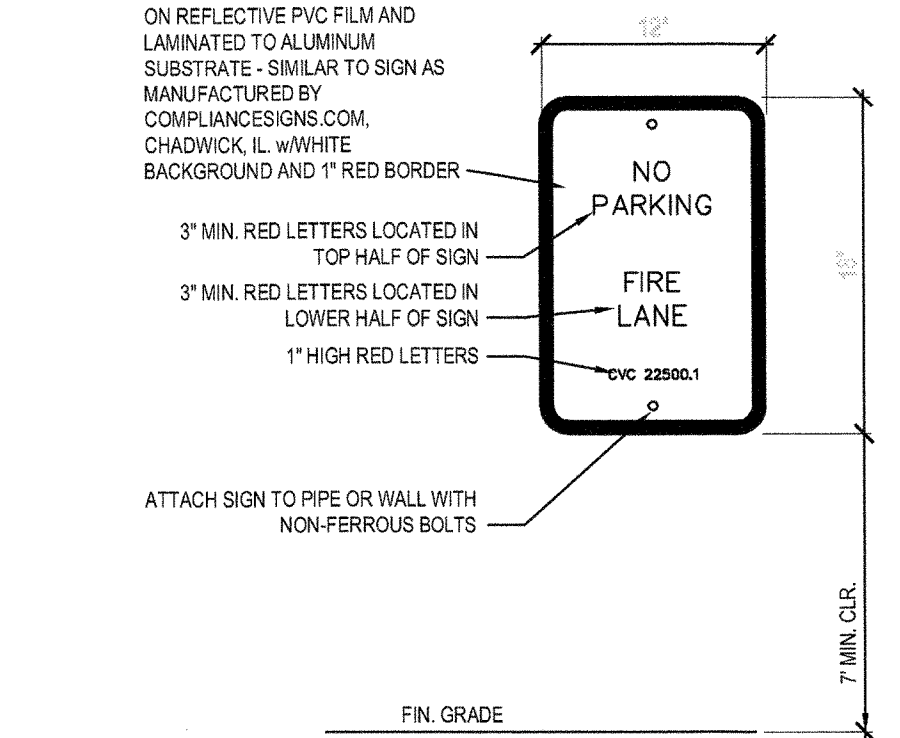
10 "TOW AWAY" SIGN

G821 REF. SCALE: N.T.S.



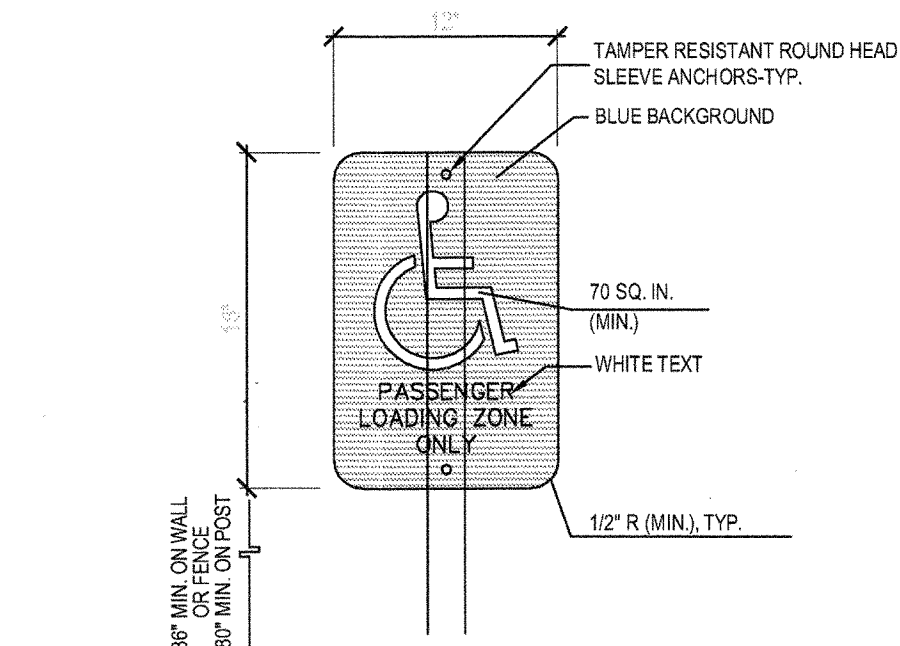
6 SIGN POLE BASE

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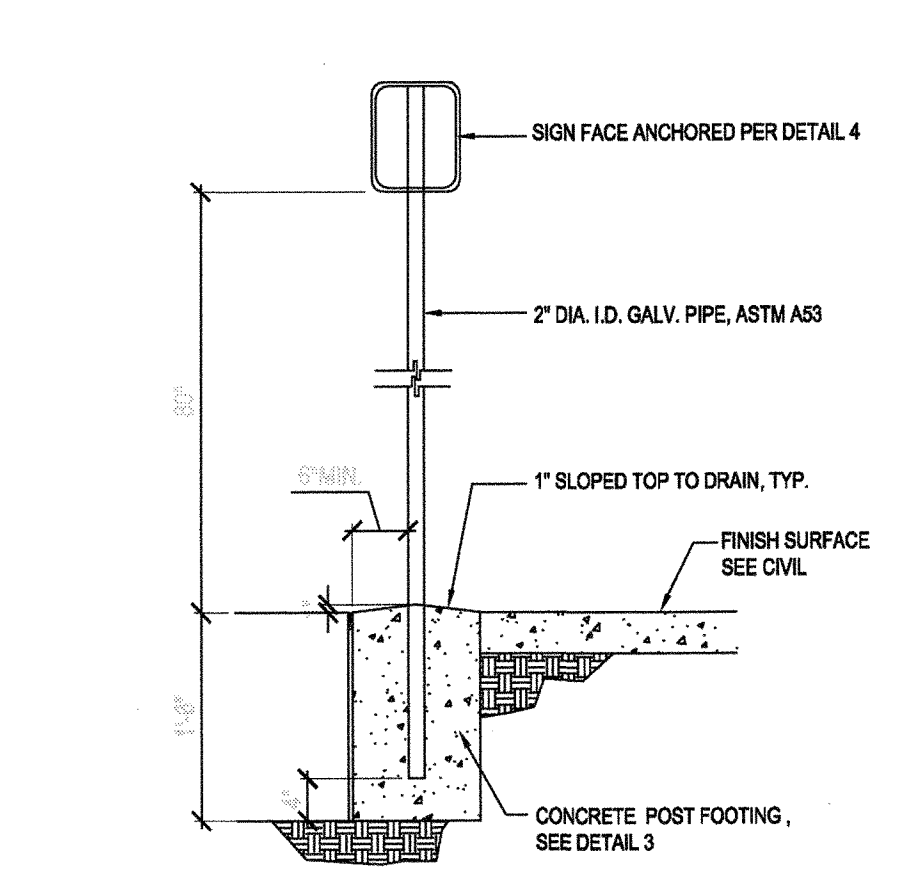
3 NO PARKING SIGN

G821 REF. SCALE: N.T.S.



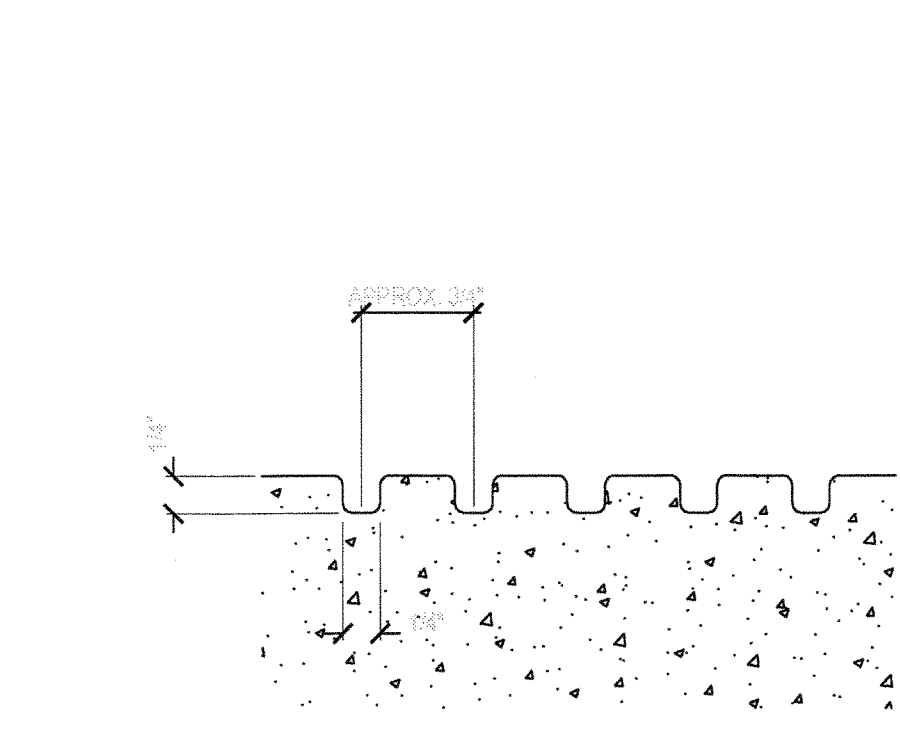
9 "DROP-OFF" SIGN

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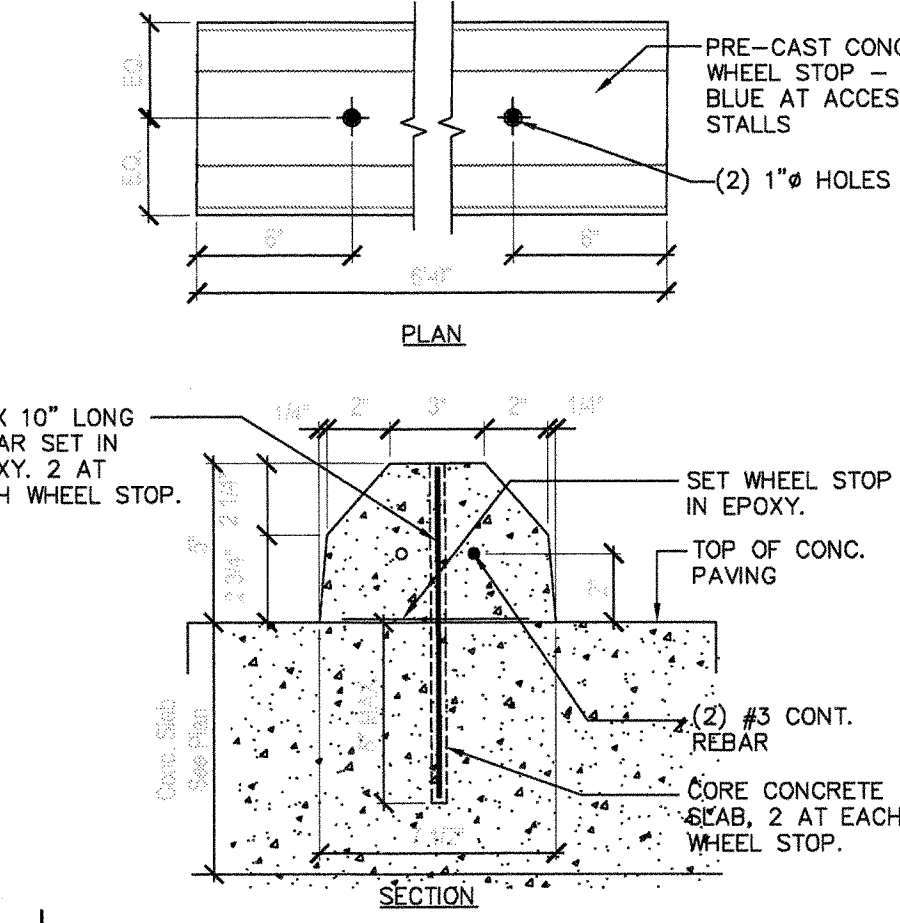
5 TYPICAL SIGN POLE - MOUNT

G821 REF. SCALE: N.T.S.



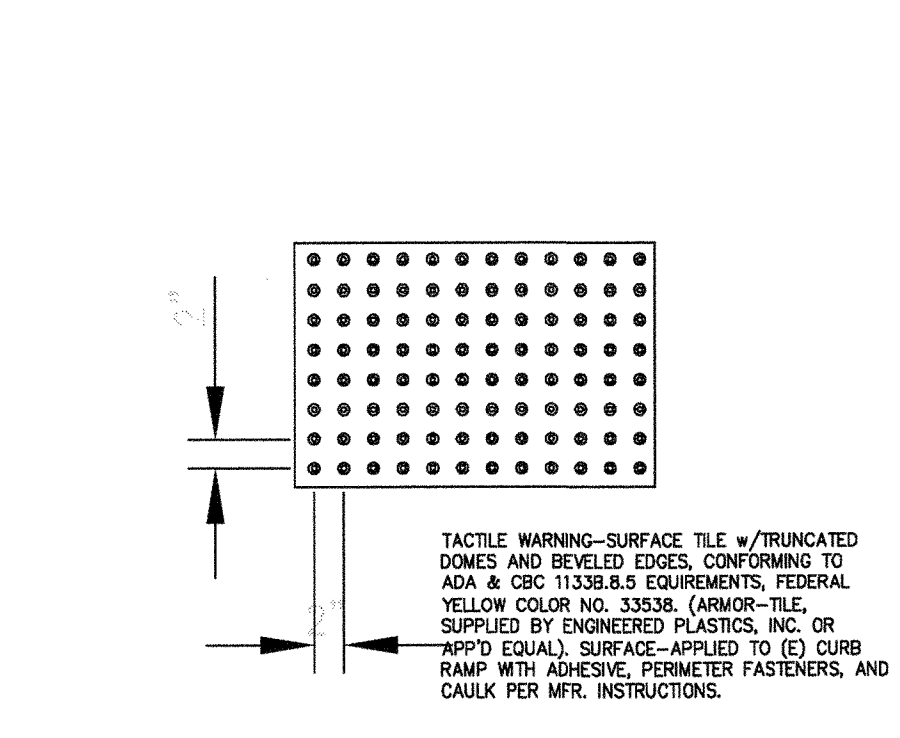
2 GROOVING DETAIL

G821 REF. SCALE: N.T.S.



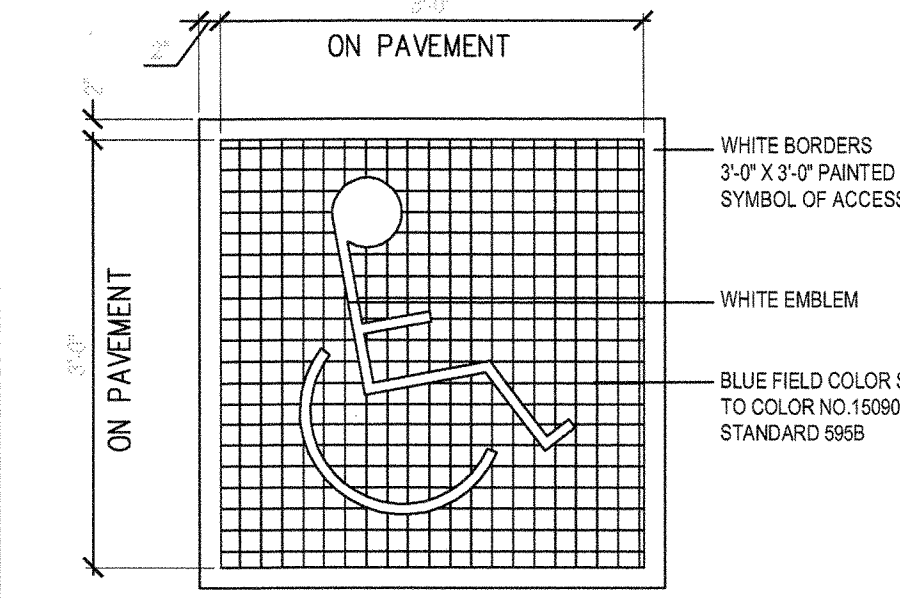
8 PRE-CAST CONCRETE WHEEL STOP

G821 REF. SCALE: N.T.S.



4 TYPICAL TRUNCATED DOMES

G821 REF. SCALE: N.T.S.



1 ISA SYMBOL AT ACCESSIBLE PARKING STALL

G821 REF. SCALE: N.T.S.

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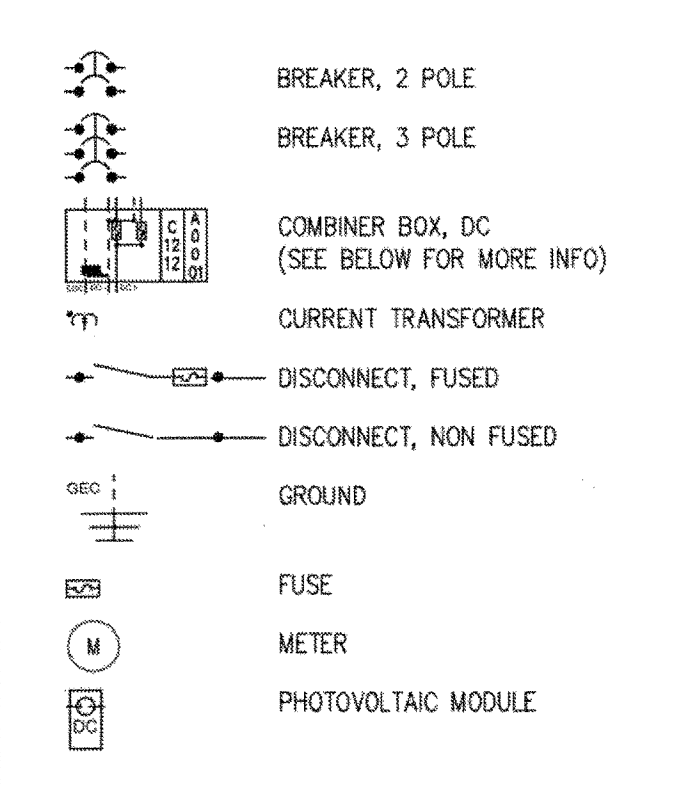
GLENDALE USD - COLUMBUS ELEMENTARY
 188.16 KW PV SYSTEM
 GLENDALE USD - COLUMBUS ELEMENTARY
 425 MILFORD ST
 GLENDALE, CA 91203
 8185070201

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP03 114571
 ARCH. FLS. FE. SS. ED.
 DATE: MAY 22, 2012



JOB DETAILS	
THE Client	Glendale
MOBILES	(784) YINGLI # YL240P-29b
WORKING SYSTEM	STEEL SUPPORT STRUCTURES
NUMBER:	(2) SOLECTRIA # PM 82KW-208VAC
MARK:	LEO WU; DESIGN: MATT RYODE
GOV'T CHECKED BY:	LEO WU
DATE:	3/22/2012
PAGE NAME:	ACCESS DETAILS
PROJECT MANAGER:	D NAVARRO
JOB NUMBER:	JB-912070-00
PAGE:	PV A6
REV:	

LEGEND



MODULE CHARACTERISTICS

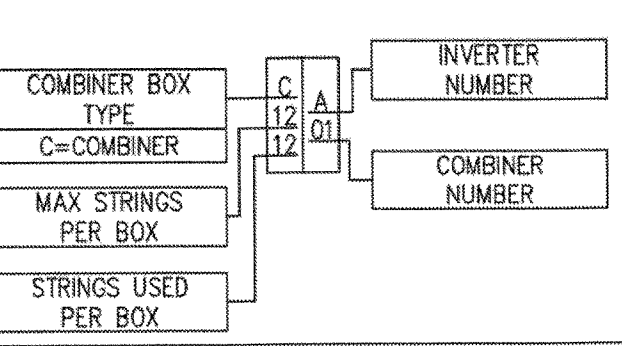
YNQL YL-240P-29b
 Voc = 37.5 V
 Vmp = 29.5 V
 Isc = 8.65 A
 Imp = 8.14 A
 Tkvoc = -14 V/C
 Tlow = 1 °C (ASHRAE DATA)

COLUMBUS ELEMENTARY SCHOOL - GLENDALE SCHOOL DISTRICT
 188.16 KW

SYSTEM COMPONENTS:
 • (784) YNQL YL-240P-29b PHOTOVOLTAIC MODULES CONFIGURED INTO (56) SERIES STRINGS OF (14) MODULES PER STRING
 • (2) SOLECTRIA PV-82 (208V) GRID TIED INVERTER

MAX SYSTEM VDC CALCULATIONS
 LOWEST EXPECTED AMBIENT TEMPERATURE FOR LA CRESCENTA, CA = 1°C BASED ON ASHRAE DATA
 MAX VOLTAGE = # OF MODULES/STRING X (MODULE Voc - (Tact-Trecord_low) X Tkvoc)
 MAX VDC = 37.5 VDC - (25°C - 1°C) * -0.14
 = 37.5 - -3.35 = 40.85 VDC
 MAX SYSTEM VDC = 40.85 VDC * 14 MODULES IN SERIES = 572.04 VDC

COMBINER BOX NUMBERING SYSTEM

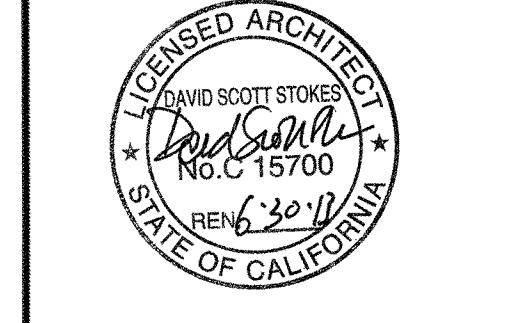


SHEET NOTES

- INTERCONNECTION NOTES**
- LOAD SIDE CONNECTION SHALL BE MADE VIA A DEDICATED CIRCUIT BREAKER IN CONFORMANCE WITH ARTICLE 690.64(B)
 - PROVIDE A PLACARD ON THE AC DISCONNECT SWITCH WITH THE FOLLOWING INFORMATION IN 1/4" HIGH LETTERING PER NEC 690-54 (SEE LABEL #2, PVI):
CAUTION - POSSIBLE BACKFEED FROM PHOTOVOLTAIC POWER SYSTEM:
 Vnom = 208 VAC
 Inom = 458 AAC
 - PROVIDE A PLACARD ON THE DC DISCONNECT SWITCHES WITH THE FOLLOWING INFORMATION IN 1/4" HIGH LETTERING PER NEC 690-53 (SEE LABEL #3, L-PVI):
 12-STRING ARRAY:
 PHOTOVOLTAIC POWER SOURCE DISCONNECT
 OPERATING CURRENT: 97.68 ADC
 OPERATING VOLTAGE: 413 VDC
 MAXIMUM SYSTEM VOLTAGE: 572 VDC
 SHORT-CIRCUIT CURRENT: 103.8 ADC
 10-STRING ARRAY:
 PHOTOVOLTAIC POWER SOURCE DISCONNECT
 OPERATING CURRENT: 81.4 ADC
 OPERATING VOLTAGE: 413 VDC
 MAXIMUM SYSTEM VOLTAGE: 572 VDC
 SHORT-CIRCUIT CURRENT: 86.5 ADC
 4-STRING ARRAY:
 PHOTOVOLTAIC POWER SOURCE DISCONNECT
 OPERATING CURRENT: 32.56 ADC
 OPERATING VOLTAGE: 413 VDC
 MAXIMUM SYSTEM VOLTAGE: 572 VDC
 SHORT-CIRCUIT CURRENT: 34.5 ADC
 - PROVIDE A SIGN ON DC DISCONNECTS PER ART 690.17 THAT SHALL READ:
WARNING: ELECTRIC SHOCK HAZARD. DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

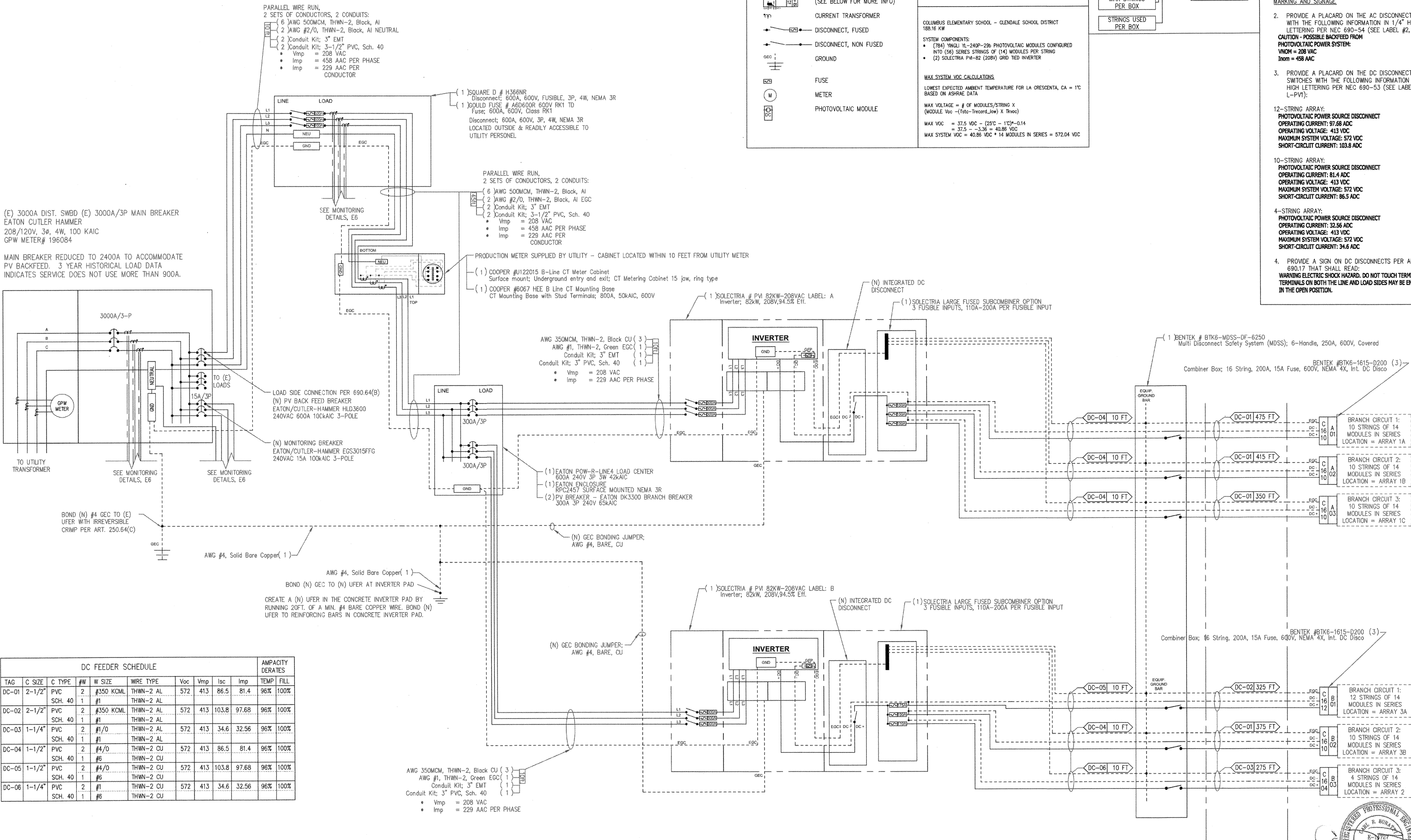
GLENDALE USD - COLUMBUS ELEMENTARY
 188.16 KW PV SYSTEM
 GLENDALE USD - COLUMBUS ELEMENTARY
 425 MILFORD ST
 GLENDALE, CA 91203
 8185070201

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 APP03 114571
 AC FLS Jc SS ED
 DATE MAY 27 2012



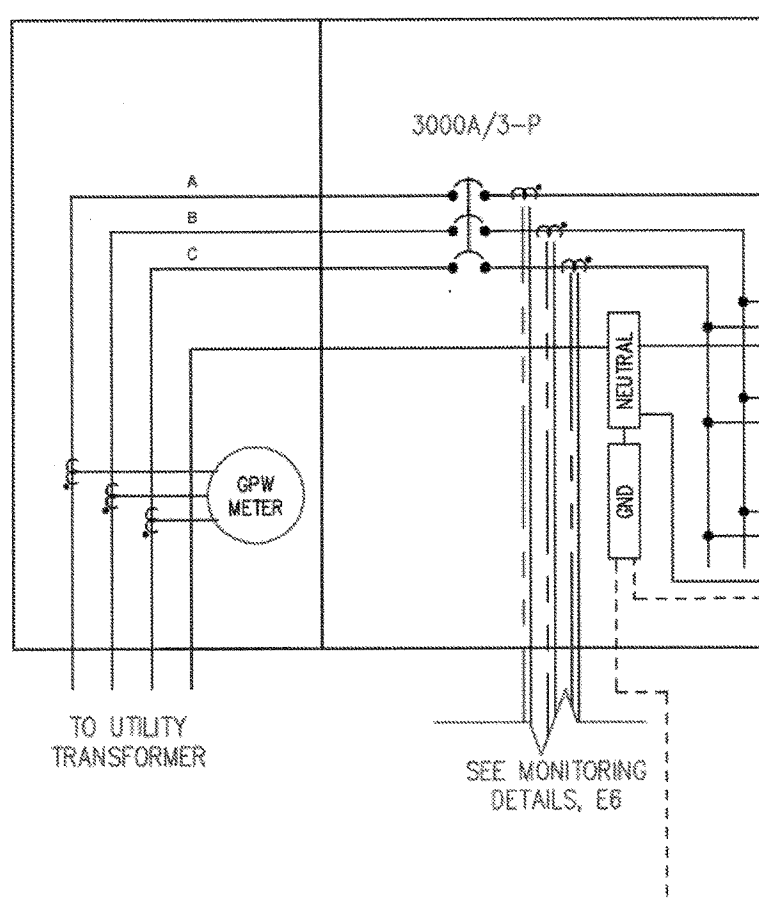
JOB DETAILS

CLIENT	GlenDale
MODULES	(784) YNQL # YL240P-29b
MOUNTING SYSTEM	STEEL SUPPORT STRUCTURES
INVERTER	(2) SOLECTRIA # PVI 82KW-208VAC
MARKER	DESIGN: MATT RHODE
GOVT CHECKED BY	LEO WU
DATE	3/22/2012
PAYMENT TYPE	CASH
FRSE NAME	FRSE: DANIEL D NAVARRO
LINE DRAWING	
JOB NUMBER	JB-912070-00
PAGE	PV 3



(E) 3000A DIST. SWBD (E) 3000A/3P MAIN BREAKER
 EATON CUTLER HAMMER
 208/120V, 3ø, 4W, 100 KAIC
 GPW METER # 196084

MAIN BREAKER REDUCED TO 2400A TO ACCOMMODATE
 PV BACKFEED. 3 YEAR HISTORICAL LOAD DATA
 INDICATES SERVICE DOES NOT USE MORE THAN 900A.



DC FEEDER SCHEDULE

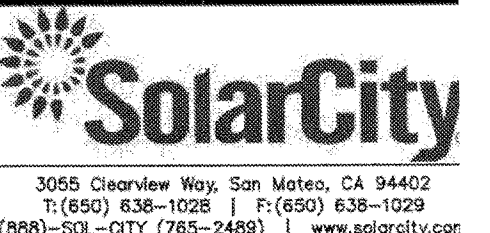
TAG	C SIZE	C TYPE	#W	W SIZE	WIRE TYPE	Voc	Vmp	Isc	Imp	TEMP	FILL	AMPCAPACITY DERATES
DC-01	2-1/2"	PVC	2	#350 KOML	THWN-2 AL	572	413	86.5	81.4	96%	100%	
DC-02	2-1/2"	PVC	2	#350 KOML	THWN-2 AL	572	413	103.8	97.68	96%	100%	
DC-03	1-1/4"	PVC	2	#1/0	THWN-2 AL	572	413	34.6	32.56	96%	100%	
DC-04	1-1/2"	PVC	2	#4/0	THWN-2 CU	572	413	86.5	81.4	96%	100%	
DC-05	1-1/2"	PVC	2	#4/0	THWN-2 CU	572	413	103.8	97.68	96%	100%	
DC-06	1-1/4"	PVC	2	#1	THWN-2 CU	572	413	34.6	32.56	96%	100%	

NOTES:

- ALL CIRCUITS ARE ADEQUATELY SIZED FOR TEMPERATURE & CONDUIT FILL DERATE SO THAT ANY (2) OR (3) CIRCUITS CAN BE ROUTED TOGETHER IN (1) CONDUIT, PROVIDED THE CONDUIT IS UPSIZED TO ACCOMMODATE.
- (1) EGC MUST BE ROUTED IN EACH CONDUIT.
- FOR CIRCUITS WHERE THE CONDUCTORS HAVE BEEN UPSIZED DUE TO VOLTAGE DROP LARGER THAN THE TERMINALS OF THE DEVICES WILL ALLOW, A JUNCTION BOX MUST BE INSTALLED NEAR EACH DEVICE WITH LISTED SPLICES AND/OR CONNECTORS. THE CONDUCTORS MUST TRANSITION TO THE LARGEST CONDUCTOR THE TERMINALS WILL ALLOW PRIOR TO ENTERING THE DEVICE.

A LINE DRAWING 1 OF 4

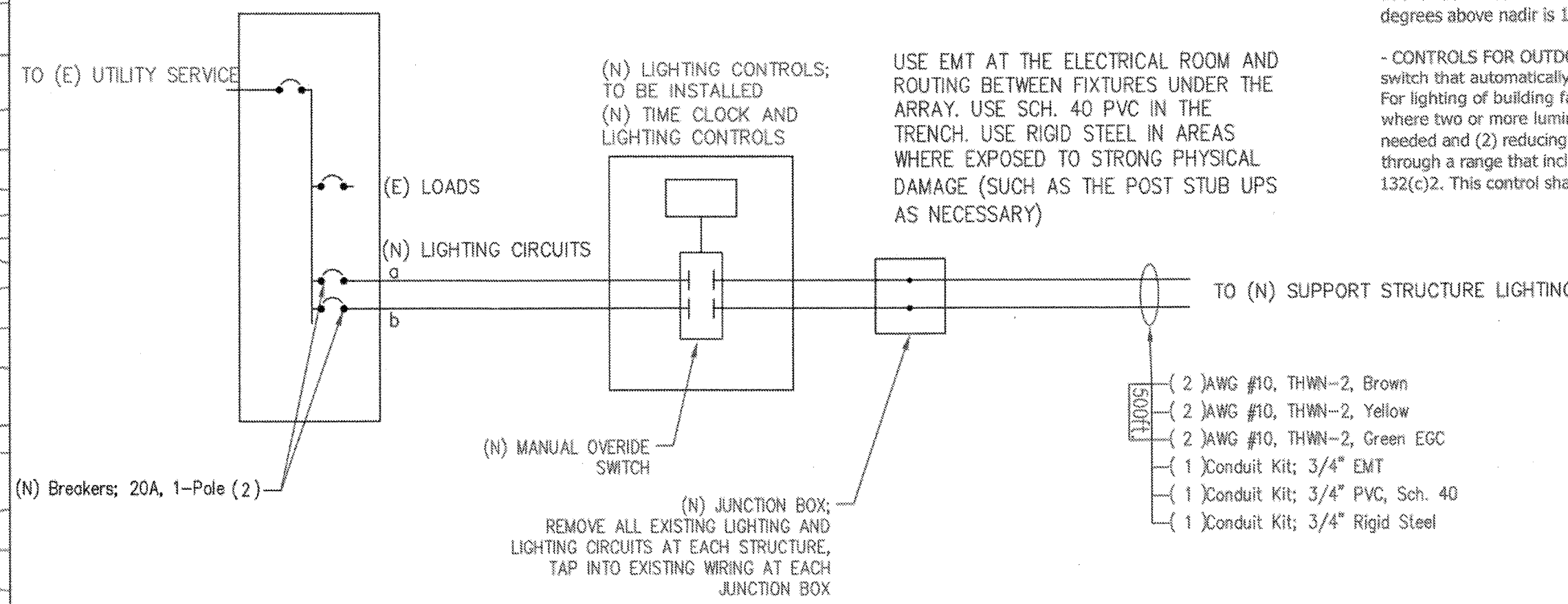
SYMBOL	LABEL	DESCRIPTION	LAMP TYPE	WATTAGE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	QUANTITY
	FCP	SURFACE MOUNTED 4 FOOT (2) LAMP T8 FLUORESCENT LUMINAIRE WITH SPECULAR REFLECTOR AND CLEAR WRAP LENS. POLYCARBONATE CONSTRUCTION WITH STAINLESS STEEL CLIPS AND TAMPER PROOF SCREWS.	TWO (2) 32W 4100K (MIN.) T8 FLUORESCENT LAMPS.	54.3W	GVA	FAD100T84HT232W277VTPSS	120V & 208v	22



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A SINGLE LINE DIAGRAM FOR LIGHTING CIRCUITS

(E) MAIN PANEL
3000A EATON / CUTLER-HAMMER
208Y/120V, 3Ø, 4W



MANDATORY MEASURES - OUTDOOR LIGHTING CONTROLS AND EQUIPMENT

- **OUTDOOR LIGHTING:** All permanently installed outdoor luminaires employing lamps rated over 100 watts shall either: have a lamp efficacy of at least 60 lumens per watt; or be controlled by a motion sensor unless exempted from the 8 possible exceptions. See Section 132.

- **LUMINAIRE CUTOFF REQUIREMENT:** All outdoor luminaires that use lamps rated greater than 175 watts in hardscape areas including parking lots, building entrances, sales and non-sales canopies, and all outdoor sales areas shall be designated Cutoff for light distribution. To comply with this requirement, the luminaire shall be rated Cutoff in a photometric test report that includes any tilt of other non-level mounting condition of the installed luminaire. Cutoff is a luminaire light distribution classification where the candela per 1000 lamp lumens does not numerically exceed 25 at of above a vertical angle of 90 degrees above nadir, and 100 at of above a vertical angle of 80 degrees above nadir. Nadir is in the direction of straight down, as would be indicated by a plumb line. 90 degrees above nadir is horizontal. 80 degrees above nadir is 10 degrees below horizontal unless exempted from the 6 possible exceptions. See Section 132(b).

- **CONTROLS FOR OUTDOOR LIGHTING:** All permanently installed outdoor lighting shall be controlled by a photocell or astronomical time switch that automatically turns off the outdoor lighting when daylight is available unless exempted from the exception, see section 132(c). For lighting of building facades, parking lots, sales and non-sales canopies, all outdoor sales areas, and student pick-up/drop-off zones where two or more luminaires are used, and automatic time switch shall be installed that is capable of (1) turning off the lighting when not needed and (2) reducing the lighting power (in watts) by at least 50 percent but not exceeding 80 percent or providing continuous dimming through a range that includes 50 percent through 80 percent reduction unless exempted from the 6 possible exceptions. See Section 132(c). This control shall meet the requirements of Section 119(c).

EACH LIGHTING CIRCUIT IS ONLY GOING TO 597.3W (0.717kVA) OF ELECTRICITY (EQUATING TO APPROXIMATELY 4.98A LOAD AT 120V). BASED ON HOW LIGHTS ARE ARRANGED.

PUTTING SOLAR SUPPORT STRUCTURE LIGHTING ON TWO CIRCUITS TO COMPLY WITH THE MULTI-LEVEL SWITCHING REQUIREMENT PER TITLE 24.

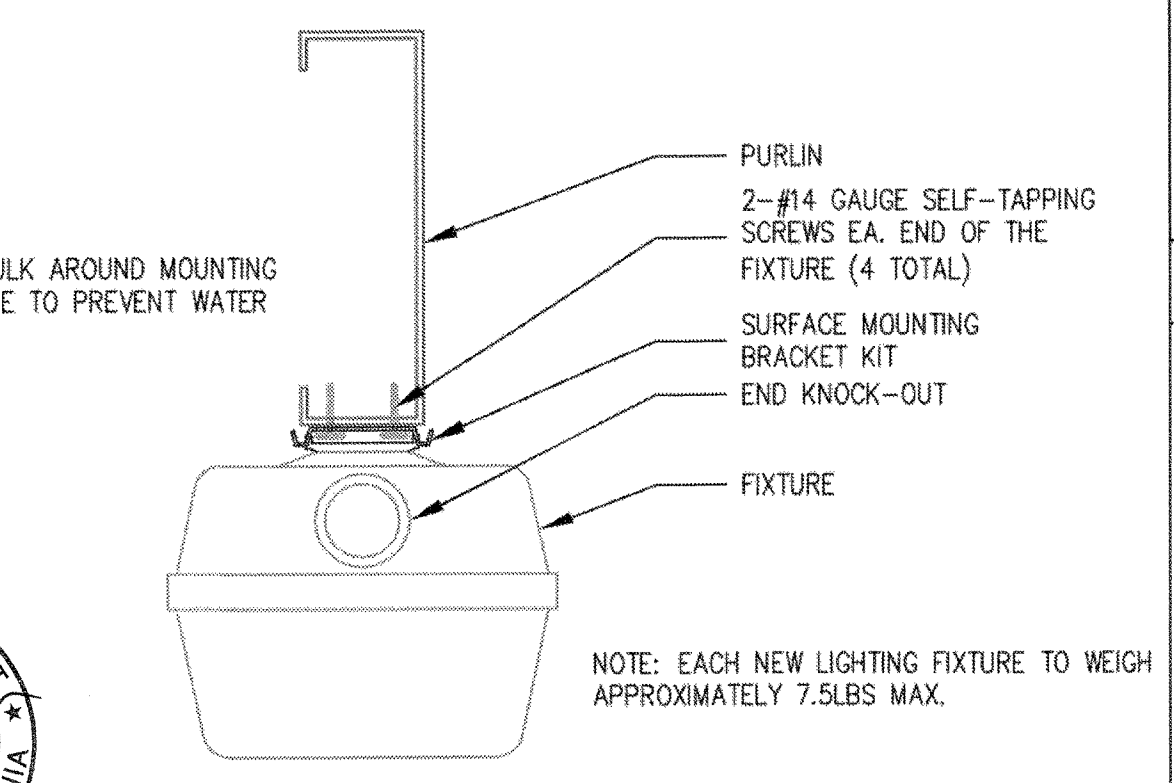
- CONNECT CANOPY LIGHTING CIRCUITS TO EXISTING EMS SYSTEM OR PROVIDE NEW ASTRONOMICAL TIMING CLOCK WITH MANUAL OVERRIDE. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND CONNECTION POINT. THE LIGHTING CONTROL CONFIGURATION SHALL ALLOW TO TURN OFF 50% OF LIGHTING FIXTURES WHEN LIGHTING IS NOT NEEDED (2 CIRCUITS REQUIRED) ALL OTHER EXISTING LIGHTING ON CAMPUS SHALL REMAIN OPERATIONAL.
- VERIFY EXISTING SYSTEM OPERATING VOLTAGE FOR LIGHTING FIXTURE AND CLOCK SELECTION.
- PROVIDE J-BOX IN VARIOUS LOCATIONS AS REQUIRED TO DISTRIBUTE POWER TO LIGHTING FIXTURES. ANY LIGHTING BRANCH CIRCUIT SHALL BE MINIMUM (2) #10 AWG AND (1) #10 GROUND, BUT UPSIZED SO THAT MAXIMUM VOLTAGE DROP ACROSS THE CIRCUIT IS 5%. WIRING SHALL BE INSTALLED IN METAL RACEWAYS LISTED FOR WET LOCATION.

SHEET NOTES

- (N) SOLAR SUPPORT STRUCTURES
- (N) SCH. 40 PVC CONDUIT IN TRENCH. DO NOT SHARE THE CONDUIT WITH PV LINES.
- (N) SOLAR SUPPORT STRUCTURE LIGHTING FIXTURE (FIXTURE TYPE FCP). TYPICAL (22).
- (E) HOME RUN FEEDER BACK TO LIGHTING PANEL.
- (N) BRANCH FEEDERS BETWEEN LIGHTING CIRCUITS. CONNECT FIXTURES BACK TO CIRCUITS A AND B RESPECTIVELY. SEE CIRCUIT CALLOUT ON DRAWING FOR DETAILS.
- LIGHTING FIXTURES TO BE WIRED IN STAGGERED FORMATION TO COMPLY WITH TITLE 24 MULTI-LEVEL SWITCHING.
- (N) LIGHTING CIRCUIT BREAKER
- (N) LIGHTING CONTROL TIMECLOCKS

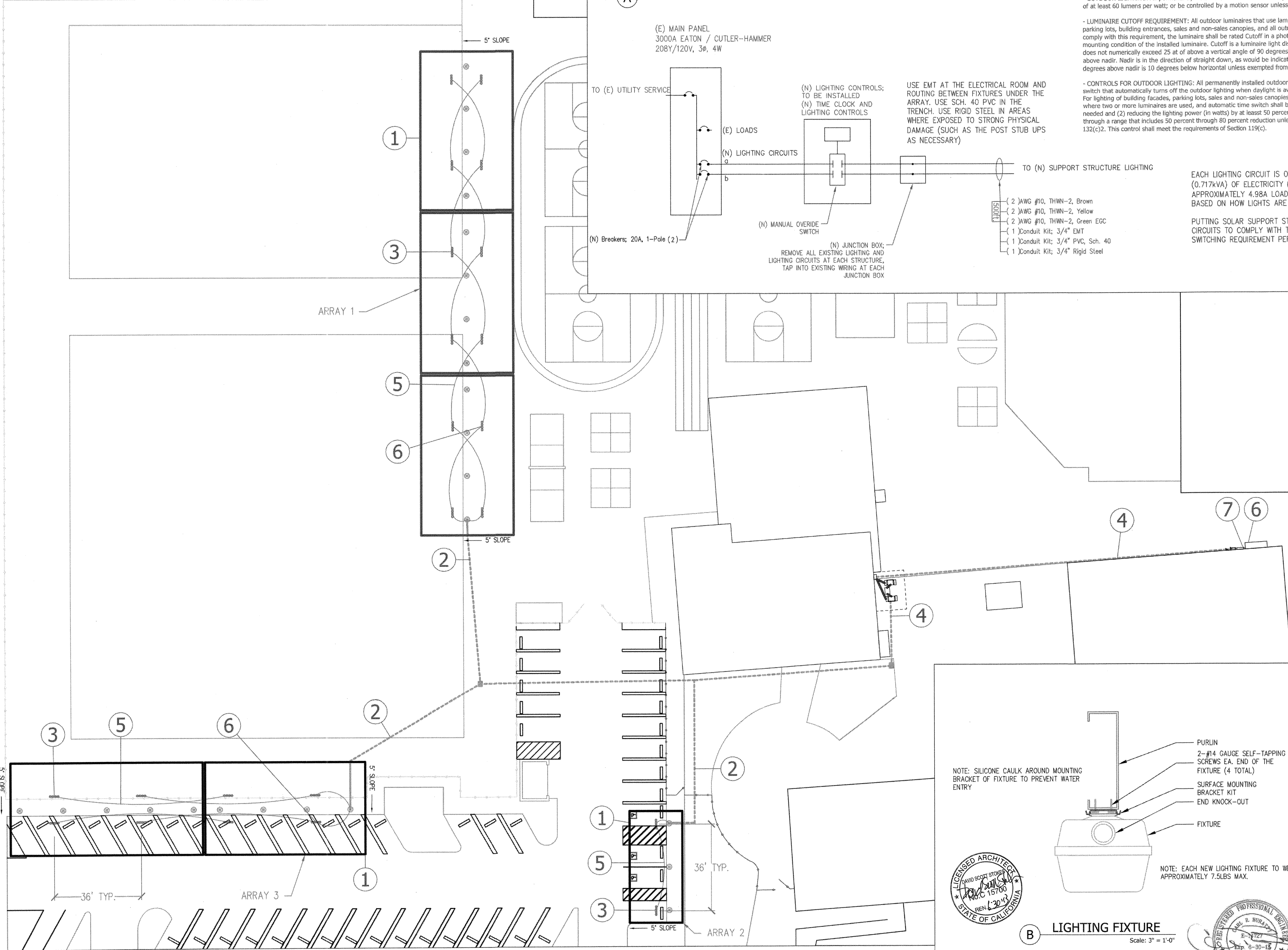
SITE LEGEND

- DATA
- TELEPHONE
- LIGHTING FIXTURE
- PHOTOCELL
- TIMECLOCK
- MOTION SENSOR
- SWITCH
- CANOPY POST/BEAM LOCATION
- DISTRIBUTION PANEL (#)



B LIGHTING FIXTURE
Scale: 3" = 1'-0"

A LIGHTING SITE PLAN
Scale: 1" = 20'



GLENDALE USD - COLUMBUS ELEMENTARY
188.16 KW PV SYSTEM
GLENDALE USD - COLUMBUS ELEMENTARY
425 MILFORD ST
GLENDALE, CA 91203
8185070201

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT

APPOS 114571
AC FLS FC SS ED
DATE MAY 22 2012

REV	BY	DATE	COMMENTS
REV A	BY	DATE	COMMENTS

REVISIONS

JOB DETAILS

TITLE: Glendale
PROJECT: (784) YINGLI # YL240P-29b
DRAWING SYSTEM: STEEL SUPPORT STRUCTURES
NUMBER: (2) SOLECTRIA # PM 82KW-208VAC
MARKET: GOVT DESIGN: MATT RHODE
DESIGNED BY: LEO WU
DATE: 3/22/2012
CHECKED BY: LEO WU
DATE: 3/22/2012
PROJECT TYPE: CASH
PROJECT MANAGER: D NAVARRO
LIGHTING DESIGN
JOB NUMBER: JB-912070-00
PAGE: PV 8

Certificate of Compliance (Page 1 of 4) OLTG-1C
 Project Name: GUSD - COLUMBUS ELEMENTARY SCHOOL Date: 4/18/12
 Project Address: 425 MILFORD ST. Total Hardscape Illuminated Area: 14,244 sq ft

General Information
 Phase of Construction: New Construction Addition Alteration

Documentation Author's Declaration Statement
 I certify that this Certificate of Compliance documentation is accurate and complete.
 Name: MATTHEW RHODE Signature: [Signature] Date: 4/18/2012
 Company: SolarCity
 Address: 3055 Clearview Way IF Applicable CEA # CPEI #
 City/State/Zip: San Mateo, CA, 94402 Phone: 650-963-5100 EXT 5741

Principal Lighting Designer's Declaration Statement
 I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the lighting design.
 This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.
 The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 Name: Carl Buratti Signature: [Signature] Phone: 818-345-7130
 Company: Buratti & Associates, Inc. License # E-14727
 Address: 6345 Balboa Blvd, Ste. 259
 City/State/Zip: Encino, CA 91316 Date: 5/17/2012

Principal Lighting Designer's Declaration
 I certify that this Certificate of Compliance documentation is accurate and complete, and accounts for all outdoor lighting power, including building mounted, pole mounted, as well as all other outdoor lighting designed for the site, and that Additional Lighting Power Allowances for Specific Applications or Additional Lighting Power Allowances for Ordinance Requirements have not been counted more than one time for the same area, in accordance with Section 147 of the Standards.

Outdoor Lighting Mandatory Measures
 Indicate location on building plans of Mandatory Measures Note Block:

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)
 For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.
 OLTG-1C Certificate of Compliance. All 4 pages required on plans for all submittals.
 OLTG-2C (Page 1 of 3) Lighting Wattage Allowances for General Hardscape, Sales Frontage, or Ornamental Lighting. Optional on plans.
 OLTG-2C (Page 2 of 3) Lighting Wattage Allowances for Per Application or Per Area. Optional on plans.
 OLTG-2C (Page 3 of 3) Additional Lighting Power Allowance for Ordinance Requirements. Optional on plans.

2008 Nonresidential Compliance Forms July 2010

Certificate of Compliance (Page 2 of 4) OLTG-1C
 COMPLIANCE FIXTURE / LIGHTING CONTROL SCHEDULE AND FIELD INSPECTION CHECKLIST
 Project Name: GUSD - COLUMBUS ELEMENTARY SCHOOL Date: 4/18/12

INSTALLATION CERTIFICATE, OLTG-1-INST (Retain a copy and verify form is completed and signed.) Field Inspection
 CERTIFICATE OF ACCEPTANCE, OLTG-2A (Retain a copy and verify form is completed and signed.) Field Inspection

Luminaire Schedule		Installed Watts						
A	B	C	D	E	F	G	H	I
Name or Item Tag	Luminaire Description (See footnote below)	Count/Designation	Watts per Luminaire	Special Features	How wattage was determined	Number of Luminaire	Installed Watts (D x C)	Field Inspector
FCP	(2) 32W T8 Wet Listed Fluorescent		54.4			22	1,197	
Enter total into OLTG-1C, Page 4 of 4; Row H, Total Installed Watts:						1,197		

1. Type of luminaire (i.e., post top, wall pack, surface, shoe box); for non-incandescent luminaires, indicate nominal lamp wattage and lamp type (i.e., fluorescent, incandescent, HID); ballast type (i.e., electronic or magnetic); number of lamps and number of ballasts per luminaire. For incandescent luminaires, the luminaire wattage listed in column D shall be the maximum relamping rated wattage on a permanent factory-installed label on the luminaire. NOT the wattage of the lamp itself used, in accordance with Section 1304(e) or 1. 2. If Field then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

EXEMPT LUMINAIRES Field Inspection
 Name or Symbol Description of exempt luminaires in accordance with §147

MANDATORY CONTROLS Field Inspection

#	Description	Location	#	Description	Location
1	Astronomical Timeclock	NEXT TO ELECTRICAL MAIN PANEL			

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of OLTG-1C)
 The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector Notes or Discrepancies:

2008 Nonresidential Compliance Forms July 2010

Certificate of Compliance (Page 3 of 4) OLTG-1C
 Project Name: GUSD - COLUMBUS ELEMENTARY SCHOOL Date: 4/18/12

A. OUTDOOR LIGHTING ZONE
 OUTDOOR LIGHTING ZONE: OLZ 1 OLZ 2 OLZ 3 OLZ 4
 Is the Outdoor Lighting Zone: Default in accordance with §10-114, or Amended by JHA
 Complete the information below if the default Outdoor Lighting Zone has been amended by the local jurisdiction having authority (JHA):
 The site is a government designated park, recreation area, wildlife preserve, or portion thereof, and has been designated as LZ2 or LZ3, in accordance with Table 10-114-A, because the site is contained within such a zone.
 The local jurisdiction having authority has officially adopted a change to the State Default Lighting Zone and has notified the Energy Commission by providing the materials required in §10-114(d) to the Executive Director.
 The adopted change is posted on the Energy Commission website.

B. ADDITIONAL LIGHTING POWER ALLOWANCE FOR ORDINANCE REQUIREMENTS
 Are additional lighting power allowances for ordinance in Table 147-C used? Yes No
 Complete the information below if additional lighting power allowances for ordinance requirements are used:
 The local jurisdiction having authority has officially adopted specific outdoor light levels, which are expressed as average or minimum footcandle levels, by following a public process that allowed for formal public notification, review, and comment about the proposed change.
 The local jurisdiction having authority which adopted specific outdoor light levels and has notified the Commission by providing the following materials required §10-114(f) to the Executive Director.

C. ACCEPTANCE FORMS
 Required Acceptance Tests
Designer:
 This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system. OLTG-2A. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. Forms can be grouped by type of Luminaire controlled.
Enforcement Agency:
 Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The OLTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the OLTG-2A for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Certificate of Acceptance			
Luminaires Controlled		OLTG-2A ¹	
Equipment Requiring Testing	Description	Number of Luminaires Controlled	Location
Time Clock	Astronomical Time Clock	1	NEXT TO MAIN ELECTRICAL PANEL

1. Insert: OMS for Outdoor Motion Sensor; OLSC for Outdoor Lighting Shutoff Controls; OP for Outdoor Photocontrol; ATS for Astronomical Time Switch; and STS for Standard (non-astronomical) Time Switch acceptance.

2008 Nonresidential Compliance Forms July 2010

CERTIFICATE OF COMPLIANCE (Page 4 of 4) OLTG-1C
 Project Name: GUSD - COLUMBUS ELEMENTARY SCHOOL Date: 4/18/2012
 ALLOWED AND INSTALLED OUTDOOR LIGHTING POWER

	Lighting Wattage Power Allowance	
A	Lighting power allowance for general hardscape (from OLTG-2C Page 1 of 3)	
B	Specific application lighting wattage allowance per unit length (from OLTG-2C Page 1 of 3)	
C	Specific application wattage allowance for ornamental lighting (from OLTG-2C Page 1 of 3)	
D	Specific application wattage allowance per application (from OLTG-2C Page 2 of 3)	
E	Specific application lighting wattage allowance per area (from OLTG-2C Page 2 of 3)	2987.5
F	Additional lighting power allowance for ordinance requirements (from OLTG-2C Page 3 of 3)	2987.5
G	Total Allowed Wattage = Sum of rows A through F:	2987.5
H	Total Installed Watts (from Luminaire Schedule, from OLTG-1C (Page 2 of 4))	1,197

Provided that the lighting wattage power allowances listed in rows A through F are identical to the lighting wattage power allowances taken from OLTG-2C Pages 1 through 3, complies if Installed Wattage in row H is less than or equal to the Total Installed Wattage in row G Yes No

NOTES:

2008 Nonresidential Compliance Forms July 2010

OUTDOOR LIGHTING WORKSHEET (Page 1 of 3) OLTG-2C
 Project Name: GUSD - COLUMBUS ELEMENTARY SCHOOL Date: 4/18/12

A. LIGHTING POWER ALLOWANCE FOR GENERAL HARDSCAPE

AREA WATTAGE ALLOWANCE (AWA)		LINEAR WATTAGE ALLOWANCE (LWA)		INITIAL WATTAGE ALLOWANCE	TOTAL GENERAL HARDSCAPE LIGHTING ALLOWANCE		
A	B	C	D	E	F	G	H
ILLUMINATED HARDSCAPE AREA	AWA PER SQUARE FOOT	AWA (A X B)	PERIMETER LENGTH OF GENERAL HARDSCAPE	LWA PER LINEAR FOOT	LWA (D X E)	IWA (WATTS)	C + F + G
14244	.092	1310.5	987	.92	907	770	2987.5
Enter total into OLTG-1C, Page 4 of 4; Row A; Lighting Power Allowance for General Hardscape:							2987.5

Yes: AWA, LWA, and IWA from Table 147-A was used as appropriate for the Outdoor Lighting Zone

B. SPECIFIC APPLICATION LIGHTING WATTAGE ALLOWANCE PER UNIT LENGTH (Available only for sales frontage)

DETERMINE WATTAGE ALLOWANCE		LUMINAIRE TYPE		DESIGN WATTS					
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Linear Feet of Frontage	Sales Frontage allowance for OLZ (watts per lf)	Wattage Allowance (B x C)	Name or Symbol	Luminaire Type	Luminaire Quantity	Watts per Luminaire	Design Watts (G x H)	Allowed Watts Minimum of D or I
N/A									
Enter total into OLTG-1C, Page 4 of 4; Row B; Specific Application Lighting Wattage Allowance Per Unit Length									0

C. SPECIFIC APPLICATION WATTAGE ALLOWANCE FOR ORNAMENTAL LIGHTING

DETERMINE WATTAGE ALLOWANCE		LUMINAIRE TYPE		DESIGN WATTS					
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Square feet of Hardscape	Ornamental Lighting Allowance for OLZ (watts per ft ²)	Wattage Allowance (B x C)	Name or Symbol	Luminaire Type	Luminaire Quantity	Watts per Luminaire	Design Watts (G x H)	Allowed Watts Minimum of D or I
N/A									
Enter total into OLTG-1C, Page 4 of 4; Row C; Specific Application Wattage Allowance for Ornamental Lighting									0

2008 Nonresidential Compliance Forms March 2010



3055 Clearview Way, San Mateo, CA 94402
 T: (650) 438-1028 | F: (650) 438-1029
 (888)-SOL-CITY (762-2482) | www.solarcity.com

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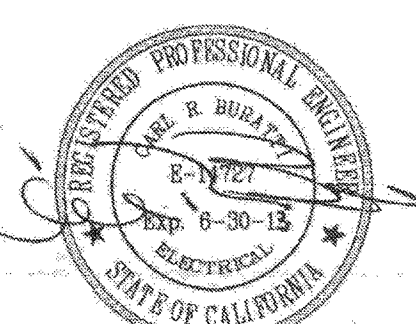
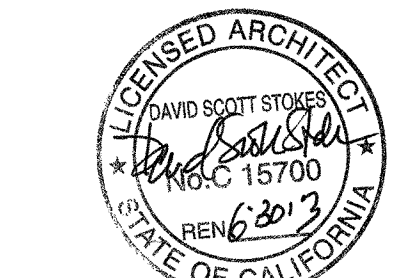
GLENDALE USD - COLUMBUS ELEMENTARY
 188.16 KW PV SYSTEM
 GLENDALE USD - COLUMBUS ELEMENTARY
 425 MILFORD ST
 GLENDALE, CA 91203
 8185070201

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT

APPO3 114571
 AC FLS JESS ED
 DATE MAY 27 2012

REVISIONS
 REV BY DATE COMMENTS

JOB DETAILS
 THE: Glendale
 DRAWING: (784) YINGLI # YL240P-296
 WORKING SYSTEM: STEEL SUPPORT STRUCTURES
 INVERTER: (2) SOLECTRIA # PVI 82KW-208VAC
 WAREHOUSE: MATT RHODE
 GOVT CHECKED BY: LEO WU
 DATE: 3/22/2012
 PAYMENT TYPE: CASH
 PROJECT MANAGER: D NAVARRO
 JOB NUMBER: JB-912070-00
 PAGE: PV 9



ABBREVIATIONS table listing various construction terms and their abbreviations, such as ANCHOR BOLT, BASE COURSE, etc.

BUILDING CODE:

2010 EDITION OF THE CALIFORNIA BUILDING CODE.

OCCUPANCY GROUP PER SITE-SPECIFIC DOCUMENTS. ALLOWABLE AREA AND MINIMUM SEPARATION BETWEEN STRUCTURES TO BE DETERMINED AT EACH SPECIFIC LOCATION PER CBC WHICH IS TO BE CHECKED AT BACKCHECK.

II-B CONSTRUCTION LOADS:

ROOFS: ROOF DEAD LOAD = ACTUAL WEIGHT OF MEMBER: SOLAR PANEL = 3 PSF (MAX) PURLIN = 4 PLF

FOR 10 DEGREE ROOF SLOPE: C&C WIND LOAD = 18.9 PSF (TOWARD THE SURFACE). C&C WIND LOAD = 20.8 PSF (AWAY FROM THE SURFACE).

LATERAL:

OCCUPANCY CATEGORY II WIND: 3" SECOND WIND GUST = 85 MPH. WIND IMPORTANCE FACTOR = 1.0. EXPOSURE C.

SEISMIC: SEISMIC IMPORTANCE FACTOR = 1.0. SHORT PERIOD SPECTRAL ACCELERATION Sa = 2.85.

SEISMIC DESIGN CATEGORY D. BASIC SEISMIC-FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEMS DETAILED TO ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AISI.

FOUNDATIONS:

ALL FOOTINGS SHALL BE DESIGNED FOR THE SPECIFIC SITE. DRILLED PIER FOOTING DESIGNS ARE BASED ON THE ALLOWABLE LATERAL BEARING PRESSURES SHOWN IN DETAIL 2. THE ALLOWABLE LATERAL BEARING PRESSURE MAY BE MULTIPLIED BY 2.0 PER CBC SECTION 1806A.3.4.

SPREAD FOOTING DESIGNS ARE BASED ON CBC SECTION 1806A, CLASS 5 SOILS. SPREAD FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL 2 FEET MINIMUM BELOW ADJACENT EXISTING GRADE.

CONCRETE:

SPECIFIED 28 DAY COMPRESSIVE STRENGTH F'c:

FOUNDATIONS - 3,000 PSI

GENERAL:

ALL CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ACI 308.1. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED UNLESS NOTED OTHERWISE.

FOR REINFORCING INFORMATION, SEE REINFORCING SECTION OF G.S.N., PLANS, SCHEDULES AND DETAILS.

FLY ASH - SHALL BE LIMITED TO 50% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT.

TEST DATA FOR EACH CONCRETE MIX SHALL BE SUBMITTED FOR REVIEW PER CHAPTER 5 OF ACI 318. REFERENCE FIGURE RS.3 FOR SUBMITTAL REQUIREMENTS AND OPTIONS. CONCRETE MIX DESIGNS THAT ARE SUBMITTED WITHOUT THE APPROPRIATE TEST DATA CANNOT BE REVIEWED.

IT IS ACCEPTABLE AND INTENDED TO USE EARTH CUTS FOR THE DRILLED PIER FOOTING AND SPREAD FOOTING. THE FOOTING DESIGNS INDICATED ON THIS SHEET DO NOT APPLY IF THE EARTH CUTS ARE UNSTABLE AND/OR DO NOT STAND ON THEIR OWN.

THE FOOTINGS INDICATED ON THIS SHEET DO NOT APPLY WHERE ORGANIC FILL MATERIALS EXIST.

CONCRETE SHALL BE ADEQUATELY VIBRATED AROUND THE EMBEDDED STEEL COLUMNS TO ENSURE THE CONCRETE IS COMPLETELY SURROUNDED. THE STEEL COLUMN SHALL CONFORM TO THE REMAINDER OF THE DRILLED PIER OR SPREAD FOOTING. CONCRETE SHALL SLOPE UP SLIGHTLY TOWARDS COLUMNS TO PREVENT WATER FROM PONDING AROUND COLUMNS.

IT IS ACCEPTABLE FOR CONCRETE TO FREE FALL INTO FOOTINGS.

REINFORCING:

ALL REINFORCING PER CRSI SPECIFICATIONS AND HANDBOOK. ASTM A615 (Fy = 60 KSI / GRADE 60) DEFORMED BARS FOR ALL BARS. WHERE SHOWN ON DRAWINGS ALL 60 REINFORCING SHALL BE WELDED SHALL BE ASTM A706. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER.

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH - 3" EXPOSED TO EARTH OR WEATHER

#6 OR LARGER - 2" #5 AND SMALLER - 1 1/2"

ALL OTHER PER LATEST EDITION OF ACI 318

ALL REINFORCING SHALL BE CHAIRED TO ENSURE PROPER CLEARANCES. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPE COVERING REINFORCING IS NOT AN ACCEPTABLE CHAIR.

ALL DIMENSIONS REFERENCED IN DRAWINGS AS "CLEAR" SHALL BE FROM FACE OF STRUCTURE TO EDGE OF REINFORCING, AND SHALL NOT BE LESS THAN STATED, NOR GREATER THAN "CLEAR" DIMENSION PLUS 3/8". ALL OTHERS SHALL BE PLUS OR MINUS 1/4" TYPICAL UNLESS NOTED OTHERWISE.

FIELD BENDING OR STRAIGHTENING OF DEFORMED BARS SHALL BE LIMITED TO #5 BARS AND SMALLER AND SHALL BE FIELD BENT OR STRAIGHTENED ONLY ONCE. ANY BEND SHALL BE LIMITED TO 90 DEGREES. IF FIELD BENDING OR STRAIGHTENING OF #6 BARS OR LARGER IS REQUIRED, OR IF A SECOND BEND IS REQUIRED FOR #5 BARS AND SMALLER, HEAT SHALL BE APPLIED FOR BENDING OR STRAIGHTENING. CONTRACTOR SHALL SUBMIT PROCEDURE FOR APPLYING HEAT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BENDING OR STRAIGHTENING BARS.

STRUCTURAL STEEL:

GENERAL:

ALL CONSTRUCTION PER LATEST AISI STEEL CONSTRUCTION

ALL CONSTRUCTION PER LATEST AISI STEEL CONSTRUCTION MANUAL. ALL WIDE FLANGE STEEL SHALL BE ASTM A992 (Fy = 50 KSI). ALL PIPE STEEL SHALL BE ASTM A500 (Fy = 42 KSI) OR ASTM A53, TYPE E OR S, GRADE B (Fy = 35 KSI). ALL MISCELLANEOUS STEEL UNLESS NOTED OTHERWISE SHALL BE ASTM A36 (Fy = 36 KSI). IF CALLED OUT ON PLANS, Fy = 50 KSI PLATE STEEL SHALL BE ASTM A529 OR A572.

ALL STRUCTURAL ROLLED STEEL MEMBERS WITH Fy GREATER THAN 36 KSI ARE TO BE IDENTIFIED WITH AN ASTM SPECIFICATION MARK OR TAG PER 18C SEC. 2203.1.

HOLLOW STRUCTURAL SHAPE (HSS):

HSS COLUMNS ARE CALLED OUT ON THE DRAWINGS AS EITHER ASTM A500 (Fy = 46 KSI) OR ASTM A572 (Fy = 65 KSI).

ASTM A500 (Fy = 46 KSI) HSS SECTIONS ARE TO BE PRODUCED PER THE SPECIFICATIONS SET FORTH IN AISI.

ASTM A572 (Fy = 65 KSI) HSS SECTIONS ARE TO BE PRODUCED BY DIRECT-FORMING OR FOLDING THE PLATE FOLLOWED BY AN ELECTRIC RESISTANCE WELD ALONG THE SEAM. INLINE INSPECTION OF THE WELD ZONE DURING PRODUCTION BY NON-DESTRUCTIVE TESTING (NDT) (ULTRASONIC INSPECTION) IS REQUIRED.

THE TERMS PIPE AND ROUND HOLLOW STRUCTURAL SHAPE (HSS) ARE USED SYNONYMOUSLY THROUGHOUT THESE DOCUMENTS ALONG WITH THE TERMS TUBE STEEL AND RECTANGULAR OR SQUARE HSS.

BOLTS:

ALL BOLTS SHALL BE ASTM A325 AND SHALL BE INSTALLED AS SLIP CRITICAL CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS PER AISI SPECIFICATIONS. IT IS ACCEPTABLE TO USE OVERSIZE HOLES OR SLOTTED HOLES PER AISI SPECIFICATIONS.

WELDING:

UNLESS NOTED OTHERWISE, ALL WELDS PER LATEST EDITION OF THE AWS STANDARDS. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES.

ALL FULL (COMPLETE) PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.

ALL SPOT WELDS SHALL BE PER LATEST AISI AND AWS STANDARDS.

STEEL CONNECTORS:

SCREW FASTENERS:

ALL STEEL SCREWS SHALL BE IN ACCORDANCE WITH AISI-GENERAL AND AISI-NAS. Fy = 50 ksi AND Ft = 70 ksi FOR ALL SCREWS.

- 1. MINIMUM SPACING OF SCREWS SHALL NOT BE LESS THAN 3 TIMES THE NOMINAL DIAMETER. MINIMUM EDGE DISTANCE FOR SCREWS SHALL NOT BE LESS THAN 1.5 TIMES THE NOMINAL SCREW DIAMETER.
2. THE HEAD OF THE SCREW OR WASHER SHALL HAVE A DIAMETER, DW, OF NOT LESS THAN 5/16". WASHERS SHALL BE AT LEAST 0.05" THICK.

Table with columns: SCREW NUMBER DESIGNATION, NOMINAL DIAMETER, and values for 8, 10, 12 (12-14), 14.

COLD FORMED STRUCTURAL STEEL FRAMING:

GENERAL:

ALL COLD FORMED STEEL COMPONENTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AISI.

FRAMING:

ALL STRUCTURAL STEEL FRAMING MATERIAL AND ITS ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBER".

ALL WELDING TO BE PERFORMED BY WELDERS HOLDING A VALID CERTIFICATE AND HAVING CURRENT EXPERIENCE IN LIGHT GAUGE STEEL. CERTIFICATES SHALL BE ISSUED BY AN ACCEPTED TESTING AGENCY. DO NOT NOTCH FLANGES OF MEMBERS WITHOUT EXPRESSED APPROVAL OF THE ENGINEER OF RECORD. ALL WELDING IN AN APPROVED FABRICATOR'S SHOP.

STRUCTURAL STEEL MEMBERS ARE FURNISHED TO A SPECIFIED MINIMUM Fy = 55,000 PSI. U.N.O. THE GRADE AND THE ASTM SPECIFICATION NUMBER OR OTHER SPECIFICATION DESIGNATION SHALL BE INDICATED BY PAINTING, DECAL, TAGGING OR OTHER SUITABLE MEANS ON EACH BUNDLE OF FABRICATED ELEMENTS. IT IS ACCEPTABLE TO USE THE Fy SHOWN ON THE MILL CERTIFICATION IN lieu of the "ORDERED" Fy. IT IS ACCEPTABLE TO USE STEEL WITH Fy = 70 KSI IF THE STEEL USED IS IN THE AISI AND/OR AISI SPECIFICATION, THE ELONGATION IN A 2" COUPON IS A MINIMUM OF 10% AND THE RATIO OF Ft OVER Fy IS AT LEAST 1.08.

Table with columns: MILS, GAGE NO., MIN DELIVERED THICKNESS, DESIGN THICKNESS. Lists values for various gage numbers and thicknesses.

GENERAL NOTES:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND GENERAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND DETAILS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

SPECIAL INSPECTION - STRUCTURAL ONLY: SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17A OF THE CBC FOR THE FOLLOWING: CONCRETE CONSTRUCTION:

- 1. CONCRETE: A. DURING THE TAKING OF TEST SPECIMENS. B. THE PLACEMENT OF ALL FOUNDATION CONCRETE.
2. REINFORCING STEEL: INSPECTION OF IN-PLACE REINFORCING FOR CONFORMANCE PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE FOR THE FOLLOWING: A. REINFORCING FOR SPREAD FOOTING AND DRILLED PIER CONCRETE FOUNDATIONS. B. REINFORCING FOR INVERTER SLABS ON THE GROUND.

STEEL CONSTRUCTION:

- 1. WELDING: A. PERIODIC VISUAL INSPECTION OF ALL FIELD WELDS. B. CONTINUOUS INSPECTION OF ALL MULTIPASS FILLET WELDS OR SINGLE PASS FILLET WELDS LARGER THAN 5/16". C. NON-DESTRUCTIVE TESTING OF ALL COMPLETE PENETRATION WELDS BY AN AWS CERTIFIED INDEPENDENT TESTING LABORATORY AT THE CONTRACTOR'S EXPENSE.
2. STEEL FRAMES: VERIFICATION OF BRACING, CONNECTIONS, MEMBER LOCATIONS, AND PROPER JOINT DETAIL APPLICATION AT ALL STEEL FRAME CONNECTIONS.
3. HIGH STRENGTH BOLTING: A. VERIFICATION OF SLIP CRITICAL BOLT INSTALLATION FOR ASTM A325 BOLTS.

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR: A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATION. B. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE DEVIATIONS FROM THE DESIGN DRAWINGS OR SPECIFICATIONS. DEVIATIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD AND/OR DSA PRIOR TO PROCEEDING WITH THE WORK.

THE SOLAR PANELS AND THEIR ANCHORAGE SYSTEMS ARE DEFERRED ITEMS. PER TITLE 24, PART 1, SECTION 4-317 (g), THEIR DESIGNS SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. THE DEFERRED SUBMITTAL DOCUMENTS SHALL BE STAMPED AND SIGNED BY EITHER AN ARCHITECT OR REGISTERED ENGINEER WITH A VALID CALIFORNIA LICENSE. PLEASE NOTE THAT ADDITIONAL CANOPY FRAMING AND BEARING BLOCKS MAY BE REQUIRED FOR CONNECTING THE SOLAR PANEL ANCHORAGE SYSTEM TO THE CANOPY.

NOTES FOR SITE SPECIFIC PHOTOVOLTAIC (PV) INSTALLATION:

- 1. THESE DRAWINGS ARE FOR THE STEEL STRUCTURES SUPPORTING PV PANELS. NO PROVISIONS ARE INCLUDED IN THESE DRAWINGS FOR THE PV PANELS OR THE PV PANEL INSTALLATION.
2. THE PV PANELS AND THE PV PANEL INSTALLATION SHALL BE SUBMITTED AS A SITE SPECIFIC APPLICATION. (REFER TO THE BOX NUMBER REGARDING THE SOLAR PANELS AND THEIR ANCHORAGE BEING A DEFERRED ITEM).
3. PV PANELS SHALL BE INSTALLED PER DRAWINGS THAT HAVE BEEN SUBMITTED TO AND REVIEWED/PERMITTED BY DSA. THE PV DRAWINGS SHALL PROVIDE THE MINIMUM FOLLOWING INFORMATION:

- A. LOCATION ALL ELECTRICAL EQUIPMENT.
B. WIRING DIAGRAMS TO AND FROM ALL PV PANELS AND ELECTRICAL EQUIPMENT.
C. ALL GROUNDING DETAILS FOR STRUCTURES AND EQUIPMENT.
D. ALL DISCONNECTION LOCATIONS AND DETAILS.
E. EQUIPMENT MARKING LABELS FOR INVERTER OVER VOLTAGE, SINGLE 120 VOLT SUPPLY WITHOUT MULTI BRANCH CIRCUITS AND ELECTRICAL SHOCK HAZARD.
4. REFER TO CCC ARTICLE 690 FOR ADDITIONAL REQUIREMENTS AND DETAILS.

NOTE: PV SYSTEM SHALL BE MARKED. MARKING IS NEEDED TO PROVIDE EMERGENCY RESPONDERS WITH APPROPRIATE WARNING AND GUIDANCE WITH RESPECT TO ISOLATING THE SOLAR ELECTRIC SYSTEM. THIS CAN FACILITATE IDENTIFYING ENERGIZED ELECTRICAL LINES THAT CONNECT THE SOLAR PANELS TO THE INVERTER AND MAIN SERVICE DISCONNECT. THE LABEL SHALL BE OF A WEATHER-RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT. MARKING CONTENT SHALL READ: "CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED". THIS LABEL SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED.

ADDITIONAL MARKING IS REQUIRED OF THE DC CIRCUIT. MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DO CONDUIT, RACEWAYS, ENCLOSURES, GABLE ASSEMBLIES AND JUNCTION BOXES TO ALERT FIRE SERVICE TO AVOID CUTTING THEM. MARKING SHALL BE PLACED EVERY 10 FEET, AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS AND AT ALL DC COMBINER AND JUNCTION BOXES. MARKING FOR CIRCUIT SHALL READ: "CAUTION: SOLAR CIRCUIT".

Table titled GOVERNING LOAD COMBOS with columns: MEMBER, LOADS, M MAX(K'), V MAX(K'). Lists loads for PURLIN, BEAM 3P, BEAM 4P, and various column and footing combinations.

3P = 3 PANELS, 4P = 4 PANELS

SHEET INDEX FOR 02-112000

Table listing sheet numbers and titles: FL1 FULL LANDSCAPE GENERAL STRUCTURAL NOTES, FL2 FULL LANDSCAPE BOX BEAM, FL3 FULL LANDSCAPE BOX BEAM DETAILS, FL4 FULL LANDSCAPE BACK TO BACK, FP1 FULL PORTRAIT GENERAL STRUCTURAL NOTES, FP2 FULL PORTRAIT BOX BEAM, FP3 FULL PORTRAIT BOX BEAM DETAILS, FP4 FULL PORTRAIT BACK TO BACK.

IDENTIFY THE OPTIONS TO BE USED BY CROSSING OUT OPTIONS NOT USED IN ANY SPECIFIC PROJECT.

Professional stamps and signatures including 'LICENSED ARCHITECT' and 'REGISTERED PROFESSIONAL ENGINEER' with dates and project information.

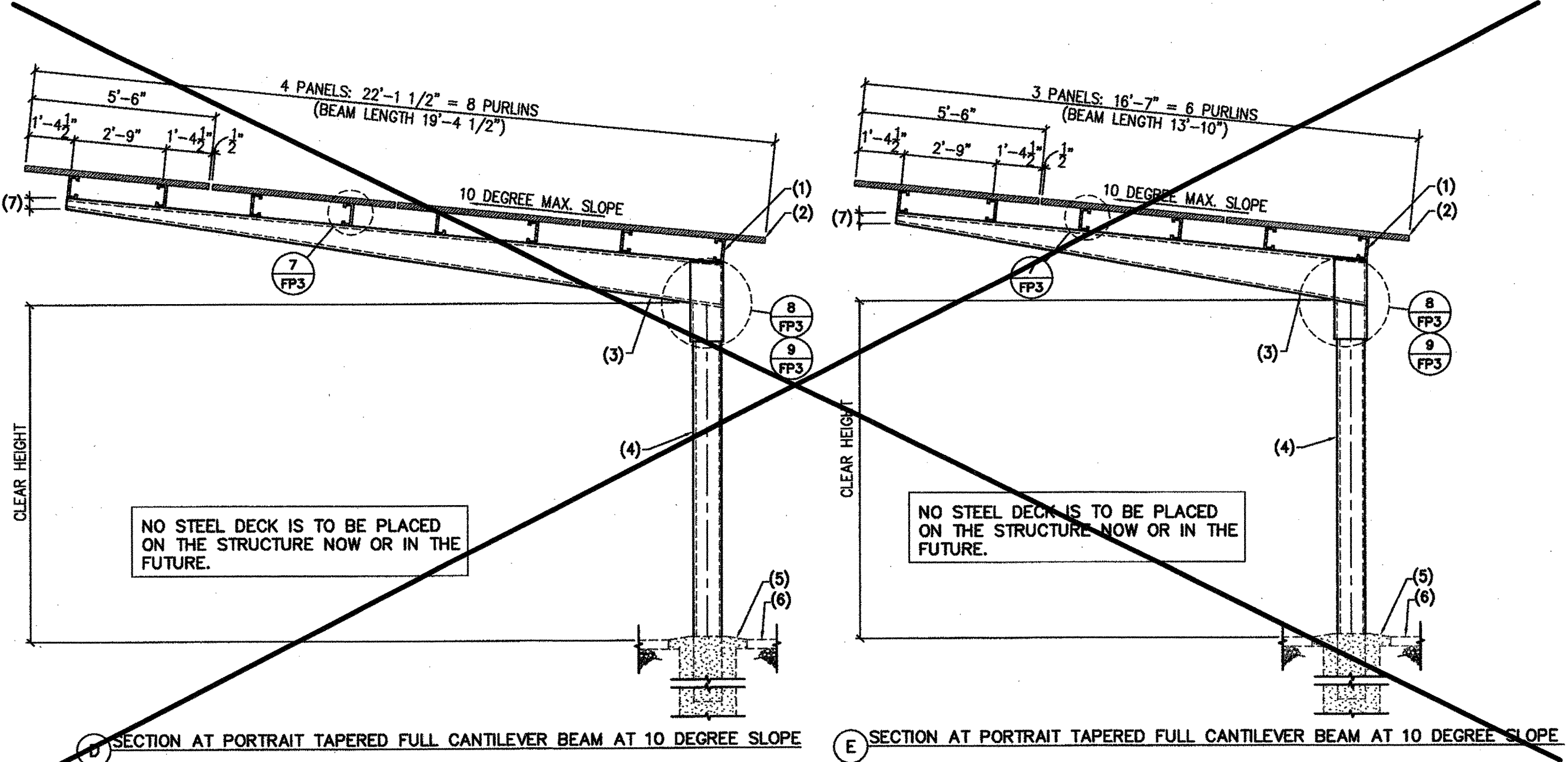
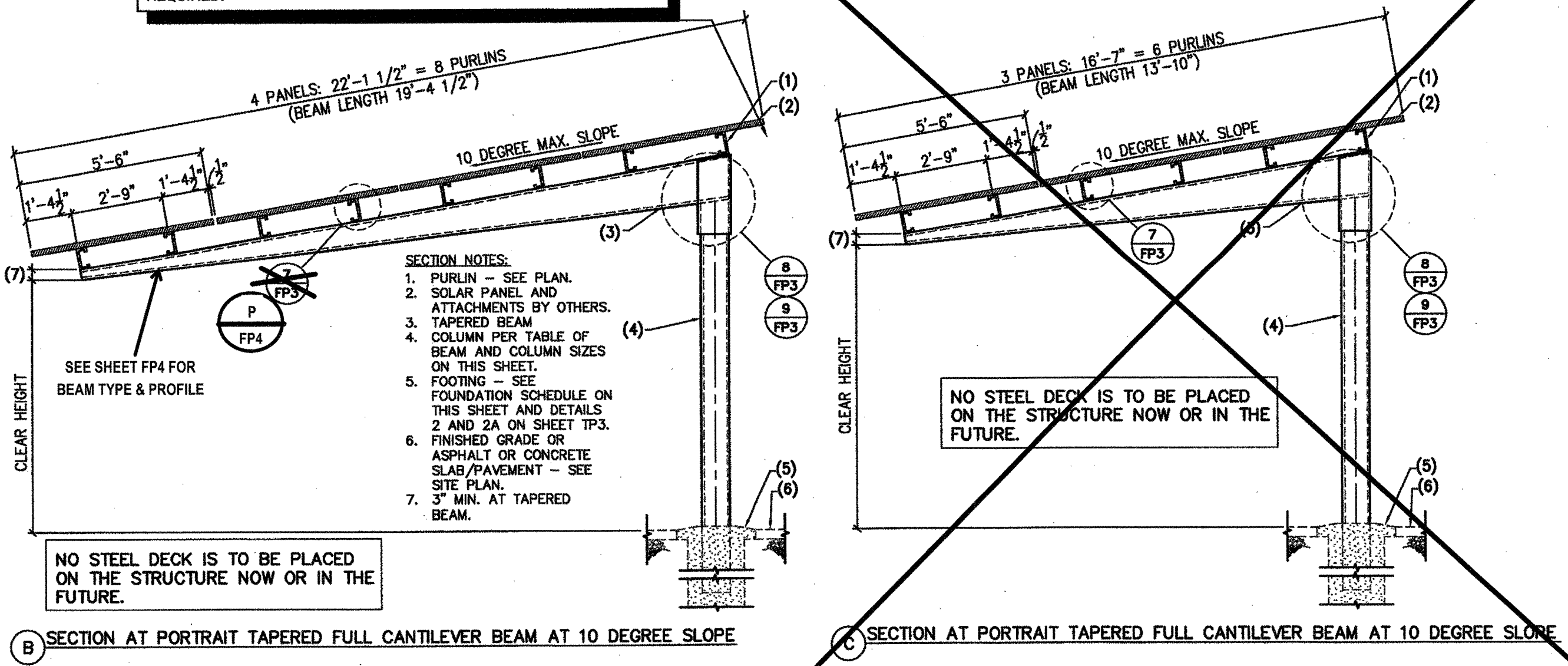
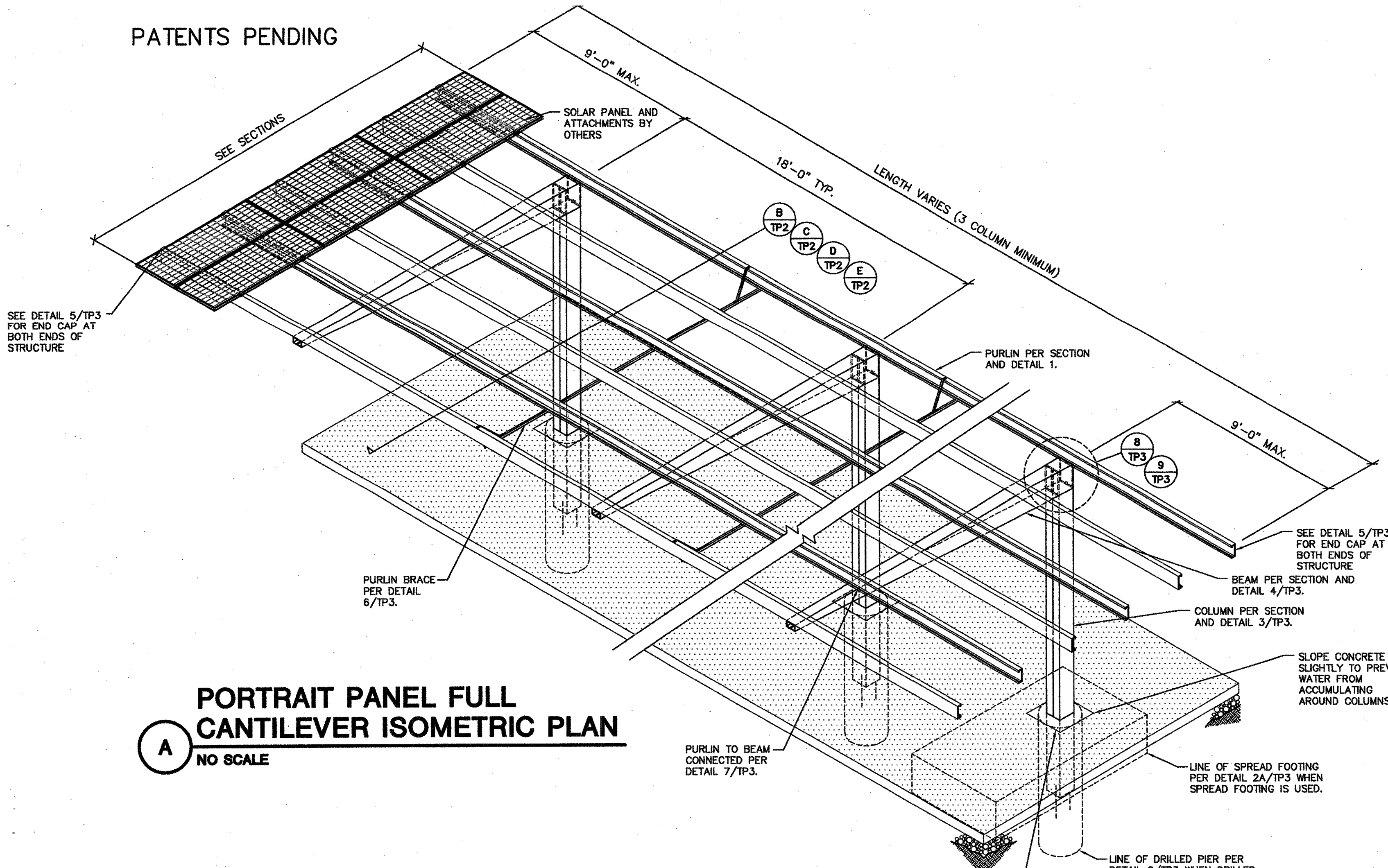
PRE-CHECK (PC) DOCUMENT stamp with project code 02-112000, date 3/15/12, and other project details.

Vertical sidebar containing 'CARUSO TURLEY SCOTT INC.' logo, contact information, and 'PORTRAIT SOLAR PANELS ON FULL CANTILEVER SOLAR SUPPORT STRUCTURE DSA PRE-CHECK' text.

PATENTS PENDING

PATENTS PENDING

NOTE:
THE PV PANEL SIZE USED TO DETERMINE THE DIMENSIONS SHOWN ON THIS DRAWING WERE 3'-4" (40") x 5'-6" (66"). THERE IS A GAP OF 1/2" BETWEEN THE PV PANELS IN LANDSCAPE AND 1/2" GAP BETWEEN THE PANELS IN PORTRAIT. THE BEAM LENGTHS NEED TO BE REVISED IF PV PANELS OF DIFFERENT SIZES ARE USED. IF THE BEAMS GET LONGER THE STRUCTURAL ENGINEER MUST CHECK THE BEAM, COLUMN AND FOOTING. IF THE BEAMS GET SHORTER NO RECALCULATION IS REQUIRED.



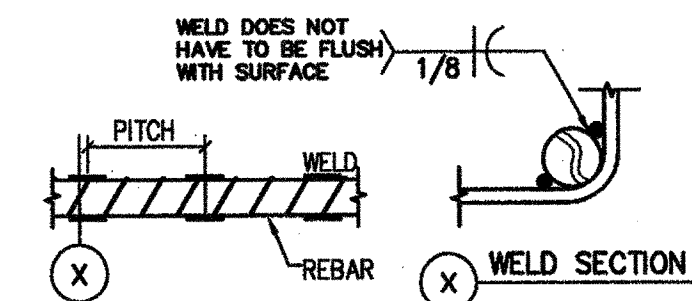
PORTRAIT PANEL FULL CANTILEVER ISOMETRIC PLAN
NO SCALE

MEMBER TYPE	3 PANELS 16'-7"	4 PANELS 22'-1 1/2"
BEAM SIZES	6 PURLINS 85 MPH/EXPOSURE C	8 PURLINS 85 MPH/EXPOSURE C
BEAM WITH WELDED CONNECTION PER DETAIL 5/TP3		
BEAM WITH BOLTED CONNECTION PER DETAIL 6/TP3		
CLEAR HEIGHT		
COLUMN SIZES	12'-0"	12'-0"

CONTRACTOR OPTION: 24" SQUARE "TOP" OF DRILLED PIER DUE TO SAW CUTTING ASPHALT TO ALLOW DRILLING OF FOOTING.

REBAR SIZE	WELD LENGTH (IN) - PITCH (C.T.O.C. SPACING) (IN)	MINIMUM NUMBER OF 2" LONG WELDS
#8	2 - 13	7

NOTE: IT IS ACCEPTABLE TO USE A CLOSER CENTER TO CENTER SPACING THAN WHAT IS SHOWN, BUT IT IS NOT ACCEPTABLE TO SPACE THE WELDS ANY FARTHER THAN WHAT IS SHOWN.



FULL-CANT FOUNDATION SCHEDULE												
PANEL ORIENTATION	# OF PANELS	CLEAR HEIGHT (MAX.)	DRILLED PIER EMBEDMENT DEPTH (32" DIAMETER)				SPREAD FOOTING SIZE					
			PASSIVE = 100PSF/FT	PASSIVE = 200PSF/FT	PASSIVE = 300PSF/FT	PASSIVE = 400PSF/FT	THICKNESS	WIDTH	LENGTH			
P	3	10'-6"	12'-7"	7'-11"	10'-0"	6'-4"	8'-9"	5'-6"	7'-11"	5'-0"	8'-0"	9'-6"
P	3	12'-0"	12'-0"	8'-2"	10'-1"	6'-0"	8'-0"	5'-0"	7'-2"	5'-0"	8'-0"	9'-6"
P	4	10'-6"	10'-3"	9'-8"	12'-3"	7'-6"	10'-8"	6'-0"	9'-11"	5'-6"	9'-6"	11'-6"
P	7	12'-0"	16'-0"	9'-0"	12'-7"	7'-0"	10'-9"	6'-0"	9'-9"	6'-0"	10'-0"	11'-9"

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APPOS 114571
AC: PLS SS
DATE: MAY 22 2012

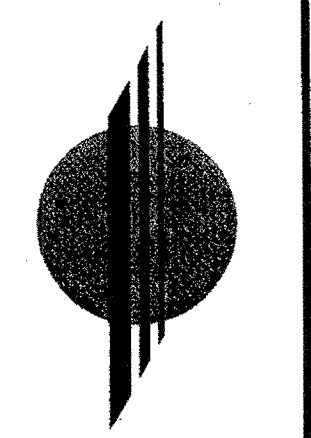


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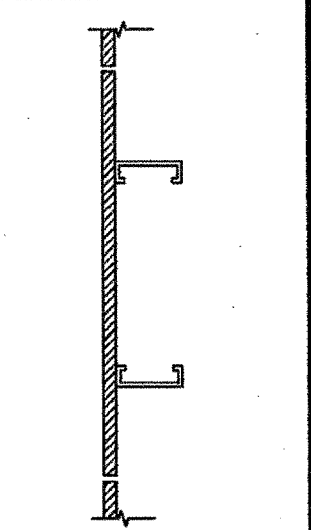
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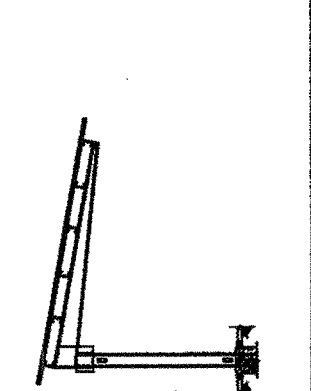
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DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02-112000
AC: PLS SS KB
DATE: 3.22.12



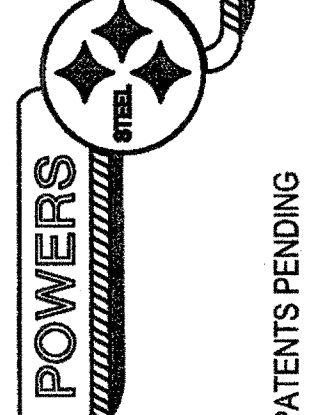
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consulting structural engineers
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Suite 200
Tempe, Arizona 85281
(480) 774-1700
(480) 774-1701 FAX
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PORTRAIT SOLAR PANELS ON FULL CANTILEVER SOLAR SUPPORT STRUCTURE
DSA-PRE CHECK



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DRAWING EDITION/REF JOB #

SITE PROJECT:

REVISIONS:

JOB NUMBER:

11-071

DRAWN: ENGINEER CHECKED:

BLP PGS DST

DATE:

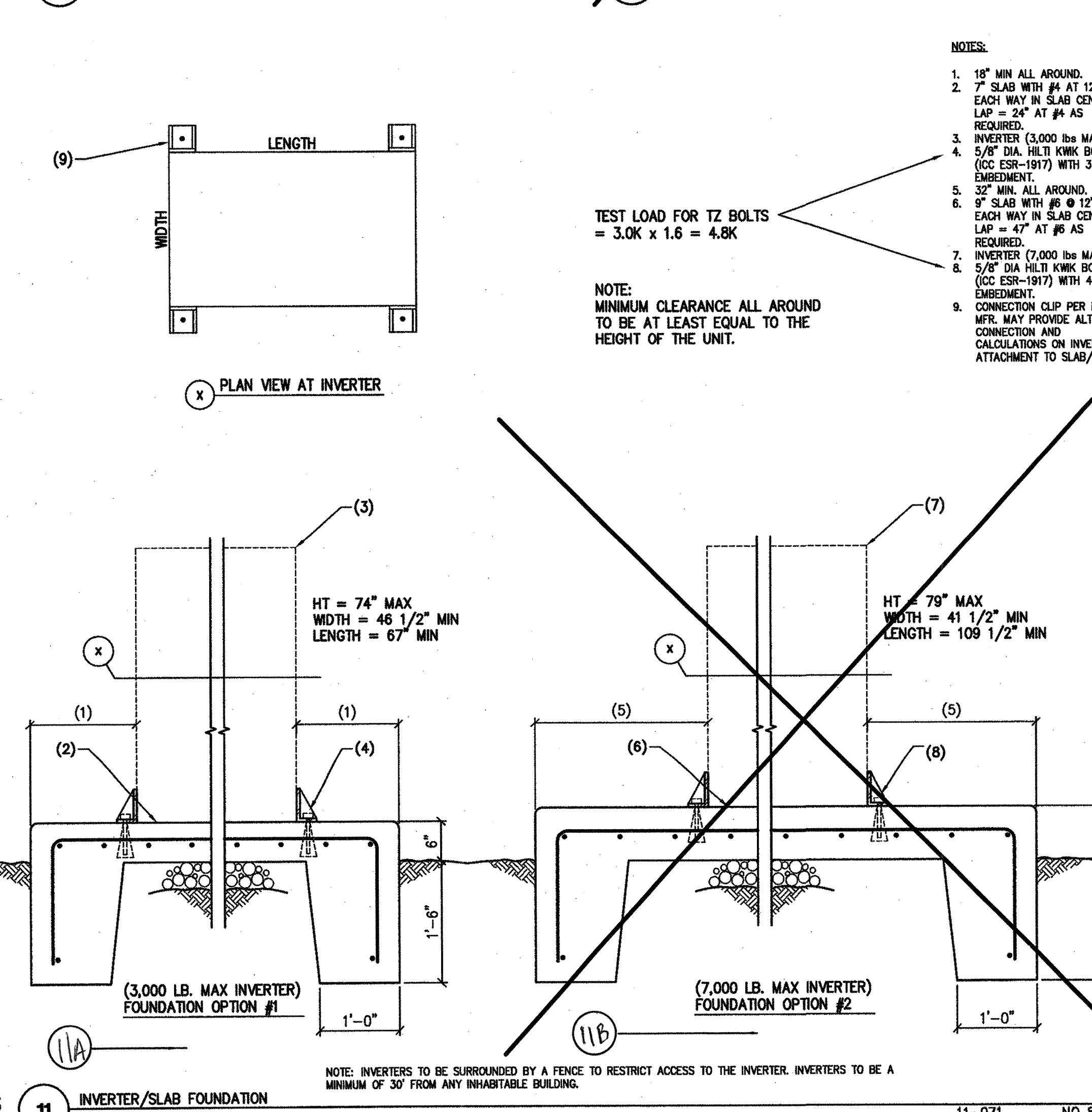
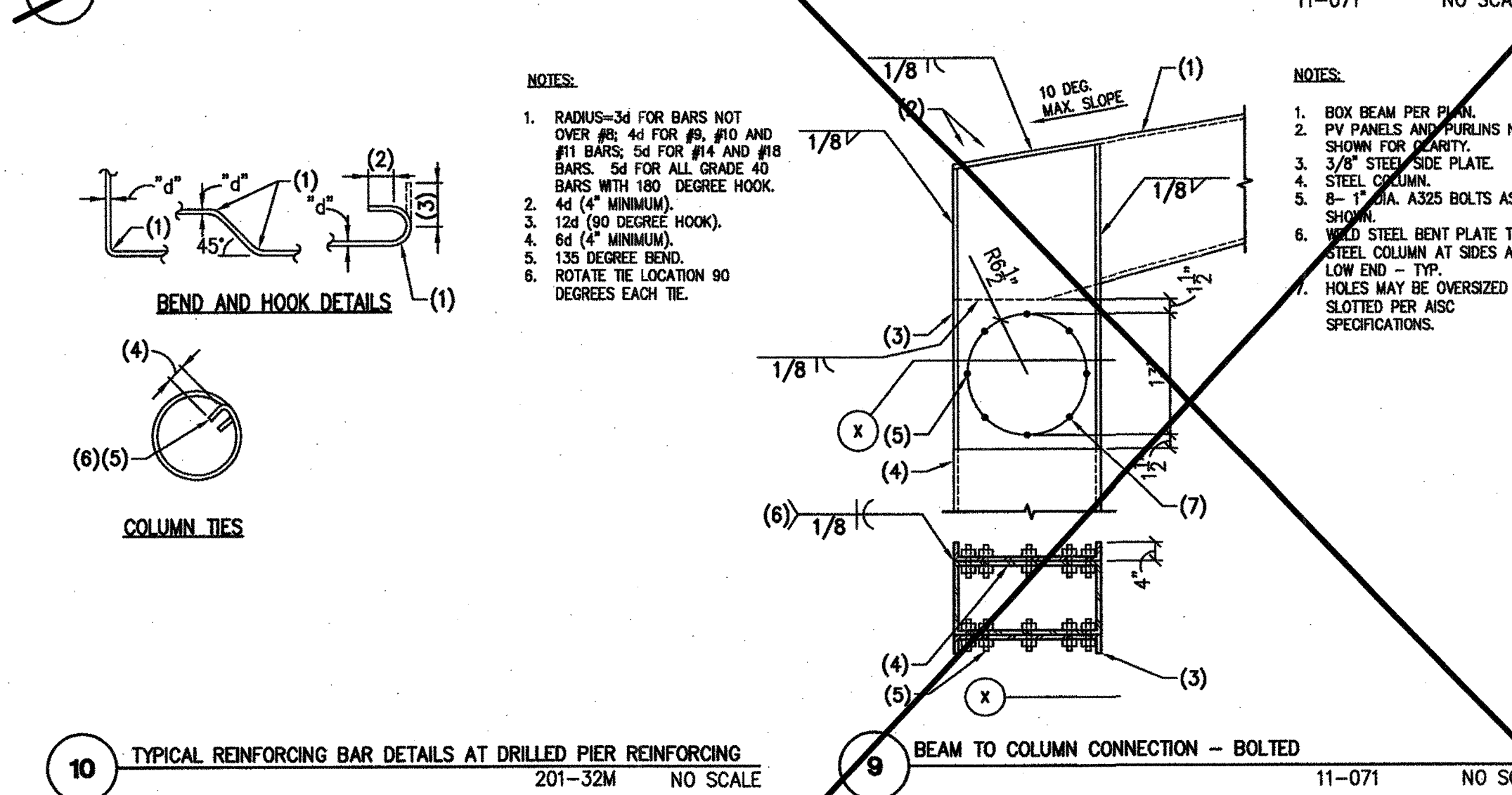
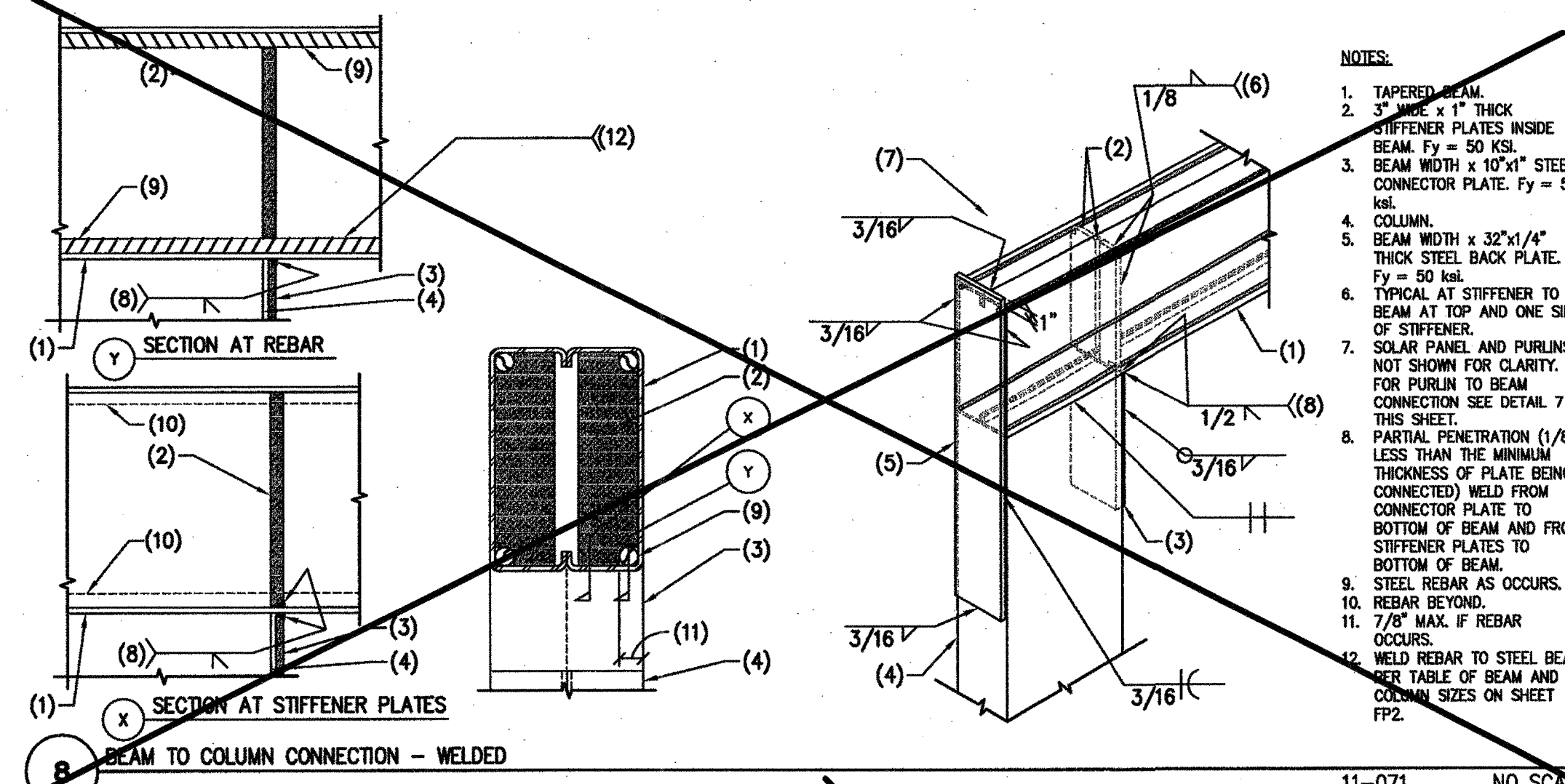
3/15/12

SHEET:

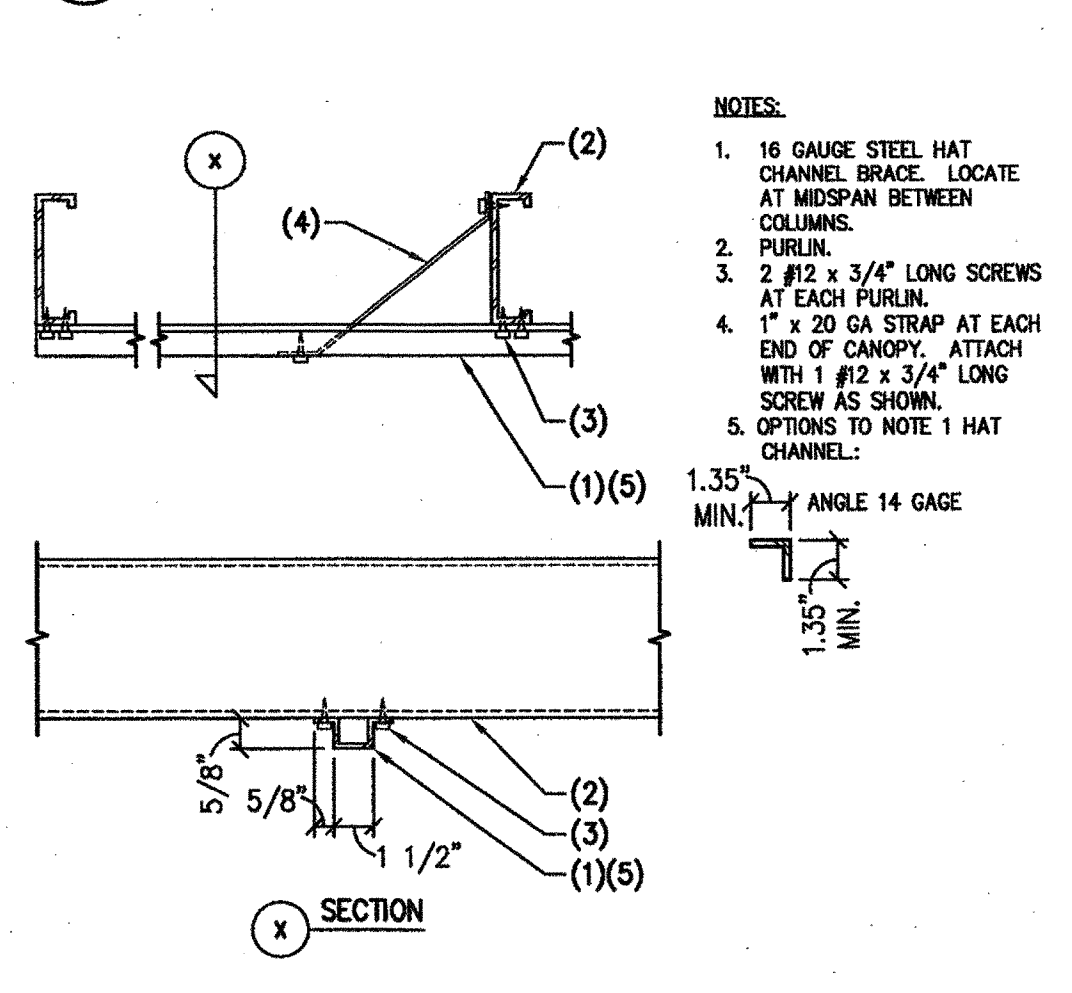
FP2

PATENTS PENDING

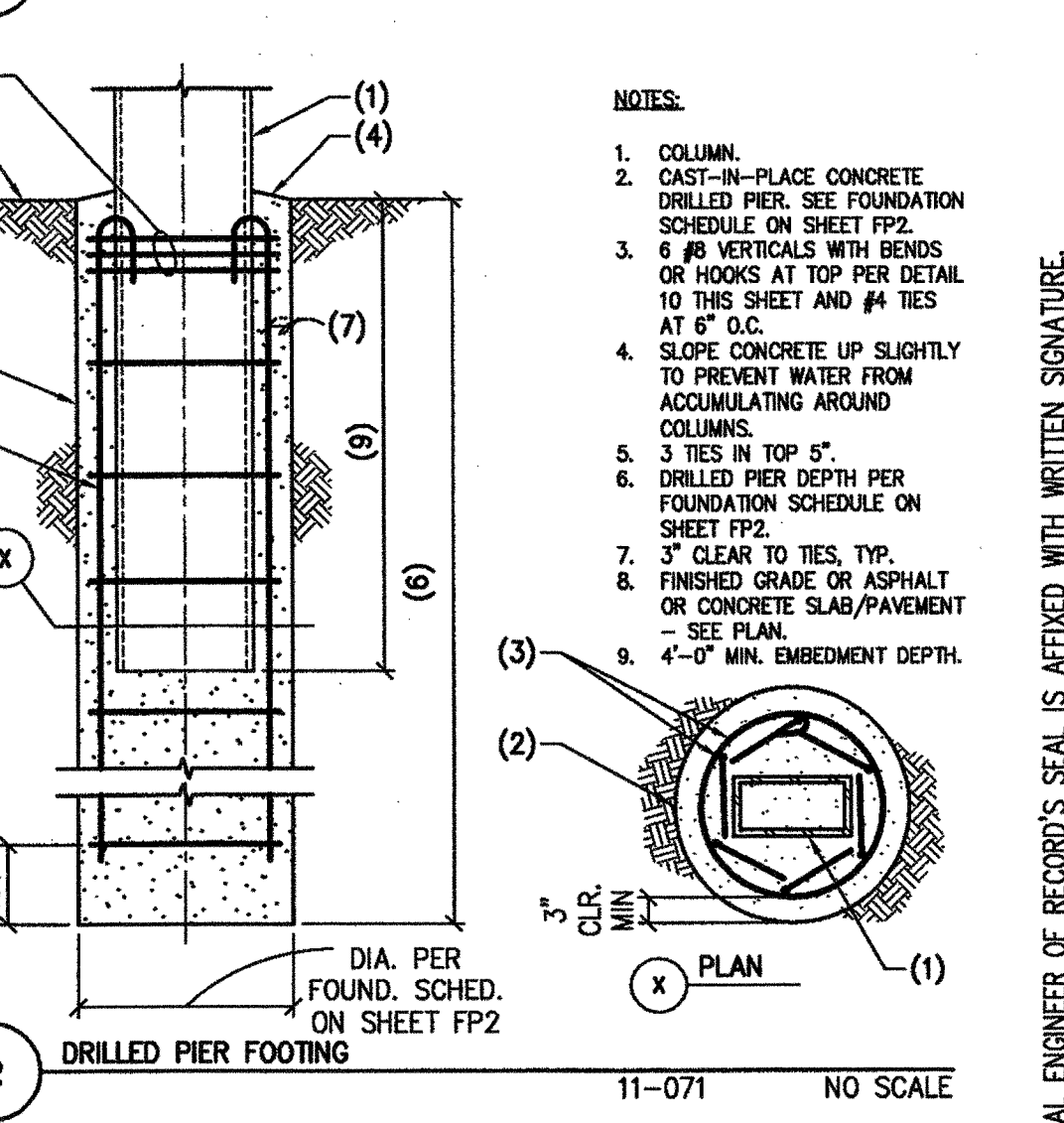
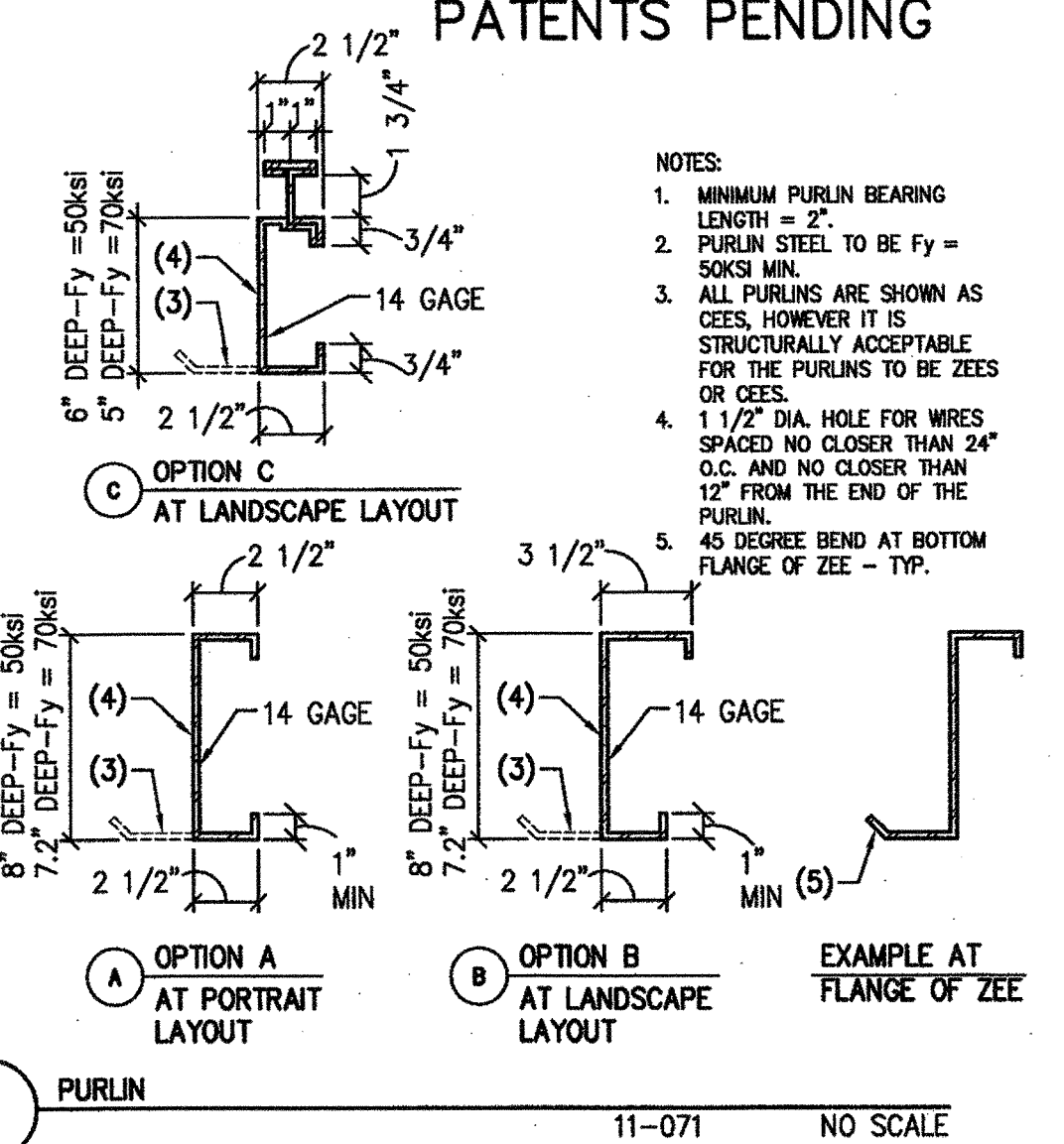
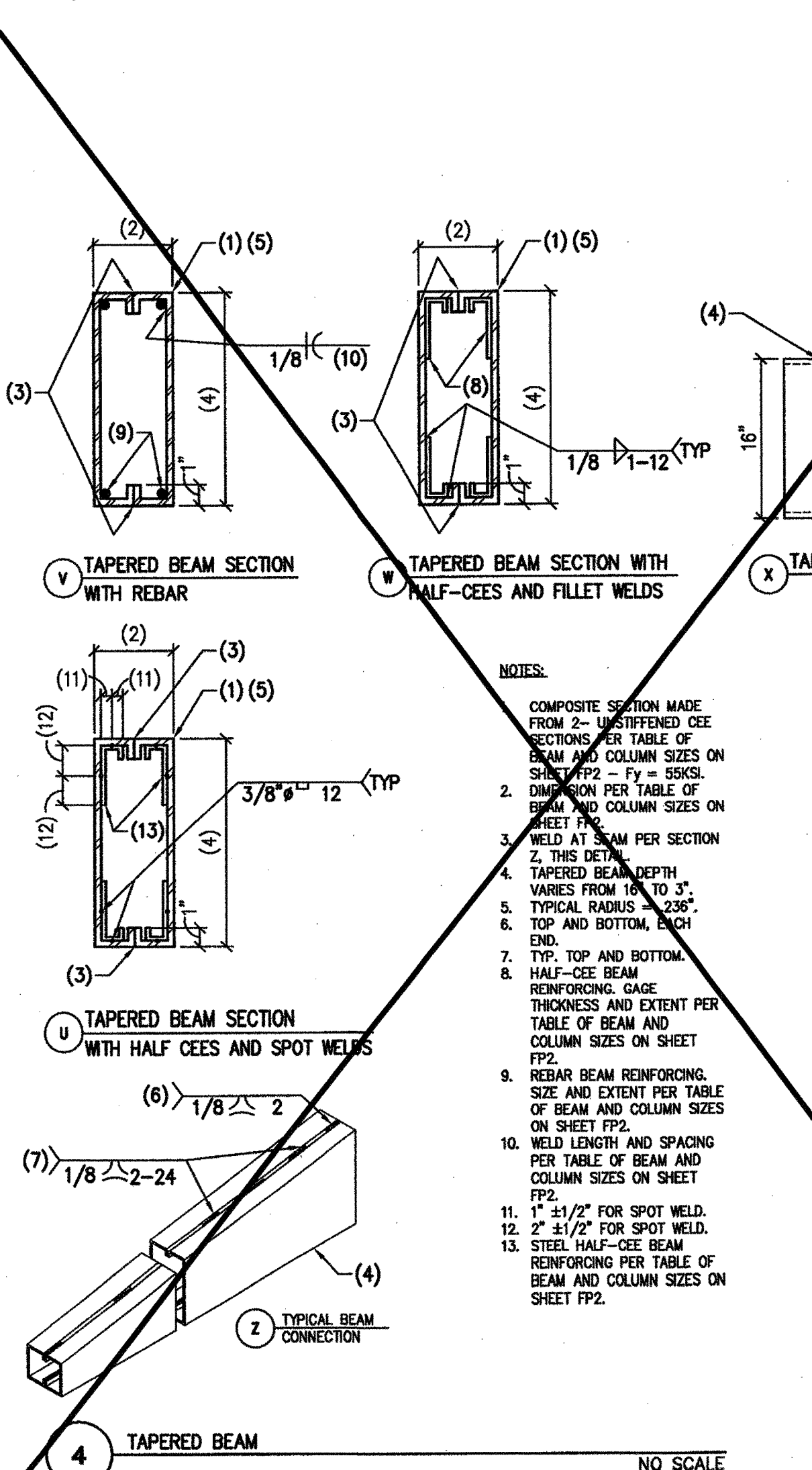
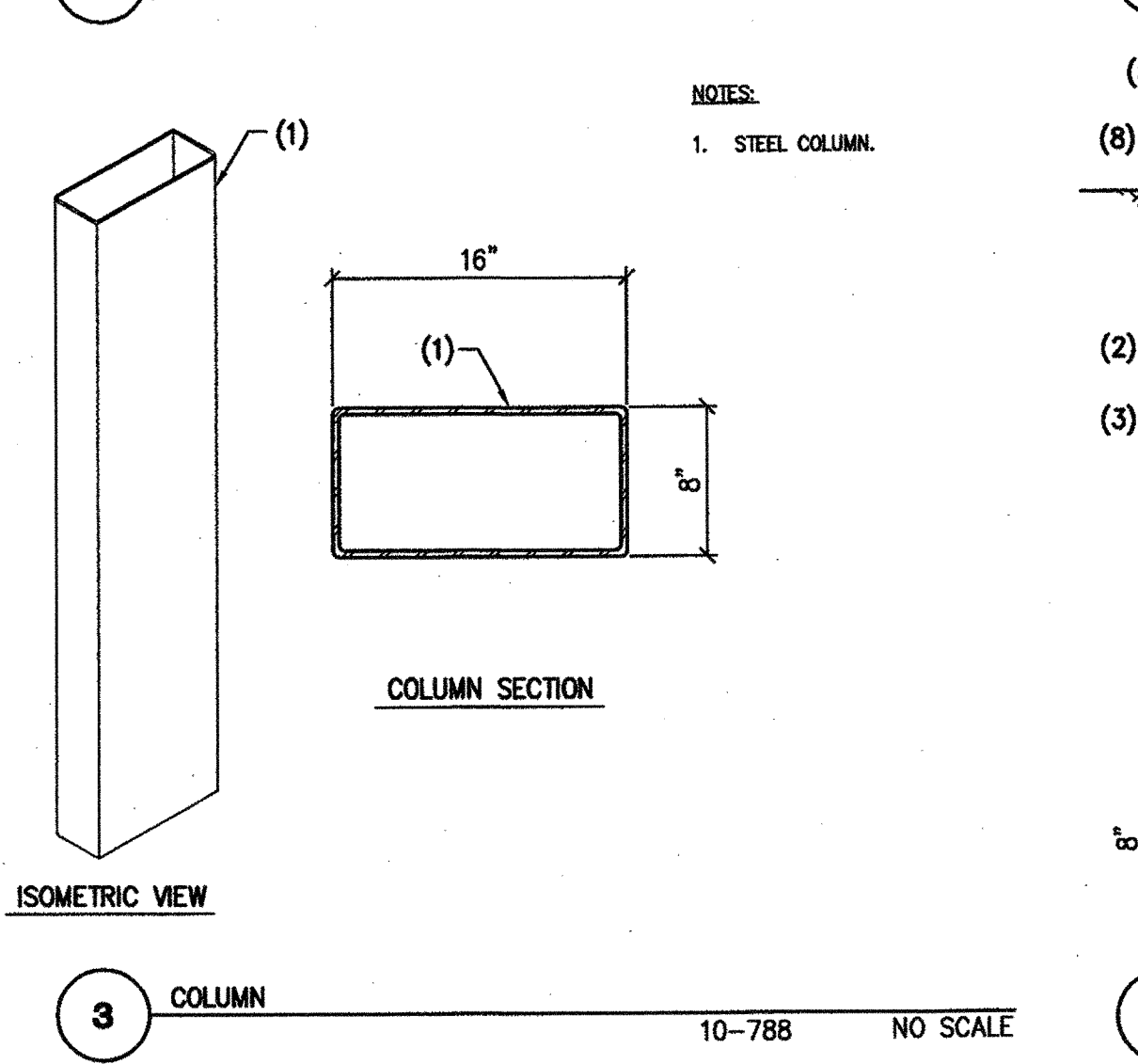
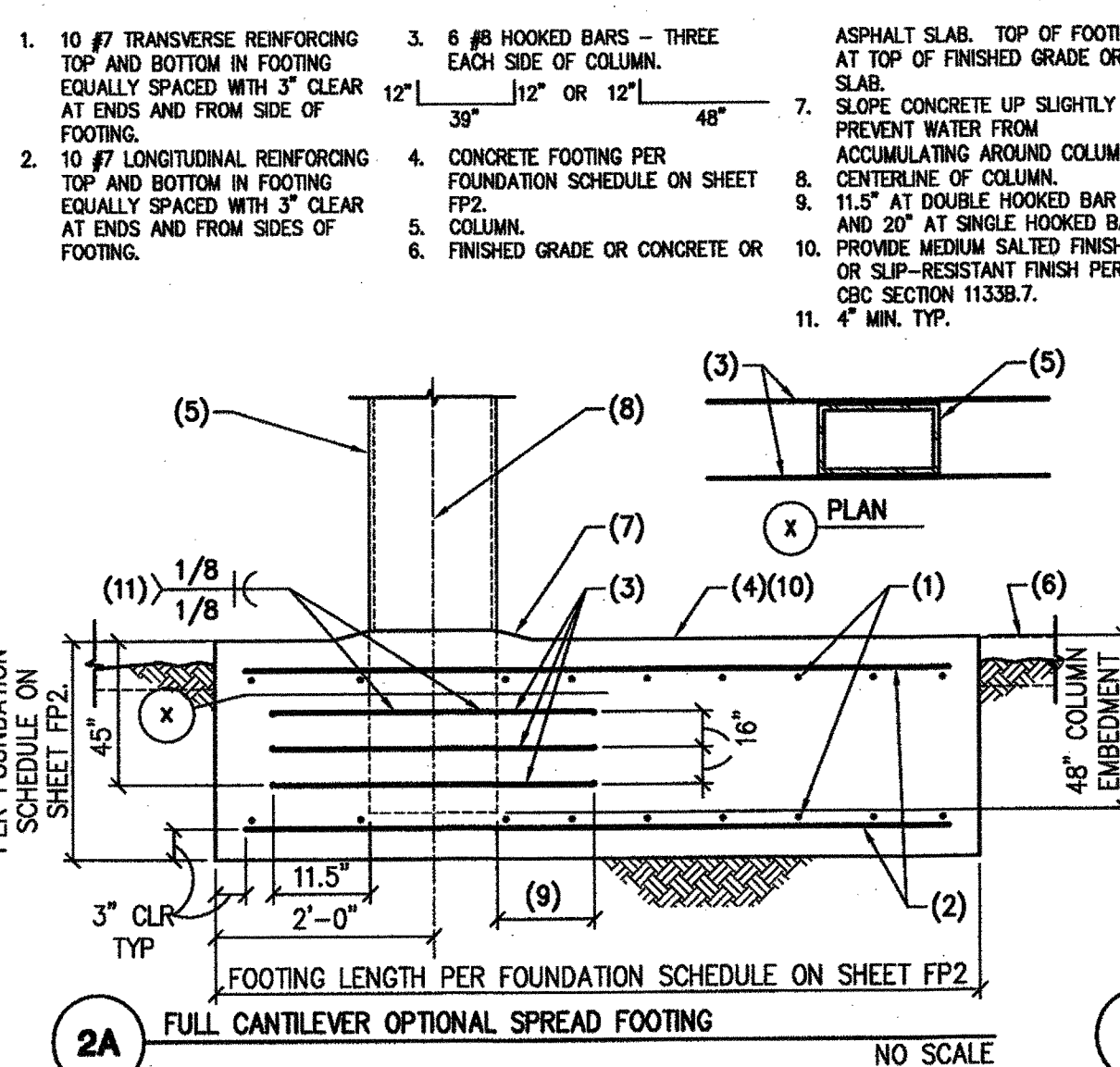
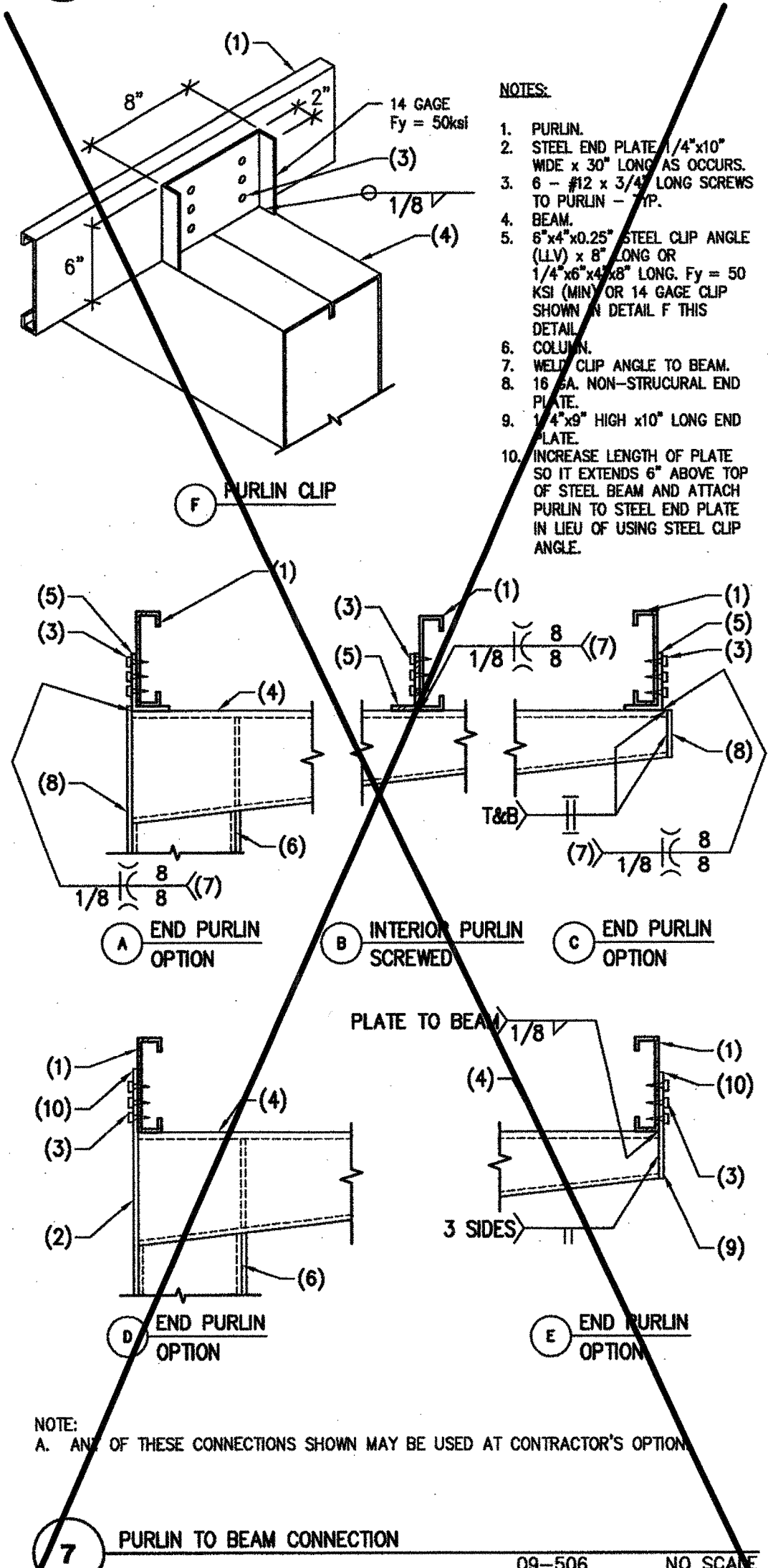
TABLE OF BEAM AND COLUMN SIZES



5 END CAP AT PURLIN 10-788 NO SCALE



6 STEEL BRACING AT PURLINS 09-506 NO SCALE



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AC FLS SS 60
DATE MAY 27 2012

7/15/12

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DATE 3.22.12

POWER STEEL & WIRE

11-071 NO SCALE

CARUSO TURLEY SCOTT INC.
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PORTRAIT SOLAR PANELS ON FULL CANTILEVER SOLAR SUPPORT STRUCTURE DSA PRE-CHECK

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THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY - NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

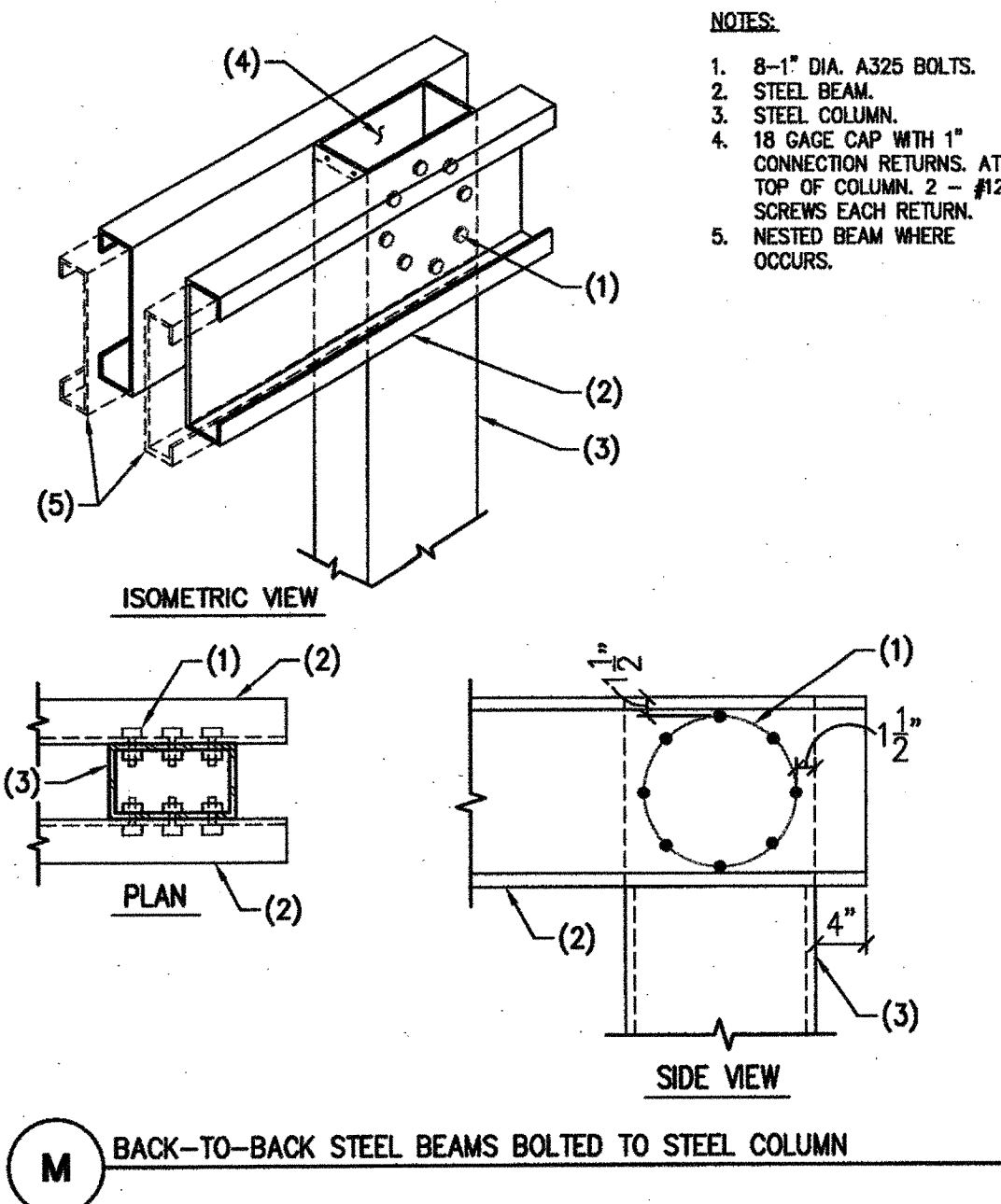
DRAWING EDITION/REF JOB #

SITE PROJECT:

REVISIONS:

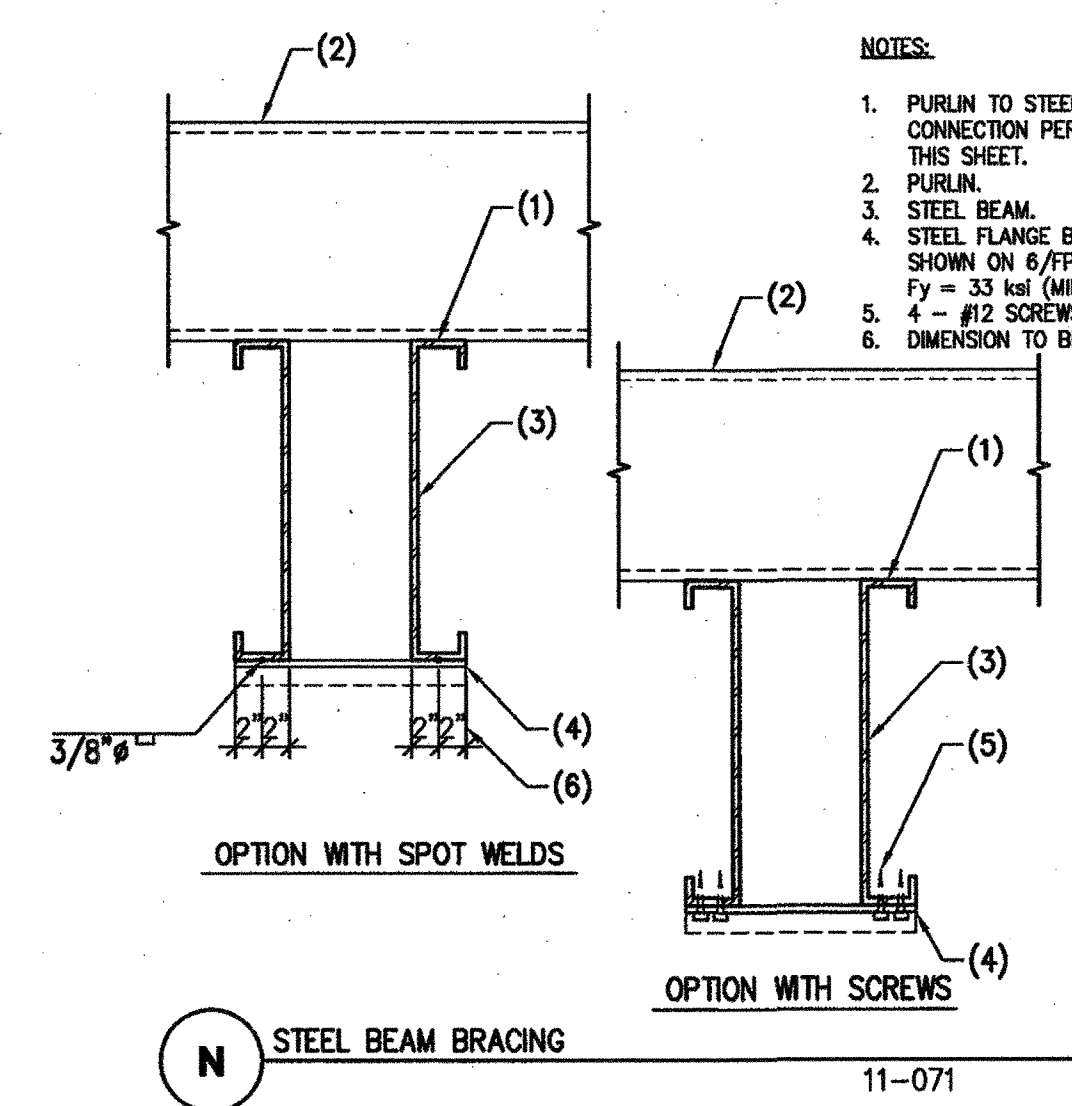
JOB NUMBER: 11-071
DRAWN: [ENGINEER] CHECKED: BLP PGS DST
DATE: 3/15/12
SHEET: FP3

PATENTS PENDING



- NOTES:**
- 8-1" DIA. A325 BOLTS.
 - STEEL BEAM.
 - STEEL COLUMN.
 - 18 GAGE CAP WITH 1" CONNECTION RETURNS AT TOP OF COLUMN. 2 - #12 SCREWS EACH RETURN.
 - NESTED BEAM WHERE OCCURS.

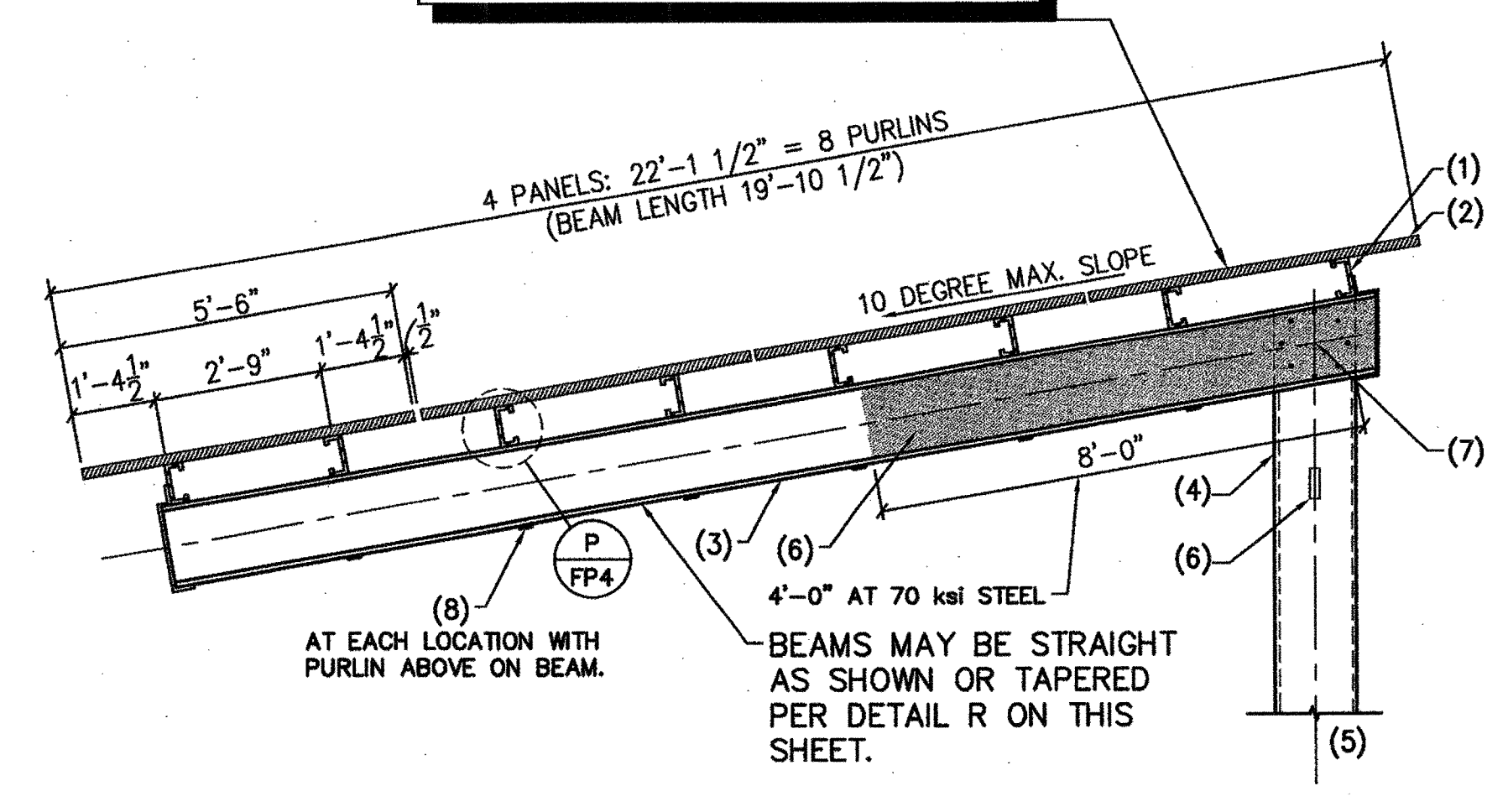
M BACK-TO-BACK STEEL BEAMS BOLTED TO STEEL COLUMN
11-071 NO SCALE



- NOTES:**
- PURLIN TO STEEL BEAM CONNECTION PER DETAIL P ON THIS SHEET.
 - PURLIN.
 - STEEL BEAM.
 - STEEL FLANGE BRACE AS SHOWN ON 6/FP3. Fy = 33 ksi (MIN).
 - 4 - #12 SCREWS.
 - DIMENSION TO BE ± 1/2".

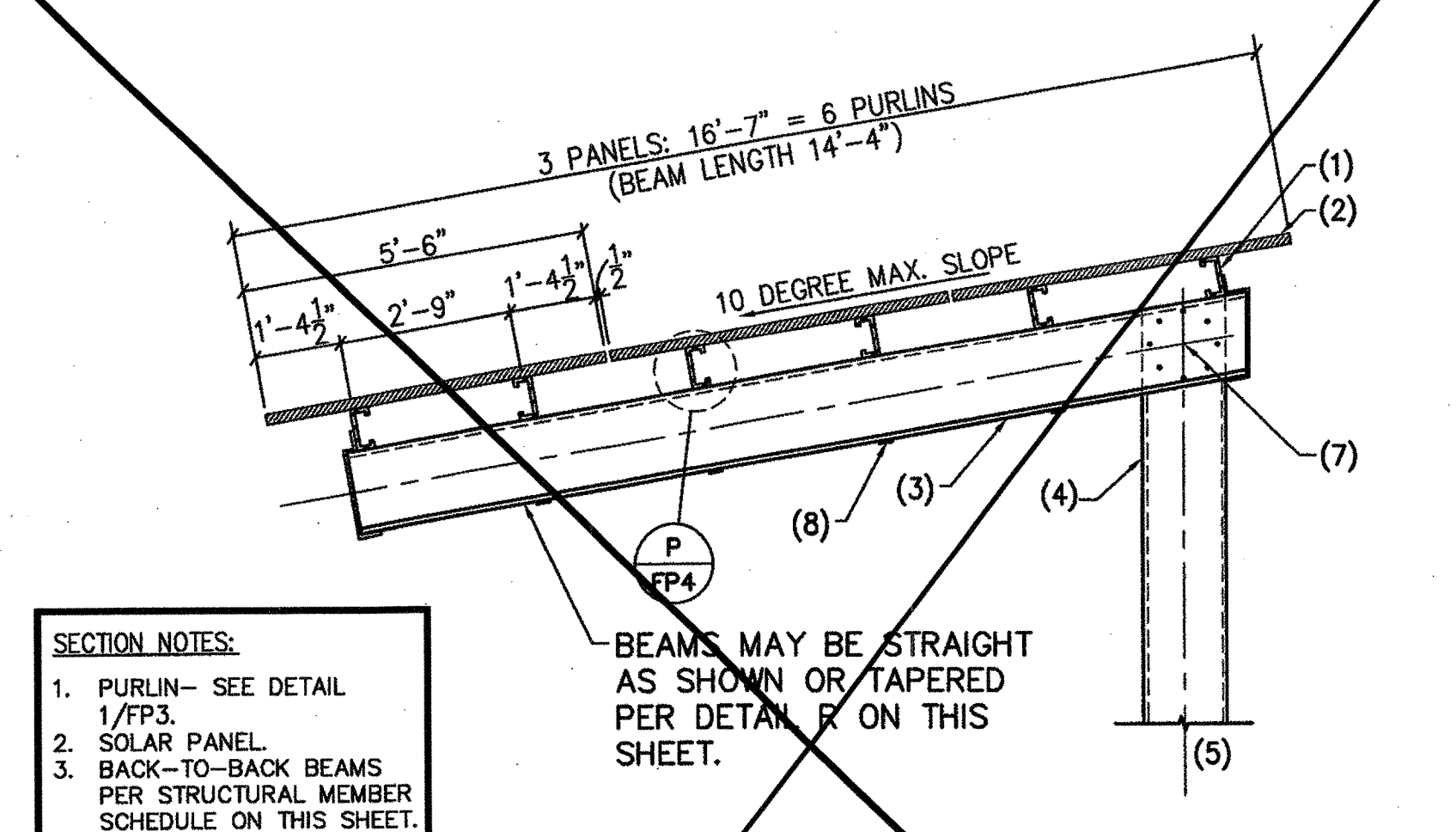
N STEEL BEAM BRACING
11-071 NO SCALE

NOTE:
 THE PV PANEL SIZE USED TO DETERMINE THE DIMENSIONS SHOWN ON THIS DRAWING WERE 3'-4" (40") x 5'-6" (66"). THERE IS A GAP OF 1/2" BETWEEN THE PV PANELS IN LANDSCAPE AND 1/2" GAP BETWEEN THE PANELS IN PORTRAIT. THE BEAM LENGTHS NEED TO BE REVISED IF PV PANELS OF DIFFERENT SIZES ARE USED. IF THE BEAMS GET LONGER THE STRUCTURAL ENGINEER MUST CHECK THE BEAM, COLUMN AND FOOTING. IF THE BEAMS GET SHORTER NO RECALCULATION IS REQUIRED.



NO STEEL DECK IS TO BE PLACED ON THE STRUCTURE NOW OR IN THE FUTURE.

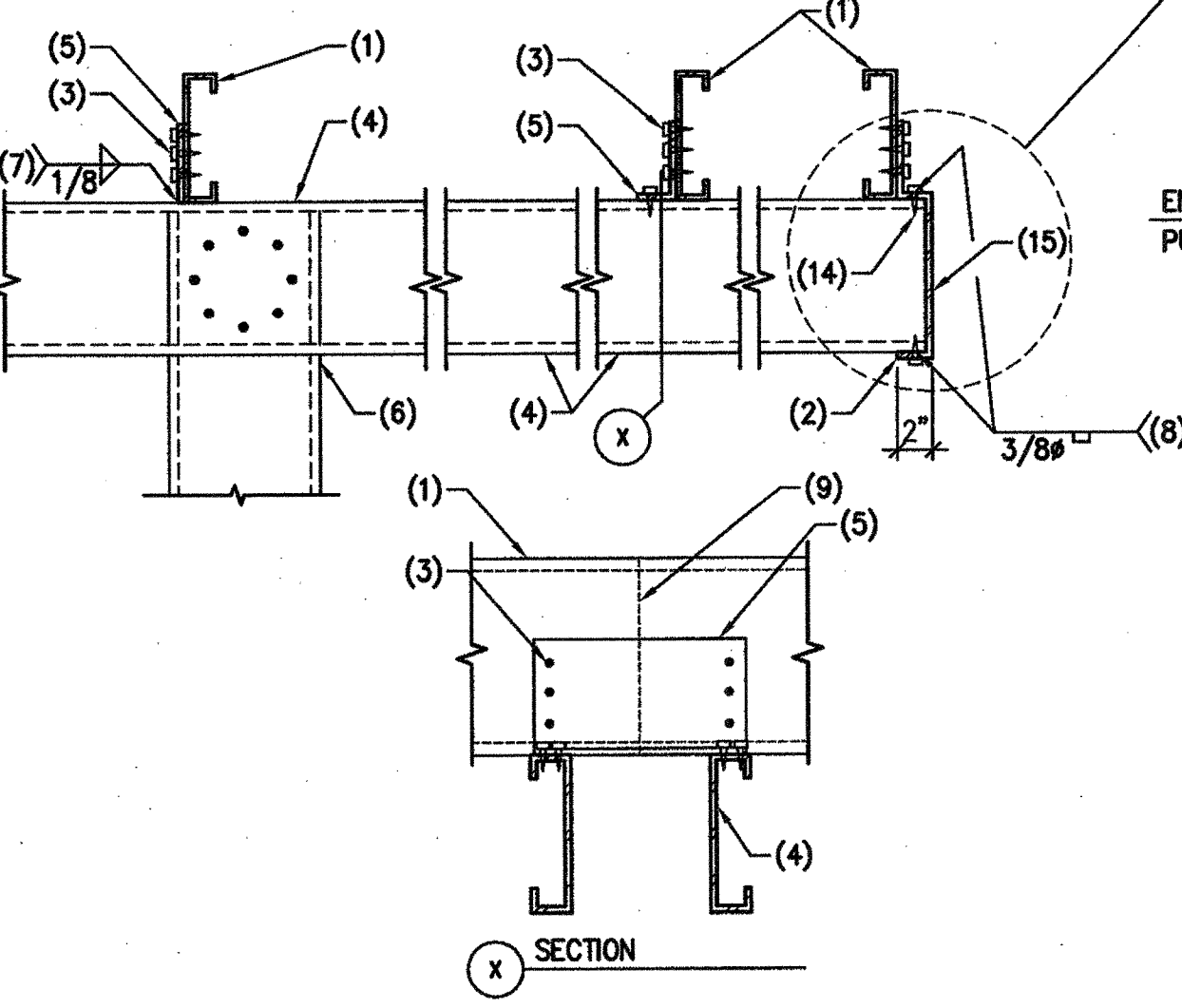
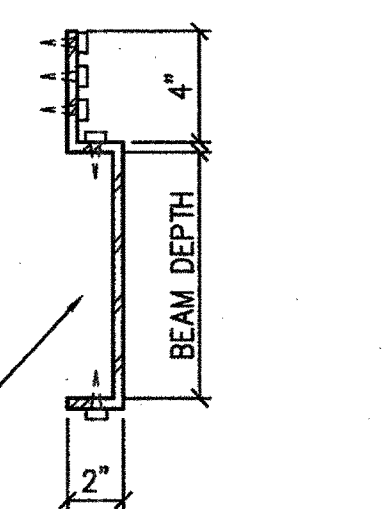
H PARTIAL SECTION AT PORTRAIT BACK-TO-BACK BEAMS AT 10 DEGREE SLOPE



NO STEEL DECK IS TO BE PLACED ON THE STRUCTURE NOW OR IN THE FUTURE.

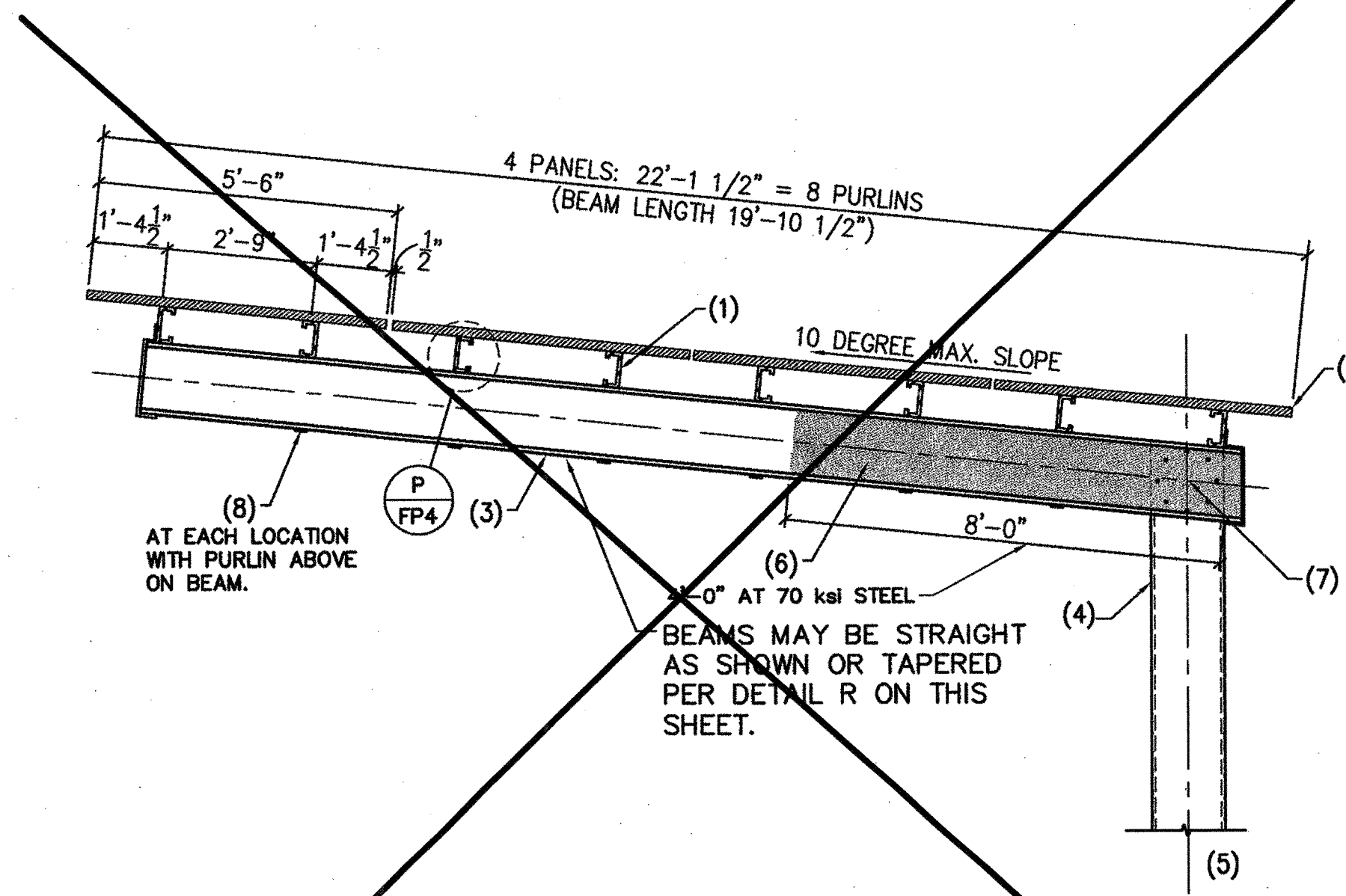
J PARTIAL SECTION AT PORTRAIT BACK-TO-BACK BEAMS AT 10 DEGREE SLOPE

- NOTES:**
- PURLIN.
 - 10 GA BEAM CAP PLATE W/ (4) #12 TO BOTTOM OF BEAM AND (6) #12 TO PURLIN.
 - (3) #12 x 3/4" LONG SCREWS TO PURLIN.
 - STEEL BEAM.
 - 18" LONG x 4" x 10 GAUGE STEEL CLIP OR 18" LONG x 4" x 16" (LLV) ANGLE WITH (2) #12 SCREWS AT EACH BEAM MEMBER. Fy = 50 ksi (MIN).
 - STEEL COLUMN.
 - WELD PLATE TO BEAM.
 - OPTIONAL SPOT WELD.
 - OPTIONAL PURLIN SPLICE LOCATION AT NON-CANTILEVERED PURLINS.
 - 18 GA CLIP.
 - (3) #12 SCREWS TO PURLIN.
 - TOP OF PURLIN.
 - (3) #12 SCREWS TO BEAM.
 - 2 #12 SCREWS AT EACH BEAM MEMBER.
 - IF CLIP OPTION Z IS USED, THE END CAP BECOMES NON-STRUCTURAL AND MAY BE 22 GAGE.
 - ALL DIMENSIONS TO BE ± 1/2".



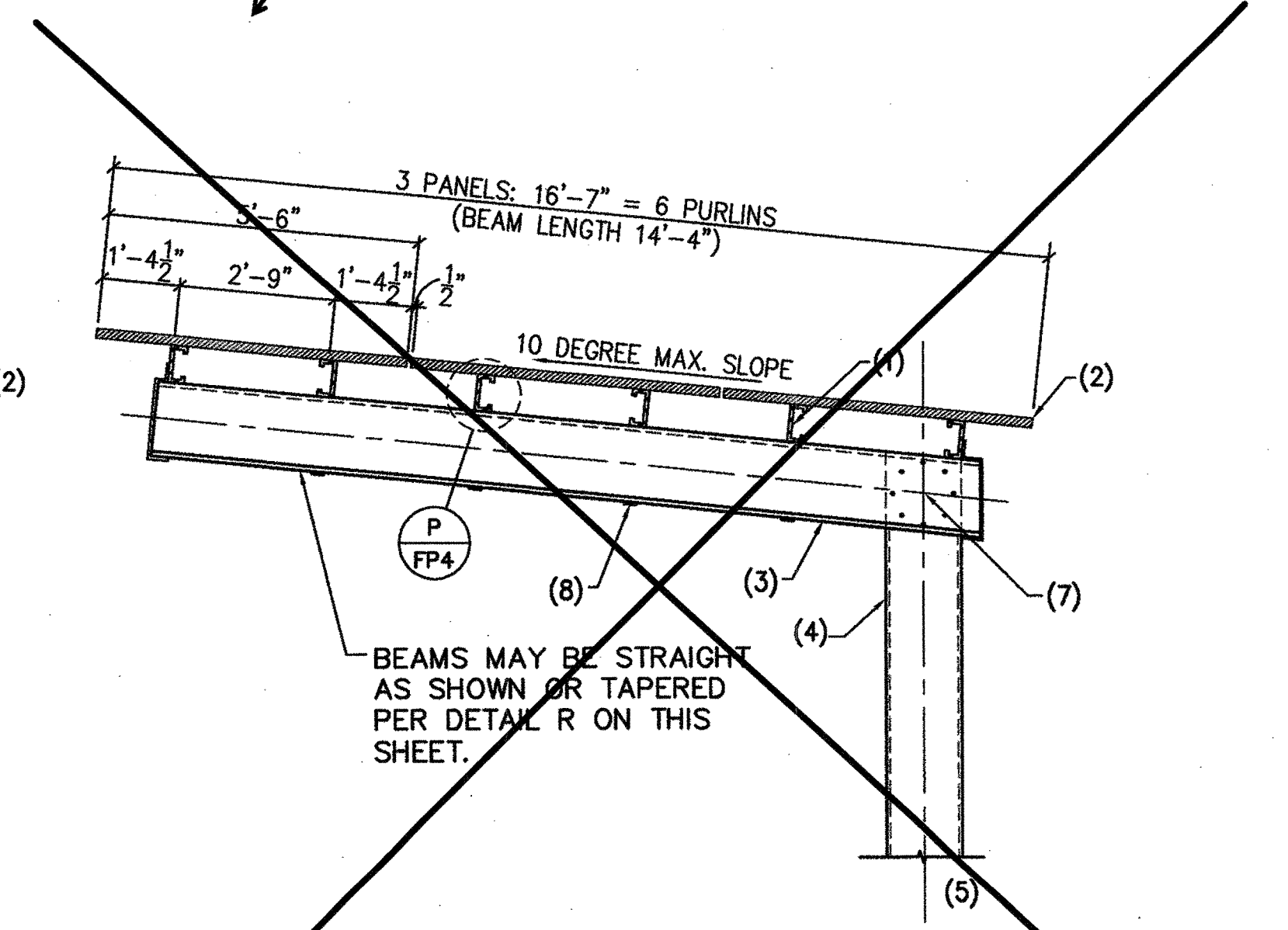
STRUCTURAL MEMBER SCHEDULE		
SOLAR CANOPY TYPE	STEEL BEAM SIZE (Fy=55 KSI)	NESTED BEAM SIZE (OPTION) (Fy=55 KSI)
3 PANEL FULL	(2) 18"x4"x10 GA	(2) 18"x4"x10 GA
4 PANEL FULL	(2) 18"x4"x10 GA	(2) 18"x4"x10 GA WITH 10 GA. NESTED BEAM (SEE DETAILS H AND K ON THIS SHEET FOR LENGTH AND LOCATION)

STRUCTURAL MEMBER SCHEDULE



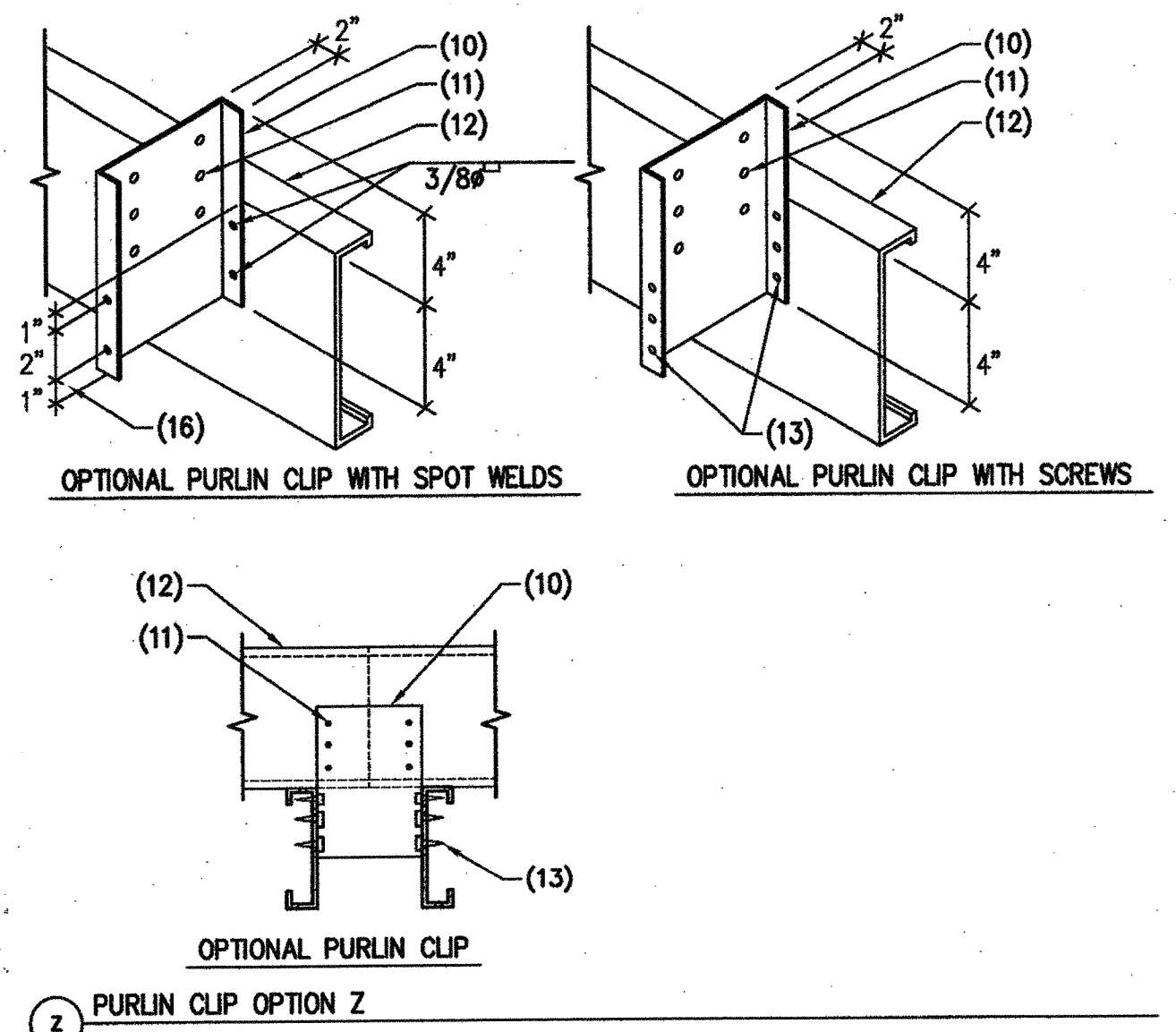
NO STEEL DECK IS TO BE PLACED ON THE STRUCTURE NOW OR IN THE FUTURE.

I PARTIAL SECTION AT PORTRAIT BACK-TO-BACK BEAMS AT 10 DEGREE SLOPE

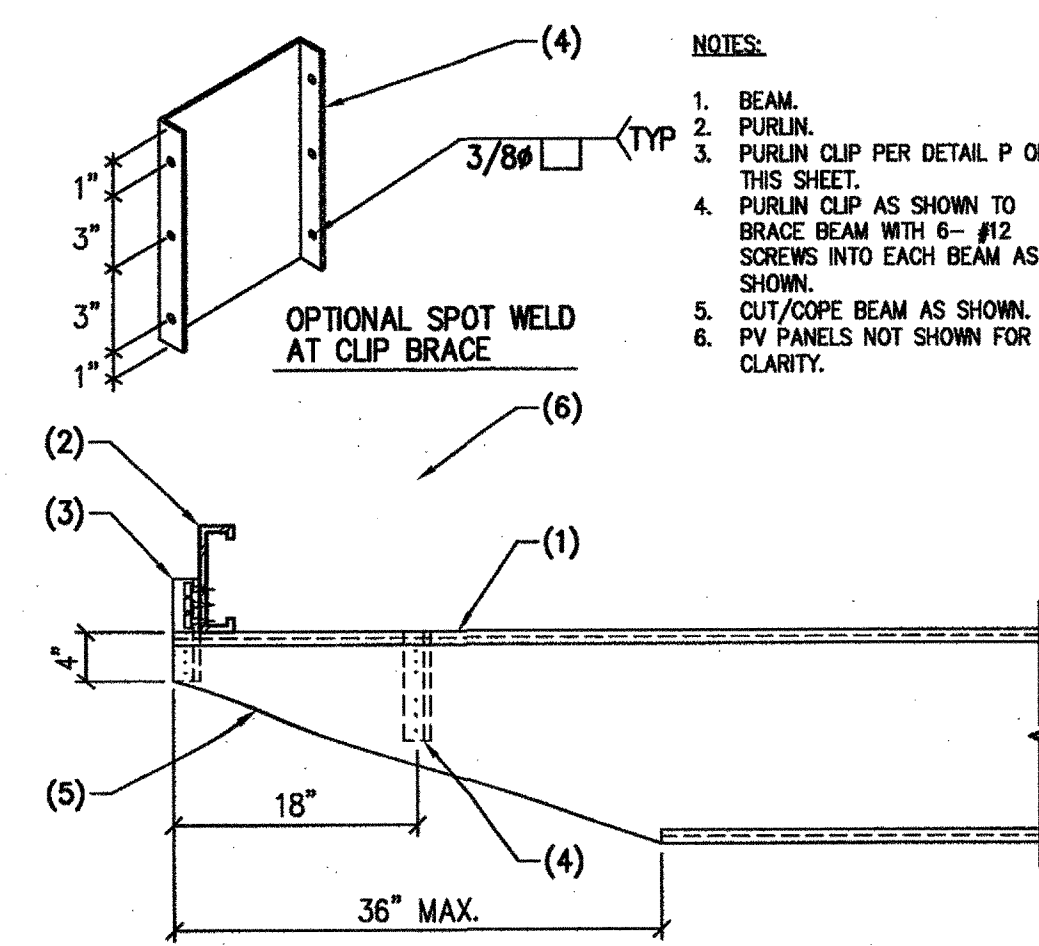


NO STEEL DECK IS TO BE PLACED ON THE STRUCTURE NOW OR IN THE FUTURE.

L PARTIAL SECTION AT PORTRAIT BACK-TO-BACK BEAMS AT 10 DEGREE SLOPE



2 PURLIN CLIP OPTION Z

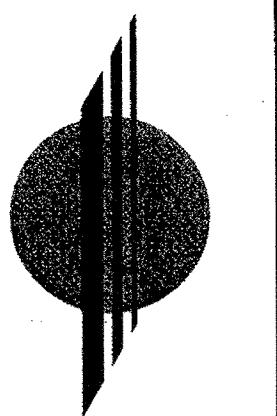


- NOTES:**
- BEAM.
 - PURLIN.
 - PURLIN CLIP PER DETAIL P ON THIS SHEET.
 - PURLIN CLIP AS SHOWN TO BRACE BEAM WITH 6 - #12 SCREWS INTO EACH BEAM AS SHOWN.
 - CUT/COPE BEAM AS SHOWN. PV PANELS NOT SHOWN FOR CLARITY.
 -

R BEAM TAPER OPTION
11-071 NO SCALE

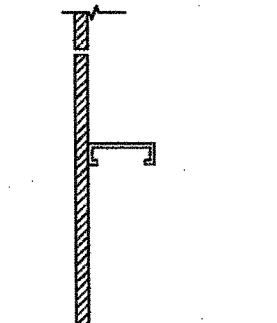
P PURLIN TO BEAM CONNECTION
11-071 NO SCALE
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PATENTS PENDING

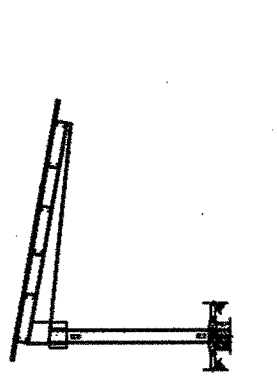


**CARUSO
TURLEY
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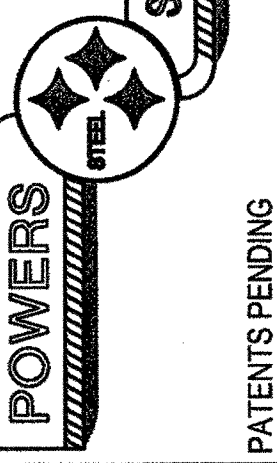
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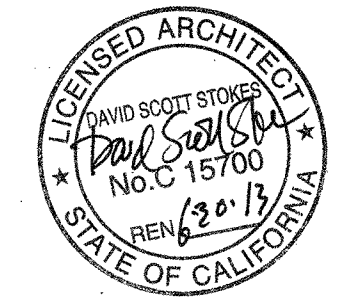
SITE PROJECT:
 REVISIONS:

JOB NUMBER:
 11-071

DRAWN: ENGINEER/ CHECKED:
 BLP/ PGS/ DST

DATE:
 3/15/12

SHEET:
FP4

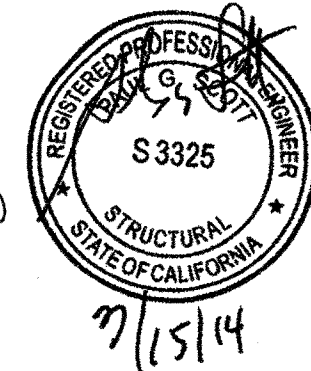


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02-112000
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 APP03 114571
 AC: FLS ✓ SS ✓ ED
 DATE: MAY 2, 2012



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ABBREVIATIONS table listing various construction terms and their corresponding abbreviations, such as A.B.C. for Aggregate Base Course and W.F. for Welded Wire Fabric.

Building Code, Occupancy Group, Allowable Area and Minimum Separation, Loads, Foundations, Concrete, Reinforcing, Steel Construction, Welding, Cold Formed Structural Steel Framing, and General Notes sections.

Welding, Cold Formed Structural Steel Framing, and General Notes sections.

Notes for site specific photovoltaic (PV) installation, including requirements for steel structures supporting PV panels, marking, and safety.

Governing Load Combinations table with columns for Purlin, Beam, and Column/Footing, and rows for different load cases (DL, DL + 0.75W + 0.75Lr, etc.).

6P = 6 PANELS, 7P = 7 PANELS

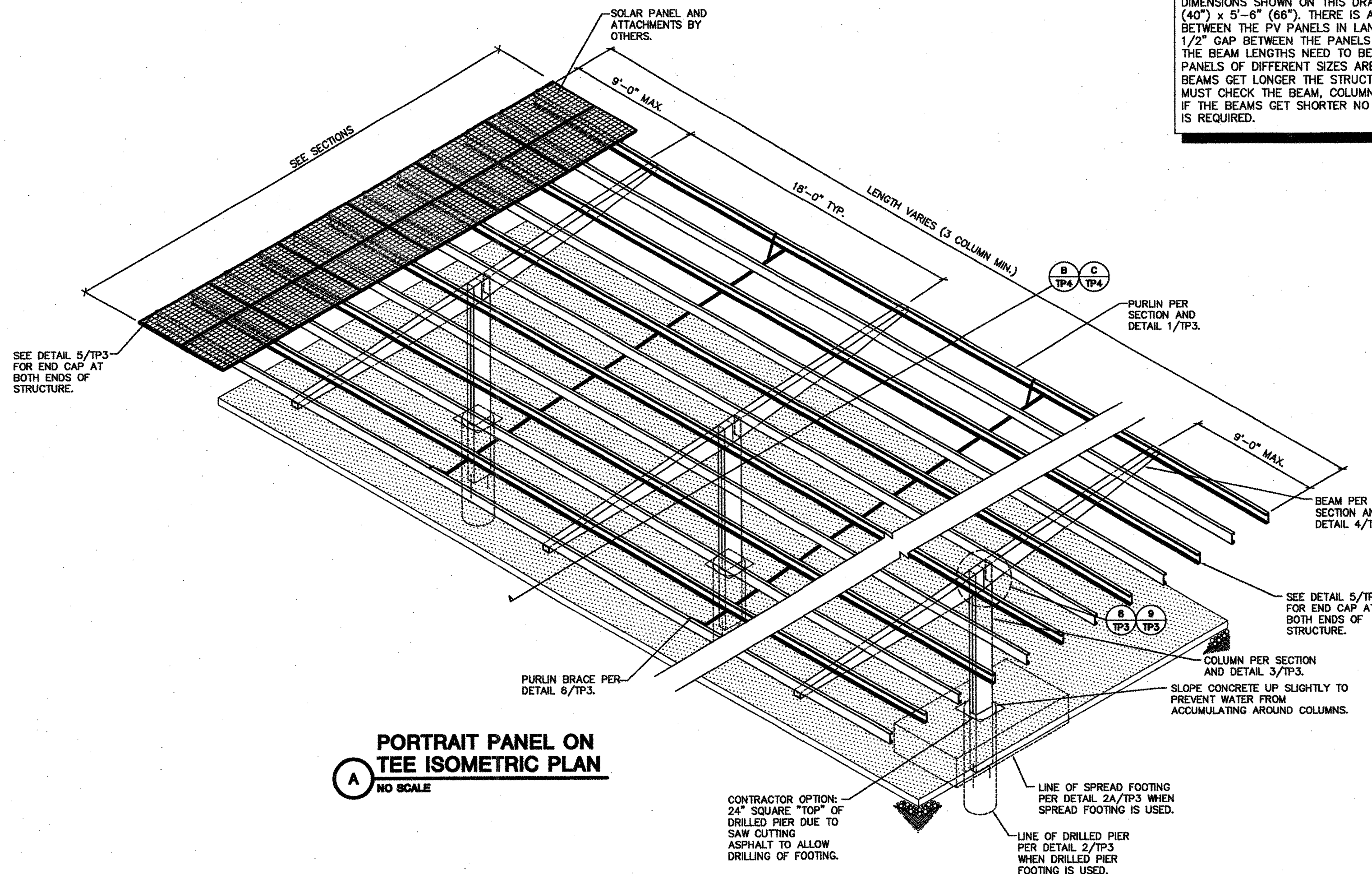
SHEET INDEX FOR 02-111999 table listing sheet numbers (TL1, TL2, TL3, TL4, TP1, TP2, TP3, TP4) and their corresponding titles.

IDENTIFY THE OPTIONS TO BE USED BY CROSSING OUT OPTIONS NOT USED IN ANY SPECIFIC PROJECT.

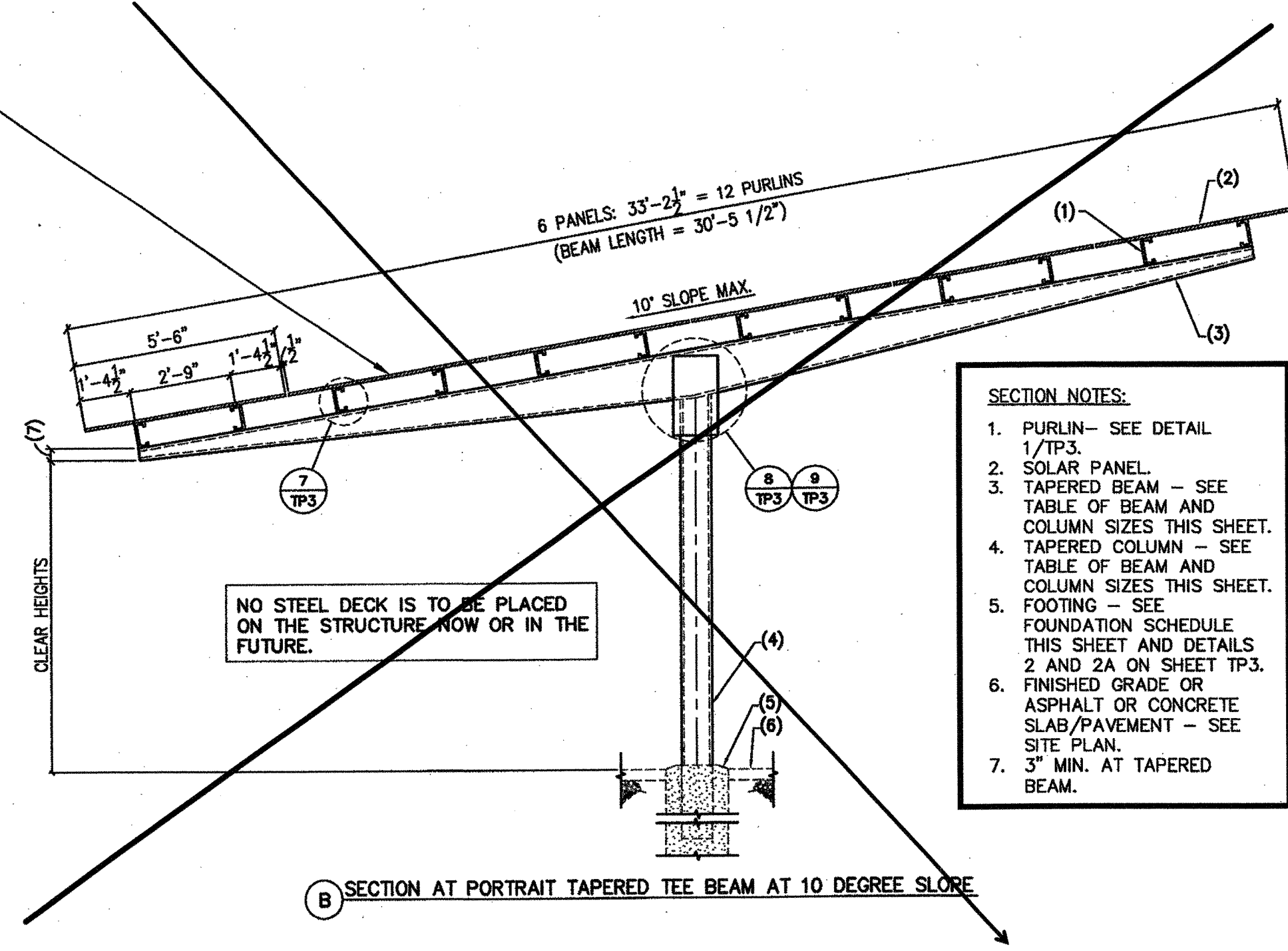
PRE-CHECK (PC) DOCUMENT section with project code, application for construction, and identification stamps.

Vertical sidebar containing the Caruso Turley Scott Inc. logo, contact information, and a vertical signature line.

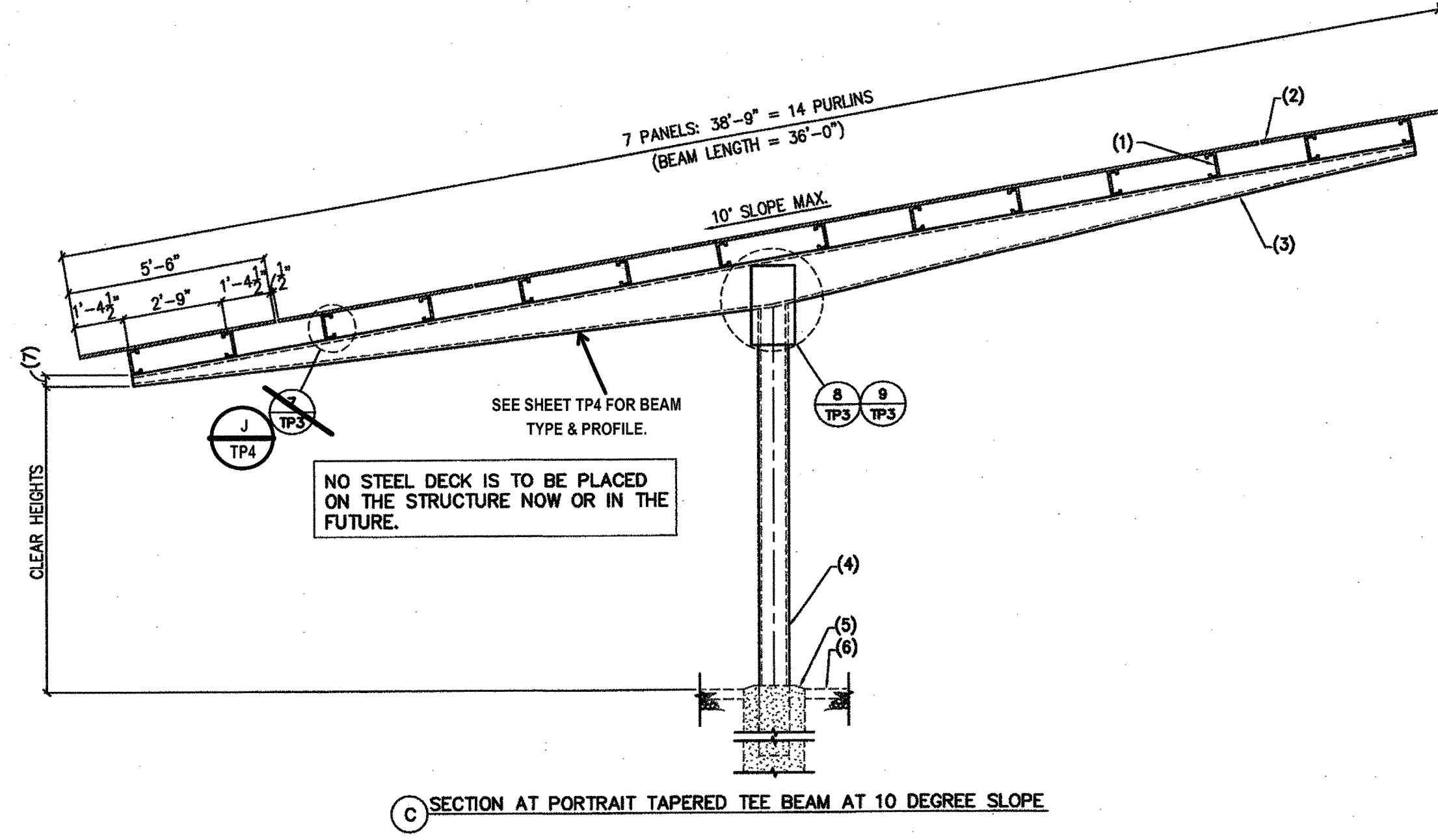
NOTE: THE PV PANEL SIZE USED TO DETERMINE THE DIMENSIONS SHOWN ON THIS DRAWING WERE 3'-4" (40") x 5'-6" (66"). THERE IS A GAP OF 1/2" BETWEEN THE PV PANELS IN LANDSCAPE AND 1/2" GAP BETWEEN THE PANELS IN PORTRAIT. THE BEAM LENGTHS NEED TO BE REVISED IF PV PANELS OF DIFFERENT SIZES ARE USED. IF THE BEAMS GET LONGER THE STRUCTURAL ENGINEER MUST CHECK THE BEAM, COLUMN AND FOOTING. IF THE BEAMS GET SHORTER NO RECALCULATION IS REQUIRED.



A PORTRAIT PANEL ON TEE ISOMETRIC PLAN
NO SCALE

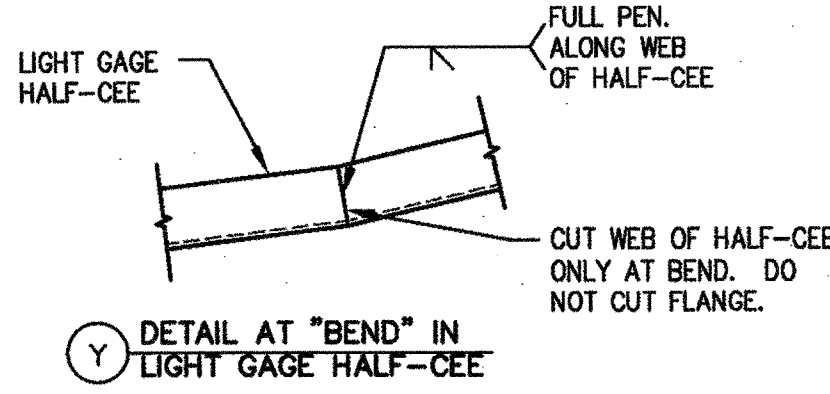


SECTION NOTES:
1. PURLIN - SEE DETAIL 1/TP3.
2. SOLAR PANEL.
3. TAPERED BEAM - SEE TABLE OF BEAM AND COLUMN SIZES THIS SHEET.
4. TAPERED COLUMN - SEE TABLE OF BEAM AND COLUMN SIZES THIS SHEET.
5. FOOTING - SEE FOUNDATION SCHEDULE THIS SHEET AND DETAILS 2 AND 2A ON SHEET TP3.
6. FINISHED GRADE OR ASPHALT OR CONCRETE SLAB/PAVEMENT - SEE SITE PLAN.
7. 3\"/>

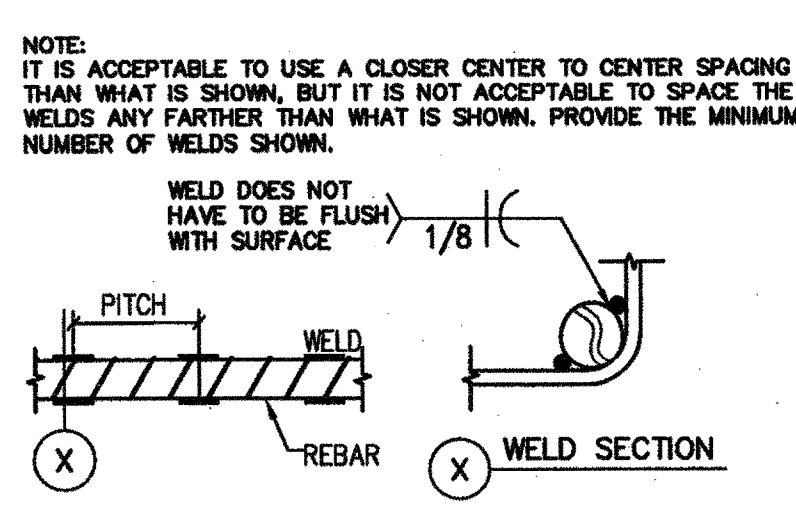


C SECTION AT PORTRAIT TAPERED TEE BEAM AT 10 DEGREE SLORE

MEMBER TYPE	6 PANELS 33'-2 1/2"	7 PANELS 38'-9"
BEAM SIZES	12 PURLINS 85 MPH/EXPOSURE C	14 PURLINS 85 MPH/EXPOSURE C
BEAM WITH WELDED CONNECTION PER DETAIL 8/TP3	10 GA. NO REINFORCING REQ'D. FOR Fy=70ksi 10 GAGE STEEL. 4 #4 BEAM REINFORCING 4'-0"	10 GA. NO REINFORCING REQ'D. FOR Fy=70ksi 10 GAGE STEEL. 4 #6 BEAM REINFORCING 4'-0" FOR Fy=55ksi 4'-0" FOR Fy=70ksi
BEAM WITH BOLTED CONNECTION PER DETAIL 9/TP3	10 GA. NO REINFORCING REQ'D. FOR Fy=70ksi 10 GAGE STEEL. 14 GA. LIGHT GAGE HALF-CEE (A CEE SHAPE CUT IN HALF) 4'-0"	10 GA. NO REINFORCING REQ'D. FOR Fy=70ksi 10 GAGE STEEL. 12 GA. LIGHT GAGE HALF-CEE (A CEE SHAPE CUT IN HALF) 14'-0" FOR Fy=55ksi 6'-0" FOR Fy=70ksi
CLEAR HEIGHT	10'-6"	12'-0"
COLUMN SIZES	HSS 16"x8"x3/8" Fy= 46 ksi HSS 16"x8"x1/4" Fy= 65 ksi	HSS 16"x8"x3/8" Fy= 46 ksi HSS 16"x8"x5/16" Fy= 65 ksi



REBAR SIZE	WELD LENGTH (IN) - PITCH (C.T.O.C. SPACING) (IN)	MINIMUM NUMBER OF 2" LONG WELDS
#4	2 - 7	2
#6	2 - 10	4



NOTES:
1. FOR BEAM REINFORCING INFORMATION NOT SHOWN, SEE DETAIL 4/TP3.
2. BEAM REINFORCING WITH REBAR OPTION MAY ALSO BE USED WITH BOLTED CONNECTION.

TABLE OF BEAM AND COLUMN SIZES
NO SCALE

PANEL ORIENTATION	# OF PANELS	CLEAR HEIGHT (MAX)	DRILLED PIER EMBEDMENT DEPTH (32" DIAMETER)				SPREAD FOOTING SIZE						
			PASSIVE = 100PSF/FT	PASSIVE = 200PSF/FT	PASSIVE = 300PSF/FT	PASSIVE = 400PSF/FT	THICKNESS	WIDTH	LENGTH				
			DIRT AND/OR ASPHALT PAVEMENT (UNCONSTRAINED)	CONCRETE PAVEMENT (CONSTRAINED)	DIRT AND/OR ASPHALT PAVEMENT (UNCONSTRAINED)	CONCRETE PAVEMENT (CONSTRAINED)				DIRT AND/OR ASPHALT PAVEMENT (UNCONSTRAINED)	CONCRETE PAVEMENT (CONSTRAINED)		
P	7	10'-6"	12'-8"	9'-1"	10'-0"	7'-3"	6'-6"	6'-4"	7'-11"	3'-9"	36"	6'-0"	12'-0"
P	7	12'-0"	12'-11"	9'-3"	10'-11"	7'-0"	6'-9"	6'-7"	6'-6"	3'-11"	36"	6'-0"	14'-0"
P	7	12'-0"	13'-3"	9'-3"	10'-11"	7'-9"	6'-7"	6'-9"	6'-6"	3'-2"	36"	8'-6"	13'-6"

FOUNDATION SCHEDULE



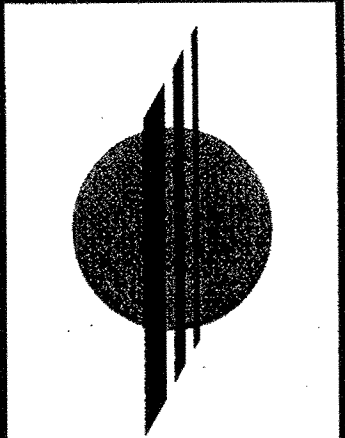
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DIV. OF THE STATE ARCHITECT
APPG 114571
DATE MAY 22 2012

PATENTS PENDING

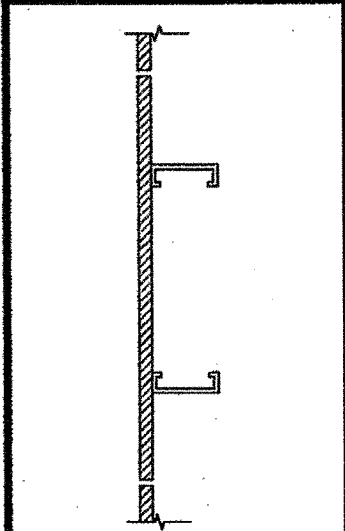
PRE-CHECK (PC) DOCUMENT
CODE: 2010 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

DSA APP. NO 02-111999

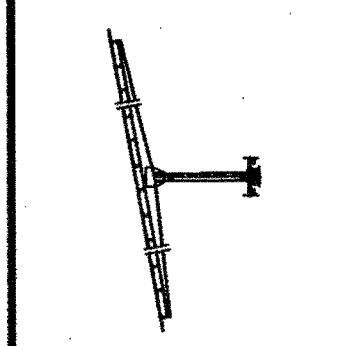
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DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02-111999
DATE 3-23-12



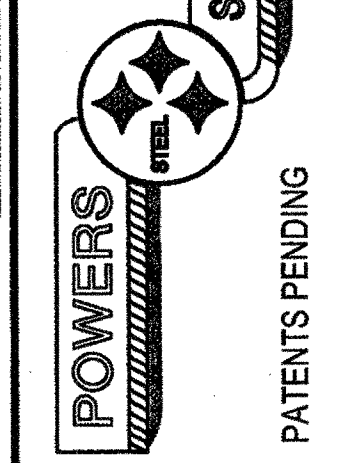
CARUSO TURLEY SCOTT INC.
consulting structural engineers
1215 W. Rio Salado Pkwy
Suite 200
Tempe, Arizona 85281
(480) 774-1700
(480) 774-1701 FAX
www.ctsaz.com



PORTRAIT SOLAR PANELS ON TEE SOLAR SUPPORT STRUCTURE
DSA PRE-CHECK



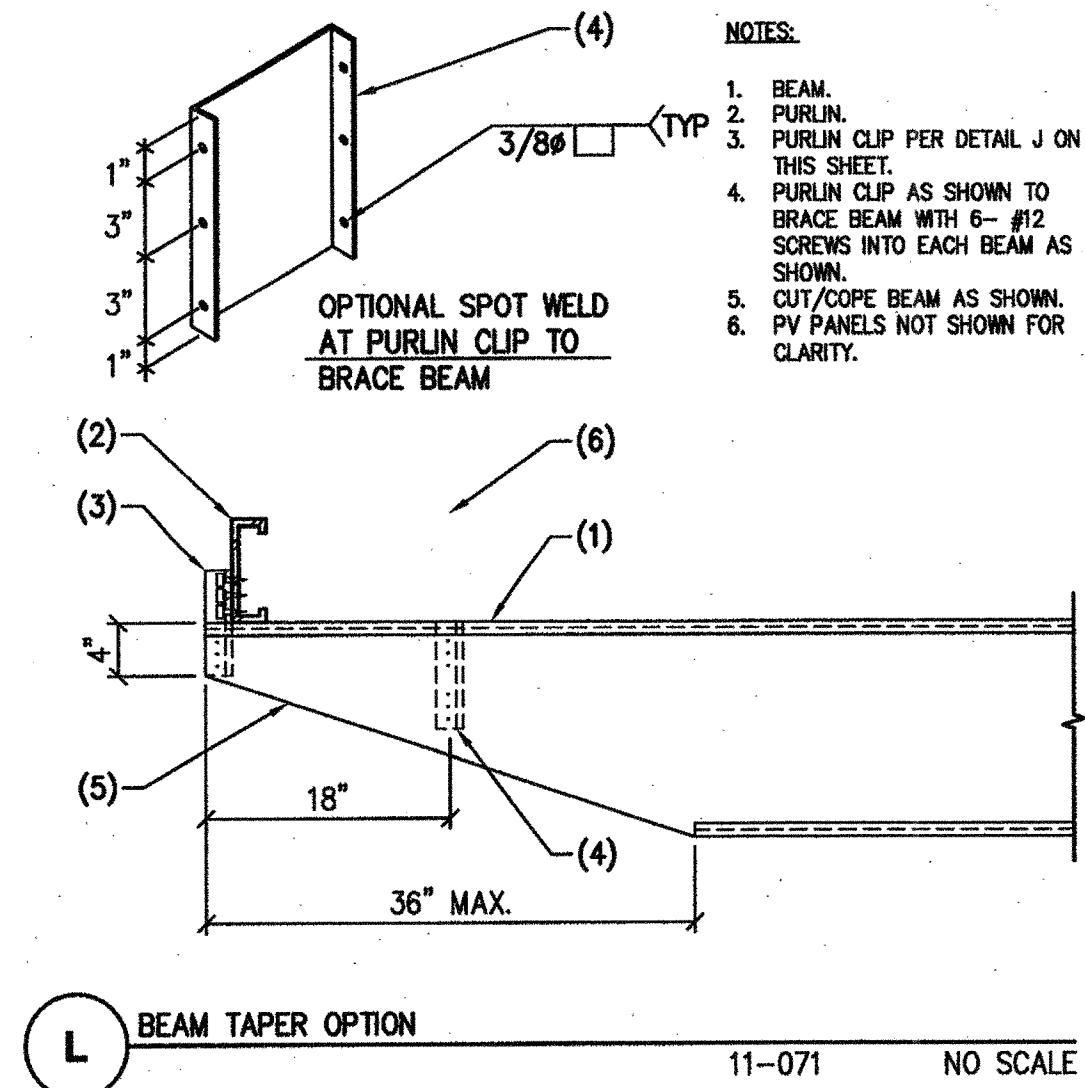
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DRAWING EDITION/REF JOB #

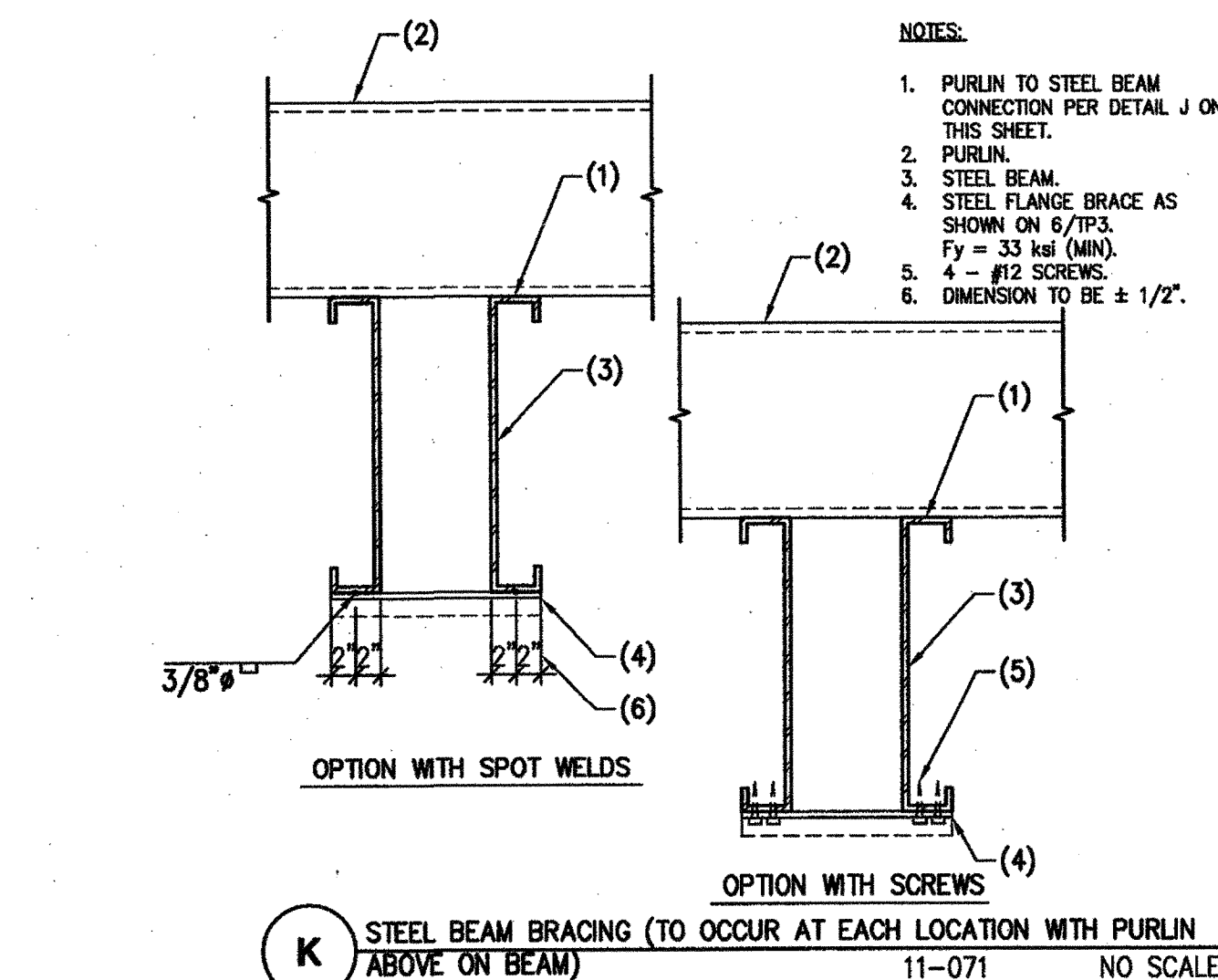
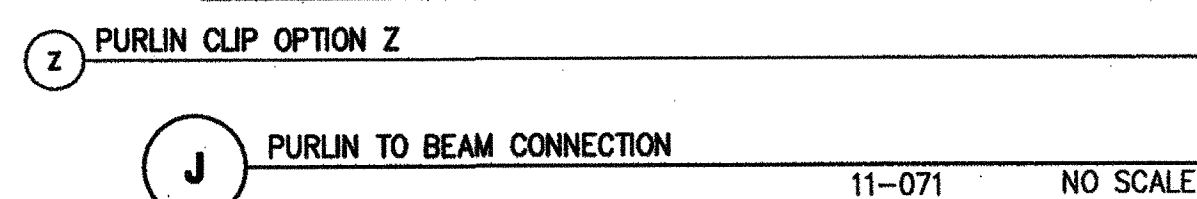
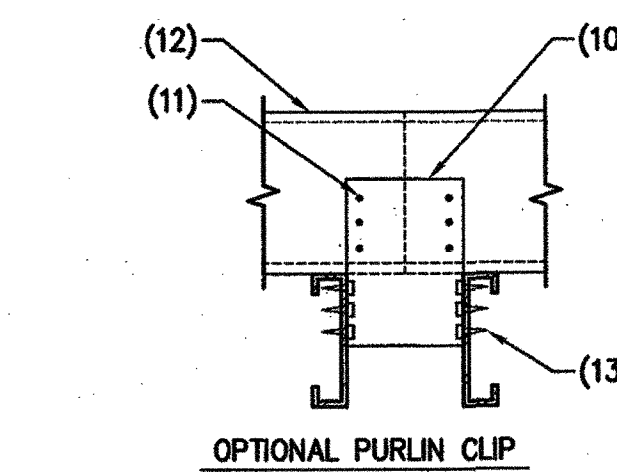
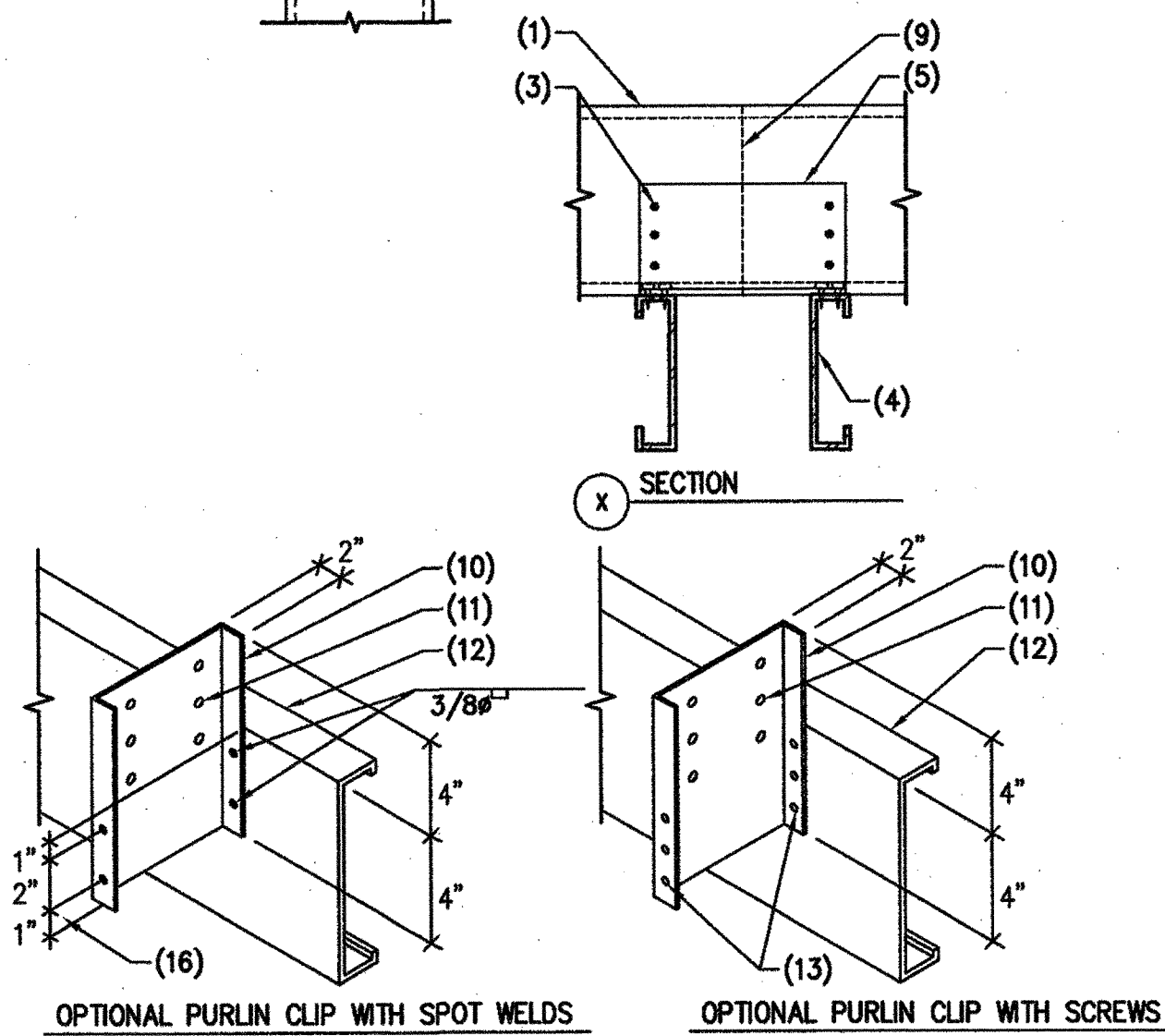
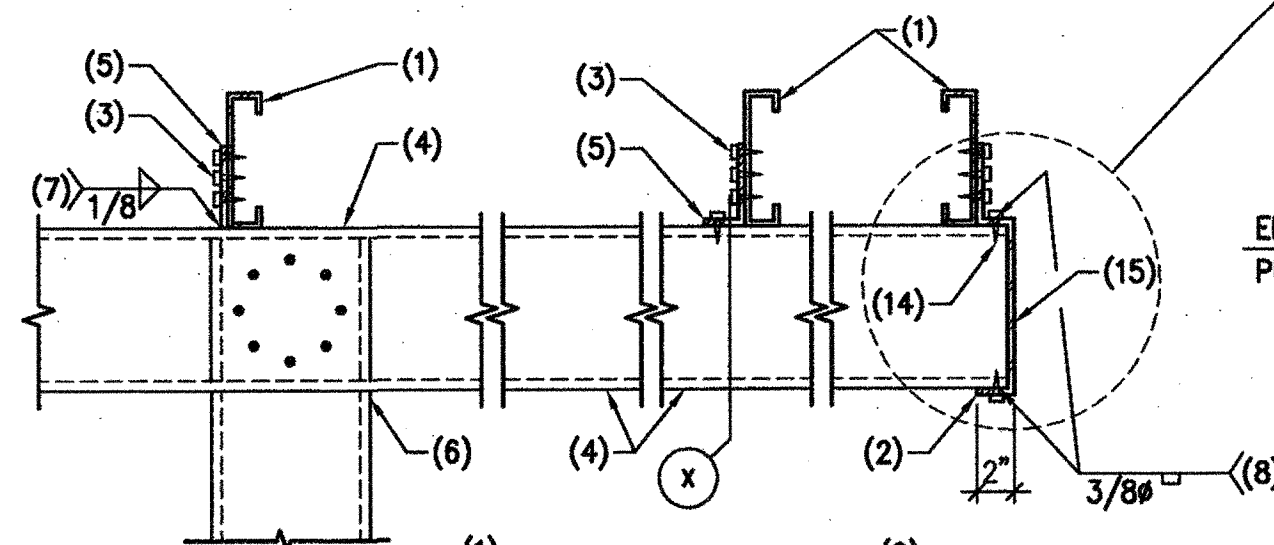
SITE PROJECT:
REVISIONS:

JOB NUMBER: 11-071
DRAWN: ENGINEER/ CHECKED: BLP PGS DST
DATE: 3/15/12
SHEET: TP2

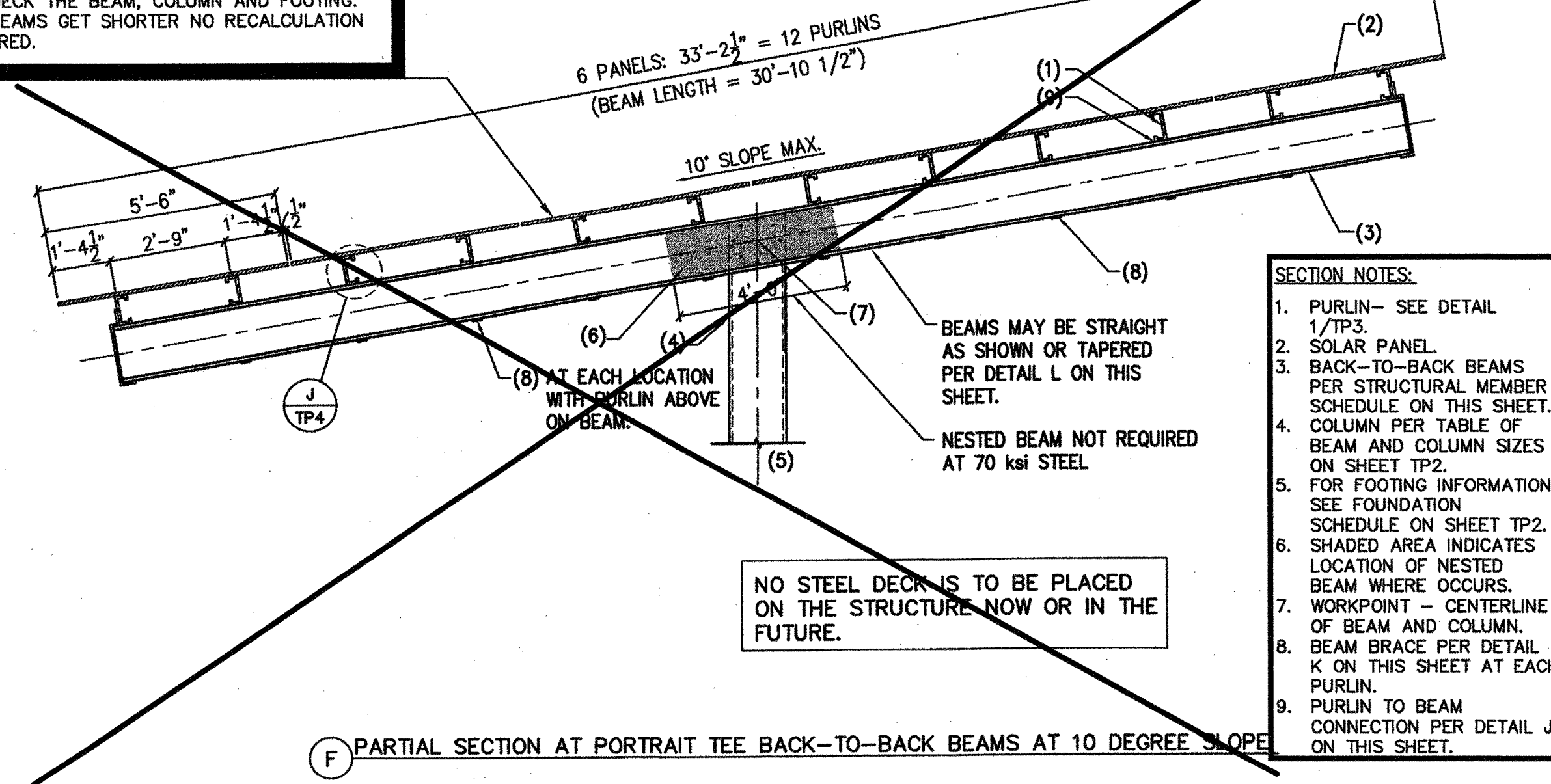


- NOTES:**
1. BEAM.
 2. PURLIN.
 3. PURLIN CLIP PER DETAIL J ON THIS SHEET.
 4. PURLIN CLIP AS SHOWN TO BRACE BEAM WITH 6- #12 SCREWS INTO EACH BEAM AS SHOWN.
 5. CUT/COPE BEAM AS SHOWN.
 6. PV PANELS NOT SHOWN FOR CLARITY.

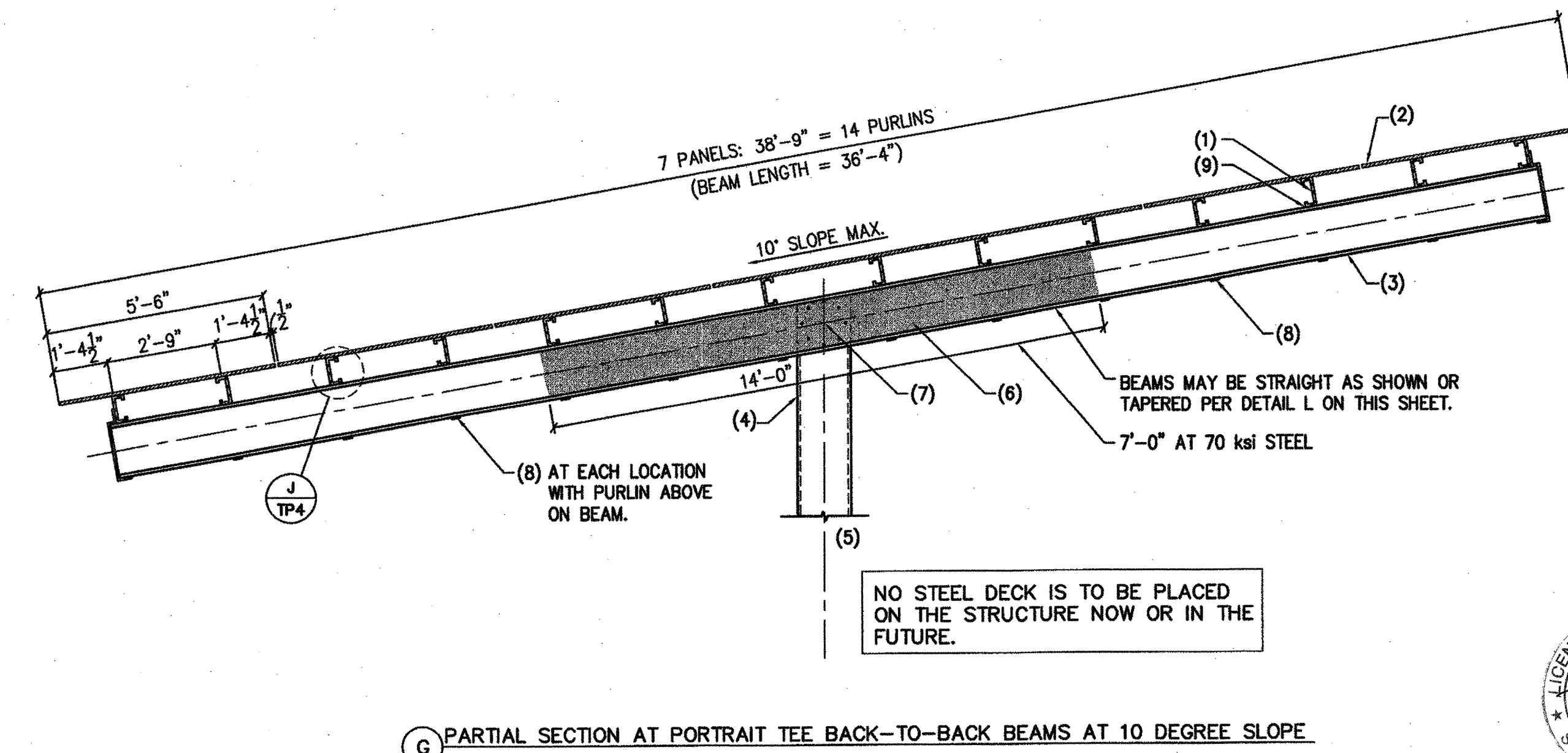
- NOTES:**
1. PURLIN.
 2. 10 GA BEAM CAP PLATE W/ (4) #12 TO BOTTOM OF BEAM AND (6) #12 TO PURLIN.
 3. (3) #12 x 3/4" LONG SCREWS TO PURLIN.
 4. STEEL BEAM.
 5. 16" LONG 3"x10 GAUGE STEEL CLIP OR 16" LONG x 4" x6" (LLV) ANGLE WITH (2) #12 SCREWS AT EACH BEAM MEMBER. Fy = 50 ksi (MIN).
 6. STEEL COLUMN.
 7. WELD PLATE TO BEAM.
 8. OPTIONAL SPOT WELD.
 9. OPTIONAL PURLIN SPLICE LOCATION AT NON-CANTILEVERED PURLINS.
 10. 16 GA CLIP.
 11. (3) #12 SCREWS TO PURLIN.
 12. TOP OF PURLIN.
 13. (3) #12 SCREWS TO BEAM.
 14. 2 #12 SCREWS AT EACH BEAM MEMBER.
 15. IF CLIP OPTION Z IS USED, THE END CAP BECOMES NON-STRUCTURAL AND MAY BE 22 GAGE.
 16. ALL DIMENSIONS TO BE ± 1/2".



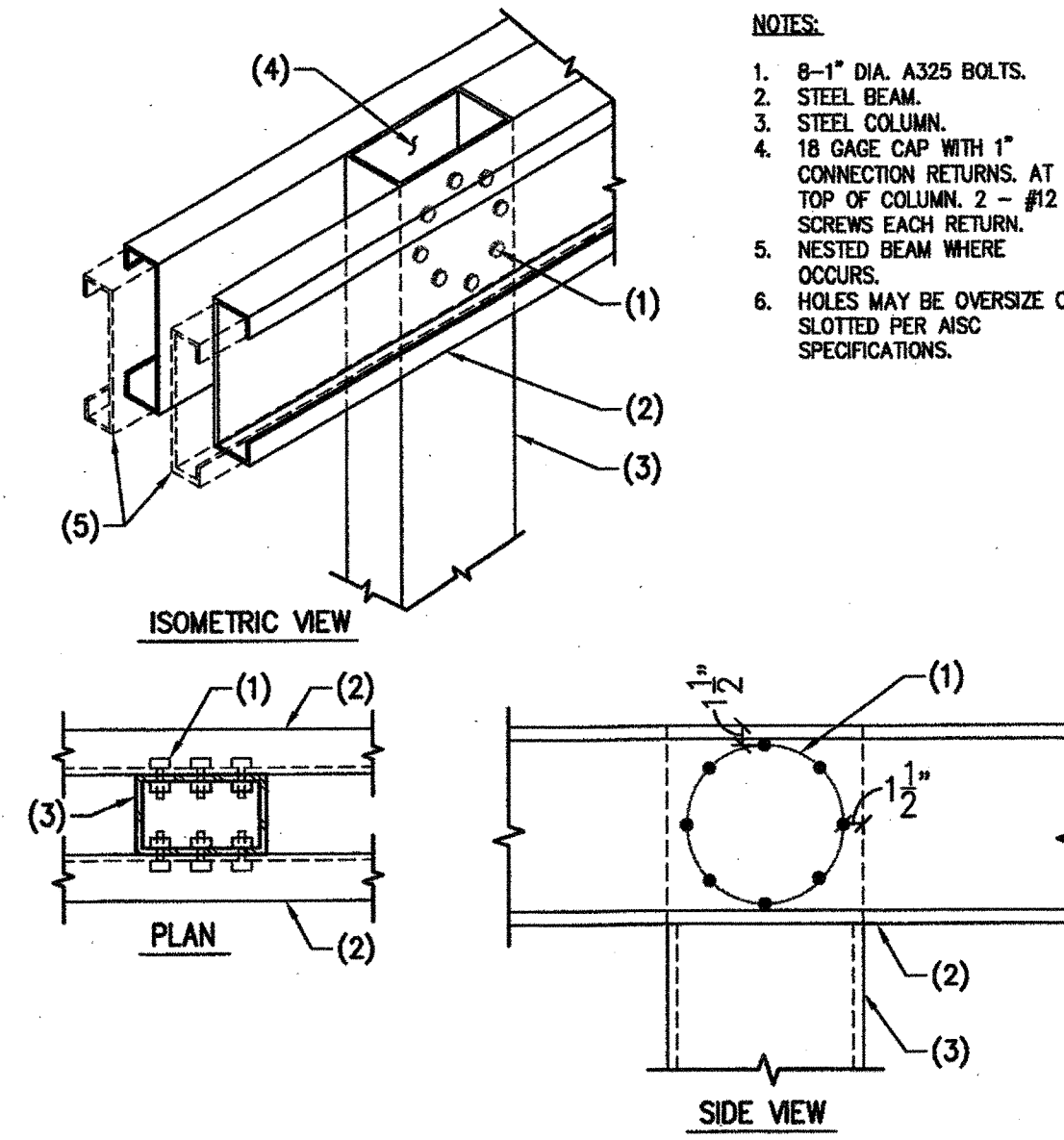
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- SECTION NOTES:**
1. PURLIN - SEE DETAIL J ON THIS SHEET.
 2. SOLAR PANEL.
 3. BACK-TO-BACK BEAMS PER STRUCTURAL MEMBER SCHEDULE ON THIS SHEET.
 4. COLUMN PER TABLE OF BEAM AND COLUMN SIZES ON SHEET TP2.
 5. FOR FOOTING INFORMATION SEE FOUNDATION SCHEDULE ON SHEET TP2.
 6. SHADED AREA INDICATES LOCATION OF NESTED BEAM WHERE OCCURS.
 7. WORKPOINT - CENTERLINE OF BEAM AND COLUMN.
 8. BEAM BRACE PER DETAIL K ON THIS SHEET AT EACH PURLIN.
 9. PURLIN TO BEAM CONNECTION PER DETAIL J ON THIS SHEET.



STRUCTURAL MEMBER SCHEDULE		
SOLAR CANOPY TYPE	STEEL BEAM SIZE (Fy=55 KSI)	NESTED BEAM SIZE (OPTION) (Fy=55 KSI)
6 PANEL TEE	(2) 16"x4"x10 GA	(2) 16"x4"x10 GA. WITH 12 GA. NESTED BEAM (SEE DETAIL F ON THIS SHEET FOR LENGTH AND LOCATION)
7 PANEL TEE	(2) 16"x4"x10 GA	(2) 16"x4"x10 GA. WITH 12 GA. NESTED BEAM (SEE DETAIL G ON THIS SHEET FOR LENGTH AND LOCATION)



- NOTES:**
1. 8-1" DIA. A325 BOLTS.
 2. STEEL BEAM.
 3. STEEL COLUMN.
 4. 18 GAGE CAP WITH 1" CONNECTION RETURNS AT TOP OF COLUMN. 2 - #12 SCREWS EACH RETURN.
 5. NESTED BEAM WHERE OCCURS.
 6. HOLES MAY BE OVERSIZE OR SLOTTED PER AISC SPECIFICATIONS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APPROX 114571
AC FLS ✓ SS ED
DATE MAY 22 2012

STATE OF CALIFORNIA ARCHITECT
CARUSO TURLEY SCOTT INC.
NOV 15 2010
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PRE-CHECK (PC) DOCUMENT
CODE: 2010 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

DSA APP. NO 02-111999

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DATE 3-22-12

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PORTRAIT SOLAR PANELS
SOLAR SUPPORT STRUCTURE
DSA PRE-CHECK

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY - NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

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DRAWING EDITION/REF JOB #

SITE PROJECT:

REVISIONS:

JOB NUMBER: 11-071
DRAWN: ENGINEER: CHECKED: BLP PGS DST
DATE: 3/15/12
SHEET: TP4