

PRINT NAME C34479

LICENSE NUMBER

**BEN PACKARD** 

March 31st, 2021

EXPIRATION DATE

7/19/2022 1:56:05 PM S:\Shared With Me\- CURRENT\02 Projects\20-05\_San Diego USD Ph III\03 Design\LANGUAGE ACADEMY\LANGUAGE A

# SAN DIEGO UNIFIED SCHOOL DISTRICT CANOPY MOUNTED PV SYSTEM LANGUAGE ACADEMY PTN # 68338-1466

|--|

3.3.2.1)	LOT
	_ 35
	_ 16
	- 2
S	_ 46%
PACES – – –	– 100%
	- 2
	_ 2
)	— <u>1</u>
)	— 1
	- 1
	- 1
RED	_ 2
DED — — — —	— 2
	- 1
	- 1
	- 1
	- 1
RED — — — ·	— 0
DED — — — ·	— 0
UIRED —	— 0
DVIDED —	— 0

PROJECT CODE ANALYSIS

PROJECT ADDRESS 4961 64TH ST, SAN DIEGO, CA 92115 3630804300 APN ZONING LOT AREA **OCCUPANCY USE GROUP** (CBC 406.2) **OCCUPANCY TYPE** S-2 (CBC 311.3) **CONSTRUCTION TYPE** II-B (CBC TABLE 601) AUTOMATIC FIRE SPRINKLER SYSTEM (CBC 903.2 & 903.2.11.3, EXCEPTION 1) **REQUIRED SEPARATION OF OCCUPANCIES** NO SEPARATION REQUIRED (CBC 508.3.3)

ALLOWABLE EXTERIOR OPENINGS

FIRE SEPARATION DISTANCE RATING

ALLOWABLE NUMBER OF STORIES 2

ACTUAL NUMBER OF STORIES

ALLOWABLE BUILDING HEIGHT

**ACTUAL BUILDING AREA & HEIGHT** 

TYPE

6x15

6x45

4x55

<varies>

(CBC TABLE 602)

(CBC TABLE 504.4)

ALLOWABLE AREA

(CBC TABLE 504.3)

(CBC 406.5.5)

ARRAY

2019

MARSHAL

NUMBER

∧ < 5...

 $\lambda \ge 30$ 

10 ≤ X < 30.

(CBC 705.8.1, EXCEPTION 2)

RS-1-7 9.99 AC **OPEN PARKING GARAGE** 

NOT REQUIRED

OPENINGS

.0 HR

**HEIGHT (HIGH SIDE)** 

21' - 0"

21' - 0''

21' - 0"

UNLIMITED

55 FEET

AREA

2143.29 SF

6406.07 SF

5214.99 SF

CCR TITLE-19, REGULATIONS OF THE STATE FIRE

UNLIMITED UNPROPTECTED

**OWNER / CLIENT** SAN DIEGO UNIFIED SCHOOL

DISTRICT 4100 NORMAL STREET SAN DIEGO, CA 92103 (619) 725-8000 STRUCTURAL ENGINEER

KPFF 3131 CAMINO DEL RIO NORTH, STE. 1080 SAN DIEGO, CA 92108

ENGINEER OF RECORD: SHANE NOEL **PROJECT MANAGER: SHAUN WALTERS** 

(619) 521-8500

**GEOTECHNICAL ENGINEER** LEIGHTON CONSULTING, INC 3934 MURPHY CANYON ROAD, SUITE B-205 SAN DIEGO, CA 92123-4425 SR. PRJ GEOLOGIST: BRYAN VOSS LICENSE: 8709 (858) 292-8030

PRJ # 10883.007 DATED 10/09/2019

ARTIAL LIST	OF APPLICABLE STANDARDS (AS REFERENCED IN CURRENT CBC	C AND CFC)
NFPA 13	THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	INSTALLATION OF STANDPIPE AND HOSE SYSTEMS	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17-A	WET CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 20	INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES	2016 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTINF AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 37	INSTALLATION AND USE OF STATIONARY COMBUSTION	2015 EDITION
	ENGINS AND GAS TURBINES	2010 EBIHON
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2016 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 101	LIFE SAFETY CODE	2018 EDITION
NFPA 110	EMERGENCY AND STANDBY POWER SYSTEMS	2016 EDITION
NFPA 170	STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS	2018 EDITION
NFPA 221	STANDARD FOR HIGH CHALLENGE FIRE WALLS, FIRE WALLS,	2018 EDITION
	AND FIRE BARRIER WALLS	
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHER SYSTEMS	2015 EDITION
ICC 300	STANDARDS ON BLEACHERS, FOLDING AND TELESCOPIC	2017 EDITION
	SEATING, AND GRANDSTANDS	
ICC-ES AC77	ACCEPTANCE CRITERIA FOR SMOKE CONTAINMENT SYSTEMS	
	USED WITH FIRE-RESISTANCE-RATED ELEVATOR HOISTWAY	
	DOORS AND FRAMES	
SFM 12-10-1	POWER OPERATED EXIT DOORS	
SFM 12-10-2	SINGLE POINT LATCHING OR LOCKING DEVICES	
SFM 12-10-3	EMERGENCY EXIT AND PANIC HARDWARE	
SFM 12-7A	MATERIALS AND CONSTRUCTION METHODS FOR EXTERIOR	
	WILDFIRE EXPOSURE	
UBC 15-2	TEST STANDARD FOR DETERMINING THE FIRE RETARDANCY	
	OF ROOF-COVERING METERIALS	
UL 38	MANUAL OPERATING SIGNAL BOXES	1999 EDITION
UL268	SMOKE DETECTROS FOR FIRE PROTECTIVE SIGNALING	2009 EDITION
	SYSTEMS	
UL268A	SMOKE DETECTORS DUCT APPLICATIONS	1999 EDITION
UL 294	STANDARD FOR ACCESS CONTROL SYSTEM UNITS	1999 EDITION
UL 305	STANDARDS FOR PANIC HARDWARE	2012 EDITION
UL 346	SYSTEMS	2005 EDITION
UL 464	AUDIBLE SINGAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING	1999 EDITION
UL 2034	MONOXIDE ALARMS	
	CALTRANS STANDARD SPECIFICATIONS	

	APPLICABLE CODES	
DITION	CODE NAME	PART, TITLE
019	CALIFORNIA ADMINISTRATIVE CODE, C.C.R.	PART 1, TITLE 24
019 018	CALIFORNIA BUILDING CODE, (CBC), C.C.R. (INTERNATIONAL BUILDING CODE WITH 2019 CALIFORNIA AMENDMENTS)	PART 2, TITLE 24
019 017	CALIFORNIA ELECTRICAL CODE (CEC), C.C.R. (NATIONAL ELECTRIC CODE WITH 2019 CALIFOF AMENDMENTS)	PART 3, TITLE 24 RNIA
019 018	CALIFORNIA MECHANICAL CODE (CMC), C.C.R. (UNIFORM MECHANICAL CODE WITH 2019 CALIFORNIA AMENDMENTS)	PART 4, TITLE 24
019 018	CALIFORNIA PLUMBING CODE, C.C.R. (CALIFORNIA PLUMBING CODE WITH 2019 CALIFORNIA AMENDMENTS)	PART 5, TITLE 24
019	CALIFORNIA ENERGY CODE, (CEnC), C.C.R.	PART 6, TITLE 24
019 018	CALIFORNIA FIRE CODE, (CFC), C.C.R. (INTERNATIONAL FIRE CODE WITH 2019 CALIFORNIA AMENDMENTS)	PART 9, TITLE 24
019	CALGREEN BUILDING STANDARDS CODE, C.C.R	. PART 11, TITLE 24
019	CALIFORNIA REFERENCED STANDARDS CODE, C.C.R.	PART 12, TITLE 24

THE "GREEN BOOK"



#### PROJECT DIRECTORY

**SUNPOWER** 1414 HARBOUR WAY SOUTH - STE.1901 RICHMOND, CA 94804

ARCHITECT

(760) 752-2800

(201) 687-9975

MPA DESIGN

TEL (415) 434-4664

LICENSE: 2360

LICENSE: E20357

CURRENT DESIGN GROUP

CARLSBAD, CA 92008

ELECTRICAL ENGINEER

ENGINEER: RICHARD IVINS

HOBOKEN, NJ 07030

PM: TRAVIS LENBERG

LANDSCAPE ARCHITECT

414 MASON STREET #700

SAN FRANCISCO, CA 94102

LANDSCAPE ARCHITECT: DAVID W NELSON

2018 EDITION

925 PALOMAR OAKS WAY, STE 107

ARCHITECT OF RECORD: BEN PACKARD

PROJECT DESIGNER: DAVID RICCI

PURE POWER ENGINEERING, Inc.

5 MARINE VIEW PLAZA, SUITE 301

(510) 540-0550

## REFERENCED STANDARDS

## SHEET INDEX

CALGREEN MANDATORY MEASURES CHECKLIST

ARCHITECTURAL

A010

A011

A014

A020

A030

A040

A100

COVER SHEET

DEMO PLAN

**GENERAL NOTES** 

GENERAL NOTES

EXISTING SITE PLAN

FIRE ACCESS PLAN

OVERALL PARKING PLAN

A200 OVERALL ACCESSIBLE SITE PLAN A210 ENLARGED ACCESSIBLE PLAN **OVERALL CANOPY LAYOUT PLAN** A300 A310 ENLARGED CANOPY FOUNDATION PLAN A400 SITE SECTIONS A500 ACCESSIBLE DETAILS A501 ACCESSIBLE DETAILS ELECTRICAL E001 **ELECTRICAL NOTES & SYMBOLS** E101 ELECTRICAL SITE PLAN EQUIPMENT LAYOUT E110 E201 ELECTRICAL SINGLE LINE DIAGRAM E301 DC WIRING SCHEMATIC E601 TRENCHING DETAILS E701 INSTALLATION DETAILS E801 **GROUNDING DETAILS** E802 **GROUNDING DETAILS** E901 MONITORING DIAGRAM E902 MONITORING DIAGRAM E1201 LIGHTING PLAN E1202 LIGHTING FIXTURE LOCATIONS AND CONDUIT ROUTING E1203 LIGHTING PHOTOMETRIC PLAN E1301 TITLE 24 CERTIFICATES OF COMPLETION E1302 TITLE 24 CERTIFICATES OF COMPLETION E1401 EQUIPMENT DATA SHEETS E1501 ELECTRICAL SIGNAGE E1502 ELECTRICAL SIGANGE **BUS TAP DRAWINGS** EXXXX LANDSCAPE L101 PLANTING PLAN L201 IRRIGATION PLAN L202 **IRRIGATION LEGEND AND NOTES** L203 **IRRIGATION DETAILS** L204 **IRRIGATION DETAILS** L301 PLANTING DETAILS STRUCTURAL S001 TITLE SHEET

0001	
S100	GENERAL STRUCTURAL NOTES
S102	TESTING AND INSPECTION FORM
S200L	L STRUCTURE SECTION & FRAMING PLAN
S200T	T STRUCTURE SECTION & FRAMING PLAN
S300	FOUNDATION DETAILS
S400	DETAILS
S500	DETAILS
S600	MISCELLANEOUS DETAILS
S601	FENCE DETAILS
S602	PANELS CUT SHEETS

Total Sheets: 51



#### ABBREVIATION

&	AND ANGLE	RAD. R.D. RECOM	RADIUS ROOF DRAIN RECOMMENDATIONS	<u>ACCE</u> 1. PA
Q C Q	CENTERLINE DIAMETER OR ROUND	REF. REINF	REFERENCE REINFORCING	CL
° %	DEGREES PERCENT	REQ'D. R.O.W.	REQUIRED RIGHT OF WAY	2. WI CE
# ± (=)	POUND OR NUMBER PLUS / MINUS	S.C.	SOLID CORE	3. AC
(⊏) (N) (P)	NEW PAINT	SD S.F.	SMOKE DETECTOR SQUARE FOOT	4. AC
(R) A.B.	REMOVE ANCHOR BOLT	SHR SHT	SHEAR SHEET	FA
ABV A.C.	ABOVE ASPHALTIC CONCRETE ACCESSIBLE	SIM S.M. SPEC	SIMILAR SHEET METAL SPECIFICATION(S)	5. PA EN
A.D. ADD'L	AREA DRAIN ADDITIONAL	SQ. S.S.	SQUARE STAINLESS STEEL	6. PR
ADJ A.F.F.	ADJUSTABLE / ADJACENT ABOVE FINISH FLOOR	STD STL STDUCT	STANDARD STEEL	ON RC
AGG ALT ALUM	AGGREGATE ALTERNATE ALUMINUM	T.C.	TOP OF CURB	7. OL
AMP APPL	AMPERAGE APPLICABLE	T.O.A. T.O.C.	TOP OF ASPHALT TOP OF CONCRETE	LO
APPX ARCH	APPROXIMATE ARCHITECT	T.O.S. T.O.ST. T.O.W	TOP OF SLAB TOP OF STEEL	
BD BLDG	BOARD BUILDING	TYP	TYPICAL	<u>PARk</u> # (
BLK'G BM	BLOCKING BEAM	UNO UTIL.	UNLESS NOTED OTHERWISE UTILITY	1-2 26 51
BOT BTWN B W	BOTTOM BETWEEN BOTH WAYS	UXU	ORDINACE LINE	76- 10
CALCS	CALCULATIONS	VERT. V.I.F.	VERTICAL VERIFY IN FIELD	15 20 30
C.B. CEM	CATCH BASIN CEMENT CAST IPON	W/ WD	WITH WOOD	40 50
CJ	CONTROL JOINT	W/O W.P.	WITHOUT WATERPROOF / WEATHERPROOF	1,0 PC
		WT WWF	WEIGHT WELDED WIRE FABRIC	* F SH
CLG CLR CMU	CEILING CLEAR CONCRETE MASONRY	SY	MBOLS	
C.O.	UNITS CLEAN OUT			<u>VAN /</u> 1. PR
COL CONC CONST	COLUMN CONCRETE CONSTRUCTION	$(\mathbf{x})$		SE
CONT	CONTINUOUS CONTRACTOR		COLUMN GRID LINES	2. VA 96
C.P. CTR	CONTROL POINT CENTER	10°		11 3. VA
C.W.	COLD WATER	N	DIRECTION OF DOWNWARD SLOPE	PA
D.A. DBL	DISABLED ACCESS DOUBLE			<u>ACCE</u> 1. AC
D.FIR DTL DEG	DOUGLAS FIR DETAIL DEGREE			AC 2 AI
DIA DIAPH	DIAMETER DIAPHRAM		<u>CANOPY SECTION TAG</u> ——SECTION IDENTIFICATION	PA
DIM DN DWG	DIMENSION DOWN DRAWING	A101 TYP	SHEET REFERENCE	3. AIS SE
EA	EACH	SIM	DETAIL CALLOUTS	4. BU Als
ELEC ELEV	ELECTRICAL ELEVATION	1 A101		5. AC
E.J. ENCL EMBED	ENCLOSE / ENCLOSURE EMBEDMENT	$\sim$	REVISION	BL MA
EQ EXT	EQUAL EXTERIOR		CLOUD AT REVISED AREA	CC BL
FDN FLUOR	FOUNDATION FLUORESCENT		MATCH LINE SHADED PORTION IS THE	I H MI VIS
FTG	FOOTING	SEE SHEET AXXX	SIDE CONSIDERED DATUM POINT	AIS LE
GA GALV GFCI	GAUGE GALVANIZED GROUND FAULT CIRCUIT	✓	— KEYNOTE	6. PA AC
INTERUPT GIR	GIRDER	x>-	— CANOPY TAG	11
GSM	GALVANIZED SHEET METAL	Elevation	CONTROL POINT	ACCE
HORZ	HORIZONTAL	Name	EL: 12'-8"	1. IN E
HR LD.	HOUR	10.0°	SLOPE ANGLE TAG	IC
INFO			CENTER LINE	
JT	JOINT		ASSUMED PROPERTY LINE	
LAB LVL	LABORATORY LEVEL		PROPERTY LINE	2. D T A
LGT LWT	LIGHT LIGHTWEIGHT		ELEMENTS SCHEDULED TO BE DEMOLISHED	A
MATL MAX	MATERIAL MAXIMUM		BREAKS OF CANOPY COMPONENTS	3. C
M.B. MECH MER	MACHINE BOLT MECHANICAL MANUEACTURER		FIRE APPARATUS ACCESS	S 5
MIN MISC	MINIMUM MISCELLANEOUS		PATH	E A C
MTD MTL	MOUNTED METAL		NEW PATH OF TRAVEL	T D
NAT N.I.C.	NATIONAL NOT IN CONTRACT	×.	EXISTING TREE SCHEDULED TO	4. B
NO / # NOM	NUMBER NOMINAI	<b>XX</b> <sub>T/R</sub>	BE REMOVED OR TRIMMED	0       
N.T.S	NOT TO SCALE		EXISTING LIGHT POLE SCHEDULED TO BE REMOVED	C T
0A 0.C. 0CC	OVERALL ON CENTER OCCUPANCY		EXISTING BUILDING	5. P W
O.D. OPNG	OUTSIDE DIAMETER OPENING	FINAL ELEV		S
OPP	OPPOSITE PI ATF	(000.00') 000.00'	ELEVATION TAG	S. V S F
Р.L. Р.О.Т.	PROPERTY LINE PATH OF TRAVEL	(E) ELEV TOP: 0' - 0"	PIER HEIGHT TAG	M A
PR PSI	PAIR POUNDS PER SQUARE INCH			C
PT	PRESSURE TREATED		EXISITING FIRE HYDRANT	
		0 0	PROPOSED CANOPY ARRAY LOCATION	

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## **ACCESSIBILITY NOTES**

ACCESSIBLE PARKING

RKING STALL AND ACCESS AISLE TO BE MAX OF 2% SLOPE IN NY DIRECTION - NO DRAINAGE SWALES, BUILT-UP RAMPS, OR JRBS WITHIN SPACE.

IDTH OF PARKING STALL SHALL BE MEASURED TO THE ENTERLINE OF MARKINGS

CESSIBLE PARKING TO BE LOCATED ON THE SHORTEST CESSIBLE ROUTE TO THE ACCESSIBLE ENTRY

CESSIBLE PARKING CAN BE LOCATED IN DIFFERENT PARKING CILITIES IF GREATER ACCESSIBLITY IS PROVIDED

ARKING STRUCTURES TO HAVE 98" VERTICAL CLEARANCE FROM NTRY TO ACCESSIBLE PARKING TO EXIT FOR FULL VEHICULAR OUTE, PER CBC 11B-502.5

ROVIDE A WHEEL STOP IF THE VEHICULAR OVERHANG INTRUDES IN THE REQUIRED CLEAR WIDTH OF ADJACENT ACCESSIBLE OUTES

UTLINE THE ACCESS ISLE IN BLUE AND PROVIDE AN ISA PAINTED WHITE WITH A BLUE BACKGROUND; ISA TO BE 36" x 36" AND DCATED ON THE GROUND AT THE END OF THE ACCESSIBLE ALL. PER CBC 11B-502.6.4.1

KING SPACES REQUIRED PER FACILITY OF STALLS MIN ADA REQ'D



2% OF TOTAL 20 + 1 FOR EACH 100 OF

DRTION THEREOF, OVER 1,000

FOR EVERY 6 ACCESSIBLE STALLS OR FRACTION OF 6 SPACES, 1 HOULD BE VAN ACCESSIBLE, WITH A MINIMUM OF 1

ACCESSIBLE PARKING

ROVIDE VERTICAL CLEARANCE OF 98" MIN FOR ALL ACCESSIBLE FALLS, THEIR ACCES AISLE, AND THE FULL VEHICULAR ROUTE ERVING THEM. CBC 11B-208.2.4

AN ACCESSIBLE PARKING STALLS MUST BE 108" MIN WIDE WITH " MIN WIDE ACCESS AISLE ON PASSENGER SIDE. PER CBC IB-502.2

AN ACCESSIBLE STALLS CAN BE GROUPED ON ONE LEVEL OF A RKING STRUCTURE. PER CBC 11B-208.3.1 <u>ESS AISLE</u>

CES AISLE REQUIRED ON PASSENGER SIDE UNLESS A COMMON CESS AISLE SHARED BY 2 ACCESSIBLE STALLS, PER CBC

SLE MUST ADJOIN AN ACCESSIBLE ROUTE AND ROUTE CAN NOT ASS BEHIND OTHER PARKED VEHICLES. PER CBC

SLE TO BE CONTIGUOUS THE FULL LENGTH OF THE STALL THEY RVE

JILT-UP CURB RAMPS CAN NOT BE LOCATED IN THE ACCESS

CESS AISLES SHALL BE MARKED WITH A BLUE PAINTED RDERLINE AROUND THEIR PERIMETER. THE AREA WITHIN THE LUE BORDERLINES SHALL BE MARKED WITH HATCHED LINES A AXIMUM OF 36 INCHES (914 MM) ON CENTER IN A COLOR ONTRASTING WITH THAT OF THE AISLE SURFACE, PREFERABLY LUE OR WHITE. THE WORDS "NO PARKING" SHALL BE PAINTED ON IE SURFACE WITHIN EACH ACCESS AISLE IN WHITE LETTERS A NIMUM OF 12 INCHES (305 MM) IN HEIGHT AND LOCATED TO BE SIBLE FROM THE ADJACENT VEHICULAR WAY. ACCESS SLE MARKINGS MAY EXTEND BEYOND THE MINIMUM REQUIRED NGTH.

AINT THE WORDS "NO PARKING" ON THE GROUND WITHIN THE CCESS AISLE IN WHITE LETTERS 12" HIGH MIN, PER CBC B-502.3.3 WITH NO DIAGONAL STRIPING THROUGH TEXT

#### SSIBILITY SIGNAGE

NTERNATIONAL SYMBOL OF ACCESSIBILITY: THE FOLOWING ELEMENTS AND SPACES OF ACCESSIBLE FACILITIES SHALL BE

- DENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY: A. ACCESSIBLE PARKING SPACES
- ACCESSIBLE AREA OF REFUGE
- ACCESSIBLE PASSENGER LOADING ZONES ACCESSIBLE TOILET AND BATHING FACILITIES
- ALL MAIN ENTRY DOORS

DESIGN: THE INTERNATIONAL SYMBOL OF ACCESSIBLITY SHALL BE HE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS AS SET FORTH IN THESE BUILDING STANDARDS ANS AS SPECIFICALLY REQUIRED IN THESE NOTES. (SECTION 11B-703.2.1)

COLOR OF SYMBOL: THE SYMBOL SPECIFIED ABOVE SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595C. PROPORTIONS SHALL MATCH CBC FIG. 11B-703.2.1. EXCEPTION: THE APPROPRIATE ENFORCEMENT AGENCY MAY APPROVE SPECIAL SIGNS AND IDENTIFICATION NECESSARY TO COMPLEMENT DECOR OR UNIQUE DESIGN WHEN IT IS DETERMINED THAT SUCH SIGNS AND IDENTIFICATION PROVIDE ADEQUATE PIRECION TO PERSONS WITH DISABILITIES.

BRAILLE SYMBOLS: CONTRACTED GRADE 2 BRAILLE SHALL BE ISED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL BE 1/10 NCH ON CENTER IN EACH CELL WITH 2/10 INCH SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 1/40 INCH ABOVE THE BACKGROUND.

PROPORTIONS: LETTERS AND NUMBERS ON SIGNS SHALL HAVE A VIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1.1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.

/ISUAL CHARACTER HEIGHT: CHARACTERS AND NUMBERS ON SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE "X". LOWERCASE CHARACTERS ARE PERMITTED. FOR SIGNS SUSPENDED OR PROJECTED 80 INCHES MINIMUM ABOVE THE FINISH FLOOR, THE MINIMUM CHARACTER HEIGHT SHALL BE 3 INCHES.

- CONTRAST AND FINISH: CHARACTER AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. THE (FINISH OF) CHARACTERS AND BACKGROUND OF SIGNS SHALL BE AGGSHELL, MATTE, OR OTHER NON-GLARE FINISH.
- 8. MOUNTING LOCATION AND HEIGHT: WHERE PERMANENT IDENTIFICATION IS PROVIDED OR WHERE SIGNAGE IS REQUIRED FOR ROOMS AND SPACES, RAISED LETTERS SHALL BE PROVIDED AND SHALL BE ACCOMPANIED BY BRAILLEIN CONFORMANCE WITH NOTE #9. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH OUTSIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING HEIGHT SHALL BE 48 INCHES MINIMUM ABOVE THE FINISHED FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST LINE OF BRAILLE AND 60 INCHES MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS. MOUNTING LOCATION SHALL BE DETERMINED SO THAT A PERSON MAY APPROACH WITHIN 3 INCHES OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.

WALKS AND SIDEWALKS

- 1. CONTINUOUS SURFACE: WALKS AND SIDEWALKS SUBJECT TO THESE REGULATIONS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2" AND SHALL BE A MINIMUM OF 48" IN WIDTH. SURFACES SHALL BE SLIP RESISTANT AS FOLLOWS: 1.1 SLOPES LESS THAN 6 PERCENT: SURFACES WITH A SLOPE OF LESS THAN 6 PERCENT GRADIENT SHALL BE AT LEAST AS SLIP-RESISTANT AS DESCRIPED FOR A MEDIUM SALTED FINISH. 1.2 SLOPES 6 PERCENT OR GREATER: SURFACES WITH A SLOPE OF GREATER THAN 6 PERCENT SHALL BE SLIP-RESISTANT. 1.3 SURFACE CROSS SLOPES: SURFACE CROSS SLOPES SHALL NOT EXCEED 2%.
- 2. GRATINGS: OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2 INCH DIAMETER. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL (SECTION 11B-302.3).
- 3. CHANGES IN LEVEL: CHANGES IN LEVEL BETWEEN 1/4 INCH HIGH MINIMUM AND 1/2 INCH HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT TO EXCEED 1:2. CHANGES IN LEVEL GREATER THAN 1/2 INCH HIGH SHALL BE RAMPED, AND SHALL COMPLY WITH SECTION 11B-405 OR 11B-406 (SECTION 11B-303.3-4).
- 4. WARNING CURBS: ABRUPT CHANGES IN LEVEL EXCEEDING 4 INCHES IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY WARNING CURBS AT LEAST 6 INCHES IN HEIGHT ABOVE THE WALK OR SIDEWALK SURFACE. A WARNING CURB IS NOT REQUIRED WHEN A GUARD OR HANDRAIL IS PROVIDED WITH A GUIDE RAIL. CENTERED 2 INCHES MINIMUM AND 4 INCHES MAXIMUM ABOVE THE SURFACE OF THE WALK OR SIDEWALK (SECTION 11B-303.5).
- 5. PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2 INCH BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4 INCH VERTICAL AND IS AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (POT) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80 INCHES MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4 INCHES PROJECTION FROM WALL AND ABOVE 27 INCHES AND LESS THAN 80 INCHES. THE ARCHITECT SHALL 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 LATEST EDITION OF CBC SECTION 11B, DIVISION 4.

## ACCESSIBILITY NOTES (cont.)

#### **GENERAL NOTES (cont.)**

- 22. PROVIDE FOR THE PROPER SEQUENCE OF CONSTRUCTION, LOCATION AND SIZE OF OPENINGS. COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS. INCLUDING SHOP DRAWINGS REVIEWED BY ARCHITECT.
- 23. REMOVE ALL TRASH AND DEBRIS DAILY. DO NOT STORE BUILDING MATERIALS IN CORRIDORS AT ANY TIME. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.
- 24. VERIFY POINTS OF CONNECTION, INCLUDING SIZES AND LOCATIONS, AND ALL OTHER REQUIRED OPERATING CRITERIA WITH EQUIPMENT MANUFACTURER.
- 25. CONTRACTOR SHALL STIPULATE THAT ALL PROPOSED SUBSTITUTIONS ARE EQUAL IN PERFORMANCE AND COMPLY WITH APPLICABLE CODES AND ARE EQUAL IN PERFORMANCE AND COMPLY WITH APPLICABLE CODES AND REGULATIONS. CONTRACTOR'S SUBSTITUTION OF ALTERNATE MATERIALS OR SYSTEMS SHALL BE AT NO ADDITIONAL COST TO OWNER.
- 26. CONTRACTOR SHALL INSURE ALL CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED BY THE INSPECTOR OF RECORD. FOR CONTINUOUS INSPECTION, TESTING, AND OBSERVATION REQUIREMENTS, REFER TO THE TESTING AND OBSERVATION PROGRAM.
- 27. ITEMS OF A CIVIL, LANDSCAPE, STRUCTURAL, MECHANICAL, OR ELECTRICAL NATURE MAY NOT APPEAR ON THE ARCHITECTURAL DRAWINGS. SEE APPROPRIATE DRAWINGS FOR THESE ITEMS.
- 28. COMPLIANCE WITH CFC, SECTION 33 (FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION) AND CBC, SECTION 33 (SAFEGUARDS DURING CONSTRUCTION) WILL BE ENFORCED.
- 29. CONNECTIONS AND IMPLIED CONSTRUCTION ASSEMBLIES THAT ARE NOT SPECIFICALLY DESCRIBED OR DETAILED SHALL BE CONSTRUCTED USING STANDARD CONSTRUCTION PRACTICES IN COMPLIANCE WITH THE GOVERNING CODES AND ORDINANCES.
- 30. APPROVALS FROM BUILDING INSPECTORS SHALL NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE PLANS AND SPECIFICATIONS.
- 31. PROVIDE APPROVED GALVANIC BARRIER BETWEEN ALL DISSIMILAR METALS IN CONTACT WITH ONE ANOTHER.
- 32. ALL WORK SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE GEOTECHNICAL REPORT AND ADDENUM.
- 33. IF DURING CONSTRUCTION GROUND WATER, SUB-GRADE ROCKS, OR OVERSIZED MATERIAL ARE FOUND. THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT SHALL BE ENFORCED.
- 34. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF **REGULATIONS (C.C.R.).**
- 35. THROUGHOUT CONSTRUCTION CONTRACTOR SHALL MAINTAIN ACCESS TO ALL AREAS NOT WITHIN SCOPE OF CONSTRUCTION. PROVIDE TEMPORARY TWO-WAY STRIPING, SIGNAGE, SAFETY BARRIERS, ETC AS REQUIRED.
- 36. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- 37. A "DSA CERTIFIED CLASS 2 " PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- 38. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)
- 40. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

- 1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THE CODES AND ALL APPLICABLE LOCAL ORDINANCES. WHERE CONTRACT DOCUMENTS EXCEED SUCH REQUIREMENTS, WITHOUT VIOLATING SUCH CODES, REGULATIONS
- 2. DURING THE CONSTRUCTION PERIOD, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONDITIONS AT THE PROJECT SITE, TO MEET THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND CALIFORNIA OCCUPATIONAL REGULATIONS . THIS PROVISION SHALL COVER THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PERSONS WORKING UPON OR VISITING THE SITE. THE CONTRACTOR SHALL BECOME FULLY INFORMED OF ALL APPLICABLE STANDARDS AND REGULATIONS AND INFORM ALL PERSONS AND REPRESENTATIVES RESPONSIBLE FOR WORK UNDER THIS CONTRACT.
- 3. CONFIRM ALL NEW AND EXISTING CONDITIONS WITH THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL DISCREPANCIES OR CONFLICTS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF THE CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.
- 4. REVIEW THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF SYSTEMS SHOWN ON CONSULTING ENGINEERS DOCUMENTS. DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEER'S DOCUMENTS SHALL BE BROUGHT TO ARCHITECT'S ATTENTION FOR DIRECTION. CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.
- 5. DO NOT SCALE THE CONSTRUCTION DOCUMENTS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED GRAPHICS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL ADDITIONAL REQUIRED DIMENSIONS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF THE CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.
- CORRECT ALL WORK INSTALLED IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS BY CONTRACTOR AS DIRECTED BY ARCHITECT AND AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 7. PRIOR TO BIDDING, THE GENERAL CONTRACTOR SHALL VISIT AND INSPECT THE SITE TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AFFECTING THE NEW WORK. THE GENERAL CONTRACTOR SHALL NOT DISPUTE. COMPLAIN. OR ASSERT THAT THERE IS ANY MISUNDERSTANDING IN REGARDS TO LOCATION, EXTENT, NATURE, OR AMOUNT OF WORK TO BE PERFORMED UNDER THIS CONTRACT DUE TO THE CONTRACTOR'S FAILURE TO INSPECT THE SITE AND/OR FAILURE TO INSPECT THE CONTRACT DOCUMENTS.
- 8. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. REQUEST ALL INSPECTIONS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE THE WORK ACCORDINGLY.
- 9. WHERE WORK OR EQUIPMENT IS INDICATED "N.I.C." (NOT IN CONTRACT) ON THE DRAWINGS. SUCH WORK AND/OR EQUIPMENT SHALL BE PROVIDED BY OTHERS. CONTRACTOR SHALL COORDINATE AND COOPERATE TO EFFECT SUCH INSTALLATION.
- 10. THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE **RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING** UNDERGROUND UTILITIES IN ALL AREAS OF THE NEW WORK PRIOR TO COMMENCEMENT OF EXCAVATION. EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ROUTING LOCATIONS AS BEST DETERMINED FROM EXISTING DRAWINGS AND BY THE OWNER, BUT SHOULD NOT BE CONSTRUED TO REPRESENT ALL EXISTING UTILITIES.
- 11. ANY ALTERATIONS OF EXISTING FACILITIES TO ACCOMMODATE THE INSTALLATION OF NEW WORK SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- 12. ALL EXISTING FINISHES OR MATERIALS DAMAGED OR DEMOLISHED DUE TO NEW CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL STATE OR REPLACED WITH NEW MATERIALS FINISHED TO MATCH EXISTING.
- 13. CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID DISRUPTION OF TENANTS DURING WORKING HOURS. ANY DISRUPTION OF POWER, TELEPHONE, OR HVAC SYSTEMS MUST BE COORDINATED AND APPROVED BY OWNER'S REPRESENATIVE PRIOR TO ANY WORK COMMENCING.
- 14. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT THE REVIEW OF ARCHITECT UNLESS NOTED (+/-) OR "VERIFY". DIMENSIONS NOTED "HOLD" SHALL BE CONSIDERED AS ABSOLUTE AND USED FOR LAY-OUT CONTROL UNLESS OTHERWISE DIRECTED BY ARCHITECT.
- 15. ALL HEIGHTS ARE DIMENSIONED FROM TOP OF SLAB UNLESS NOTED "AFF" (ABOVE FINISH FLOOR).
- 16. "TYPICAL" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED. WHEN A DETAIL OR NOTE IS IDENTIFIED AS "TYPICAL", CONTRACTOR SHALL APPLY THIS DETAIL OR NOTE TO EVERY LIKE CONDITION, WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE. VERIFY DIMENSIONS AND ORIENTATION ON PLANS.
- 17. PROVIDE WORK NOT SPECIFICALLY DETAILED OR SPECIFIED IN ACCORDANCE WITH DETAILS OR SIZES COVERING SIMILAR WORK.
- 18. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED VERIFY DIMENSIONS AND ORIENTATION ON PLANS.
- 19. ABBREVIATIONS THROUGHOUT THE DOCUMENTS COMPLY WITH DOCUMENT ABBREVIATION LIST OR ARE THOSE IN COMMON USE. ARCHITECT WILL DEFINE THE INTENT OF ANY IN QUESTION.
- 20. REFER TO THE PROJECT MANUAL FOR GENERAL CONDITIONS. SUPPLEMENTARY AND SPECIAL CONDITIONS, AND OTHER REQUIREMENTS.
- 21. PROVIDE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. PROVIDE TEMPORARY PASSAGES AS REQUIRED. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE CHECK WITH OWNER FOR ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES USE AREA OUTSIDE THE CONSTRUCTION ZONE WITHOUT PRIOR CLEARANCE FROM THE OWNER. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

#### **GENERAL NOTES**





# **DEMOLITION AND RENOVATION NOTES**

- 1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO MODIFY THE FACILITY FOR ACCESSIBILITY AND PV CARPORTS IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS SUCH THAT THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY ENFORCING AGENCY OR DSA PRIOR TO PROCEEDING WITH THE WORK. ADDITIONAL CHANGES WILL BE PROCESSED BY C.C.D. FOR DSA PROJECTS
- 2. VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO, MECHANICAL, PLUMBING, ELECTRICAL, PNEUMATIC TUBE, AND ALL OTHER EXISTING SYSTEMS. MAKE NECESSARY PROVISIONS TO MAINTAIN THE INTEGRITY OF EXISTING SYSTEMS PRIOR TO THE COMMENCEMENT OF DEMOLITION.
- 3. REFER TO DOCUMENTS PREPARED BY CONSULTING ENGINEERS FOR INFORMATION REGARDING THE REMOVAL OF EXISTING SYSTEMS.
- 4. COMPLY WITH ANSI A10.6 "SAFETY REQUIREMENTS FOR DEMOLITION" PUBLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE.

#### FIRE AND LIFE SAFETY NOTES

- 1. PROVIDE AN APPROPRIATE NUMBER OF PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 4A-60BC FOR PROTECTION DURING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PEDESTRIAN PROTECTION AS REQUIRED BY LOCAL CODE AND SPECIFICATION.
- 3. DO NOT BLOCK EXITS AT ANY TIME.
- 4. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE, STANDARDS AS DEFINED IN CHAPTER 35 CALIFORNIA BUILDING CODE AND APPLICABLE NFPA STANDARDS.
- 5. THE CONTRACTOR SHALL PROVIDE PROTECTION COMPLYING WITH TITLE 8, CCR, DURING WELDING. FURTHER PROTECTION SHALL BE PROVIDED TO ANY OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATION WHERE WELDING IS BEING PERFORMED. PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT.

#### **CALGREEN NOTES**

ELECTRIC VEHICLE PARKING

- 1. EV PARKING STALLS SERVICING FUTURE EV CHARGING STATIONS SHALL BE INCLUDED TO PARKING FACILITY WHEN A NEW CONSTRUCTED BUILDING IS PROPOSED.
- WHERE EV ADA PARKING IS REQUIRED, REFER TO CBC TABLE 11B-228.3.2.1 FOR QUANTITY REQUIREMENTS.
- 3. FUTURE EV PARKING SPACES QUALIFY AS DESIGNATED PARKING FOR CLEAN AIR VEHICLES AND SHALL BE MARKED WITH THE FOLLOWING CHARACTERS SUCH THAT THE LOWER EDGE OF THE LAST WORD ALIGNS WITH THE END OF THE STALL STRIPING AND IS VISIBLE BENEATH A PARKED VEHICLE.

#### CLEAN AIR/

VANPOOL/EV

4. EV ADA PARKING SPACES SHALL CONFORM TO THE REQUIREMENTS LISTED IN CBC SECTION 11B-812.

EV PARKING SPACES REQUIRED PER FACILITY# OF STALLSMIN EV REQ'D



10 6% OF TOTAL

## STRUCTURAL NOTES

- 1. PROVIDE ALL TEMPORARY SHORING AND BRACING AS REQUIRED FOR ALL DEMOLITION AND NEW WORK AS REQUIRED. ASSUME FULL RESPONSIBILITY FOR REPAIR AND/OR REPLACEMENT OF DAMAGED AREAS, INCLUDING BUT NOT NECESSARILY LIMITED TO, STRUCTURE, FINISHES, EQUIPMENT AND FURNISHINGS IF DAMAGE OF ANY KIND OCCURS AS RESULT OF IMPROPER OR INADEQUATE SHORING OR BRACING.
- 2. UNLESS SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS, DO NOT CUT OR OTHERWISE MODIFY STRUCTURAL ELEMENTS WITHOUT DIRECTION FROM ARCHITECT. PROVIDE REINFORCEMENT, SUPPORT, TEMPORARY SHORING SATISFACTORY TO THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CUTTING INTO STRUCTURAL PORTIONS OF ANY STRUCTURAL ELEMENT. PROVIDE ALL CUTTING OF STRUCTURAL ELEMENTS, AND ALL ASSOCIATED REPAIR OR REFINISHING OF ADJACENT SURFACES AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 3. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING NON-PRE-STRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING PRE-STRESSED REINFORCED CONCRETE (POST OR PRE TENSIONED), USE A NON-DESTRUCTIVE METHOD TO LOCATE TENDONS PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
- 4. PROVIDE TEMPORARY SHORING FOR EXCAVATIONS THAT REMOVE THE LATERAL SUPPORT FROM AN EXISTING BUILDING OR A PUBLIC WAY. PRIOR TO ISSUANCE OF PERMIT, OBTAIN APPROVAL FROM THE ENFORCING AGENCY FOR EXCAVATIONS ADJACENT TO A PUBLIC WAY.
- 5. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS, INCLUDING CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, PRIOR TO ISSUANCE OF A BUILDING OR GRADING PERMIT FOR ALL TRENCHING.

## EQUIPMENT ANCHORAGE NOTES

- 1. ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13,26, AND 30:
  - 1. ALL PERMANENT EQUIPMENT AND COMPONENTS
  - 2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER
  - 3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
- 2. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHEMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
  - A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT
  - B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL
- 3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.
- 4. <u>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM</u> <u>BRACING NOTE:</u>
- PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SEECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.8, AND 2019 CBC SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.
- 6. THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
- 7. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E)

MP MD PP E	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS
MP MD PP E	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) #



CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	0	Plan sheet, Spec or Attach Reference
DIVISION 5.4	MANDATORY	WEATHER PROTECTION	5.407.1		N/A		NOTE 7
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	MANDATORY	MOISTURE CONTROL: SPRINKLERS	5.407.2.1		N/A		NOTE 7
	MANDATORY	MOISTURE CONTROL: EXTERIOR DOOR PROTECTION	5.407.2.2.1		N/A		NOTE 7
MANDATORY		MOISTURE CONTROL: FLASHING	5.407.2.2.2		N/A		NOTE 7
			5.408.1.1,		N/A		NOTE 7
	MANDATORY	SECTIONS 5.408.1.1, 5.408.1.2, 5.408.1.3 OR MORE STRINGENT LOCAL	5.408.1.2,		N/A		NOTE 7
			5.408.1.3		N/A		NOTE 7
	MANDATORY	CONSTRUCTION WASTE MANAGEMENT: DOCUMENTATION WITH NOTES	5.408.1.4		N/A		NOTE 7
	MANDATORY	UNIVERSAL WASTE [A]	5.408.2		N/A		NOTE 7
	MANDATORY	EXCAVATED SOIL AND LAND CLEARING DEBRIS WITH EXCEPTION AND NOTES	5.408.3		N/A		NOTE 7
	MANDATORY	RECYCLING BY OCCUPANTS WITH EXCEPTION	5.410.1		N/A		NOTE 7
	MANDATORY	RECYCLING BY OCCUPANTS: ADDITIONS WITH EXCEPTION	5.410.1.1		N/A		NOTE 7
	MANDATORY	RECYCLING BY OCCUPANTS: SAMPLE ORDINANCE	5.410.1.2		N/A		NOTE 7
	MANDATORY	COMMISSIONING NEW BUILDINGS (3 10,000 SF) [N] WITH EXCEPTIONS AND NOTES	5.410.2		N/A		NOTE 7
	MANDATORY	OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS (OPR) [N]	5.410.2.1		N/A		NOTE 7
	MANDATORY		5.410.2.2		N/A		NOTE 7
	MANDATORY		5.410.2.3		N/A		NOTE 7
	MANDATORY		5.410.2.4		N/A		NOTE 7
			5.410.2.5		N/A		NOTE 7
			5 410 2 5 2				NOTE 7
	MANDATORY		5.410.2.6		N/A		NOTE 7
	MANDATORY	TESTING AND ADJUSTING FOR NEW BUILDINGS < 10,000 SF OR NEW SYSTEMS THAT SERVE ADDITIONS OR ALTERATIONS	5.410.4		N/A		NOTE 7
	MANDATORY	SYSTEM TESTING PLAN FOR HVAC, LIGHTING, WATER HEATING, RENEWABLE ENERGY, LANDSCAPE IRRIGATION AND WATER REUSE	5.410.4.2		N/A		NOTE 7
	MANDATORY	PROCEDURES FOR TESTING AND ADJUSTING	5.410.4.3		N/A		NOTE 7
	MANDATORY	HVAC BALANCING	5.410.4.3.1		N/A		NOTE 7
	MANDATORY	REPORTING FOR TESTING AND ADJUSTING	5.410.4.4		N/A		NOTE 7
	MANDATORY	OPERATION AND MAINTENANCE (O&M) MANUAL	5.410.4.5		N/A		NOTE 7
	MANDATORY	INSPECTION AND REPORTS	5.410.4.5.1		N/A		NOTE 7
DIVISION 5.5	MANDATORY	FIREPLACES	5.503.1		N/A		NOTE 7
ENVIRONMENTAL QUALITY	MANDATORY	WOODSTOVES	5.503.1.1		N/A		NOTE 7
	MANDATORY		5.504.1		N/A		NOTE 7
	MANDATORY	EQUIPMENT DURING CONSTRUCTION	5.504.3		N/A		NOTE 7
	MANDATORY	ADHESIVES, SEALANTS AND CAULKS	5.504.4.1		N/A		NOTE 7
	MANDATORY	PAINTS AND COATINGS	5.504.4.3		N/A		NOTE 7
	MANDATORY	AEROSOL PAINTS AND COATINGS	5.504.4.3.1		N/A		NOTE 7
	MANDATORY	AEROSOL PAINTS AND COATINGS: VERIFICATION	5.504.4.3.2		N/A		NOTE 7
	MANDATORY	CARPET SYSTEMS	5.504.4.4		N/A		NOTE 7
	MANDATORY	CARPET CUSHION	5.504.4.4.1		N/A		NOTE 7
	MANDATORY	CARPET ADHESIVE	5.504.4.4.2		N/A		NOTE 7
	MANDATORY	COMPOSITE WOOD PRODUCTS	5.504.4.5		N/A		NOTE 7
	MANDATORY	COMPOSITE WOOD PRODUCTS: DOCUMENTATION	5.504.4.5.3		N/A		NOTE 7
	MANDATORY		5.504.4.6		N/A		NOTE 7
	MANDATORY		5.504.4.6.1		N/A		NOTE 7
	MANDATORY		5.504.5.3		N/A		NOTE 7
	MANDATORY		5.504.5.3.1		N/A		NOTE 7
	MANDATORY		5.504.7		N/A		NOTE 7
	MANDATORY		5 506 1		N/A		NOTE 7
	MANDATORY		5.506.2		N/A		NOTE 7
	MANDATORY		5 507 4		N/A		NOTE 7
	MANDATORY	EXTERIOR NOISE TRAMSISSION PRESCRIPTIVE METHOD WITH EXCEPTIONS	5.507.4.1		Ν/Α		NOTE 7
	MANDATORY	NOISE EXPOSURE WHERE NOISE CONTOURS ARE NOT READILY AVAILABLE	5.507.4.1.1		Ν/Δ	++	NOTE 7
	MANDATORY	PERFORMANCE METHOD	5.507.4.2		Ν/Δ		NOTE 7
	MANDATORY	SITE FEATURES	5.507.4.2.1		N/A		NOTE 7
	MANDATORY	DOCUMENTATION OF COMPLIANCE	5.507.4.2.2		N/A		NOTE 7
	MANDATORY	INTERIOR SOUND TRANSMISSION WITH NOTE	5.507.4.3		N/A		NOTE 7
		OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS	5.508.1		N/A		NOTE 7
	MANDATORY		-	1		1	
	MANDATORY	CHLOROFLUOROCARBONS (CFCs)	5.508.1.1		N/A		NOTF 7
	MANDATORY MANDATORY MANDATORY	CHLOROFLUOROCARBONS (CFCs) HALONS	5.508.1.1 5.508.1.2		N/A N/A		NOTE 7

DOCUMENT COMPANY: ADDRESS:

CITY/STATE

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Y = YESes (SECTION HAS BEEN SELECTED AND / OR INCLUDED) N/A = NOT APPLICABLE (CODE SECTION DOES NOT APPLY TO THE PROJECT, MAINLY USED FOR ADDITIONS AND ALTERATIONS) O = OTHER (PROVIDE EXPLANATION) [N] = NEW CONSTRUCTION PURSUANT TO SECTION 301.3F [A] = ADDITIONS AND / OR ALTERATIONS PUSUANT TO SECTION 301.3

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y N/A	0	Plan sheet, Sr Attach Refer
DIVISION 5.1	MANDATORY	STORM WATER POLLUTION PREVENTION WITH SUBSECTIONS	5.106.1 through 5.106.1.2		0	NOTE 1
PLANNING AND DESIGN	MANDATORY	SHORT TERM BICYCLE PARKING	5.106.4.1.1	N/A		NOTE 7
	MANDATORY	LONG TERM BICYCLE PARKING	5.106.4.1.2	N/A		NOTE 7
	MANDATORY	DESIGNATED PARKING FOR CLEAN AIR VEHICLES	5.106.5.2	N/A		NOTE 7
	MANDATORY	PARKING STALL MARKING	5.106.5.2.1	Y		NOTE 7
	MANDATORY	SINGLE (EV) CHARGING SPACE REQUIREMENTS [N]	5.106.5.3.1	Y		NOTE 3
	MANDATORY	MULTIPLE (EV) CHARGING SPACE REQUIREMENTS [N]	5.106.5.3.2	Y		NOTE 3
	MANDATORY	EV CHARGING SPACE CALCULATION [N] WITH EXCEPTIONS	5.106.5.3.3	Y		NOTE 3
	MANDATORY	[N] IDENTIFICATION	5.106.5.3.4	Y		NOTE 3
	MANDATORY	[N] FUTURE CHARGING SPACES WITH NOTES 1-3	5.106.5.3.5	N/A		NOTE 3
	MANDATORY	LIGHT POLLUTION REDUCTION [N] WITH EXCEPTIONS AND NOTE	5.106.8	Y		PV?
	MANDATORY	GRADING AND PAVING WITH EXCEPTION FOR ADDTIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH	5.106.10	N/A		NOTE 4
DIVISION 5.2 ENERGY EFFICIENCY	MANDATORY	MEET THE MINIMUM ENERGY EFFICIENCY STANDARD	5.201.1	Y		A000
<b>DIVISION 5.3</b>	MANDATORY	SEPARATE METERS (NEW BUILDINGS OR ADDITIONS > 50,000 SF THAT CONSUME MORE THAN 100 GAL/DAY)	5.303.1.1	N/A		NOTE 5
WATER EFFICIENCY AND CONSERVATION	MANDATORY	SEPARATE METERS (FOR TENANTS IN NEW BUILDINGS OR ADDITIONS THAT CONSUME MORE THAN 1,000 GAL/DAY)	5.303.1.2	N/A		NOTE 5
	MANDATORY	WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH	5.303.3.1	N/A		NOTE 5
	MANDATORY	WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GPF	5.303.3.2.1	N/A		NOTE 5
	MANDATORY	FLOOR MOUNTED URINALS SHALL NOT EXCEED 0.5 GPF	5.303.3.2.2	N/A		NOTE 5
	MANDATORY	SINGLE SHOWERHEAD SHALL HAVE MAXIMUM FLOW RATE OF 2.0 GPM (GALLONS PER MINUTE) AT 80 PSI	5.303.3.3.1	N/A		NOTE 5
	MANDATORY	MULTIPLE SHOWERHEADS SERVING ONE SHOWER SHALL HAVE A COMBINED FLOW RATE OF 2.0 GPM (GALLONS PER MINUTE) AT 80 PSI	5.303.3.3.2	N/A		NOTE 5
	MANDATORY	NONRESIDENTIAL LAVORATORY FAUCETS	5.303.3.4.1	N/A		NOTE 5
	MANDATORY	KITCHEN FAUCETS	5.303.3.4.2	N/A		NOTE 5
	MANDATORY	WASH BASINS	5.303.3.4.3	N/A		NOTE 5
	MANDATORY	METERING FAUCETS	5.303.3.4.4	N/A		NOTE 5
	MANDATORY	METERING FAUCETS FOR WASH FOUNTAINS	5.303.3.4.5	N/A		NOTE 5
	MANDATORY	FOOD WASTE DISPOSERS WITH NOTE	5.303.4.1	N/A		NOTE 5
	MANDATORY	AREAS OF ADDIONS AND ALTERATIONS	5.303.5	N/A		NOTE 5
	MANDATORY	SSTANDARDS FOR PLUMBING FIXTURES AND FITTINGS	5.303.6	N/A		NOTE 5
	MANDATORY	OUTDOOR WATER USE IN LANDSCAPE AREAS EQUAL TO / GREATER THAN 500 SF	5.304.2	N/A		NOTE 6
	MANDATORY	OUTDOOR WATER USE IN REHABILITED LANDSCAPE PROJECTS WITH AREAS EQUAL TO OR GREATER THAN 2,500 SF	5.304.3	N/A		NOTE 6
	MANDATORY	OUTDOOR WATER USE IN LANDSCAPE AREAS OF 2,500 SF OR LESS	5.304.4	N/A		NOTE 6
	MANDATORY	GRAYWATER OR RAINWATER USE IN LANDSCAPE AREAS	5.304.5	N/A		NOTE 6

#### <u>NOTES</u>

SWPP BY OTHERS (N.I.C.)

(NOT USED) MULTIPLE (FUTURE) EV CHARGING STATIONS PROVIDED BY OTHERS.

THE PROJECT DOES NOT ALTER THE EXISTING DRAINAGE PATH. THE PROJECT DOES NOT IMPACT INDOOR WATER USE.

ALL LANDSCAPING BY OTHERS (N.I.C.)

ION AUTHOR'S / RESPONSIBLE DESIGNER'S DECALRATION STATEMENT MANDATORY:				
I ATTEST THAT THIS MANDATORY PROVISIONS CHE	CKLIST IS ACCI	URATE AND COMPLETE.		
Ben Backard	SIGNATURE:	Jomp All		
CURRENT DESIGN GROUP	DATE:	05/18/2020		
1925 PALOMAR OAKS WAY, STE 107		C24470		
ZIP: CARLSBAD, CA 92008	LICLINGE.	034473		

STATE OF CALIFORNIA – DEPARTMENT OF GENERAL SERVICES – BUILDING STANDARDS COMMISSION CALGreen VERIFICATION GUIDELINES – MANDATORY MEASURES CHECKLIST BSC CG-200 (Rev. 12/16)

# **CALGreen VERIFICATION GUIDELINES** MANDATORY MEASURES CHECKLIST

APPLICATION: THIS CHECKLIST SHALL BE USED FOR NONRESIDENTIAL PROJECTS THAT MEET ONE OF THE FOLLOWING: NEW CONSTRUCTION, BUILDING ADDITIONS OF 1,000 SQ. FT. OR GREATER, OR ALTERATIONS WITH A PERMIT VALUATION OF \$200,000 OR MORE PURSUANT TO CALGreen SECTION 301.3 AND DO NOT TRIGGER A TIER 1 OR TIER 2 REQUIREMENT:

7. THE PROJECT DOES NOT IMPACT THE EXISTING BUILDINGS, LESS THAN 10 PARKING STALLS ADDED.





			EGEND	
—		-	PROPERTY LIN	E
· · · · · · · · · · ·			SETBACK LINE	
		· · ·	(E) BUILDING (N	1.1.C.)
	X	]	KEYNOTE	
		сш		
1. LOCA	TION OF UT			FE AND ARE BASE
BEST RESP PIPES	INFORMAT ONSIBILITY 5, STRUCTU	ION AVAIL FOR VER IRES, AND	ABLE. THE CON IFYING ALL UNE LIN RUNS IN TH	NTRACTOR BEARS DERGROUND UTIL
CONS SHALI THE A	TRUCTION L BE REPAI	ANY DAI RED IMME ASSUMES	MAGE TO UTILIT DIATELY AT NO NO RESPONSI	IES THAT ARE TO EXPENSE TO THE BILITY FOR ANY U
NOT S 2. ALL P	SHOWN ON	PLANS. AND FINIS	H GRADES ARE	BASED ON INFOF
PROV ACTU ARCH	IDED BY TH AL FIELD M	IE OWNEI EASUREM EDIATELY	R'S SURVEY. AN IENTS ARE TO E	IY DISCREPANCIE SE REPORTED TO
	STING BUILI		ETNUTES	
7 EXIS	STING AC P STING TREE	AVING E, TYP.		
11 EXIS 14 EXIS	STING LIGH STING STOF	T FIXTURI RM DRAIN	E, TYP. EASEMENT BK	3918, PG305 OR
		VVALL		
	EXI	STING	PARKING	COUNT
LOT NU	<b>EXI</b> JMBER	<b>STING</b> TOTAL P <i>I</i>	PARKING	COUNT TOTAL ADA
LOT NU	<b>EXI</b> JMBER	<b>STING</b> TOTAL P#	PARKING SPACES	COUNT 5 TOTAL ADA 3
LOT NU 1	<b>EXI</b> JMBER	<b>STING</b> TOTAL PA	PARKING SPACES	COUNT 5 TOTAL ADA 3
LOT NU 1	<b>EXI</b>	<b>STING</b> TOTAL PA	PARKING SPACES	COUNT 5 TOTAL ADA 3
LOT NU 1	<b>EXI</b>	<b>STING</b> TOTAL PA	PARKING SPACES	COUNT TOTAL ADA 3
LOT NU 1	<b>EXI</b>	STING TOTAL P	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	<b>EXI</b>	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	<b>EXI</b>	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	<b>EXI</b>	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	JMBER	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	JMBER	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU 1	JMBER	STING	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NU	JMBER	STING	PARKING SPACES 35	COUNT TOTALADA 3
LOT NU 1	JMBER	STING TOTAL PA	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NL 1	JMBER	STING	PARKING SPACES 35	S TOTAL ADA 3
LOT NL 1	JMBER	STING TOTAL PA	PARKING SPACES 35	5 TOTAL ADA 3
LOT NI 1	JMBER	STING TOTAL PA	PARKING SPACES	COUNT TOTAL ADA 3
LOT NI 1	JMBER	STING TOTAL PA	PARKING SPACES	COUNT TOTALADA 3
LOT NI 1	JMBER	STING TOTAL PA	PARKING SPACES	5 TOTAL ADA 3
LOT NU 1	JMBER	STING TOTAL PA	PARKING SPACES 35	COUNT TOTAL ADA 3
LOT NL 1	JMBER	STING TOTAL PA	PARKING SPACES 35	S TOTAL ADA 3





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	LE	EGEND
	XX XX	ELEMENTS SCHEDULED TO BE DEMOLISHED EXISTING TREE SCHEDULED TO BE REMOVED OR TRIMMED EXISTING LIGHT POLE SCHEDULE
	X	KEYNOTE
	?	UNDERGROUND UTILITY LINE
	DEMOLI	TION NOTES
1.	CONDUIT RUNS AS SHOWN	IS APPROXIMATE. FIELD VERIFY ALL EXISTING UTILITIES. INCLUDING
2.	CONDUIT RUNS AS REQUIR REMOVED LIGHTING FIXTUF LEGALLY DISPOSED OF AS REPRESENTATIVE STOCKE	ED PRIOR TO START WORK. RES, LAMPS, AND POLES SHALL BE DIRECTED BY OWNER'S PULE ON SITE (COORDINATE LOCAT
3.	WITH OWNER). REMOVE PARKING LOT LIGH DEMOLITION WORK THAT A CONTINUITY TO EXISTING L UNDERGROUND CONDUIT N ABANDONED IN PLACE. CAI	HTING CONDUCTORS ASSOCIATED RE NOT REQUIRED TO MAINTAIN C IGHTING THAT IS TO REMAIN. NO LONGER REQUIRED MAY BE P ABANDONED CONDUIT.
4.	CONTRACTOR SHALL FIELD EXTERIOR LIGHTING CIRCU PROVIDE IN-GRADE TRAFFI DEMOLISHED LIGHT POLES TO ANY EXISTING LIGHTING COORDINATE NEW ARRAY I EXISTING PARKING LOT LIG LIGHTING MUST BE TIED IN BUILT DRAWINGS SHOWING LOCATIONS TO OWNER PRI	VERIFY ALL EXISTING UNDERGRO ITRY PRIOR TO STARTING WORK. C RATED BOXES AT LOCATIONS OF IF REQUIRED TO MAINTAIN CONTIN FIXTURES OUTSIDE OF THE ARRA LIGHTING REQUIREMENTS WITH HTING INFRASTRUCTURE. NEW AN TO EXISTING CIRCUITS. PROVIDE A THE REVISED CIRCUITING AND BO OR TO CLOSE-OUT.
5.	WHERE LIGHT POLES ARE F BELOW FINISH GRADE TO M REPAIR THE AREA OF DEMO EXISTING.	REMOVED, REMOVE CONCRETE PII MATCH ASPHALT THICKNESS. PATC OLITION WITH NEW ASPHALT TO M
6.	EXISTING PARKING STRIPIN SHALL BE PAINTED BLACK.	IG AFFECTED BY NEW ADA SPACE
7.	COORDINATE TREE TRIMMI REPRESENTATIVE AND ARE COMMENCEMENT OF WORK	NG AND / OR REMOVAL WITH OWN 3ORIST AS REQUIRED PRIOR TO K.
1.	ALL ITEMS REFERENCED AF OTHERWISE.	ET NOTES RE EXISTING, UNLESS NOTED
2.	REFER TO GENERAL NOTES SHEET A001 FOR ADDITION	S AND DEMOLITION NOTES ON AL INFORMATION AND
3.	CONTRACTOR SHALL FIELD COMMENCING WITH WORK.	VERIFY ALL DIMENSIONS PRIOR T
4.	COORDINATE ALL DEMOLIT REFER TO ELECTRICAL DRA	ION WORK WITH ELECTRICAL. AWINGS FOR ADDITIONAL (E) ULTUITIES
	TREES DEMO: 12 LIGHT PO	OLES DEMO: 2
	KE	YNOTES
1 3 5 6	EXISTING STRUCTURE T DURING CONSTRUCTION EXISTING TREE TO BE RI GRIND STUMP 18" BELOW PER LANDSCAPE REQUI EXISTING PAINTED PARK REMOVED, TYP. GRIND EXISTING ASPHAI REQUIRED AND PREPAR	O REMAIN. PROTECT AS REQUIREI N. EMOVED, TYP. CONTRACTOR TO W GRADE. TOP DRESS LANDSCAPE REMENTS KING STALL STRIPING TO BE LT PAVING PER PLAN. GRADE AS RE SURFACE/SUBSURFACE TO
10 16	<ul> <li>RECEIVE NEW WORK.</li> <li>EXISTING CONCRETE PA TO ACCOMMODATE NEW</li> <li>EXISTING CONCRETE CL SHALL FIELD VERIFY SCO DEMOLITION</li> </ul>	VING TO BE REMOVED AS REQUIR / WORK. JRB TO BE REMOVED. CONTRACTC OPE OF WORK PRIOR TO
19 23	<ul> <li>EXISTING ACCESSIBLE S</li> <li>EXISTING FENCE TO BE</li> <li>A300 FOR LOCATION</li> </ul>	STALL STRIPINGTO BE REMOVED. REMOVED AND RELOCATED - SEE
19 23	<ul> <li>EXISTING ACCESSIBLE S</li> <li>EXISTING FENCE TO BE I A300 FOR LOCATION</li> </ul>	STALL STRIPINGTO BE REMOVED REMOVED AND RELOCATED - SE





# 810

# **FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL**

Division of the State Architect (DSA) documents referenced within this publication are available on the

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply. Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and

For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for

UNIFIED SCHOOL DISTRICT				
ACADEMY				
N DIEGO, CA 92115				
			6	
N				
performed within the past 12 months? $\sqrt[n]{2}{2}$	Yes 🔲		No 🗖	
est performed as part of this LFA	Yes 🗖		No 🗖	
signated fire hazard severity zone re? (If yes, indicate FHSZ classification	Yes 🗖		No 🗖	
r FHSZ locations:	Moderate 🔲 High 🗖		Very High 🗖	
(If any designations are checked, project design must meet the A.)			WIFA 🗖	

		Page 1 of 4
C	EPARTMENT OF GENERAL SERVICES	STATE OF CALIFORNIA

DS RESOLUTION	ALTER	NATE AC	CEPTE	D
	Yes	No	N/A	N/R
adways do not meet CFC requirements.				
gency vehicle and personnel access as proposed eptable for providing fire suppression and				
spacing does not meet CFC requirements.				
er of fire hydrants and spacing as proposed by able for fire suppression and protection of life and				
d pressure are less than CFC minimum.				
vailable flow and pressure is acceptable for protection of life and property.				
nnection(s) serving fire sprinkler systems or neet CFC requirements.				
ocation of fire department connection serving the andpipe system is acceptable for providing fire life and property.				

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Ť	itle:	
	Dat	e:
NFORMATION		
	Work Phone:	
	Date	ə:

Page 2 of 4 STATE OF CALIFORNIA DEPARTMENT OF GENERAL SERVICES

PROJECT SCOPE OF WORK

INSTALLATION OF PV SHADE STRUCTURES, ASSOCIATED FOUNDATIONS. ERECTION OF STRUCTURAL STEEL AND SUPPOERTING STRUCTURE AND ASSOCIATED GROUND MOUNTING EQUIPEMNT FOR PV PANELS

INSTALLATION OF ELECTRICAL EQUIPMENT, CONDUIT, CONDUCTORS AND ASSOCIATED PV WIRING.

INSTALLATION OF EQUIPMENT PADS.

INTERCONNECTION WITH FACILITY'S ELECTRICAL SYSTEM.

• DEMOLITION AND REMOVAL OF TREES AND LIGHT POLES, LANDSCAPE, IRRIGATION REMOVAL AND REPLACEMENT, WHERE



	LEGEND		
	EXISTING FIRE APPARATUS ACCESS ROAD	0 0	PROPOSI
	ASSUMED PROPERTY LINE		(E) BUILD
	PROPERTY LINE		
$\langle \mathbf{x} \rangle$	(N) ARRAY PER TABLE		(E) BIOSV
$\searrow$	FIRE HYDRANT	X	KEYNOTE
SIM			

AGGREGATE	ARRAY #	OCC. TYPE	CONST. TYPE	AREA	ALLOWABLE AREA	SPRINKLER
1	1	S-2	IIB	2143.29 SF	< 14,500 SF	No
				2143.29 SF		
2	2	S-2	IIB	6406.07 SF	< 14,500 SF	No
	•		•	6406.07 SF	•	
3	3	S-2	IIB	5214.99 SF	< 14,500 SF	No
				5214.99 SF		

- 1. COMPLIANCE WITH CFC, SECTION 33 (FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION) AND CBC, SECTION 33 (SAFEGUARDS DURING CONSTRUCTION) SHALL BE ENFORCED.
- 2. PER CFC, SECTION 503.1.1: APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING FIRE APPARATUS ACCESS ROAD SHALL COMPLY WITH THE REQUIREMENTS OF FACILITY AND ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY.
- 3. PER CFC, SECTION 503.2.1: FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN (20' - 0"), EXCLUSIVE OF SHOULDERS, EXCEPT FOR APPROVED SECURITY GATES IN ACCORDANCE WITH SECTION 503.6,
- 4. SOLAR SUPPORT STRUCTURES SHALL BE INSTALLED SUCH THAT THEY DO NOT AFFECT THE APPROVED FIRE APPARATUS ACCESS ROADS. SURVEYOR AND FOUNDATION INSTALLER SHALL COORDINATE COLUMN PLACEMENTS WITH SUNPOWER.
- 5. ARROWS POINT TO THE LOW SIDE OF THE SOLAR SUPPORT STRUCTURE. STRUCTURES WITHOUT ARROWS SHALL HAVE 0° TILT.
- 6. FOR COLUMN TO COLUMN DISTANCE, REFER TO STRUCTURAL DRAWINGS.
- 7. PARKING STALL CLEARANCE HEIGHT SHALL BE (12' 0") MINIMUM.

DIAGRAM. SEE SHEET NOTE #3 FOR MORE INFORMATION 2 TURNING DIAGRAM FOR MORE INFORMATION.





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![](_page_7_Figure_1.jpeg)

![](_page_8_Figure_0.jpeg)

•	•••••	NEW PATH OF TRAVEL (SEE NOTE 1)
	•••••	EXISTING PATH OF TRAVEL PER A# 04-111593
		ASSUMED PROPERTY LINE
	$\langle \mathbf{x} \rangle$	(N) ARRAY # PER ARRAY SUMMARY TABLE ON A010
	0 0	PROPOSED ARRAY
		(E) BUILDING (N.I.C.)
		NEW WALKWAY AREA
		(E) BIOSWALE
	X	KEYNOTE
	DESIGN PRO RESPONSIBI	FESSIONAL IN GENERAL _E CHARGE STATEMENT
1.	THE POT IDENTIFIED MEETS THE REQUIRE CALIFORNIA BUILDIN FOR PATH OF TRAVE ADDITIONS AND STR DESIGN OF THIS PRO ELEMENTS, COMPON WERE DETERMINED HAVE BEEN IDENTIFI WORK NECESSARY T BEEN INCLUDED WIT THROUGH DETAILS, I INCORPORATED INTO ANY NONCOMPLIANT OF THE POT THAT W BASED ON VALUATIO OF UNREASONABLE CONSTRUCTION DOO ITEMS WITHIN THE S CBC COMPLIANT ARE REASONABLE CONST BE BROUGHT INTO C THIS PROJECT BY ME DOCUMENT."	IN THESE CONSTRUCTION DOCUMENTS MENTS OF THE CURRENT APPLICABLE G CODE (CBC) ACCESSIBILITYPROVISION L REQUIREMENTS FOR ALTERATIONS, JCTURAL REPAIRS. AS PART OF THE DJECT, THE POT WAS EXAMINED AND AN IENTS OR PORTIONS OF THE POT THAT TO BE NONCOMPLIANT WITH THE CBC ED AND THE CORRECTIVE O BRING THEM INTO COMPLIANCE HAS HIN THE SCOPE OF THIS PROJECT'S WO DRAWINGS AND SPECIFICATIONS D THESE CONSTRUCTION DOCUMENTS. ELEMENTS, COMPONENTS OR PORTION ILL NOT BE CORRECTED BY THIS PROJEC ON THRESHOLD LIMITATIONS OR A FINDIN HARDSHIP ARE INDICATED IN THESE CUMENTS. DURING CONSTRUCTION, IF PO COPE OF THE PROJECT REPRESENTED FOUND TO BE NONCONFORMINGBEYON IRUCTION TOLERANCES, THE ITEMS SHA OMPLIANCE WITH THE CBC AS A PART C EANS OF A CONSTRUCTION CHANGE
2.	"PATH OF TRAVEL" (F ACCESSIBLE ROUTE EXCEEDING 1/2" BEV 1:2, EXCEPT THE LEV AND IS AT LEAST 48" AND SLIP RESISTANT THAN 1:48 AND RUNN 1:20. UNLESS OTHER	2.0.T.) AS INDICATED IS A BARRIER FREE WITHOUT ANY ABRUPT LEVEL CHANGES ELED AND AT A SLOPE NOT STEEPER TH 'EL CHANGES ARE 1/4" MAXIMUM VERTIC WIDE. SURFACE SHALL BE STABLE, FIRM C CROSS-SLOPE SHALL NOT BE STEEPEI WING SLOPE SHALL NOT BE STEEPER TH WISE INDICATED (SECTION 11B-403.3)

P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS UP TO 80" MINIMUM (SECTION 11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM A WALL SURFACE BETWEEN 27" AND 80" ABOVE FINISH FLOOR OR GROUND (SECTION 11B-307.2). PROVIDE FLUSH TRANSITION AT ANY ADJOINING JOINTS BETWEEN NEW AND EXISTING WALK SURFACES IN P.O.T. ARCHITECT TO VERIFY THAT THERE ARE NO BARRIERS IN THE P.O.T AND ALL OTHER AREAS COMPLY WITH SECTION 11B-206.

## SHEET NOTES

- SOLAR SUPPORT STRUCTURES TO BE INSTALLED SUCH THAT THEY DO NOT INTERFERE WITH THE APPROVED ADA PATH OF TRAVEL ACCESS PLAN.
- 2. SOLAR SUPPORT STRUCTURE COLUMNS AND ASSOCIATED FOUNDATIONS SHALL NOT INTERFERE WITH (E) ADA PARKING STALLS NOR (E) ADA PATH OF TRAVEL. SURVEYOR AND FOUNDATION INSTALLER TO COORDINATE COLUMN PLACEMENT WITH SUNPOWER.
- 3. REFER TO SHEETS A010 AND A210 FOR MORE NOTES REGARDING REQUIREMENTS FOR ADA PARKING STALLS.
- REFER TO SHEETS A010 AND A210 FOR NOTES REGARDING REQUIREMENTS FOR EV PARKING STALLS.
- PARKING STALL CLEARANCE HEIGHT SHALL BE (12' 0") MINIMUM.

## KEYNOTES

- 1 EXISTING P.O.T. PER A# 04-111593
- 3 EXISTING ACCESSIBLE STALL PER A# 04-111593
- 8 NEW TRUNCATED DOMES10 NEW ACCESSIBLE WALKWAY
- 12 FUTURE EV ADA STALL
- 13 FUTURE EV STALL
- 16 EXISTING ACCESSIBLE BUS LOADING ZONE PER A# 04-111593
- 17 EXISTING ENTRY SIGN SEE DETAIL 5/A500

![](_page_8_Figure_18.jpeg)

![](_page_9_Picture_0.jpeg)

LEG	END
	NEW PATH OF TRAVEL (SEE NOTE 1) EXISTING PATH OF TRAVEL
	Ν
O (000.00') NEW ELEVATION	ELEVATION TAG
	AREA OF WORK - CONTRACTO SHALL PROVIDE NEW ASPHAL CONCRETE PAVEMENT AND SI BLEND FINISH SURFACE OF NE ELEVATIONS TO EXISTING ELEVATIONS AS REQUIRED. HATCHED AREA SHALL MAINT/ 2% OR 5% MAXIMUM SLOPE IN DIRECTIONS. SEE DETAIL 4/A5
X	KEYNOTE
	TRUNCATED DOMES SEE DETAIL 1/A501
	NEW CONCRETE WALK SEE DETAIL 3/A501
SHEET	NOTES
1. SOLAR SUPPORT STRUCTUR THEY DO NOT INTERFERE WI TRAVEL ACCESS PLAN.	ES TO BE INSTALLED SUCH THAT TH THE APPROVED ADA PATH OF
2. SOLAR SUPPORT STRUCTUR FOUNDATIONS SHALL NOT IN STALLS NOR ANY (E) ADA PA	E COLUMNS AND ASSOCIATED TERFERE WITH (E) ADA PARKING TH OF TRAVEL.
3. SURVEYOR AND FOUNDATION COLUMN PLACEMENT WITH S	N INSTALLER TO COORDINATE SUNPOWER.
4. THE ACCESSIBLE PATH OF TH PLANS, IS A BARRIER FREE A ABRUPT VERTICAL CHANGES SLOPE OF 1:20, WITH THE EX DO NOT EXCEED 1/4" VERTICA ACCESSIBLE PATH OF TRAVE MAINTAIN A 48" MIN. WIDTH.	RAVEL, AS INDICATED ON THE CCESS PATHWAY WITHOUT ANY IN EXCESS OF 1/2" AND A MAX CEPTION THAT LEVEL CHANGES AL WITH A CROSS SLOPE OF 2%. L SHALL BE SLIP RESISTANT ANI
5. FOR EXACT COLUMN SPACIN DRAWINGS.	G REFER TO SITE SECTION
6. IF SITE PARKING TO BE RE-S DIMENSIONS SHALL BE 9'-0" V RE-STRIPING WITH OWNER A COMMENCEMENT OF WORK.	TRIPED, TYPICAL PARKING STALI VIDE X 18'-0" LONG. COORDINAT S REQUIRED PRIOR TO
7. GRADES AND SLOPES SHALL AS NEEDED, WHENEVER ACC ADDED TO AN EXISTING PARE	BE CHECKED AND READJUSTED ESSIBLE PARKING STALLS ARE KING LOT.
KEYN	IOTES
<ol> <li>EXISTING PARKING STRIPING</li> <li>NEW PARKING STRIPING, PAIN EXISTING.ADJUST AND OR EX COMPLETE THE ACCESSIBLE</li> <li>EXISTING ACCESSIBLE PARKIN A# 04-111593</li> <li>EXISTING ACCESS AISLE STRI 36" O.C.</li> <li>EXISTING WHEELSTOP. CONT BLUE 15090 IN COMPLIANCE V REPLACE IF DAMAGED OR NO</li> <li>NEW CANOPY ABOVE SHOWN</li> <li>NEW SOLAR COLUMN SUPPOI 4 EXISTING TRUNCATED DOMES</li> <li>NEW TRUNCATED DOMES WIT</li> <li>NEW ADA SIGNAGE IN COMPL AND 4 A500</li> <li>PROVIDE 2% MAX. SLOPE IN A PARKING STALL AND ACCESS VERIFY SLOPES DO NOT EXCE</li> <li>FUTURE EV PARKING LABELE</li> <li>NEW CONCRETE CURB SEE D</li> </ol>	NTED BLUE - MATCH TEND EXISTING STRIPING TO AREA AS REQUIRED. NG STRIPING AND ISA SYMBOL P PING. COLOR SHALL BE WHITE A RACTOR SHALL PAINT FEDERAL VITH FEDERAL STANDARD 595C. N-COMPLIANT. DASHED. TH 48" MIN. WIDTH AND 36" DEPTH IANCE WITH CODE. SEE DETAILS NY DIRECTION AT ACCESSIBLE AISLE. CONTRACTOR SHALL FIE ED 2%. D AS "CLEAN AIR/ VANPOOL / EV ETAIL 3 / A501

![](_page_9_Figure_4.jpeg)

![](_page_10_Picture_0.jpeg)

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![](_page_11_Figure_0.jpeg)

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	••••	NEW PATH OF TRAVEL (SEE NOTE 1
	•••••	EXISTING PATH OF TRAVEL PER
_		ASSUMED PROPERTY LINE
	$\langle \mathbf{x} \rangle$	(N) ARRAY # PER ARRAY SUMMARY TABLE ON A010
	0 0	PROPOSED ARRAY
		(E) BUILDING (N.I.C.)
		NEW WALKWAY AREA
0-100-100-100-100-100-100-100-100-100-1		(E) BIOSWALE
	X	KEYNOTE
	DESIGN PRO RESPONSIB	OFESSIONAL IN GENERAL
1.	THE POT IDENTIFIE MEETS THE REQUIR	D IN THESE CONSTRUCTION DOCUMENTS REMENTS OF THE CURRENT APPLICABLE
	CALIFORNIA BUILDI FOR PATH OF TRAV	NG CODE (CBC) ACCESSIBILITYPROVISIO EL REQUIREMENTS FOR ALTERATIONS,
	ADDITIONS AND STI DESIGN OF THIS PR	RUCTURAL REPAIRS. AS PART OF THE ROJECT, THE POT WAS EXAMINED AND AN
	ELEMENTS, COMPO WERE DETERMINED	NENTS OR PORTIONS OF THE POT THAT TO BE NONCOMPLIANT WITH THE CBC
	HAVE BEEN IDENTIF	FIED AND THE CORRECTIVE TO BRING THEM INTO COMPLIANCE HAS
	BEEN INCLUDED WI THROUGH DETAILS	THIN THE SCOPE OF THIS PROJECT'S WC DRAWINGS AND SPECIFICATIONS
	INCORPORATED IN ANY NONCOMPLIAN	TO THESE CONSTRUCTION DOCUMENTS.
	OF THE POT THAT V	VILL NOT BE CORRECTED BY THIS PROJE
	OF UNREASONABLE	E HARDSHIP ARE INDICATED IN THESE
	ITEMS WITHIN THE	SCOPE OF THE PROJECT REPRESENTED
	REASONABLE CONS	REFOUND TO BE NONCONFORMINGBEYO STRUCTION TOLERANCES, THE ITEMS SH
	BE BROUGHT INTO THIS PROJECT BY N	COMPLIANCE WITH THE CBC AS A PART ( /IEANS OF A CONSTRUCTION CHANGE
	DOCUMENT."	
2.	"PATH OF TRAVEL" ACCESSIBLE ROUTI	(P.O.T.) AS INDICATED IS A BARRIER FREE E WITHOUT ANY ABRUPT LEVEL CHANGES
	EXCEEDING 1/2" BE	VELED AND AT A SLOPE NOT STEEPER TH
	AND IS AT LEAST 48	WIDE. SURFACE SHALL BE STABLE, FIR
	THAN 1:48 AND RUN	INING SLOPE SHALL NOT BE STEEPER TH
	P.O.T. SHALL BE MA	INTAINED FREE OF OVERHANGING
	OBSTRUCTIONS UP PROTRUDING OBJE	TO 80" MINIMUM (SECTION 11B-307.4) ANI CTS GREATER THAN 4" PROJECTION FRC
	A WALL SURFACE B OR GROUND (SECT	ETWEEN 27" AND 80" ABOVE FINISH FLOO ION 11B-307.2). PROVIDE FLUSH TRANSIT
	AT ANY ADJOÌNING SURFACES IN P.O.T	JOINTS BETWEEN NEW AND EXISTING WA
	NO BARRIERS IN TH	IE P.O.T AND ALL OTHER AREAS COMPLY
		SHEET NOTES
1		TRUCTURES TO BE INSTALLED SUCH THA
1.	THEY DO NOT INTE TRAVEL ACCESS PL	RERE WITH THE APPROVED ADA PATH C
2.	SOLAR SUPPORT S FOUNDATIONS SHA	TRUCTURE COLUMNS AND ASSOCIATED LL NOT INTERFERE WITH (E) ADA PARKIN
	STALLS NOR (E) AD FOUNDATION INSTA	A PATH OF TRAVEL. SURVEYOR AND ALLER TO COORDINATE COLUMN SUNPOWER
3.	REFER TO SHEETS	A010 AND A210 FOR MORE NOTES REMENTS FOR ADA PARKING STALLS
4.	REFER TO SHEETS	A010 AND A210 FOR NOTES REGARDING
5.	PARKING STALL CLI MINIMUM.	EARANCE HEIGHT SHALL BE (12' - 0")
		KEYNOTES
	NEW PV CANOPY EXISTING ACCESSIB	LE PARKING STRIPING AND ISA SYMBOL.
ì	EXISTING ACCESSIB	LE PATH OF TRAVEL. REFER TO PATH OF

LEGEND

![](_page_11_Figure_3.jpeg)

![](_page_12_Figure_1.jpeg)

![](_page_12_Figure_2.jpeg)

#### SIGN NOTES:

A REFLECTORIZED SIGN SHALL BE PERMANENTLY POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES, OR IMMEDIATELY ADJACENT TO AND VISIBLE FROMEACH STALL OR SPACE. THE SIGN SHALL NOT BE LESS THAN 17" BY 22" IN SIZE WITH WHITE LETTERING NOT LESS THAN 1" IN HEIGHT ON A DARK BLUE BACKGROUND.

RECLAMATION ADDRESS AND TELEPHONE NUMBER SHALL BE PROVIDED BY OWNER AND INCLUDED BY CONTRACTOR AS A PERMANENT PART OF THIS SIGN. DARK BLUE BACKGROUND COLOR SHALL BE EQUAL TO COLOR NUMBER 15090 IN FEDERAL STANDARD 595C. SIGN SHALL NOT OBSTRUCT PASSAGE BETWEEN STALL AND ANY ACCESSIBLE WALKWAY. SEE SITE PLAN FOR LOCATIONS.

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![](_page_13_Figure_3.jpeg)

![](_page_13_Figure_4.jpeg)

1" = 1'-0" 5

![](_page_13_Figure_7.jpeg)

![](_page_13_Figure_8.jpeg)

1' - 0"

Æ

PARKIN

ONLY

MINIMUM

**FINE \$250** 

VÂN ACCESSIBLE

![](_page_13_Figure_13.jpeg)

![](_page_14_Picture_0.jpeg)

![](_page_14_Figure_1.jpeg)

AC PAVING TRANSITION DETAIL

3" = 1'-0" 4

TYP.

![](_page_14_Figure_5.jpeg)

ACCESSIBLE WALKWAY WARNING DETAILS1

![](_page_14_Figure_7.jpeg)

ISA SYMBOL

12" = 1'-0" 2

![](_page_14_Figure_11.jpeg)

![](_page_14_Figure_13.jpeg)

#### ELECTRICAL NOTES

- 1. ALL WORK SHALL CONFORM TO ALL PERTINENT CODES, REGULATIONS, LAWS AND ORDINANCES AS SPECIFIED ON SHEET A000. AN SUBMITTED PER RFI PROCESS FOR ENGINEERING EVALUATION.
- CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY TO ENSURE A COMPLETE INSTALLATION INCLUDING. BUT NOT LIMITED WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR
- CIRCUIT ROUTING ON DRAWINGS IS DIAGRAMMATIC AND INDICATES THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCL SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF OTHER TRADES. CONTRACTOR SHALL PREPARE AND SUBMIT ROUTING OF NEW CONDUITS FOR REVIEW AND APPROVAL.
- 4. WHERE LONG OR DIFFICULT PULLS EXIST, CONTRACTOR MAY UPSIZE THE CONDUIT.
- 5. ALL CONDUIT BEND RADII TO CONFORM TO CEC MINIMUM BEND RADII STANDARDS. CONDUIT SHALL NOT BE DEFORMED BASED ( 6. CONDUIT SHALL NOT ENTER FROM TOP OF ELECTRICAL EQUIPMENT IN OUTDOOR LOCATIONS WITHOUT SITE-SPECIFIC APPROVAL APPROVAL FOR TOP ENTRY, ONLY RIGID CONDUIT TO OUTDOOR EQUIPMENT WITH MEYERS HUBS TO BE USED.
- 7. CLEARANCE BETWEEN ALL NEW EQUIPMENT TO BE INSTALLED AND ANY NEW OR EXISTING ADJACENT EQUIPMENT SHALL COMPLY INSULATED GROUNDING BUSHINGS TO BE USED ON ALL METALLIC CONDUIT TERMINATIONS (CONTAINING POWER CONDUCTORS) FITTING SHALL BE SUITABLE FOR BONDING TO GROUND IN ACCORDANCE WITH CEC 250.92 (B). INSULATED BOX CONNECTORS ALO SHALL BE INSTALLED IN COMBINATION WITH AN INSULATED GROUNDING BUSHING. FOR IMC/RIGID APPLICATIONS EITHER AN OZ ALLOWED.
- GAS PIPING MAINTAIN 1' SEPARATION FROM GAS PIPES WITH CONDUIT. IF SEPARATION UNAVOIDABLE, GAS PIPE MUST BE BOND CONDITIONAL ON OWNER'S APPROVAL.
- 10. GREEN GROUNDING SCREWS ARE NOT BE USED OUTDOORS (OUTSIDE OF BOXES) FOR MODULE OR STRUCTURE GROUNDING.
- 11. GROUNDING LUGS USED OUTDOORS AND EXPOSED TO THE ENVIRONMENT SHALL BE DIRECT BURIAL LISTED FOR THE PURPOSE. ILS NOT LISTED FOR OUTDOOR USE). GROUNDING HARDWARE ON INSULATED GROUNDING BUSHINGS INSTALLED OUTSIDE ENCLOSUF
- 12. THWN/THHN WIRE IS NOT TO BE USED AS EQUIPMENT GROUND OUTDOORS EXPOSED LOCATIONS. BONDING AND GROUNDING CO STRANDED USE-2 TYPE INSULATION WITH THE INSULATION STRIPPED BACK AT TERMINATION POINTS. WHERE EXPOSED TO PHYSIC CONDUCTOR SHALL BE MINIMUM #6 AWG.
- 13. ARRAY WIRING TO BE SECURED IN GOOD WORKMANSHIP-LIKE MANNER. CONDUCTORS SHOULD BE SECURED AT MAX 4.5FT INTER ABRASIONS AND PINCH POINTS. CONDUCTORS SHALL NOT BE UNNECESSARILY TOUCHING THE ROOF OR STRUCTURE; INCIDENTAL PERMISSIBLE. MODULE LEAD WIRES SHOULD BE PLUGGED NEATLY TOGETHER, NOT WRAPPED OR TWISTED TOGETHER. A SMALL A INSTALLED HOME RUN WIRES, EXCESSIVE EXTRA LENGTH OF HOME RUN WIRE SHOULD BE TRIMMED.
- 14. WIRING WITHIN ELECTRICAL EQUIPMENT SHALL BE NEATLY ARRANGED AND TIED WHEN NECESSARY WITH CABLE TIES. UV RATED DIRECT SUNLIGHT. CONTRACTOR SHALL ENSURE THAT CABLE TIES OR SUPPORTS DO NOT DAMAGE CABLE INSULATION.
- 15. NO SPLICING SHALL BE PERMITTED IN ELECTRICAL CONDUCTORS WITHOUT PERMISSION FROM ENGINEER OF RECORD VIA RFI, UNL SHALL BE WITHIN ENCLOSURE.
- 16. ARRAY WIRING ENTERING ENCLOSURES SHALL HAVE STRAIN RELIEF FITTING OR BE ROUTED THROUGH A LISTED RACEWAY TO PREV 17. ALL PARTS SUPPLIED BY CONTRACTOR SHALL BE NEW AND LISTED FOR CONDITIONS OF USE. SUBMITTALS ON PRODUCT SPECS AND AND APPROVED BY ENGINEER OF RECORD.
- 18. WHERE ELECTRICAL TAPE OR OTHER FORMS OF PERMANENT/TEMPORARY MARKINGS ARE USED TO IDENTIFY STRING NUMBERING ANY PORTION OF THE PV CELL ON THE MODULE. TEMPORARY MARKINGS SHALL BE REMOVED PRIOR TO CLOSE OUT.
- 19. FOR CONDUIT BODY INSTALLATIONS THE REQUIREMENT OF CEC 314.28 SHALL BE MET. FOR CONDUCTORS LARGER THAN #4/0 AW EMPLOY REDUCING BUSHINGS TO TRANSITION THE RACEWAY TO THE CONDUIT BODY SHALL NOT BE USED. FOR THESE INSTALLATI REQUIRED. MOGUL TYPE ELONGATED CONDUIT BODIES SHALL BE PERMITTED WHERE THE REQUIREMENTS OF CEC 314.28 ARE MET USED. FOR INSTALLATIONS WITH CONDUCTORS 250 KCMIL OR LARGER, CONDUIT BODIES SHALL NOT BE USED. AN ADEQUATELY S
- 20. THE USE OF PULL LUBE IS REQUIRED FOR ALL WIRE PULLS THROUGH METALLIC CONDUITS CONTAINING PV OUTPUT CIRCUITS AND RESISTANCE TESTING. PULL LUBE IS ALSO REQUIRED FOR PV SOURCE CIRCUITS WHERE THE CONDUIT RUN EXCEEDS 20 FT IN LENGT THE USE OF SELF LUBRICATING CONDUCTORS SUCH AS SOUTHWIRES SIMPULL TYPE WIRING IS STRICTLY PROHIBITED WITHOUT AD OR POLYWATER "J" LUBRICANTS ARE KNOWN EFFECTIVE TO ENABLE WET INSULATION RESISTANCE TESTING, ALTERNATIVES MUST PROCESS.
- 21. DUAL SIDED SEALING RING WITH STAINLESS STEEL RETAINER, T&B 5262 SERIES OR EQUIVALENT, MUST BE USED AT THE EXTERIOR CONNECTED TO OUTDOOR ENCLOSURES, CONDUIT BODIES AND ALL CONDUIT TRANSITIONS. THIS REQUIREMENT APPLIES TO ALL DUAL SIDED SEALING RING WITH STAINLESS STEEL RETAINER SHALL BE INSTALLED OVER THE THREADED CONNECTOR AND PLACED FITTING AND THE ENCLOSURE WALL WITH THE GASKET MATERIAL ORIENTED TOWARDS THE ENCLOSURE AND A LOCK RING INSTAL TIGHTENED COMPLETELY. (EVERY TIME A BOX CONNECTOR IS INSTALLED THE INSTALLER MUST REMOVE THE PRE-INSTALLED SEALI OUTDOOR RATED FITTING AND REPLACE WITH DUAL SIDED SEALING RING WITH STAINLESS STEEL RETAINER. T&B 5262 SERIES OR E
- 22. ALL FIELD INSTALLED CONDUCTOR TERMINATIONS SHALL HAVE TORQUE MARKS APPLIED WITH A TORQUE MARK PEN AT TIME OF 23. VERTICAL CONDUIT RUNS SHALL INCLUDE STRAIN RELIEF FITTINGS AS NEEDED TO PREVENT STRESS ON TERMINATIONS.
- 24. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) IS NOT ALLOWED TO BE USED WITH DC CIRCUITS OR AS PART OF DC RACEWAY 25. ALL AC AND COMMUNICATION CIRCUIT RACEWAY ASSEMBLIES WHICH MAKE USE OF LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT TO INCLUDE A T-CONDULET WITH APPLETON ECDB50HP DRAIN PLUG OR EQUIVALENT IS INSTALLED AT A LOW POINT WITHIN THE
- 26. ALL OVERHEAD OPEN AIR CONDUCTOR TRANSITIONS FROM OPEN AIR TO CONDUIT ARE REQUIRED TO MAKE USE OF A WEATHER H WATER INGRESS INTO RACEWAY ASSEMBLIES.
- 27. ALL STRUT AND HARDWARE MOUNTED OUTDOORS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER SDUSD GUIDE SPECIF HARDWARE AT INDOOR LOCATIONS ONLY MAY BE ELECTROGALVANIZED.
- 28. ALL SPARE CONDUITS TO BE LEFT IN PLACE WITH (2) RATED PULL STRING/MIL TAPE AND PROPERLY CAPPED WITH PVC/GRS AS APP

Y DEVIATION FROM THESE NOTES SHALL BE
TO RACEWAYS, BENDS, FITTINGS, BOXES, ETC.
 UDED. CONTRACTOR SHALL LAY OUT RUNS TO F SHOP DRAWINGS OF DEVIATIONS TO DESIGNED
ON CEC 344.24 FOR GRS & CEC 344.24 FOR GRS
FROM SUNPOWER VIA RFI. IF GRANTED
Y WITH CEC 110. REGARDLESS OF VOLTAGE. THE INSULATED
ONE DO NOT MEET THIS REQUIREMENT, AND GEDNEY SPEC GRADE OR T&B BLACKJACK ARE
DED TO PHOTOVOLATIC SYSTEM (PV),
SCO GBL-4DBT IS ACCEPTABLE. (ILSCO GBL-4 IS RES MUST MEET THIS REQUIREMENT.
ONDUCTORS MAY BE SOLID BARE COPPER OR CAL DAMAGE, EQUIPMENT GROUNDING
RVALS AND CARE SHALL BE TAKEN TO AVOID CONTACT DUE TO PRODUCT DESIGN IS MOUNT OF SERVICE SLACK IS EXPECTED IN FIELD
TIES OR SUPPORTS SHALL BE USED WHEN IN
LESS SPECIFIED ON PLANS. IF APPROVED, SPLICING
VENT STRESS ON TERMINATIONS. D LISTINGS SHALL BE PROVIDED TO SUNPOWER
G/PLACEMENT, SAID MARKING SHALL NOT COVER
G, THE USE OF OVERSIZED CONDUIT BODIES THAT IONS AN ADEQUATELY SIZED PULL BOX IS T AND WHERE REDUCING BUSHINGS ARE NOT ZED PULL BOX IS REQUIRED.
AC CIRCUITS SUBJECT TO INSULATION TH OR EMPLOYS 180 DEGREES IN TURNS OR MORE. DDITIONAL PULL LUBE. IDEAL "VELOCITY" BRAND BE APPROVED THROUGH MATERIAL SUBMITTAL
INTERFACE OF CONDUIT BOX CONNECTORS OUTDOOR CONDUITS; GRS, IMC, LFMC, PVC, ETC. D FIRMLY BETWEEN THE SHOULDER OF THE LED ON THE INSIDE OF THE ENCLOSURE WALL,
EQUIVALENT).
INSTALLATION.
ASSEMBLIES WHICH CONNECT TO ENCLOSURES. (LFMC) AND THEIR TRANSITIONS ARE REQUIRED
RACEWAY ASSEMBLY. HEAD AND CONDUCTOR DRIP LOOP TO PREVENT
FICATIONS OR STAINLESS STEEL. STRUT AND
PROPRIATE.

#### PRODUCT SPECIFIC NOTES

FOR GROUND MOUNT OR CARPORT SYSTEMS, ELECTRICAL ENCLOSURES MUST BE LOCKED SHUT.

#### WIRE COLOR CODING

AC WIRING		
CONDUCTOR	277/480V SYSTEM	
PHASE A	BROWN	
PHASE B	ORANGE	
PHASE C	YELLOW	
NEUTRAL	WHITE/GREY	
V. REF	WHITE/GREY	
GROUND	GREEN	
FOR 4W DELTA CONNECTED SYSTEM, HIGH LEG SHALL BE MARKED PER CEC 110.15		

#### ELECTRICAL SYMBOLS

![](_page_15_Figure_31.jpeg)

#### ABBREVIATIONS

A OR AMP	AMPERE
AC	ALTERNATING CURRENT
AF/AS	AMP FUSE/AMP SWITCH
A.F.G	ABOVE FROM GROUND
A.I.C	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
APPROX	APPROXIMATE
AT/AF	AMP TRIP/AMP FRAME
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
B.F.G	BELOW FROM GROUND
C OR CDT	CONDUIT
CB	COMBINER BOX
C/B	CIRCUIT BREAKER
СКТ	CIRCUIT
COMM	COMMUNICATION
C.O.U.	CONDITIONS OF USE
СТ	CURRENT TRANSFORMER
CONT	CONTINUOUS
CU	COPPER
DAS	DATA ACQUISITION SYSTEM
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
EA	EACH
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING

NAMING CONVENTION	
INVERTER LABEL	SWITCHBOARD
INV-01	SSB01
SEQUENCE # EQUIPMENT PREFIX	SE EC

DC WIRING						
CONDUCTOR	UNGROUNDED SYSTEM					
UNGROUNDED	RED(+)BLACK(-)					
GROUNDED	-					
EQUIP. GROUND	GREEN					

![](_page_15_Figure_37.jpeg)

CONDUIT TURNED UP CONDUIT TURNED DOWN (N) ELEC. PANEL OR BOX (E) ELEC. PANEL OR BOX PHOTOVOLTAIC PANEL ARRAY NUMBERED NOTE, APPLIES TO ALL DRAWINGS

FLEXIBLE CONDUIT

NUMBERED NOTE, APPLIES TO DRAWING CONTAINING NOTE ONLY, U.O.N. EXISTING CONDUIT RUN, EXPOSED ON ROOF OR WALL **TRENCH AC CONDUIT** 

MLO

MSB

NEW CONDUIT RUN, EXPOSED

EQUIP

EQUIV

E OR (E)

FL

FLA

GCR

GEC

GFI

GFP

GND

GRS

HP

ΗZ

ISC

IB

KCMIL

KVA

KW

KWH

KWP

LFMC

MCB

MET

MFR

MIN

LV

IMP

EQUIPMENT EQUIVALENT EXISTING FUTURE FLOOR FULL LOAD AMPS GROUND COVER RATIO GROUND ELECTRODE CONDUCTOR GROUND FAULT INTERRUPTER GROUND FAULT PROTECTION GROUND GALVANIZED RIGID STEEL CONDUIT HORSEPOWER HERTZ MAXIMUM POWER CURRENT SHORT CIRCUIT CURRENT SHORT CIRCUIT CURRENT SHORT CIRCUIT CURRENT JUNCTION BOX THOUSAND CIRCULAR MILS KILOVOLT-AMPERE KILOWATT KILOWATT-HOUR KILOWATT-PEAK
KILOWATT-PEAK
LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LOW VOLTAGE MAIN CIRCUIT BREAKER
MAIN CIRCOTI BREAKER
MANUFACTURER
MINIMUM

NC NO NIC NTS PB PH ΡV RAD REF SECT SLD SPEC ST SW SWBD TYP UG UL UON V VMP VOC W WP

XFMR

MAIN LUGS ONLY MAIN SWITCHBOARD NEUTRAL NORMALLY CLOSED NORMALLY OPEN NOT IN CONTRACT NOT TO SCALE POLE PULL BOX PHASE POTENTIAL TRANSFORMER PHOTOVOLTAIC RADIUS REFERENCE SECTION SINGLE LINE DIAGRAM SPECIFICATION SHUNT TRIP SWITCH **SWITCHBOARD** TYPICAL UNDERGROUND UNDERWRITERS LABORATORY UNLESS OTHERWISE NOTED VOLT MAXIMUM POWER VOLTAGE OPEN CIRCUIT VOLTAGE WATT WEATHERPROOF

TRANSFORMER

D LABEL

EQUENCE # QUIPMENT PREFIX

![](_page_15_Picture_46.jpeg)

![](_page_16_Picture_0.jpeg)

BESS SPARE CONDUIT REQUIREMENT:

RUN (2) 4" AND (1) 1.5" CONDUIT(S), FROM MAIN SERVICE TO PULL BOX AT POTENTIAL BESS LOCATION. CONDUIT TERMINATION LOCATION AT MAIN CABINET TO BE DETERMINED BY CONTRACTOR AND OWNER DURING DESIGN

![](_page_16_Picture_10.jpeg)

![](_page_17_Figure_0.jpeg)

SHEET NOTES:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING AND VERIFYING THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES. PROVIDE AN AUTOCAD FILE OF UNDERGROUND SURVEY TO SUNPOWER AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE WORK.
- 2. ANY EXISTING UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR'S WORK SHALL BE REPAIRED AT CONTRACTOR'S COST WHETHER OR NOT UTILITIES ARE INDICATED ON SITE PLANS.
- 3. PATCH AND REPAIR ALL SURFACES DAMAGED BY TRENCHING TO MATCH EXISTING. ANY EXISTING PARKING STRIPING THAT IS CUT BY NEW TRENCH WORK SHALL BE REPAINTED. SEE TRENCH DETAILS FOR PAVEMENT REPAIR DETAIL.
- 4. TRENCH ROUTING AS SHOWN IS DIAGRAMMATIC AND CONTRACTOR MAY ADJUST TO SUIT FIELD CONDITIONS. PROVIDE SHOP DRAWINGS FOR REVIEW INDICATING ANY CHANGES TO PROPOSED ROUTING AND HANDHOLE LOCATIONS. AT UTILITY CROSSINGS ROUTE NEW TRENCHES UNDER EXISTING UTLITIES.
- 5. CONTRACTOR SHALL PROVIDE TRAFFIC RATED HANDHOLES FOR ALL UNDERGROUND AC ELECTRICAL RUNS EXCEEDING 270 DEGREES BENDS AND UNDERGROUND COMMUNICATION RUNS EXCEEDING 180 DEGREES AND AS REQUIRED SO AS NOT TO EXCEED THE MANUFACTURER'S CABLE PULLING TENSION. VERIFY MAXIMUM DEGREES OF BEND ALLOWABLE PER SDUSD GUIDE SPECIFICATIONS. PROVIDE HANDHOLES WHETHER OR NOT INDICATED ON DRAWINGS.
- 6. EXPOSED CONDUITS ON ARRAYS AND ALL EXPOSED EXTERIOR LOCATIONS SHALL BE GALVANIZED RIGID STEEL.

![](_page_17_Figure_9.jpeg)

——————— SECURITY CAMERA CONDUIT LIGHTING CONDUIT ------ SPARE CONDUIT

——\_\_\_\_MV—\_\_\_\_MV MV CONDUIT VIA TRENCH

AC AC AC AC AC CONDUIT VIA DIRECTIONAL BORE

120V RECEPTACLE POWER CONDUIT

INVERTER LABEL

![](_page_17_Picture_14.jpeg)

![](_page_17_Picture_15.jpeg)

![](_page_18_Figure_0.jpeg)

- 1. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING AND VERIFYING THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES. PROVIDE AN AUTOCAD FILE OF UNDERGROUND SURVEY TO SUNPOWER AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE WORK.
- 2. ANY EXISTING UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR'S WORK SHALL BE REPAIRED AT CONTRACTOR'S COST WHETHER OR NOT UTILITIES ARE INDICATED ON SITE PLANS.
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- 6. EXPOSED CONDUITS ON ARRAYS AND ALL EXPOSED EXTERIOR LOCATIONS SHALL BE GALVANIZED RIGID STEEL.

![](_page_18_Figure_9.jpeg)

AC AC AC AC AC CONDUIT VIA DIRECTIONAL BORE ——————— SECURITY CAMERA CONDUIT ------ LIGHTING CONDUIT ------ SPARE CONDUIT

- MV CONDUIT VIA TRENCH
- 120V RECEPTACLE POWER CONDUIT

INVERTER LABEL

![](_page_18_Picture_14.jpeg)

![](_page_18_Figure_15.jpeg)

![](_page_18_Picture_16.jpeg)

# (F) 2'X3' \$PARE CONDUIT TO TERMINATE IN (N) HANDHOLE (N) SECURITY SURVEILLANCE

CAMERA (TYPICAL). SEE NOTE 8

120V RECEPTACLE REQUIRED FOR SECURITY CAMERA ON ALL ARRAYS. SEE DETAIL 2/E702

TERMINATE SECURITY CAMERA CONDUIT IN JUNCTION BOX IN CANOPY. SEE NOTES B & G (TYPICAL)  $\sim$ 

> (F) 2'X3' ELECTRICAL HANDHOLE FOR SPARE CONDUTT TRANSITION FROM (1) 3"C TO (2) 3"C

DO NOT JUMP FROM CANOPY TO CANOPY ABOVE GRADE WITH ANY CONDUITS/CONDUCTORS

(N) (1) 3"C SPARE CONDUIT WITH A MINIMUM OF = TWO SUFFICIENTLY RATED PULL STRINGS/WIRES INSIDE CONDUIT FOR FUTURE WIRE PULL, 480V RATED VIA DIRECTIONAL BORE. SEE NOTE 9

(E) STORM DRAIN EASEMENT

 $\sim$ (17X30 EAST OF INV02) (N) ELECTRICAL HANDHOLE FOR CONDUIT W/ LIGHTING CIRCUITS TRANSITION FROM (1) 1"C TO (3) 1"C 17x30 East of INV02

((17X30 SE OF INV02))(N) ELECTRICAL HANDHOLE FOR

CONDUIT W/ SECURITY CAMERA CIRCUITS TRANSITION 17x30 SE of INV02 FROM (1) 2"C TO (3) 1"C (17X30 EAST OF INV02 ) (N) ELECTRICAL HANDHOLE FOR CONDUIT W/ 120V RECEPTACLE AC CIRCUITS TRANSITION FROM (1) 1"C TO (3) 1"C 17x30 East of INV02

CONDUITS VIA DIRECTIONAL BORE

(N) (1) 1" CONDUIT W/ 120V RECEPTACLE AC CIRCUITS VIA DIRECTIONAL BORE (TYPICAL)

(N) (1) 2" CONDUIT W/ SECURITY CAMERA CIRCUITS VIA DIRECTIONAL BORE

(E) SWITCHBOARD WITH

ARRAY #1

(E) LIGHTING BREAKER 

TERMINATE CONDUIT W/ 120V RECEPTACLE AC CIRCUITS TO (N) 20A BREAKER IN EXISTING PANEL CIRCUIT#8 '01-01AC' IN HALLWAY SURFACE MOUNTED 

![](_page_19_Figure_17.jpeg)

ELECTRICAL SITE PLAN - SECURITY CAMERA, LIGHTING AND BESS

SHEET NOTES:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING AND VERIFYING THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES. PROVIDE AN AUTOCAD FILE OF UNDERGROUND SURVEY TO SUNPOWER AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE WORK.
- ANY EXISTING UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR'S WORK SHALL BE REPAIRED AT CONTRACTOR'S COST WHETHER OR NOT UTILITIES ARE INDICATED ON SITE PLANS.
- 3. PATCH AND REPAIR ALL SURFACES DAMAGED BY TRENCHING TO MATCH EXISTING. ANY EXISTING PARKING STRIPING THAT IS CUT BY NEW TRENCH WORK SHALL BE REPAINTED. SEE TRENCH DETAILS FOR PAVEMENT REPAIR DETAIL.
- 4. TRENCH ROUTING AS SHOWN IS DIAGRAMMATIC AND CONTRACTOR MAY ADJUST TO SUIT FIELD CONDITIONS. PROVIDE SHOP DRAWINGS FOR REVIEW INDICATING ANY CHANGES TO PROPOSED ROUTING AND HANDHOLE LOCATIONS. AT UTILITY CROSSINGS ROUTE NEW TRENCHES UNDER EXISTING UTLITIES.
- CONTRACTOR SHALL PROVIDE TRAFFIC RATED HANDHOLES FOR ALL UNDERGROUND AC ELECTRICAL RUNS EXCEEDING 270 DEGREES BENDS AND UNDERGROUND COMMUNICATION RUNS EXCEEDING 180 DEGREES AND AS REQUIRED SO AS NOT TO EXCEED THE MANUFACTURER'S CABLE PULLING TENSION. VERIFY MAXIMUM DEGREES OF BEND ALLOWABLE PER SDUSD GUIDE SPECIFICATIONS. PROVIDE HANDHOLES WHETHER OR NOT INDICATED ON DRAWINGS.
- 6. EXPOSED CONDUITS ON ARRAYS AND ALL EXPOSED EXTERIOR LOCATIONS SHALL BE GALVANIZED RIGID STEEL
- 7. STUB AND CAP SPARE CONDUIT OUTSIDE SWITCHBOARD, 6" ABOVE GRADE.
- 8. PROVIDE CONDUIT PATHWAY FOR SECURITY SURVEILLANCE CAMERAS. REFER TO "SECURITY CAMERA REQUIREMENTS" NOTES ON THIS SHEET. SECURITY CAMERAS ARE FOR FUTURE INSTALLATION. THEY ARE NOT PART OF PV SYSTEM DESIGN.
- 9. ALL SPARE CONDUITS TO BE LEFT IN PLACE WITH (2) RATED PULL STRING/MIL TAPE AND PROPERLY CAPPED WITH PVC OR GRS.

SECURITY CAMERA REQUIREMENTS:

PROVIDE CONDUIT PATHWAY FOR DISTRICT'S SURVEILLANCE

- CAMERAS AS FOLLOWS: A. 1" CONDUIT WITH PULL STRING FROM EACH ARRAY GROUP (CARPORT, SHADE STRUCTURE, GROUP MOUNT) TO THE NEAREST EXISTING BDF/IDF/MDF LOCATION. CONFIRM BDF/IDF/MDF LOCATIONS WITH DISTRICT PRIOR TO INSTALLATION. CONDUITS TO BE PROPERLY CAPPED WITH PVC
- OR GRS. CONDUITS SHALL TERMINATE AT EACH ARRAY GROUP IN A 8" X 8" X 3" NEMA 4X JUNCTION BOX LOCATED AT THE LEVEL OF THE
- SOLAR PANELS. C. CONDUIT RUNS FROM ARRAY GROUPS MAY BE COMBINED INTO 2" CONDUIT WITH PULL STRING. CONDUITS TO BE
- PROPERLY CAPPED WITH PVC OR GRS. D. CONDUITS MAY BE RUN IN COMMON TRENCH WITH AC POWER
- CONDUITS WITH HORIZONTAL SEPARATION OF 12" MINIMUM. E. CAMERAS AND CAMERA CABLES WILL BE FURNISHED AND INSTALLED BY THE DISTRICT.
- MAXIMUM NUMBER OF BENDS IN SECURITY CAMERA CONDUIT SHALL BE (2) 90 DEGREE PER DISTRICT STANDARDS FOR COMMUNICATION SYSTEM PATHWAYS. WHERE MORE THAN 180 DEGREES OF BENDS OCCUR PROVIDE A SUITABLE PULL BOX. CONDUIT LB FITTINGS ARE NOT ACCEPTABLE.
- G. WHERE CONDUIT LENGTH OF RUN TO BDF/IDF/MDF EXCEEDS 300FT, PROVIDE A 120V 20A RECEPTACLE WITH WEATHERPROOF 'IN-USE' COVER AT CAMERA LOCATION

(	$\overline{}$
'N	INCHES)
$\langle$	17 X 30 X 24
$\left( \right)$	11 X 17 X 24
$\left( \right)$	11 X 17 X 24
$\left\langle \right\rangle$	17 X 30 X 24
$\left\langle \right\rangle$	24 X 36 X 24

SEE DETAIL 8/E601 FOR ADDITIONAL HANDHOLE SPECIFICATIONS

## LEGEND:

AC AC AC AC AC AC CONDUIT VIA DIRECTIONAL BORE ---- SECURITY CAMERA CONDUIT

- ------------ LIGHTING CONDUIT ------ SPARE CONDUIT
- ——MV——MV—— MV CONDUIT VIA TRENCH

120V RECEPTACLE POWER CONDUIT

![](_page_19_Picture_46.jpeg)

![](_page_19_Picture_47.jpeg)

![](_page_19_Picture_48.jpeg)

![](_page_20_Figure_0.jpeg)

— (E) UNDERGROUND UTILITY LINE

#### LEGEND:

ACAC
MVMV
COM

AC CONDUIT SECURITY CAMERA CONDUIT LIGHTING CONDUIT SPARE CONDUIT **MV CONDUIT** 120V RECEPTACLE POWER CONDUIT COMMUNICATION CONDUIT

# INVERTER LABEL INV-01

![](_page_20_Picture_17.jpeg)

![](_page_20_Picture_18.jpeg)

SPECIFIC ELECTRICAL NOTES:	
1 LOAD SIDE TAP PER CEC ART. 705.12(B). BUS CONNECTIONS SHALL BE RELISTED BY A 3RD PARTY TESTING AGENCY IF THE CONNECTION IS NOT IN ACCORDANCE WITH THE LISTING OF THE EQUIPMENT.	EXISTING
2 GANG OPERATED, LOCKABLE, VISIBLE OPEN DISCONNECT	SDG&E UTILITY TRANSFORMER kva: (tbd)
3       ALL INVERTERS ARE LISTED TO UL 1741SA WITH INTEGRAL ARC-FAULT PROTECTION AND RAPID SHUT-DOWN TO INCORPORATE ANTI-ISLANDING AND THE FOLLOWING PROTECTIONS:         50       51       59       27       810	PRI: 12KV SEC: 4.16KV, 3ø, 4W
(4) NEUTRAL BUS SHALL NOT BE BONDED TO THE GROUND BUS AND SHALL BE ISOLATED FROM THE ENCLOSURE UNLESS OTHERWISE SPECIFIED	
	UTILITY COMPOUND AREA
	ELECTRICAL ROOM 121 EXTERIOR
	ELECTRICAL ROOM 121 EXTERIOR
	CARPORT AREA
SYSTEM SUMMARY	
MODULE TYPESPR-E20-435-COMTOTAL MODULES580	
MODULE TYPESPR-E20-435-COMTOTAL MODULES580DC SIZE (KW)252.3	
MODULE TYPESPR-E20-435-COMTOTAL MODULES580DC SIZE (KW)252.3INVERTER #4AC SIZE (KW)228.2	

	ARRAY SUMMARY									
		INVERTER	STRING	# OF	# OF	DC SIZE	AC SIZE			
ΑΚΚΑΙ#		TYPE	LENGTH	STRING	MODULES	(KW)	(KW)			
1	INV 01	M36U_121	10	9	90	39.15	39.6			
2	INV 02	M60U_121	10	18	180	78.3	66			
2	INV 03	M36U_121	10	9	90	39.15	39.6			
3	INV 04	M80U_121	10	22	220	95.7	83			
			TOTAL	58	580	252.3	228.2			

![](_page_21_Figure_2.jpeg)

![](_page_21_Figure_3.jpeg)

![](_page_21_Picture_5.jpeg)

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_2.jpeg)

INVERTER CONFIGURATION

	MV FEEDER CALCULATIONS															
CIRCUIT	EQUIPMENT SUPPLIED	FED FROM	VOLTAGE	FULL LOAD AMPS 'FLA'	FLA x 1.25	OCPD SIZE	GROUND SIZE (600V)	# OF CIRCUITS I DUCTBANK	N CONDUCTOR SIZI	C.O.U DERATE AMBIENT TEMP	FEEDER LENGTH (FEET)	CONDUIT, GRS	CONDUIT, PVC SCH 80	FULL CONDUCTOR SPEC	SEGMENT VOLTAGE DROP AT FLA	TOTALVOLTAGE DROP AT FLA
ULD	UTILITY LOCKABLE DISCONNECT SWITCH	INTERCONNECTION POINT	4160	41.6	52.0	65E	CU #6	1	CU #2	1.00	50	3.5"	N/A	(3)#2 CU MV-90 TAPE SHIELD 5KV 133% EPR. INCLUDE (1)CU #6G (600V)	0.02%	0.02%
XFMR	SOLAR TRANSFORMER	UTILITY LOCKABLE DISCONNECT SWITCH	4160	41.6	52.0	65E	CU #6	1	CU #2	1.00	450	N/A	4"	(3)#2 CU MV-90 TAPE SHIELD 5KV 133% EPR. INCLUDE (1)CU #6G (600V)	0.16%	0.18%

							AC FEED	DER CALCULATIONS											
CIRCUIT	EQUIPMENT SUPPLIED	FED FROM	VOLTAGE	FULL LOAD AMPS 'FLA'	FLA x 1.25	OCPD SIZE	GROUND SIZE	CONDUCTORS PER PHASE AND NEUTRAL	NEUTRAL CONDUCTOR SIZE	PHASE CONDUCTOR SIZE	75° AMPACITY	C.O.U DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	90° AMPACITY WITH C.O.U.	FEEDER LENGTH (FEET)	SEGMENT VOLTAGE DROP AT FLA	TOTALVOLTAGE DROP AT FLA	GRS	PVC80
SSB01	SOLAR SWITCHBOARD 'SSB01'	SOLAR TRANSFORMER	480	276.4	346.0	350	CU #2	1	CU 500MCM	CU 500MCM	380	1.00	1.00	430.0	25	0.07%	0.25%	3.5"	4"
INV 01	INVERTER 'INV-01'	SOLAR SWITCHBOARD 'SSB01'	480	48.2	60.0	70	CU #4	1	CU #4	CU #4	85	1.00	1.00	95.0	320	1.73%	1.98%	1.25"	1.5"
INV 02	INVERTER 'INV-02'	SOLAR SWITCHBOARD 'SSB01'	480	80.0	100.0	100	CU #6	1	CU #1	CU #1	130	1.00	1.00	145.0	220	1.02%	1.27%	2"	2"
INV 03	INVERTER 'INV-03'	SOLAR SWITCHBOARD 'SSB01'	480	48.2	60.0	70	CU #6	1	CU #6	CU #6	65	1.00	1.00	75.0	150	1.28%	1.53%	1"	1.25"
INV 04	INVERTER 'INV-04'	SOLAR SWITCHBOARD 'SSB01'	480	100.0	125.0	125	CU #6	1	CU #1	CU #1	130	1.00	1.00	145.0	90	0.52%	0.77%	2"	2"
DAS	AXUILIARY BOX & DAS	SOLAR SWITCHBOARD 'SSB01'	480	1.0	1.0	15	CU #12	1	CU #12	CU #12	25	1.00	1.00	30.0	20	0.01%	0.27%	3/4"	3/4"
ACUV	PV PRODUCTION METER	SOLAR SWITCHBOARD 'SSB01'	480	1.0	1.0	15	CU #12	1	CU #12	CU #12	25	1.00	1.00	30.0	20	0.01%	0.27%	3/4"	3/4"

# 1 TYPICAL INVERTER CONFIGURATIONS SCALE: NTS

CONFIGURATION

![](_page_22_Figure_8.jpeg)

# TYPICAL 83KW INVERTER CONFIGURATION

MODULE SPECIFICATIONS								
Make/Model	SPR-E20-435-COM							
Power [W]	435							
lsc [A]	6.43							
Imp [A]	5.97							
Voc [V]	85.60							
Vmp [V]	72.90							
β Voc [%/degC]	-0.236%							

AVERAGE AC VOLTAGE DROP FROM POI TO INVERTERS: 1.39%

![](_page_22_Figure_12.jpeg)

![](_page_23_Figure_0.jpeg)

#### HORIZONTAL BORING NOTES:

- BACKFILL SHALL BE PLACED AND DENSIFIED TO A MINIMUM OF 90 PERCENT OF RELATIVE COMPACTION FROM 1 FOOT ABOVE THE TOP OF THE CONDUIT TO THE SURFACE. SEE GEOTECH REPORT DATED 22/11/2019 FOR MORE INFORMATION.
- CONDUIT SHALL BE HDPE.
- A SINGLE BORE CASING SHALL NOT HAVE MORE THAN 2 POWER CONDUITS. 4. REFER TO DIRECTIONAL BORING REQUIREMENTS IN RFP.

![](_page_23_Figure_7.jpeg)

# TYPICAL HANDHOLE DETAIL

## **TRENCHING NOTES:**

- DUCT FOR ELECTRICAL CABLES MORE THAN 600 V: CONCRETE ENCASEMENT SHALL BE 3000 PSI, WITH RED DYE ADDED AND WITH THREE INCHES OF COVER ON ALL SIDES FOR ALL DUCT BANKS OF MORE THAN 600 V REGARDLESS OF LOCATIONS
- 2. DUCT FOR ELECTRICAL FEEDERS 600 V AND LESS: CONCRETE ENCASEMENT SHALL BE TWO SACK SLURRY WITH RED DYE AND IS REQUIRED FOR ALL 600 V AND LESS FEEDERS UNDER DRIVEWAYS AND PATHWAYS DESIGNED FOR VEHICULAR TRAFFIC, EXCLUDING EMERGENCY VEHICLES. ASPHALT SURFACED PLAYGROUNDS AND VEHICLE ENTRY GATES ARE NOT CONSIDERED A PATH OR DRIVEWAY. CONCRETE ENCASEMENT SHALL BE A MINIMUM OF 3 INCHES OF COVER ON ALL SIDES ALL OTHER DUCT BANKS OPERATING AT LESS THAN 600 V SHALL HAVE 3 INCHES OF SAND BASE AND 6 INCHES OF SAND COVER AND COMPACTED NATIVE SOIL ON TOP.
- 3. DUCT FOR ELECTRICAL BRANCH CIRCUITS: ALL DUCTS FOR BRANCH CIRCUITS SHALL HAVE 2 INCHES OF SAND BASE AND 3 INCHES OF SAND COVER AND COMPACTED NATIVE SOIL ON TOP. 4. REFER TO TRENCHING REQUIREMENTS IN RFP.
- 5. TRENCHING IN FIRE LANE SHALL BE BACKFILLED AND PATCHED TO MATCH EXISTING FIRE LANE PAVING SECTION.

![](_page_23_Figure_14.jpeg)

- TO TOP OF CONDUIT

- COMMUNICATION CONDUIT

![](_page_23_Figure_15.jpeg)

3" MIN BETWEEN POWER CONDUITS

TRENCHING TO MATCH EXISTING SECTION PER A# 04- 111593

![](_page_23_Figure_17.jpeg)

![](_page_23_Figure_18.jpeg)

![](_page_23_Picture_19.jpeg)

![](_page_24_Figure_0.jpeg)

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

F Rating Hr.	T Rating Hr.
2	0
2	0
2	0
3	3/4
3	0
3	0
3	3/4
3	0
3	1
3	0

![](_page_24_Figure_13.jpeg)

- 1. WALL ASSEMBLY THE 1, 2, 3 OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL
- AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC. WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.
- 2. PIPE OR CONDUIT NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) TYPE L OR (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH
- 3. FILL, VOID OR CAVITY MATERIAL\* CAULK CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN ¼ IN. DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, A SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS

Max Pipe or Conduit Diam, In.	Annular Space, In.	F Rating, In.	T Rating, In.
1	0 to 3/16	1 or 2	0+, 1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1-1/2	1 or 2	0
6	1/4 to 1/2	3 or 4	0
12	3/16 to 3/8	1 or 2	0

B. NO PENETRATIONS ARE ALLOWED WITHIN TWO FEET OF A WALLS OPENING OR WALL EDGE WITHOUT APPROVAL OF THE EOR.

![](_page_24_Picture_23.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_3.jpeg)

# 2 SECURITY CAMERA JUNCTION BOX MOUNTING DETAIL SCALE: NTS

![](_page_25_Picture_5.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Picture_4.jpeg)

![](_page_27_Figure_1.jpeg)

1 GROUNDING PLAN SCALE: N.T.S.

![](_page_27_Picture_3.jpeg)

CATSe     ETHERINET: AWG 24 SHIELDED CAT SE CABLE (300 MIAX)       [HWN-2     THWN-2 CONDUCTORS	
	2-PAIR CAB
(1) 1	."C GRS CON
(3) #1 (1) #14 AV PROVIDED BY T	14 AWG THV WG THWN-2 THE CONTRA
(1) #: (PROVII	(1) 1"C GRS (2) #12 AW 12 AWG TH DED BY CON

![](_page_28_Figure_1.jpeg)

#### NOTES:

RATINGS. EXAMINE INSTALLATION MANUAL OF EACH EQUIPMENT PRIOR TO INSTALLATION. ALL CONDUCTORS, CABLING AND CONDUIT TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.CONTRACTOR TO CONNECT AND WIRE THE FOLLOWING DEVICES: REFERENCE CELL, PVS5X ASSEMBLY, INVERTERS, ACUPANEL ACUVIM METERS

DRAWING IS DIAGRAMMATIC, CONTRACTOR TO VERIFY ACTUAL EQUIPMENT LAYOUT AND

- 1. ENSURE THAT SHIELD WIRES ARE TWISTED TOGETHER WHERE CABLE IS CUT (CABLE BREAK). DO NOT TERMINATE THE SHIELD WIRE ANYWHERE BESIDES THE TERMINAL BLOCKS.
- 2. ALL COMMUNICATION AND METERING EQUIPMENT, CONDUCTORS & CONDUIT SHALL BE PROVIDED BY SUBCONTRACTOR UNLESS OTHERWISE NOTED.
- 3. MODIFICATION OF CABLING OR ORDERING OF DEVICES ON RS485 DAISY CHAIN MUST BE APPROVED BY SUNPOWER.
- 4. ALL COMMUNICATION CABLES (CAT-5E, BELDEN ETC.) SHALL BE ROUTED IN A SEPARATE CONDUIT FROM FEEDER CABLES, BUS BARS, AND AC SWITCHBOARD AS POSSIBLE.
- 5. CONTRACTOR SHALL LABEL ALL CABLES WITH TO/FROM TERMINATION INFORMATION. ALL CONDUIT STUB-UPS ENTERING/EXITING THE SOLAR SWITCHBOARD SHALL BE LABELED ON EACH END. LABELING SHALL INCLUDE EQUIPMENT NAME AND ENCLOSURE NUMBER IN WHICH STUB-UPS OCCUR.
- 6. CONTRACTOR SHALL USE FERRULES FOR ALL MODBUS TERMINATIONS.
- 7. PVS5X CAN BE POWERED FROM 240V OR 120V. IF PVS5X IS POWERED FROM 120V, CONTRACTOR MUST JUMPER ACROSS L2 AND N AT THE PVS5X TERMINALS USING #14AWG THWN-2.

- (1) 3/4"C PVC/GRS CONDUIT: (1) CAT 5e CABLE

> ACUPANEL ACUVIM IIR **PV GENERATION METER**

$+\Box$	ETHEF	RNET			
				1	
	O	A	14	◀	DATA +
K	0	В	15		DATA-
	0	S	16		SHIELD
	R	S-485 PORT			

![](_page_28_Picture_15.jpeg)

THWN THWN THWN THWN-THWN-THWN-THWN-THWN-THWN
RS485 RS485 RS-485: (1) BELDEN 3107A, #22 AWG SHIELDED TWISTED 2-PAIR (
DRAWING IS DIAGRAMMATIC, SUB CONTRACTOR TO VERIFY ACTUAL EQUIPMENT LAYOUT AND RATINGS. EXAMINE INSTALLATION MANUAL OF EACH EQUIPMENT PRIOR TO INSTALLATION. ALL CONDUCTORS, CABLING AND CONDUIT TO BE PROVIDED BY ELECTRICAL SUBCONTRACTOR UNLESS OTHERWISE NOTED.SUBCONTRACTOR TO CONNECT AND WIRE THE FOLLOWING DEVICES: DAS ASSEMBLY, INVERTERS, AND MONITORING METER
ENSURE THAT SHIELD WIRES ARE TWISTED TOGETHER WHERE CABLE IS CUT (CABLE BREAK). DO NOT TERMINATE THE SHIELD WIRE ANYWHERE BESIDES THE DAS TERMINAL BLOCK.
ENSURE THAT REF CELL IS ALIGNED IN THE SAME ORIENTATION AS THE ARRAY. (IF REQUIRED FOR THE SITE)
ALL COMMUNICATION AND METERING EQUIPMENT TO BE PROVIDED BY SUNPOWER. CONDUCTORS & CONDUIT SHALL BE PROVIDED BY SUBCONTRACTOR UNLESS OTHERWISE NOTED.
MODIFICATION OF CABLING OR ORDERING OF DEVICES ON CAT5E DAISY CHAIN MUST BE APPROVED BY SUNPOWER.
BELDEN CABLES SHALL BE ROUTED AS FAR AWAY FROM FEEDER CABLES, BUS BARS, AND AC SWITCHBOARD AS POSSIBLE.
CONTRACTOR SHALL LABEL ALL CABLES WITH TO/FROM TERMINATION INFORMATION. ALL CONDUIT STUB-UPS ENTERING/EXITING THE SOLAR SWITCHBOARD SHALL BE LABELED ON EACH END. LABELING SHALL INCLUDE EQUIPMENT NAME AND ENCLOSURE NUMBER IN WHICH STUB-UPS OCCUR.
CONTRACTOR SHALL USE FERRULES FOR ALL MODBUS TERMINATIONS.

![](_page_29_Figure_1.jpeg)

![](_page_29_Picture_2.jpeg)

![](_page_30_Figure_0.jpeg)

## ELECTRICAL DEMOLITION GENERAL NOTES:

1. COORDINATE WITH ARCHITECTURAL DEMOLITION PLAN FOR NON ELECTRICAL RELATED WORKS.

2. CONDUIT RUNS PATH SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY LOCATION, ROUTE OF CONDUIT RUNS AND ALL EXISTING UNDERGROUND UTILITIES AND CIRCUITRY AS REQUIRED, PRIOR TO STARTING WORK. CONTACT SUNPOWER VIA RFI WITH ANY DISCREPANCIES.

PROVIDE IN-GRADE TRAFFIC-RATED BOX LOCATIONS FOR DEMOLISHED LIGHT POLES, IF REQUIRED TO MAINTAIN CONTINUITY TO ANY EXISTING LIGHTING FIXTURES OUTSIDE OF THE ARRAYS. COORDINATE NEW ARRAY LIGHTING REQUIREMENTS WITH EXISTING PARKING LOT LIGHTING INFRASTRUCTURE. NEW ARRAY LIGHTING MUST BE TIED INTO EXISTING CIRCUIT. AT THE CONCLUSION OF PROJECT PROVIDE AS-BUILT DRAWINGS SHOWING THE REVISED CIRCUITING AND BOX LOCATIONS TO OWNER.

4. COORDINATE REQUIREMENTS AND LOCATION FOR REMOVED LIGHTING FIXTURES, LAMPS, AND POLES WITH THE OWNER.

5. REMOVE PARKING LOT LIGHTING CONDUCTORS ASSOCIATED WITH DEMOLITION WORK THAT ARE NOT REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO EXISTING LIGHTING. UNDERGROUND CONDUITS NO LONGER REQUIRED MAY BE ABANDONED IN PLACE.

6. REMOVE CONCRETE PIERS ASSOCIATED WITH LIGHT POST REMOVAL BELOW ASPHALT. MATCH EXISTING SECTION AS REQUIRED. IF NECESSARY WHERE LIGHT POLES ARE REMOVED, FILL HOLE WITH CONCRETE SLURRY, 1500 PSI MIN.

![](_page_30_Picture_10.jpeg)

# 2 LIGHTING CONDUIT ROUNTING - TRANSITION AT GIRDER SCALE: 6" = 1'-0"

SELF-DRILLING SCREW -S-D HWH 1/4-20X2" B-LINE B3201 SERIES HDG FINISH 1-HOLE PIPE STRAP OR EQUIVALENT

PURLIN, TYP. —

GIRDER*,* TYP. —

![](_page_31_Picture_3.jpeg)

# 3 LIGHTING CONDUIT ROUTING - TRANSITION AT GIRDER SCALE: 1" = 1'-0"

![](_page_31_Figure_5.jpeg)

![](_page_31_Figure_6.jpeg)

![](_page_31_Picture_7.jpeg)

# 1 LIGHTING CONDUIT ROUTING - SINGLE CANTILEVER SCALE: 3/32" = 1'-0"

![](_page_31_Picture_9.jpeg)

![](_page_32_Figure_0.jpeg)

0.8 0.9

to.8 1.1 1.3 1.4 1.4 1.2 1.2 1.2

0.1 0.5 1.1 1.6 2.0 2.5 2.2 1.9 1.7 1.6 1.5 1.5 1.4 1.3 1.3

0.4 1.6 2.5 3.3 4.2 3.6 2.7 2.1 1.9 1.9 2.0 2.1 2.2 2.2 1.8 1.2 0.7 0.4

0.2 2.1 3.7 4.8 5.5 5.3 3.6 2.5 2.2 2.2 2.6 3.3 3.8 3.7 3.0 2.4 1.0 0.5 0.2

0,1 1.8 5.5 6.8 6.5 6.2 4.5 3.2 2.7 2.8 3.5 4.8 5.9 5.6 4.9 4.3 2.3 0.4 0.1 0.1

b.4 6.5 8.3 7.6 6.1 5.9 4.2 3.5 3.7 4.7 6.8 7.4 7.6 7.2 6.8 5.5 1.3 b.2 b.1

0.2 2.6 9.5 7.8 6.7 6.2 4.9 4.3 4.9 6.6 7.3 8.7 10.6 10.3 8.8 8.6 6.5 0.3 0.1 0.1

## PHOTOMETRIC PLAN (WITH NEW AND EXISTING FIXTURES) SCALE: N.T.S

ø + 7.9	<sup>*</sup> 8.8	18 <mark>.0</mark> 1	° <b>9.</b> 0	° <b>9.</b> 7	10.0	<b>10.</b> З	4.4	<sup>†</sup> 0.4	<sup>†</sup> 0.2			
+7 <mark>10</mark> 1	٦.7	7.8	<sup>+</sup> 8.6	<b>9.</b> 4	10.2	<sup>†</sup> 11.4	5.4	<sup>†</sup> 0.4	¢.3			
7.2	<sup>+</sup> 6.6	<sup>+</sup> 6.7	<sup>+</sup> 7.6	<sup>+</sup> 8.9	• 9.5	10.2	6.3	<sup>+</sup> 0.5	<sup>†</sup> .3	0.2		
5.7	ŧ 6.5	5.9	<sup>+</sup> 6.5	<sup>†</sup> .8	₽.5	<sup>†</sup> .3	4.7	¢.5	<sup>†</sup> .3	<sup>†</sup> 0.2		
* 8.8	÷6.8	<sup>+</sup> 5.6	5.5	<sup>+</sup> 5.9	5.3∕	4.7	3.0	<sup>†</sup> 0.6	ð.3	<sup>+</sup> 0.2	<sup>†</sup> 0.1	
1 8.6	* 8.0	÷ 6.0	4.7	<sup>+</sup> 4.0	3.6	<sup>+</sup> 3.0	1.9	0.5	<sup>†</sup> 0.3	0.2		
4 9.0	<b>5.</b> 3	⁵.9	4.0	3.0	+2.5	<sup>‡</sup> 2.0	1.2	<sup>†</sup> 0,5	$\setminus$	$\rangle$		
7.4	5.4	4.3	3.0	<sup>+</sup> 2.3	1.8	1.4		$\land$	$\langle \rangle$			
4.4	<sup>+</sup> 3.8	<sup>+</sup> 3.0	2.2	1.7					>	$\swarrow$		
1.2	<sup>‡</sup> 2.0	<sup>*</sup> 1.9				$\geq$	Ø,	$\rangle$ $\leq$		$\square$		$\searrow$
t.3			$\langle \langle \rangle$		$\langle$		$\wedge$				$\wedge$	
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![](_page_32_Figure_3.jpeg)

Calculation	Summary		
Label			CalcTyp
Existing_1			Illumin
Luminaire So	chedule		
Symbol	Qty	Label	
	3	rab01658	260W
← →	1	rab01658	260W_1

![](_page_32_Picture_5.jpeg)

# **PHOTOMETRIC PLAN (WITH EXISTING FIXTURES)**

![](_page_32_Picture_7.jpeg)

![](_page_33_Figure_0.jpeg)

![](_page_33_Figure_1.jpeg)

## ALED4T360N/

Construction			
Lens:			
Tempered glass le	ens incl	uded	
Housing:			
Die-cast aluminun	n with a	airflow	ı fins
Mounting:			
Heavy-duty moun stainless steel scr	ting arr ews	n with	י0" ו
IP Rating:			
Ingress Protection water	rating	of IP6	6 for
Reflector:			
Vacuum-metalized	d polyca	arbon	ate
Gaskets:			
High-temperature	silicon	e gasl	kets
Dimensions			
		â	
		•	멛
			-
3 1/4″ T		•@•	ΠI
			VUL

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**PRT30N/D10** 

LED Characteristics

results and TM-21 calculations

consistent fixture-to-fixture color

Color Consistency:

Color Stability:

**Color Uniformity:** 

year period

C78.377-2017.

LEDs:

Lifespan:

13 15/16" 354 mm

LED4T360N/D10		RAB	ALED	4 <b>T</b> 360	N/D10				
echnical Specifications (contin	ued)		Ordering	g Matrix					
Construction	Finish:	Surge Protection:	Family	Distribution	Wattage	Mounting	Color Temp	Finish	Dimming Driver
Construction Lens: Fempered glass lens included Housing: Die-cast aluminum with airflow fins for cooling Mounting: Heavy-duty mounting arm with "O" ring seal & stainless steel screws P Rating: Ingress Protection rating of IP66 for dust and water Reflector: /acuum-metalized polycarbonate Gaskets: High-temperature silicone gaskets	<ul> <li>Finish:</li> <li>Formulated for high durability and long-lasting color</li> <li>Green Technology:</li> <li>Mercury and UV free. RoHS-compliant components.</li> <li>Electrical</li> <li>Drivers:</li> <li>Constant Current, Class 1, 1560mA, 100-277V, 50-60Hz, 120V: 3.0A, 208V: 1.8A, 240V: 1.5A, 277V: 1.3A</li> <li>Dimming Driver:</li> <li>Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.</li> <li>THD:</li> <li>5.7% at 120V, 8.7% at 277V</li> <li>Power Factor:</li> <li>99.8% at 120V, 95.7% at 277V</li> </ul>	Surge Protection: 4kV For areas prone to surges, upgrade to 10kV surge protection. See 10kV surge protectors here. <b>Optical</b> <b>BUG Rating:</b> B1 U0 G5 <b>Other</b> <b>BAA Compliance:</b> Click here for BAA compliance. <b>Warranty:</b> RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty. <b>Equivalent</b> to 1000W Pulse Start Metal Halide <b>Buy American Act Compliance:</b> RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.	Family	Distribution 4T 4T = Type IV 3T = Type III 2T = Type II	Wattage 360 260 = 260W 360 = 360W	Mounting Blank = Pole SF = Slipfitter	Color Temp N Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm) <sup>1</sup> Not available	Finish Blank = Bronze W = White e for slipfitter	Jimming Driver           Options           /D10           /D10 = 120-277V, 0-10V Dim           /480/D10 = 480V, 0-10V Dim
Dimensions	<b>Features</b> 66% energy of 165 mm 1 165 mm 1 100,000-hour 5-Year, No-Co 22 1/2" 572 mm	cost savings vs. HID r LED lifespan ompromise Warranty							
eed help? Tech help line: <b>(888) 722-1000</b> Email: o pyright © 2020 RAB Lighting All Rights Reserved	<pre>custserv@rablighting.com Website: www.rablight Note: Specifications are subject to change at any tim</pre>	r <b>ing.com</b> ne without notice Page 2 of 3	Need help? T Copyright © :	ech help line: <b>((</b> 2020 RAB Lighti	<b>388) 722-1000</b> ng All Rights Ro	Email: <b>custserv</b> eserved Note: S	@rablighting.c pecifications are	<b>om</b> Website: subject to ch	www.rablighting.co ange at any time with

![](_page_33_Figure_8.jpeg)

![](_page_33_Figure_9.jpeg)

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		RAB
mming Driver Options	Sensor Options	Other Options
/D10		
<b>10</b> = 120-277V, 0-10V Dim <b>30/D10</b> = 480V, 0-10V Dim	Blank = No Option /PCT = 120-277V Twistlock Photocell /PCT4 = 480V Twistlock Photocell /WS4 = Motion Sensor/Photocell <sup>1</sup> /WS10 = Motion Sensor/Photocell <sup>1</sup> /LC = Lightcloud® Controller <sup>1</sup>	USA = BAA Compliant Blank = Standard
ls.		
<b>rablighting.com</b> at any time withou	ut notice	Page 3 of 3
		RAB

Prepared By:       Prepared By:       Date:         Color: Bronze       Weight: 82.1 Ibs       Prepared By:       Date:         Color: Bronze       Weight: 82.1 Ibs       Diver Info       LED Info         Technical Specifications       Editation       Efficiency       Efficacy       10.000         Color: Bronze       Weight: 82.1 Ibs       Efficacy       Lamenta       20.000       10.000         Color: Bronze       Weight: 82.1 Ibs       Efficacy       10.000       20.000       10.000			Project: Languag	e Academy	Type: Wall Mount
Color: Bronze       Weight 82.1 lbs         Color: Bronze       Weight 82.1 lbs         Color: Bronze       Weight 82.1 lbs         Color: Bronze       Color: Constant Current Watts 260W         208V       122.5 A       Color Accuracy 75 CRI         208V       227V       0.93A       Lumens 20,80S         Technical Specifications       Efficacy       115.4 lm         Upinodo Consoler Installator or commissioning. The High-End trins functionality in pupoload control Fixture, Zone, and commissioning. The High-End trins functionality in commonly found on smaller side streets or Jogsing commonly found on smaller side streets or Jog			Preparec Archit	I By: Patnaik	Date: 06-22-2022
Functical Specifications         Lightcloud         Lightcloud Controller Installed         Integrated/embedded networked lighting control, luminate-level [ighting control, Fixture, Zone and pilu-load control from one power/dereyr onnoitoring. Can also be used to extend the range and narrow lighting taggicarcines and usually is individual luminate at the time of installation or commissioning. The High-Buff tim functionality is field reconfigurable via the imaximum light output to a less-than-maximum state of an individual luminate at the time of installation or commissioning. The High-Buff tim functionality is field reconfigurable via the lightcloud meth network communication protocols. The Lightcloud controller can be attached to the fixture, junction box or electrical panel.       Lens: Tampered glass.       Tampered glass.         Matter towork communication protocols. The Lightcloud controller can be attached to the fixture, junction box or electrical panel.       Matter towork commenciation protocols. Offer Distribution is inding with external Air-Flow fins Housing:       Lens: Tampered glass.       Tampered glass.         Compliance       Distribution is inding the fixture, junction box or electrical panel.       Matter towork commenciation protocols. The Lightcloud the lightcloud.       Lens: Tampered glass.       Tampered glass.         Duble Election       Lens: Sutable for wet locations       Lens:	Color: Bronze	Weight: 82.1 lbs	Driver Info           Type         0           120V         2           208V         1           240V         1           277V         0           Input Watts         2	Constant Current 2.21A 1.25A 1.09A 0.97A 258.3W	LED Info Watts 260W Color Temp 4000K (Neut Color Accuracy 75 CRI L70 Lifespan 100,000 Hou Lumens 29,806 Efficacy 115.4 Im/W
Lightcloud       ISC Classification:       Image: Classific	Technical Specifications				
Lightcloud Controller Installed:       The Type II distribution is ideal for wide walkway, on ramps and entrance readways, bike paths and the role gan dentrance readways, bike paths and the role gans dentrance readways, bike paths and the role gans.         Ull streed:       Waximum Attable of the forture, junction box, or electric panel.       Maximum with airflow fins for cooling       Finsh:       Formulated for high durability and long-lasting reads and the role gans.         Ull streed:       Suitable for we tocations       Eistes fram maximg the path and the role gans.	Lightcloud	IES Classification:		Lens:	
<ul> <li>Integrated/embedded networked lighting control, likture, Zone, and plug-load control from one powerful device. LLC-capable of switching, 0-100/dimming, 0-100/dimming, 0-100/dimming, 0-100/dimming, 0-100/dimming, 0-100/dimming, 0-100/diming</li></ul>	Lightcloud Controller Installed:	The Type II distribution is ideal fo	or wide walkways,	Tempered glass	
Individual luminaire at the time of installation or commissioning. The High-End trim functionality is field reconfigurable via the Lightcloud mesh network communication protocols. The Lightcloud controller can be attached to the fixture, junction box, or electrical panel.       Cold Weather Starting:         DLC system - NHCZ2BIA17L       The minimum starting temperature is -40°C (-40°F)         Learn more about Lightcloud.       Superior heat sinking with external Air-Flow fins         UL Listed:       Suitable for wet locations         IESNA LM-79 & LM-80 Testing:       Die-cast aluminum with airflow fins for cooling         DLC Listed:       This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.         DLC Product Code: PQAWMGTX       Page-ablighting.com Website: www.rablighting.com	Integrated/embedded networked lighting control, luminaire-level lighting control. Fixture, Zone, and plug-load control from one powerful device. LLLC - capable of switching, 0-10Vdimming, power/energy monitoring. Can also be used to extend the range of the Lightcloud mesh network communication protocols. Offers the capability to set the maximum light output to a less-than-maximum state of an	on ramps and entrance roadway other long and narrow lighting a type is meant for lighting larger located near the roadside. This t commonly found on smaller side paths. Maximum Ambient Temperat	rs, bike paths and applications. This areas and usually is ype of lighting is e streets or jogging <b>ture:</b>	Reflector: Vacuum-metalize Gaskets: High-temperatur Finish: Formulated for bi	ed polycarbonate e silicone gaskets
Compliance   Die-cast aluminum with airflow fins for cooling   UL Listed:   Suitable for wet locations   IESNA LM-79 & LM-80 Testing:   RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.   DLC Listed:   This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.   DLC Product Code: PQAWMGTX   eed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	individual luminaire at the time of installation or commissioning. The High-End trim functionality is field reconfigurable via the Lightcloud mesh network communication protocols. The Lightcloud controller can be attached to the fixture, junction box, or electrical panel. DLC system - NHCZ2BIA17L Learn more about Lightcloud.	Suitable for use in up to 40°C (10 Cold Weather Starting: The minimum starting temperat Thermal Management: Superior heat sinking with exter Housing:	14°F) ure is -40°C (-40°F) nal Air-Flow fins	rormulated for h	gn aarabiing ana iong-lasting C
UL Listed: Suitable for wet locations IESNA LM-79 & LM-80 Testing: RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80. DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PQAWMGTX eee help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	Compliance	Die-cast aluminum with airflow f	fins for cooling		
Suitable for wet locations IESNA LM-79 & LM-80 Testing: RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80. DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PQAWMGTX eed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	UL Listed:				
IESNA LM-79 & LM-80 Testing: RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80. DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PQAWMGTX eed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	Suitable for wet locations				
with IESNA LM-79 and LM-80. DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PQAWMGTX eed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	IESNA LM-79 & LM-80 Testing: RAB LED luminaires and LED components have been tested by an independent laboratory in accordance				
DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PQAWMGTX eed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	with IESNA LM-79 and LM-80.				
leed help? Tech help line: (888) 722-1000 Email: sales@rablighting.com Website: www.rablighting.com	DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.				
Copyright © 2022 RAB Lighting All Rights Reserved Note: Specifications are subject to change at any time without notice	DLC Product Code: PQAWMGTX leed help? Tech help line: <b>(888) 722-1000</b> Email: <b>sales@r</b> copyright © 2022 RAB Lighting All Rights Reserved Not	<b>ablighting.com</b> Website: <b>www.rablig</b> e: Specifications are subject to chang	<b>hting.com</b> ge at any time without	notice	

![](_page_33_Figure_12.jpeg)

![](_page_33_Picture_14.jpeg)

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utdoor Lighting						and the second se	STATE OF CA	IFORNIA I <b>r Lighting</b>									(and	an cauge
RCC-LTO-E (Created 11/19)					CALIFORN	NIA ENERGY COMMISSION	NRCC-LTO-E	Created 11/19)								CALIFORNIA ENERGY C	ommissi19 🌉	
ERTIFICATE OF COMPLIANCE						NRCC-LTO-E	CERTIFICA	TE OF COMPLIANCE									NRCC-L	LTO-E
his document is used to demonstrate compli	ance with requirements in §2	<u>110.9, §130.0, §1</u>	<u>130.2, §140.7,</u> an	d <u>§141.0(b)2L</u> for ou	tdoor lighting scopes u	ising the prescriptive path.	Project Na	me: San Diego Unifie	d School Distric	t Sandburg ES			Report Page:				Page 2	2 of 6
roject Name: San Diego Unified School Dig	strict Sandburg ES		Report	Page:		Page 1 of 6	Project Ad	dress: 4961 64th Street	, San Diego, CA	92115			Date Prepared	:			07-17-2	-2020
roject Address: 4961 64th Street, San Diego	, CA 92115		Date P	repared:		07-17-2020												
A. GENERAL INFORMATION						2		TIONAL CONDITIONS		-				+ + h = f =				
01 Project Location (city)	San Diego		04 Total Illumin	ated Hardscape Are	a (ft <sup>2</sup> )	210,000		is auto-fillea with unealt	table comments	s because of ser	ctions made c	r aata enterea	in tables throughou	t the Jorm.				
02 Climate Zone	7						Table F. O	utdoor Lighting Fixture S	Schedule Permit	t Applicant Not	s:							ļ
03 Outdoor Lighting Zone per Title 24, Part	1 §10-114 or as designated	by Authority Hav	ving Jurisdiction (	AHJ):			Canopy	According to §130.0(c)										ļ
LZ-0: Very Low - Undeveloped Parkland	LZ-2: Moderate - Rural A	reas	 LZ-4: High - N	Iust be reviewed by	CA Energy Commission	n for Approval	N Pole:	According to §130.0(c)										ļ
LZ-1: Low - Developed Parkland	 ✓ LZ-3: Moderately High - U	Urban Areas		,			E Pole: /	According to §130.0(c)	Downalt Arrist	ant Nat								ļ
	, , , , , , , , , , , , , , , , ,						Iable H. C Parking	utaoor Lighting Controls	not required by	ant Notes:	ohts are less t	han 40W and t	he nole heights are	>74'				ļ
PROJECT SCOPE						2	A luminair	e in Table F may be requ	uired to comply	with Cutoff Re	uirements, bu	it nothing has b	been selected in Tab	le F. Column	09.			ļ
ible Instructions: Include any outdoor lightin	g systems that are within th	ne scope of the pe	ermit application	and are demonstra	ting compliance using t	the prescriptive path												
unned in <u>9140.7</u> or <u>9141.0(D)2L</u> for alteratio	115.						E. ADDIT	ONAL REMARKS										?
				02			This table	includes remarks made l	by the permit a	pplicant to the	uthority Havi	ng Jurisdiction.						
UI	Must Comply with A	Mowancas from	\$140.7	02														
		Allowances from	<u>9140.7</u> .															
		crossing the conr	posted lighting la	(M/atta)	○ Voc													
	Is your alteration inc	creasing the conr	nected lighting lo	oad (Watts)?	• Yes	No												
03	Is your alteration ind	creasing the conr 04	nected lighting lo	oad (Watts)?	• Yes 05	No	F. OUTDO	OOR LIGHTING FIXTUR	RE SCHEDULE				- (					2
03 % of Existing Luminaires Being Altered	Is your alteration ind	creasing the conr 04 inaires Being Add	nected lighting lo	oad (Watts)?	• Yes 05 Calculation Meth	nod	F. OUTD Table Inst	OOR LIGHTING FIXTUR	RE SCHEDULE	tems demonstr	ting complian	ce with <u>§140.7</u>	(ie Table I has expandition in the Table bel	nded for inpu	t), include all l	luminaires being in	stalled and ar	<b>?</b> ny
03 % of Existing Luminaires Being Altered Please proceed to Table F. Outdoor Lighting FOOTNOTES: % of Existing Luminaires Being A	Is your alteration ind Sum Total of Lum Fixture Schedule to define t Altered = (Sum Total of Lum	creasing the conr 04 inaires Being Ado the project's lumi ninaires Being Ado	nected lighting lo ded or Altered <b>inaires.</b> Ided or Altered / I	oad (Watts)?	• Yes 05 Calculation Meth vithin the Scope of the	No nod Permit Application) x 100	<b>F. OUTD</b> Table Inst existing lu method p	<b>DOR LIGHTING FIXTUR</b> Fuctions: For new or alte minaires remaining or b er <u>§141.0(b)2L</u> (ie Table l	<b>RE SCHEDULE</b> red lighting sys eing moved wit N has expanded	tems demonstr thin the spaces d for input), incl	ting complian overed by the de only new l	ce with <u>§140.7</u> permit applica uminaires bein	(ie Table I has expa tion in the Table bel g installed and repla	nded for inpu ow. For alter cement lumir	t), include all l ed lighting sys naires being in	luminaires being in stems using the Exi stalled as part of t	stalled and ar ting Power ne project sco	ny pe
03 % of Existing Luminaires Being Altered Please proceed to Table F. Outdoor Lighting FOOTNOTES: % of Existing Luminaires Being	Sum Total of Lum Fixture Schedule to define t Altered = (Sum Total of Lum	creasing the conr 04 inaires Being Ado the project's lumi ninaires Being Ado	nected lighting lo ded or Altered <b>inaires.</b> Ided or Altered / I	ad (Watts)?	• Yes 05 Calculation Meth within the Scope of the	nod Permit Application) x 100	F. OUTDO Table Inst existing lu method p (ie, do not	<b>DOR LIGHTING FIXTUR</b> Fuctions: For new or alter minaires remaining or be er <u>§141.0(b)2L</u> (ie Table l include existing luminai	<b>RE SCHEDULE</b> red lighting sys eing moved wit N has expanded ires remaining o	tems demonstr thin the spaces d for input), incl or existing lumil	ting complian overed by the de only new l aires being mo	ce with <u>§140.7</u> permit applica uminaires being oved).	(ie Table I has expan tion in the Table belo g installed and repla	nded for inpu ow. For alter cement lumir	t), include all l ed lighting sys naires being in	luminaires being in stems using the Exi stalled as part of t	stalled and ar ting Power ne project sco	יחy הy סpe
03 % of Existing Luminaires Being Altered Please proceed to Table F. Outdoor Lighting FOOTNOTES: % of Existing Luminaires Being C. COMPLIANCE RESULTS	Sum Total of Lum Fixture Schedule to define to Altered = (Sum Total of Lum Sum Total of Lum	creasing the conr 04 inaires Being Ado the project's lumi inaires Being Ado	nected lighting lo ded or Altered <b>inaires.</b> Ided or Altered / I	aad (Watts)? Existing Luminaires v	Yes     05     Calculation Meth     vithin the Scope of the     D for guidance	nod Permit Application) x 100	F. OUTDO Table Inst existing lu method p (ie, do not Designed	DOR LIGHTING FIXTUR Fuctions: For new or alter minaires remaining or b er <u>§141.0(b)2L</u> (ie Table f include existing luminai Wattage:	<b>RE SCHEDULE</b> ired lighting sys eing moved wit N has expanded ires remaining c	tems demonstr thin the spaces d for input), incl or existing lumi	ting complian overed by the de only new l aires being mo	ce with <u>§140.7</u> permit applica uminaires bein oved).	(ie Table I has expan tion in the Table bel g installed and repla	nded for inpu ow. For alter cement lumir	t), include all I ed lighting sys naires being in	luminaires being in stems using the Exi stalled as part of t	stalled and ar sting Power ne project sco	iny pe
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Project Name: San Diego Ui	nified School District S	andburg ES		Report Page:			Page 4 of 6	Project Nar	ne: San [	Diego Unified School District Sandburg ES	Report Page:		Page 5 d
Project Address: 4961 64th St	treet, San Diego, CA 92	115		Date Prepared	1:		07-17-2020	Project Add	dress: 4961	64th Street, San Diego, CA 92115	Date Prepared:		07-17-20
01		02		03		04	05	L. LIGHTIN	NG ALLOW	ANCE: ORNAMENTAL			
		Shut-Off	Δυί	to-Schedule	Moti	ion Sensor	Field Inspector	This Section	n Does Not	Apply			
Area Description		§130.2(c)1	5 Au	130.2(c)2	§1	.30.2(c)3							
		<u></u>		<u>,()</u>			Pass Fail	M. LIGHTI	ING ALLOV	VANCE: PER SPECIFIC AREA			
Parking Lot	Ast	ronomical Timer		Yes	Ex	xempt *		This Section	n Does Not	Apply			
*NOTES: Controls with a * req EX: Not permitted by health &	uire a note in the space safety to be turned op	e below explaining f; EXCEPTION 1 to §	now compliance is acl 1 <u>30.2(c)</u> .	hieved.				N. EXISTIN		FIONS POWER ALLOWANCE (alterations only)			
Parking Lot	Motion sens	ors are not required	because canopy light	s are less than 40W a	and the pole heights	are >24'.		This Section	n Does Not	Apply			
		•	1, 5										
								O. DECLAI	RATION O	REQUIRED CERTIFICATES OF INSTALLATION			
I. LIGHTING POWER ALLOV	MANCE (per 8140 7)							Table Instru	uctions: Sel	ections have been made based on information provided i	in previous tables of this document. If any selection needs to be changed, µ	olease explai	in why in
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CERTIFICAT	E OF COMPLIANCE	,								NR	CC-LT
Project Nar	ne: San Diego Unified	School Distr	rict Sandburg E	S		Report Page:				Ра	ge 3
Project Adc	lress: 4961 64th Street,	San Diego, C	CA 92115			Date Prepared:				07	-17-2
01	02		03	04	05	06	07	08	09		10
Name or Item Tag	Complete Luminaire D	escription	Watts per luminaire <sup>1,2</sup>	How Wattage is determined	Total number luminaires²	Luminaire Status <sup>3</sup>	Excluded per <u>§140.7(a</u>	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output <u>§130.2(b)</u> <sup>4</sup>	Field Ir Pass	nspeo Fa
		Linear						0			Г
								0			
						Total Desig	ned Watts	2,830			
* NOTEC, C	· · · · · · · · · · · · · · · · · · ·							_,000			
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EX: Luminal Canopy N Pole E Pole Pole Pole Pole Pole Pole Pole Pole	elections with a * requir ire is lighting a statue; E. According to §130.0(c) According to §130.0(c) According to §130.0(c) TES: Authority Having Jur Iuminaires, wattage sho ware for new luminaires in the Remain" for existing lun oved and reinstalled as po ce with mandatory cutof <b>F REQUIREMENTS (BU</b> In Does Not Apply <b>DOR LIGHTING CONTRO</b> uctions: Complete this to projects, luminaires which y are within the spaces co ption having a * is select is NOT COMPLY" if the no list to indicate not applic <b>y Controls</b>	e a note in th XCEPTION 2 isdiction may uld be indice in a new oute in a	he space belov to <u>§130.2(b)</u> . y ask for Lumin ated as W/lf in hoor lighting pu- hin the project oject scope nts is required trating compli g to remain (ie e permit applie s section of the blank. For eac xemption.	w explaining how of naire cut sheets to istead of Watts/lu roject or for addec roject or for addec for luminaires wit for luminaires wit ance with controls untouched) and log cation. is table must be con h requirement in con	compliance is confirm watt minaire. Tota I luminaires in t being altere h initial lumer s requirements uminaires wh completed. The columns 02 the	achieved. age used for compliant I linear feet for the lur an alteration. Select d and are remaining. output ≥ 6,200 unles for all new or altered ich are removed and r lighting controls secti rough 04, do not leave	nce per <u>§13</u> minaire sha "Altered" Select "Exi s exempte d luminaire einstalled ion of the field l	30.0(c) ould be indicated for replacement isting Reinstalled d by <u>§130.2(b)</u> . es installed as pa (wiring only) do Compliance Sumi plank, instead se	d in column 05 instea luminaires in an alte l" for existing lumino rt of the permit appl not need to be inclue mary Table on the fii lect NA or Exempt* j	id of nu eration. hires wh lication. ded in tr rst page from the	mber Sele ich a For his tc ?

CERTIFICATE OF COMPLIANCE			NRCC-LTC
Project Name: San Diego Uni	fied School District Sandburg ES	Report Page:	Page 6 o
Project Address: 4961 64th Stre	eet, San Diego, CA 92115	Date Prepared:	07-17-20
DOCUMENTATION AUTHOR	'S DECLARATION STATEMENT		
certify that this Certificate of (	Compliance documentation is accurate and cor	nplete	
Documentation Author Name:	ARCHIT PATNAIK	Documentation Author Signa	ature:
Company:	PURE POWER ENGINEERING	Signature Date:	07-17-2020
Address:	403 16th Street Suite 301	CEA/ HERS Certification Iden	tification (if applicable):
City/State/Zip:	DENVER, CO 80202	Phone:	573-202-1403
RESPONSIBLE PERSON'S DECLA certify the following under per L. The information provided on 2. I am eligible under Division Compliance (responsible des 3. The energy features and per Certificate of Compliance co 1. The building design features compliance documents work	ARATION STATEMENT enalty of perjury, under the laws of the State of n this Certificate of Compliance is true and co 3 of the Business and Professions Code to acc signer) rformance specifications, materials, compone onform to the requirements of Title 24, Part 1 s or system design features identified on this of rksheets, calculations, plans and specification	of California: rrect. ept responsibility for the building desig nts, and manufactured devices for the k and Part 6 of the California Code of Reg Certificate of Compliance are consistent s submitted to the enforcement agency	n or system design identified on this Certificate of ouilding design or system design identified on this gulations. It with the information provided on other applicable
<ul> <li>RESPONSIBLE PERSON'S DECLA certify the following under per l. The information provided of 2. I am eligible under Division Compliance (responsible de 3. The energy features and per Certificate of Compliance co</li> <li>4. The building design features compliance documents, wor</li> <li>5. I will ensure that a complete to the enforcement agency f documentation the builder per Responsible Designer Name:</li> </ul>	ARATION STATEMENT enalty of perjury, under the laws of the State of n this Certificate of Compliance is true and co 3 of the Business and Professions Code to acc signer) rformance specifications, materials, compone onform to the requirements of Title 24, Part 1 s or system design features identified on this of rksheets, calculations, plans and specification ed signed copy of this Certificate of Compliance for all applicable inspections. I understand that provides to the building owner at occupancy. RICHARD IVINS	of California: rrect. ept responsibility for the building desig nts, and manufactured devices for the b and Part 6 of the California Code of Reg Certificate of Compliance are consistent s submitted to the enforcement agency ce shall be made available with the build at a completed signed copy of this Certi	n or system design identified on this Certificate of puilding design or system design identified on this gulations. with the information provided on other applicable for approval with this building permit application. ding permit(s) issued for the building, and made availab ficate of Compliance is required to be included with the
RESPONSIBLE PERSON'S DECLA certify the following under per L. The information provided of 2. I am eligible under Division Compliance (responsible de 3. The energy features and per Certificate of Compliance co 4. The building design features compliance documents, wor 5. I will ensure that a complete to the enforcement agency f documentation the builder p Responsible Designer Name: Company :	ARATION STATEMENT enalty of perjury, under the laws of the State of n this Certificate of Compliance is true and co 3 of the Business and Professions Code to acc signer) rformance specifications, materials, compone onform to the requirements of Title 24, Part 1 s or system design features identified on this of rksheets, calculations, plans and specifications ed signed copy of this Certificate of Compliance for all applicable inspections. I understand the provides to the building owner at occupancy. RICHARD IVINS PURE POWER ENGINEERING	of California: rrect. ept responsibility for the building desig nts, and manufactured devices for the k and Part 6 of the California Code of Reg Certificate of Compliance are consistent s submitted to the enforcement agency ce shall be made available with the build at a completed signed copy of this Certi Responsible Designer Signatu Date Signed:	n or system design identified on this Certificate of ouilding design or system design identified on this gulations. t with the information provided on other applicable of or approval with this building permit application. ding permit(s) issued for the building, and made availab ficate of Compliance is required to be included with the ure:
RESPONSIBLE PERSON'S DECLA I certify the following under per 1. The information provided of 2. I am eligible under Division Compliance (responsible de 3. The energy features and per Certificate of Compliance co 4. The building design features compliance documents, wor 5. I will ensure that a complete to the enforcement agency f documentation the builder p Responsible Designer Name: Company : Address:	ARATION STATEMENT enalty of perjury, under the laws of the State of n this Certificate of Compliance is true and co 3 of the Business and Professions Code to acc signer) rformance specifications, materials, compone onform to the requirements of Title 24, Part 1 s or system design features identified on this of rksheets, calculations, plans and specifications ed signed copy of this Certificate of Compliance for all applicable inspections. I understand that provides to the building owner at occupancy. RICHARD IVINS PURE POWER ENGINEERING 5 MARINE VIEW PLAZA - SUITE 301	of California: rrect. ept responsibility for the building desig nts, and manufactured devices for the k and Part 6 of the California Code of Reg Certificate of Compliance are consistent s submitted to the enforcement agency ce shall be made available with the build at a completed signed copy of this Certi Responsible Designer Signatu Date Signed: License:	n or system design identified on this Certificate of puilding design or system design identified on this gulations. It with the information provided on other applicable of or approval with this building permit application. ding permit(s) issued for the building, and made availab ficate of Compliance is required to be included with the ure: 07-17-2020 PE# E20357

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

![](_page_34_Figure_4.jpeg)

November 2019

![](_page_35_Picture_0.jpeg)

SunPower Offers The Best Combine	d Power And Produc	t Warranty
Power Warranty	S T W O	Product Warranty unPower raditional Varranty 5 10 15 20 25
More guaranteed power: 95% for first 5 years, –0.4%/yr. to year 25 <sup>8</sup>	Combined	Power and Product defect 25-year coverage <sup>9</sup>
Electrical Data		Tests And Certifications
SPR-E20-435-COM	Standard Tests <sup>14</sup>	UL1703 (Type 2 Fire Rating)
Nominal Power (Pnom) <sup>12</sup> 435 W	Quality Certs	ISO 9001:2008, ISO 14001:2004
Power Tolerance +5/–3%	EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH
Avg. Panel Efficiency <sup>13</sup> 20.3%	A subject of the second	SVHC-163, PV Cycle
Rated Voltage (Vmpp) 72.9 V	Ammonia Test	IEC 62/16
Rated Current (Impp) 5.97 A	Desert Test	10.1109/PVSC.2013.6/44437
Open-Circuit Voltage (Voc) 85.6 V	Salt Spray Test	IEC 61701 (maximum severity)
hort-Circuit Current (Isc) 6.43 A	PID Test	Potential-induced Degradation free: 1000 V
Aax. System Voltage 1000 V UL	Available Listings	OL, CEC
Aaximum Series Fuse 15 A	Operati	ing Condition And Mechanical Data
Power Temp Coef. –0.35% / ° C	Temperature	-40° F to +185° F (-40° C to +85° C)
′oltage Temp Coef. −235.5 mV / ° C	Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Current Temp Coef. 2.6 mA / ° C	Appearance	Class B
FERENCES: Helix-compatible modules may not be compatible with other racking systems. VI comparisons are SPR-E20-327 vs. a representative conventional panel: 250 W, approx. 1.6 m <sup>2</sup> , 3% efficiency. ypically 7-9% more energy per watt, BEW/DNV Engineering "SunPower Yield Report," Jan 2013. SunPower 0.25%/yr degradation vs. 1.0%/yr conv. panel. Campeau, Z. et al. "SunPower Module gradation Rate," SunPower white paper, Feb 2013; Jordan, Dirk "SunPower Test Report," NREL, -2015. SunPower Module 40-Year Useful Life" SunPower white paper, May 2015. Useful life is 99 out of 0 panels operating at more than 70% of rated power. Second highest, after SunPower X-Series, of over 3,200 silicon solar panels, Photon Module rvey, Feb 2014. We more energy than the average of the top 10 panel companies tested in 2012 (151 panels, 102 mpanies), Photon International, Feb 2013. Compared with the top 15 manufacturers. SunPower Warranty Review, May 2015. Siome restrictions and exclusions may apply. See warranty for details. 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et "Fraunhofer PV Durability Initiative for Solar Modules: Part 2". Photovoltaics International, 2014. Compared with the non-stress-tested control panel. Atlas 25+ Durability test report, Feb 2013. Standard Test Conditions (1000 Wm² irradiance, AM 1.5, 25° C). NREL calibration Standard: MS current, LACCS FF and Voltage. Based on average of measured power values during production. Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.	Solar Cells Tempered Glass Junction Box Weight Max. Load Frame 2073 1 2067 r 4x (C) (A) Cable Length: 1230 (B) Stacking Pins (C) Optional Helix-comp Please read the safety Clips installed on Helix Clips are not removab	128 Monocrystalline Maxeon Gen II         High-transmission tempered anti-reflective         IP-65, TE (PV45)         56 lbs (25.4 kg)         Wind: 50 psf, 2400 Pa, 244 kg/m² front & back         Snow: 112 psf, 5400 Pa, 550 kg/m² front         Class 2 silver anodized; stacking pins         mm (81.4 in)         Image: Reflective re
www.sunpower.com/facts for more reference information.		Document # 521912 Rev & /I TP LIS

	Technical Spe
	Model
l	DC Input
-	Operating voltage
-	Start voltage
-	VMPP range for POUT-R
	Rated voltage
-	Number of MPP tracker
-	Current limit, IMP-MAX /
-	Connection type
-	Allowable conductors
-	Surge protection, DC si
-	Combiner fuses
	DC disconnect switch
	String current monitor
l	Rated output power
-	Max. output power
-	Max. output current
-	Grid configuration
	Inverter connection
-	Operating voltage rang
-	Operating frequency ra
-	Surge protection AC si
-	THD
-	Connection type
	Night time consumption
	Efficiency
	Peak efficiency
	CEC efficiency
	Information Communication port
-	Display
	Regulation
	General Data
	Smart inverter function
	Operating temp. range
-	Protection level
-	Operating elevation
	Dimonsion (in)
-	W/ Wirin
	Weight (lb) W/O Wir
	Shipping
	Delta Flectronice (
4	16101 Fremont Blvd. Fre
١	www.delta-americas.com
(	Customer Service
I	VI.Support.US@deltaw
	+1-877-442-4832

	M80U_121	M60U_121	M42U_121	M36U_121					
		1000V (r	per NEC)						
)		200-1	000V						
		>25	50V						
TED	600~800V	520~800V	545~830V	520~830V					
		71	0V						
				36A/MDDT					
/MPPT	1084/	MPPT	40A/INIFF1 100A/						
	100/1	2pr. Termi	nal blocks						
	#1~#3/0 A	WG, Cu/Al	#2/0~#8 A	WG, Cu/Al					
е		SPD Type II 1	0kA (8 x20us)						
		Not Pro	visioned						
	Not Pro	visioned	Y	es					
		Not Pro	visioned						
	001374	C013 (A	401274	0012/0					
	80KVA (@TAMB ≤ 40°C, VIN ≥ 600VDC)	60KVA (@TAMB ≤ 40°C, VIN ≥ 520VDC)	42KVA (@TAMB ≤ 40°C, VIN ≥ 545VDC)	36KVA (@TAMB ≤ 40°C, VIN ≥ 520VDC)					
	83kVA (@TAMB ≤ 40°C, VIN ≥ 650VDC)	66kVA (@TAMB ≤ 40°C, VIN ≥ 600VDC)	46kVA (@TAMB ≤ 40°C, VIN ≥ 630VDC)	39.6kVA (@TAMB ≤ 40°C, VIN ≥ 600VDC)					
	100A	80A	56.2A	48.2A					
		480/277V (3P-4W/Y	) or 480V (3P-3W/Δ)						
		3W or 4W pr	ogrammable						
		±10	0%						
e		50/60H	z ±5Hz						
		Unity at PRATED; adjust	able: [0.8 ind ~0.8 cap]						
;		SPD Type II 1	0KA (0 X2005)						
	AC Switch & Term	inal block #1~#2/0	AC Switch & Termin	al block #3~#6 AWG					
		<3	W						
	98.	8%	98	.6%					
	98.	5%	98	.0%					
		DO 405 (Dalta and							
		RS-485 (Delta or 3							
		20 7 -							
	UL1	741 SA. UL1741. UL1998. U	L 1699B. IEEE1547. IEEE15	547.1					
		CSA C22.2, FCC	Part 15 (Class B)						
ty	Voltage/Freque	ncy Ride through, Volt/Var, V	olt/Watt, Power curtailment,	Frequency/Watt					
		-13°~140°F	(-25°~60°C)						
		NEM	A 4X						
		Forced air cooling wi	<pre>th Smart Ean Control</pre>						
	24.2 x 35	.4 x 10.8	24.2 x 32	2.2 x 10.8					
box	17	1.8	127.6	123.7					
g box	14	9.9	99	9.2					
/eight	243	2.5	145.6	141.7					
meric	as), Ltd	- Al	I specifications are subject to	o change without prior notice					
ont, CA echnie	94538 cal Support			<b>NELT</b>					
.com			Cmarton C	roopor Togotha					
			Smarter. G	reener. logethe					

20181122

![](_page_35_Figure_4.jpeg)

HELIX <sup>™</sup> Ac	vanced Monitoring Solution
PVS5x Specificatio	ns
Compatibility	
Operating voltage	240 VAC, 60 Hz   208 VAC, 60 Hz   120 VAC, 60 Hz
Compatible inverters	<ul> <li>SMA Sunny Tripower CORE1 STP62-US-41, STP50-US-41, STP3</li> <li>SMA Sunny Tripower 30000TL-US-10, 24000TL-US-10, 20000T</li> <li>Delta M80U_121, M60U_121, M42U_121, M36U_121</li> </ul>
Compatible meters	Acuvim IIR, ION 8650
Mechanical	
Operating temperature	–30°C to +60°C (–22°F to +140°F)
Humidity (max.)	95%, non-condensing
Weight	2.5 kg (5.5 lbs)
Dimensions	34.5 × 20.6 × 9.3 cm (13.6 × 8.1 × 3.6 in.)
Enclosure rating	NEMA Type 3R
Communication	
RS-485	Two ports for legacy inverters and meters
Ethernet	One LAN (or optional WAN) port for inverters and meters
Wi-Fi	802.11b/g/n
Cellular	LTE/3G UMTS
ZigBee	IEEE 802.15.4 MAC, 2.4G Hz ISM band
Data storage	60 days
Upgrades	Automatic firmware upgrades
Worser Certifica	To commission with the PVS Management App use Firefox,
Warranty and Certifica	tions
warranty	10-year limited warranty
Certifications	UL, CUL, EN60950, EN61326-1, FCC Part 15 (Class B)
Auxiliary Box Spec	fications
Mechanical	
Weight	8.15 kg (17.9 lb)
Enclosure Rating	36.8 × 33.7 × 18.3 cm (14.5 × 13.3 × 7.2 m.) NEMA Type 4X
0	
Electrical and Commun	
Output Voltage	120 VAC, 60 Hz
Communication Hubs	Two PS_485 inputs (two or four wire)   Fight port Ethernet s
Communication nubs	Two K3-465 Inputs (two of four wire)   Light-port Ethernet s
Warranty and Certificat	ions
14/	10-year limited warranty
Warranty	

# WIRING DIAGRAMS 3 Phase 3Line V<690V(line to line) •000 Α — •CT2 •СТЗ LOAD L1 L3 Note: Neutral is optional DIMENSIONS NEMA4X Waterproof Plastic Panel Unit : mm (inches) R 11.00 mm (0.435") (TYP. 2 PLACES) 20.30 mm (0.8")

SIDE VIEW

# AcuSplitCT Series 3135R Split Core Current Transformers

The Accuenergy split core CTs are compact and low- cost current transformers with high accuracy. The CTs are ideal for quick and easy installation without disconnecting cables during installation. Multiple installation mechanisms provide stable and durable current measurement.

FRONT VIEW

#### FEATURES

- Multiple output including 5A, 1A, 80mA, 100mA,
- 200mA, 333mV
- Simple hinged installation Can be installaed on cable, bus and panel
- Standard Window size from 0.75 to 5 by 7 inch Listed to UL2808, 61010-1 and CSA 22.2

SPECIFICATIONS	
Rated Primary Current	Up to 1500A
Rated Output	5A, 1A, 80mA, 100mA, 200mA, 333mV
Withstand Voltage	5,000Vac
Operating Amb. Temperature	-15°C to 65°C
Accuracy	IEC 60044-1 0.5s class
Lead	8 ft(2.5m) UL 1015 22AWG
Construction	UL enclosure rated to 135°C
Certifications	UL listed UL2808, 61010-1 and CSA 22.2

#### ORDERING INFORMATION

			nateu input		nated Output	
Ordering Number	AcuCT-3135R			-		
Ordering Example	AcuCT-3135R	•	600		333mV	
			600: 600A		1A	
			800: 800A		5A	
			1000: 1000A		333mV	
			1200: 1200A		80mA	
			1500: 1500A		100mA	
					200mA	
lote: For any oth	er size and ratio,	olea	ase contact Aco	cuene	rgy Corp.	
	Accuer	P	av Corp			
내양원드		Jor	Toronto	Raiiin	a Protoria	

#### Los Angeles - Toronto - Beijing - Pretoria North America Toll Free: 1-877-721-8908 Web: www.accuenergy.com Email: marketing@accuenergy.com

![](_page_35_Figure_19.jpeg)

DIMENSIONS

![](_page_35_Picture_20.jpeg)

61.00 mm (2.40")

BOTTOM VIEW

![](_page_35_Picture_22.jpeg)

# S U N P O W E R SWITCHBOARD **SSB-01**

SIGNSIGN ATA-1ELECTRICAL EQUIPMENT

# S U N P O W E R AC STATION #1

SIGN AT EACH AC STATION

WARNING

- ELECTRIC SHOCK HAZARD -IF A GROUND FAULT IS INDICATED, NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED

SIGN AT EACH INVERTER

WARNING

- ELECTRIC SHOCK HAZARD -DO NOT TOUCH TERMINALS.

TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

SIGN AT EACH INVERTER B-2

![](_page_36_Picture_11.jpeg)

![](_page_36_Picture_12.jpeg)

THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

![](_page_36_Picture_16.jpeg)

THIS EQUIPMENT HAS SECONDARY POWER SOURCE FROM PHOTOVOLTAIC SYSTEM

PV SYSTEM MAX AC OUTPUT CURRENT: 41.6A PV SYSTEM OPERATING VOLTAGE: 4160V

SOLAR PV SYSTEM SIGN AT RAPID SHUTDOWN INITIATION DEVICE AND UTILITY DISCONNECT

![](_page_36_Picture_21.jpeg)

SIGN AT UTILITY DISCONNECT

![](_page_36_Picture_23.jpeg)

# WARNING

# - ELECTRIC SHOCK HAZARD -

**SIGN** SIGN AT EACH INVERTER

# WARNING

SIGN AT POINT OF INTERCONNECTION AND AT UTILITY DISCONNECT

![](_page_36_Picture_29.jpeg)

SIGNSIGN ATB-5ELECTRICAL EQUIPMENT

![](_page_36_Picture_31.jpeg)

12000V VOLTS INSIDE CAN SHOCK, BURN, OR CAUSE DEATH

> -KEEP OUT-QUALIFIED PERSONNEL ONLY

> > SIGN AT ELECTRIC SUPPLY B-6

SUNPOWER SIGNAGE NOTES: ALL DC COMBINER AND JUNCTION BOXES.

ADDITIONAL SIGNAGE (IF APPLICABLE):

![](_page_36_Picture_46.jpeg)

OUTDOOR RATED STICKER MOUNTED ON ALL EQUIPMENT

CKT#1 01-INV-01 CKT#2 01-INV-02 ....

![](_page_36_Figure_52.jpeg)

![](_page_36_Picture_53.jpeg)

![](_page_37_Picture_0.jpeg)

1. REFER TO DISTRICT SPECS "26 05 53 IDENTIFICATION FOR ELECTRICAL SYSTEMS" AND "26 60 00 SOLAR PHOTOVOLTAICS SECTION (3.1) REQUIRED

4. MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, AND JUNCTION BOXES TO ALERT THE FIRE SERVICE TO AVOID CUTTING THEM. MARKING SHALL BE PLACED EVERY 10', AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS, AND AT

5. COLOR FOR DAS WARNING SIGN, UTILITY LOCKABLE AC DISCONNECT, SOLAR GENERATOR ON PREMISES, POWER METER, INTERCONNECT PANEL SECONDARY POWER SIGN WILL BE BLACK TEXT ON ORANGE BACKGROUND. THE COLOR FOR DISCONNECT SIGNAGE WILL BE BLACK TEXT ON WHITE

SIGNAGE ON THIS SHEET TO BE USED IN CONJUCTION WITH SUNPOWER DOCUMENT 'SPECIFICATION, D&E, ELECTRICAL, PRODUCT, SIGNAGE" # 505614. 9. ALL PLACARDS SHALL BE MACHINE GENERATED PHENOLIC TYPE WITH RED BACKGROUND AND WHITE LETTERING, AFFIXED TO EQUIPMENT WITH STAINLESS STEEL SCREWS OR WITH PERMANENT ADHESIVE WHERE SET SCREWS ARE NOT FEASIBLE. MINIMUM LETTERING SIZE TO BE 1/4" UNLESS

11. PROVIDE UTILITY-REQUIRED SYSTEM DIRECTORY PLACARD AND UTILITY SAFETY SWITCH IDENTIFICATION PLACARD AS REQUIRED BY LOCAL UTILITY

2. WORKSPACE CLEARANCE WARNING: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR INCHES." 3. PROVIDE A PLACARD CLEARLY VISIBLE AT EACH MAIN SERVICE PANEL TO IDENTIFY BOTH SOURCES OF POWER, WITH THE FOLLOWING WORDING IN 1/4" HIGH LETTERING PER CEC 690.64(B)(4): "WARNING - THIS SERVICE IS FED BY TWO SOURCES OF POWER - THE UTILITY SERVICE MAIN DISCONNECT AND THE PV SYSTEM MAIN

4. PROVIDE A PLACARD ON EACH PV SYSTEM INPUT CIRCUIT BREAKER (WHERE USED) AT THE MAIN PANEL WITH THE FOLLOWING WORDING IN 1/4" HIGH LETTERING

5. PROVIDE A PLACARD ON THE MAIN PV SYSTEM DISCONNECT (ADJACENT TO EACH MAIN SERVICE PANEL) WITH THE FOLLOWING INFORMATION IN 1/4" HIGH LETTERING PER CEC 690.53: "PHOTOVOLTAIC POWER SOURCE DISCONNECT - OPERATING CURRENT: X AMPS; OPERATING VOLTAGE: XX VAC; MAXIMUM SYSTEM VOLTAGE: XX VAC; SHORT-CIRCUIT CURRENT: XXX AMPS", WHERE X IS THE OPERATING CURRENT, XX IS THE SYSTEM VOLTAGE, AND XXX IS THE MAXIMUM SHORT 6. PROVIDE A PLACARD AT EACH MAIN SWITCHBOARD WITH THE FOLLOWING INFORMATION IN 1/4" HIGH LETTERING PER CEC 690.54: "CAUTION - POSSIBLE BACKFEED

FROM PHOTOVOLTAIC POWER SYSTEM - X VAC, XX AMPS", WHERE X IS THE SYSTEM VOLTAGE AND XX IS THE MAXIMUM AC AMPERES OF THE INSTALLED SYSTEM. PROVIDE A PLACARD ON EACH PV SYSTEM INVERTER WITH THE FOLLOWING INFORMATION IN 1/4" HIGH LETTERING: "PHOTOVOLTAIC POWER SOURCE INVERTER RATING - OPERATING CURRENT: XX AMPS; OPERATING VOLTAGE: XXX VDC; MAXIMUM SYSTEM VOLTAGE: 1,000 VDC; SHORT-CIRCUIT CURRENT: XXXX AMPS", WHERE XX IS THE MAXIMUM DC AMPERES OF THE INSTALLED SYSTEM, XXX IS THE OPERATING VOLTAGE DC, AND XXXX IS THE SHORT CIRCUIT CURRENT THAT THE INVERTER

![](_page_37_Picture_18.jpeg)

![](_page_38_Figure_0.jpeg)

![](_page_39_Figure_0.jpeg)

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# GENERAL NOTES

FACILITIES, UNLESS OTHERWISE SPECIFIED. 4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

# LANDSCAPE PLANTING NOTES

- OF EXISTING TREES.

- 8. ALL PLANTING AREAS SHALL RECEIVE WEED CONTROL, SEE SPECS.
- OF CONFLICTS PRIOR TO PLANTING. TO SPECS.

12. PRIOR TO REMOVING ANY EXISTING PLANT MATERIAL, CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE, FLAG ALL PLANT MATERIAL TO BE REMOVED AND TO REMAIN, AND PHOTOGRAPH EXISTING CONDITIONS TO VERIFY IDENTIFIED PLANTS TO REMAIN ARE NOT HARMED DURING THE CONSTRUCTION PROCESS. CONTRACTOR SHALL REPLACE ANY EXISTING PLANTING TO REMAIN THAT WERE DAMAGED DURING CONSTRUCTION OPERATIONS TO THE SATISFACTION OF THE OWNER.

13. DO NOT USE CHEMICAL FERTILIZERS, PESTICIDES, HERBICIDES OR COMMERCIAL SOIL AMENDMENT. USE ORGANIC MATERIALS REVIEW INSTITUTE (OMRI) MATERIALS AND COMPOST. REFER TO THE BAY-FRIENDLY LANDSCAPE GUIDELINES: http://www.stopwaste.org/resource/brochuures//bay-friendly-landscape-guidelines-sustainable-practices-landscape-professional FOR GUIDANCE.

COMMON NAME	<u>SIZE</u>	ON-CENTER SPACING	WUCOLS IV
BERKELEY SEDGE	1 GAL	2'-0"	LOW
BUSH ANEMONE	5 GAL	5'-0"	LOW
DEER GRASS	5 GAL	6'-0"	LOW
HUMMINGBIRD SAGE	1 GAL	5'-0"	LOW
JAPANESE PITTOSPORUM	5 GAL	6'-0"	MED

BEEN FIELD VERIFIED BY THE LANDSCAPE ARCHITECT. ANYONE USING THIS DRAWING IS URGED TO PERFORM THEIR OWN FIELD VERIFICATION WORK TO DETERMINE THE STATE OF CURRENT EXISTING CONDITIONS.

(BIOSWALE SAFE PLANT) (BIOSWALE SAFE PLANT) (TO MATCH EXISTING)

![](_page_39_Figure_24.jpeg)

1. CONTRACTOR IS TO NOTIFY DIGALERT(811) AT LEAST TWO DAYS PRIOR TO STARTING WORK AND ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION, AND CAPPING OF EXISTING UTILITIES (IF REQUIRED) WITH THE APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCING WORK. 2. PROTECT IN PLACE EXISTING IMPROVEMENTS, STRUCTURES, AND UNDERGROUND UTILITIES WHICH ARE TO REMAIN. MAINTAIN UTILITY SERVICES TO EXISTING

3. THE LOCATION OF EXISTING UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM GROUND PENETRATING RADAR. A SEARCH OF AVAILABLE RECORD DRAWINGS FOR IRRIGATION WERE OBTAINED FROM SDUSD.

1. ALL UNDERGROUND UTILITIES SHALL BE LOCATED BEFORE START OF WORK.

2. EXISTING TREES TO BE PROTECTED PER DISTRICT STANDARDS. REFER TO DISTRICT STANDARD TREE PROTECTION SPECIFICATIONS.

3. PROVIDE 3" MULCH OVER ALL NEW SHRUB AND GROUNDCOVER AREAS

4. ALL SHRUBS AND GROUNDCOVER SHALL BE SET 1/2 THE DIMENSION OF THE SPACING FROM ADJACENT WALL, AND CURBS, UTILITY STRUCTURES AND WALLS UNLESS OTHERWISE SHOWN. ALL SHRUB AND GROUNDCOVER SPACING SHALL BE TRIANGULAR UNLESS DRAWN OTHERWISE. NO NEW PLANTS WITHIN 6' OF TRUNK

5. WHERE CIRCLES SHOW PLANTS, TRUNK OF PLANT EQUALS CENTER POINT OF CIRCLE.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY DAMAGE OR DESTRUCTION TO EXISTING PLANT MATERIALS AND TO RESTORE THE SAME SPECIES TO IT'S ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, SEE SPECS.

7. REFER TO SPECIFICATIONS FOR SOIL AMENDMENTS, FERTILIZER AND PLANTING INFORMATION. ALL PROPOSED AREAS OF NEW PLANTING WITH EXISTING TOPSOIL SHALL HAVE 2" ORGANIC AMENDMENT BLEND INTO EXISTING SOIL, SEE SPECS.

9. PLANT TREES A MINIMUM OF 4'-0" FROM EDGE OF PAVING, UTILITY STRUCTURES, UNLESS RESTRICTED BY SIZE OF PLANTER. NOTIFY OWNER'S REPRESENTATIVE

10. CONTRACTOR SHALL MAINTAIN ENTIRE AREA WITHIN LIMIT OF WORK LINE INCLUDING MANUAL WATERING OF EXISTING PLANT MATERIAL AS SPECIFIED. CONTRACTOR SHALL VERIFY THAT ALL ADJACENT EXISTING PLANT MATERIAL AFFECTED BY CONSTRUCTION OPERATIONS SHALL RECEIVE WATERING REGULARLY. REFER

11. FOR THE PURPOSE OF PLANT QUALITY VERIFICATION: WHERE PLANTS ARE INDICATED BY CIRCLES, SYMBOLS TAKE PRECEDENCE OVER QUANTITY CALL OUTS. WHERE PLANTS ARE INDICATED BY A HATCH PATTERN, ON-CENTER SPACING SPECIFIED IN THE PLANT LIST TAKES PRECEDENCE OVER QUALITY CALL OUTS.

![](_page_39_Figure_38.jpeg)

![](_page_40_Figure_0.jpeg)

CONTRACTOR TO FIELD VERIFY LOCATIONS AND FUNCTIONALITY OF ALL EXISTING AUTOMATIC IRRIGATION EQUIPMENT AFFECTED BY NEW WORK. PERFORM TESTING IN THE PRESENCE OF THE DISTRICT TO ENSURE THERE ARE NO SURPRISES OR DISPUTES OF MALFUNCTIONING IRRIGATION EQUIPMENT AT PROJECT CLOSEOUT. CONTRACTOR TO SUBMIT A FIELD OBSERVATION REPORT TO THE DISTRICT FOR WRITTEN APPROVAL OF THE FIELD REPORT AND EXISTING CONDITIONS.

IRRIGATION CONTRACTOR IS TO NOTIFY GENERAL CONTRACTOR OF POTENTIAL IRRIGATION CONFLICTS WITH NEW CONSTRUCTION PRIOR TO BEGINNING OF CONSTRUCTION ACTIVITY AND COORDINATE IRRIGATION INSTALLATION WITH OTHER NEW IMPROVEMENTS. IRRIGATION CONTRACTOR IS TO COORDINATE AND RECEIVE APPROVAL OF ANY SHUTDOWN OF THE IRRIGATION MAINLINE OR POTABLE WATER SUPPLY WITH DISTRICT IRRIGATION SPECIALIST PRIOR TO PERFORMING ANY WORK.

4. CONTRACTOR IS TO TURN OFF IRRIGATION MAINLINE WATER SUPPLY PRIOR TO ANY CONSTRUCTION AND IDENTIFY BREAKS IN THE MAINLINE AND/OR LATERAL LINES AFTER INITIAL DEMO OPERATIONS ON SITE AND REPAIR AS REQUIRED.

5. THE EXISTING IRRIGATION MAINLINE AND WIRES ARE TO REMAIN OPERATIONAL AT ALL TIMES DURING DEMOLITION AND NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO MODIFY EXISTING IRRIGATION SYSTEM AS REQUIRED DURING WORK TO MAINTAIN A FULLY FUNCTIONAL IRRIGATION SYSTEM WITHIN AND BEYOND LIMITS OF WORK FOR THE SCHOOL SITE. CONTRACTOR TO PROVIDE TEMPORARY HIGH LINES FOR IRRIGATION MAINLINE AND WIRES WHERE EXISTING SERVICES MUST BE DISTURBED AND CANNOT REMAIN IN PLACE. REMOVE AND RESTORE ALL IRRIGATION EQUIPMENT BELOW GRADE TO THE SATISFACTION OF THE DISTRICT REPRESENTATIVE FOR COMPLETION OF PROJECT CONSTRUCTION PHASE.

6. CONTRACTOR IS TO REPAIR EXISTING IRRIGATION IMPACTED BY ELECTRICAL TRENCHING AND ANY OTHER CONSTRUCTION THAT IMPACTS THE IRRIGATION SYSTEM IN LANDSCAPE AREAS. 7. REMOVE ALL SPRINKLERS AND BUBBLERS WHERE PLANTERS ARE ELIMINATED OR CONVERTED TO A DIFFERENT METHOD OF IRRIGATION. CAP RISERS BELOW GRADE WITH SOLVENT WELD CAPS. (THREADED CAPS SHALL NOT BE USED BELOW PAVING.) IRRIGATION MAINLINES AND WIRES SHALL BE PROTECTED IN PLACE. 8. UPON COMPLETION OF THE IRRIGATION SYSTEM THE CONTRACTOR WILL BE REQUIRED TO DEMONSTRATE THAT THE ENTIRE IRRIGATION SYSTEM (FOR THE AFFECTED AREAS ONLY) ARE OPERATIONAL.

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VALVE WI WIRES.	RES, MASTER VALVE WIRE TEST TO ENSURE ALL EX
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# IRRIGATION WATERING SCHEDULE

POP-UP SPRAY SPRINK	LER IRRIG	ATION F	OR LOW	WATER	-USE SHR	UBS/GROL	NDCOVER								
SPRINKLER MANUFACTURER			RAIN BIRD LOCATION:			SAN DIEGO, CALIFORNIA									
PRECIPITATION RATE (INCHES	/HOUR):		1.85		HEAD SP	ACING:		VARIES							
IRRIGATION SYSTEM EFFICIENC	CY		0.81		HEAD GPN	<b>И:</b>		VARIES							
PLANT FACTOR:		0.30													
YEAR 2 REDUCTION AMOUNT:			-10% (	OF YEAR	1 (ESTAB	LISHMENT	) RUN TIM	E MINUTES						-	
	MONTH:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	
ETO PER MON	TH (INCHES):	2.10	2.40	3.40	4.60	5.10	5.30	5.70	5.60	4.30	3.60	2.40	2.00	46.50	
ETO PER WE	EK (INCHES):	0.485	0.554	0.785	1.062	1.178	1.224	1.316	1.293	0.993	0.831	0.554	0.462		
APPLIED ETO PER WE	EK (INCHES):	0.180	0.205	0.291	0.393	0.436	0.453	0.488	0.479	0.368	0.308	0.205	0.171		
MINUTES OF WATER	YEAR 1	6	7	9	13	14	15	16	16	12	10	7	6		
PER WEEK:	YEAR 2	5	6	8	11	13	13	14	14	11	9	6	5		
	YEAR 1	1	1	2	3	3	3	3	3	3	2	1	1		
DATS PER WEEK:	YEAR 2	1	1	2	3	3	3	3	3	3	2	1	1		
MINUTES OF WATER	YEAR 1	6	7	5	4	5	5	5	5	4	5	7	6		
PER DAY:	YEAR 2	5	6	4	4	4	4	5	5	4	4	6	5		
	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1		
CICLES PER DAT:	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1		
	YEAR 1	6	7	5	4	5	5	5	5	4	5	7	6		
MINUIES PER CICLE:	YEAR 2	5	6	4	4	4	4	5	5	4	4	6	5		
NOTES:															

PAVING.

THE CHARTS ARE INTENDED TO BE USED AS A GUIDELINE ONLY AND INDICATE APPROXIMATE RUN TIMES (IN MINUTES) FOR EACH ZONE BASED ON ESTIMATED WEEKLY WATER REQUIREMENTS FOR ESTABLISHED PLANT MATERIAL. THE FIGURES SHOWN IN THIS SCHEDULE ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM LOCAL CURRENT AVERAGES FOR EVAPOTRANSPIRATION, AND REFLECT MAXIMUM IRRIGATION REQUIREMENTS OF THE PLANT MATERIAL BASED ON PLANT TYPE AND SPACING. ACTUAL RUN TIMES MAY BE DIFFERENT DEPENDING ON A VARIETY OF FACTORS INCLUDING TOPOGRAPHY, SOIL STRUCTURE, SUN AND WIND EXPOSURE, WEATHER, ACTUAL PLANT WATER REQUIREMENTS, ETC.

![](_page_40_Figure_14.jpeg)

MAINLINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT-WELD FITTINGS. 18" COVER. 24" COVER UNDER VEHICULAR PAVING. SLEEVING: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT-WELD FITTINGS.

18" COVER. 24" COVER UNDER VEHICULAR

ACTUAL CONSTRUCTED CONDITIONS FOR THIS PROJECT. IN PREPARING THIS RECORD DRAWING, THE IRRIGATION DESIGNER HAS RELIED UPON AS-BUILT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR. CONTRACTOR PROVIDED INFORMATION HAS NOT BEEN VERIFIED BY THE IRRIGATION DESIGNER. ANYONE USING THIS DRAWING IS URGED TO PERFORM THEIR OWN FIELD VERIFICATION WORK TO DETERMINE THE STATE OF CURRENT EXISTING CONDITIONS.

NOTE: REFER TO SHEET L202 FOR IRRIGATION DETAILS AND NOTES.

> **DICKSON & ASSOCIATES. INC.** LANDSCAPEIRRIGATION (530) 547-5515 www.dicksoninc.net P.O. BOX 415 PALO CEDRO, CALIFORNIA 96073 © Dickson & Associates, Inc.

![](_page_40_Figure_21.jpeg)

# **IRRIGATION NOTES**

THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS WHERE POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR IS REQUIRED TO INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IN THE EVENT OF FIELD DIFFERENCES, THE CONTRACTOR IS REQUIRED TO PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE DISTRICT'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATION. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC., BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REQUIRED REVISIONS

THE CONTRACTOR SHALL EXERCISE CARE IN LOCATING PIPING AS TO NOT CONFLICT WITH OTHER UTILITIES. DO NOT INSTALL IRRIGATION PIPING PARALLEL TO AND DIRECTLY OVER OTHER UTILITIES.

THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

CONTRACTOR SHALL PROVIDE WATERING SCHEDULE TO THE DISTRICT IRRIGATION CONTROL SPECIALIST FOR PROGRAMMING OF CONTROL SYSTEM. THE GOAL IS TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE, AND WIND EXPOSURES.

AT THE END OF THE REQUIRED MAINTENANCE PERIOD OF THE CONTRACTOR, THE DISTRICT SHALL PROVIDE REGULAR MAINTENANCE OF THE IRRIGATION SYSTEM TO ENSURE THE EFFICIENT USE OF WATER. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO CHECKING, ADJUSTING, AND REPAIRING IRRIGATION EQUIPMENT AND CONTROL SYSTEM.

THIS IRRIGATION SYSTEM INTERFACES WITH AN EXISTING IRRIGATION SYSTEM WHICH IS TO REMAIN IN SERVICE. THE EXISTING UNDERGROUND IRRIGATION EQUIPMENT AND OTHER UTILITIES HAVE NOT BEEN FIELD VERIFIED UNDER THE CONSTRUCTION DOCUMENT PHASE OF WORK. THE CONTRACTOR IS TO FIELD VERIFY THE LOCATION OF EXISTING IRRIGATION MAINLINE PIPING, LATERAL LINE PIPING, LOW VOLTAGE AND HIGH VOLTAGE WIRE, COMMUNICATION CABLE, AND VALVES BEFORE CONSTRUCTION IS STARTED. DAMAGE TO THE EXISTING IRRIGATION SYSTEM AND OTHER VARIOUS UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE DISTRICT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CURRENT OPERATION OF THE EXISTING IRRIGATION SYSTEM WHICH SERVICES AREAS OUTSIDE OF THE CONTRACT WORK AREA. DO NOT SHUT DOWN GATE VALVES, SEVER MAIN OR LATERAL PIPING, AND/OR SEVER WIRE WHICH ORIGINATES IN OR TRAVELS THROUGH THIS CONTRACT WORK AREA UNLESS SPECIFICALLY DIRECTED TO DO SO BY THE CONTRACT DOCUMENTS OR BY WRITTEN APPROVAL FROM THE ARCHITECT. LANDSCAPE STRESS OUTSIDE OF THIS CONTRACT AREA WILL REQUIRE FULL REPLACEMENT OF THE LANDSCAPE DAMAGED UNDER THIS CONTRACT WORK AT NO ADDITIONAL EXPENSE TO THE DISTRICT

7. IRRIGATION CONTROLLER IS EXISTING.

IRRIGATION CONTROL WIRES SHALL BE COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. SIZE #14-1. COMMON GROUND WIRE SHALL HAVE WHITE INSULATING JACKET. CONTROL WIRE SHALL HAVE INSULATING JACKET OF COLOR OTHER THAN WHITE. SPLICE SHALL BE MADE WITH 3M-DBR/Y-6 SEAL PACKS.

9. SPLICING OF 24 VOLT WIRES IS NOT PERMITTED EXCEPT IN VALVE BOXES. SEAL WIRE SPLICES WITH 3M-DBR/Y-6 SPLICE SEALING DEVICES OF SIZE COMPATIBLE WITH WIRE SIZE. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. TAPING WIRES IS NOT REQUIRED INSIDE SLEEVES.

10. INSTALL VALVE BOXES 12" FROM WALK, CURB, HEADER BOARD, BUILDING, OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, ETC. AND EACH BOX SHALL BE 12" APART. SHORT SIDE OF RECTANGULAR VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.

11. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.

12. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE DRAWINGS

WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATION IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN TWENTY-FOUR (24) HOURS; AND WHERE THIS IS NOT POSSIBLE THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS

14. IRRIGATION CONTRACTOR TO NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF EXISTING BACKFLOW PREVENTION DEVICE. REPAIR OR REPLACE AS TEST RESULTS INDICATE.

- 15. PRESSURE TEST PROCEDURE. THE CONTRACTOR SHALL:
  - A. NOTIFY ARCHITECT AT LEAST THREE (3) DAY IN ADVANCE OF TESTING.
  - B. PERFORM TESTING AT HIS OWN EXPENSE
  - C. CENTER LOAD PIPING WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTING SHALL BE COVERED. D. APPLY THE FOLLOWING TESTS AFTER WELD PLASTIC PIPE JOINTS HAVE CURED AT LEAST 24
  - HOURS. 1. TEST LIVE (CONSTANT PRESSURE) AND QUICK COUPLER LINE HYDROSTATICALLY AT 125 PSI MINIMUM. LINES WILL BE APPROVED IF TEST PRESSURE IS MAINTAINED FOR SIX (6) HOURS. THE LINE WILL BE APPROVED OR NOT APPROVED AS SUCH RESULTS MAY INDICATE. THE CONTRACTOR SHALL MAKE TESTS AND REPAIRS AS NECESSARY UNTIL TEST CONDITIONS ARE MET
  - 2. TEST RCV CONTROLLED LATERAL LINES WITH WATER AT LINE PRESSURE AND VISUALLY INSPECT FOR LEAKS. RETEST AFTER CORRECTING DEFECTS

THE EXISTING MAINLINE SHOWN ON THE DRAWINGS IS DIAGRAMMATIC. CONTRACTOR TO VERIFY AND LOCATE EXISTING MAINLINE IN FIELD. ANY DEVIATION OF EXISTING MAINLINE LOCATION AS SHOWN ON THE DRAWINGS IS TO BE REPORTED TO ARCHITECT FOR REVIEW AND POSSIBLE REVISION.

17. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL T+2, CHRISTY'S ULTRA SEAL, OR APPROVED EQUAL

18. RECORD DRAWINGS. REFER TO SPECIFICATIONS FOR DETAILED INSTRUCTIONS.

19. FINE TUNE IRRIGATION SYSTEM TO PROVIDE COMPLETE AND UNIFORM COVERAGE OF THE LANDSCAPE WHILE AVOIDING RUNOFF OF WATER ONTO NON-IRRIGATED AREAS, PAVED AND OTHERWISE. THIS INCLUDES PROGRAMMING THE CONTROLLER RUN TIMES FOR OPTIMIZING SOIL INFILTRATION WITH OUT PUDDLING OR RUNOFF.

#### 20. WARRANTY

- A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FILL AND REPAIR ALL NECESSARY PLANTING DUE TO THE SETTLEMENT OF IRRIGATION TRENCHES FOR ONE YEAR FOLLOWING COMPLETION AND ACCEPTANCE OF THE JOB
- B. THE CONTRACTOR SHALL ALSO WARRANTY ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FURNISHED BY THEM TO BE FREE OF ALL DEFECTS OF WORKMANSHIP AND MATERIALS, AND SHALL AGREE TO REPLACE AT THEIR EXPENSE, AT ANY TIME WITHIN ONE YEAR AFTER INSTALLATION IS ACCEPTED, ANY AND ALL DEFECTIVE PARTS THAT MAY BE FOUND.

![](_page_41_Figure_28.jpeg)

![](_page_41_Figure_29.jpeg)

SECTION

( |-9

SECTION

- (9) 8" THICK CONCRETE BASE, INSTALL

6 1 1/4" WIRE CONDUIT AND LONG SWEEP

FOR MASTER VALVE AND FLOW SENSOR

CONTROLI

|-6|

N.T.S.

IN S.S. ENCLOSURE

- SCH. 40 (GREY) PVC ELECTRICAL TYPE. ALL CONDUITS SHALL SWEEP IN THE DIRECTION OF THEIR SOURCE.

![](_page_41_Figure_41.jpeg)

![](_page_42_Picture_0.jpeg)

	SHEET LIST							
		SHEET	DESCRIPTION					
1	$\boxtimes$	S001	TITLE SHEET					
2	Ø	S100	GENERAL STRUCTURAL NOTES					
3	$\boxtimes$	S102	TESTING AND INSPECTION FORM					
4		S200-L	L-STRUCTURE: SECTION & FRAMING PLAN					
5	X	S200-T	T-STRUCTURE: SECTION & FRAMING PLAN					
6	X	S300	FOUNDATION DETAILS					
7	X	S400	DETAILS					
8	$\boxtimes$	S500	DETAILS					
9		S600	MISCELLANEOUS DETAILS					
10		S601	FENCE DETAILS					
11	$\boxtimes$	S602	PANEL CUT SHEETS					

#### **SCOPE OF WORK**

THE SCOPE OF WORK INCLUDES THE INSTALLATION OF NEW SOLAR PHOTOVOLTAIC CARPORTS, (INCLUDING STRUCTURAL STEEL FRAMING, CONCRETE FOUNDATIONS, AND COLD-FORMED PURLINS), AS WELL AS A FENCED INVERTER EQUIPMENT PAD (INCLUDING INVERTER PAD, FENCING, BOLLARDS, AND EQUIPMENT MOUNTING DETAILS).

#### **PROJECT DIRECTORY**

STRUCTURAL ENGINEER SHANE NOEL, SE #4800

PROJECT MANAGER SHAUN WALTERS, SE #6484

KPFF CONSULTING ENGINEERS 3131 CAMINO DEL RIO NORTH, SUITE 1080 SAN DIEGO, CA 92108 PHONE: (619) 521-8500

<u>VENDOR</u> SUNPOWER 1414 HARBOUR WAY SOUTH RICHMOND, CA 94804 USA PHONE: (510) 540-0550

# SUNPOWER **DSA-PC PV STRUCTURE SYSTEM**

## **BUILDING DATA**

- 1. CLASSIFICATION OF CONSTRUCTION IS TYPE IIB.
- 2. OCCUPANCY CLASSIFICATION:

Α.	U: May	_	3 000	FT
В.	A-2	_	5,000	

- MAX. AREA =  $9,500 \text{ FT}^2$ C. E: MAX. AREA =  $14,500 \text{ FT}^2$
- D. S-2 MIN. AREA =  $3000 \text{ FT}^2$ MAX. AREA = UNLIMITED
- 3. RISK CATEGORY IS II
- 4. THE STRUCTURE IS A SINGLE-STORY OPEN CARPORT STRUCTURE.
- 5. FOR GENERAL STRUCTURAL NOTES SEE SHEETS S100.

## CODES AND STANDARDS

ALL WORK SHALL CONFORM TO:

- 1. 2016 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
- 2. 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE AND 2016 CALIFORNIA AMENDMENTS)
- 3. 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2014 NATIONAL ELECTRIC CODE AND 2016 CALIFORNIA AMENDMENTS)
- 4. 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
- (2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS) 5. 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS) 6. 2016 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
- 7. 2016 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.
- (2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
- 8. 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R.
- 9. 2016 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.

#### LEGAL INFORMATION

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- KPFF CONSULTING ENGINEERS SHALL ALWAYS ACT AS THE ENGINEER-OF-RECORD FOR ANY PROJECT USING THIS DSA-PC DOCUMENT.
- PLEASE CONTACT SUNPOWER FOR PRICING AND FABRICATION OF THE DESIGNS CONTAINED IN THIS MAXIMUM SOLAR PANEL SIZE: DSA-PC DOCUMENT.
- THE USE OF THIS DSA-PC DOCUMENT SHALL BE RESTRICTED TO THE PROJECT FOR WHICH IT MINIMUM UPWARD WIND LOAD [ASD]: 35.0 PSF HAS BEEN SPECIFIED. REUSE, REPRODUCTION, OR PUBLICATION, IN WHOLE OR IN PART, IS USE AND OCCUPANCY NOTE: PROHIBITED WITHOUT THE WRITTEN CONSENT OF SUNPOWER AND KPFF CONSULTING ENGINEERS.

..(2.5 PANEL + 0.25 MISC) PSF MAX. ..10 PSF NON-CONCURRENT W/ PV PANEL DEAD LOAD ..300 LBS CONCURRENT W/ PV PANEL DEAD ...V = 110 MPH= CATEGORY C ...G = 0.85.... = A – E .... = A - E $..\Omega_{0} = 1.25$ ...Cd = 1.25 $...|_{F} = 1.00$  $....\rho = 1.3$ 

CODE: 2016 CALIFORNIA BUILDING CODE, REFERRED TO AS "THE CODE" GOVERNING JURISDICTION: DIVISION OF THE STATE ARCHITECT (DSA) CONSTRUCTION TYPE: IIB  $\underline{OCCUPANCY \ CLASSIFICATION} \square A-2 \square E \qquad \boxed{S-2} \square U$ RISK CATEGORY: ROOF DEAD LOADS: PV PANEL + MISC ROOF LIVE LOADS: DISTRIBUTED... POINT LOAD .. WIND ANALYSIS: DIRECTIONAL PROCEDURE PER ASCE 7, CHAPTER 27 BASIC WIND SPEED. WIND EXPOSURE .. GUST EFFECT FACTOR .. INTERNAL PRESSURE COEFFICIENT......GC<sub>ni</sub> =  $\pm 0$ SEISMIC CRITERIA: SITE CLASSIFICATION.... SEISMIC DESIGN CATEGORY ..... SEISMIC ANALYSIS: ASCE 7-10 CHAPTER 12 "BUILDING STRUCTURES" STRUCTURE TYPE: STEEL ORDINARY CANTILEVER COLUMN SYSTEM (OCCS) RESPONSE MODIFICATION COEFFICIENT......R = 1.25SYSTEM OVERSTRENGTH FACTOR..... DEFLECTION AMPLIFICATION FACTOR...... IMPORTANCE FACTOR REDUNDANCY FACTOR. SEISMIC SEPARATION OF ADJACENT CANOPIES = 3.5"

S<sub>S</sub> ≤ 2.213g

GROUND MOTION HAZARD ANALYSIS NOTE: FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY E, A GROUND MOTION HAZARD ANALYSIS SHALL BE PERFORMED.

GEOHAZARD NOTE: GEOHAZARD REPORTS ARE NOT REQUIRED FOR CANTILEVERED COLUMN OPEN STRUCTURES PROVIDED THEY ARE CONSTRUCTED OF METAL, DO NOT EXCEED 4000 SF IN PLAN AREA AND ARE NOT LOCATED WITHIN A STATE OR LOCAL GEOHAZARD ZONE. STRUCTURES MAY BE SPLIT INTO MULTIPLE SEISMICALLY SEPARATED STRUCTURES TO STAY BELOW THE 4000 SF TRIGGER

GENERAL WEATHER PROTECTION: STRUCTURAL STEEL: HOT DIP GALVANIZED.

EXPOSED STEEL FASTENERS: ALL EXPOSED STEEL FASTENERS, INCLUDING CAST-IN-PLACE ANCHOR BOLTS/RODS SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT-DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329), OR PROTECTED WITH PROTECTED WITH CORROSION-PREVENTATIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT

COLD-FORMED STEEL 55% ALUMINUM-ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE WITH AISI S200 TABLE A4-1, CP 90 COATING DESIGNATION

82" LONG X 42" WIDE MINIMUM DOWNWARD WIND LOAD [ASD]: 30.8 PSF

USE AN OCCUPANCY CLASSIFICATION PER CBC CHAPTER 3, OCCUPANT LOAD FACTOR (OLF) PER CBC TABLE 1004.1.2 AND DETERMINATION OF RISK CATEGORY PER CBC TABLE 1604A.5. TO BE COMPLETED BY DESIGN PROFESSIONAL AT TIME OF OTC OR PROJECT SUBMITTAL. REGARDLESS OF SIZE, IF A STRUCTURE THAT WOULD OTHERWISE QUALIFY AS RISK CATEGORY II PROVIDES

# DESIGN PARAMETERS CHECKLIST

SEISMIC BASE SHEAR

BASE SHEAR .. ....C<sub>s</sub> ≤ 1.18\*W

ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT ...

SHELTER FOR EMERGENCY VEHICLES OR EQUIPMENT; OR PROVIDES REQUIRED ACCESS TO, REQUIRED EGRESS FROM OR SHARES LIFE SAFETY COMPONENTS WITH A RISK CATEGORY III OR IV BUILDING. THE MORE RESTRICTIVE RISK CATEGORY MUST BE APPLIED. SEE CBC 1604A.5.1

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE

PROJECT. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL

ORDINANCES.

![](_page_42_Figure_62.jpeg)

![](_page_43_Figure_2.jpeg)

![](_page_43_Figure_3.jpeg)

#### GENERAL

- 1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DO NOT SCALE THE DRAWINGS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. IN CASE OF CONFLICT, MORE COSTLY REQUIREMENTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.
- 2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY DEVIATION FROM THE APPROVED SET OF CONTRACT DOCUMENTS SHALL ONLY BE MADE AFTER WRITTEN APPROVAL BY THE ENGINEER OF RECORD ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. UNLESS NOTED OTHERWISE, DETAILS IN STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.
- 4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS
- 5. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- 6. ALL REFERENCED STANDARDS (i.e. ACI. AISC. ASTM. ETC.) SHOWN IN THESE DOCUMENTS SHALL BE PER THE LATEST ADOPTED EDITION AS LISTED IN CHAPTER 35A OF THE CODE.
- 7. CONTRACTOR TO PROVIDE A LIST OF ALL PROPOSED SUBSTITUTIONS, WITH APPLICABLE MANUFACTURER'S ICC/IAPMO REPORTS, TO ARCHITECT, ENGINEER OF RECORD AND DSA FOR REVIEW AND APPROVAL BEFORE FABRICATION.

## STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION PER THE REQUIREMENTS OF THE CODE IS REQUIRED. THE STRUCTURAL ENGINEER WILL VISIT THE PROJECT OR REVIEW PHOTO DOCUMENTATION OF WORK COMPLETED AT THE FOLLOWING STAGES OF CONSTRUCTION:

ITEM	STAGE
STRUCTURAL STEEL / COLD-FORMED STEEL	AFTER ERECTION

- a. STRUCTURAL UBSERVATION DUES NOT INCLUDE OR WAIVE THE INSPECTIONS REQUIRED BY THE CODE. b. ALL OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, AND CONTRACTOR. THE STRUCTURAL OBSERVER SHALL SUBMIT A FINAL WRITTEN STATEMENT TO THE GOVERNING JURISDICTION THAT SITE VISITS HAVE BEEN MADE AND IDENTIFYING
- ANY REPORTED DEFICIENCIES THAT HAVE NOT BEEN RESOLVED. THE STRUCTURE WILL NOT BE IN COMPLIANCE UNTIL THE DESIGNER HAS NOTIFIED DSA THAT ALL DEFICIENCIES ARE RESOLVED. c. OBSERVATION MAY BE PERFORMED REMOTELY BY USE OF PHOTOS OR VIDEO.

#### **SHOP DRAWINGS / SUBMITTALS**

- 1. THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY THE DESIGN CONCEPT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK THEIR OWN SHOP DRAWINGS.
- 2. THE STRUCTURAL SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S CHECKING.
- 3. THE FOLLOWING SHOP DRAWINGS ARE NOT REQUIRED FOR SUBMITTAL FOR STRUCTURAL REVIEW. a. SHORING AND BRACING
  - b. REBAR AT SLAB-ON-GRADE AND SPREAD FOOTINGS
  - c. FORMWORK d. STRUCTURAL STEEL MILL REPORTS e. FENCING
- 4. THE FOLLOWING SHOP DRAWINGS ARE REQUIRED FOR SUBMITTAL FOR STRUCTURAL REVIEW.
  - a. CONCRETE MIX DESIGNS, INCLUDING STRENGTH TEST RESULTS b. REINFORCING STEEL (EXCEPT WHERE NOTED BY NOTE 3 ABOVE)
  - c. STRUCTURAL STEEL
  - d. LIGHT GAUGE STEEL PURLINS AND BLOCKING e. ANCHOR ROD CUT SHEET WITH DIAMETER, LENGTH, AND MATERIAL STRENGTH f. WELDING PROCEDURE SPECIFICATIONS
- 5. ANY SUBMITTAL OF A DETAIL SHEET WITH ADDED INFORMATION NOT SHOWN ON PLANS SHALL BE ACCOMPANIED BY LOCATION PLAN IDENTIFYING THE MEMBERS INVOLVED AND CLOUDING AROUND ADDED INFORMATION.
- 6. THE SHOP DRAWINGS SHALL REFERENCE THE DATA OF THE DESIGN USED TO PRODUCE THE SUBMITTAL.
- CONTRACTOR/SUBCONTRACTOR TO PROVIDE DIGITAL SET OF SHOP DRAWINGS FOR REVIEW BY SUNPOWER AND KPFF CONSULTING ENGINEERS. DIGITAL SET WILL BE RETURNED TO THE CONTRACTOR WITH REDLINES FOR REPRODUCTION AND DISTRIBUTION.

#### FOUNDATION

- 1. FOUNDATION DESIGN BASED ON SITE SPECIFIC SOILS REPORT OR TABLE 1806A.2 OF THE CBC.
- 2. SLABS ON GRADE SHALL BEAR ON APPROVED SUBGRADE PER THE RECOMMENDATIONS OF THE SOILS REPORT OR SPECIAL INSPECTOR.
- 3. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE, IF REQUIRED.
- 4. FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS WILL BE ALTERED.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT OR BACKFILLED WITH 2-SACK SAND CEMENT SLURRY AND APPROVED BY THE SPECIAL INSPECTOR. SOILS REPORT SHALL TAKE PRECEDENT WHEN RECOMMENDATION GIVEN.
- 6. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 7. REMOVE CONTAMINATED SOILS (WHERE OCCUR) PER THE SOILS REPORT.
- 8. SOIL REMOVAL AND RECOMPACTION SHALL BE PER THE SOILS REPORT AND APPROVED CONTRACT DOCUMENTS. 9. EACH DRILLED PIER MUST BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACING CONCRETE
- AND REINFORCING STEEL. ADJUST SHAFT LENGTHS UNDER DIRECTION OF THE SOILS ENGINEER AND THE OWNER'S REPRESENTATIVE BASED ON SOIL CONDITIONS AT TIME OF DRILLING. 10. PRECAUTIONS SHOULD BE TAKEN DURING THE INSTALLATION OF PIERS TO MINIMIZE THE POSSIBILITY
- OF CAVING. CLOSELY SPACED PIERS SHOULD BE DRILLED AND FILLED ALTERNATELY, ALLOWING THE CONCRETE TO SET AT LEAST EIGHT HOURS BEFORE DRILLING AN ADJACENT HOLE. PIER EXCAVATIONS SHOULD BE FILLED WITH CONCRETE AS SOON AFTER DRILLING AND INSPECTION AS POSSIBLE. 11. KEEP EXCAVATIONS FREE OF WATER BEFORE PLACING CONCRETE UNLESS OTHERWISE APPROVED BY
- THE SOILS ENGINEER. IF UNABLE TO SEAL OFF WATER FLOW, PER THE APPROVAL OF THE SOILS ENGINEER, ALLOW WATER LEVEL TO ATTAIN ITS NORMAL LEVEL AND PLACE CONCRETE BY THE TREMIE METHOD OR OTHER APPROVED METHOD.
- 12. PLACE REINFORCING STEEL IN ONE CONTINUOUS UNIT AND ACCURATELY HOLD SECURELY IN FINAL POSITION USING CHAIRS OR SPACERS DURING CONCRETE PLACEMENT. 13. CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF ACI 336.3R, LATEST EDITION.

# STATEMENT OF STRUCTURAL INSPECTION AND TESTING

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER CHAPTER 17A OF THE CODE. U.N.O. 1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH THE CODE AND WITH THE PROVISIONS OF ACI 318 AND ACI 301 SPECIAL INSPECTIONS AND TESTING SHALL BE PROVIDED BY AN INSPECTION AGENCY, EMPLOYED BY THE OWNER, AND QUALIFIED BY THE BUILDING OFFICIAL TO INSPECT THE PARTICULAR TYPE OF

- THE TYPES OF WORK LISTED BELOW:
- □ STEEL CONSTRUCTION □ CONCRETE CONSTRUCTION
- □ SOILS □ CAST IN-PLACE DEEP FOUNDATIONS □ POST-INSTALLED ANCHORS
- GOVERNING JURISDICTION IS SUBJECT TO REMOVAL OR EXPOSURE.
- THAT ALL WORK IS INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.
- WORK REQUIRED TO HAVE SPECIAL INSPECTION. EXCEPTIONS
- 3. WHEN WAIVED BY THE GOVERNING JURISDICTION
- TIGHTENING MEET THE STANDARDS REQUIREMENTS. f. THE SPECIAL INSPECTOR FOR HIGH STRENGTH BOLTED CONNECTIONS SHALL:
- PLANS OR SPECIFICATIONS HAVE BEEN DRAWN TOGETHER.
- ADHESIVE, AND THE PROPER MATERIAL FOR ASSEMBLY. ENGINEER.
- i. THE SPECIAL INSPECTOR SHALL ENSURE THAT ALL DEFICIENCIES NOTED BY THE STRUCTURAL ENGINEER IN SPECIAL INSPECTOR REPORT.
- JURISDICTION, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND, EQUIPMENTS.
- TO PERIODICALLY WITNESS THE INSTALLATION OF THE ITEMS I. A LICENSED WEIGHMASTER SHALL POSITIVELY IDENTIFY QUANTITY OF MATERIALS AND CERTIFY EACH LOAD
- BY A BATCH TICKET
- MAINTAIN A COPY OF THE DAILY RECORD AS REQUIRED BY THE ENFORCEMENT AGENCY.

# POST-INSTALLED CONCRETE ANCHORS

- WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD AND DSA.
- 2. SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORS, U.N.O.
- - SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS
  - A.1. HILTI KWIK BOLT TZ (ICC ESR-1917) A.2. SIMPSON STRONG-BOLT-2 (ICC ESR-3037)
  - A.3. POWERS POWER-STUD +SD2 (ICC ESR-2502) A.4. ALTERNATE APPROVED BY KPFF AND DSA
- BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S
- RECOMMENDATIONS B.1. HILTI HIT-HY 200 (ICC ESR-3187) B.2. SIMPSON SET-XP (ICC ESR-2508)
- B.3. POWERS PE1000+ (ICC ESR-2583) B.4. ALTERNATE APPROVED BY KPFF AND DSA
- RECOMMENDATIONS.
- C.1. HILTI KWIK HUS-EZ (ICC ESR-3027) C.2. SIMPSON TITEN-HD (ICC ESR-2713)
- C.3. POWERS WEDGE-BOLT+ (ICC ESR-2526) C.3. ALTERNATE APPROVED BY KPFF AND DSA
- OR HOT DIP GALVANIZED.

# POST-INSTALLED MASONRY ANCHORS

- WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- 2. SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORS, U.N.O
- SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- A.1. HILTI KWIK BOLT 3 (ICC ESR-1385) A.2. SIMPSON STRONG-BOLT-2 (IAPMO ER-240)
- A.3. DEWALT/POWERS POWER-STUD+ SD1 (ICC ESR-2966) A.4. ALTERNATE APPROVED BY KPFF
- STEEL OR HOT DIP GALVANIZED.

# GENERAL STRUCTURAL NOTES (G.S.N.)

CONSTRUCTION. TESTS AND INSPECTIONS, AS REQUIRED BY SECTIONS 110A, 1704A, 1707A AND 1708A OF THE 2016 CBC W/ CA AMENDMENTS, SHALL BE PERFORMED DURING CONSTRUCTION ON

	<b>INSPEC</b>	TIO	<u>NS</u>	
SECTION	1705A.2	&	TABLE	1705A.
SECTION	1705A.3	&	TABLE	1705A.
SECTION	1705A.6	&	TABLE	1705A.
SECTION	1705A.8	&	TABLE	1705A.8
MANUFAC	TURFR'S	ICO	C RFPO	RT

a. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE GOVERNING JURISDICTION. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF AN INSPECTOR FROM THE

b. FOR CONTINUOUS INSPECTION, WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED IN ACCORDANCE WITH THE PROVISIONS OF THE CODE. IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE

c. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION IN THE CATEGORY OF

SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD OR PROJECT INSPECTOR SMOKE CONTROL SYSTEM, BY THE MECHANICAL ENGINEER OF RECORD

d. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST TWO WORKING DAYS PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL e. PROVIDE SPECIAL INSPECTION FOR CONNECTIONS BOLTED WITH A325 AND A490 BOLTS. INSPECTIONS SHALL BE DONE PER APPROVED NATIONALLY RECOGNIZED STANDARDS AND THE REQUIREMENTS OF THE CODE AND THE GOVERNING JURISDICTION. WHILE THE WORK IS IN PROGRESS, THE SPECIAL INSPECTOR SHALL DETERMINE THE BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS; AND INSTALLATION AND

OBSERVE THE CALIBRATION PROCEDURES WHEN SUCH PROCEDURES ARE REQUIRED BY THE

2. MONITOR THE INSTALLATION OF BOLTS TO DETERMINE THAT ALL PLIES OF CONNECTED MATERIALS 3. MONITOR THAT THE SELECTED PROCEDURE IS PROPERLY USED TO TIGHTEN ALL BOLTS

g. THE SPECIAL INSPECTOR FOR ADHESIVE ANCHORS SHALL VERIFY THE DRILLING OF ANY HOLES, THE CLEANLINESS OF THE HOLE, THE MOISTURE IN THE HOLE, MIXING THE ADHESIVE, THE BRAND OF

h. THE SPECIAL INSPECTOR SHALL PROVIDE WEEKLY REPORTS AND A FINAL REPORT TO THE STRUCTURAL

STRUCTURAL OBSERVATION REPORTS ARE CORRECTED. SUCH COMPLIANCE SHALL BE REFERENCED IN

THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE GOVERNING

k. PERIODIC INSPECTION SHALL OCCUR FREQUENTLY ENOUGH TO INSPECT ALL OF THE INSTALLED ITEMS AND

m. BATCH TICKETS, INCLUDING MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD, SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY THE TRUCK DRIVER WITH LOAD IDENTIFICATION THEREON. THE LOAD SHALL NOT BE PLACED WITH OUT A BATCH TICKED IDENTIFYING THE MIX. THE INSPECTOR OF RECORD SHALL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, ITS LOAD, AND TIME OF RECEIPT AT THE JOBSITE, AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND SHALL

1. POST-INSTALLED ANCHORAGE SHALL BE AS DETAILED ON THE PLANS. SUBSTITUTION OF PRODUCTS SPECIFICALLY DETAILED IN THESE DRAWINGS SHALL NOT BE ALLOWED WITHOUT

WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED. THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST: A. EXPANSION ANCHORS: UNLESS NOTED OTHERWISE, EXPANSION ANCHORS IN CONCRETE

B. ADHESVE ANCHORS: UNLESS NOTED OTHERWISE, EPOXY ANCHORS IN CONCRETE SHALL

C. SCREW ANCHORS: UNLESS NOTED OTHERWISE, SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S

4. REBAR MUST BE LOCATED AND AVOIDED BEFORE DRILLING INTO OR FASTENING TO SLABS, EXCEPT WHEN ANCHORS ARE USED WITH A MINIMUM EMBEDMENT OF  $\frac{3}{4}$ " or less. ALL CONCRETE ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL

POST-INSTALLED ANCHORAGE SHALL BE AS DETAILED ON THE PLANS. SUBSTITUTION OF PRODUCTS SPECIFICALLY DETAILED IN THESE DRAWINGS SHALL NOT BE ALLOWED WITHOUT

WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED, THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST: A. EXPANSION ANCHORS: UNLESS NOTED OTHERWISE, EXPANSION ANCHORS IN MASONRY

ALL MASONRY ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS

CONCRETE

BY THE STRUCTURAL ENGINEER. a. MIX DESIGN METHODS (TEST HISTORY OR TRIAL BATCH METHOD) PER THE CODE SHALL BE USED TO PROPORTION CONCRETE. SUBMIT MIX DESIGN METHOD DATA. 3. SCHEDULE OF STRUCTURAL CONCRETE PERFORMANCE REQUIREMENTS:

		EXPOSURE CLASS: F0, S0, P0, C0		EXPOSUF >F0, S1 OR				
	MEMBER	F'c 28 DAY (PSI)	MAX W/C	F'c 28 DAY (PSI)	MAX W/C	MAX DENSITY (PCF)		
	ALL FOOTINGS & FOUNDATIONS	3500*	0.50	4500	0.45	150		
	SLAB-ON-GRADE	3500*	_	4500	0.45	150		
	EQUIPMENT PADS, AND OTHER MISC. CONCRETE	3500*	0.60	4500	0.45	150		
۲ ۲	FOUNDATION DESIGN IS BASED	ON CONCRE	L TE STRENG	TH, F'c = 3,	000 PSI @ 2	28–DAYS		
4.	PORTLAND CEMENT SHALL CONF	FORM TO AS	TM C-150,	TYPE   OR	II FOR EXPOS	SURE CLASS		
5.	PORTLAND CEMENT SHALL CONF	S1) FORM TO AS	TM C-150,	, TYPE V FOF	R EXPOSURE	CLASS S2		
6.	CONCRETE EXPOSED TO THAW / PER TABLE 19.3.3.1 OF THE A	AND FREEZE	CYCLES (	F1, F2, F3)	SHALL BE AIR	ENTRAINED		
7.	7. IF TESTING INFORMATION IS NOT PROVIDED IN THE GEOTECHNICAL REPORT OR IF NO REPORT IS AVAILABLE FOR THE SITE CONCRETE SHALL USE TYPE V CEMENT AND HAVE A MINIMUM 28-DAY STRENGTH OF 4500							
8.	AGGREGATE FOR HARDROCK CO OF ASTM C33 AND PROJECT SF PERMISSION OF THE STRUCTUR/	NCRETE SHA PECIFICATION AL ENGINEER	LL CONFOR S. EXCEPTI	RM TO ALL R ONS MAY BE	EQUIREMENTS USED ONLY	AND TESTS WITH		
9.	AGGREGATE FOR LIGHTWEIGHT C TO ALL REQUIREMENTS AND TES EXCEPTIONS MAY BE USED ONL	CONCRETE SH STS OF ASTN Y WITH PER	HALL BE TH M C330 AN MISSION OI	HE EXPANDED ID PROJECT F THE STRUC	SHALE TYPE SPECIFICATION TURAL ENGINE	CONFORMING S. EER.		
10.	CONCRETE SHRINKAGE FOR MIX C157.	DESIGNS S	HALL BE D	ETERMINED A	T 28 DAYS P	ER ASTM		
11. 12.	CONCRETE MIXING OPERATION, I PLACEMENT OF CONCRETE SHAL	ETC. SHALL	CONFORM	TO ASTM C94	4. JECT SPECIFIC	ATIONS.		
17	CLEAN AND ROUGHEN TO 1/4" AN CONCRETE IS TO BE PLACED.	MPLITUDE AL		CONCRETE "	AGAINST WHI	CH NEW		
13.	SECURED IN POSITION PRIOR TO	O PLACING (	ND OTHER CONCRETE.	CONCRETE II	NOT DE END	. BE WELL		
14.	PIPES OR CONDUITS LARGER TH STRUCTURAL CONCRETE EXCEPT PIPES OR CONDUITS SHALL NO PIPES OR CONDUITS SUCH THA ACHIEVED.	HAN 2½ NO WHERE SPI T DISPLACE T PROPER C	MINAL DIAN ECIFICALLY OR INTERR CONCRETE	IETER SHALL APPROVED E UPT REINFOR PLACEMENT A	NOT BE EMB Y STRUCTURA CING BARS. S ND CONSOLID	LDED IN L ENGINEER. PACE THE ATION IS		
15.	FOAM USED AS STAY-IN-PLACE 5.8 PSI AT 1% DEFORMATION A	FORMS SHAND A MINIM	ALL HAVE / UM MODULI	A MINIMUM C US OF 580 F	OMPRESSIVE S PSI PER ASTM	STRENGTH OF D6817.		
16.	PROVIDE MIN ¼" CHAMFER ON THE OWNER OR SUNPOWER.	ALL EXPOSE	D CORNER	S UNLESS IN	DICATED OTHE	RWISE BY		
17.	THE STEEL STRUCTURES MAY B CAST OR AFTER CONCRETE REA WHICHEVER COMES FIRST. BREA ERECT.	BE INSTALLED ACHES A MIN AK TESTS NO	) 48 Hour IIMUM Com )t require	IS AFTER THE PRESSIVE STI ID IF WAITING	E FOUNDATION RENGTH OF 24 UNTIL 48 HG	S HAVE BEEN 200-PSI, 2URS TO		
R	EINFORCING STEEL							
1.	REINFORCING BARS SHALL CONI	FORM TO TH	e require	MENTS OF C	HAPTER 19A	OF THE		
0	CODE, ASTM A615, GRADE 60 U	U.N.O.						
2.	ALL REINFORCING BAR BENDS	SHALL BE M	ADE COLD.	MATERIALS	LIKELY IO IMF	AIR BOND.		
3.	REINFORCING BAR SPLICES SHA 318, AND IN MASONRY, CONFOR SHALL NOT BE LAP SPLICED. L DOWEL ALL VERTICAL REBAR TO APPROVAL BY STRUCTURAL ENG AFTER ENGINEER'S REVIEW.	LL, IN CONC RM TO THE AP ALL HOR FOUNDATIO GINEER. PROV	CRETE, CON PROVISIONS IZONTAL B/ NS. ALL SI VIDE REQUI	IFORM TO TH S OF ACI 530 ARS AT CORN PLICE LOCATIO RED SHOP D	E PROVISIONS D, #14 AND # IERS AND INT DNS ARE SUB RAWINGS AND	OF ACI ≹18 BARS ERSECTIONS. JECT TO FABRICATE		
4.	ALL BARS SHALL BE MARKED S IN—PLACE INSPECTION IS MADE.	so their ide	ENTIFICATIO	N CAN BE M.	ADE WHEN TH	E FINAL		
5.	WELDING (WHERE APPROVED BY a. ALL WELDS SHALL BE IN D1.4. SEE <u>SPECIAL INSP</u> b. ALL REINFORCING BARS c. ALL WELDS SHALL BE D FLECTRODES UN O	Y THE STRUC N CONFORMI P <u>ECTION</u> SEC TO BE WELL ONE BY AWS	CTURAL ENO TY WITH TH TION FOR Y DED SHALL S CERTIFIEL	GINEER): IE PROJECT S WELDING INSF BE ASTM A7 D WELDERS U	SPECIFICATION PECTION REQU 206, U.N.O. JSING THE FO	S AND AWS IREMENTS. LLOWING		
		ASTM A706	E80X	XX				
7.	BARS IN SLABS SHALL BE SEC	URELY SUPP	ORTED ON	WELL-CURE	) CONCRETE	BLOCKS OR		
Q	APPROVED METAL CHAIRS, PRIO				315			
о. 9.	COMPLETE AND DETAILED REINF	ORCING PLA	CEMENT DF	RAWINGS SHAI	L BE PREPA	RED AND		
- •	SUBMITTED TO THE ARCHITECT FABRICATION IN ACCORDANCE W	FOR REVIEW	BY THE S	TRUCTURAL E	E CODES. TH	DR TO ESE		
	APPROVED DRAWINGS SHALL BE CONCRETE.	AVAILABLE	UN THE J	JR ZIF AKIC	K IU PLACIN	J UF		
10.	. REBAR SPACINGS GIVEN ARE MA UNLESS A SPECIFIED LENGTH IS "CONT." OR NOT	AXIMUM ON 5 GIVEN, ALL	CENTER WH _ REBAR IS	HETHER STATI	ED AS "O.C." S WHETHER S	OR NOT. TATED AS		
11.	MECHANICAL BAR SPLICES (COU THEY MAY ALSO BE USED AT T WHERE REINFORCING IS SHOWN NOTED OTHERWISE, ALL MECHAN 318 AND BE ONE OF THOSE LI RECOMMENDATIONS:	JPLERS) SHA THE CONTRAC CONTINUOU NICAL BAR S ISTED BELOW	ILL BE USE CTOR'S OPT S THROUG PLICES SH AND INST	ED WHERE SF FION IN LIEU H CONSTRUC ALL BE "TYPI FALLED PER T	PECIFIED ON F OF LAP SPLIG TION JOINTS. E 2" AS DEFII THE MANUFAC	<sup>2</sup> LANS. CES AND UNLESS NED BY ACI TURER'S		
10	a. HRC 500 SERIES MECHA b. LENTON A2 SERIES MECH	NICAL COUP HANICAL SPL	LERS (ICC ICES (IAPN	ESR-2764) 10 ER-0129)				
ıΖ.	OF REINFORCING STEEL. INSPEC	CTION SHALL	BE SCHEE	DULED SO TH	AT PLACEMEN	T OF		

- REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OF REINFORCING STEEL. 13. CONCRETE PROTECTION FOR REINFORCEMENT:
- CAST-IN-PLACE CONCRETE. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

		MINIMUM COVER	TOLERANCES + OR -
A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	<sup>3</sup> ⁄8"
B.	CONCRETE EXPOSED TO EARTH OR WEATHER:		
	NO. 6 THROUGH NO. 18 BAR	2"	<sup>3</sup> ⁄8"
	NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	11/2"	3⁄8"
C.	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:		
	SLABS, WALLS, JOISTS:		
	NO. 11 BAR AND SMALLER	<sup>3</sup> ⁄4"	<i>1</i> /4"

#### STRUCTURAL STEEI

AS NOTED. 5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, MASONRY, OR SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED. 6. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED OR PAINTED AFTER FABRICATION, U.N.O. GALVANIZING AT FIELD WELDS SHALL BE REPAIRED WITH A GALVANIZING REPAIR PAINT ACCORDING TO ASTM A780. 7. ALL GALVANIZED STEEL SHALL CONFORM TO THE MINIMUMS ESTABLISHED BY ASTM A123 OR A153. CLASS D.

8. TIGHTEN HIGH STRENGTH BOLTS TO "SNUG-TIGHT" CONDITION PER AISC SPECIFICATION FOR STRUCTURAL JOINTS, U.N.O. 9. PROVIDE BEVELED WASHERS PER ANSI B18.23.1 AS REQUIRED ON SLOPED SURFACES 10. WELDING:

STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC 360 AND AISC 303. 2. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED 2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (U.N.O.):

DESCRIPTION	ASTM DESIGNATION
. BASE PLATES AND LATERAL RESISTING CONNECTION PLATES	A572, GRADE 50
ALL ANGLES, CHANNELS, AND MISC.	A36
ALL WF BEAMS AND WT SECTIONS	A992, GRADE 50
ALL WF COLUMNS	A992, GRADE 50
STRUCTURAL PIPE SECTIONS	A53, GRADE B
HSS SECTIONS	A500 GRADE B
HIGH STRENGTH BOLTS	A325
ACHINE BOLTS AND THREADED RODS	A307
ANCHOR BOLTS	
STAINLESS STEEL BOLTS	304SS, ASTM 593C

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

4. HOLES IN STEEL SHALL BE  $\frac{1}{16}$ " LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED. EXCEPT AS NOTED. COLUMN BASE PLATE HOLES MAY BE OVERSIZED PER AISC MANUAL OR

a. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND AWS D1.1, SEE <u>SPECIAL INSPECTION</u> SECTION FOR WELDING INSPECTION REQUIREMENTS. b. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (U.N.O.).

c. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360.

d. WELDS TERMINATING AT ENDS OR SIDES, WHERE PRACTICAL, SHALL BE RETURNED CONTINUOUSLY AROUND CORNERS A DISTANCE 2 TIMES THE NOMINAL SIZE OF THE WELD PER AISC 360 SECTION J2.2B, U.N.O.

e. ALL FULL-PENETRATION FIELD WELDS SHALL BE ULTRASONICALLY TESTED. f. ALL TWO-SIDED FILLET WELDS SHOWN SHALL BE WELDED WITH THE SAME (GIVEN) WELD SIZE ON BOTH SIDES.

q. ALL UNSIZED GROOVE OR BUTT WELDS SHOWN SHALL BE COMPLETE PENETRATION. ALL PROVISIONS OF AWS SHALL BE OBSERVED INCLUDING REQUIREMENTS FOR BACK-UP PLATES AND WELD TRANSITIONS WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN.

h. A WRITTEN WELDING PROCEDURE SPECIFICATION SHALL BE SUBMITTED TO THE TESTING LABORATORY. IT SHALL INCLUDE ALL WELDING PROCEDURES TO BE USED AS DESCRIBED IN AWS. CHAPTER 4.

i. WHERE FIELD WELDING IS INDICATED, THE FIELD DESIGNATION IS GIVEN AS A RECOMMENDATION ONLY.

11. GROUT OTHER THAN FOR MASONRY CELLS SHALL BE NON-SHRINK, NON-METALLIC GROUT, MEETING ASTM C-1107, MIXED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS. 12. TIGHTEN ANCHOR BOLTS TO "SNUG TIGHT" CONDITION PER AISC SPECIFICATIONS, U.N.O.

![](_page_44_Picture_140.jpeg)

#### **COLD-FORMED STEEL**

CONTRACTOR.

<u>GENERAL</u>

A. ALL COLD-FORMED METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI S100 "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"

3. /	ALL	COLD-FORMED	STEEL	SHALL	СС	DNFORM	TO	TH	E FC	DLLOWI	NG (	U.N.	0):	
		GR. 33		AST	М	A1003	GR	33	OR	ASTM	653	GR	33	
		GR 55		<b>∆</b> S1	м	A1008	GR	55	OR	MT24	653	GR	55	

GR. 55	ASTM ATUUO GR 33 UR ASTM 633 GR 33	
GR. 60	ASTM A1008–10 HSLA–F GR 60 OR ASTM A1011–10 HSLA–F GR 60	
C. WELDING IS NOT PERMITTE	D UNLESS SPECIFICALLY APPROVED BY ENGINEER (	OF

RECORD.

D. ALL APPROVED WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR ALL APPROPRIATE DIRECTIONS COMPLYING WITH AWS D1.3. WELDING RODS SHALL CONFORM TO THE FOLLOWING:

43 MIL AND LIGHTER	E60XX
54 MIL AND HEAVIER	E70XX OR E6013
COLD-FORMED TO STRUCTURAL STEEL	E70XX LOW HYDROGEN

E. WIRE TYING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED. F. TEMPORARY BRACING REQUIREMENTS ARE THE RESPONSIBILITY OF THE

- G. ALL SCREWS SHALL BE FULLY DRIVEN AND PROTRUDE THE LARGER OF 3 THREADS OR  $\frac{1}{4}$ " THROUGH THE LAST MATERIAL JOINED. THERE SHALL BE NO SPACE BETWEEN JOINING MEMBERS AT THE SCREW LOCATION.
- H. ALL FIELD CUTTING OF MEMBERS SHALL BE BY SAWING OR SHEARING. TORCH OR PLASMA CUTTING OF MEMBERS SHALL NOT BE PERMITTED.
- . ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED ON AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
- J. SPLICING OF PURLINS OR OTHER LOAD CARRYING MEMBERS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD.
- K. MEMBERS SHALL BE IDENTIFIED PER SECTION 2203A.1 OF 2016 CBC PART 2, VOLUME 2.
- L. ALL SHEET METAL SCREWS (SMS) SHALL BE ELCO DRIL-FLEX (ICC ESR-3332) OR ITW BUILDEX TEKS SELECT (ICC ESR-3223) UNLESS APPROVED BY THE SEOR.

MINIMUM	SEC	TION	PRO	PERTI	ES F	OR Z	ZEE S	SH
SHAPE	D (in)	B (in)	L (in)	t (in)	A (in²)	Wt (plf)	$I_X$ (in <sup>4</sup> )	
8ZS4x12GA	8	4	1	0.1017	1.772	6.04	18.77	

![](_page_44_Figure_157.jpeg)

2. ALL CALCULATED MEMBER PROPERTIES PER AISI SPECIFICATIONS ARE BASED ON THE FOLLOWING THICKNESSES. ALL MEMBERS REFERENCED ON PLANS BY GAUGE SHALL MEET THESE MINIMUM DESIGN THICKNESSES

MINIMUM THICKNESS	REFERENCE GAUGE	DESIGN THICKNESS
33 MIL	20 GA	0.0346"
43 MIL	18 GA	0.0451"
54 MIL	16 GA	0.0566"
68 MIL	14 GA	0.0713"
97 MIL	12 GA	0.1017"
118 MIL	10 GA	0.1242"

#### ABBREVIATIONS

A.B.	ANCHOR BOLT(S)	EW	EACH WAY	PCF	POUNDS PER CUBIC FOOT
0	AT	EXIST	EXISTING	PEN	PENETRATION
ACI	AMERICAN CONCRETE INSTITUTE	FND	FOUNDATION	ዊ	PLATE OR PROPERTY LINE
ADD'L	ADDITIONAL	FS or F.S.	FAR SIDE	PERP	PERPENDICULAR
AISC	AMERICAN INSTITUTE OF STEEL	FT	FOOT or FEET	REINF	REINFORCED or REINFORCING
AISC	CONSTRUCTION	FTG	FOOTING	REQ'D	REQUIRED
APPROX.	APPROXIMATE	GA	GAGE or GAUGE	SCHED	SCHEDULE
ARCH	ARCHITECT or ARCHITECTURAL DOCUMENTS	GALV	GALVANIZED	SECT	SECTION
ASTM	AMERICAN SOCIETY FOR TESTING AND	GR or GRD	GRADE	SFRS	SEISMIC FORCE RESISTING S
AWS	MATERIALS	G.S.N.	GENERAL STRUCTURAL NOTES	SH or SHT	SHEET
	RI OCKINC	HORIZ or HOR	HORIZONTAL	SIM	SIMILAR
DLK G RM	BEAM	ICC	INTERNATIONAL CODE COUNCIL	SMS	SHEET METAL SCREWS
	BOTTOM	IN	INCH	SOG	SLAB ON GRADE
BRC	BEARING	INCL	INCLUDE	SP or SPCS	SPACES
	BETWEEN	INFO	INFORMATION	SPEC	SPECIFICATION
		LG	LONG	SQ	SQUARE
CRC		LGS	LIGHT GAUGE STEEL	STD	STANDARD
CES	COLD_EOPMED_STEEL	LLH	LONG LEG HORIZONTAL	STIFF	STIFFENER
	CAST IN DIACE	LLV	LONG LEG VERTICAL	STL	STEEL
	CLEAR	LOC	LOCATION	T&B	TOP AND BOTTOM
		LWC	LIGHT WEIGHT CONCRETE	THK	THICK or THICKNESS
€ COI		MATL	MATERIAL	TOC	TOP OF CONCRETE
CONC	CONCRETE	MAX	MAXIMUM	TOS	TOP OF STEEL
CONN	CONNECTION	MB	MACHINE BOLT	TYP	TYPICAL
CONT		MECH	MECHANICAL	U.N.O.	UNLESS NOTED OTHERWISE
		MFR or MANUF	MANUFACTURER	VERT	VERTICAL
		MIN	MINIMUM	V.I.F.	VERIFY IN FIELD
		MISC	MISCELLANEOUS	w/	WITH
		MTL	METAL	w/o	WITHOUT
	DIVISION OF THE STATE ARCHITECT	No. or #	NUMBER	, WT or WGT	WEIGHT
	DRAWING(S)	N.T.S.	NOT TO SCALE		
Dwg		0C or 0/C	ON CENTER		
		, О.Н.	OPPOSITE HAND		
		OPNG	OPENING		
		OPP	OPPOSITE		
LO UI E.O.	LAUT JIVE				

![](_page_44_Figure_162.jpeg)

DEPAR BEPAR School Name IMPOR inspection noted of Laboration must be of this f structur constructur non-structur non-structur	DSA-103 Issued 9/1/2017 List of Required Structural Special Inspections ANT: This form is only a summary list of structural tests and some of the ns required for the project. Generally, the structural tests and special inspect this form are those that will be performed by the Geotechnical Engineer by of Record, or Special Inspector. The actual complete test and inspect performed as detailed on the DSA approved documents. The appendix m identifies work NOT subject to DSA requirements for special inspect testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	e special spections r of Record, tion program at the bottom	est CBC District INS test
BEPAR BEPAR School Name IMPOR inspect noted of Laborat must be of this f structur constru structur non-stru NOTE: 2013 C	DSA-103 Issued 9/1/2017 List of Required Structural tests and some of the the required for the project. Generally, the structural tests and special inst this form are those that will be performed by the Geotechnical Engineer y of Record, or Special Inspector. The actual complete test and inspect performed as detailed on the DSA approved documents. The appendix m identifies work NOT subject to DSA requirements for special inspect testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	e special spections r of Record, tion program at the bottom	est CBC District INS test
BEPAR BE	DSA-103 Issued 9/1/2017 List of Required Structure Special Inspections ANT: This form is only a summary list of structural tests and some of the ns required for the project. Generally, the structural tests and special inspective this form are those that will be performed by the Geotechnical Engineer ty of Record, or Special Inspector. The actual complete test and inspector performed as detailed on the DSA approved documents. The appendix m identifies work NOT subject to DSA requirements for special inspector testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	e special spections r of Record, tion program at the bottom	District
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IMPOR inspect noted o Laborat must be of this f structur constru structur non-stru NOTE: 2013 C	<b>ANT:</b> This form is only a summary list of structural tests and some of the sequired for the project. Generally, the structural tests and special institution form are those that will be performed by the Geotechnical Engineer ry of Record, or Special Inspector. The actual complete test and inspector berformed as detailed on the DSA approved documents. The appendix m identifies work NOT subject to DSA requirements for special inspector testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	e special spections r of Record, tion program at the bottom	INS test
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must be of this f structur constru structur non-stru <b>NOTE:</b>	berformed as detailed on the DSA approved documents. The appendix m identifies work NOT subject to DSA requirements for special inspect testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	at the bottom	requ
of this f structur constru structur non-stru <b>NOTE:</b> 2013 C	testing. The project inspector is responsible for providing inspection of ion, including but not limited to, special inspections not listed on this for	· · · · · · · · · · · · · · · · · · ·	hea
constru structur non-stro <b>NOTE:</b> 2013 C	ion, including but not limited to, special inspections not listed on this for	all facets of	For
non-stri NOTE:	wood traming, high-load wood diaphragms, cold-formed steel framing,	m such as anchorage of	
2013 C	tural components, etc., per Title 24, Part 2, Chapter 17A. his form is also available for projects submitted for review under the 200	07, 2010, and	$\overline{\ }$
2010 0			
	Note: References are to the 2016 ed	dition of the Ca	lifornia
/	HER TEST OR SPECIAL INSPECTION		1
4		TYPE	PERF
	SOILS	Table 4945	e
-	a. Verify that:	i able 1705A	σ
	<ul> <li>site has been prepared properly prior to placement of controlled fill and/or excavations for foundations,</li> </ul>		OFt
x	<ul> <li>reached proper material, and</li> <li>materials below footings are adequate to achieve the design</li> </ul>	Periodic	GE
	bearing capacity.	Table 1705A	6
X	2. COMPACIED FILLS:     a. Perform classification and testing of fill materials.	Table 1705A Test	LOR*
x	b. Verify use of proper materials, densities and inspect lift thicknesses, placement, and compaction during placement of fill.	Continuous	GE*
X	c. Test compaction of fill.	Test	LOR*
• •	A. CAST-IN-PLACE DEEP FOUNDATIONS (PIER     a. Inspect drilling operations and maintain complete and accurate	S):	Table GE*
Λ	<ul><li>records for each pier.</li><li>c. Verify pier locations, diameters, plumbness, bell diameters (if</li></ul>	ooninuous	02
X	applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.	Continuous	GE*
X	d. Confirm adequate end strata bearing capacity.	Continuous	GE*
-		Table 1705A.3	, ACI 31
-	7. CAST IN PLACE CONCRETE		
v	Material Verification and Testing:     A Verify use of required design mix	Periodic	SI*
x	<ul> <li>b. Identifiy, sample, and test reinforcing steel.</li> </ul>	Test	LOR
v	c. During concrete placement, fabricate specimens for strength tests perform slump and air content tests, and	Test	LOR
A V	determine the temperature of the concrete.	Tast	LOR
<u>х</u>	11. POST-INSTALLED ANCHORS:	1631	LOK
v	a. Inspect installation of post-installed anchors	See Notes	SI*
X	<ul> <li>Test post-installed anchors.</li> </ul>	Test	LOR
+	MASONRY	TMS 402-13/A	CI 530-1
-	STEEL, ALUMINUM	Table 1705A.2	.1, AISC
	Material Verification:		
x	Wenty identification of all materials and.     Mill certificates indicate material properties that comply with     requirements	Periodic	٠
x	<ul> <li>Material sizes, types and grades comply with requirements.</li> <li>b. Test unidentified materials</li> </ul>	Test	LOR
X	c. Examine seam welds of HSS shapes	Periodic	SI
x	<ul> <li>Verify and document steel fabrication per DSA approved construction documents.</li> </ul>	Periodic	SI
-	18. HIGH STRENGTH BOLTS: Material Verification of High-Strength Bolts, Nuts, and Washer	RCSC 2009	
v	<ul> <li>a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA</li> </ul>	Periodic	sı
А	approved documents.	Test	
x			Loix
X	Inspection of High-Strength Bolt Installation:	Periodic	SI
X X X	Inspection of High-Strength Bolt Installation:     Bearing-type ("snug tight") connections.      Slip-critical connections.	*	and the second second
X X X	Inspection of High-Strength Bolt Installation:     C. Bearing-type ("snug tight") connections.      d. Slip-critical connections.      19 WELDING:	*	
X X X	Inspection of High-Strength Bolt Installation: c. Bearing-type ("snug tight") connections. d. Slip-critical connections. 19. WELDING: Varification of Materials, Equipment Wolders, etc.	*	
x x x -	Inspection of High-Strength Bolt Installation: c. Bearing-type ("snug tight") connections. d. Slip-critical connections. 19. WELDING: Verification of Materials, Equipment, Welders, etc: a. Verify weld filler material identification markings per AWS	* Periodic	SI
x x x x	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections. <b>19. WELDING:</b> Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of	* Periodic Periodic	SI SI
X X · X X X X	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections. <b>19. WELDING:</b> Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of compliance.         c.       Verify WPS, welder qualifications and equipment.	* Periodic Periodic Periodic	SI SI SI
x x - x x x x -	<ul> <li>Inspection of High-Strength Bolt Installation:</li> <li>c. Bearing-type ("snug tight") connections.</li> <li>d. Slip-critical connections.</li> <li>19. WELDING:         <ul> <li>Verification of Materials, Equipment, Welders, etc:</li> <li>a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.</li> <li>b. Verify weld filler material manufacturer's certificate of compliance.</li> <li>c. Verify WPS, welder qualifications and equipment.</li> </ul> </li> <li>19.1 SHOP WELDING:         <ul> <li>a. Inspect groove welds, multi-pass fillet welds. single pass fillet</li> </ul> </li> </ul>	* Periodic Periodic Periodic	SI SI SI
X X X · X X X X	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections.         19. WELDING:         Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of compliance.         c.       Verify WPS, welder qualifications and equipment.         19.1       SHOP WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect single-pass fillet welds ≤ 5/16", floor and roof dock welde	* Periodic Periodic Periodic Continuous Periodic	SI SI SI
x x x · · · · · ·	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections.         19. WELDING:         Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of compliance.         c.       Verify WPS, welder qualifications and equipment.         19.1       SHOP WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds         19.2         FIELD WELDING:	* Periodic Periodic Periodic Continuous Periodic	SI SI SI SI
X X X - X X X X X X X	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections.         19. WELDING:         Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of compliance.         c.       Verify WPS, welder qualifications and equipment.         19.1       SHOP WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds         19.2         FIELD WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds	* Periodic Periodic Periodic Continuous Periodic Continuous	SI SI SI SI SI
X X X · · X X X X X X	Inspection of High-Strength Bolt Installation:         c.       Bearing-type ("snug tight") connections.         d.       Slip-critical connections.         19. WELDING:         Verification of Materials, Equipment, Welders, etc:         a.       Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.         b.       Verify weld filler material manufacturer's certificate of compliance.         c.       Verify WPS, welder qualifications and equipment.         19.1       SHOP WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds         19.2         FIELD WELDING:         a.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds         b.       Inspect groove structure set fillet welds = 5/16"         OTHER	* Periodic Periodic Periodic Continuous Periodic Continuous Periodic	SI SI SI SI SI SI

# **TESTING AND INSPECTION FORM**

<form></form>	INCREMENT # DSA File No.: Application No.: Date Submitted: Revised: Revised:		DSA-103 Issued 9/1/2017	INCREMENT # DSA File No.:
<form></form>	Application No.:       Date Submitted:       Revised:       Revised:		DSA-103 Issued 9/1/2017	INCREMENT # DSA File No.:
<form></form>	Date Submitted: Revised: Revised:		DSA-103 Issued 9/1/2017	
		A = D	<b>SA</b> List of Required Structural	Tests & Application No.:
		DEPARTMENT OF GET	FTHESTATE ARCHITECT Special Inspections - 2016	6 CBC Date Submitted: Revised:
	ck a plus sign (+) before any category or subcategory to reveal additional	List of required verif	fied report(s):	Revised:
<form></form>	pections. A shaded box indicates a test or special inspection that may be on the scope of the construction and other issues. A shaded box can be	KEY to Col	lumns	
<form><pre>class de la caracterization de la cara</pre></form>	r selection of that test. <b>Note:</b> A minus (-) on a category or subcategory	1 Type -	•	2 Performed By - GE – Indicates that the special inspection is to be performed by a registered geotechnical eng
	e "COMPILE" button to show only the tests and inspections finally selected.	Continuous –	<ul> <li>Indicates that a continuous special inspection is required</li> </ul>	her authorized representative
<form></form>	on on use of this form, see DSA-103.INSTR.	Periodic – Ind	dicates that a periodic special inspection is required	LOR – Indicates that the test or inspection is to be performed by a testing laboratory accepted Laboratory Evaluation and Acceptance (LEA) Program. See section 4-335, 2013 CCR Title 24
		Test – Indicat	tes that a test is required	SI – Indicates that the special inspection is to be performed by a special inspector
<form></form>				
	CBC) unless otherwise noted.	┨ └──		
<form></form>	E REFERENCE AND NOTES	Name of Architect or Engin	neer in general responsible charge	DIV OF THE STATE ARCHITECT
				APP. #
<form></form>		Name of Structural Enginee	er (When structural design has been delegated)	AC N/A F/LS N/A SS
<form>The second s</form>		Signature of Architect or Str	tructural Engineer date	DATE
<form>memory memory memor</form>	al engineer or his or her qualified representative. (See Appendix for exemptions.)			
<form><ul> <li>And the specific distance of the spe</li></ul></form>				
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<form><ul> <li>Har and a final state of the state</li></ul></form>	ervision of the geotechnical engineer.			
<form>manne granter auger de la granter de la granter auger de la granter de</form>	al engineer or his or her qualified representative.			
<form><ul> <li>Market And State And State</li></ul></form>	pervision of the geotechnical engineer.			
<form>         array and an any angle and any angle any angle and any angle and any angle and a</form>	al engineer or his or her qualified representative. (See Appendix for exemptions.)			
<form>         The structure of the stru</form>	al engineer or his or her qualified representative. (See Appendix for exampline			
The net of the standard dependence (link Agend to ready (link)) The standard dependence (link) Agend to ready (link) agend	a engineer of his of her qualined representative. (See Appendix for exemptions.)	Appendix: Work Exe	empt from DSA Requirements for Special Inspection or Struct	tural Testing
Mill Henderster   Mill Henderster   Size Hund   Mill Henderster   Mill Henderster <td>al engineer or his or her qualified representative. (See Appendix for exemptions.)</td> <td>Evernet items given in</td> <td>a IR A 22 or the 2016 CRC (including DSA amondments) and ther</td> <td>an items identified below with an "X" by the design professional are NOT subject</td>	al engineer or his or her qualified representative. (See Appendix for exemptions.)	Evernet items given in	a IR A 22 or the 2016 CRC (including DSA amondments) and ther	an items identified below with an "X" by the design professional are NOT subject
Control Con	ETE section below.	requirements for the s	structural tests or special inspections noted. Items marked as exer	mpt shall be identified by either: 1) listing specific details/sheets noted in the spa
An Start 1 (1702 2.1) The land endowed by the start 1 (2002 A.1)   An Control A decision 2.00 A.1 (2002 A.1)   And A decision 2.00 A.1 (2002 A.1)   <		below OR 2) on the ap	pproved construction documents. The project inspector shall verify	ly all construction complies with the approved construction documents.
min.		101.24	7	104.01.
24/1.0012 storest #1.12 (September 11.00000000000000000000000000000000000	ng technician	mbecond		mpeoul
Intel A 42 2014       Provide V 42 40 40 2014       Provide V 42 40 2014       P	2.4 <sup>+</sup> ); ACI 318-14 Section 26.6.1.2. DSA IR 17-10.16	Ete Sea		/ 4 <sup>+</sup> 9 <sup>4</sup>
Description of the section of the secting of the secting of the secting of the secting of the	item 6; ACI 318-14 Sections 26.5 & 26.12	Soils: 1. Deep found	lations acting as a cantilever footing designed based on	Welding:           1. Solid-clad and open-mesh gates with maximum leaf span or rolling section for rolli
Import of Continuous) & Brit Printing (cont Agreen in the Section and Type and Section and Type an	09.3.7 <sup>+</sup> ); ACI 318-14 Section 26.12.	geotechnical r	vable pressures per 2016 CBC Table 1806A.2 and having no report for the following types of structures: free standing sign,	and apex height less than 8'-0" above lowest adjacent grade. When located above cir occupied space below, these gates are not located within 1.5x gate/fence height (ma
2.8.1 3 * We be serviced by the project model or the fight project mode	Item 4a (Continuous) & 4b (Periodic) (see Appendix for exemptions) ACI 318-14	errolling mess dead load less	sage sign, scoreboard, covered walkway or shade structure with s than 5 psf and other light-weight structures of which the apex is	eage of floor or root.
27.1) Sector Assoc 23.4 (ASS 230.4 (ASS 24.1 Constraint)       Part Sector 130.4 (Constraint)       Part Sector	26.13 * May be performed by the project inspector when specifically approved by	Itess than 8' ab     2. Shallow four	Indations meeting the exception item #1 criteria specified in 2016	2. Handrails, guardrails, and modular or relocatable ramps associated with walking subtract 20" above advector of the second sec
<ul> <li>abe als 1.4 Thes 462-11AG15 80-1746/25 e13 Table 5</li> <li>control 1.4 Sec 2.4 Sec 2.4 Lab 2.4 Sec 2</li></ul>	.2.7 <sup>+</sup> ). (See Appendix for exemptions.)	X CBC Section 1	tor applicable evempt items:	X         Section 1705A.2.1); fillet welds cannot be ground flush.           3         Non-structural interior cold formed steel froming particulation for the structural interior.
there is year with Winds: Same year and Winds: Sam	able 3.1.3 & TMS 602-13/ACI 530.1-13/ASCE 6-13 Table 5	(Optional) List details 1	ior applicable exempt items.	partitions, interior soffits, etc. supporting only self weight and light-weight finishes or a
Concerted Masonry:       Image: Appendix a constraint of the table of the state of	60-10, AISC 341-10, AISC 358-10, AISI S100-07/S2-10	<b>4</b> I		and not over an exit way. Maximum tributary load to a member shall not exceed the e
111, Total Property Lines 34-04 (Stripperty Coupling Lines Total Coupling Lines Section 24, 14 (Stripperty Sec		<b>1</b>		X     A Manufactured support frames and curbs using hot rolled or cold formed steel (1 a)
1.1       Interfact rescale in the control of the section provide section 10 and the section 10 and t	8.1 <sup>+</sup> ), <b>Table 1705A.2.1 Item 3a-3c;</b> AISI S100-07/S2-10 Section A2.1 & A2.2, AISI on A3. AISI S20-11 Section A4. * By special inspector or sublified to be bailed in the section of the	Concepto (I)	Masonry:	mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment (connections of such frames to superstructure elements using wolding will require an
131	site.	Concrete/M	ausonity.	as noted in selected item(s) for section 19, 19.1 and/or 19.2 of listing above).
Weiding? John To EQC Section 1516.4.1 is which replices PACE 7:0.0.         Section 1106.4.1 is which replices PACE 7:0.0.         Section 1106.4.1 is which replices PACE 7:0.0.         Section 1106.4.1 is which replices PACE 7:0.0.         Sectin 100.0.0.0.1 is which replices PACE 7:0.0. </td <td>.1*).</td> <td>1. Post-installe</td> <td>ed anchors for the following: 1) exempt non-structural</td> <td>5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electric</td>	.1*).	1. Post-installe	ed anchors for the following: 1) exempt non-structural	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electric
bis cold-formed steel light-frame construction, except for fuses (1796A.2.4). bis emptiliant 3 for 2005 Section 2.1. DSA IR 17-9 1.1 tern 1, 2203A1; RCSC 2009 Section 2.1. DSA IR 17-9 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR (7-6.16 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR (7-6.16 1.1 tern 2.2 RCSC 2009 Section 7.1 DSA IR 17-9 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR (7-6.16 1.1 tern 2.2 RCSC 2009 Section 7.1 DSA IR 17-9 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR (7-6.16 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 DSA IR 17-9.11 1.1 tern 2.2 RCSC 2009 Section 7.2 RCSC		"Welding") give	/en in CBC Section 1616A.1.18 (which replaces ASCE 7-10, 4) or 2) interior nonstructural wall partitions meeting criteria listed	welding will require special inspection as noted in selected item(s) for section 19, 19.
Concrete batch plant impaction is not required for items given in CBC     Concrete batch plant impaction is not required for items given in CBC     Concrete batch plant impaction is not required for items given in CBC     Section 725.3.2.2 student to the requirements and imitations in that section.     Section 725.2.009 Section 7.2 DSA IR 17.4 if     Section 725.2.009 Section 7.2 DSA IR 17.3 if     Section 725.2.009 Section 7.2 DSA IR 17.3 if     Section 725.2.009 Section 7.2 DSA IR 17.3 if     Section 725.2.000 Section 7.2 DSA IR 17.3 if     Section 725.2.000 Section 7.2 DSA IR 17.3 if     Section 725.2.000 Section 7.2 DSA IR 17.3 if     Sectin 725.2.000 Sectin 7.2 DSA IR 17.3 if     Section 725.2.000 Sectin	o cold-formed steel light-frame construction, except for trusses (1705A.2.4).	X in exempt item	n 3 for "Welding."	X Brockote projector and the second state
X       Section 17.05A.3.2 subject to the requirements and imitations in that sector.         X       Section 17.05A.3.2 subject to the requirements and imitations in that sector.         X       Section 17.05A.3.2 subject to the requirements and imitations in that sector.         X       Section 17.05A.3.2 subject to the requirements and imitations in that sector.         X       Section 17.05A.3.2 subject to the requirements and imitations in that sector.         X       Assocry retaining walls less than 4-0 <sup>-1</sup> above abject to the requirements and imitations in that sector.         X       Assocry retaining walls less than 4-0 <sup>-1</sup> above abject to the requirements and imitations or that sector.         X       Assocry retaining walls less than 4-0 <sup>-1</sup> above abject to the requirements and imitations or the sector of the sect		2. Concrete bi	patch plant inspection is not required for items given in CBC	(e.g., playground structures, basketball backstops, etc.) (connections of such element
1 mm 1, kuose 1, kuose doube section 2, LOSA IR 17-8.16         1 mm 20, RCS 2009 Section 9,1. DSA IR 17-8.16         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-8.16         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCSC 2009 Section 9,1. DSA IR 17-9.11         1 mm 20, RCC 10, RCSC 2009 Section 9,1. DSA IR 17-3. WIS D1.1 and XWS D1.8 for structural components given in CIGC Section 1, 14, 10, and XWS D1.4 for reinforcing steel. Gr exemptions.)         1 mm 5a,1. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).         1 tem 5a,1.4. Per AISC 360-10 (and AISC 341-10 as applicable).	1 Itom 1 2202A 1. DCCC 2000 Section 2.4. DCA ID 47.0	X Section 1705A	A.3.3.2 subject to the requirements and limitations in that section.	X section 19, 19.1 and/or 19.2 of listing above).
3:1). RCSC 2009 Section 7.2 DSA IR 17-8.16       and resulting composele centre of mass (including	Them 1, 2203A.1; RUSU 2009 Section 2.1. DSA IK 17-9	3. Masonry ret	taining walls less than 4'-0" above the top of foundation not surcharge and free standing non-spear masonry walls	7. Any support for exempt non-structural components given in CBC Section 1616A.1. replaces ASCE 7-10, Section 13.1.4) meeting the following: 1) when supported on a formation of the section of the secti
1 Item 2a; RCSC 2009 Section 9.1. DSA IR 17-9         1 Item 2a; RCSC 2009 Section 9.1. DSA IR 17-9, and PSA 2.1. RCSC 2009 Section 9.2 & 9.3.* "Continuous" or "Periodic" depends on method used, DSA IR 17-9, ANVS D1.4 and AWS D1.8 for structural 2 for Auminum, AVS D1.5 for structural 2 for Auminum, AVS D1.3 for cold-formed steel, AWS D1.4 for reinforcing steel. For Australian AWS D1.4 for a seplicable exempt items:       DSA-103       Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.       Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.         1 Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).       THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE       THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE         1 Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).       DSA-103 (ISSUEd 9-1-17)       THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE	6.1 ). RCSC 2009 Section 7.2 DSA IR 17-8.16	up to 6'-0" abo	ove adjacent grade do not require grout, mortar or masonry core A special inspection.	supporting floor/roof, 2) when hung from a wall or roof/floor, <20# for discrete units of
Item status dev. DSA RI 17-9 and 1795A.2.1.         ise method used. DSA RI 17-9 and 1795A.2.1.         ise 1795A.2.1 items 4 8.5; DSA IR 17-3, AWS D1.1 and AWS D1.8 for structural 2 for exemptions.)         Item status dev. DSA.2.1 items 4 8.5; DSA IR 17-3, AWS D1.1 and AWS D1.4 for reinforcing steel.         for exemptions.)         DSA-103         Item status dev. DSA.2.1 items 4.6; So 260-10 (and AISC 341-10 as applicable). DSA IR 17-3.         item status dev. DSA.2.1 items 5.6; Sa 5.6. Per AISC 360-10 (and AISC 341-10 as applicable).         THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE         1 Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).         DSA-103         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).         DSA-117	.1 Item 2a; RCSC 2009 Section 9.1. DSA IR 17-9 1 Item 2b & 2c, RCSC 2009 Section 9.2 & 9.3 * "Continuous" or "Periodic" descende			(Optional) List details for applicable exempt items:
DSA-103 (Issued 9-1-17) + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used to community college THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA IS TO BE FORM DSA 103S SHOWN ON THIS SHEE ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA IS TO BE FALL.	method used, DSA IR 17-9 and 1705A.2.1.	4. Epoxy shear	ar dowels in site flatwork.	
DSA-103 (Issued 9-1-17) + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community college Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. PTO5A.2.1 Item 5a.5 & 5a.6. Per AISC 360-10 (and AISC 341-10 as applicable). Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	for Aluminum, AWS D1.3 for cold-formed steel, AWS D1.4 for reinforcing steel.		approacte exempt norme.	
DSA-103 (Issued 9-1-17) + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community college (Issued 9-1-17) + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community college THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEEL Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	prexemptions.)			
DSA-103 (Issued 9-1-17)       + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community college (Issued 9-1-17)         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).				
DSA-103 (Issued 9-1-17) + In the CODE REFERENCE AND NOTES column indicates DSA-SS/CC sections that may be used by community college (Issued 9-1-17) THIS EXAMPLE FORM DSA IR 17-3. THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE ARE FOR ILLUSTRATION PUPPOSES ONLY. A FORM DSA ARE FOR ILLUSTRATION PUPPOSES ONLY. A FORM DSA ISSUE TO RECOMPLETED FOR FACH APPLICATION THAT THIS				
Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.         1705A.2.1 Item 5a.5 & 5a.6. Per AISC 360-10 (and AISC 341-10 as applicable).         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).         Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable).		DSA-103		
Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. a 1705A.2.1 Item 5a.5 & 5a.6. Per AISC 360-10 (and AISC 341-10 as applicable). THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEEL ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS		(Issued 9-1-17)	+ In the CODE REFERENCE AND NO	DTES column indicates DSA-SS/CC sections that may be used by community colleges, per 2010
THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEEL ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA I Item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	<b>1 Item 5a1-4.</b> Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	4		
THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEE ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA IS TO BE COMPLETED FOR EACH APPLICATION THAT THE	ле птозм.2.т цент за.з а за.о. нег АЗС зоо-то (and АЗС 341-10 as applicable).	4		
				THIS EXAMPLE FORM DSA 103S SHOWN ON THIS SHEET ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA 103
1 Item 5a.5. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	tom Fot A Der AISC 260 10 (and AISC 044 40 and all the Det in the	4		I IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS
DSA-103S ARE TO BE CROSSED OUT ON THIS DRAWING	tem 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. em 5a.5. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.	U Contraction of the second		
ind calibation of test equipment.	em 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3. em 5a.5. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.			DSA-103S ARE TO BE CROSSED OUT ON THIS DRAWING

![](_page_45_Figure_4.jpeg)

![](_page_45_Figure_9.jpeg)

![](_page_46_Figure_0.jpeg)

![](_page_47_Figure_0.jpeg)

MAX. COLUMN HEIGHT (H)	PURLINS	PURLIN BLOCKING	BEAM SIZE	COLUMN SIZE
12 FT	8ZS4x12GA (GRADE 55)	6x2x16GA TRACK SECTION (GRADE 33, 50 OR 55)	HSS14x14x⅔	HSS14x14x¾

	WIDTH PER SCHEDULE
	↓
	B PLAN SCALE: N.T.S.
	STRUCTURE TYPE
	т 1
	L UP 13'-
	L DOWN
p:\118\1800207_sunpower kpff dsa solar pc\dwa\s300.dwa 6/5/2018	17 SCALE: AS NOTED

SPREAD FOUND	ATION SIZE (WIDTH	x LENGTH)		
ALLOWABLE BEARING PRESSURE (PSF)				
	2,000	3,000	≥4,000	
x14'	1 <i>3</i> ′×13′	13'x13'	13'x13'	
x13'-6"	12'*12'	12'x12'	12'x12'	
x13' 1	1'-6"x11'-6"	11'-6"x11'-6"	11'-6"x11'-6"	

![](_page_48_Figure_4.jpeg)

		CONC. PIER	FOUNDATION DEPTH SC	CHEDULE		
	DESIGN ALLOWABLE SKIN FRICTION (PSF/FT)	Total	=18'-0" DESI	GN ALLOWABLE PASSIVE PRES	SSURE	
TORE TIPE		200	300	400	508	600
тĺ	300	18'-0"	17'-0"	17'-0"	<u>)</u> , , , , , , , , , , , , ,	، <i>ک</i> ل
1.	408	18'-0"	15'-0"	13 -6"	12'-6"	12'-
	200	20'-0"	20'-0"	20'-0"	20,-0,,	80,4
_ UP	300	202-0"	16'-0"	13'-6"	12'-0"	12'-
	200	20'-0"	20'-0"	20,-0,,	20,-0,	20+
DOMIN	300	170."	13'-6"	12'-0"	12'-0"	12'-
			$\backslash$			

![](_page_49_Figure_0.jpeg)

![](_page_50_Figure_0.jpeg)

![](_page_51_Figure_0.jpeg)

![](_page_52_Figure_2.jpeg)

FENCES			
MAX HEIGHT	END POSTS CORNER POSTS PULL POSTS	TYP. POSTS	TOP RAILS BRACE RAILS POST BRACES
6'-0"	2.375"O.D.	1.90" O.D.	1 66" 0 0
8'-0"	2.875"O.D.	2.375" O.D.	1.00 U.D.

GATES		
MAX LEAF WIDTH	GATE POSTS	FRAME MEMBERS
6'	2.875"O.D.	1.66"O.D.

![](_page_53_Figure_0.jpeg)

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A A-SERIES PANEL CUTSHEET SCALE: N.T.S.

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1-200-SUNPOWER

sunpower.com

SUNPOWER® 52XXXX Rev A / LTR\_US

#### E-Series: E20-435-COM SunPower<sup>®</sup> Commercial DC Panel

Liectifical Data		
SPR-E20-435-COM		
435 W		
+5/-3%		
20.1%		
72.9 V		
5.97 A		
85.6 V		
6.43 A		
1500 V UL & 1500 V IEC		
15 A		
-0.35% / ° C		
–235.5 mV / ° C		
2.6 mA / ° C		

10303	
Standard Tests <sup>8</sup>	UL1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Quality Management Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, Recycle Scheme, REACH SVHC-163
Sustainability	Cradle to Cradle Certified™ Silver. "Declare." listed.
Ammonia Test	IEC 62716
Desert Test	10.1109/PVSC.2013.6744437
Salt Spray Test	IEC 61701 (maximum severity)
PID Test	1500 V: IEC 62804, PVEL 600 hr duration
Available Listings	UL, TUV, MCS, FSEC, CEC

1 SunPower 327 W compared to a Conventional Panel on same-sized arrays (260 W, 16% efficient, approx. 1.6 m²), 4% more energy per watt (based on PVSyst pan files), 0.75%/yr slower degradation (Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013). 2 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of January 2017.

3 #1 rank in "Fraunhofer PV Durability Initiative for Solar Modules: Part 3". PVTech Power Magazine, 2015. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013. 4 SunPower is rated #1 on Silicon Valley Toxics Coalition's Solar Scorecard.

5 Cradle to Cradle Certified is a multi-attribute certification program that assesses products and materials for safety to human and environmental health, design for future use cycles, and sustainable manufacturing. 6 X-Series and E-Series panels additionally contribute to LEED Materials and Resources credit categories.

7 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage. 8 Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.

See www.sunpower.com/company for more reference information. For more details, see extended datasheet: www.sunpower.com/solar-resources. Specifications included in this datasheet are subject to change without notice.

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L-800-SUNPOWER

Operating Condition And Mechanical Data –40° F to +185° F (–40° C to +85° C) Temperature Impact Resistance 1 inch (25 mm) diameter hail at 52 mph (23 m/s) Appearance Class A Solar Cells 128 Monocrystalline Maxeon Gen II High-transmission tempered anti-reflective Tempered Glass IP-65, 1230 mm cables / MC4 Compatible Junction Box Weight 56 lbs (25.4 kg) G6 Frame: Wind: 50 psf, 2400 Pa front & back Snow: 50 psf, 2400 Pa front Max. Load G4 Frame: Wind: 50 psf, 2400 Pa front & back Snow: 112 psf, 5400 Pa front Frame Class 2 silver anodized; stacking pins

![](_page_53_Figure_23.jpeg)

Short Side 22 mm [0.9 in]

Please read the safety and installation guide.

![](_page_53_Picture_25.jpeg)

527989 Rev A / LTR\_US

**E-SERIES PANEL CUTSHEET** SCALE: N.T.S.

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#### IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP. 04-119550 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/13/2020

![](_page_53_Picture_29.jpeg)

![](_page_53_Figure_30.jpeg)