

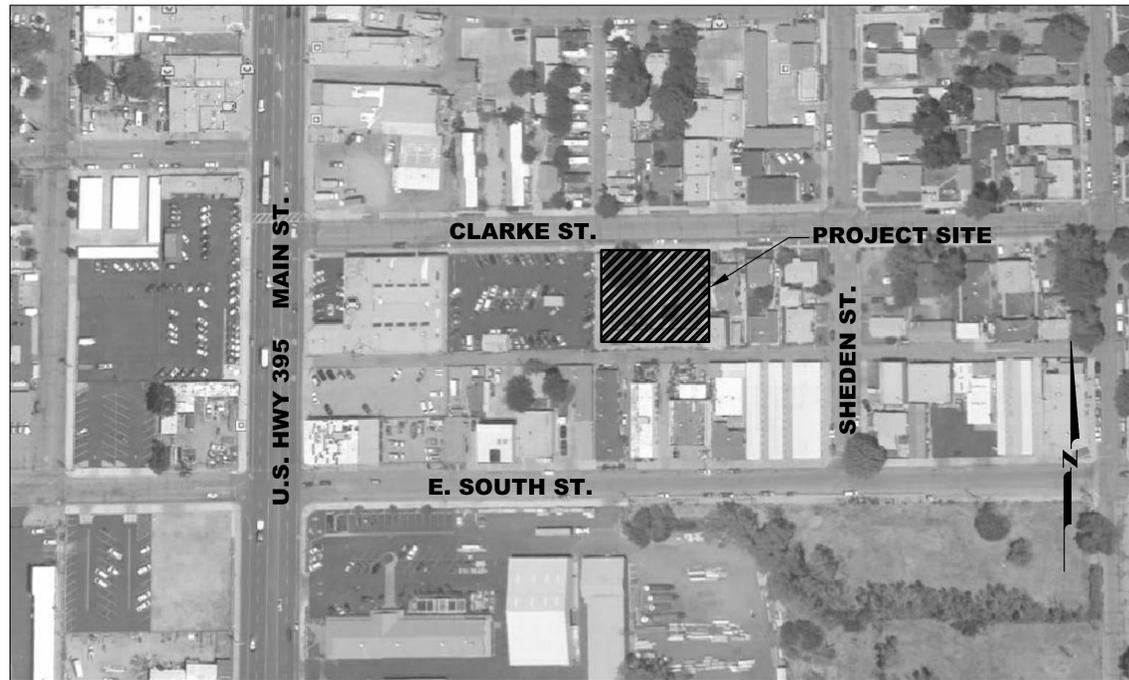
VALLEY APARTMENT ELECTRICAL AND SOLAR PROJECT

BISHOP, CALIFORNIA
PROJECT NO. 13-CDBG-8972

DINTER
ENGINEERING CONFIDENCE
Airfield Electrical Mechanical
385 Gentry Way
Reno, NV 89502
Ph: 775.826.4044
Fax: 775.826.4190
Web: dinter.com
J-4593



No.	REVISIONS/SUBMISSIONS	DATE



AREA MAP

N.T.S.



VICINITY MAP

N.T.S.

VALLEY APARTMENT
POWER AND SOLAR PROJECT
156 E. CLARKE ST.
BISHOP, CA. 93514
INYO COUNTY, CALIFORNIA

DESIGNED BY: PKH	DRAWN BY: AWB	CHECKED BY: ERG	DATE: 19 DECEMBER 2017
---------------------	------------------	--------------------	---------------------------

PROJECT SUMMARY:

ASSESSORS PARCEL NO. 035-025-006-000
LOCATION:
156 E. CLARKE ST.
BISHOP CA.
APPLICANT:
CITY OF BISHOP
377 WEST LINE ST.
BISHOP, CA. 93514
(760) 873-8458

UTILITY COORDINATION:

POWER:
LOS ANGELES DEPARTMENT OF WATER AND POWER
PHILLIP WILLIAMS - PLANNER
300 MANDICH ST.
BISHOP, CA. 93514
760-873-0251

SHEET INDEX

- C0.1 COVER SHEET
- E0.1 ELECTRICAL SYMBOL LIST, GENERAL AND DEMOLITION NOTES
- E1.1 FIRST FLOOR DEMOLITION PLAN
- E2.1 FIRST FLOOR PLAN
- E2.2 ROOF PLAN
- E4.1 ELECTRICAL SINGLE LINE DIAGRAM
- E4.2 ELECTRICAL UNIT CALCULATIONS AND PANEL SCHEDULES
- E4.3 HOUSE PANEL SCHEDULES
- E5.1 ELECTRICAL DETAILS
- E5.2 ELECTRICAL DETAILS
- S1.0 STRUCTURAL NOTES, FRAMING PLAN, TYPICAL SECTION, DETAILS
- EC0.1 TITLE 24 CERTIFICATE OF COMPLIANCE
- EC0.2 TITLE 24 OUTDOOR LIGHTING CONTROLS
- EC0.3 TITLE 24 OUTDOOR LIGHTING POWER ALLOWANCES



COVER SHEET

C0.1

SHEET 1 OF 14

ELECTRICAL SYMBOL LIST

	CONDUIT RUN IN OR ON CEILING OR WALL
	CONDUIT RUN IN OR UNDER FLOOR OR UNDERGROUND
	OVERHEAD CABLES
	HASH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS IN CONDUIT. NO MARKS INDICATE 2 #12'S. DOES NOT INCLUDE GROUND WIRE. IF NON-METALLIC CONDUIT ADD GROUND PER NEC.
	LONG SLASH WITH HASH MARKS AS SHOWN INDICATES GROUND WIRE FOR ISOLATED GROUNDING SYSTEM. SIZE PER N.E.C.
	HOMERUN TO PANEL WITH PANEL AND CIRCUIT INDICATED
	HOMERUN TO PANEL WITH CIRCUIT NUMBER IN BRACKETS INDICATING MULTI-POLE BREAKER.
	RACEWAY UP
	RACEWAY DOWN
	SURFACE MOUNTED FIXTURE - WALL MOUNTED
	SINGLE POLE SWITCH +48" AFF
	FRACTIONAL HORSEPOWER MOTOR MANUAL STARTER
	MOTOR SYMBOL - HORSEPOWER AS INDICATED
	DISCONNECT SWITCH (30A/3P UNLESS INDICATED ON DWGS) "F" INDICATES FUSES PER MANUFACTURERS NAMEPLATE RATING
	COMBINATION STARTER / FUSED DISCONNECT SWITCH (SIZE AS INDICATED ON DRAWINGS - FUSES SIZED PER MANUFACTURER'S NAMEPLATE RATING)
	TIME CLOCK
	ELECTRICAL PANELBOARD - SURFACE MOUNTED
	ELECTRICAL PANELBOARD - FLUSH MOUNTED
	SERVICE OR DISTRIBUTION EQUIPMENT
	TRANSFORMER
	AUXILIARY SYSTEM TERMINAL CABINET
	PRECAST CONCRETE PULLBOX (SIZE AS INDICATED)
	EMERGENCY SHUNT TRIP DISCONNECT
	EXISTING WIRE AND/OR CONDUIT TO BE REMOVED OR ABANDONED
	EXISTING WIRE AND/OR CONDUIT TO REMAIN
	DASHED DEVICES, LIGHT FIXTURES, ETC. EXISTING TO BE REMOVED
	SHEET NOTE
	FEEDER - SIZE AS INDICATED ON SINGLE LINE DIAGRAM
	DETAIL DESIGNATION - "B" INDICATES DETAIL # ON SHEET E3.1
	ROOM NUMBER

* NOTE: ALL MOUNTING HEIGHTS AS INDICATED UNLESS NOTED OTHERWISE.
ALL SYMBOLS MAY NOT BE USED ON PROJECTS.

AC	ABOVE COUNTER. INSTALL 4" ABOVE SPLASH OR COUNTER OR AT HEIGHT AS INDICATED ON DRAWINGS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
CEC	CALIFORNIA ELECTRICAL CODE
CL	CENTERLINE
CU	COPPER
EC	EMPTY CONDUIT WITH PULL WIRE
FBO	FURNISHED BY OTHER SECTION
GFI	GROUND FAULT INTERRUPTING
LADWP	LOS ANGELES DEPARTMENT OF WATER AND POWER
NIC	NOT IN CONTRACT
PNL	PANEL
SPD	SURGE PROTECTION DEVICE
T-24	TITLE 24, CALIFORNIA ENERGY CODE, THE ENERGY EFFICIENCY STANDARDS FOR RESIDENTIAL AND NON-RESIDENTIAL BUILDING
TBD	TO BE DETERMINED
TL	TWISTLOCK
TTB	TELEPHONE TERMINAL BOARD
UNO	UNLESS NOTED OTHERWISE
UNSW	UNSWITCHED
W/	WITH
WP	WEATHERPROOF (NEMA 3R)
XFMR	TRANSFORMER

GENERAL DEMOLITION NOTES

- ELECTRICAL OUTLETS AND DEVICES THAT ARE INDICATED BY DASHED LINES SHALL BE REMOVED ENTIRELY, INCLUDING JUNCTION BOXES AND CIRCUITING ASSOCIATED WITH SAID ITEM.
- THESE PLANS DO NOT PURPORT TO SHOW ALL EXISTING CONDITIONS. ANY OUTLETS, CIRCUITING AND/OR DEVICES THAT CONFLICT WITH ALL WORK BEING PERFORMED DURING THE COURSE OF THIS PROJECT SHALL BE RELOCATED/REROUTED OR REMOVED ENTIRELY AS DICTATED BY OWNER.
- ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY SHALL BE TURNED OVER TO OWNER ON PROJECT SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM PROJECT SITE.
- IT IS RECOMMENDED THAT THE CONTRACTOR VISIT SITE AND VERIFY EXISTING CONDITIONS THAT MIGHT AFFECT HIS OR HER WORK. ALL DISCREPANCIES SHALL BE REPORTED TO ENGINEER PRIOR TO BID.
- DEMOLITION AND MODIFICATION OF EXISTING DISTRIBUTION SYSTEMS SHALL BE PERFORMED AS FOLLOWS:
 - EXISTING WIRING TO BE REMOVED SHALL BE REMOVED BACK TO ITS SOURCE. CONDUITS MAY BE ABANDONED IN PLACE IF THEY ARE IN CONCEALED LOCATION AND DO NOT CONFLICT WITH ANY NEW WORK. REMOVE ALL WIRING FROM ABANDONED RACEWAYS.
 - REMOVAL OF EXISTING ELECTRICAL DISTRIBUTION SYSTEM SHALL INCLUDE EQUIPMENT, ASSOCIATED WIRING, INCLUDING (BUT NOT LIMITED TO) CONDUCTORS, CABLES, EXPOSED CONDUIT, SURFACE RACEWAYS, BOXES, FITTINGS, ETC. (BACK TO EQUIPMENT SOURCE.)
 - CONTINUATION OF SERVICE: MAINTAIN CONTINUITY OF EXISTING CIRCUITS. TEST LIGHTING, RECEPTACLES AND ALL ELECTRICALLY POWERED EQUIPMENT IN SURROUNDING AREAS TO DETERMINE IF ANY EQUIPMENT TO REMAIN HAS BEEN DE-ENERGIZED. CONTRACTOR SHALL RECONNECT ALL EQUIPMENT AND EXTEND CIRCUITING IN ORDER TO RE-ACTIVATE ANY SUCH EQUIPMENT.

ELECTRICAL GENERAL NOTES

- FURNISH ALL LABOR, MATERIALS, TOOLS, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE WORKING ELECTRICAL SYSTEM.
- ALL ELECTRICAL WORK SHALL COMPLY WITH ALL APPLICABLE STATE, COUNTY AND LOCAL CODES AND ORDINANCES, AS WELL AS ALL CURRENT STANDARDS, CODES AND PRACTICES AS REQUIRED BY CEC, CBEES (TITLE 24), NEMA, ANSI, NFPA, CBC, UL, IEEE AND UTILITY COMPANY STANDARDS. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND PROPERLY LABELED. ELECTRICAL PLAN APPROVAL DOES NOT WAIVE ANY REQUIREMENT OF THE 2016 CALIFORNIA ELECTRICAL CODE (CEC) OR ENERGY CODE (CBEES)
- ALL EQUIPMENT, MATERIALS AND WORK SHOWN ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING. OR NOTED OTHERWISE ON OTHER SHEETS.
- UTILITIES SHOWN TO BE DEMOLISHED SHALL NOT BE REMOVED FROM SERVICE UNTIL EITHER OF THE FOLLOWING EVENTS OCCUR: A) THE FACILITY SERVED BY THE UTILITY IS NO LONGER OCCUPIED AND IS READY FOR DEMOLITION. OR B) EQUIVALENT SERVICE BY NEW UTILITY CONSTRUCTION HAS BEEN PROVIDED TO THE FACILITY CURRENTLY SERVICED. UNLESS OTHERWISE NOTED.
- VERIFY EXACT LOCATION OF ALL RECEPTACLES ABOVE OR ADJACENT TO COUNTERS FIXTURES MIRRORS OUTDOOR FIXTURES AND MOUNTING HEIGHTS & LOCATIONS OF ALL FIXTURES & BOXES PRIOR TO ROUGH-IN. NO EXTRA COSTS WILL BE ALLOWED FOR FAILURE TO COMPLY.
- PRIOR TO PURCHASE OF ANY PANEL, PROTECTIVE DEVICES, SWITCH, STARTER, CONDUIT, WIRE, ETC., TO FEED ANY PIECE OF MECHANICAL EQUIPMENT VERIFY THE VOLTAGE, PHASE, & LOAD OF THAT ITEM IN THE FIELD AND/OR WITH THE PARTICULAR ENTITY INVOLVED IN FURNISHING THE ITEM SUCH THAT THE PROPER SIZE & RATING OF THE MATERIALS ARE PURCHASED. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO COMPLY. THIS APPLIES TO ALL EQUIPMENT UNDER OTHER SECTIONS & BY THE OWNER.
- ALL RECEPTACLES SHALL MATCH THE MALE PLUG CONNECTOR OF ALL EQUIPMENT PROVIDED VERIFY PRIOR TO PURCHASE. SEE GENERAL NOTE 6.
- PULL ROPES: PROVIDE 12 GA PULL WIRE OR NYLON EQUIVALENT IN ALL INTERIOR EMPTY CONDUIT RUNS. PROVIDE 1/4" DIA NYLON PULL ROPE IN EACH EMPTY EXTERIOR CONDUIT OR DUCT.
- APPEARANCE AND WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND STANDARDS.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE THE ELECTRICAL WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- VERIFY THE EXACT LOCATION AND ELEVATION OF ALL ELECTRICAL EQUIPMENT PRIOR TO ROUGH-IN. FINAL CONNECTIONS OF EQUIPMENT SHALL BE PER MANUFACTURERS APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
- ORDER AND/OR RELEASE ORDERED MATERIALS PROMPTLY AFTER SUBMITTAL APPROVAL. NO SUBSTITUTIONS OR ALTERNATE METHODS OF INSTALLATION WILL BE ACCEPTED FOR FAILURE TO ORDER MATERIALS IN A TIMELY FASHION.
- OBTAIN WRITTEN APPROVAL FROM THE ENGINEER OF ALL SHOP DRAWINGS AND MANUFACTURERS DATA FOR PANEL BOARDS, TRANSFORMERS, WIRING DEVICES, ETC. BEFORE RELEASING ORDERED MATERIALS. SUBMITTAL DATA SHALL INDICATE THAT THE CONTRACTOR HAS REVIEWED THE INFORMATION THEREIN AND THAT THE PROPOSED EQUIPMENT WILL MEET THE PHYSICAL CONSTRAINTS AT THE JOB SITE. ANY SUBSTITUTIONS SHALL BE OF EQUIVALENT OR BETTER QUALITY THAN THE SPECIFIED COMPONENTS.
- TYPE MC OR TYPE AC CABLE SHALL ONLY BE USED WITH THE SPECIFIC WRITTEN PERMISSION OF THE ENGINEER. ENT TYPE CONDUIT IS NOT ALLOWED.
- CONDUIT/ CONDUCTOR RUNS SHOWN ARE DIAGRAMMATICAL ONLY. THE BEST FINAL CONDUIT ROUTING SHALL BE AS DETERMINED BY THE ELECTRICAL CONTRACTOR AT TIME OF CONSTRUCTION.
- ALL UNDERGROUND CONDUIT SHALL BE WRAPPED RIGID STEEL WITH THREADED COUPLINGS AND CONNECTORS, AND/ OR PVC SCHEDULE 40. ALL ELBOWS AND EXPOSED RISERS SHALL BE RIGID STEEL CONDUIT.
- SERIES RATING OF UPSTREAM OR DOWNSTREAM CIRCUIT BREAKERS OR FUSES IS PROHIBITED. ONLY FULLY RATED SYSTEM COMPONENTS WILL BE ACCEPTED.

ELECTRICAL GENERAL NOTES

- PROVIDE ALL PANEL BOARDS WITH TYPED DIRECTORIES INSTALLED UNDER A CLEAR PLASTIC COVER. DIRECTORIES WILL INCLUDE AT MINIMUM PANEL NAME, PANEL VOLTAGE & PHASE, CIRCUIT NUMBER, CIRCUIT NAME AND CIRCUIT BREAKER SIZE. CIRCUIT NAMES WILL BE UNIQUELY IDENTIFIED IN A MANNER THAT DISTINGUISHES IT FROM ALL OTHER CIRCUITS. SUBMIT DIRECTORY INFORMATION TO THE OWNER FOR APPROVAL PRIOR TO FINALIZATION. SEE SPEC SECTION 26.05.53 3.07 E PROVIDE LABEL ON ALL PANELS STATING "NO ADDITIONAL LOADS TO BE ADDED WITHOUT PRIOR APPROVAL OF BUILDING DEPARTMENT"
- PROVIDE ALL TRENCHING, EXCAVATION, BACK FILLING, SHORING, PUMPING, COMP ACTION TESTS, ETC. THAT ARE REQUIRED FOR THE SCOPE OF ELECTRICAL WORK. CONTRACTOR TO ARRANGE INSPECTION OF UNDERGROUND ELECTRICAL WORK PRIOR TO TRENCH BEING FILLED.
- ALL BRANCH CIRCUITS ARE COPPER. TYPE I OR II CONSTRUCTION: MC CABLE.
- OUTLET BOXES IN PLUMBING WALLS OR ON OPPOSITE SIDES OF SOUND-RATED PARTITIONS SHOULD BE SEPARATED BY AT LEAST 16 INCHES AND ONE EMPTY STUD BAY. THE EXPOSED BACKS AND SIDES SHOULD BE TREATED WITH LOWRY'S PADS. WHERE IT IS NOT POSSIBLE TO PROVIDE 16 INCH SEPARATION, A GYPSUM BOARD OR SHEET METAL BACKER PLATE SHOULD BE ATTACHED TO THE INNER FACE OF ONE ROW OF STUDS. THE BACKER SHOULD EXTEND EIGHT INCHES BEYOND THE EDGES OF THE BOXES IN QUESTION. SEE DETAILS 8 AND 12 ON SHEET A9.11 FOR JUNCTION BOX TREATMENT AT SOUND-RATED CONDITIONS.
- EXPANSION FITTINGS SHALL BE INSTALL ON ALL CONDUIT TRAVERSING SEISMIC JOINTS.
- CONTRACTOR TO ARRANGE FOR INSPECTION OF ELECTRICAL EQUIPMENT, INCLUDING CONDUCTOR TERMINATIONS IN PANELS, IN A DE-ENERGIZED CONDITION. SEE SPEC SECTION 26.24.16 3.04C
- ALL SWITCHBOARDS AND PANELBOARDS SHALL BE MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ARC FLASH HAZARDS PER CEC 110.16 AND NFPA 70E.
- SPECIFY WORKING SPACE REQUIRED TO BE MAINTAINED IN FRONT OF ALL SWITCHBOARDS AND, PANELBOARDS ON FRONT OF EQUIPMENT. IF ROOM IS ALSO USED FOR OTHER PURPOSES SIGNAGE AND OR FLOOR STRIPING WILL BE REQUIRED. SEE SPEC SECTION 26.05.53 2.07E
- ALL PANELBOARDS WILL BE IDENTIFIED ON THE FRONT OF THE PANEL WITH A MINIMUM OF PANEL NAME, VOLTAGE, PANEL/ SWITCHBOARD NAME AND LOCATION OF WHERE FED FROM. SEE SPEC SECTION 26.05.53 7.09
- SWITCHES, AND CONTROLS TO CONTROL LIGHTING, RECEPTACLE OUTLETS, APPLIANCES, HEATING AND VENTILATING EQUIPMENT IN ALL COMMON USE AREAS AND RECEPTACLES OF 30AMPS OR LESS AND COMMUNICATIONS SYSTEM RECEPTACLES TO BE 15" MINIMUM AND 48" MAXIMUM ABOVE FLOOR. THE LOWER REACH IS MEASURED TO THE BOTTOM OF BOX AND THE UPPER REACH IS MEASURED TO THE TOP OF THE BOX. SEE SPEC SECTION 26.27.26 3.01D.
- ALL PIPING SYSTEMS TO BE BONDED IN COMPLIANCE WITH CEC 250.104
- ALL ELECTRICAL PENETRATION OF FIRE RATED WALLS SHALL COMPLY WITH CBC SECTION 714.3. IF THE PENETRATION CANNOT COMPLY WITH THE EXCEPTIONS THAN SUBMIT A LISTED PENETRATION FIRE STOP SYSTEM AS SPECIFIED IN CBC SECTION 714.3.1.2 TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION. SEE SPEC SECTION 26.05.44 3.01 AND DETAILS ON SHEETS E5.1 AND E5.2.
- VERIFY TORQUE ON CIRCUIT BREAKER, PANELS AND WIRE CONNECTORS TO SPEC SECTION 260519, 262413, 262416, 262816. IF NOT COVERED UNDER SPECS USE VALUES IN CEC ANNEX I.
- CONDUCTORS THAT ARE MORE FINELY STRANDED THAN CLASS B OR C MUST BE TERMINATED IN ACCORDANCE WITH CEC. FERRULES ARE NOT ACCEPTABLES.
- CIRCUIT BREAKERS MUST BE LISTED FOR OPERATION AT 100% OF THEIR RATING IF THE FEEDER IS LESS THAN THE COMBINATION OF NON-CONTINUOUS LOADS AND 125% OF THE CONTINUOUS LOADS. THE CIRCUIT BREAKER MUST COMPLY WITH UL 489 INCLUDING PARAGRAPH 9.1.4.4, WHICH STATES: "A CIRCUIT BREAKER, HAVING A FRAME SIZE OF 250 A OR GREATER, OR A MULTI-POLE TYPE OF ANY AMPERE RATING RATED 250V; AND INTENDED FOR CONTINUOUS OPERATION AT 100 PERCENT OF RATING, SHALL BE MARKED :SUITABLE FOR CONTINUOUS OPERATION AT 100 PERCENT OF RATING ONLY IF USED IN CIRCUIT BREAKER ENCLOSURE TYPE
- REPLACEMENT OF RECEPTACLES SHALL COMPLY WITH CEC 406.4(D)(1) THROUGH (6) AS APPLICABLE. ARC FAULT CIRCUIT INTERRUPTER TYPE AND GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
- SUBMIT NEW MAIN SERVICE PANELS TO UTILITY COMPANY FOR APPROVAL PRIOR TO SUBMITTING TO ENGINEER.

J-4593



12/19/2017

NO.	DATE	REVISIONS/SUBMISSIONS

**VALLEY APARTMENT
POWER AND SOLAR PROJECT**
156 E. CLARKE ST.
BISHOP, CA. 93514

CALIFORNIA
INYO COUNTY,

DESIGNED BY: PKH	DRAWN BY: MWB	CHECKED BY: ERG	DATE: 19 DECEMBER 2017
---------------------	------------------	--------------------	---------------------------

**ELECTRICAL SYMBOL
LIST, GENERAL AND
DEMOLITION NOTES**



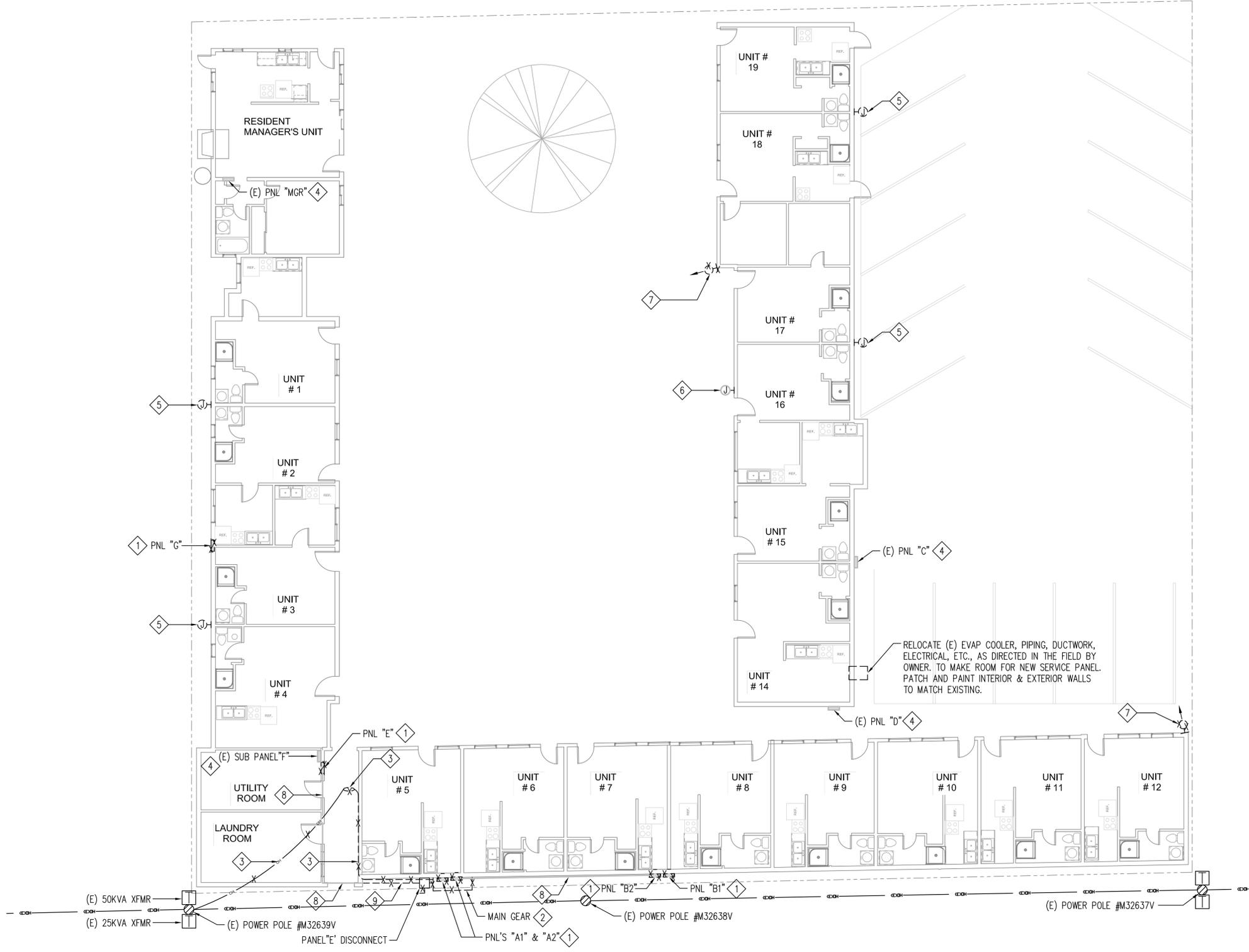
No.	REVISIONS/SUBMISSIONS	DATE

VALLEY APARTMENT
 POWER AND SOLAR PROJECT
 156 E. CLARKE ST.
 BISHOP, CA. 93514
 INYO COUNTY, CALIFORNIA

DESIGNED BY: PKH	DRAWN BY: MWB	CHECKED BY: ERG	DATE: 19 DECEMBER 2017
---------------------	------------------	--------------------	---------------------------

FIRST FLOOR
 DEMOLITION PLAN

E1.1
 SHEET 3 OF 14

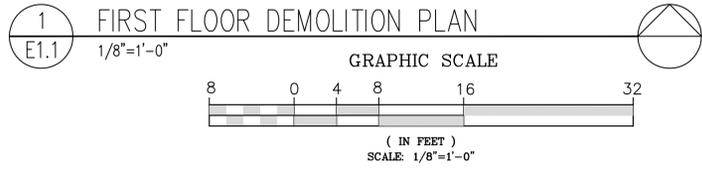


GENERAL NOTES

- EXISTING CONDUIT TO BE REUSED WERE PRACTICAL.
- KEEP UNITS OPERATIONAL IF POSSIBLE WHEN REPLACING PANELS. SUBMIT A PHASING PLAN TO THE OWNERS PRIOR TO ANY SHUT DOWN OF POWER.

SHEET NOTES

- EXISTING PANELS TO BE REMOVED AND REPLACED.
- REMOVE 2 METERS, MULTIPLE DISCONNECTS, WIRE CHANNEL, ETC.
- EXISTING POWER COMPANY FEEDER & WEATHER HEAD TO BE REMOVED.
- EXISTING PANEL TO REMAIN.
- EXISTING JUNCTION BOX TO BE REMOVED AND REPLACED.
- EXISTING JUNCTION BOX TO REMAIN.
- REMOVE EXISTING FLOOD LIGHT.
- EXISTING CONDUIT TO REMAIN.
- REMOVE EXISTING CONDUIT.





No.	REVISIONS/SUBMISSIONS	DATE
		12/19/2017

GENERAL NOTES

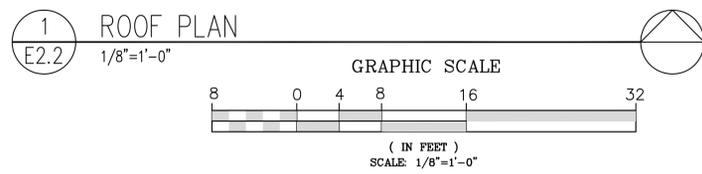
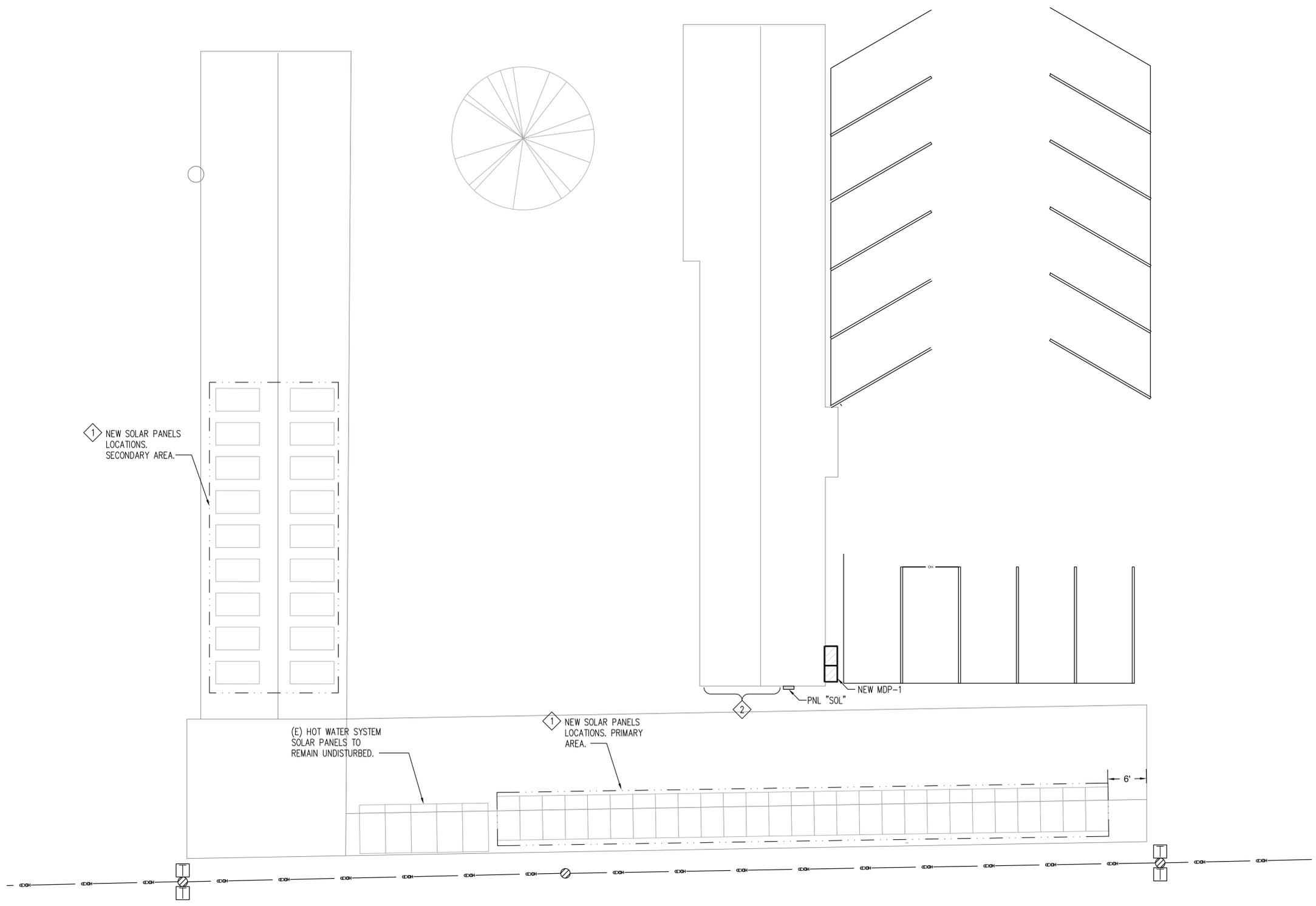
1. INSTALL SOLAR PANELS IN THESE AREAS TO MAKE AN OPERATIONAL 20K WATT SYSTEM.
2. INSTALL SOLAR PANELS AROUND EXISTING VENT PIPES, SATELLITE DISHES, ETC. AS TO PROVIDE MAXIMUM SOLAR INPUT.
3. SURFACE RUN CONDUIT ALONG ROOF TOP. IF 4 OR MORE CONDUCTORS ARE IN A SINGLE CONDUIT VERIFY CONDUIT SIZE AS PER CEC ART. 310.15.

**VALLEY APARTMENT
 POWER AND SOLAR PROJECT**
 156 E. CLARKE ST.
 BISHOP, CA. 93514
 INYO COUNTY, CALIFORNIA

DESIGNED BY: PKH
 DRAWN BY: MWB
 CHECKED BY: ERG
 DATE: 19 DECEMBER 2017

ROOF PLAN

E2.2
 SHEET 5 OF 14



SHEET NOTES

- 1 COORDINATE WITH STRUCTURAL CONTRACTOR ON PLACEMENT AND MOUNTING.
- 2 IF INVERTERS ARE NOT LOCATED ON ROOF WITH SOLAR PANELS LOCATE THEM ON THE WALL IN THIS AREA AT 4'-0" AFG.

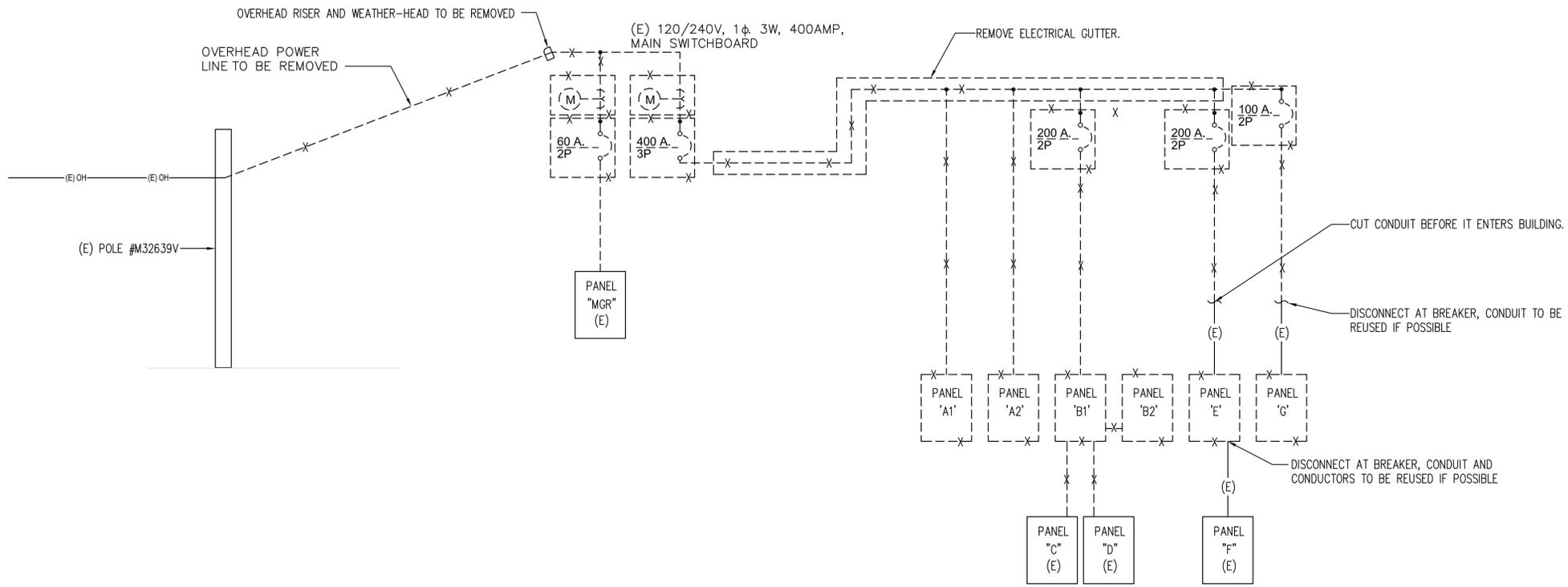


No.	REVISIONS/SUBMISSIONS	DATE

VALLEY APARTMENT
POWER AND SOLAR PROJECT
156 E. CLARKE ST.
BISHOP, CA. 93514
CALIFORNIA
INYO COUNTY,
19 DECEMBER 2017

DESIGNED BY: PKH
DRAWN BY: AMWB
CHECKED BY: ERG
DATE: 19 DECEMBER 2017

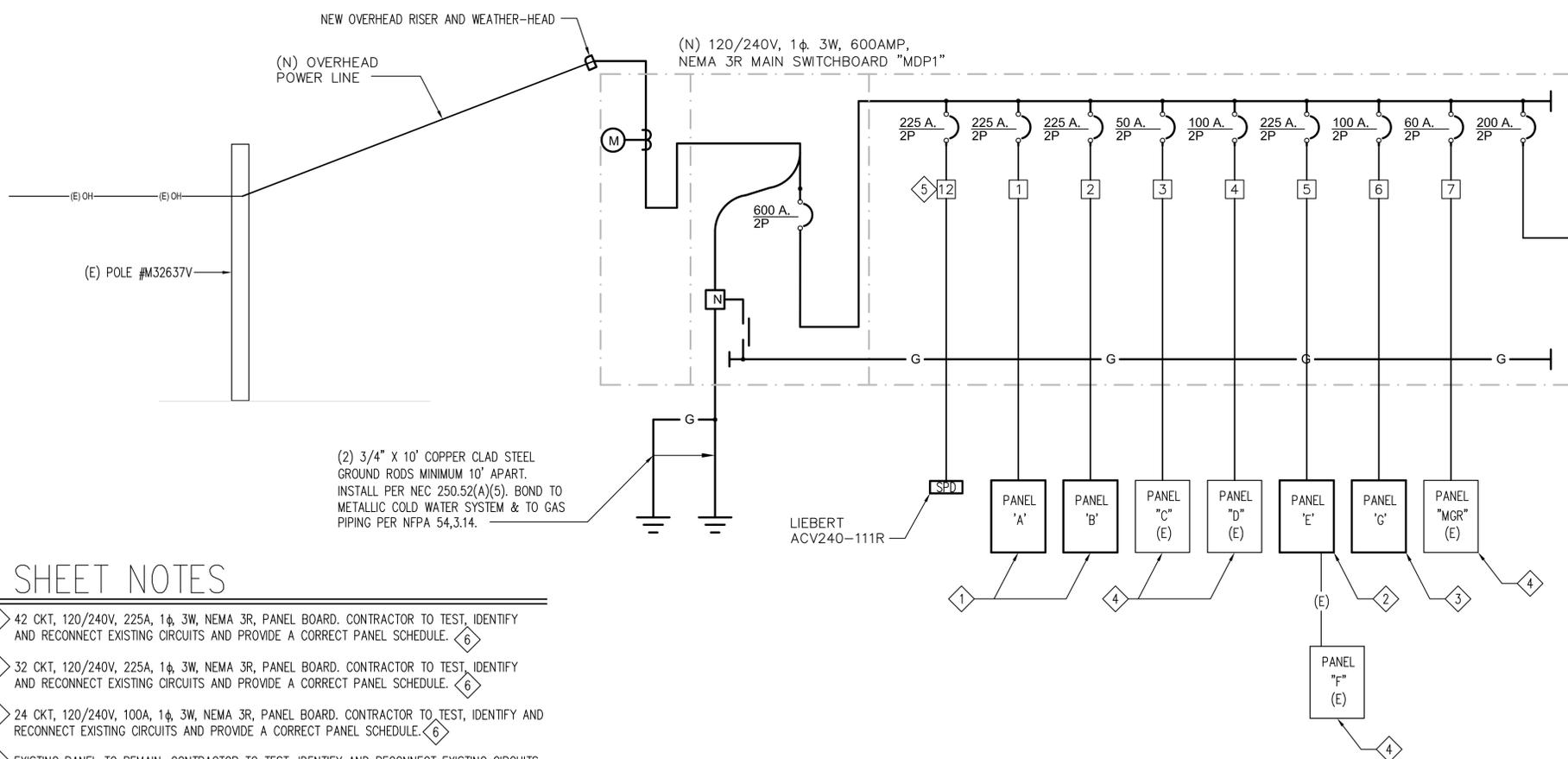
ELECTRICAL SINGLE
LINE DIAGRAM



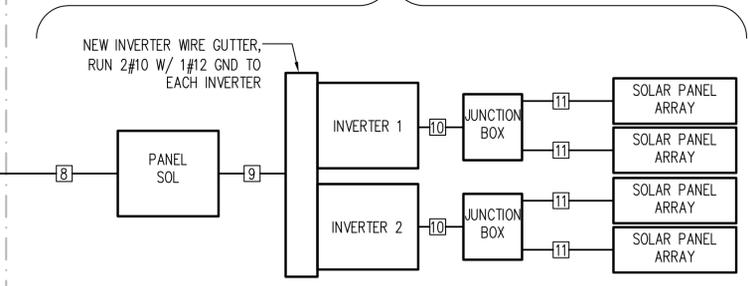
1 EXISTING SINGLE LINE DIAGRAM
E4.1 NTS

SWITCHBOARD LOAD CALCULATION		
APARTMENTS CALC SEE SHEET E4.2		
D.F FROM CEC TABLE 220-84	263305 x .38 D.F.	100,056 VA
INTERIOR HOUSE LIGHTS (LAUNDRY ROOM)	320 VA x 125%	400 VA
EXTERIOR LIGHTS	500 VA x 125%	625 VA
LAUNDRY EQUIPMENT (4 WASHERS & 4 DRYERS)	26960 VA x 1st 10KW @100% Rest @50%	18,480 VA
WATER HEATER	VA x 125%	0 VA
CIRC PUMP	VA x 125%	0 VA
TOTAL		119,561 VA
TOTAL x 240V 1PH		498 AMP MIN

ELECTRICAL CONTRACTOR TO COORDINATE WITH SOLAR CONTRACTOR FOR ELECTRICAL CONNECTIONS. SOLAR CONTRACTOR TO PROVIDE SOLAR PANELS, INVERTERS, ETC. TO MAKE AN OPERATIONAL 20K WATT SYSTEM. ALL PANELS, JUNCTION BOXES, ETC. NEEDS TO BE NEMA 3R.



2 NEW SINGLE LINE DIAGRAM
E4.1 NTS



FEEDER SCHEDULE					
NO.	FROM	TO	CONDUIT & WIRE THWN U.N.O.	CU.	AL.
1	MDP-1	PNL "A"	3 #4/0 THWN, #4 GND, 2"C.	X	
2	MDP-1	PNL "B"	3 #4/0 THWN, #4 GND, 2"C.	X	
3	MDP-1	PNL "C"	3 #6 THWN, #8 GND, 3/4"C.	X	
4	MDP-1	PNL "D"	3 #1 THWN, #8 GND, 1 1/4"C.	X	
5	MDP-1	PNL "E"	3 #4/0 THWN, #4 GND, 2"C.	X	
6	MDP-1	PNL "G"	3 #1 THWN, #8 GND, 1 1/4"C.	X	
7	MDP-1	PNL "MGR"	3 #4 THWN, #8 GND, 1"C.	X	
8	MDP-1	PANEL SOL	1-2"C WITH 3-#3/0 AND 1-#6 GND	X	
9	PANEL SOL	INVERTER GUTTER	1-2"C WITH (10) 2-#10 AND (10) 1-#12 GND	X	
10	INVERTER	JUNCTION BOX ON ROOF	4-#10 USE-2 AND 2-#10 BARE CU GND	X	
11	JUNCTION BOX ON ROOF	SOLAR ARRAY	2-#10 USE-2 AND 1-#10 BARE CU GND	X	
12	MDP-1	SPD	2 #10 THWN, #12 GND, 3/4"C.		5

SHEET NOTES

- 1 42 CKT, 120/240V, 225A, 1φ, 3W, NEMA 3R, PANEL BOARD. CONTRACTOR TO TEST, IDENTIFY AND RECONNECT EXISTING CIRCUITS AND PROVIDE A CORRECT PANEL SCHEDULE. 6
- 2 32 CKT, 120/240V, 225A, 1φ, 3W, NEMA 3R, PANEL BOARD. CONTRACTOR TO TEST, IDENTIFY AND RECONNECT EXISTING CIRCUITS AND PROVIDE A CORRECT PANEL SCHEDULE. 6
- 3 24 CKT, 120/240V, 100A, 1φ, 3W, NEMA 3R, PANEL BOARD. CONTRACTOR TO TEST, IDENTIFY AND RECONNECT EXISTING CIRCUITS AND PROVIDE A CORRECT PANEL SCHEDULE. 6
- 4 EXISTING PANEL TO REMAIN. CONTRACTOR TO TEST, IDENTIFY AND RECONNECT EXISTING CIRCUITS ON PANEL SCHEDULE. 6
- 5 NO LONGER THAN 10'-0".
- 6 REFER TO (A/E4.3) FOR PANEL SCHEDULES.

(2) 3/4" X 10' COPPER CLAD STEEL GROUND RODS MINIMUM 10' APART. INSTALL PER NEC 250.52(A)(5). BOND TO METALLIC COLD WATER SYSTEM & TO GAS PIPING PER NFPA 54,3.14.

PANEL BOARD		A				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
EXISTING LOAD		20/1	1	A	2	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	3	B	4	20/1		EXISTING LOAD	
UNIT 6		20/1	5	A	6	20/1		UNIT 6	
EXISTING LOAD		20/1	7	B	8	20/1		EXISTING LOAD	
UNIT 9		20/1	9	A	10	20/1		UNIT 9	
EXISTING LOAD		20/1	11	B	12	20/1		UNIT 7 BATH HEAT	
UNIT 6 COOL		20/1	13	A	14	20/1		UNIT 8 OUTLETS	
EXISTING LOAD		30/1	15	B	16	30/1		EXISTING LOAD	
EXISTING LOAD		30/1	17	A	18	30/1		EXISTING LOAD	
UNIT 7 WALL HEATER		20	19	B	20	20/1		EXISTING LOAD	
EXISTING LOAD		2	21	A	22	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	23	B	24	20/1		UNIT 9 HEAT	
EXISTING LOAD		20/1	25	A	26	20/1		EXISTING LOAD	
UNIT 8 KITCHEN HEATER		20	27	B	28	20/1		UNIT 8 BATH HEATER	
EXISTING LOAD		2	29	A	30	20/1		UNIT 8 COOLER	
UNIT 8 FAN		20/1	31	B	32	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	33	A	34	20/1		EXISTING LOAD	
SPARE		20/1	35	B	36	20/1		SPARE	
SPARE		20/1	37	A	38	20/1		SPARE	
SPARE		20/1	39	B	40	20/1		SPARE	
SPARE		20/1	41	A	42	20/1		SPARE	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					225 AMP MCB	
								225 AMP BUS	

PANEL BOARD		B				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
UNIT 12		20/1	1	A	2	20/1		UNIT 10	
UNIT 12		20/1	3	B	4	20/1		UNIT 10	
UNIT 11		20/1	5	A	6	20/1		UNIT 9	
UNIT 11		20/1	7	B	8	20/1		UNIT 9	
UNIT 9 STOVE		50	9	A	10	50		UNIT 10 STOVE	
EXISTING LOAD		2	11	B	12	2		EXISTING LOAD	
UNIT 8 STOVE		50	13	A	14	50		UNIT 12 STOVE	
EXISTING LOAD		2	15	B	16	2		EXISTING LOAD	
UNIT 7 STOVE		50	17	A	18	50		UNIT 11 STOVE	
EXISTING LOAD		2	19	B	20	2		EXISTING LOAD	
UNIT 11 KITCHEN HEATER		20/1	21	A	22	20/1		UNIT 12 BATH HEATER	
EXISTING LOAD		20/1	23	B	24	20/1		EXISTING LOAD	
UNIT 12 HEATER		20	25	A	26	20/1		EXISTING LOAD	
EXISTING LOAD		2	27	B	28	20/1		EXISTING LOAD	
UNIT 11 HEATER		20	29	A	30	20		UNIT 10 HEATER	
EXISTING LOAD		2	31	B	32	2		SPARE	
EXISTING LOAD		20/1	33	A	34	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	35	B	36	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	37	A	38	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	39	B	40	20/1		EXISTING LOAD	
SPARE		20/1	41	A	42	20/1		SPARE	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					225 AMP MCB	
								225 AMP BUS	

LOAD CENTER		C				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
EXISTING LOAD		20/1	1	A	3	40		EXISTING LOAD	
EXISTING LOAD		20/1	2	B	4	2		EXISTING LOAD	
EXISTING LOAD		20/1	5	A	7	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	6	B	8	20/1		EXISTING LOAD	
[Table content is crossed out with a large X]									
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					50 AMP MCB	
								50 AMP BUS	

PANEL BOARD		D				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
UNIT 17		20/1	1	A	2	20/1		UNIT 17	
UNIT 14		20/1	3	B	4	20/1		UNIT 14	
EXISTING LOADS		50	5	A	6	50		EXISTING LOAD	
EXISTING LOAD		2	7	B	8	2		EXISTING LOAD	
UNIT 14 HEATER		15	9	A	10	15/1		EXISTING LOAD	
EXISTING LOAD		2	11	B	12	15		UNIT 15 HEATER	
UNIT 16 HEATER		15	13	A	14	2		EXISTING LOAD	
EXISTING LOAD		2	15	B	16	15		UNIT 17 HEATER	
UNIT 18 HEATER		15	17	A	18	2		EXISTING LOAD	
EXISTING LOAD		2	19	B	20	15		UNIT 19 HEATER	
EXTERIOR LIGHTS (NEW)	500	20/1	21	A	22	2		EXISTING LOAD	
EXISTING LOAD		23	23	B	24			EXISTING LOAD	
EXISTING LOAD		25	25	A	26			EXISTING LOAD	
EXISTING LOAD		27	27	B	28			EXISTING LOAD	
EXISTING LOAD		29	29	A	30			EXISTING LOAD	
CONNECTED LOAD	500 VA	(	2.1 A)					OTHER NOTES:	
A=	500 VA		4.2 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					100 AMP MCB	
								100 AMP BUS	

PANEL BOARD		E				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
WASHROOM HEATER		20/1	1	A	2	20/1		UNIT 5	
EXISTING LOAD		2	3	B	4	20/1		UNIT 5	
WASHERS		20/1	5	A	6	20/1		UNIT 7	
WASHERS		20/1	7	B	8	20/1		UNIT 7	
UNIT 8		20/1	9	A	10	20/1		UNIT 6	
UNIT 8		20/1	11	B	12	20/1		UNIT 6	
UNIT 4		20/1	13	A	14	30		DRYER	
UNIT 4		20/1	15	B	16	2		DRYER	
DRYER		30	17	A	18	50		UNIT 5 STOVE	
EXISTING LOAD		2	19	B	20	2		UNIT 5 STOVE	
UNIT 6 STOVE		50	21	A	22	50		UNIT 1 STOVE	
EXISTING LOAD		2	23	B	24	2		UNIT 1 STOVE	
UNIT 4 STOVE		50	25	A	26	90		PANEL "F"	
EXISTING LOAD		2	27	B	28	2		PANEL "F"	
SPARE		20/1	29	A	30	20/1		SPARE	
SPARE		20/1	31	B	32	20/1		SPARE	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					225 AMP MCB	
								225 AMP BUS	

PANEL BOARD		F				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
UTILITY ROOM		20/1	1	A	2	20/1		UNIT 1	
TIME CLOCK		20/1	3	B	4	20/1		UNIT 1	
UNIT 1 HEATER		15	5	A	6	15		UNIT 3 HEATER	
EXISTING LOAD		2	7	B	8	2		UNIT 3 HEATER	
UNIT 2 HEATER		15	9	A	10	15		UNIT 4 HEATER	
EXISTING LOAD		2	11	B	12	2		UNIT 4 HEATER	
SPACE		-	13	A	14	-		SPACE	
SPACE		-	15	B	16	-		SPACE	
SPACE		-	17	A	18	-		SPACE	
SPACE		-	19	B	20	-		SPACE	
SPACE		-	21	A	22	-		SPACE	
SPACE		-	23	B	24	-		SPACE	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					90 AMP MLO	
								90 AMP BUS	

PANEL BOARD		G				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
EXISTING LOAD		20/1	1	A	3	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	3	B	4	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	5	A	6	20/1		EXISTING LOAD	
EXISTING LOAD		15/1	7	B	8	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	9	A	10	15/1		EXISTING LOAD	
EXISTING LOAD		15/1	11	B	12	20/1		SPARE	
SPARE		20/1	13	A	14	20/1		SPARE	
SPACE		-	15	B	16	-		SPACE	
SPACE		-	17	A	18	-		SPACE	
SPACE		-	19	B	20	-		SPACE	
SPACE		-	21	A	22	-		SPACE	
SPACE		-	23	B	24	-		SPACE	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					100 AMP MCB	
								100 AMP BUS	

LOAD CENTER		MGR				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
EXISTING LOAD		20/1	1	A	3	20/1		EXISTING LOAD	
EXISTING LOAD		20/1	2	B	4	20/1		SPACE	
EXISTING LOAD		50	5	A	7	20/1		EXISTING LOAD	
EXISTING LOAD		2	6	B	8	20/1		EXISTING LOAD	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					60 AMP MCB	
								60 AMP BUS	

PANEL BOARD		SOL				EXISTING			
DIRECTORY	LOAD	BKR	CIR		CIR	BKR	LOAD	DIRECTORY	
EXISTING LOAD		1	A	2				EXISTING LOAD	
EXISTING LOAD		3	B	4				EXISTING LOAD	
EXISTING LOAD		5	A	6				EXISTING LOAD	
EXISTING LOAD		7	B	8				EXISTING LOAD	
EXISTING LOAD		9	A	10				EXISTING LOAD	
EXISTING LOAD		11	B	12				EXISTING LOAD	
EXISTING LOAD		13	A	14				EXISTING LOAD	
EXISTING LOAD		15	B	16				EXISTING LOAD	
EXISTING LOAD		17	A	18				EXISTING LOAD	
EXISTING LOAD		19	B	20				EXISTING LOAD	
EXISTING LOAD		21	A	22				EXISTING LOAD	
EXISTING LOAD		23	B	24				EXISTING LOAD	
CONNECTED LOAD	0 VA	(	0 A)					OTHER NOTES:	
A=	0 VA		0 A					120/240V., 1PH, 3W	
B=	0 VA		0 A					200 AMP MCB	
								200 AMP BUS	

SHEET NOTES

1 ELECTRICAL CONTRACTOR WILL PROVIDE PANEL AND WILL MAKE CONNECTIONS TO MAIN SWITCHBOARD. SOLAR CONTRACTOR WILL PROVIDE CIRCUIT BREAKERS AS NEEDED AND WILL MAKE ALL OTHER CONNECTIONS AS NEEDED FOR A COMPLETE SYSTEM.

DINTER
 ENGINEERING CONFIDENCE
 Airfield Electrical Mechanical
 385 Gentry Way
 Reno, NV 89502
 Ph: 775.826.4044
 Fax: 775.826.4190
 Web: dinter.com
 J-4593

PROFESSIONAL
 REGISTERED ELECTRICAL ENGINEER
 No. E 19598
 Exp. 6/30/19
 STATE OF CALIFORNIA
 12/19/2017

NO.	REVISIONS/SUBMISSIONS	DATE

1. GENERAL

- 1.1 THE FOLLOWING STRUCTURAL NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
- 1.2 PROMPTLY REPORT ANY DISCREPANCY FOUND AMONG THESE NOTES, DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS TO THE ENGINEER, WHO WILL CORRECT SUCH DISCREPANCIES IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCY IS AT THE CONTRACTORS OWN RISK. VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. IT IS THE CONTRACTORS RESPONSIBILITY FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION.
- 1.3 DO NOT SCALE WORKING DIMENSIONS FROM THESE PLANS, SECTIONS, OR DETAILS. DIMENSIONS REFER TO FACE OF STUDS, TOP OF SHEATHING OR TOP OF SLAB UNLESS OTHERWISE INDICATED.
- 1.4 DETAILS OF THE CONSTRUCTION NOT FULLY SHOWN OR NOTED ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS SHALL BE OF THE SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED.
- 1.5 THE WORD "TYPICAL" SHALL MEAN THAT INFORMATION SHOWN SHALL BE APPLIED TO ALL SIMILAR CONDITIONS WHETHER OR NOT THE INFORMATION IS SPECIFICALLY REFERENCED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 1.6 MODIFICATIONS OR SUBSTITUTIONS TO THE DESIGN, MATERIALS, OR PRODUCTS SPECIFIED ON THE PLANS ARE PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
- 1.7 THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES AND TO PAY ALL ASSOCIATED FEES PRIOR TO CONSTRUCTION.
- 1.8 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING A SAFE WORK ENVIRONMENT IN ACCORDANCE WITH ALL LOCAL, STATE, FEDERAL SAFETY AND HEALTH STANDARDS LAWS AND REGULATIONS. THE CONTRACTOR SHALL EXECUTE WORK TO ENSURE SAFETY OF PERSONS AND PROPERTY AGAINST DAMAGE AND SHALL PROVIDE ADEQUATE SHORING AND BRACING AS REQUIRED FOR STABILITY DURING ALL PHASES OF CONSTRUCTION.
- 1.9 THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE MEANS AND METHODS OF CONSTRUCTION. STRUCTURAL CALCULATIONS AS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENTS ARE BASED ON A COMPLETED STRUCTURE. THE STRUCTURAL ADEQUACY OF THE PARTIALLY COMPLETED STRUCTURE TO RESIST APPLIED LOADS IS BEYOND THE SCOPE OF THESE STRUCTURAL DRAWINGS.

2. DESIGN CRITERIA

- 2.1 DESIGN, MATERIALS, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE 2016 CALIFORNIA BUILDING CODE AS AMENDED AND ADOPTED BY THE CITY OF BISHOP, CA
- 2.2 ALL OTHER CODES AND STANDARDS SHALL BE THE MOST CURRENT ADOPTED EDITION AS OF THE DATE OF THESE DRAWINGS.
- 2.3 SNOW LOADS:

SNOW LOAD IMPORTANCE FACTOR, Is:	1.0	
GROUND SNOW LOAD, Pg:	50 PSF	(ELEV: 4145')
FLAT ROOF/PANEL SNOW LOAD, Pf:	35 PSF	
SNOW EXPOSURE FACTOR, Ce:	1.0	
THERMAL FACTOR, Ct:	1.0	
- 2.4 WIND DESIGN:

BASIC WIND SPEED, Vult:	115 MPH
NOMINAL WIND SPEED, Vasd:	90 MPH
RISK CATEGORY:	II
WIND EXPOSURE:	B
INTERNAL PRESSURE COEFFICIENT:	±0.18
VELOCITY PRESSURE AT MEAN HEIGHT:	16.6 PSF
MINIMUM PANEL LOAD RATING:	17.5 PSF (1.0 W)
- 2.5 SEISMIC DESIGN:

RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR, Is:	1.0
MAPPED SPECTRAL ACCELERATION, Ss:	1.47 g
S1:	0.47 g
SITE CLASS:	D
SPECTRAL RESPONSE COEFFICIENT, Sds:	0.98 g
Sd1:	0.48 g
SEISMIC DESIGN CATEGORY:	D

3. WOOD CONSTRUCTION

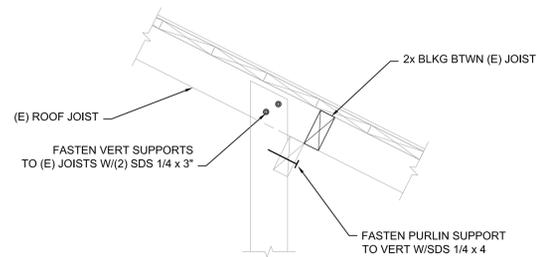
- 3.1 FRAMING SHALL CONFORM TO CBC CHAPTER 23 AND AF&PA'S NDS.
- 3.2 PROTECT ALL WOOD FRAMING MATERIALS FROM EXCESSIVE MOISTURE AND OR EXPOSURE AFTER DELIVERY TO JOB SITE. WOOD FRAMING SHALL BE STACKED ABOVE GRADE AND COVERED PRIOR TO INSTALLATION.
- 3.3 SAWN LUMBER SHALL BE STAMPED DOUGLAS-FIR #2 AS DEFINED IN THE NDS, TABLES 4A AND 4D WITH A MAXIMUM MOISTURE CONTENT 19% AT TIME OF INSTALLATION AND PRIOR TO BEING COVERED WITH INSULATION OR WALL AND FLOOR FINISHES.
- 3.4 USE COMMON NAILS ONLY. BOX NAILS AND SINKERS (VS) ARE NOT ACCEPTABLE. WHERE NAILS ARE EXPOSED TO WEATHER, USE ZINC COATED, OR STAINLESS STEEL CONFORMING TO IBC 2318.3
- 3.5 USE FRAMING HARDWARE AS MANUFACTURED BY SIMPSON STRONG-TIE OF THE SIZE AND TYPE INDICATED ON THESE PLANS. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS. USE THE MAXIMUM NUMBER OF FASTENERS FOR EACH CONNECTION, UNO.
- 3.6 FRAMING HARDWARE SHALL BE HOT-DIP GALVANIZED (G90 MIN COATING).
- 3.7 FOR WOOD TO WOOD NAILED CONNECTIONS USE A MINIMUM SPACING AND EDGE DISTANCE OF (1) DIAMETERS AND (6) DIAMETERS RESPECTIVELY.
- 3.8 WHERE REQUIRED TO AVOID SPLITTING, PRE-DRILL HOLES WITH A DRILL DIAMETER EQUAL TO THE NEXT SMALLER NAIL DIAMETER. IN NO CASE SHALL HOLES EXCEED 75% OF NAIL DIAMETER.
- 3.9 TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30° AND SHALL BE LOCATED WITHIN 1/3 OF THE NAIL LENGTH FROM THE END OF THE MEMBER.

4. MISCELLANEOUS

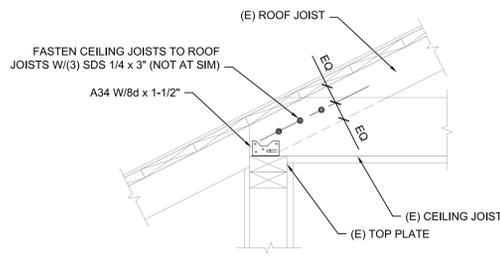
INSTALL AND ANCHOR ELECTRICAL EQUIPMENT, INCLUDING PIPES AND CONDUITS FOR THE FORCES PRESCRIBED IN CBC SECTION 1613. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORTS REQUIRED WITHIN THE ROOF FRAMING.

5. SPECIAL INSPECTIONS AND TESTING

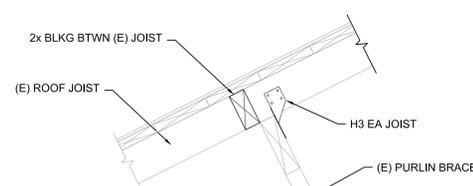
SPECIAL INSPECTIONS ARE NOT REQUIRED PER CBC CHAPTER 17 FOR THIS SCOPE OF CONSTRUCTION.



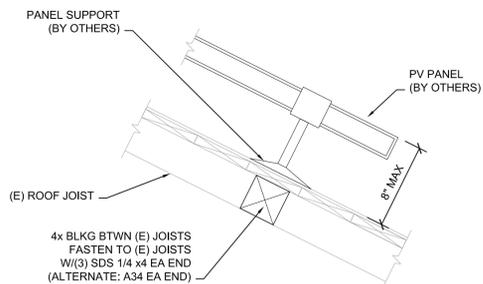
TYPICAL PURLIN BRACE CONNECTION
SCALE: 1-1/2" = 1'-0" 203
S1.0



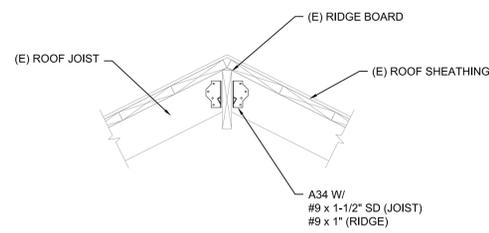
TYPICAL EAVE CONNECTION
SCALE: 1-1/2" = 1'-0" 202
S1.0



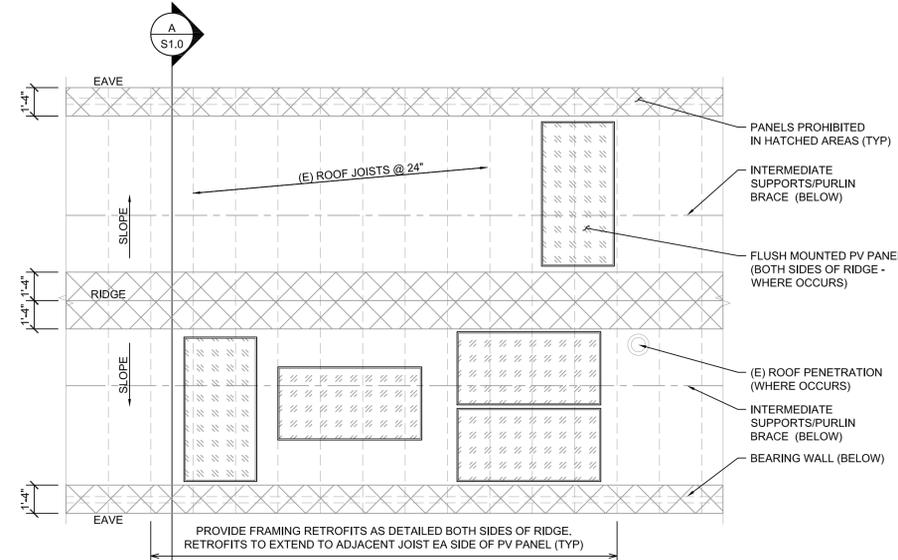
TYPICAL PURLIN BRACE CONNECTION
SCALE: 1-1/2" = 1'-0" 201
S1.0



BLOCKING AT PANEL SUPPORT
SCALE: 1-1/2" = 1'-0" 204
S1.0

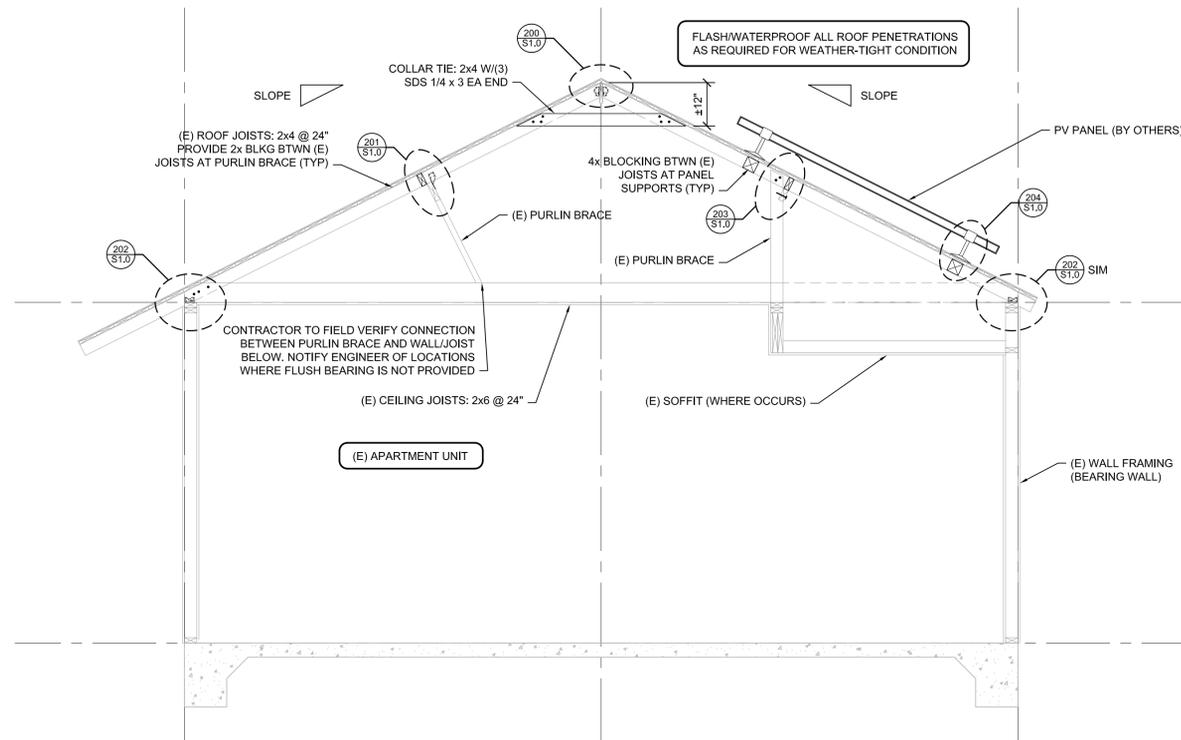


TYPICAL RIDGE CONNECTION
SCALE: 1-1/2" = 1'-0" 200
S1.0



PARTIAL ROOF PLAN - GENERAL
SCALE: 1/4" = 1'-0"

- PLAN NOTES:**
1. ROOF PLAN IS FOR USE WITH THE PROPOSED ROOFTOP SOLAR INSTALLATION ONLY AND IS INTENDED TO DEPICT MINIMUM REQUIRED STRENGTHENING TO THE EXISTING ROOF FRAMING.
 2. PANELS ARE ASSUMED FLUSH-MOUNTED TO EXISTING ROOF/ROOF FRAMING AND ASSUMES PANEL HEIGHT ABOVE ROOF SURFACE < 8".
 3. PANEL ORIENTATION AND SPACING IS FOR REFERENCE ONLY. SEE ELECTRICAL AND SOLAR INSTALLATION PLANS FOR ADDITIONAL INFORMATION. PROVIDE 3/8" MINIMUM GAP BETWEEN ADJACENT PANELS.
 4. WATER-PROOFING AND WEATHER-TIGHTNESS OF ROOF ASSEMBLY AFTER INSTALLATION OF PV PANELS SHALL BE THE RESPONSIBILITY OF THE SOLAR INSTALLER.
 5. SOLAR INSTALLER SHALL SUBMIT LAYOUT PLANS AND INCLUDING ANCHORAGE DETAILS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE LOAD RATING FOR THE SOLAR PANELS SELECTED BY THE CONTRACTOR MUST MEET OR EXCEED THE ACTUAL DESIGN SNOW AND WIND PRESSURES AS SHOWN ON THESE PLANS. ALL PANELS ARE TO BE LISTED AND LABELED IN ACCORDANCE WITH UL 1703 PER CBC 1510.7.4 FOR THE PANEL ORIENTATION SHOWN.
 6. ALL EXPOSED STEEL FASTENERS AS REQUIRED FOR MOUNTING OF THE PROPOSED ROOFTOP PV SYSTEM SHALL BE BE STAINLESS STEEL (TYPE 304 MIN), HDG (ASTM A153, CLASS D OR ASTM F2329) OR PROTECTED WITH CORROSION-PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1000 HRS OF EXPOSURE (ASTM B117).
 7. ATTACHMENT OF SOLAR PANELS TO THE STRUCTURE SHALL BE DESIGNED TO RESIST THE SHEARING FORCE FROM SNOW.



TYPICAL BUILDING SECTION
SCALE: 1/2" = 1'-0" A
S1.0

REV	DATE	DESCRIPTION	APPROV



VALLEY APARTMENTS - POWER AND SOLAR PROJECT
156 E. CLARK ST. BISHOP, CA 93514
STRUCTURAL NOTES, FRAMING PLAN
TYPICAL SECTION, DETAILS
INYO COUNTY CALIFORNIA

DRAWN: T.J.L.
CHECKED: T.J.L.
DATE: 12/19/17
SCALE: AS SHOWN
PROJECT NO: 1141706

SHEET NO:
S1.0

