STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)2I for outdoor lighting scopes using the prescriptive path.	
Project Name: Niland Public Safety Facility	Report Page: Page 1 of 6
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

A. GENERAL INFORMATION

01	Project Location (city)	Niland	04	Total Illuminated Hardscape Area (ft²)	0
02	Climate Zone	15			

03 Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):

- ☐ LZ-0: Very Low - Undeveloped Parkland
- ☐ LZ-1: Low - Developed Parkland
- ☐ LZ-2: Moderate - Rural Areas
- ☑ LZ-3: Moderately High - Urban Areas
- ☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval

B. PROJECT SCOPE

Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2I for alterations.

My project consists of:

01	02
☑ New Lighting System	Must Comply with Allowances from §140.7.
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No

FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2I												Compliance Results	
01		02		03		04		05		06		07	08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)3	+	Ornamental §140.7(d)3	+	Per Specific Area §140.7(d)2	OR	Existing Power §141.0(b)2L	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 Must be ≥ 08**
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		(See Table N)				(See Table F)	
520	=		+		+	484	OR		=	1,004	≥	484		**COMPLIES**	
Cutoff Compliance (See Table G for Details)												**Not Applicable**			
Controls Compliance (See Table H for Details)												**COMPLIES**			

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Niland Public Safety Facility	Report Page: Page 2 of 6
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2I, (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1]	How Wattage is determined	Total number luminaires	Luminaire Status[2]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 150W §130.2(b)[3]	Field Inspector	
									Pass	Fail
F8	F8 - 4" Recessed Downlight W/Dim.	12	Mfr. Spec	7	New	☐	84		☐	☐
S1	S1 - 40W LED Wall Pack W/ Photocell	40	Mfr. Spec	10	New	☐	400		☐	☐
						Total Designed Watts:	**484**			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).

G. CUTOFF REQUIREMENTS (BUG)

This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards September 2017

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Niland Public Safety Facility	Report Page:
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (or untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 07, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.*

Mandatory Controls

01	02	03	04	05	06	07	08	
Area Description	Motion Sensor: Incandescent>100W §130.2(a)	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Sales Frontage §130.2(c)4	Façade, Ornament, Outdoor Dining §130.2(c)5	Field Inspector	
							Pass	Fail
Building Facade	NA: No Incand>100W	Photocontrol	Yes	Yes	NA: No Sales Front Ltg	No Applicable Lt	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).

I. LIGHTING POWER ALLOWANCE (per §140.7)

Table Instructions: Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lost it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

General Hardscape Allowance	"Use it or lose it" Allowance (Watts)				
☐	☐ Per Application	☐ Sales Frontage	☐ Ornamental	☑ Per Specific Area	
	Table I (below)	Table J	Table K	Table L	Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
		0.04	0		0.35	0	0

Initial Wattage Allowance for Entire Site (Watts):	**520**
Total General Hardscape Allowance (Watts):	**520**

J. LIGHTING ALLOWANCE: PER APPLICATION

This Section Does Not Apply

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards September 2017

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Niland Public Safety Facility	Report Page: Page 4 of 6
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL

This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

Table Instructions: Please complete this table for areas using the wattage allowance per specific area type from Table 140.7-B. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

01	02	03	04	05	06	07	08	09	10
Area Description	Specific Area Type per Table 140.7-B	CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				Additional Allowance (Watts)
		Specific Area (ft²)[1]	Allowed Density (W/ft²)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	
Exterior Lighting	Bldg Façade	4,945	0.35	1,730.75	F8	12	7	84	
Exterior Lighting	Bldg Façade	4,945	0.35	1,730.75	S1	40	10	400	
						Total Design Watts for this Area:		484	484
							Total Allowance (Watts) All Areas:		**484**

[1] *FOOTNOTES: See Table 140.7-B for the rules for calculating the specific areas (ft²) for these additional lighting allowances.*

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This Section Does Not Apply

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards September 2017

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Niland Public Safety Facility	Report Page: Page 5 of 6
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRC)

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCI-LTO-01-E - Must be submitted for all buildings.	☐	☐
◉	○	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	☐	☐

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards September 2017

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 9/17) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Niland Public Safety Facility	Report Page: Page 6 of 6
Project Address: 8071 Luxor Ave	Date Prepared: 5/14/2019

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Documentation Author Name:	Leonard P. Maya	Documentation Author Signature:	
Company:	Design West Engineering	Signature Date:	05/14/2019
Address:	275 W. Hospitality Lane, Suite #100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Bernardino, CA 92408	Phone:	(909) 890-3700

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Leonard P. Maya	Responsible Designer Signature:	
Company :	Design West Engineering	Date Signed:	05/14/2019
Address:	275 W. Hospitality Lane, Suite #100	License:	E-19480
City/State/Zip:	San Bernardino, CA 92408	Phone:	(909) 890-3700

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards September 2017

HOLT ARCHITECTURE
70225 HWY 111, SUITE D
RANCHO MIRAGE, CA 92270
PH: 760.328.5280
3891 11TH STREET
RIVERSIDE, CA 92501
PH: 951.462.1451

CONSULTANT:
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS
275 W. Hospitality Lane Suite #100
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
email: info@designwesteng.com

STAMPS:
REGISTERED PROFESSIONAL ENGINEER LEONARD P. MAYA No. E19480 Exp. 6-30-2021 ELECTRICAL STATE OF CALIFORNIA

PROJECT:
NILAND PUBLIC SAFETY FACILITY

8071 LUXOR AVE.
NILAND CA 92257

CLIENT:
IMPERIAL COUNTY CALIFORNIA 1907

MARK	DATE	DESCRIPTION
	04/09/19	PLAN CHECK SUBMITTAL #1
1	05/14/19	PLAN CHECK SUBMITTAL #2
2	06/11/19	PLAN CHECK SUBMITTAL #3

PROJECT NO.:	TGH.012
DRAWN BY:	Author
CHK'D BY:	Checker
ORIGINAL DATE:	

SHEET TITLE:
TITLE 24 DOCUMENTS

SHEET No.:
E-0.4

19-022

© 2018 Holt Architects, Inc.
C:\Users\rodriguez\Documents\19-022 Niland Public Safety Building_MEP_Central_rodriguez.rvt

600V FEEDER SCHEDULE 1ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

600V FEEDER SCHEDULE 3ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
30-D	30A-3W	1	3 # 10	NA	1 # 10	3/4"
50-D	50A-3W	1	3 # 6	NA	1 # 10	1"

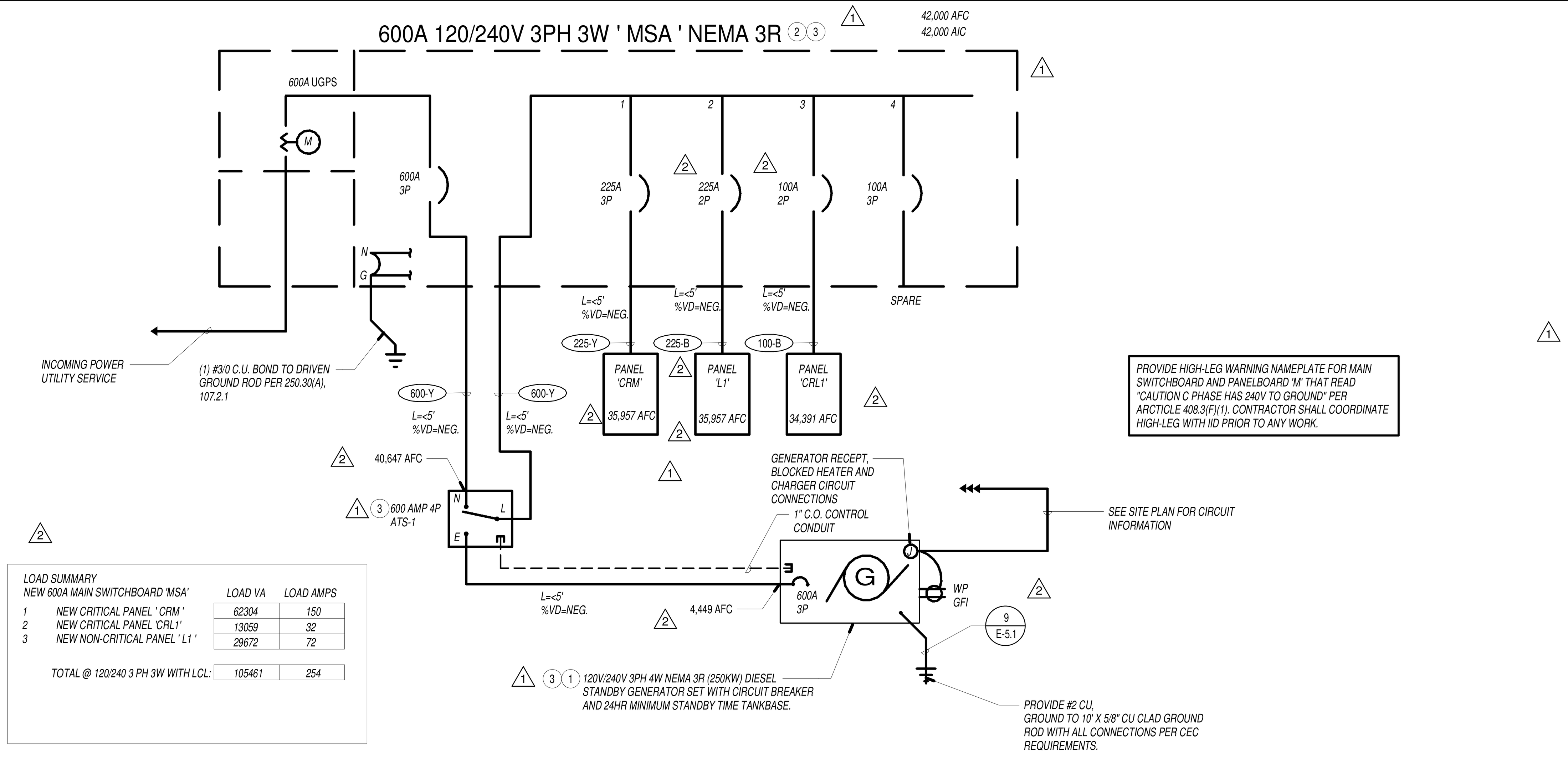
NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

600V FEEDER SCHEDULE 3ø 4W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
225-Y	225A-4W	1	3 # 4/0	1 # 4/0	1 # 4	2-1/2"
250-Y	250A-4W	1	3 # 250 KCM	1 # 250 KCM	1 # 4	2-1/2"
300-Y	300A-4W	1	3 # 350 KCM	1 # 350 KCM	1 # 4	3"
350-Y	350A-4W	1	3 # 500 KCM	1 # 500 KCM	1 # 2	4"
400-Y	400A-4W	1	3 # 600 KCM	1 # 600 KCM	1 # 2	4"
450-Y	450A-4W	2	3 # 4/0	1 # 4/0	1 # 2	3"
500-Y	500A-4W	2	3 # 250 KCM	1 # 250 KCM	1 # 2	3"
600-Y	600A-4W	2	3 # 350 KCM	1 # 350 KCM	1 # 1/0	4"
700-Y	700A-4W	2	3 # 500 KCM	1 # 500 KCM	1 # 1/0	4"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

FEEDER SCHEDULES | 3



LOAD SUMMARY
NEW 600A MAIN SWITCHBOARD 'MSA'

		LOAD VA	LOAD AMPS
1	NEW CRITICAL PANEL ' CRM '	62304	150
2	NEW CRITICAL PANEL 'CRL1'	13059	32
3	NEW NON-CRITICAL PANEL ' L1 '	29672	72
	TOTAL @ 120/240 3 PH 3W WITH LCL:	105461	254

SINGLE LINE DIAGRAM | 1

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKERS, PANELBOARDS AND TRANSFORMERS SHALL BE OF THE SAME MANUFACTURER.
3. ALL NEW SWITCHBOARDS DISTRIBUTION SECTIONS SHALL BE EQUIPPED WITH FULL HEIGHT VERTICAL BUSSING TO ACCOMMODATE MAXIMUM UTILIZATION OF SPACE FOR DEVICES.
4. ALL GROUND CONNECTIONS SHALL BE CADWELD.
5. AVAILABLE FAULT AT SERVICE POINT SHALL BE CONSIDERED AT 42,000 RMS SYM.
6. ALL PANELBOARDS SHALL BE FULLY RATED FOR THE AVAILABLE FAULT UNLESS OTHERWISE NOTED.
7. THE FEEDER LENGTHS SHOWN ON THESE DRAWINGS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT VALID FOR BIDDING.
8. REFER TO DETAIL 12 ON SHEET E-5.1 FOR SERVICE AND DISTRIBUTION GROUNDING.
9. CONTRACTOR SHALL CONDUCT, WITH ASSISTANCE OF SWITCHGEAR MANUFACTURER OR LICENSED ENGINEER, AN ELECTRICAL HAZARD ANALYSIS CONSISTING OF AN ARC FLASH, SHORT CIRCUIT, AND COORDINATION STUDY TO DETERMINE APPROPRIATE LEVELS OF PERSONNEL PROTECTIVE EQUIPMENT (PPE) AS REQUIRED BY NFPA 70E AND IEEE STD 1584, AND TO ENSURE PROPER COORDINATION (INCLUDING GROUND FAULT COORDINATION) EXISTS BETWEEN ALL OVER-CURRENT PROTECTIVE DEVICES SHOWN ON SINGLE-LINE DIAGRAM ADDITIONALLY
   - A. STUDY SHALL INCLUDE ALL PORTIONS OF ELECTRICAL SINGLE-LINE DIAGRAM. NORMAL SYSTEM CONNECTIONS AND THOSE THAT RESULT IN MAXIMUM FAULT CONDITION SHALL BE ADEQUATELY COVERED IN THE STUDY. PERFORM STUDY WITH THE AID OF A COMPUTER PROGRAM, SKM CAPTOR, OR EQUAL. STUDY SHALL IDENTIFY SELECTIVE COORDINATION SUCH THAT DEVICE CLOSEST TO FAULT WILL TRIP FIRST. GROUND FAULT PORTION OF THE STUDY SHALL DEMONSTRATE COORDINATION OF MAIN BREAKER AND ANY FEEDER GROUND FAULT DEVICES WITH DOWNSTREAM CIRCUIT BREAKERS 30A AND LESS.
   - B. CONTRACTOR SHALL BE RESPONSIBLE TO RECOMMEND SETTINGS OF ALL DEVICES AND TO INCLUDE GROUND FAULT SETTINGS NECESSARY TO ACHIEVE SYSTEM COORDINATION. CONTRACTOR SHALL FIELD ADJUST DEVICES ACCORDINGLY UTILIZING A QUALIFIED MANUFACTURER'S REPRESENTATIVE.
   - C. DURING THE CONSTRUCTION PHASE OF THE PROJECT ALL GROUND FAULT RELAYS SHALL BE SET AT SHORTEST AVAILABLE TIME DELAY.
   - D. RESULTS OF COORDINATION STUDY SHALL BE SUBMITTED AS PART OF OVERALL SWITCHGEAR SUBMITTAL AND SHALL INCLUDE PROTECTIVE DEVICE TIME VERSUS CURRENT COORDINATION CURVES, GROUPING APPROPRIATE DEVICES TOGETHER. TABULATIONS OF RELAY AND CIRCUIT BREAKER TRIP SETTINGS, FUSE SELECTION, AND COMMENTARY REGARDING SAME.
   - E. A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER NEC (CEC-WHERE ADOPTED) 230.95(C). GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN PRESENCE OF LOCAL AHJ. VERIFICATION OF DEVICE SETTINGS PER THE COORDINATION STUDY SHALL BE PERFORMED BY SAME INDEPENDENT TESTING AGENCY. GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO ENGINEER OR RECORD.

   PERFORM ARC FLASH ANALYSIS TO DETERMINE FLASH BOUNDARY, FLASH HAZARD CATEGORY, PPE REQUIREMENTS, AND MINIMUM ARC RATING(CAL/SQUARE CM). ABOVE INFORMATION SHALL BE INDICATED AT EACH ARC FLASH SOURCE ON A NEC (CEC WHERE ADOPTED) COMPLIANT ARC PLASH HAZARD LABEL(S) AS MANUFACTURED BY BRADY.

CONSTRUCTION NOTES

1. PROVIDE LOAD BANK BREAKER FOR TESTING.
2. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE SUFFICIENTLY DURABLE TO WITH STAND THE ENVIRONMENT INVOLVED.
3. CONTRACTOR TO PROVIDE NEMA 3R CABINET WITH LOCK AND KEY TO OWNER PER CEC 708.5(B)

PANEL 'CRM' (NEW)

MOUNTING: SURFACE **FED FROM:** MSA **NEMA:** 1 **AIC RATING:** 42,000
LOCATION: IT RM. 106
VOLTAGE: 120/240V 3PH 4W **BUS:** 225 A **MAIN:** 225A **FEEDER:** 225-Y

NOTE	DESCRIPTION	TYPE	POLES	AMP		A		B		C			AMP	POLES	TYPE	DESCRIPTION	NOTE
	AC-1 (ROOF)	M	3	45 A	1	2387	1200					2	20 A	1	M	EF-1,3,4	
					3			2387	106			4	20 A	1	M	EF-5,6,7,8,	
					5					2387	0	6	20 A	1		HI LEG SPARE	1
	AC-2 (ROOF)	M	3	45 A	7	2387	1440					8	20 A	1	M	CF RM 129	
					9			2387	2880			10	20 A	1	M	CF RM 129	
					11					2387	0	12	20 A	1		HI LEG SPARE	1
	AC-3 (ROOF)	M	3	30 A	13	1671	56					14	20 A	3	M	AIR COMPRESSOR RM 129	
					15			1671	56			16					
					17					1671	56	18					
	AC-4 (ROOF)	M	3	30 A	19	2898	0					20	20 A	1		SPARE	
					21			2898	0			22	20 A	1		SPARE	
					23					2898	831	24	20 A	3	M	AC 1,2 ECONOMIZER (ROOF)	
	AC-5 (ROOF)	M	3	45 A	25	2467	831					26					
					27			2467	831			28					
					29					2467	0	30	20 A	1		HI LEG SPARE	1
	AC--6 (ROOF)	M	3	45 A	31	2467	150					32	20 A	1	M	MOTORIZED DAMPER	
					33			2467	0			34	20 A	1	M	EXHAUST EXTRACTION SYST.	
					35					2467	0	36	20 A	1	M	HI LEG SPARE	1
	FAN COIL RM 106	M	1	20 A	37	240	50					38	20 A	1	C	DUCT DETECTOR RM 127	
	SMOKE FIRE DAMPERS	M	1	20 A	39			575	100			40	20 A	1	C	DUCT DETECTOR RM 110	
1	HI LEG SPARE		1	20 A	41					0	0	42	20 A	1		HI LEG SPARE	1
	CONDENSATE PUMP RM 106	M	1	20 A	43	50	1680					44	20 A	1	M	CONDENSING UNIT (ROOF)	
	SPARE		1	20 A	45			0	50			46	20 A	1	C	HUMIDITY SENSOR RM 126	
1	HI LEG SPARE		1	20 A	47					0	0	48	20 A	1		HI LEG SPARE	1
	EF-9 (ROOF)	M	3	20 A	49	2076	0					50	20 A	1		SPARE	
					51			2076	0			52	20 A	1		SPARE	
					53					2076	0	54	20 A	1		HI LEG SPARE	1
	SUBTOTALS					22050 VA		20951 VA		17240 VA							

DEMAND FACTORS: LOAD TYPE	CONNECTED VA	DEMAND FACTOR	DEMAND VA	DEMAND AMPS	SUBTOTAL	PHASE
(L) LIGHTING		1.25			22050 VA	A
(R) RECEPTACLES		NEC 220.44			20951 VA	B
(M) MOTOR	48054 VA	1.00	60068 VA	144 A	17240 VA	C
LARGEST MOTOR	7401 VA	0.25	1850 VA	4 A	60242 VA	TOTAL
(C) CONTINOUS	175 W	1.25	219 W	1 A	145 A	AMPS
(N) NON-CONTINOUS	167 VA	1.00	167 VA	0 A		
(K) KITCHEN (NEC 220.56)		0.65				
(S) SPECIAL DEMAND		1.00				
TOTALS	55797 VA		62304 VA			
TOTAL AMPS AT 120/240V 3PH 4W WITH LCL:				150 A		

NOTES:
1. **PHASE C IS HIGH LEG AND SHALL BE DURABLY AND PERMANENTLY MARKED BY AN OUTER... THAT IS ORANGE IN COLOR OR BY OTHER EFFECTIVE MEANS. NO 120V LOADS ALLOWED ON HIGH LEG.

PANEL 'CRL1' (NEW)

MOUNTING: SURFACE **FED FROM:** MSA **NEMA:** 1 **AIC RATING:** 42,000
LOCATION: IT RM. 106
VOLTAGE: 120/240V 1PH 3W **BUS:** 100 A **MAIN:** 100 **FEEDER:** 100-B

NOTE	DESCRIPTION	TYPE	POLES	AMP		A		B			AMP	POLES	TYPE	DESCRIPTION	NOTE
	RECEPT. RM 100, 101, 102	R	1	20 A	1	1620	720			2	20 A	1	R	RECEPT. RM 104	
	RECEPT. RM 120	R	1	20 A	3			540	360	4	20 A	1	R	RECEPT. RM 105	1
2	RECEPT. FRIDGE CORR. 108	R	1	20 A	5	180	1080			6	20 A	1	R	RECEPT. RM 105	1
	RECEPT. RM 106	R	1	20 A	7			360	25	8	20 A	1	C	CO DETECTOR RM 129	
2	RECEPT. FRIDGE RM 121	C	1	20 A	9	180	500			10	20 A	1	N	CIRC PUMP RM 116	
	RECEPT. RM 106	R	1	20 A	11			360	0	12	20 A	1		SPARE	
	RECEPT. RM 106	C	1	20 A	13	360	0			14	20 A	1	R	GENERATOR GEN. RECEP.	
3	WATER HEATER RM 116	N	1	20 A	15			50	0	16	20 A	1	N	GENERATOR HEATER	1
	RECEPT. RM 111	R	1	20 A	17	540	0			18	20 A	1	N	GENERATOR CHARGER	1
	SPACE		--	--	19			0	0	20	20 A	1		SPARE	
	SPACE		--	--	21	0	0			22	--	--		SPACE	
	SPACE		--	--	23			0	0	24	--	--		SPACE	
	SPACE		--	--	25	0	0			26	--	--		SPACE	
	SPACE		--	--	27			0	0	28	--	--		SPACE	
	SPACE		--	--	29	0	0			30	--	--		SPACE	
	S. CARD READER	C	1	20 A	31			500	500	32	20 A	1	C	N. CARD READER	
	DOOR OPENER 2	M	1	20 A	33	2400	2400			34	20 A	1	M	DOOR OPENER 3	
	ANTENNA SHERIFF (ROOF)	C	1	20 A	35			500	500	36	20 A	1	C	ANTENNA FIRE (ROOF)	
	LIGHTING S.	L	1	20 A	37	1032	2400			38	20 A	1	M	DOOR OPENER 1	
4	LIGHTING EXT.	L	1	20 A	39			584	1394	40	20 A	1	L	LIGHTING N.	
	SPARE		1	20 A	41	0	0			42	20 A	1		SPARE	
	SUBTOTALS					13412 VA		5673 VA							

DEMAND FACTORS: LOAD TYPE	CONNECTED VA	DEMAND FACTOR	DEMAND VA	DEMAND AMPS	SUBTOTAL	PHASE
(L) LIGHTING	2842 VA	1.25	3552 VA	15 A	13412 VA	A
(R) RECEPTACLES	5940 VA	NEC 220.44	5940 VA	25 A	5673 VA	B
(M) MOTOR	7700 VA	1.25	9625 VA	40 A	0 VA	C
LARGEST MOTOR		0.25			19085 VA	TOTAL
(C) CONTINOUS	2025 VA	1.25	2531 VA	11 A	80 A	AMPS
(N) NON-CONTINOUS	410 VA	1.00	410 VA	2 A		
(K) KITCHEN (NEC 220.56)		0.65				
(S) SPECIAL DEMAND		1.00				
TOTALS	18917 VA		22059 VA			
TOTAL AMPS AT 120/240V 1PH 3W WITH LCL:				92 A		

NOTES:
1. PROVIDE HANDLE TIE FOR ALL MULTI-WIRE BRANCH CIRCUITS
2. PROVIDE AFCI CIRCUIT BREAKER
3. PROVIDE BREAKER WITH LOCK-OFF CAPABILITY
4. CONTROLLED VIA TIMECLOCK/PHOTOCELL

PANEL 'L1' (NEW)

MOUNTING: SURFACE **FED FROM:** MSA **NEMA:** 1 **AIC RATING:** 42,000
LOCATION: IT RM. 106
VOLTAGE: 120/240V 1PH 3W **BUS:** 225 A **MAIN:** 225A **FEEDER:** 225-B

NOTE	DESCRIPTION	TYPE	POLES	AMP		A		B			AMP	POLES	TYPE	DESCRIPTION	NOTE
	RECEPT. RM 129 E. EXT WALL	R	1	20 A	1	180	1080			2	20 A	1	R	RECEPT. RM 113	
	RECEPT E. EXT WALL	R	1	20 A	3			180	900	4	20 A	1	R	RECEPT. RM 103, 109, 114, 115,...	
	RECEPT. RM 110	R	1	20 A	5	1080	720			6	20 A	1	R	RECEPT. RM 127, 128	
1	RECEPT. CORR 108 KITCHEN	R	1	20 A	7			360	540	8	20 A	1	R	RECEPT. RM 113	
	RECEPT. RM 113	R	1	20 A	9	180	540			10	20 A	1	R	RECEPT. CORR 107	
	RECEPT. RM 113	R	1	20 A	11			180	180	12	20 A	1	R	RECEPT. RM 113	
1	RECEPT. RM 121 E. WALL	R	1	20 A	13	180	720			14	20 A	1	R	RECEPT. RM 118	
	RECEPT. RM 113	R	1	20 A	15			180	1440	16	20 A	1	R	RECEPT. RM 119.122, 123, 124	
1	RECEPT. RM 121 E. WALL	R	1	20 A	17	180	180			18	20 A	1	R	RECEPT RM 121	1
	RECEPT. RM 125, 126	R	1	20 A	19			360	540	20	20 A	1	R	RECEPT. RM 129	1
	RECEPT. RM 129	R	1	20 A	21	360	360			22	20 A	1	R	RECEPT. RM 129	
	RECEPT. RM 113 N. EXT WALL	R	1	20 A	23			180	180	24	20 A	1	R	RECEPT. S. EXT WALL	
	RECEPT. CORR. 108	R	1	20 A	25	900	180			26	20 A	1	R	RECEPT. RM 121 S. WALL	1
	RECEPT. LOBBY 112	R	1	20 A	27			720	180	28	20 A	1	R	RECEPT. RM 105 W. EXT WALL	
	RECEPT. ROOF	R	1	20 A	29	540	168			30	20 A	1	M	KH-1 RM 121	
	RECEPT. RM 118	R	1	20 A	31			720	180	32	20 A	1	N	WASHER RM 129	1
	RECEPT. W EXT WALL	R	1	20 A	33	180	3600			34	30 A	2	N	DRYER RM 129	
1	RECEPT. RM 121	R	1	20 A	35			180	3600	36					
	RECEPT. RM 118	R	1	20 A	37	360	4800			38	50 A	2	N	FUTURE EV CHARGER	
1	RECEPT. RM 121 STOVE	R	1	20 A	39			180	4800	40					
	RECEPT. N. EXT WALL	R	1	20 A	41	180	360			42	20 A	1	N	RECEPT. RM	
	SUBTOTALS					17028 VA		15780 VA							

DEMAND FACTORS: LOAD TYPE	CONNECTED VA	DEMAND FACTOR	DEMAND VA	DEMAND AMPS	SUBTOTAL	PHASE
(L) LIGHTING		1.25			17028 VA	A
(R) RECEPTACLES	15300 VA	NEC 220.44	12650 VA	53 A	15780 VA	B
(M) MOTOR		1.25			0 VA	C
LARGEST MOTOR	168 VA	0.25	42 VA	0 A	32808 VA	TOTAL
(C) CONTINOUS	360 VA	1.25	450 VA	2 A	137 A	AMPS
(N) NON-CONTINOUS	9780 VA	1.00	9780 VA	41 A		
(K) KITCHEN (NEC 220.56)		0.65				
(S) SPECIAL DEMAND	7200 VA	1.00	7200 VA	30 A		
TOTALS	32808 VA		30122 VA			
TOTAL AMPS AT 120/240V 1PH 3W WITH LCL:				126 A		

NOTES:
1. PROVIDE AFCI CIRCUIT BREAKER

PANEL SCHEDULES | 2

HOLT ARCHITECTURE
70225 HWY 111, SUITE D
RANCHO MIRAGE, CA 92270
PH: 760.328.5280
3891 11TH STREET
RIVERSIDE, CA 92501
PH: 951.462.1451

CONSULTANT:
275 W. Hospitality Lane Suite #100
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
email: info@designwesteng.com
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

STAMPS:
REGISTERED PROFESSIONAL ENGINEER LEONARD P. MAYA No. E19480 Exp. 6-30-2021 ELECTRICAL STATE OF CALIFORNIA

PROJECT:
NILAND PUBLIC SAFETY FACILITY

8071 LUXOR AVE.
NILAND CA 92257

CLIENT:
IMPERIAL COUNTY CALIFORNIA 1907

MARK	DATE	DESCRIPTION
	04/09/19	PLAN CHECK SUBMITTAL #1
1	05/14/19	PLAN CHECK SUBMITTAL #2
2	06/11/19	PLAN CHECK SUBMITTAL #3

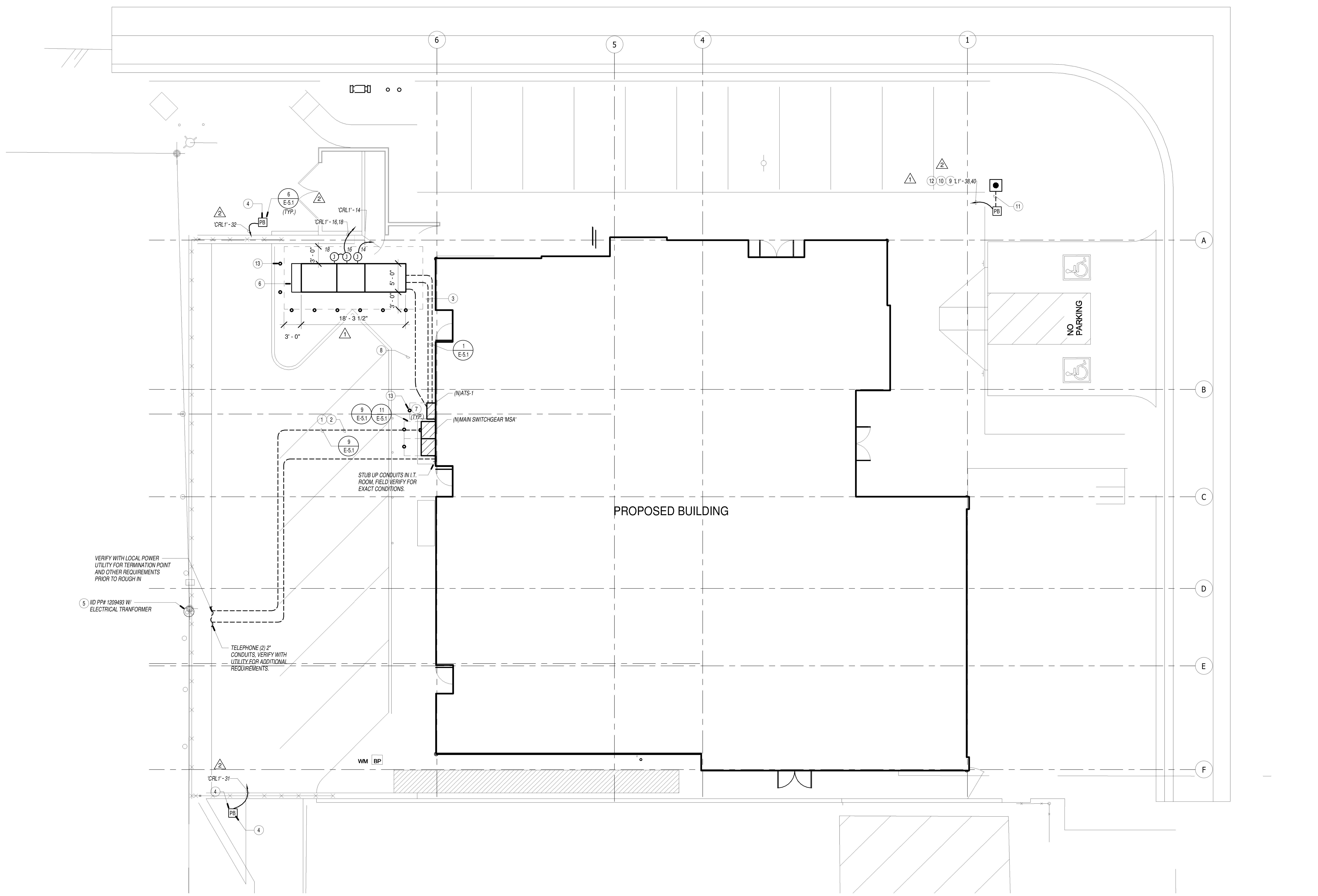
PROJECT NO.: TGH.012
DRAWN BY: Author
CHK'D BY: Checker
ORIGINAL DATE:

SHEET TITLE:
SINGLE LINE DIAGRAM & PANEL SCHEDULE

SHEET No.:
E-0.5

19-022

© 2018 Holt Architects, Inc.
C:\Users\lrodriguez\Documents\19-022 Niland Public Safety Building_MEP_Central_lrodriguez.rvt



ELECTRICAL SITE PLAN | 1/8" = 1'-0" | 1

GENERAL NOTES

1. ALL UTILITY SERVICES SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS. VERIFY FINAL CONSTRUCTION REQUIREMENTS WITH UTILITY COMPANY SERVICE PLANNERS.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL FIELD CONDITIONS PRIOR TO INSTALLATION OF UTILITY SERVICES.
3. COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
4. UTILITY SERVICE INFORMATION SHOWN IS FOR BIDDING PURPOSES ONLY.CACTUAL CONSTRUCTION DOCUMENTS SHALL BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY REPRESENTATIVE.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY REPRESENTATIVE TO ESTABLISH PRE-CONSTRUCTION COORDINATION, OBTAIN ALL NECESSARY METERS AND/OR APPROVALS, AND SCHEDULE UTILITY WORK TO COORDINATE WITH THE CONSTRUCTION SCHEDULE.
6. ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
7. CONTRACTOR SHALL VERIFY EXISTING BUILDING FOOTING PRIOR TO INSTALLATION OF STUB-UP CONDUITS FOR NEW WALL MOUNTED JUNCTION BOX TO AVOID ANY INTERFERENCE.
8. CONTRACTOR SHALL UTILIZE 'GPR' GROUND PENETRATING RADAR TO SURVEY AND TRACE ALL EXISTING UNDERGROUND UTILITY LINES IN AREAS WHERE NEW TRENCHING IS PLANNED. CONTRACTOR TO SUBMIT "GPR" REPORT TO PROJECT MANAGER FOR REVIEWING PRIOR TO TRENCHING.
9. ALL POWER UTILITY WORK SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS.
10. ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
11. SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION. (1)
12. PROVIDE PHYSICAL SECURITY FOR ELECTRICAL EQUIPMENTS PER CEC 708.5.
13. CONTACT INFORMATION FOR UTILITY COMPANIES ARE AS FOLLOWS:

    POWER
    IGNACIO ROMO
    IMPERIAL IRRIGATION DISTRIC (IID)
    (760) 427-1590

    TELEPHONE
    (NAME)
    (COMPANY)
    (CONTACT INFO)

CONSTRUCTION NOTES

1. UNDERGROUND POWER UTILITY SECONDARY CONDUITS. PROVIDE CONDUIT AS SPECIFIED BY UTILITY COMPANY, UNLESS NOTED OTHERWISE. VERFIY SIZE AND QUANTITY OF CONDUITS REQUIRED WITH UTILITY COMPANY PRIOR TO BID. ALL WORK TO BE DONE FROM UTILITY CO. APPROVED PLANS.
2. PROVIDE (1) 4" CONDUITS UNDERGROUND 5' FROM UTILITY POLE TO NEW GEAR, VERIFY EXACT UTILITY POLE LOCATION.
3. PROVIDE (2) 1" CONDUITS UNDERGROUND FROM GENERATOR TO ATS.
4. NEW CARD READER. PROVIDE (1) 1"C FOR LOW VOLTAGE TO IT ROOM 106. COORDINATE IN FIELD FOR POWER REQUIREMENTS AND EXACT LOCATION.
5. COORDINATE IN FIELD FOR EXACT POLE LOCATION AND WITH THE ULITITY FOR ADDITIONAL REQUIREMENTS. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
6. NEW GENERATOR. REFER TO SINGLE LINE DIAGRAM ON SHEET E-0.3 FOR MORE INFORMATION.
7. PROVIDE MINIMUM 3'-0" LEVEL CLEARANCE IN FONT OF ELECTRICAL EQUIPMENT, PER NEC 110.26.
8. REFER TO SINGLE LINE ON SHEET E0.3 FOR UNDERGROUND CONDUIT SIZE INFORMATION.
9. PROVIDE (1) 1-1/4" PVC POWER, (1) 1" DATA CONDUIT FOR FUTURE ELECTRIC VEHICLE CHARGER.
10. PROVIDE (1) 2" PVC POWER, (1) 2" DATA CONDUIT FOR FUTURE ELECTRIC VEHICLE CHARGER.
11. (1) ELECTRIC VEHICLE CHARGING COMPLIES WITH CGBC NON RESIDENTIAL MANDATORY MEASURE SECTION 5.106.5.3 FOR ELECTRIC VEHICLE CHARGING SPACES AS REQUIRED BY TABLE 5.106.5.3.3. INCLUDE TYPE AND LOCATION OF EVSE, ELECTRICAL RACEWAY ROUTING & TERMINATION, ELECTRICAL LOAD CALCULATIONS BASED ON 40-AMPERE MINIMUM BRANCH CIRCUIT TO ENABLE SIMULTANEOUS CHARGING OF ALL REQUIRED EV'S AT FULL RATED EMPERAGE, AND IDENTIFICATION OF CIRCUIT IN ELECTRIC PANEL.
12. FOR FUTURE ELECTRICAL VEHICLES CHARGER STATIONS. VERIFY EXACT LOCATION AND ELECTRICAL REQUIREMENTS IN FIELD.
13. PROVIDE REMOVABLE BOLLARD PROTECTION FOR ELECTRICAL EQUIPMENT AS REQUIRED.

HOLT ARCHITECTURE
70225 HWY 111, SUITE D
RANCHO MIRAGE, CA 92270
PH: 760.328.5280
3891 11TH STREET
RIVERSIDE, CA 92501
PH: 951.462.1451

CONSULTANT:
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS
275 W. Hospitality Lane Suite #100
San Bernardino, CA 92408
Phone: 909.890.3700
Fax: 909.890.3770
email: info@designwesteng.com

STAMPS:

PROJECT:

NILAND PUBLIC SAFETY FACILITY

8071 LUXOR AVE.
NILAND CA 92257

CLIENT:

IMPERIAL COUNTY CALIFORNIA 1907

MARK	DATE	DESCRIPTION
	04/09/19	PLAN CHECK SUBMITTAL #1
1	05/14/19	PLAN CHECK SUBMITTAL #2
2	06/11/19	PLAN CHECK SUBMITTAL #3

PROJECT NO.:	TGH.012
DRAWN BY:	Author
CHK'D BY:	Checker
ORIGINAL DATE:	

SHEET TITLE:

ELECTRICAL SITE PLAN

SHEET No.:

E-1.1

19-022

© 2018 Holt Architects, Inc.