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GENERAL PROJECT NOTES

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ALL ELECTRICAL INSTALLATIONS TO CONFORM TO THE LATEST NEC AND LOCAL CODES.

ELECTRICAL CONTRACTOR'S PROJECT MANAGER AND ON-SITE PROJECT FOREMAN SHALL REVIEW VENDOR SUBMITTALS FOR ACCURACY PRIOR TO SUBMITTING TO ENGINEER. INACCURACIES SHALL BE CORRECTED PRIOR TO ENGINEER SUBMITTAL.

SUBMITTALS FOR EACH SYSTEM WILL BE REVIEWED BY ENGINEER UP TO TWO TIMES--ONE FULL SUBMITTAL FOR OVERALL COMPLIANCE AND ONE RESUBMITTAL. ADDITIONAL REVIEWS WILL BE CHARGED TO CONTRACTOR AT ENGINEER'S STANDARD BILLING RATE.

SUBMITTALS TO ENGINEER SHALL INCLUDE ALL SPECIFIED SYSTEMS IN FIRST SUBMITTAL. PARTIAL SUBMITTALS WILL BE RETURNED TO CONTRACTOR AS INCOMPLETE AND WILL BE CONSIDERED ONE OF TWO INCLUDED SUBMITTAL REVIEWS.

THE CLARITY OF RECORD DRAWING CHANGES MADE BY THE CONTRACTOR SHALL BE EQUAL TO THE ORIGINAL DRAWINGS AS JUDGED BY THE ARCHITECT OR THE RECORD SET WILL BE RETURNED TO THE CONTRACTOR FOR CLARIFICATION.

WHEN THE GENERAL CONTRACT CALLS FOR "RECORD" OR "AS-BUILT" DRAWINGS TO BE FURNISHED BY THE CONTRACTOR AT JOB COMPLETION, THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO FURNISH A COMPLETE SET OF "BLUE-PRINT READY" AUTOCAD ELECTRICAL DRAWINGS FOR ALL CONTRACTOR GENERATED CHANGES FROM THE DRAWINGS OF A CLARITY EQUAL TO THE ORIGINAL DRAWINGS AS JUDGED BY THE ENGINEER. CONTACT ARCHITECT FOR DISKS OR REPRODUCIBLE ORIGINAL MEDIA. PROVIDE DRAWINGS ON CD IN AUTOCAD FORMAT.

. DO NOT SCALE ELECTRICAL FLOOR PLANS. SEE CIVIL DRAWINGS FOR ACCURATE DIMENSIONS.

ELECTRICAL DEVICES CANNOT BE SHOWN TO SCALE AND SOMETIMES OVERLAP BUILDING AND ELEMENTS. FIELD VERIFY CONDITIONS PRIOR TO INSTALLATION. EMT IS NOT ALLOWED OUT OF DOORS.

). DO NOT INSTALL IN-GRADE JUNCTION BOXES UNLESS SPECIFICALLY SHOWN ON DRAWINGS. CONDUCTORS SHALL BE RUN CONTINOUS WITHOUT SPLICING FROM SOURCE OR DEVICE TO NEXT DEVICE.

. CIRCUIT WIRING SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS. ANY DEVIATIONS SHALL BE INITIATED BY A CHANGE ORDER FROM THE ARCHITECT. OTHERWISE THE RECORD SET SHALL MATCH THE CONSTRUCTION SET.

2. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR, PULLED INTO THE CONDUIT WITH THE PHASE CONDUCTOR, IN ALL SERVICE, FEEDER, AND BRANCH CIRCUITS.

3. ALL CIRCUITS TO BE MINIMUM #12 CU IN MINIMUM 3/4" CONDUIT UNLESS OTHERWISE NOTED.

I. MC CABLE IS NOT AN APPROVED ALTERNATE TO CONDUCTORS IN CONDUIT.

5. REMOVE ALL OLD AND/OR UNUSED EXISTING CONDUIT AND ELECTRICAL APPARATUS FROM EXTERIOR OR INTERIOR EXPOSED SURFACES.

. WHERE EXISTING ELECTRICAL EQUIPMENT IS TO REMAIN BUT THE SURFACE THAT IT IS MOUNTED ON IS TO BE REWORKED UNDER OTHER CONTRACTS, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND INSTALL OR MODIFY THE EXISTING EQUIPMENT AS REQUIRED TO MEET THE DESIGN INTENT. SEE ARCHITECTURAL DRAWINGS FOR ROOF, CEILINGS, WALLS, SOFFITS, FLOORS, ETC.

7. REMOVE ALL UNUSED CONDUITS AND CIRCUITS IN THE DEMOLTIONED AREA AS THEY ARE IDENTIFIED AS UNUSED OR ABANDONED.

3. REMOVE ALL EXISITING ELECTRICAL DEVICES, EQUIPMENT, AND APPARATUS AS THEY ARE IDENTIFIED AS UNUSED OR ABANDONED.

. RELOCATE EXISTING CONDUITS AND CIRCUITS AS REQUIRED THAT ARE PRESENTLY SERVING EQUIPMENT THAT IS INTENDED TO REMAIN IN SERVICE BUT SAID CONDUITS ARE CURRENTLY RUNNING THROUGH AREAS TO BE DEMOLITIONED.

. WHERE EXISTING CONDUIT RUNS ARE RE-USED BY SPECIAL PERMISSION FROM THE ARCHITECT, A SEPARATE GREEN, INSULATED GROUND WIRE SHALL BE PULLED IN THE CONDUIT AND BONDED AT EACH END AS REQUIRED.

. ALL PATCH, REPAIR, REPAINT AND COVER UP REQUIRED AS A RESULT OF ELECTRICAL REMODEL IS TO BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, BUT ACTUAL WORK IS TO BE PERFORMED BY QUALIFIED PERSONNEL.

2. FIELD VERIFY CONDITIONS FOR NEW WIRING. SURFACE RACEWAYS MUST RECEIVE PRIOR APPROVAL FROM THE ARCHITECT BEFORE BID AND MUST BE PAINTED TO MATCH THE SURFACE ON WHICH THEY ARE MOUNTED.

3. FIXTURE COUNTS SHOWN ON DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO VERIFY FIXTURE COUNTS AS PART OF BIDDING PROCESS.

. WHERE LIGHT FIXTURES AS SPECIFIED AS COLOR PER ARCHITECT, THIS SHALL BE INTERPRETED AS A NON-STANDARD COLOR.

5. REVIEW THE STATE DESIGN REQUIREMENTS MANUAL PRIOR TO BID.

6. REVIEW THE USU A&E DESIGN MANUAL PRIOR TO BID.

WHERE THERE ARE CONFLICTS IN THE DRAWINGS AND/OR SPECIFICATIONS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BID. WHERE NO NOTIFICATION IS GIVEN THE MORE STRINGENT INTERPRETATION (GENERALLY INTERPRETED TO BE THE MORE COSTLY) WILL BE ENFORCED.

ELECTRICAL LEGEND

ANNOTATIONS									
X XXX	DETAIL CALL-OUT; TOP "X" REFERS TO DETAIL NUMBER & BOTTON "XXX" REFERS TO SHEET NUMBER								
LIGHTING	FIXTURES								
	EMERGENCY LIGHT								
	BATTERY PACK								
	EMERGENCY FIXTURE								
Ю	WALL MOUNT FIXTURE								
	POLE LIGHT; ONE HEAD								
	POLE LIGHT; TWO HEAD								
\odot	DECORATIVE POLE LIGHT								

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				CONTACT INFORMATION	
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SHEE	11 TE	NDEX		R S Answers to Initiastructure ENGINEERING & SURVEYING	
#	She	et Title			9
FF001 ABBREVIATIONS	G.P.N	LEGEND & SHEET INDEX		4246 S RIVERBOAT RD., STE 200	
EE002 ELECTRICAL SPE				P: 801.359.5565	
ESTUT ELECTRICAL SIT					
ES102 ELECTRICAL UT		AN - NEVV			
ES103 ELECTRICAL SIT	= PLAN				
ES501 ELECTRICAL SIT	E DETA	ILS			8
ES502 ELECTRICAL SIT	E DETA	ILS			0
EP601 ELECTRICAL ONI	E-LINE	DIAGRAM		95 W Golf Course Road	
EP602 ELECTRICAL SCH	IEDULE	ES			
					-
				office: (435) 787-1445	
				tax: 1-877-207-3199	
				REVISIONS	7
					-
					6
					7 -
RICAL ABBREV	ΊΑΤ	IONS			
	LTG	LIGHTING			
- SE	MAX	MAXIMUM			ш
FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER			\mathbf{I} 5
	MECH	MECHANICAL			
ULT CIRCUIT-INTERRUPTER E INTERRITOTING CAPACITY	MFR MIN	MANUFACTURER			∞ S
	MLO	MAIN LUGS ONLY			\square
ECT(URAL)	MTD	MOUNTED			
/ITCH	NEC	NATIONAL ELECTRICAL CODE			Ш
AN WIRE GAUGE		NATIONAL ELECTRICAL CONTRACTOR	R'S ASSOCIATION		\bigcirc
JARD	NEUT	NEUTRAL			
T	NFC	NATIONAL FIRE CODE			
T	NC	NORMALLY CLOSED			
				THE INFORMATION CONTAINED IN THIS	
BREAKER	NO			DRAWING IS THE PROPERTY OF CRS	L U.
1	NTS	NOT TO SCALE		CONSULTING ENGINEERS, INC. AND IS	()
T ONLY	OCP	OVERCURRENT PROTECTION		NOT TO BE REPRODUCED, MODIFIED, OR	
	Р uu	POLE		EXTENSION OF THIS PROJECT EXCEPT BY	$\left \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
2110IN ?	PNL	PANEL		AGREEMENT WITH CRS ENGINEERS.	$\left \begin{array}{c} \\ \\ \\ \end{array} \right 3$
TION/DEMOLISH	PWR	POWER		DESIGN	$ $ \subseteq $ $
NECT	QTY	QUANTITY			
IC	RECEP REO'D			POFESSION	
	RGSC	RIGID GALVANIZED STEEL CONDUIT		N'I VA	
ICAL	RM	ROOM			
OR	SCHED	SCHEDULE		S No. 294174	Δ
	SP	SINGLE POLE		SHAND 5	
LINE RESISTOR	SN	SOLID NEUTRAL	\sim		2
ENT	SPEC	SPECIFICATION			
	SW SWBD	SWITCH		4/11/2022	0
IL UNIT	SWGR	SWITCH GEAR		VIII TAN	
D FLOOR	SYS	SYSTEM		U OF U	
	TEMP	TEMPORARY			0
		IELEPHONE TRANSEODMED		PRINCIPAL : S.SWENSON	
R FOOT	T-STAT	THERMOSTAT		MANAGER: S.SWENSON	1
D FAULT INTERRUPTER	TWP	TWISTED PAIR		REVIEWER : S.SWENSON	
	TWSP	TWISTED SHEILDED PAIR			
YUWER 2. VENTILATING & AID CONDITIONING	UTP URC			PROJECT	
5, VENTILATING & AIR CONDITIONING	UL	UNDERWRITERS LABORATORY		2022080	
EDIATE METAL CONDUIT	UMC	UNIFORM MECHANICAL CODE		14 DECEMBER 2022	
	UNO	UNLESS NOTED OTHERWISE			
CIRCUIT AMPERES, KA ON BOX	v VA	VOLT OR VOLTAGE			0
AND CIRCULAR MILS	W	WATT			0
LT AMPERE	W/	WITH			ЦЦ.
TT	WG WD	WIRE GUARD)		
	۷۷۲	UL LISTED WEATHERPROOF, NEMA 3F	K OF 4	NIBLEY, UTAH, 84321	
L		M	Ν	O I	P

BRANCH C	RCUITING
₽	DUPLEX OUTLET

⊕	DUPLEX OUTLET: GROUND FAULT INTERRUPTER
WP -	DUPLEX OUTLET: WEATHERPROOF
WPIU -	DUPLEX OUTLET: WEATHERPROOF-IN-USE COVER
\bigcirc	JUNCTION BOX
	DISCONNECT, 22KAIC MINIMUM
Þ	OVERCURRENT PROTECTIVE DISCONNECT
	QUANTITY OF CONDUCTORS: SHORT LINES = PHASE /SWITCH LONG LINES = NEUTRAL
	HOME-RUN
POWER AN	ND DISTRIBUTION

	DISTRIBUTION PANEL
	PANELBOARD
	METER/METER SOCKET
SITE ELEC	TRICAL
(A)3ØUP	ABANDONED 3-PHASE UNDERGROUND PRIMARY POWER
(E)3ØUP	EXISTING 3-PHASE UNDERGROUND PRIMARY POWER
3ØUP	3-PHASE UNDERGROUND PRIMARY POWER
3ØUS	3-PHASE UNDERGROUND SECONDARY POWER
(E)UT	EXISTING UNDERGROUND TELEPHONE
UT	UNDERGROUND TELEPHONE
UTV	UNDERGROUND TV
\bigotimes	POINT OF DISCONNECTION
	POINT OF CONNECTION
	UTILITY POLE

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	#		et Title				9
					4246 S RIVERBOAT RD., STE 200		
		, G.P.N	, LEGEND & SHEET INDEX		SALI LAKE CITY, UI 84123 P: 801 359 5545		
	EE002 ELECTRICAL SPE		ATIONS		1.001.337.3363		
	ES101 ELECTRICAL SIT	E PLAN	- OVERALL				
	ES102 ELECTRICAL UTI	LITY PL	AN - NEW				
	ES103 ELECTRICAL SIT	E PLAN					
	ES501 ELECTRICAL SIT	E DETA	ILS				
	ES502 ELECTRICAL SIT	E DETA	ILS				8
	EP601 ELECTRICAL ON	E-LINE	DIAGRAM		95 W Golf Course Boad		
	EP602 ELECTRICAL SCH	HEDULI	ES		$ \begin{array}{c c} & & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & $		
					Logan, Ut 84321		
					office: (435) 787-1445		
					fax: 1-877-207-3199		
					www.sinesource.net		
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FIF	CTRICAL ABBREV	/ΙΔΤ	IONS				
						H.	
		LTG					
FF	AMP FUSE ABOVE EINISHED ELOOR	MAX MCB	MAXIMUM MAIN CIRCUIT BREAKER			II	5
FG	ABOVE FINISHED GRADE	MECH	MECHANICAL			$\overline{\mathbf{S}}$	
FI	ARC-FAULT CIRCUIT-INTERRUPTER	MFR	MANUFACTURER			\propto	
IC	AMPERE INTERRUPTING CAPACITY	MIN				\cap	
L RCH	ALUMINUM ARCHITECT/LIRAL)	MLO MTD					
S	AMP SWITCH	NEC	NATIONAL ELECTRICAL CODE				
WG	AMERICAN WIRE GAUGE	NECA	NATIONAL ELECTRICAL CONTRACTOR'S AS	SOCIATION		()	
LDG	BUILDING	NEMA	NATIONAL ELECTRICAL MANUFACTURERS	ASSOCIATION		Ш	
KBD	BACKBOARD		NEUTRAL NATIONAL EIRE CODE				4
AB	CABINET	NC	NORMALLY CLOSED				
AT	CATALOG/CATEGORY	NIC	NOT IN CONTRACT		LEGAL NOTICE	Ζ	
/B	CIRCUIT BREAKER	NL	NIGHT LITE		THE INFORMATION CONTAINED IN THIS		
KT	CIRCUIT	NO NTS	NORMALLY OPEN		CONSULTING ENGINEERS, INC. AND IS		
0	CEILING CONDUIT ONLY	OCP	OVERCURRENT PROTECTION		NOT TO BE REPRODUCED, MODIFIED, OR		
OMM	COMMUNICATION	Ρ	POLE		USED FOR ANY OTHER PROJECT OR	Ś	
ONN	CONNECTION	PH	PHASE		AGREEMENT WITH CRS ENGINEERS.	Ζ	
		PNL PW/R	PANEL POWER		DESIGN	Ο	3
ISC		QTY	QUANTITY			F	
N	DOWN	RECEP	RECEPTACLE		OFFSSI	\triangleleft	
WG	DRAWING	REQ'D			PRUI LINNION	>	_
n	EAUT FLECTRICAL	RM	RIGID GALVANIZED STEEL CONDUIT ROOM		A A A A A A A A A A A A A A A A A A A	Ш	
LEV	ELEVATOR	SCHED	SCHEDULE		No DALTA		
MER, EM	EMERGENCY	SECT	SECTION		110.604114	Β	
	ELECTRICAL METALLIC TUBING	57 SN	SINGLE POLE	\leq	E DHATE D. Z	\triangleleft	2
	END OF LINE REDIDIOR EQUIPMENT	SPEC	SPECIFICATION		\ 邑 \ SWENSON / 邑 /		
X, EXIST	EXISTING	SW	SWITCH		4/11/2023/ -0/	0	1
BO	FURNISHED BY OTHERS	SWBD	SWITCHBOARD		Von Ant		
		SWGR	SWITCH GEAR		ATE OF UTE		
ixt	FINITED FLOOK FIXTURE	TEMP	TEMPORARY			Щ	
LEX	FLEXIBLE METALLIC CONDUIT (STEEL)	TELE	TELEPHONE			Ο	
LUOR	FLUORESCENT	XFMR	TRANSFORMER		PRINCIPAL : S.SWENSON MANAGER: S.SWENSON		-
 F	FEET OR FOOT	I-SIAT	THERMOSTAT		REVIEWER : S.SWENSON	-	1
iND	GROUND FAULT INTERKUPTER	TWSP	TWISTED PAIK		DRAFTER : D.PATTON		
P	HORSEPOWER	TYP	TYPICAL		PROJECT		
VAC	HEATING, VENTILATING & AIR CONDITIONING	UBC	UNIFORM BUILDING CODE		2022080		
	ISOLATED GROUND				14 DECEMBER 2022		
1	INTERMEDIATE METAL CONDUIT INCH(ES)	UNO	UNIFORINI MIECHANICAL CODE				
SC	SHORT CIRCUIT AMPERES, KA	V	VOLT OR VOLTAGE			5	
B, J-BOX	JUNCTION BOX	VA	VOLT AMPERE		1200 WEST REDESIGN	8	0
	THOUSAND CIRCULAR MILS	W/	WATT WITH			ш	2
W I	NILUVULT AMPEKE KILOWATT	WG	WIRE GUARD				
		WP	UL LISTED WEATHERPROOF, NEMA 3R or 4				
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	EE002 ELECTRICAL SPE	CIFICA	ATIONS		F. 601.337.3363		
	ES101 ELECTRICAL SIT	E PLAN	- OVERALL				-
	ES102 ELECTRICAL UTI	LITY PL	AN - NEW				
	ES103 ELECTRICAL SIT	E PLAN					
	ES501 ELECTRICAL SIT	E DETA	ILS				
	ES502 ELECTRICAL SIT	E DETA	ILS				8
	EP601 ELECTRICAL ON	E-LINE	DIAGRAM				
	EP602 ELECTRICAL SCH		-5		$\mathbf{L} = \begin{bmatrix} 95 & \text{w control course noad} \\ \text{Suite } 102 \end{bmatrix}$		
					Logan, Ut 84321		
					office: (435) 787 1445		-
					fax: 1-877-207-3199		
					www.sinesource.net		
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ELE	CTRICAL ABBREV	ΊΑΙ	IONS				
	AMPERE	LTG	LIGHTING			Щ	
	AMP FUSE	MAX	MAXIMUM			ΙΨ.	5
F	ABOVE FINISHED FLOOR		MAIN CIRCUIT BREAKER			L L	5
	ABOVE FINISHED GRADE	MFR	MANUFACTURER			~X	
2	AMPERE INTERRUPTING CAPACITY	MIN	MINIMUM				
a	ALUMINUM	MLO	MAIN LUGS ONLY				
CH	ARCHITECT(URAL)		MOUNTED NATIONAL ELECTRICAL CODE			Z	
/G	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL CONTRACTOR'S	ASSOCIATION			
DG	BUILDING	NEMA	NATIONAL ELECTRICAL MANUFACTURE	RS ASSOCIATION			
BD	BACKBOARD	NEUT	NEUTRAL				4
D	CONDUIT	NFC NC	NATIONAL FIRE CODE				
T		NIC	NORMALLY GLOSED		LEGAL NOTICE	Ζ	
3	CIRCUIT BREAKER	NL	NIGHT LITE		THE INFORMATION CONTAINED IN THIS		
T	CIRCUIT	NO	NORMALLY OPEN		DRAWING IS THE PROPERTY OF CRS		—
G	CEILING	NTS	NOT TO SCALE		NOT TO BE REPRODUCED MODIFIED OR		
MM		P			USED FOR ANY OTHER PROJECT OR	$\hat{\mathbf{O}}$	
NN	CONNECTION	PH	PHASE		EXTENSION OF THIS PROJECT EXCEPT BY	7	
	COPPER	PNL	PANEL		AGREEMENT WITH CRS ENGINEERS.	$\overline{\bigcirc}$	3
MO	DEMOLITION/DEMOLISH	PWR	POWER		DESIGN		
ю - П	DISCONNECT DOWN	RFCFP				\triangleleft	
/G	DRAWING	REQ'D	REQUIRED		DROFESSION	$\left \right\rangle$	
	EACH	RGSC	RIGID GALVANIZED STEEL CONDUIT			<u> </u>	-
	ELECTRICAL	RM	ROOM				
ER. FM	ELEVATOR	SECT	SUNEDULE		No. 294174	6	
T	ELECTRICAL METALLIC TUBING	SP	SINGLE POLE		SHANE D. Z		0
	END OF LINE RESISTOR	SN	SOLID NEUTRAL		凵 < SWENSON / 层		2
	EQUIPMENT	SPEC	SPECIFICATION				1
, ⊏лізТ 0	EXISTING FURNISHED BY OTHERS	SWBD	SWITCH SWITCHBOARD		1	0	
υl	FAN COIL UNIT	SWGR	SWITCH GEAR		ATE OF ITAN		
<u> </u>	FINISHED FLOOR	SYS	SYSTEM				
u z		IEMP TELE				0	
JOR	FLUORESCENT	XFMR	TRANSFORMER		PRINCIPAL : S.SWENSON		
	FEET OR FOOT	T-STAT	THERMOSTAT		MANAGER: S.SWENSON		1
	GROUND FAULT INTERRUPTER	TWP	TWISTED PAIR		DRAFTER : D PATTON		
ט		iwsp typ	TWISTED SHEILDED PAIR				
AC	HEATING, VENTILATING & AIR CONDITIONING	UBC	UNIFORM BUILDING CODE		PROJECT		
-	ISOLATED GROUND	UL	UNDERWRITERS LABORATORY		2022080		
	INTERMEDIATE METAL CONDUIT	UMC	UNIFORM MECHANICAL CODE		I A DECLIVIDEN ZUZZ		
, I	INCH(ES)	UNU V				-	
J-BOX	JUNCTION BOX	VA				0	-
MIL	THOUSAND CIRCULAR MILS	W	WATT				0
A		W/	WITH			ш	
'	KILOWATT	WG WP	WIRE GUARD	nr /			
		**1		л 1	NIBLEY, UTAH, 84321		
	L		M	N	0	Ρ	

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	SECTION 260500 1.1 PERFORM A. Seis earth	- COMMON WORK F IANCE REQUIREMEI mic Performance: Equ nguake motions deter	RESULTS FOR ELEC NTS uipment controllers sl nined according to A	CTRICAL hall withstand the effects of SCE/SEI	
	1. 1 a 1.2 ENCLOS A. Com	The term "withstand" r any parts from the dev URES ply with environmenta	neans "the unit will re rice when subjected f al conditions at install	emain in place without separation of to the seismic forces specified."	SECTION 26 1.1 ME A. B.
		ndoor, Dry and Clean Dutdoor Locations: NE Other Wet or Damp, Ir	Locations: NEMA 25 MA 250, Type 3R. Indoor Locations: NEM	бо, Туре 1. ИА 250, Туре 4.	C.
	A. Stee steel B. Cast	I Pipe Sleeves: ASTN I, plain ends. I-Iron Pipe Sleeves: C	I A 53/A 53M, Type E ast or fabricated "wa	E, Grade B, Schedule 40, galvanized Il pipe," equivalent to ductile-iron	D. E. F.
	press C. Slee 1. M	sure pipe, with plain e ves for Rectangular C Minimum Metal Thickr a. For sleeve cross	nds and integral wat penings: Galvanized less: -section rectangle pe	erstop, unless otherwise indicated. I sheet steel. erimeter less than 50 inches and no	
		side more than ' b. For sleeve cross inches and 1 or shall be 0.138 in	6 inches, thickness -section rectangle per more sides equal to,	shall be 0.052 inch. erimeter equal to, or more than, 50 or more than, 16 inches, thickness	G.
	1.4 GROUT A. Nonr nonn	metallic, Shrinkage-Re netallic aggregate gro	esistant Grout: ASTN ut, noncorrosive, nor	I C 1107, factory-packaged, staining, mixed with water to	A.
	Loss 1.5 COMMON A. Com B. Meas	sistency suitable for an N REQUIREMENTS F ply with NECA 1. sure indicated mounti	oplication and a 30-m OR ELECTRICAL IN	Inde working time. ISTALLATION of unit for suspended items and to	1.3 BO) A. B.
	Cente C. Head indic	er of unit for wall-mou droom Maintenance: I ated, arrange and ins	nting items. f mounting heights or tall components and tent with these require	r other location criteria are not equipment to provide maximum	C. D.
	D. Equi com such	pment: Install to facilit ponents of both electr a way as to facilitate	ate service, maintenation ical equipment and o future disconnecting	ance, and repair or replacement of ther nearby installations. Connect in with minimum interference with	1.4 HAI A.
	E. Righ 1.6 SLEEVE A. Elect	t of Way: Give to pipir INSTALLATION FOR trical penetrations occ	ng systems installed ELECTRICAL PENE ur when raceways, c	at a required slope. ETRATIONS ables, wireways, cable trays, or	
	busw and B. Conc or fo	vays penetrate concre wall assemblies. crete Slabs and Walls rmed openings are us	te slabs, concrete or : Install sleeves for p ed. Install sleeves di	masonry walls, or fire-rated floor enetrations unless core-drilled holes uring erection of slabs and walls.	
	C. Fire- asse durin	Rated Assemblies: In mblies unless opening of construction of floo	stall sleeves for pene gs compatible with fir r or wall.	strations of fire-rated floor and wall restop system used are fabricated	B.
	E. Exter F. Seal 1. F	nd sleeves installed ir space outside of slee Promptly pack grout so	loors 2 inches aboves with grout for peoplicity between sleeve	ve finished floor level. netrations of concrete and masonry and wall so no voids remain. Tool	1.5 KAU A.
	e 1.7 FIRESTO A. Appl elect	exposed surfaces smo PPING y firestopping to pene trical installations to re	ooth; protect grout wh trations of fire-rated t store original fire-res	nile curing. floor and wall assemblies for sistance rating of assembly.	
	SECTION 260519 1.1 CONDUC	- LOW-VOLTAGE EL TORS AND CABLES	ECTRICAL POWER	CONDUCTORS AND CABLES	
	A. Copp B. Cond 1.2 CONNEC A. Desc	per Conductors: Comp ductor Insulation: Com TORS AND SPLICES pription: Factory-fabric	bly with NEMA WC 7 pply with NEMA WC ated connectors and	0. 70 for Types THHN-THWN. splices of size. ampacity rating.	
	mate 1.3 CONDUC A. Bran for N	erial, type, and class for TOR MATERIAL APP ich Circuits: Copper. S	or application and sep PLICATIONS Solid or stranded for I	rvice indicated. No. 10 AWG and smaller; stranded	B.
	1.4 CONDUCT WIRING METH A. Feed	TOR INSULATION AN HODS Jers: Type THHN-THV	D MULTICONDUCT	OR CABLE APPLICATIONS AND	
	acev 1.5 INSTALL A. Cond	way. ATION OF CONDUC ^T ceal cables in finished	TORS AND CABLES walls, ceilings, and	floors, unless otherwise indicated.	
	B. Use comp manu value	manufacturer-approve pound used must not ufacturer's recommen es.	ed pulling compound deteriorate conducto ded maximum pulling	or lubricant where necessary; r or insulation. Do not exceed g tensions and sidewall pressure	C. D.
	C. Use grips D. Insta	pulling means, includi s, that will not damage ill exposed cables par	ng fish tape, cable, r cables or raceway. allel and perpendicul	ope, and basket-weave wire/cable ar to surfaces of exposed structural	1.6 INS A.
	E. Supp Elect F. Ident	bort cables according trical Systems." tify and color-code con	to Division 26 Sectio	according to Division 26 Section	C. D.
	1.6 CONNEC A. Tight	TIONS ten electrical connector	prs and terminals acc	cording to manufacturer's published	E. F.
	torqu those B. Make equiv	ue-tightening values. I e specified in UL 486/ e splices and taps tha valent or better mecha	f manufacturer's torq A and UL 486B. t are compatible with anical strength and in	ue values are not indicated, use conductor material and that possess isulation ratings than unspliced	G. H.
	C. Wirir C. Wirir SECTION 260526	luctors. ng at Outlets: Install co - GROUNDING AND	onductor at each out	let, with at least 12 inches of slack.	
	1.1 QUALITY A. Elect NFP.	ASSURANCE trical Components, De A 70, Article 100, by a diction, and marked fo	evices, and Accessor	ies: Listed and labeled as defined in optable to authorities having	I
	B. Com 1.2 CONDUC A. Insul	ply with UL 467 for gr TORS ated Conductors: Cop	ounding and bonding	g materials and equipment.	J.
	B. Bare 1. S 2. S	ired by applicable Coo Copper Conductors: Solid Conductors: AST Stranded Conductors:	te or authorities havi TM B 3. ASTM B 8.	ng jurisdiction.	K.
	3. E 6 4. E 5. E	Bonding Cable: 28 kcr diameter. Bonding Conductor: N Bonding Jumper: Copi	nil, 14 strands of No. o. 4 or No. 6 AWG, s per tape, braided cor	17 AWG conductor, 1/4 inch in stranded conductor.	L.
	1.3 CONNEC	errules; 1-5/8 inches	tionally recognized to	nick.	1 7 ING
	A. Liste auth sizes 1.4 GROUND	orities having jurisdict s, and combinations o DING ELECTRODES	f conductors and oth	a which used, and for specific types, er items connected.	A.
	A. Grou 1.5 APPLICA A. Cond stran	ind Rods: Copper-clad TIONS ductors: Install solid o ided conductors for N	r stranded conductor o. 6 AWG and larger	e; 3/4 inch by10 feet in diameter. for No. 8 AWG and smaller, and , unless otherwise indicated.	
	B. Conc 1. F 2. U	ductor Terminations a Pipe and Equipment G Underground Connect otherwise indicated	nd Connections: Frounding Conductor ions: Welded connect	Terminations: Bolted connectors. ctors, except at ground rods and as	
	3. (4. (1.6 EQUIPME	Connections to Groun Connections to Structu ENT GROUNDING	d Rods: Bolted conne ural Steel: Welded co	ectors. onnectors.	
	A. Insta addit B. Meta sepa	in insulated equipmen tion to those required al Poles Supporting Ou arate insulated equipm	ι grounging conducto by NFPA 70: utdoor Lighting Fixtur ient grounding condu	ors an reeger and branch circuits , in res: Install grounding electrode and a uctor in addition to grounding	1.8 INS A.
	cond 1.7 INSTALL/ A. Grou othe	luctor installed with br ATION Inding Conductors: Ro rwise indicated or rea	anch-circuit conducto oute along shortest a uired by Code. Avoid	ors. nd straightest paths possible, unless l obstructing access or placing	В.
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			 Section 2016 Section 2	 Section and the section of the section of	<pre>#The second second</pre>

ELECTRICAL SPECIFICATIONS

conductors where they may be subjected to strain, impact, or damage. 1. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.

60533 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

TAL CONDUIT AND TUBING Rigid Steel Conduit: ANSI C80.1. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.

- Comply with NEMA RN 1.
- 2. Coating Thickness: 0.040 inch, minimum. EMT: ANSI C80.3.
- FMC: Zinc-coated steel or aluminum. LFMC: Flexible steel conduit with PVC jacket.
- Fittings for Conduit (Including all Types and Flexible and Liguidtight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for
- application and environment in which installed. 1. Fittings for EMT: Steel or die-cast, set-screw or compression type. . Coating for Fittings for PVC-Coated Conduit: Minimum thickness, 0.040 inch,
- with overlapping sleeves protecting threaded joints. Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway
- ioints from corrosion and enhance their conductivity. IMETALLIC CONDUITS, TUBING, AND FITTING RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise
- Fittings for RNC: Comply with NEMA TC 3; match to conduit or tubing type and
- XES, ENCLOSURES, AND CABINETS Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy or aluminum, Type
- FD, with gasketed cove Small Sheet Metal Pull and Junction Boxes: NEMA OS 1. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, cast aluminum or
- galvanized, cast iron with gasketed cover. NDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

Description: Comply with SCTE 77

- Color of Frame and Cover: Gray Configuration: Units shall be designed for flush burial and have open bottom,
- unless otherwise indicated. 3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
- . Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50. . Cover Legend: Molded lettering, "ELECTRIC." . Handholes 12 inches wide by 24 inches long and larger shall have inserts for
- cable racks and pulling-in irons installed before concrete is poured. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel
- or fiberglass or a combination of the two. CEWAY APPLICATION Outdoors: Apply raceway products as specified below, unless otherwise indicated:
- Aboveground: Rigid steel conduit Underground Conduit: RNC, Type EPC-40-PVC, direct buried.
- Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 Boxes and Enclosures, Aboveground: NEMA 250, Type 3R. Application of Handholes and Boxes for Underground Wiring:

 Handholes and Pull Boxes in Driveway, Parking Lot, and Off-Roadway
- Locations, Subject to Occasional, Nondeliberate Loading by Heavy Vehicles: Polymer concrete, SCTE 77, Tier 15 structural load rating Handholes and Pull Boxes in Sidewalk and Similar Applications with a
- Safety Factor for Nondeliberate Loading by Vehicles: Polymer concrete frame and cover, SCTE 77, Tier 8 structural load rating. Handholes and Pull Boxes Subject to Light-Duty Pedestrian Traffic Only: Polymer concrete, SCTE 77 with 3000-lbf vertical loading.
- Comply with the following indoor applications, unless otherwise indicated: Exposed, Not Subject to Physical Damage: EMT Exposed and Subject to Physical Damage: Rigid steel conduit. Includes
- raceways in the following locations: Concealed in Ceilings and Interior Walls and Partitions: EMT. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use
- LFMC in damp or wet locations. Damp or Wet Locations: Rigid steel conduit.
 Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4,
- stainless steel in damp or wet locations Minimum Raceway Size: 3/4-inch trade size.
- Raceway Fittings: Compatible with raceways and suitable for use and location. 1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated TALLATION
- Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- Complete raceway installation before starting conductor installation. Support raceways as specified in Division 26 Section "Hangers and Supports for Electrical Systems."
- Arrange stub-ups so curved portions of bends are not visible above the finished Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed. Conceal conduit and EMT within finished walls, ceilings, and floors, unless
- otherwise indicated
- Raceways Embedded in Slabs: 1. Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to
- slab support 2. Arrange raceways to cross building expansion joints at right angles with expansion fittin
- 3. Change from RNC, Type EPC-40-PVC to rigid steel conduit before rising above the floor
- Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making
- up joints. Follow compound manufacturer's written instructions. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each
- end of pull wire. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
- Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces. Where otherwise required by NFPA 70.
- TALLATION OF UNDERGROUND CONDUIT Direct-Buried Conduit:
- . Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 31 Section "Earth Moving" for pipe less than 6 inches in nominal diameter.
- Install backfill per University requirements.
- After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with compaction.
- 4. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow. STALLATION OF UNDERGROUND HANDHOLES AND BOXES
- Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
- Unless otherwise indicated, support units on a level bed of crushed stone or gravel, SECTION 265100 EXTERIOR LIGHTING graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

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- C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade. D. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for
- future cables, but short enough to preserve adequate working clearances in the enclosure. E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

SECTION 260548 - VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS 1.1 PERFORMANCE REQUIREMENTS A. Seismic-Restraint Loading:

- Site Class as Defined in the IBC: D.
- Assigned Seismic Use Group or Building Category as Defined in the IBC: III. . Component Importance Factor: 1.0 Component Response Modification Factor:
 - Fixtures: 1.5 Equipment: 2.5
- Conduit and Cables: 5.0 Component Amplification Factor: 2.5.
- Design Spectral Response Acceleration at Short Periods (0.2 Second): 173%. Design Spectral Response Acceleration at 1.0-Second Period: 76%.
- 1.2 QUALITY ASSURANCE A. Comply with seismic-restraint requirements in the IBC unless requirements in this Section are more stringent.
- B. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel
- C. Seismic-restraint devices shall have horizontal and vertical load testing and analysis and shall bear anchorage preapproval OPA number from OSHPD, preapproval by ICC-ES, or preapproval by another agency acceptable to authorities having jurisdiction, showing maximum seismic-restraint ratings. Ratings based on independent testing are preferred to ratings based on calculations. If preapproved ratings are not available, submittals based on independent testing are preferred. Calculations (including combining shear and tensile loads) to support seismic-restraint designs must be signed and sealed by a qualified professional
- engineer. D. Comply with NFPA 70. 1.3 SEISMIC-RESTRAINT DEVICES
- A. General Requirements for Restraint Components: Rated strengths, features, and application requirements shall be as defined in reports by an agency acceptable to authorities having jurisdiction. 1. Structural Safety Factor: Allowable strength in tension, shear, and pullout force
- of components shall be at least four times the maximum seismic forces to which they will be subjected. B. Channel Support System: MFMA-3, shop- or field-fabricated support assembly made of slotted steel channels with accessories for attachment to braced
- component at one end and to building structure at the other end and other matching components and with corrosion-resistant coating; and rated in tension, compression, and torsion forces. C. Mechanical Anchor: Drilled-in and stud-wedge or female-wedge type in zinc-coated
- steel for interior applications and stainless steel for exterior applications. Select anchors with strength required for anchor and as tested according to ASTM E 488. Minimum length of eight times diameter. D. Adhesive Anchor: Drilled-in and capsule anchor system containing polyvinyl or
- urethane methacrylate-based resin and accelerator, or injected polymer or hybrid mortar adhesive. Provide anchor bolts and hardware with zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.

1.4 EXAMINATION

- A. Examine areas and equipment to receive seismic-control devices for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine roughing-in of reinforcement and cast-in-place anchors to verify actual locations before installation. Proceed with installation only after unsatisfactory conditions have been corrected.
- 1.5 SEISMIC-RESTRAINT DEVICE INSTALLATION A. Drilled-in Anchors: . Identify position of reinforcing steel and other embedded items prior to drilling
 - holes for anchors. Do not damage existing reinforcing or embedded items during coring or drilling. Notify the structural engineer if reinforcing steel or other embedded items are encountered during drilling. Locate and avoid prestressed tendons electrical and telecommunications conduit and gas lines 2. Do not drill holes in concrete or masonry until concrete, mortar, or grout has
 - achieved full design strength Wedge Anchors: Protect threads from damage during anchor installation Heavy-duty sleeve anchors shall be installed with sleeve fully engaged in the
 - structural element to which anchor is to be fastened. 4. Adhesive Anchors: Clean holes to remove loose material and drilling dust prior to installation of adhesive. Place adhesive in holes proceeding from the bottom
 - of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive. Set anchors to manufacturer's recommended torque, using a torque wrench.
 - Install zinc-coated steel anchors for interior and stainless-steel anchors for exterior applications.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS 1.1 INSTALLATION

- A. Verify identity of each item before installing identification products.
- B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. C. Apply identification devices to surfaces that require finish after completing finish
- D. Self-Adhesive Identification Products: Clean surfaces before application, using
- materials and methods recommended by manufacturer of identification device. Attach signs and plastic labels that are not self-adhesive type with mechanical
- fasteners appropriate to the location and substrate.
- F. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches above lines. Use multiple tapes where width of multiple lines installed in a common trench exceeds
- 16 inches overall. G. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application. .2 IDENTIFICATION SCHEDULE
- A. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase
- 1. Color-Coding for Phase Identification, 600 V or Less: Use colors listed below for ingrounded branch-circuit conductors. a. Color shall be factory applied or field applied for sizes larger than No. 8
- AWG, if authorities having jurisdiction permit. b. Colors for 208/120-V Circuits:
-) Phase A: Black. Phase B: Red.
- Phase C⁻ Blue Neutral: White with colored stripe to match associated phase Ground: Green
- c. Colors for 480/277-V Circuits:) Phase A: Brown.
- Phase B: Yellow. Phase C: Violet
- Neutral: Gray with colored stripe to match associated phase
- Ground: Green with continuous gray stripe d. Field-Applied, Color-Coding Conductor Tápe: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no
- tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings B. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.
- I. Install underground-line warning tape for both direct-buried cables and cables in raceway.
- 1.1 STRUCTURAL ANALYSIS CRITERIA FOR POLE SELECTION

A. Dead Load: Weight of luminaire and its horizontal and vertical supports, lowering

- devices, and supporting structure, applied as stated in AASHTO LTS-4. Wind Load: Pressure of wind on pole and luminaire, calculated and applied as stated in AASHTO LTS-4 Wind speed for calculating wind load for poles exceeding 50 feet in height is 110 mph.
- **1.2 SUBMITTALS** A. Product Data: For each luminaire, pole, and support component, arranged in order of lighting unit designation. B. Operation and Maintenance Data: For luminaires and poles to include in emergency, operation, and maintenance manuals.
- **1.3 QUALITY ASSURANCE** A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer

Comply with IEEE C2, "National Electrical Safety Code."

. Metal Parts: Free of burrs and sharp corners and edges.

. Exposed Hardware Material: Stainless steel.

exposure to heat, and UV radiation.

White Surfaces: 85 percent.

gust factor of 1.3.

with support components.

indicated

1.7 ALUMINUM POLES

stainless-steel bolts.

1.8 POLE ACCESSORIES

Dimmable

1.10 LUMINAIRE INSTALLATION

1.11 POLE INSTALLATION

1.13 GROUNDING

. Install lamps in each luminaire

1.9 LED LUMINAIRES

. Finish: Same as pole.

Transient Voltage protection

Power factor: 0.90 or higher

Specular Surfaces: 83 percent. Diffusing Specular Surfaces: 75 percent.

A. Structural Characteristics: Comply with AASHTO LTS-4.

area to be used in pole selection strength analysis.

Anchor-Bolt Template: Plywood or steel.

listed in that Section, and accessible through handhole.

nounting bolts and nuts. Finish same as pole.

Heat sink to remove heat from circuits

B. Fasten luminaire to indicated structural supports.

and their mounting provisions on the pole.

"Grounding and Bonding for Electrical Systems."

grounding system

for the application and approved by manufacturer.

L70 compliant to 70,000 hours minimum

A. Solid State Drivers and LED: Comply with DOE LM 79

urisdiction, and marked for intended use.

D. Comply with NFPA 70. 1.4 DELIVERY, STORAGE, AND HANDLING

1.5 LUMINAIRES, GENERAL REQUIREMENTS

when door opens.















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IEET KEYED NOTES NG AND BACKFILL AND CURRENT USE CONDUIT BY CONTRACTOR. EP BENDS PER UTILITY REQUIREMENTS. NG AND BACKFILL AND SPARE CONDUITS BY CONTRACTOR. PROVIDE SPER UTILITY REQUIREMENTS.	CONTACT INFORMATION C S Answers to Infrastructure• ENGINEERING & SURVEYING 4246 S RIVERBOAT RD., STE 200 SALT LAKE CITY, UT 84123 P: 801.359.5565		9
PADVAULT BY CONTRACTOR. EQUIPMENT BY UTILITY. SUG46 ENCLOSURE WITH BASE(OR EQUIVALENT) WITH ONE METER. REINFORCED CONCRETE PAD EXTENDING 6" BEYOND EQUIPMENT DIRECTIONS. SEE PANEL SCHEDULES FOR ADDITIONAL INFORMATION. SONTACTORS AND TIMECLOCK IN METERED PEDESTAL COORDINATE TH REP PRIOR TO BID. NAL SIZE PANEL WITH METERING PEDESTAL REP PRIOR TO BID. SEE OR ADDITIONAL INFORMATION. ID SITE ELECTRICAL AND LIGHTING PLANS FOR CIRCUIT INFORMATION. ISH-IN-GRADE JUNCTION BOX IN UTILITY SERVICE LATERAL FOR	SINE SOURCE ENGINEERING 95 W Golf Course Road Suite 102 Logan, Ut 84321 office: (435) 787-1445		8
TILITY OWNED STREET LIGHTS. SEE ES103 - ELECTRICAL SITE PLAN OR BASE/ALTERNATE PRICING REQUIREMENTS. ERAL SHEET NOTES Y MOUNTAIN POWER'S REQUIREMENTS FOR ALL UTILITY RELATED VIEW CURRENT PACIFICORP ESR MANUAL PRIOR TO BID. NOTIFY	fax: 1-877-207-3199 www.sinesource.net REVISIONS		7
LICTS PRIOR TO BID. I INDICATE MINIMUM REQUIRED VALUES. RE CONSIDERED TO BE COPPER UNLESS SPECIFICALLY NOTED ATIONS FOR SERIES VS. FULLY RATED REQUIREMENTS. RVICE EQUIPMENT WITH REQUIRED BREAKER CLEARING TIME. Y WITH MANUFACTURER'S PUBLISHED DATA FOR MAIN BREAKER.			6
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		DIAGRAM	4
	LEGAL NOTICE THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF CRS CONSULTING ENGINEERS, INC. AND IS NOT TO BE REPRODUCED, MODIFIED, OR USED FOR ANY OTHER PROJECT OR EXTENSION OF THIS PROJECT EXCEPT BY AGREEMENT WITH CRS ENGINEERS. DESIGN	T ONE-LINE I	3
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