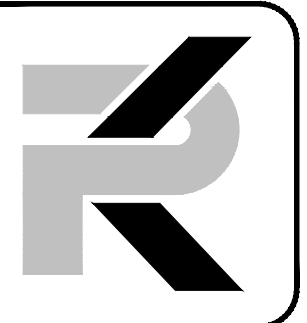


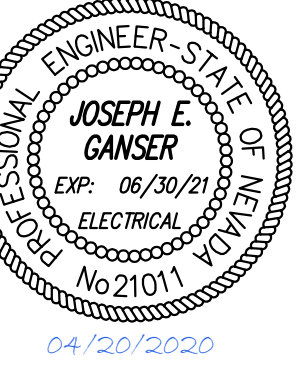
# DOUGLAS COUNTY FAIRGROUNDS ARENA SPORTS LIGHTING

Pinenut Road  
Gardnerville, NV 89410

Permit Set  
April 15, 2020



**PK Electrical, Inc.**  
681 Sierra Rose Drive, Suite B  
Reno, NV 89511  
775.826.9010  
4601 DTC Boulevard, Suite 740  
Denver, CO 80237  
720.481.3290  
pk-electrical.com  
19058



04/20/2020

DOUGLAS COUNTY FAIRGROUNDS  
ARENA SPORTS LIGHTING  
Pinenut Road  
Gardnerville, NV 89410

SITE MAP	OWNER	DRAWING INDEX																														
<p>DOUGLAS COUNTY FAIRGROUNDS PINENUT ROAD GARDNERVILLE, NV 89410</p>	<p>Douglas County Parks &amp; Recreation 1323 Waterloo Lane Lampe Park Gardnerville, NV 89410</p>	<table border="1"> <thead> <tr> <th>SHEET</th> <th>DESCRIPTION</th> <th>PERMIT SET</th> </tr> </thead> <tbody> <tr> <td>00.1</td> <td>COVER PAGE</td> <td>•</td> </tr> <tr> <td>E0.1</td> <td>ELECTRICAL LEGEND, FIXTURE SCHEDULE &amp; IECC CALCULATIONS</td> <td>•</td> </tr> <tr> <td>E0.2A</td> <td>ELECTRICAL SPECIFICATIONS</td> <td>•</td> </tr> <tr> <td>E0.2B</td> <td>SPORTS FIELD LIGHTING SPECIFICATIONS</td> <td>•</td> </tr> <tr> <td>E0.3</td> <td>ONELINES DIAGRAMS &amp; PANEL SCHEDULE</td> <td>•</td> </tr> <tr> <td>E0.4</td> <td>DETAILS</td> <td>•</td> </tr> <tr> <td>E1.1</td> <td>SITE LIGHTING DEMOLITION PLAN</td> <td>•</td> </tr> <tr> <td>E2.1</td> <td>NEW WORK SITE LIGHTING PLAN</td> <td>•</td> </tr> <tr> <td colspan="2">TOTAL SHEETS IN ISSUE:</td> <td>8</td> </tr> </tbody> </table>	SHEET	DESCRIPTION	PERMIT SET	00.1	COVER PAGE	•	E0.1	ELECTRICAL LEGEND, FIXTURE SCHEDULE & IECC CALCULATIONS	•	E0.2A	ELECTRICAL SPECIFICATIONS	•	E0.2B	SPORTS FIELD LIGHTING SPECIFICATIONS	•	E0.3	ONELINES DIAGRAMS & PANEL SCHEDULE	•	E0.4	DETAILS	•	E1.1	SITE LIGHTING DEMOLITION PLAN	•	E2.1	NEW WORK SITE LIGHTING PLAN	•	TOTAL SHEETS IN ISSUE:		8
SHEET	DESCRIPTION	PERMIT SET																														
00.1	COVER PAGE	•																														
E0.1	ELECTRICAL LEGEND, FIXTURE SCHEDULE & IECC CALCULATIONS	•																														
E0.2A	ELECTRICAL SPECIFICATIONS	•																														
E0.2B	SPORTS FIELD LIGHTING SPECIFICATIONS	•																														
E0.3	ONELINES DIAGRAMS & PANEL SCHEDULE	•																														
E0.4	DETAILS	•																														
E1.1	SITE LIGHTING DEMOLITION PLAN	•																														
E2.1	NEW WORK SITE LIGHTING PLAN	•																														
TOTAL SHEETS IN ISSUE:		8																														
	<p>CONSULTANT</p> <p><b>PK Electrical, Inc.</b> <i>Engineering · Design · Consulting</i> 681 Sierra Rose Drive, Suite B   Reno, NV 89511   775.826.9010 4601 DTC Boulevard, Suite 740   Denver, CO 80237   720.481.3290 pk-electrical.com © 2008-2015 PK Electrical, Inc.</p>																															
	<p>PROJECT INFORMATION</p> <table border="1"> <tr> <td>JURISDICTION</td> <td>DOUGLAS COUNTY</td> </tr> <tr> <td>CURRENT CODES</td> <td>2017 NATIONAL ELECTRIC CODE 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE</td> </tr> </table>	JURISDICTION	DOUGLAS COUNTY	CURRENT CODES	2017 NATIONAL ELECTRIC CODE 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE																											
JURISDICTION	DOUGLAS COUNTY																															
CURRENT CODES	2017 NATIONAL ELECTRIC CODE 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE																															

REVISIONS

SHEET TITLE  
COVER PAGE

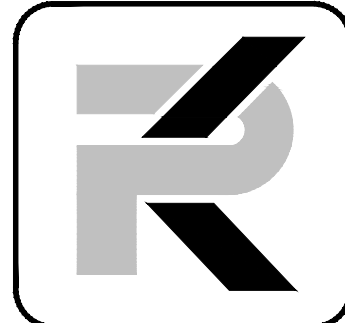
DRAWN: TPT  
CHECKED: JEG  
DATE: 4/15/20  
JOB NUMBER: 19058  
PROJECT MGR: NA

G0.1

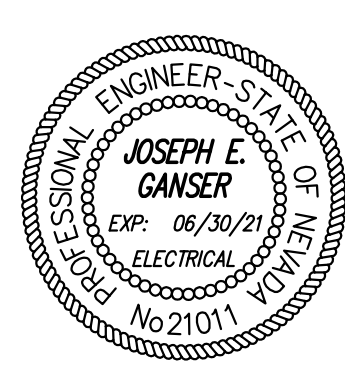








**PK Electrical, Inc.**  
 681 Sierra Rose Drive, Suite B  
 Reno, NV 89511  
 775.326.1010  
 4601 DTC Boulevard, Suite 740  
 Denver, CO 80237  
 720.481.3290  
 pk@pk-electrical.com  
 19058



04/30/2020

**DOUGLAS COUNTY FAIRGROUNDS  
 ARENA SPORTS LIGHTING**  
 Pinenut Road  
 Gardnerville, NV 89410

REVISIONS

SHEET TITLE

ELECTRICAL SPECIFICATIONS

DRAWN: TPT  
 CHECKED: JEG  
 DATE: 4/15/20  
 JOB NUMBER: 19058  
 PROJECT MGR: NA

E0.2A

**SECTION 16000 ELECTRICAL SPECIFICATIONS**

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
1.1	<p><b>PART 1 - GENERAL SUMMARY</b></p> <ul style="list-style-type: none"> <li>THE WORK UNDER THIS DIVISION SHALL CONSIST OF ALL LABOR, MATERIALS, EQUIPMENT, SERVICES AND RELATED ACCESSORIES, ETC. NECESSARY TO COMPLETE ALL WORK AS SHOWN OR INFERRED ON THE DRAWINGS AND IN THE SPECIFICATIONS (CONTRACT DOCUMENTS).</li> <li>PROVIDE FIXED ELECTRICAL EQUIPMENT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.</li> <li>PROVIDE EQUIPMENT AND/OR WIRING NORMALLY FURNISHED OR REQUIRED FOR COMPLETE ELECTRICAL SYSTEMS BUT NOT SPECIFICALLY SPECIFIED ON THE DRAWINGS AND/OR IN SPECIFICATIONS, AS THOUGH SPECIFIED BY BOTH.</li> <li>ALL EQUIPMENT AND WIRING SHALL BE NEW, EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE.</li> </ul>			2.4	<p><b>WIRING</b></p> <ul style="list-style-type: none"> <li>WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG. WHERE ALUMINUM IS ALLOWED, WIRE SHALL BE TERMINATED IN AN INSULATED QUAL RATED COMPRESSION TERMINAL FITTING (MAC-ADAPT OR EQUAL). INSULATION SHALL BE THX, THN OR THHN.</li> <li>UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE WHITE (20V) OR GREY (277V) AND PHASE WIRES SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C) FOR A 120/208 VOLT SYSTEM AND BROWN (PHASE A), ORANGE (PHASE B), AND YELLOW (PHASE C) FOR A 277/480 VOLT SYSTEM.</li> </ul>
1.2	<p><b>RELATED WORK SPECIFIED ELSEWHERE</b></p> <p>COORDINATION: THE EXTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 16 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIALS, SPECIFICATIONS AND ADDENDA.</p>			3.1	<p><b>PART 5 - EXECUTION</b></p> <p><b>VISIT TO SITE</b></p> <ul style="list-style-type: none"> <li>ALL WORK PERFORMED SHALL BE FIRST CLASS WORK IN EVERY ASPECT. THE WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO COMPLY WITH NECA'S "STANDARD OF INSTALLATION."</li> <li>IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, FURNISH AND INSTALL ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THAT ALL SYSTEMS ARE COMPLETE AND OPERATIVE.</li> <li>ALL WORK UNDER THIS SECTION SHALL BE PERFORMED IN COOPERATION WITH THE WORK PERFORMED UNDER ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR THE PROJECT IN ORDER TO AVOID INTERFERENCE WITH OTHER WORK AND TO SECURE THE PROPER INSTALLATION OF ALL WORK. REFER TO THE DRAWINGS AND SPECIFICATIONS COVERING THE WORK TO BE PERFORMED UNDER ALL SECTIONS, SO THAT THE RELATION AND EXTENT OF THE WORK OF THIS SECTION WITH RESPECT TO THE WORK OF ALL OTHER SECTIONS IS UNDERSTOOD. GIVE RIGHT OF WAY TO RACEWAYS AND PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.</li> <li>CONDUIT SYSTEMS MUST BE COMPLETE PRIOR TO INSTALLATION OF WIRING.</li> </ul>
1.3	<p><b>ADOPTED CODES</b></p> <ul style="list-style-type: none"> <li>INTERNATIONAL BUILDING CODE (IBC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC).</li> <li>NATIONAL ELECTRICAL CODE (NEC) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).</li> <li>INTERNATIONAL FIRE CODE (IFC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL.</li> <li>NATIONAL FIRE CODE (NFFA STANDARDS) PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AS REFERENCED IN THE 2006 INTERNATIONAL FIRE CODE.</li> <li>INTERNATIONAL ENERGY CONSERVATION CODE (IECC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL.</li> <li>ALL APPLICABLE PROVISIONS OF THE NEVADA REVISED STATUTES (NRS) AND THE NEVADA ADMINISTRATIVE CODE (NAC), INCLUDING THOSE LISTED BELOW.</li> <li>THE MOST CURRENT REGULATIONS OF THE STATE FIRE MARSHAL, NEVADA DEPARTMENT OF PUBLIC SAFETY, CARSON CITY, NEVADA (NAC CHAPTER 411, STATE FIRE MARSHAL).</li> <li>THE MOST CURRENT EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA) PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE INCLUDING THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).</li> </ul>	1.7	<p><b>COPYRIGHT</b></p> <p>THESE PLANS, SPECIFICATIONS, AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF PK ELECTRICAL. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO PK ELECTRICAL. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF PK ELECTRICAL AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF PK ELECTRICAL.</p>	3.2	<p><b>WORKMANSHIP</b></p> <ul style="list-style-type: none"> <li>ALL WORK PERFORMED SHALL BE FIRST CLASS WORK IN EVERY ASPECT. THE WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO COMPLY WITH NECA'S "STANDARD OF INSTALLATION."</li> <li>IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, FURNISH AND INSTALL ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THAT ALL SYSTEMS ARE COMPLETE AND OPERATIVE.</li> <li>ALL WORK UNDER THIS SECTION SHALL BE PERFORMED IN COOPERATION WITH THE WORK PERFORMED UNDER ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR THE PROJECT IN ORDER TO AVOID INTERFERENCE WITH OTHER WORK AND TO SECURE THE PROPER INSTALLATION OF ALL WORK. REFER TO THE DRAWINGS AND SPECIFICATIONS COVERING THE WORK TO BE PERFORMED UNDER ALL SECTIONS, SO THAT THE RELATION AND EXTENT OF THE WORK OF THIS SECTION WITH RESPECT TO THE WORK OF ALL OTHER SECTIONS IS UNDERSTOOD. GIVE RIGHT OF WAY TO RACEWAYS AND PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.</li> <li>CONDUIT SYSTEMS MUST BE COMPLETE PRIOR TO INSTALLATION OF WIRING.</li> </ul>
1.4	<p><b>DEFINITIONS</b></p> <p>FURNISH, INSTALL, CONNECT AND TEST UNTIL COMPLETE WIRE FURNISH ALL NECESSARY WIRING, CONNECT AND TEST UNTIL COMPLETE INSTALL FURNISH, SET IN PLACE, WIRE AND TEST UNTIL COMPLETE WORK MATERIALS COMPLETELY INSTALLED, CONNECTED, AND TESTED UNTIL COMPLETE EQUAL ACCEPTABLE EQUAL AS DETERMINED BY THE ENGINEER</p>	1.10	<p><b>EXAMINATION OF SITE AND EXISTING CONDITIONS</b></p> <p>BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.</p>	3.3	<p><b>CHANGE ORDERS</b></p> <ul style="list-style-type: none"> <li>ADDITIONAL WORK MAY BE REQUIRED ON THE PROJECT WHICH IS OUTSIDE THE SCOPE OF THE CONTRACT. SUCH ADDITIONAL WORK WILL BE DESCRIBED IN SUPPLEMENTAL INSTRUCTIONS AND/OR CLARIFICATIONS TO BE ESTIMATED AND PRICED BY THE CONTRACTOR, AND ACCEPTED BY THE OWNER, PRIOR TO COMMENCING WORK. PROPOSALS SHALL INCLUDE A LIST OF QUANTITIES OF ALL MATERIAL BEING USED WITH UNIT COSTS BROKEN DOWN INTO MATERIAL AND LABOR COSTS PER UNIT. CONTRACTOR SHALL PROVIDE ACTUAL EQUIPMENT QUOTES WHEN REQUESTED BY ENGINEER.</li> <li>MATERIAL COSTS AND LABOR UNITS SHALL NOT EXCEED THE LATEST EDITION OF RS MEANS ELECTRICAL COST DATA.</li> </ul>
1.5	<p><b>REQUIREMENTS OF REGULATORY AGENCIES</b></p> <ul style="list-style-type: none"> <li>OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK. COMPLY WITH ALL ORDINANCES PERTAINING TO WORK DESCRIBED HEREIN. PAY ALL EXPENSES ARISING FROM THE PROCUREMENT OF THESE CERTIFICATES AND INCLUDE IN THE BASE CONTRACT PRICE.</li> <li>INSTALL WORK UNDER THIS DIVISION PER DRAWINGS, SPECIFICATIONS, LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), INCLUDING LOCAL AMENDMENTS AND INTERPRETATIONS, LOCAL ADOPTED BUILDING CODES, AND ANY SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK WITHIN COMPLETE INSTALLATION. IN EVENT OF CONFLICT, INSTALL WORK PER MOST STRINGENT CODE REQUIREMENTS DETERMINED BY ENGINEER. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.</li> <li>ALL MATERIALS, PRODUCTS, DEVICES, FIXTURES, FORMS OR TYPES OF CONSTRUCTION INCLUDED IN THIS PROJECT SHALL MEET OR EXCEED THE PUBLISHED REQUIREMENTS OF NATIONAL ELECTRICAL CODE (NEC), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) AND NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA). ALL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABORATORIES (UL) LABEL OR EQUIVALENT FROM APPROVED INDEPENDENT TESTING LABORATORY.</li> <li>ARRANGE, PAY FEES FOR AND COMPLETE WORK TO PASS REQUIRED TESTS BY AGENCIES HAVING AUTHORITY OVER WORK. DELIVER TO ENGINEER COPIES OF THE CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES AND PROVIDE ORIGINAL COPY OF EACH CERTIFICATE TO OWNER.</li> <li>WHEN REQUIRED BY LAW OR REGULATIONS, THE GOVERNMENTAL AGENCY HAVING JURISDICTION FOR INSPECTIONS SHALL BE GIVEN REASONABLE NOTICE AND OPPORTUNITY TO INSPECT THE WORK. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE. AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT HIS OWN EXPENSE.</li> </ul>	1.11	<p><b>REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. MATCH AIC RATINGS. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES. EXISTING PANELBOARDS</b></p> <ul style="list-style-type: none"> <li>RING OUT CIRCUITS IN EXISTING PANELS, WHERE ADDITIONAL CIRCUITS ARE NEEDED. REUSE CIRCUITS AVAILABLE FOR REUSE. INSTALL NEW BREAKERS AS INDICATED ON DRAWINGS.</li> <li>MATCH AIC RATINGS.</li> <li>DO NOT UNUSE CIRCUITS AS SPARE.</li> <li>WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING PROJECT AREA ARE NOT IN USE OR OVERLOADED.</li> <li>REMOVE EXISTING WIRE NO LONGER IN USE FROM PANEL TO EQUIPMENT.</li> <li>PROVIDE NEW UNDATED TYPED DIRECTORIES.</li> </ul>	3.4	<p><b>GUARANTEE</b></p> <ul style="list-style-type: none"> <li>FURNISH THE OWNER A WRITTEN GUARANTEE, STATING THAT IF THE WORKMANSHIP AND/OR MATERIAL EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN (1) YEAR AFTER THE FINAL ACCEPTANCE BY THE OWNER, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED. SUBMIT WITH OPERATION AND MAINTENANCE MANUALS.</li> <li>OBTAIN FROM THE VARIOUS MANUFACTURERS OR VENDORS GUARANTEES OR WARRANTIES FOR THEIR PARTICULAR EQUIPMENT OR COMPONENTS, AND DELIVER THEM TO THE OWNER. ALL GUARANTEES AND WARRANTIES PROVIDED SHALL BE REFERENCED TO THIS PROJECT.</li> <li>IN EVENT THAT SYSTEMS ARE PLACED IN OPERATION IN SEVERAL PHASES AT THE OWNER'S REQUEST, GUARANTEE WILL BEGIN ON DATE EACH SYSTEM OR ITEM OF EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER. PROVIDE O&amp;M MANUALS FOR ALL EQUIPMENT WHEN EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER.</li> <li>ALL GUARANTEES AND WARRANTIES SHALL INCLUDE LABOR AND MATERIAL AT THE SITE OF INSTALLATION FOR THE DURATION OF THE GUARANTEE PERIOD.</li> </ul>
		2.1	<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>	3.5	<p><b>OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)</b></p> <ul style="list-style-type: none"> <li>AT ALL OBSERVATIONS OF WORK, OPEN PANEL COVERS, JUNCTION BOX COVERS, FULL BOX COVERS, DEVICE COVERS, AND OTHER EQUIPMENT WITH MOVABLE PLATES FOR OBSERVATION AS REQUESTED BY AHJ OR ENGINEER. PROVIDE SUFFICIENT PERSONNEL TO EXPEDITE COVER REMOVAL AND REPLACEMENT.</li> <li>CONTRACTOR TO DEMONSTRATE OPERATION OF NEW EQUIPMENT AND/OR SYSTEMS TO SATISFACTION OF OWNER/ENGINEER. CONTRACTOR TO HAVE MANUFACTURER AVAILABLE FOR DEMONSTRATION OF EQUIPMENT AND/OR SYSTEMS WHERE REQUESTED BY OWNER/ENGINEER. FURNISH AFFIDAVIT SIGNED BY OWNER'S REPRESENTATIVE INDICATING THAT DEMONSTRATION OF OPERATION HAS BEEN PERFORMED.</li> </ul>
		2.2	<p><b>PANELBOARDS</b></p> <p>PANELS SHALL HAVE FLUSH MONO-FLAT TRIM, LOCKING DOOR-IN-DOOR HINGED COVERS AND BOLT-ON CIRCUIT BREAKERS. BUGGING SHALL BE COPPER UNLESS INDICATED ON DRAWINGS. FLUSH-MOUNTED PANELS SHALL HAVE EMPTY CONDUITS STUBBED TO ACCESSIBLE ATTIC SPACE. ONE 1" CONDUIT FOR EACH FOUR SPARE SPACE CIRCUITS. PROVIDE ONE TYPED AND ONE SPARE PANEL SCHEDULE FOR OWNER'S USE. SCHEDULES SHALL BE TWO COLUMN TYPE WITH ODD CIRCUIT NUMBERS ON THE LEFT AND EVEN NUMBERS ON THE RIGHT.</p>	3.6	<p><b>COORDINATION OF UTILITY SERVICES</b></p> <ul style="list-style-type: none"> <li>DRAWINGS INDICATE PROPOSED SERVICE LAYOUTS. THE CONTRACTOR SHALL PROVIDE ALL CONCRETE STRUCTURES, PULLBOXES, VAULTS, TRENCHING, RACEWAYS, PROTECTIVE BOLLARDS, ETC., AS REQUIRED PER NV ENERGY STANDARDS (ELECTRICAL UTILITY), AT&amp;T (TELEPHONE COMPANY) AND CHARTER (CATV UTILITY) STANDARDS.</li> <li>CONTRACTOR IS RESPONSIBLE FOR SUBMITTING PROJECT DRAWINGS, APPLICATION, AND EQUIPMENT SHOP DRAWINGS TO THE UTILITY. UTILITY FEES TO BE PAID BY PROJECT OWNER.</li> </ul>
		2.3	<p><b>CIRCUITING</b></p> <p>ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS SHALL BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM 24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE AND CONCRETE SLAB TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. PVC MAY BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURE FROM J-BOX. FIXTURE WHIPS MAY NOT EXCEED 6' IN LENGTH. METAL CLAD CABLE (TYPE MC) WILL BE ACCEPTABLE FOR SINGLE CIRCUIT BRANCH CIRCUITING. FLEXIBLE WHIPS FROM JUNCTION BOXES TO LIGHTING FIXTURES AND WITHIN CASEWORK. TYPE MC CABLE MAY NOT BE USED FOR HOMERUNS. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY. CONNECT PUMP MOTORS WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT.</p>	3.7	<p><b>COORDINATION OF UTILITY SERVICES</b></p> <ul style="list-style-type: none"> <li>DRAWINGS INDICATE PROPOSED SERVICE LAYOUTS. THE CONTRACTOR SHALL PROVIDE ALL CONCRETE STRUCTURES, PULLBOXES, VAULTS, TRENCHING, RACEWAYS, PROTECTIVE BOLLARDS, ETC., AS REQUIRED PER NV ENERGY STANDARDS (ELECTRICAL UTILITY), AT&amp;T (TELEPHONE COMPANY) AND CHARTER (CATV UTILITY) STANDARDS.</li> <li>CONTRACTOR IS RESPONSIBLE FOR SUBMITTING PROJECT DRAWINGS, APPLICATION, AND EQUIPMENT SHOP DRAWINGS TO THE UTILITY. UTILITY FEES TO BE PAID BY PROJECT OWNER.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>	3.8	<p><b>DELIVERY, STORAGE AND HANDLING</b></p> <ul style="list-style-type: none"> <li>DELIVER EQUIPMENT AND MATERIALS TO JOB SITE IN ORIGINAL, UNOPENED, LABELED CONTAINER. PRODUCTS SHALL BE PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS AND OTHER INFORMATION NEEDED FOR IDENTIFICATION. STORE TO PREVENT DAMAGE AND INJURY. STORE MATERIALS TO PREVENT CORROSION. STORE FINISHED MATERIALS AND EQUIPMENT TO PREVENT STAINING AND DISCOLORING. STORE MATERIALS AFFECTED BY CONDENSATION IN WARM DRY AREAS. PROVIDE HEATERS. CONTRACTOR SHALL VERIFY THE AVAILABILITY OF ON SITE STORAGE SPACE, IF NO ON SITE STORAGE SPACE IS AVAILABLE THEN THE CONTRACTOR SHALL COVER THE COST FOR OFF SITE STORAGE. MATERIALS STORED AT THE PROJECT SITE THAT BECOMES SOILED WITH CONSTRUCTION DIRT, CONCRETE, OR MOISTURE SHALL BE REMOVED FROM THE SITE AND REPLACED WITH NEW. DO NOT INSTALL SOILED MATERIAL.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p><b>ANCHORS</b></p> <ul style="list-style-type: none"> <li>PROVIDE ANCHORS FOR ALL EQUIPMENT, RACEWAYS, HANGERS, ETC. TO SAFELY SUPPORT WEIGHT OF ITEM INVOLVED PLUS 100% FOR DEAD LOADS. LIVE LOADS SHALL BE CONSIDERED IN ADDITION TO DEAD LOADS.</li> <li>ANCHORS TO CONSIST OF EXPANSION TYPE DEVICES SIMILAR TO "REDHEAD" OR LEAD EXPANSION ANCHORS. PLASTIC ANCHORS ARE NOT ACCEPTABLE.</li> <li>USE PRESET ANCHOR STEEL INSERTS IN CONCRETE SLABS. PROVIDE PRESET ANCHOR SIZE AND TYPE FOR ANTICIPATED OR SPECIFIED ROD/BOLT SIZE AND LIVE/DEAD LOAD.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p><b>HOUSEKEEPING PADS</b></p> <p>FURNISH 2500 # CONCRETE PADS, 4" HIGH (INTERIOR LOCATIONS) OR 6" HIGH (EXTERIOR LOCATIONS) UNLESS OTHERWISE NOTED, FOR ALL FREESTANDING EQUIPMENT, I.E. SWITCHBOARDS, PANELS, CONTROL PANELS, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC. PADS SHALL HAVE 1" X 45° CHAMFERED EDGES, AND SHALL EXTEND 2" TO 4" BEYOND EQUIPMENT MOUNTINGS.</p> <p><b>CLEANING AND PAINTING</b></p> <ul style="list-style-type: none"> <li>CLEAN EQUIPMENT FURNISHED IN THIS DIVISION AFTER COMPLETION OF WORK. CLEAN WIPE THE INTERIOR OF ALL CONDUIT, PULLBOXES, JUNCTION BOXES, OUTLET BOXES, AND PANELBOARD BACKBOXES SOILED WITH DIRT AND DEBRIS PRIOR TO INSTALLATION OF WIRING.</li> <li>TOUCH-UP OR RE-PAINT DAMAGED FINISHES AS DETERMINED BY THE ENGINEER.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p><b>RECORD DRAWINGS</b></p> <ul style="list-style-type: none"> <li>CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE-SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM. ALSO INCLUDE THE FOLLOWING INFORMATION:        EXACT ROUTING OF ALL CONDUITS LARGER THAN ONE INCH.        EXACT LOCATION OF ALL SERVICE GROUNDING/ BONDING CONNECTIONS.        CONTRACTORS NAME, ADDRESS, AND TELEPHONE NUMBER.</li> <li>RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p><b>TESTING</b></p> <p>PRIOR TO PLACING IN SERVICES, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENES, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED, PROVIDE GFI TESTING FOR SERVICE SWITCHBOARD.</p> <p><b>IDENTIFICATION</b></p> <ul style="list-style-type: none"> <li>PROVIDE ENGRAVED NAMEPLATES FOR ALL SWITCHBOARDS, PANELS, TRANSFORMERS, DISCONNECTS, MOTOR STARTERS, CONTACTORS, THE SWITCHES AND CABINETS. NAMEPLATES SHALL BE WHITE LETTERS ON BLACK FOR NORMAL EQUIPMENT AND WHITE LETTERS ON RED FOR EMERGENCY EQUIPMENT. NAMEPLATES SHALL INCLUDE THE FOLLOWING INFORMATION AS APPLICABLE:        DESIGNATION (I.E. PANEL A); FUNCTION (I.E. AIR HANDLER AH-1); VOLTAGE, PHASE, WIRE (I.E. 480 VOLT, 3 PHASE, 4W); FEEDER SIZE (I.E. 4-1/4" O THIN CU IN 2" C); SOURCE (I.E. SWITCHBOARDS MSB).</li> <li>JUNCTION, FULL AND CONNECTION BOXES: IDENTIFICATION OF SYSTEMS AND CIRCUITS SHALL INDICATE SYSTEM VOLTAGE AND CONTAINED CIRCUITS ON OUTSIDE OF BOX COVER. USE SELF-ADHESIVE MARKING TAPE LABELS AT EXPOSED LOCATIONS AND INDELEIBLE BLACK MARKER AT CONCEALED BOXES. ALL FIRE ALARM BOXES SHALL HAVE COVERS PAINTED RED. ALL TEMPERATURE CONTROL BOXES SHALL HAVE COVERS PAINTED BLUE.</li> <li>BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED IN EACH JUNCTION BOX AND FULL BOX WITH WIRE MARKERS AS MANUFACTURED BY T&amp;B, PANDUIT, SM, OR IDEAL TO INDICATE PANEL/CIRCUIT NUMBER.</li> <li>JUNCTION BOX COVERS IN BRANCH CIRCUIT WIRING SHALL BE LABELED WITH PANEL AND CIRCUIT NUMBERS. JUNCTION BOX COVERS FOR SPECIAL SYSTEMS SHALL BE LABELED WITH SYSTEM NAME AND OTHER IDENTIFICATION AS DIRECTED; FOR EXAMPLE, "FIRE ALARM-ZONE 1". WHERE BOXES ARE INSTALLED FLUSH MOUNTED IN FINISHED AREAS OR SURFACE MOUNTED IN UNFINISHED AREAS, LABELING SHALL BE WITH ENGRAVED PLASTIC NAMEPLATE AS SPECIFIED HEREIN. WHERE BOXES ARE INSTALLED ABOVE ACCESSIBLE CEILINGS, LABELING MAY BE NEAT HAND WRITTEN LETTERING WITH INDELEIBLE MARKER.</li> <li>DEVICE PLATES - SWITCHES AND RECEPTACLES: IDENTIFY THE PANELBOARD AND BRANCH CIRCUIT NUMBER FROM WHICH SERVED ON THE FRONT OF THE DEVICE PLATE WITH PERMANENT POLYESTER TAPE. LOCATE ALL LABELS AT THE BOTTOM OF THE PLATE IN THE SAME LOCATION THROUGHOUT.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p><b>SALVAGE</b></p> <p>ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.</p> <p><b>SEISMIC PROTECTION</b></p> <ul style="list-style-type: none"> <li>THIS PROJECT IS SUBJECT TO THE SEISMIC BRACING REQUIREMENT OF THE INTERNATIONAL BUILDING CODE, 2012 EDITION. THE FOLLOWING CRITERIA ARE APPLICABLE TO THIS PROJECT:        SEISMIC USE GROUP: II; SEISMIC CLASS CATEGORY: D; SEISMIC DESIGN CATEGORY: D.</li> <li>IT IS RECOMMENDED THAT THE CONTRACTOR ENLIST THE SERVICES OF A QUALIFIED SEISMIC BRACING VENDOR/ SUPPLIER. PROVIDE BRACING FOR IDENTIFIED EQUIPMENT AND SYSTEM.</li> <li>ELECTRICAL EQUIPMENT: ELECTRICAL EQUIPMENT SHALL INCLUDE THE FOLLOWING ITEMS TO THE EXTENT REQUIRED ON THE DRAWINGS OR IN OTHER SECTIONS OF THESE SPECIFICATIONS TO BE SEISMICALLY PROTECTED:        LIGHT FIXTURES, TRANSFORMERS, SWITCHBOARDS, PANELBOARDS.</li> <li>ELECTRICAL SYSTEMS: THE FOLLOWING ELECTRICAL SYSTEMS SHALL BE SEISMICALLY PROTECTED IN ACCORDANCE WITH THIS SPECIFICATION:        LIGHTING, POWER, SECURITY, COMMUNICATIONS AND FIRE ALARM.</li> <li>CONDUITS REQUIRING NO SPECIAL SEISMIC RESTRAINTS: SEISMIC RESTRAINTS MAY BE OMITTED FROM ELECTRICAL CONDUIT LESS THAN 2-1/2 INCHES TRADE SIZE. ALL OTHER INTERIOR CONDUIT SHALL BE SEISMICALLY PROTECTED AS SPECIFIED.</li> </ul>
			<p><b>PART 2 - PRODUCTS MATERIALS</b></p> <ul style="list-style-type: none"> <li>ALL MATERIAL SHALL BE NEW AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC TO, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.</li> <li>UTILIZE ONE OF THE MANUFACTURERS LISTED TO FURNISH ALL OF THE MAJOR EQUIPMENT (I.E. PANELS, TRANSFORMERS, BUS DUCT, SWITCHGEAR, CIRCUIT BREAKERS, ETC.) REQUIRED FOR THIS PROJECT.</li> <li>ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.</li> <li>ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.</li> </ul>		<p>END OF SECTION 16000</p>



**SECTION 26 56 00 SPORTS FIELD LIGHTING**

**PART I - GENERAL**

**1.01 Related Documents**

- A. Drawings and general provisions of the bid documents, including general and supplementary conditions apply to this section.

**1.02 Description of Work**

- A. The Sports Lighting section includes:
  1. Galvanized steel luminaire mounting crossarms
  2. LED Luminaire, with appropriate glare/spill light control
  3. Remote driver enclosure
  4. Pole Foundation (No direct burial steel pole allowed)
  5. Control System
- B. The purpose of this specification is to define the performance standards, product values and features, required manufacturer's service responsibilities, and design standards for the Douglas County Fair Grounds Arena in Gardnerville, NV.

**1.03 Submittals**

- A. Musco Sports Lighting LLC is the only pre-approved equipment supplier.
- B. All other manufacturers must submit each item in this article according to the conditions of the contract and specification section 10 days prior to bid for consideration. Any deviations to the specification require the manufacturer to list and describe in detail such deviations. Failure to provide this information shall be grounds for immediate rejection.
- C. Submittal information required:
  1. Light scans as per Section 1.04 of the specification.
  2. Spill scans as per Section 1.05 of the specification.
  3. Detailed warranty information as per Section 3.01 of the specification.
  4. Detail foundation design as described in Section 2.01
  5. Provide written information for the automated control system to include monitoring. Also provide examples of system reporting and access for numbers for personal contact to operate the system.
  6. Lighting Manufacturer will supply certified photometric reports from Independent Testing Lab (ITL) or a Certified Lab along with an aiming angle summary for verification.

**1.04 Sports Lighting Performance**

- A. Illumination Levels and Design Factors: The illumination levels specified shall be based on light levels for 25 years. Light levels shall not drop below specified targeted lighting levels during the specified warranty period. Appropriate light loss factors shall be applied and submitted for the basis of design.

Area of Lighting	Light Level	Uniformity	# of Points	Size of Area	Grid Spacing
Arena	50 footcandles	2.0:1	61	300' x 200'	30' x 30'
Pens	30 footcandles	8:1	84	N/A	20' x 20'

**1.05 Environmental Light Control**

- A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited to, internal shields, louvers and external shields. No symmetrical beam patterns are accepted.
- B. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the following levels taken at 3 feet above grade.

	Maximum
150' Specified Spill Line Horizontal Footcandles	.5 fc
150' Specified Spill Line Max Vertical Footcandles	1.5 fc

**PART 2 - PRODUCTS**

**2.01 Pole Structural Steel (Minimum pole height of 80')**

- A. The pole shafts shall be high strength low alloy tapered tubular steel that is equal to current ASTM A595 standards, with galvanized coating inside and out. All connections of pole sections shall be by slip fitting the top section over the lower section by a length of at least 1.5 times the diameters.
- B. Steel components of the poles shall be hot dip galvanized to current ASTM A-123. Steel portions of the pole shall be constructed such that all segments of the pole can be readily heated to like temperatures in commercially available galvanizing methods.
- C. To avoid problems of galvanize adherence to differing steel alloys, all steel components used for the pole must be of the same type steel.
- D. All exposed steel components of the pole shall be at least 18" above the surface of the ground to avoid exposure of the steel to the heavily moisture and oxygen laden air, both above and below the surface. There shall be a cap to cover the top of the pole so that rain will not enter the interior of the pole.
- E. To avoid stress corrosion of the pole, there shall be no weld points of the steel portion of the pole within 18" of the ground. The pole shall be galvanized steel.

**2.05 WIRE HARNESS**

- A. Spiral wound, abrasion protection sleeve, strain relief, plug-in connections

**2.06 ENERGY CONSUMPTION**

- A. The average kWh consumption for the entire facility shall not exceed 39kW.

**2.07 CONTROLS AND MONITORING SYSTEM**

- A. Factory assembled lighting control cabinet (LCC) – The LCC shall be assembled and wired by a UL listed panel builder. The LCC shall contain Contactors, Monitoring and Control System and door mounted Manual off-on-auto selector switches. The LCC shall arrive at the job site ready to attach to an existing wall, switchgear, or a free standing enclosure.
  - i. Control Wire Terminations - The Control Wire Terminations shall include UL listed terminal blocks mounted on a DIN rail and 250 volt, 16 amp, touch safe type fuse holders.
  - ii. The ECE shall be constructed of aluminum and shall be powder coated gray. The cabinet door shall utilize a lockable, 3 point latching assembly that provides a NEMA 4 rated seal.
  - iii. Contactor Modules – Contactors shall be UL listed for lighting applications. They shall be rated at full capacity, be electrically held, utilize a 120 volt coil and be rated for operation in a ambient temperature range from -40 degrees C to +70 degrees C.
  - iv. Manual off-on-auto Selector Switches – For on site manual control, three position selector switches shall be factory mounted to the ECE door. The switches shall be keyed and maintain position, with make before break contacts. The switches shall be factory wired to control terminal blocks.
  - v. Warranty – The LCC shall be covered under the standard warranty for the accompanying lighting equipment.
- B. Remote Monitoring System: System shall monitor lighting performance and notify manufacturer if individual luminaire outage is detected so that appropriate maintenance can be scheduled. The manufacturer shall notify the owner of outages within 24 hours, or the next business day. The controller shall determine switch position (manual or auto) and contactor status (open or closed). The Monitoring System shall be factory wired to control terminal blocks.
- C. Remote Lighting Control System: The Lighting Control System shall allow owners and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Manufacturer shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs. The Light Control System shall be factory wired to control terminal blocks

- F. The premise of the wind speed criteria will be the 50 year mean recurrent isotach wind map. Applicable gust factors to be applied per code.

**2.02 Foundation Design**

- A. The Manufacturer shall provide a stamped foundation design, prepared by a Structural Engineer, licensed in the State of Nevada.
- B. The foundation design shall be based upon recommendations contained in the Geotechnical Report furnished by the Owner. If a Geotechnical Report is not provided by the Owner, the foundation design shall be based on soils that meet or exceed those of a Class 5 material as defined by the 2018 IBC Table 1806.2.
- C. It is the contractor's responsibility to notify the owner of soil conditions other than the design criteria. The owner shall then be responsible and absorb the additional costs associated with: Providing engineered foundation embedment design by a registered engineer in the State of Nevada for soils other than specified soil conditions. Additional materials required to achieve alternate foundation. No direct burial steel poles allowed.
- D. Lightning Protection: Manufacturer shall provide integrated lightning grounding via concrete encased electrode grounding system as defined by NFPA 780 and be UL Listed per UL 96 and UL 96A. If grounding is not integrated into the structure, the Manufacturer shall supply grounding electrodes, copper down conductors and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780. The grounding electrode shall be not less than 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.

**2.03 LED SPORTS LIGHTING FIXTURES**

- A. The lens is permanently sealed to keep optics away from harmful environmental elements. Fixture is vented and filtered to adapt to environmental elements. Heat sink with a unique convective air cooling design with high thermal conductivity and corrosion resistant construction. Machine mounted surface for maximum heat transfer of diode assembly and maintains low LED junction temperature during high wattage operation. Custom high power diode package with a metal core printed circuit board. The light control visors are factory aimed. Controls and directs more light onto the field which reduced glare and spill and enhances the on-field playability. Fixture is powder coated gray.

**2.04 REMOTE ELECTRICAL ENCLOSURE**

- A. Remote drivers and supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. Drivers are remote for ease of installation and servicing. The enclosures shall be touch-safe and include drivers and fusing with indicator lights on fuses to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit for each pole structure will be located in the enclosure.

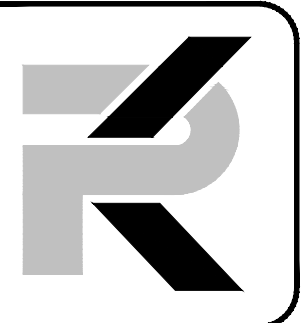
**PART 2 - EXECUTION**

**3.01 Warranty**

- A. 25-Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Manufacturer shall maintain specifically-funded financial reserves to assure fulfillment of the warranty for the full term. Warranty does not cover weather conditions events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers.
- B. Maintenance: Manufacturer shall monitor the performance of the lighting system, including on/off status, hours of usage and luminaire outage for 25 years from the date of equipment shipment. Parts and labor shall be covered such that individual luminaire outages will be repaired when the usage of any field is materially impacted. Manufacturer is responsible for removal and replacement of failed luminaires, including all parts, labor, shipping, and equipment rental associated with maintenance. Owner agrees to check fuses in the event of a luminaire outage.

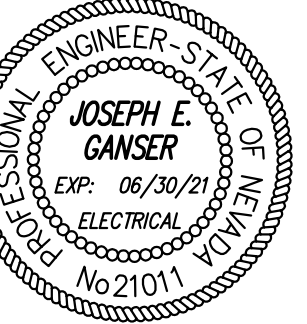
**3.02 Field Technician**

- A. Manufacturer shall have available a local factory trained technician to provide project support including but not limited to: Lamp replacement, confirm luminaire, aiming points, troubleshoot, and educate customer maintenance personnel.



**PK Electrical, Inc.**

681 Sierra Rose Drive, Suite B  
Reno, NV 89511  
775.826.9010  
4601 DTC Boulevard, Suite 740  
Denver, CO 80237  
720.481.3290  
pk-electrical.com  
19058



04/20/2020

**DOUGLAS COUNTY FAIRGROUNDS  
ARENA SPORTS LIGHTING**

Pinenut Road  
Gardnerville, NV 89410

REVISIONS

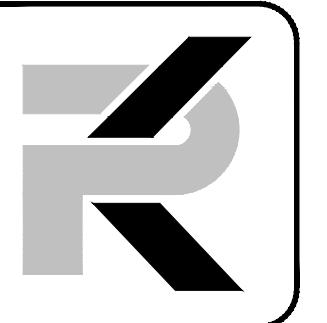
SHEET TITLE

SPORTS FIELD LIGHTING SPECIFICATIONS

DRAWN: TPT  
CHECKED: JEG  
DATE: 4/5/20  
JOB NUMBER: 19058  
PROJECT MGR: NA

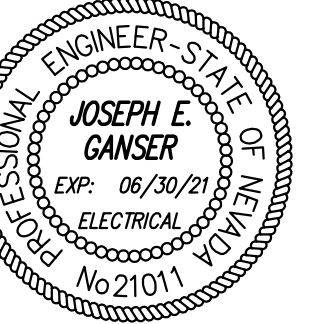
**E0.2B**





PK Electrical, Inc.

681 Sierra Rose Drive, Suite B  
Reno, NV 89511  
775.926.5010  
4601 DTC Boulevard, Suite 740  
Denver, CO 80237  
720.481.3290  
pk-electrical.com  
19058



04/20/2020

DOUGLAS COUNTY FAIRGROUNDS  
ARENA SPORTS LIGHTING  
Pinenut Road  
Gardnerville, NV 89410

GENERAL NOTES

- (E) AND/OR HALFTONE LINES INDICATE EXISTING EQUIPMENT, (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
- ALL CONTRACTOR PROVIDED EQUIPMENT SHALL COMPLY WITH NV ENERGY SPECIFICATIONS AND REQUIREMENTS.
- ALL CONDUCTOR SIZES ARE BASED ON COPPER. ALUMINUM IS NOT PERMITTED.

SHEET NOTES

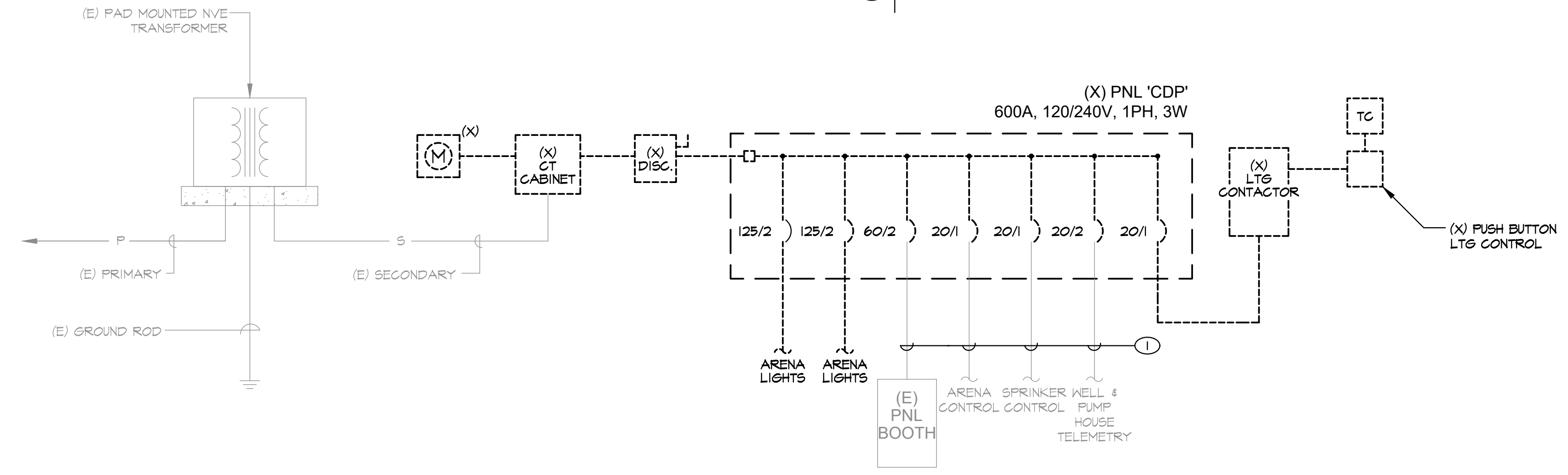
- CONTRACTOR SHALL DISCONNECT AND FULL BACK ALL CONDUCTORS FROM DEMOLISHED SWITCHBOARD TO NEW MSB.
- PROVIDE CONCRETE EQUIPMENT PAD PER DIVISION SPECIFICATIONS TO SATISFY MANUFACTURER'S REQUIREMENTS.
- CONTRACTOR SHALL UTILIZE ALL EXISTING CONDUCTORS AND FEED CONDUITS TO NEW SWITCHBOARD. IF EXISTING CONDUCTORS ARE OF INSUFFICIENT LENGTH TO REACH NEW BREAKER LOCATIONS, NEW CONDUCTORS SHALL BE INSTALLED.
- SEE SITE PLAN FOR CONDUIT AND WIRE SIZE.

20-Apr-20		PANEL: MSB				LOCATION: ELECTRICAL AREA					
TYPE	DESCRIPTION	LOAD	BKR	CIR	A	B	CIR	BKR	LOAD	DESCRIPTION	TYPE
L	MUSCO FIXTURE 'POLE #1'	6204	70/2	1	11964		2	60/2	5760	PNL BOOTH	E
L	X	6204	X	3		11964	4	X	5760	X	E
L	MUSCO FIXTURE 'POLE #2'	6204	70/2	5	7764		6	20/2	1560	WELL PUMP HOUSE & TELM	E
L	X	6204	X	7		7764	8	X	1560	X	E
L	MUSCO FIXTURE 'POLE #3'	5316	60/2	9	5516		10	20	200	SPRINKLER CONTROL	E
L	X	5316	X	11		5580	12	20	264	BLEACHER CANOPY LIGHTS	L
L	MUSCO FIXTURE 'POLE #4'	5316	60/2	13	5316		14	20		SPARE	
L	X	5316	X	15		5316	16	20		SPARE	
L	MUSCO CONTACTOR	180	20	17	180		18	20		SPARE	
L	SPACE			19		0	20	20		SPARE	

COPPER BUS SIZE:	600	GROUND:	30740	30624	NOTES:
VOLTAGE:	240	MOUNTING:			NEW SWITCHBOARD
PHASE:	1	ENCLOSURE:			
WIRE:	3	# OF 1-POLE CIRCUITS	20		
LUGS:	MCB	CONNECTED KVA:	61.4		
BREAKER AIC RATING:	65K	CONNECTED AMPS:	255.7		
NEUTRAL:	100%	NET KVA:	61.4		
FEEDER OCPD SIZE:	600	NET AMPS:	255.7		

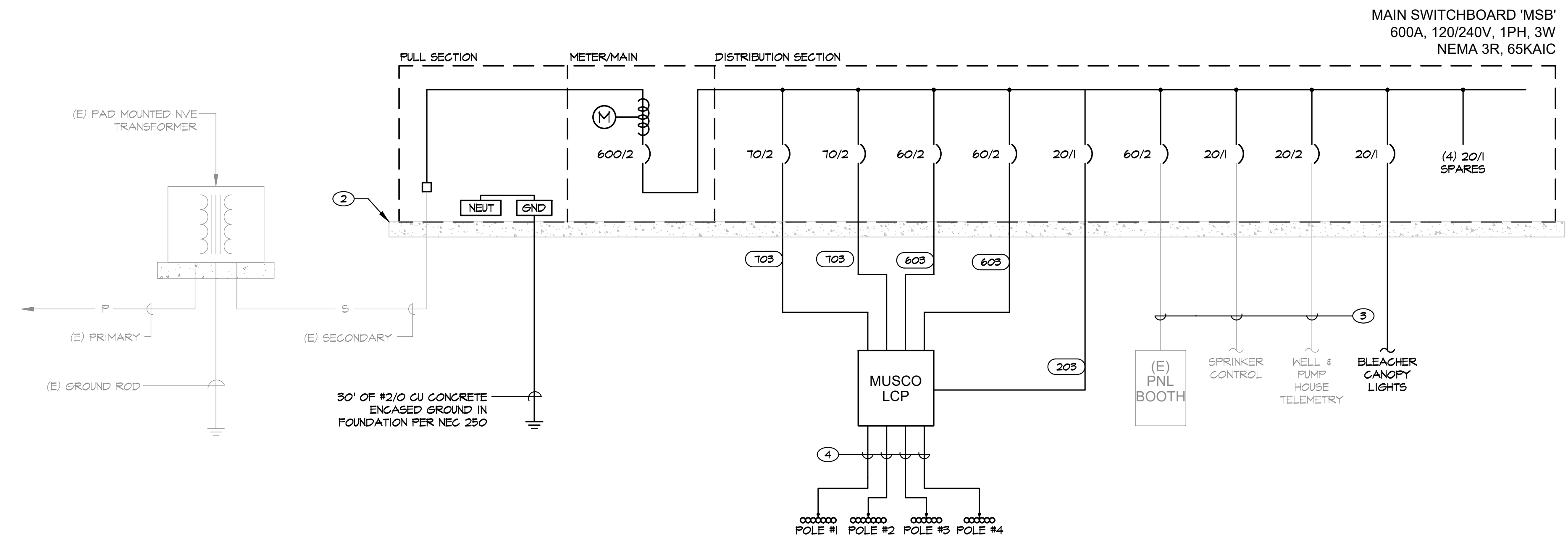
© 2008-2014 PK ELECTRICAL, INC.



A ONELINE DIAGRAM DEMOLITION  
E0.3 SCALE: NONE

FEEDER SCHEDULE (600V, 1Ø, 3W)

FEEDER	AMPERE	WIRE (CU)	BOND (CU)	CONDUIT
153	15	(3) 12	12	3/4"
203	20	(3) 12	12	3/4"
303	30	(3) 10	10	3/4"
403	40	(3) 8	10	3/4"
503	50	(3) 6	10	1"
603	60	(3) 4	10	1"
703	70	(3) 4	8	1 1/4"
803	80	(3) 3	8	1 1/4"
1003	100	(3) 2	8	1 1/4"
1253	125	(3) 1/0	6	1 1/2"
1503	150	(3) 1/0	6	1 1/2"
1753	175	(3) 2/0	6	2"
2003	200	(3) 3/0	6	2"
2253	225	(3) 4/0	4	2 1/2"
2503	250	(3) 250K	4	2 1/2"
3003	300	(3) 350K	3	3"
3503	350	(3) 400K	3	3"
4003	400	(3) 500K	3	4"
5003	500	(6) 250K	(2) 2	(2) 2 1/2"
6003	600	(6) 350K	(2) 1	(2) 3"
8003	800	(6) 500K	(2) 1/0	(2) 4"
10003	1000	(4) 400K	(3) 2/0	(3) 3"
12003	1200	(4) 600K	(3) 3/0	(3) 4"
16003	1600	(12) 600K	(4) 4/0	(4) 4"
20003	2000	(15) 600K	(5) 250K	(5) 4"



B ONELINE DIAGRAM NEW WORK  
E0.3 SCALE: NONE

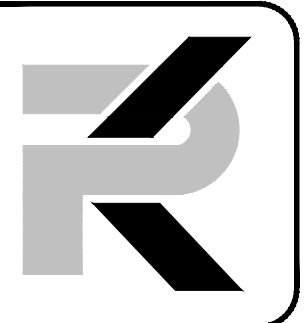
REVISIONS


SHEET TITLE  
ONELINE DIAGRAMS AND PANEL SCHEDULE

DRAWN:	TPT
CHECKED:	JEG
DATE:	4/15/20
JOB NUMBER:	19058
PROJECT MGR:	NA

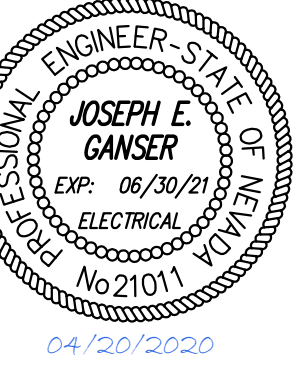
E0.3





**PK Electrical, Inc.**  
 681 Sierra Rose Drive, Suite B  
 Reno, NV 89511  
 775-326-3010

4601 DTC Boulevard, Suite 740  
 Denver, CO 80237  
 720-481-3290  
 pk-electrical.com  
 19058



04/20/2020

**DOUGLAS COUNTY FAIRGROUNDS  
 ARENA SPORTS LIGHTING**

Pinenut Road  
 Gardnerville, NV 89410

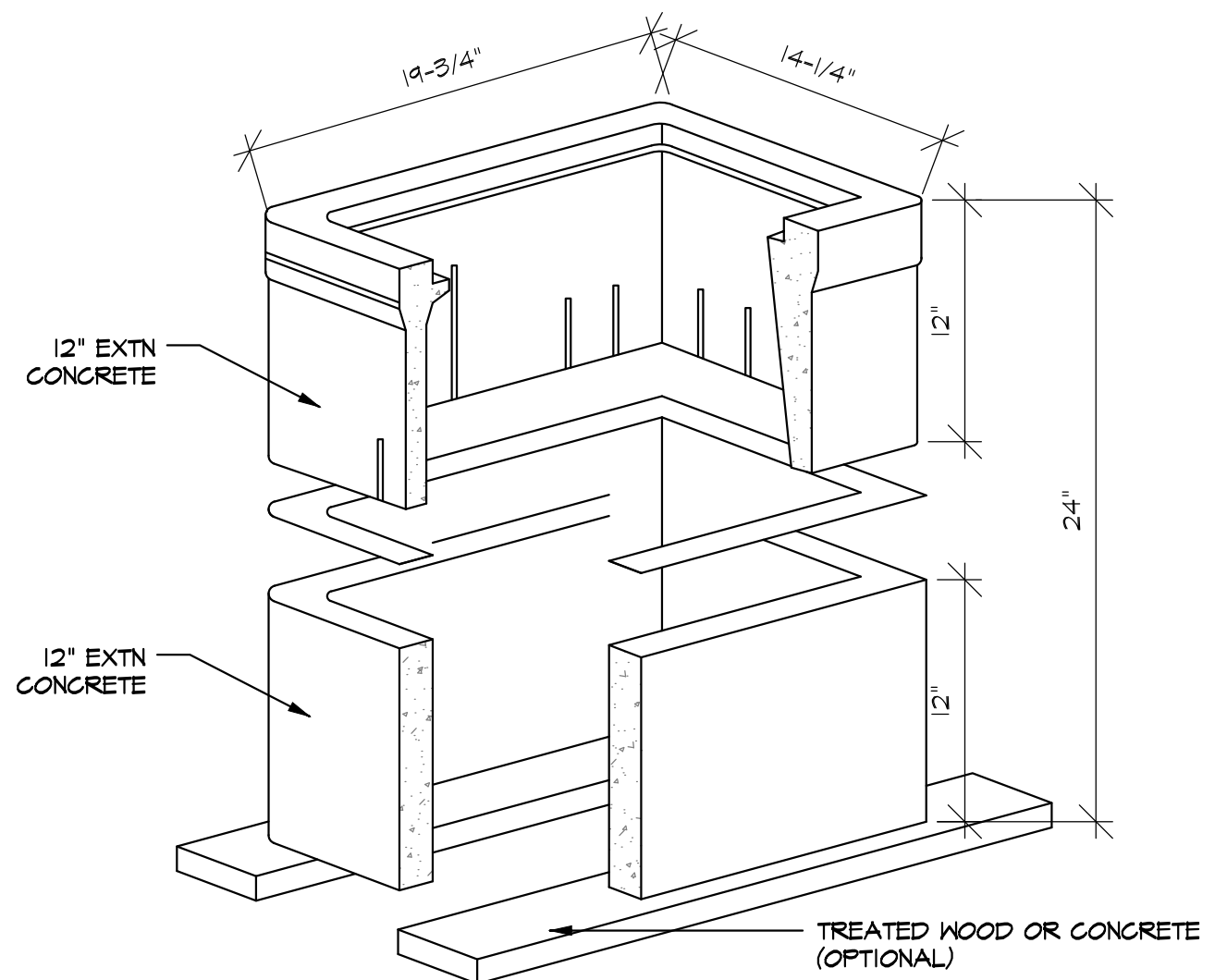
**REVISIONS**

NO.	DESCRIPTION

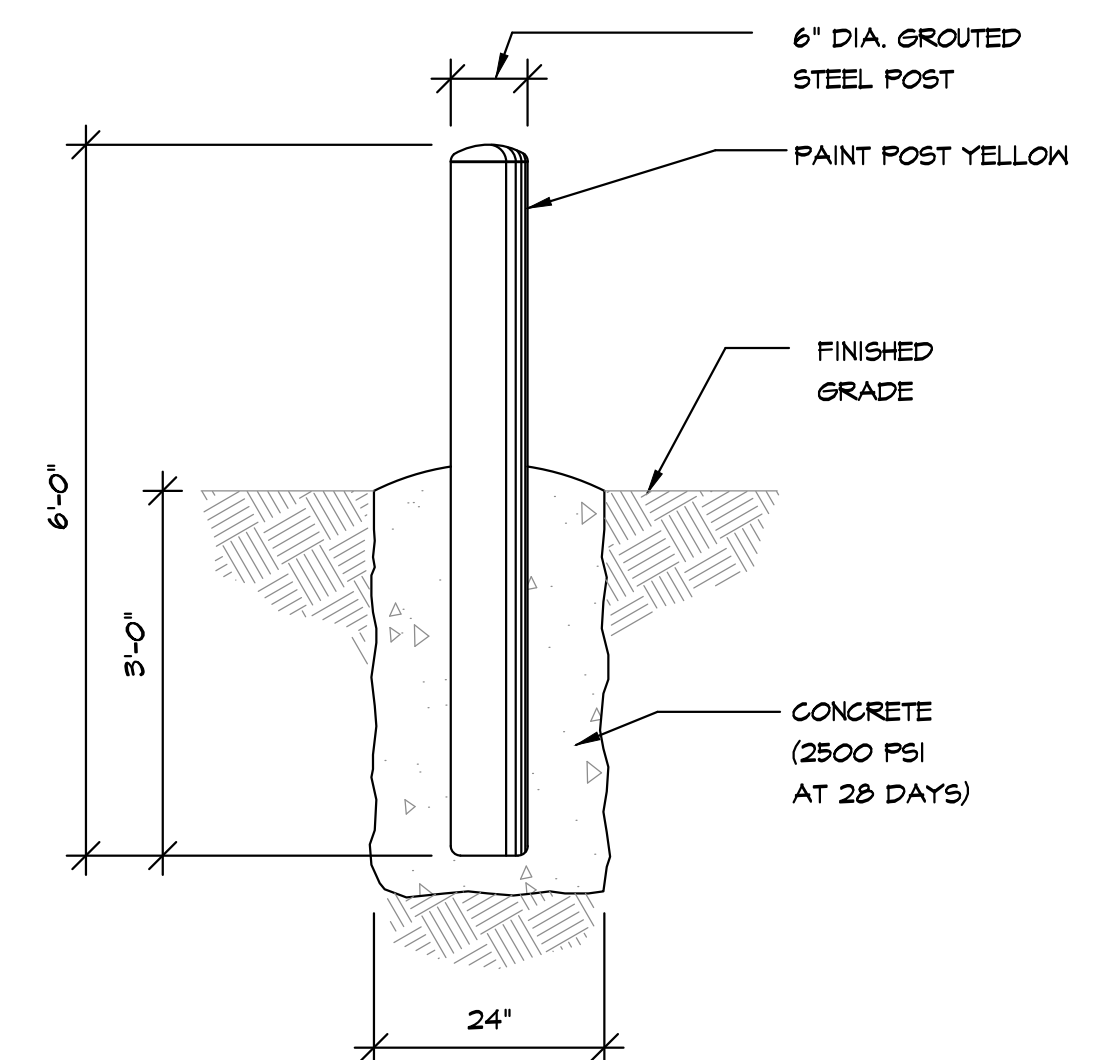
**SHEET TITLE  
 DETAILS**

DRAWN: TPT  
 CHECKED: JEG  
 DATE: 4/15/20  
 JOB NUMBER: 19058  
 PROJECT MGR: NA

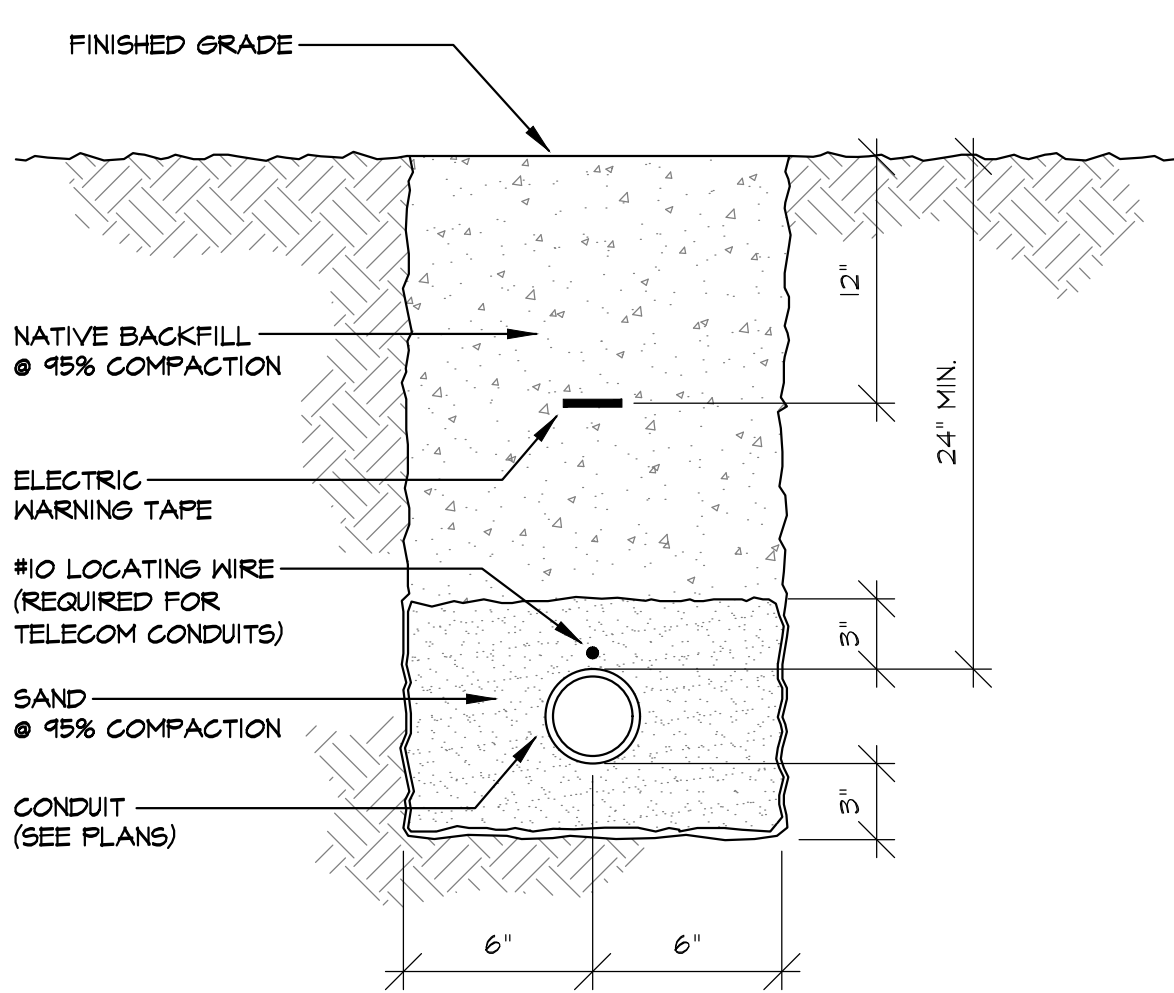
**E0.4**



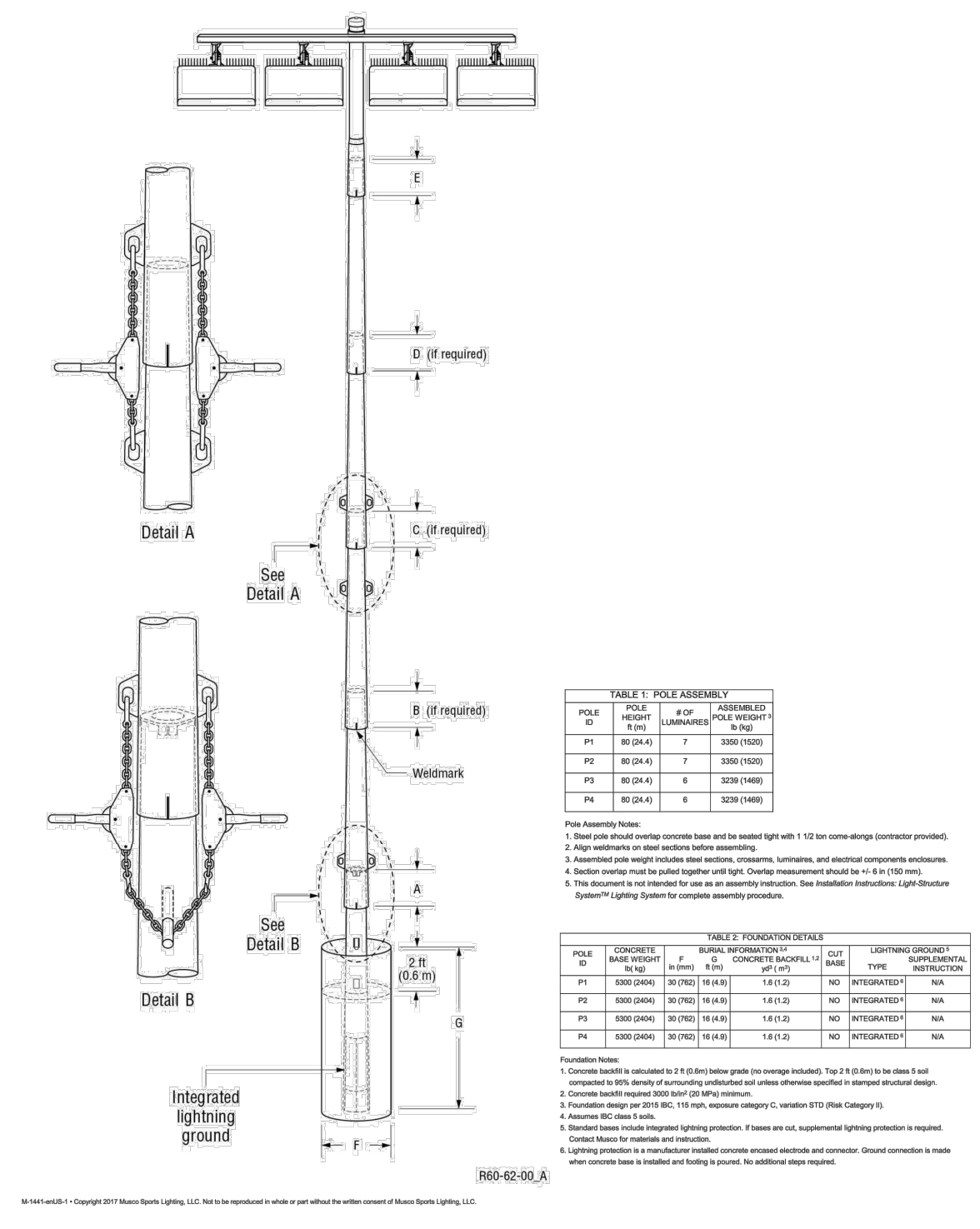
**D N-9 CONCRETE BOX**  
 E0.4 SCALE: NONE



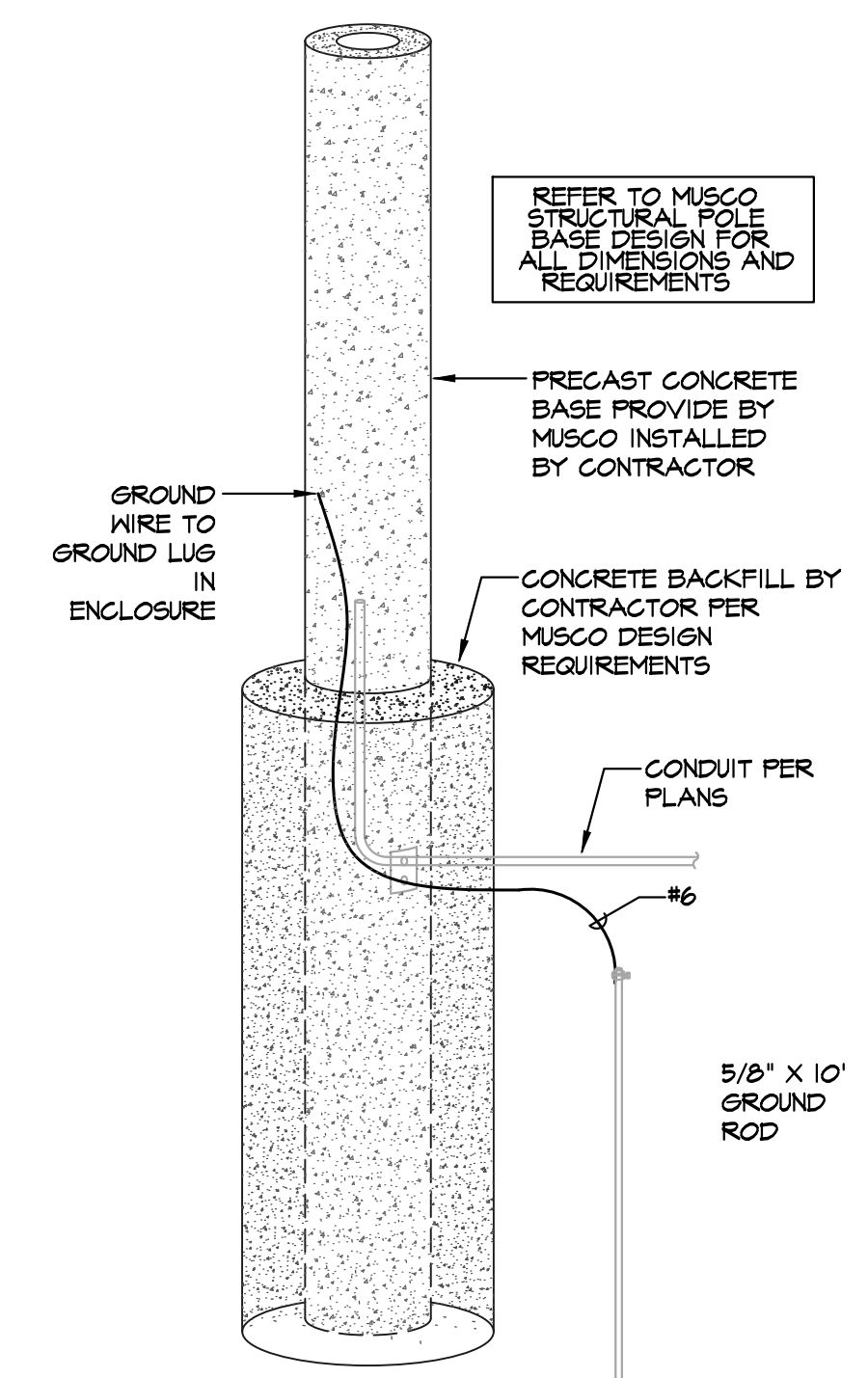
**B BARRICADE POST (TYP)**  
 E0.4 SCALE: NONE



**E TYP 12" TRENCH DETAIL**  
 E0.4 NONE



**C PRELIMINARY FOUNDATION AND POLE ASSEMBLY DRAWING**  
 E0.4 SCALE: NONE



**A MUSCO TYPE POLE BASE DETAIL**  
 E0.4 SCALE: NONE

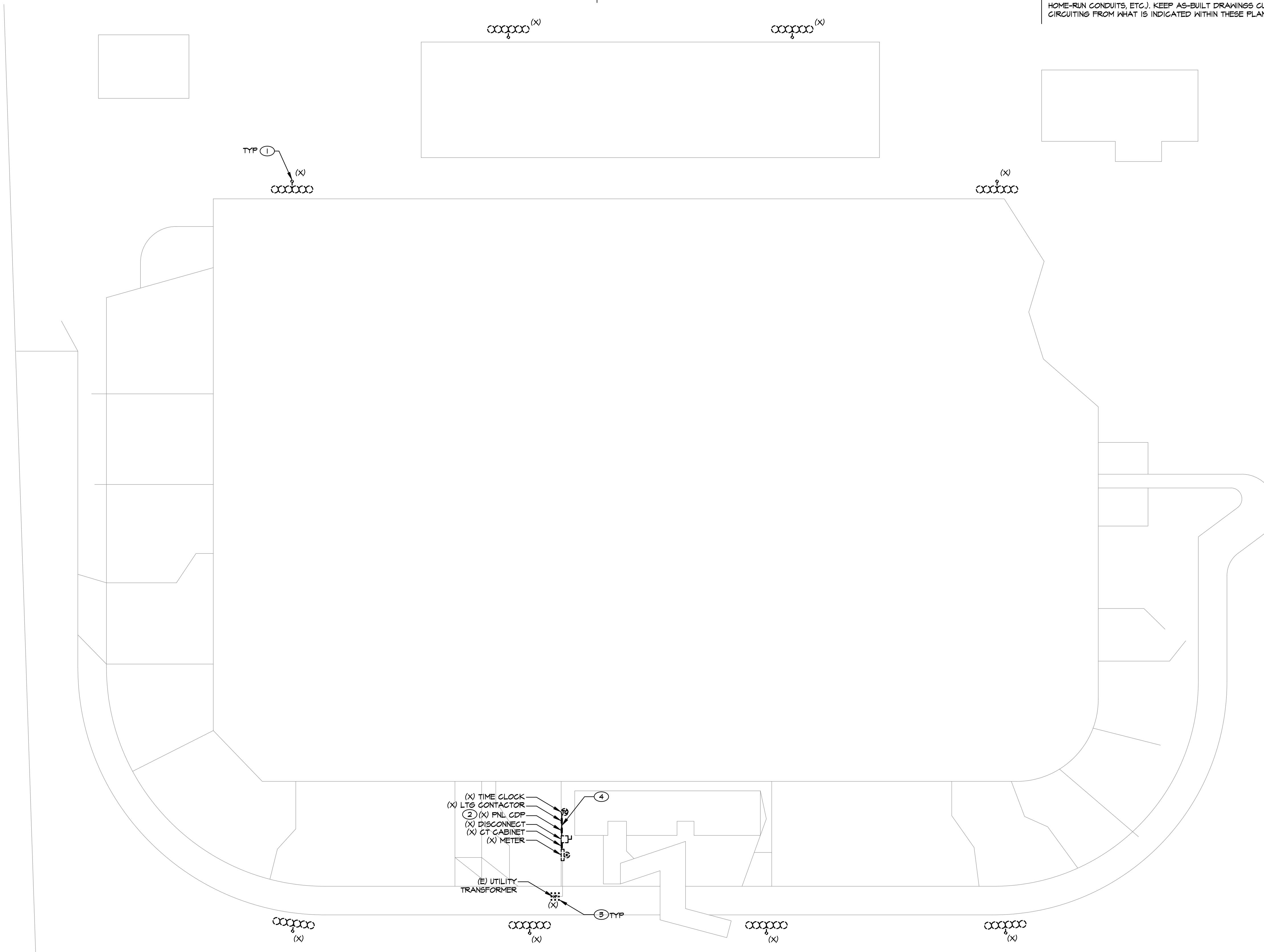


**SHEET NOTES**

- ① EXISTING ARENA FIXTURE AND POLE SHALL BE DISCONNECTED AND REMOVED IN ITS ENTIRETY. EXISTING CONDUIT AND CONDUCTORS REMOVED BACK TO NEAREST SOURCE.
- ② CONTRACTOR SHALL INTERCEPT EXISTING CONDUIT FEED FROM 'CDP' TO PANEL 'BOOTH' AND REDIRECT TO NEW SWITCHBOARD.
- ③ REMOVE BARRICADE POST AROUND UTILITY TRANSFORMER WHEN DISCONNECTING EXISTING CONDUIT FROM DEMOLISHED GEAR. MAINTAIN 8'-6" CLEARANCE IN FRONT OF NEW SWITCHBOARD AND PROPERLY LAYOUT NEW BOLLARDS IN PLACE TO ASSURE NEW SWITCHBOARD DOOR SWING SHALL HAVE PROPER CLEARANCE.
- ④ CONTRACTOR SHALL UTILIZE PORTION OF EXISTING EQUIPMENT SUPPORT SYSTEM FOR MOUNTING OF NEW LIGHTING CONTROL PANEL. CONTRACTOR SHALL DEMO AND REMOVE ALL REMAINING SUPPORTS SYSTEM NOT UTILIZED.

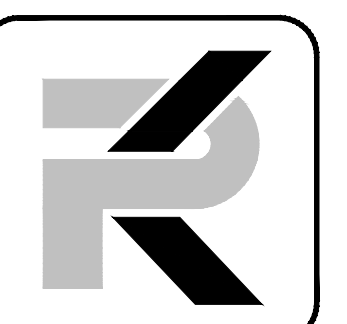
**GENERAL NOTES**

1. (X) AND/OR DASHED LINES INDICATE EXISTING EQUIPMENT TO BE REMOVED, (E) AND/OR HALFTONE LINES INDICATE EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
2. SALVAGEABLE ITEMS REMOVED DURING DEMOLITION SHALL BE OFFERED TO OWNER PRIOR TO DISPOSAL OR REMOVAL FROM SITE.
3. EXISTING CIRCUITS AND POLE LOCATIONS AS INDICATED ARE BASED ON CASUAL FIELD OBSERVATION AND INFORMATION PER RECORD DRAWINGS AND SHALL BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO START OF DEMOLITION WORK.
4. THE CONTRACTOR SHALL SALVAGE AND REUSE EXISTING BOXES AND CONDUIT WHERE POSSIBLE. DAMAGED CONDUIT, FITTINGS BOXES, ETC. MAY NOT BE RE-USED. NEW CIRCUITING AS INDICATED ON THE DRAWINGS IS SHOWN FOR INTENT ONLY AND MAY VARY BASED ON ACTUAL FIELD CONDITIONS (NEW CIRCUITING SHALL MATCH EXISTING WHERE POSSIBLE TO UTILIZE EXISTING HOME-RUN CONDUITS, ETC.). KEEP AS-BUILT DRAWINGS CURRENT WITH ANY DEVIATION IN CIRCUITING FROM WHAT IS INDICATED WITHIN THESE PLANS.

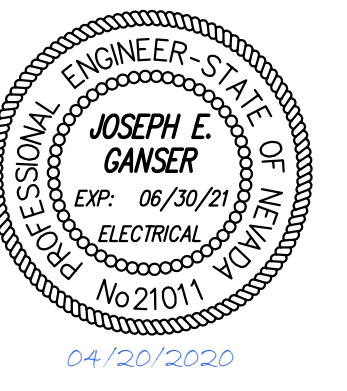


(X) TIME CLOCK  
 (X) LITS CONTACTOR  
 (2) (X) FNL CDP  
 (X) DISCONNECT  
 (X) CT CABINET  
 (X) METER  
 (E) UTILITY TRANSFORMER

**A** **SITE LIGHTING DEMOLITION PLAN**  
 E1.1 SCALE: 1" = 20'-0"



**PK Electrical, Inc.**  
 681 Sierra Rose Drive, Suite B  
 Reno, NV 89511  
 775.926.9010  
 4651 DTC Boulevard, Suite 740  
 Denver, CO 80237  
 720.481.3290  
 pk@pk-electrical.com  
 19058



**DOUGLAS COUNTY FAIRGROUNDS  
 ARENA SPORTS LIGHTING**  
 Pinenut Road  
 Gardnerville, NV 89410

**REVISIONS**

NO.	DESCRIPTION

**SHEET TITLE**

SITE LIGHTING DEMOLITION PLAN

DRAWN:	TPT
CHECKED:	JEG
DATE:	4/15/20
JOB NUMBER:	19058
PROJECT MGR:	NA

**E1.1**

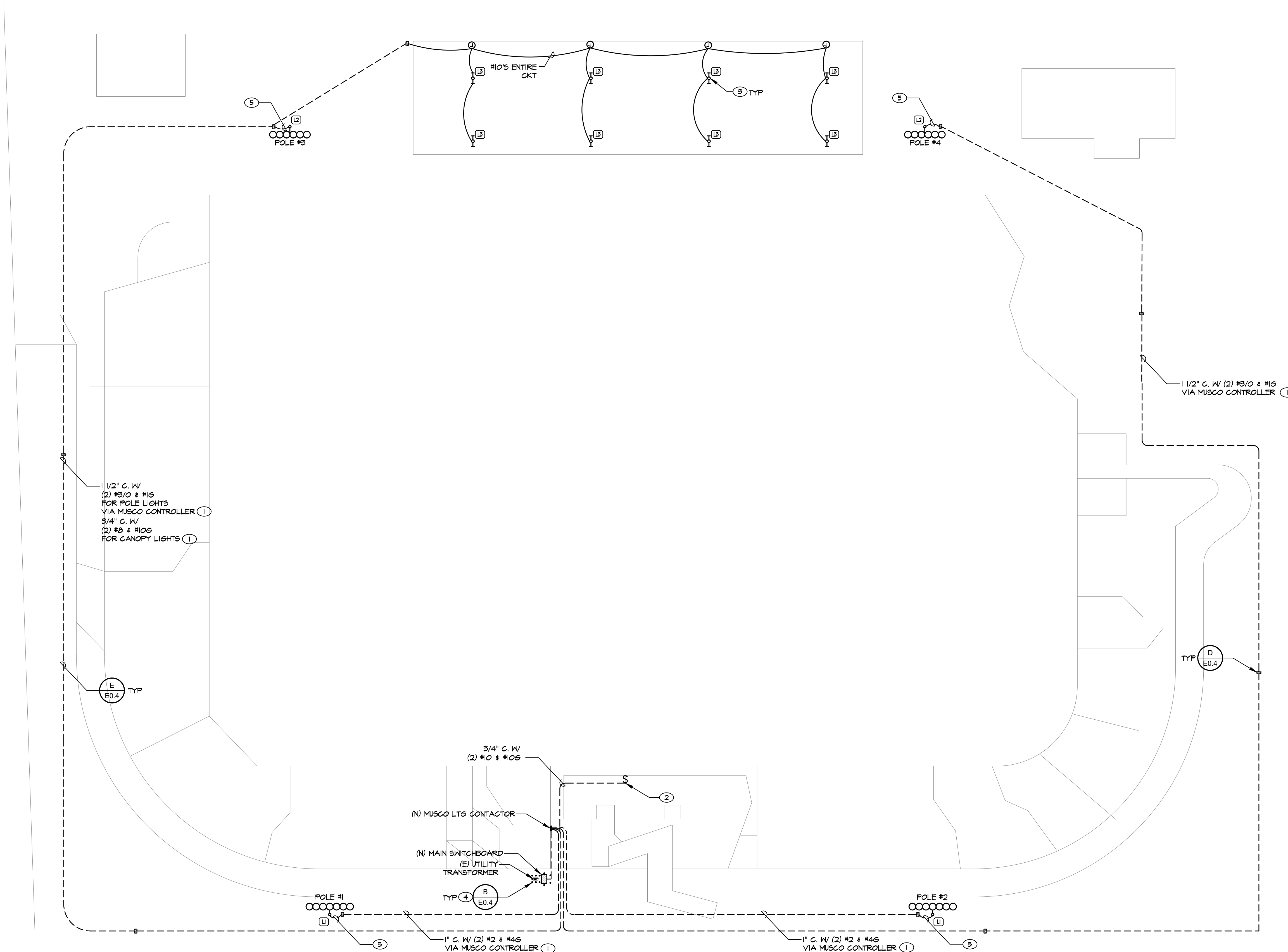


**SHEET NOTES**

- ① WIRE SIZED FOR VOLTAGE DROP, ENTIRE CIRCUIT.
- ② SWITCH TO BE PLACED IN ANNOUNCER BOOTH TO CONTROL BLEACHER CANOPY LIGHTING. COORDINATE FINAL LOCATION WITH PARKS AND RECREATION PRIOR TO FINAL ROUGH-IN.
- ③ SURFACE MOUNT FIXTURES TO CANOPY SUPPORT STRUCTURE.
- ④ INSTALL BARRICADE POST AROUND EXISTING UTILITY TRANSFORMER AND NEW SWITCHBOARD UPON COMPLETION OF NEW WORK. MAINTAIN 3'-6" CLEARANCE IN FRONT OF NEW SWITCHBOARD AND PROPERLY LAYOUT NEW BARRICADE POST BOLLARDS IN PLACE TO ASSURE NEW SWITCHBOARD DOOR SWING SHALL HAVE PROPER CLEARANCE.
- ⑤ AT FULLBOX REDUCE WIRE SIZE TO POLE LIGHT FIXTURE TO 1" C. W/ (2) #6 & #10G.

**GENERAL NOTES**

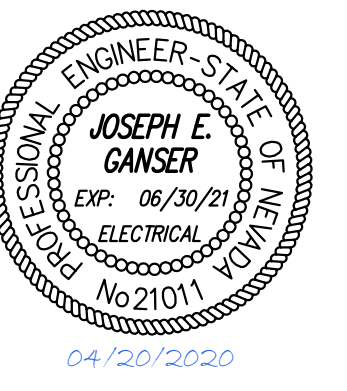
1. (E) AND/OR HALFTONE LINES INDICATE EXISTING EQUIPMENT, (N) AND/OR SOLID LINES INDICATE NEW EQUIPMENT UNLESS NOTED OTHERWISE.
2. SEE ONLINE DIAGRAM(S) FOR CONDUIT, WIRE SIZES AND EQUIPMENT REQUIREMENTS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL 1-800-227-2600 FOR LOCATES PRIOR TO DIGGING. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL NON-UTILITY UNDERGROUND ITEMS.
4. REPAIR AND REPLACE ALL LANDSCAPING AND SITEWORK DISTURBED BY EXCAVATION INCLUDING BUT NOT LIMITED TO IRRIGATION LINES, LAWNS, PLANTING, ETC.



**A** NEW WORK SITE LIGHTING PLAN  
 E2.1 SCALE: 1" = 20'-0"



**PK Electrical, Inc.**  
 681 Sierra Rose Drive, Suite B  
 Reno, NV 89511  
 775.826.3010  
 4601 DTC Boulevard, Suite 740  
 Denver, CO 80237  
 720.481.3290  
 pk-electrical.com  
 19058



**DOUGLAS COUNTY FAIRGROUNDS  
 ARENA SPORTS LIGHTING**  
 Pinenut Road  
 Gardnerville, NV 89410

**REVISIONS**

NO.	DESCRIPTION

**SHEET TITLE**

NEW WORK SITE LIGHTING PLAN

DRAWN:	TPT
CHECKED:	JEG
DATE:	4/15/20
JOB NUMBER:	19058
PROJECT MGR:	NA

**E2.1**