

**GENERAL NOTES:**

1. THE COUNTY WILL BE RESPONSIBLE FOR PEC CONSTRUCTION COST, MEMBER FEES, AND IMPACT FEES PAID BY THE 2013 PARK PROJECT FUNDING.
2. CONSTRUCTION INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF CONSTRUCTION
3. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
4. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE WORK.
5. CONTRACTOR SHALL VERIFY THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN ONLY BE ISSUED TO CONTRACTOR ARE TO BE OBTAINED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHALL GIVE A MINIMUM OF 48 HOURS NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
7. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THESE CONSTRUCTION OPERATIONS ARE TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITION AT NO ADDITIONAL COST TO OWNER.
8. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN A LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. THE CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
9. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES TO BE COORDINATED WITH THE OWNER.
10. THE CONTRACTOR SHALL COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES WITH APPLICABLE UTILITY COMPANY OR COMPANIES. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
11. THE CONTRACTOR SHALL LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, AND CONTROL POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO OWNER.
12. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR.
13. EXISTING SURFACE AND SUBSURFACE STRUCTURES (GAS MAINS, WATER MAINS, STORM SEWER, TELEPHONE CABLES, ETC.) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID DAMAGING THESE EXISTING STRUCTURES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS OR TO SHOW THEM IN THEIR EXACT LOCATION. IF ANY STRUCTURES IS DAMAGED BY THE CONTRACTOR, IT SHALL BE HIS RESPONSIBILITY TO REPAIR THE DAMAGE AT HIS EXPENSE AND RESTORE THE STRUCTURE TO ITS ORIGINAL CONDITION.
14. THE ORIGINAL PLANS FOR THIS PROJECT WERE PREPARED ON FULL SIZE STANDARD SHEETS (24 INCH x 36 INCH). THE SPECIFIC SCALE FOR THE ORIGINAL UNITS WOULD BE TRUE ONLY ON THE ORIGINAL TRACING. REPRODUCED COPIES, REDUCTIONS OR OTHER METHODS OF PRINTING MAY CHANGE OR ALTER THE SCALE. THE ENGINEER IS NOT RESPONSIBLE FOR SCALE DIMENSIONS UTILIZED BY OTHERS ON THESE PLANS.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCE. IF REQUIRED, THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.
16. ALL CONCEPTS, IDEAS, DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THESE INSTRUMENTS, AS OUTLINED IN THE TITLE SHEET INDEX, AND BY ANY ADDENDUM ARE OWNED BY AND ARE THE PROPERTY OF M & S ENGINEERING, L.L.C. AND WERE CREATED AND DEVELOPED FOR THE USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. THESE CONCEPTS, IDEAS, DESIGN, ARRANGEMENTS, OR PLANS SHALL NOT BE USED BY ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF M & S ENGINEERING, L.L.C. OF SPRING BRANCH, TEXAS.
17. A PRE-CONSTRUCTION CONFERENCE IS TO BE HELD PRIOR TO BEGINNING CONSTRUCTION. THE CONFERENCE SHALL TAKE PLACE AT A LOCATION SELECTED BY OWNER. CONTRACTOR TO ARRANGE A MEETING DATE WITH THE OWNER AT LEAST SEVEN DAYS PRIOR TO THE MEETING TIME.

**CONCRETE CONSTRUCTION NOTES:**

1. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. AND SHALL CONTAIN SIX(6) BAGS OF CEMENT PER CUBIC YARD OF CONCRETE.
2. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-305 AND ASTM A-315, GRADE 60.
3. ALL CONCRETE AND REINFORCING STEEL SHALL CONFORM TO CURRENT A.C.I. CODE.
4. ALL BAR SPLICES, CORNER DOWELS, AND JOINT DOWELS SHALL HAVE A MINIMUM LAP LENGTH OF 40 BAR DIAMETERS OR 30", WHICHEVER IS GREATER.
5. NO FLY ASH ADDITIVES WILL BE PERMITTED IN STRUCTURAL CONCRETE.

**UTILITY NOTES:**

1. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE "ONE CALL" LOCATOR SERVICE AT (800) 344-8377, AND PEC @ (877) 372-0391 AT LEAST FORTY EIGHT (48) HOURS IN ADVANCE.
2. CONTRACTOR IS RESPONSIBLE FOR VERTICAL CONTROL OF ALL UTILITIES, AND SHALL ADJUST AS NEEDED.

**GENERAL ENVIRONMENTAL NOTES:**

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIALS, INCLUDING METHODS OF HANDLING AND DISPOSAL.
2. CONTRACTOR SHALL LOCATE MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
3. FUEL STORAGE IS NOT ALLOWED ON THIS PROJECT.
4. THE CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIALS SPILLS WITHIN THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TO BE TAKEN TO REMEDY THE PROBLEM.
5. THE CONTRACTOR SHALL DISPOSE OF FUELS, HAZARDOUS MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
6. NO OPEN BURNING IS ALLOWED ON THIS PROJECT.

**ELECTRICAL NOTES:**

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE ADOPTED NATIONAL ELECTRIC CODE, APPLICABLE BUILDING CODES AND D.S.H.A. LATEST EDITIONS.
2. ALL FEEDER, BRANCH CIRCUITS, AND SIGNAL WIRING SHALL BE COPPER, RATED AT 600 VOLTS, INSTALLED IN CONDUIT OR EMT.
3. MINIMUM SIZE FOR BRANCH CIRCUIT AND POWER WIRING SHALL BE #12 AWG.
4. COORDINATE EXACT LOCATION OF ALL FIXTURES, OUTLETS, AND EQUIP. AS PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE ALL GROUNDING AND BONDING AS REQUIRED BY THE NEC OR ANY LOCAL CODES.
6. PANELS AND LOADS ARE A DESIGN GUIDE, DO NOT INCLUDE OPTIONAL EQUIPMENT, AND ARE BASED ON PROTOTYPICAL EQUIPMENT. CONTRACTOR TO VERIFY BREAKER SIZE WITH EQUIPMENT MANUFACTURERS IN FIELD BEFORE MAKING FINAL CONNECTIONS.
7. AS PER ARTICLE 422.31 OF THE NEC, THE DISCONNECTING MEANS MUST BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. THE DEVICE MUST HAVE PROVISIONS FOR PLACEMENT OF A LOCK ON IT TO SECURE THE DEVICE IN THE OFF POSITION. THE LOCK-OUT DEVICE MUST BE PART OF THE DISCONNECT ASSEMBLY AND MUST REMAIN IN PLACE AFTER THE PADLOCK IS REMOVED, WHETHER IT IS A FUSED DISCONNECT SWITCH, A SINGLE CIRCUIT BREAKER, OR A CIRCUIT BREAKER IN A PANELBOARD.
8. ALL CONDUIT AND FLEXIBLE CONDUITS THAT ARE EXPOSED TO WATER, SPLASHING, OR WEATHER SHALL BE LIQUIDTIGHT.
9. ALL BREAKERS SERVICING HVAC AND MOTOR LOADS (COOLERS, FREEZER, ETC) TO BE HACR.
10. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND MANUFACTURERS RECOMMENDATIONS.
11. THE CONTRACTOR SHALL INSTALL THE NECESSARY ACCESSORIES IN ORDER TO PLACE THE SAFETY SWITCHES IN FINAL OPERATING CONDITION.
12. PERFORM FACTORY AND INSTALLATION TESTS IN ACCORDANCE WITH APPLICABLE NEC, NEMA AND UL REQUIREMENT.
13. EQUIPMENT MANUFACTURER WARRANTIES THAT ALL GOODS SUPPLIED ARE FREE OF NON-CONFORMITIES IN WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM DATE OF INITIAL OPERATION, BUT NOT MORE THAN EIGHTEEN MONTHS FROM DATE OF SHIPMENT.
14. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ELECTRICAL TIE INS WITH THE COUNTY AND SBFA. EXACT LOCATIONS MAY BE DIFFERENT THAN SHOWN ON THIS SITE PLAN.

**COLOR OF UNGROUND CONDUCTOR:**

TYPE OF SERVICE	PHASE A	PHASE B	PHASE C
208Y/120-VOLT	BLACK	RED	BLUE
480Y/277-VOLT	PURPLE	BROWN	YELLOW
240Δ/120-VOLT	BLACK	BLUE	ORANGE (HI-LEG)*

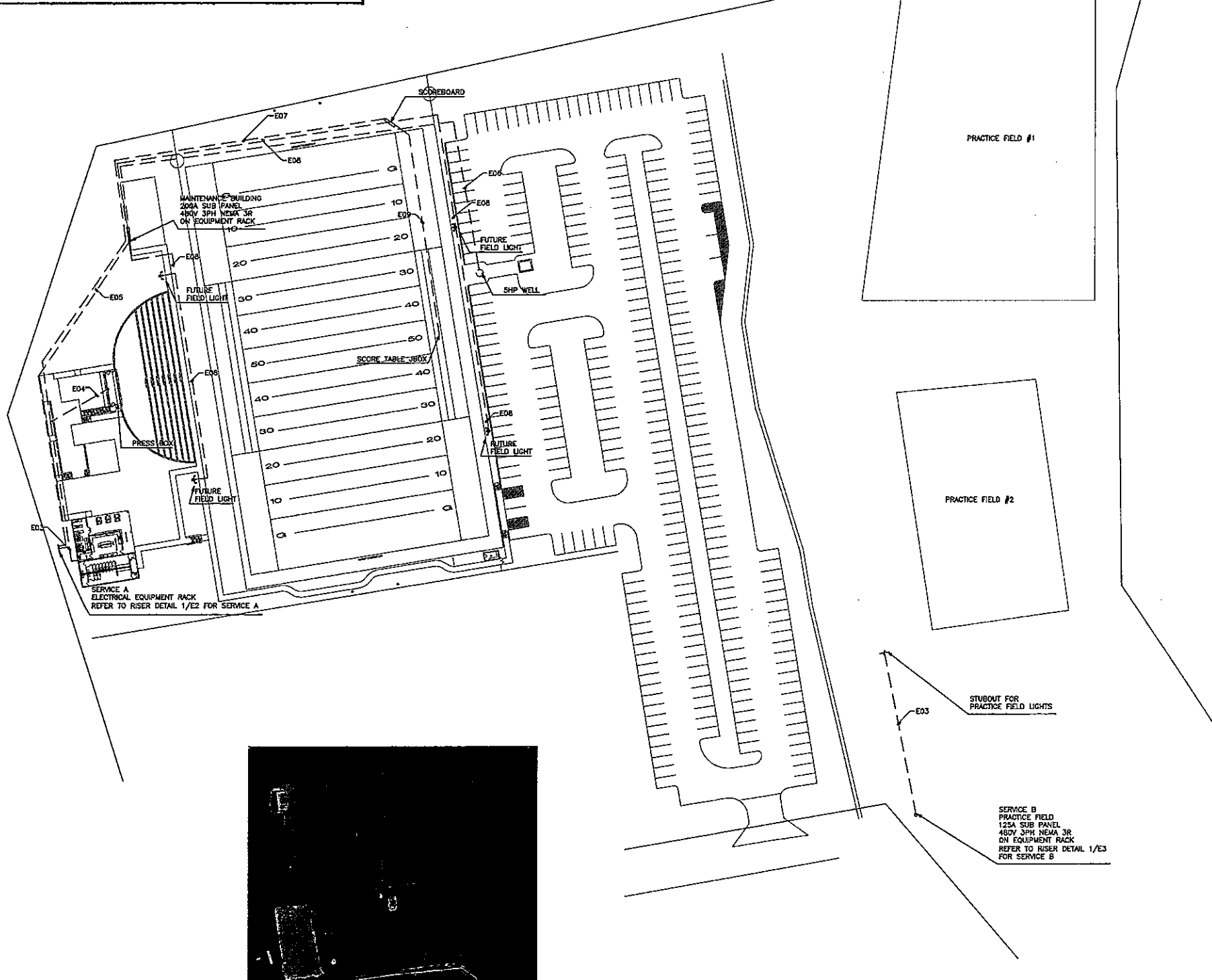
THIS COLOR CODE APPLIES TO ALL THREE-PHASE SERVICES, OVERHEAD OR UNDERGROUND.

\*THE HI-LEG SHALL BE THE CENTER LEG EXCEPT WHERE CONNECTIONS WITHIN A METER SOCKET REQUIRE IT TO BE ON THE RIGHT-HAND SIDE.

**TYPICAL FOOTBALL**

50 FOOTCANDLES MAINTAINED  
4 POLE/56 FIXTURE DESIGN  
ALL POLES - 70' MOUNTING HEIGHT  
ALL POLES - 14 FIXTURES EACH

1500 WATT METAL HALIDE FIXTURES  
AVERAGE MAINTAINED HORIZONTAL FOOTCANDLES  
TOTAL KILOWATT CONSUMPTION - 91.3 KW



2 PROJECT MAP Scale: N.T.S.

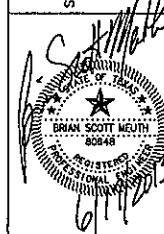
1 ELECTRICAL SITE PLAN Scale: 1/8\"/>

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**JUMBO EVANS SPORT COMPLEX  
FOOTBALL/LACROSSE FIELDS  
SPRING BRANCH, TX 78070**

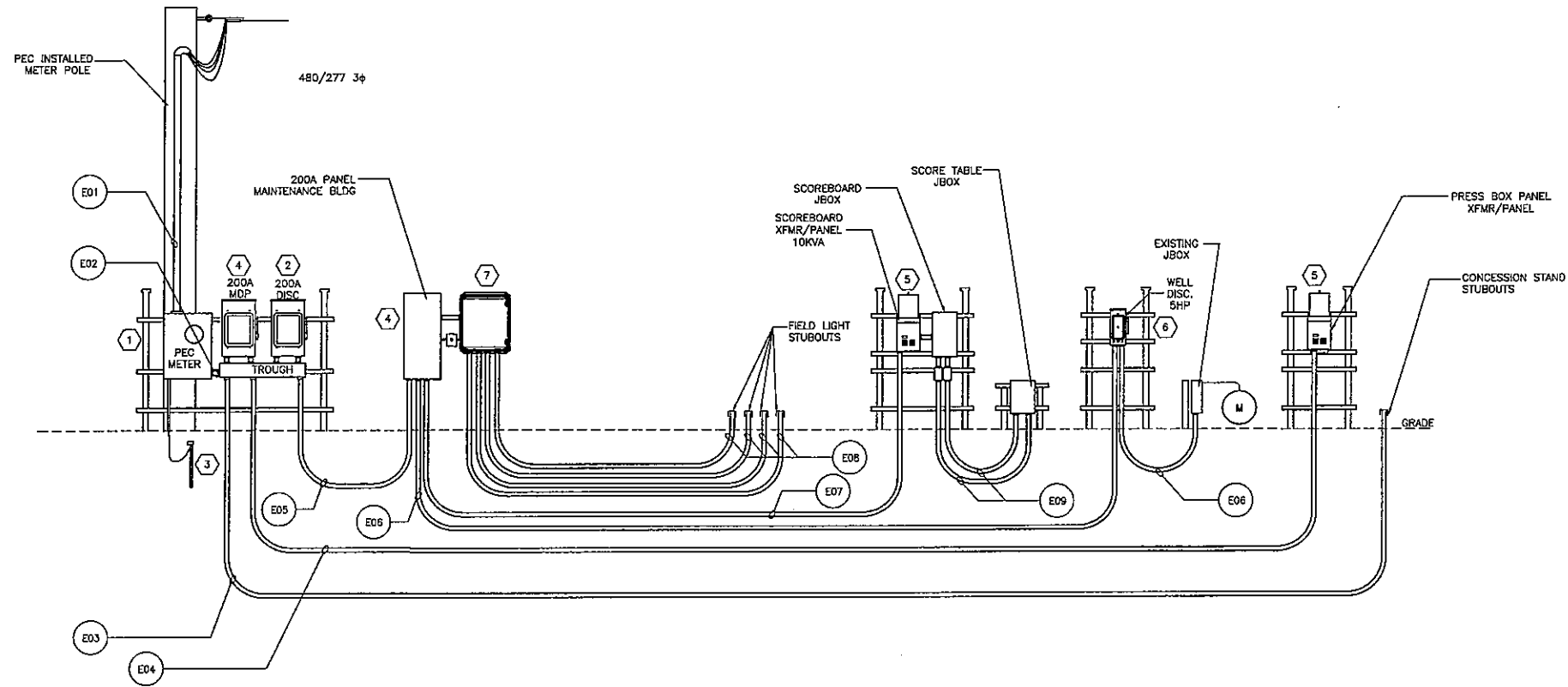
**ELECTRICAL SITE PLAN**

JOB: 70125BYFA.001  
DATE: APRIL 2013  
SCALE: AS NOTED  
ENG BY: B. MEUTH  
CHK BY: T. SIMS  
DWN BY: C. LEMAIRE

NOTES:

SHEET:  
**E1**

Date: Jun 17, 2013, 11:46am User: B. Meuth File: E:\Projects\2013\Jumbo Evans Sport Complex\DWG\70125BYFA.001.dwg



FEEDER SCHEDULE: ELECTRICAL SERVICE A

MARK	DESCRIPTION
E01	(2) 2" CONDUITS EACH W/ (4) 4/0 THWN-2 CU
E02	(2) 2" CONDUITS EACH W/ (4) 4/0 THWN-2 CU & (1) #6 AWG CU GROUND
E03	(2) 2" CONDUITS EACH W/ (1) 2,000LB MULE TAPE
E04	(1) 1" CONDUIT W/ (3) #6 THWN-2 CU & (1) #10 AWG CU GROUND
E05	(1) 3" CONDUIT W/ (3) 4/0 THWN-2 CU & (1) #4 AWG CU GROUND PROVIDE (1) 3" SPARE W/ 2,000LB MULE TAPE
E06	(1) 1" CONDUIT W/ (3) #6 THWN-2 CU & (1) #8 AWG CU GROUND
E07	(1) 1-1/2" CONDUIT W/ (3) #2 THWN-2 CU & (1) #8 AWG CU GROUND
E08	(4) 2" CONDUITS EACH W/ (1) 2,000LB MULE TAPE
E09	(2) 1" CONDUITS (1) W/ CATS (1) W/ 2,000LB MULE TAPE

KEYED NOTES:

MARK	DESCRIPTION
①	320A METER SOCKET FURNISHED BY PEC. INSTALLED BY CONTRACTOR ON UNISTRUT EQUIPMENT RACK
②	200A NEMA 3R SAFETY SWITCH SQUARE D CATALOG NO. H364NRB WITH COOPER BUSSMANN LPS-200SP FUSES
③	3/4" X 8" COPPERCLAD GROUND ROD W/ (1) #2 COPPER GROUNDING ELECTRODE CONDUCTOR
④	200A MAIN CIRCUIT BREAKER PANELBOARD 42 CKT, 480Y/277 3φ, NEMA 3R SQUARE D "NF" PANELBOARD
⑤	SEALED MINIPOWER-ZONE TRANSFORMER NEMA 3R 10KVA, INPUT 480V, OUTPUT 120/240 1φ SQUARE D CATALOG NO. MP210S40F 40A PRIMARY MAIN CIRCUIT BREAKER, 60A SECONDARY MAIN CIRCUIT BREAKER
⑥	30A NEMA 3R SAFETY SWITCH W/ 15A FUSES SQUARE D CATALOG NO. H361NRB WITH COOPER BUSSMANN LPJ-30SP FUSES
⑦	(4) 60A 3 POLE OPEN TYPE 480V ELECTRICALLY HELD 277V COIL LIGHTING CONTACTORS MOUNTED IN (1) HOFFMAN ENCLOSURE CONTINUOUS HINGE WITH QUARTER TURN FAST LATCH, TYPE 4, WALL MOUNT. PROVIDE 20A 277V SWITCH ADJACENT TO ENCLOSURE AND TIE TO COILS.

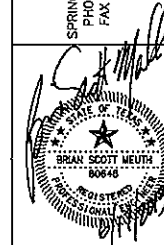
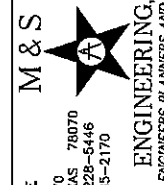
① ELECTRICAL SERVICE "A" RISER  
Scale: N.T.S.

Date: Apr 17, 2013, 11:45am User: B. Meuth  
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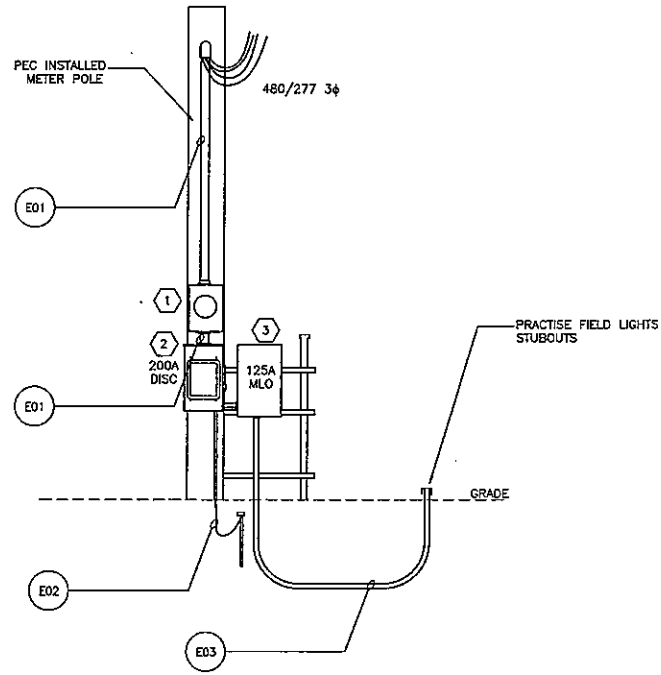


JUMBO EVANS SPORT COMPLEX  
FOOTBALL/LACROSSE FIELDS  
SPRING BRANCH, TX 78070

ELECTRICAL SERVICE "A" RISER

JOB: 70125BYFA.001  
DATE: APRIL 2013  
SCALE: AS NOTED  
ENG BY: B. MEUTH  
CHK BY: T. SIMS  
DWN BY: C. LEMAIRE  
NOTES:

SHEET:  
**E2**



FEEDER SCHEDULE: ELECTRICAL SERVICE B	
MARK	DESCRIPTION
E01	(1) 2" CONDUIT W/ (4) 1/0 THWN-2 CU
E02	(1) #6 AWG TO 5/8" x 8" MIN. COPPERCLAD GROUND ROD
E03	(4) 2" CONDUITS EACH W/ (1) 2,000LB MULE TAPE

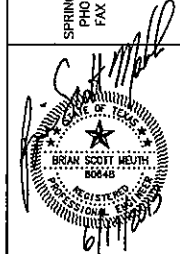
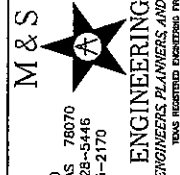
KEYED NOTES:	
MARK	DESCRIPTION
①	200A METER SOCKET FURNISHED BY PEC. INSTALLED BY CONTRACTOR ON RISER POLE
②	200A NEMA 3R SAFETY SWITCH SQUARE D CATALOG NO. H364NRB WITH COOPER BUSSMANN LPS-125SP FUSES
③	125A MAIN LUG INTERIOR PANELBOARD 18 CKT. 480Y/277 3φ, NEMA 3R SQUARE D "NF" PANELBOARD

**1** ELECTRICAL SERVICE "B" RISER  
Scale: N.T.S.

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**JUMBO EVANS SPORT COMPLEX  
FOOTBALL/LACROSSE FIELDS  
SPRING BRANCH, TX 78070**

ELECTRICAL SERVICE "B" RISER

JOB: 70125B\*FA.001  
DATE: APRIL 2013  
SCALE: AS NOTED  
ENG BY: B. MEUTH  
CHK BY: T. SIMS  
DWN BY: C. LEMAIRE

NOTES:

SHEET:  
**E3**

Date: Jun 17, 2013, 11:06am User: B. Meuth File: S:\P\70125B\FEEDS - Jumbo Evans Sport Complex.dwg Plot: S:\P\70125B\FEEDS - Jumbo Evans Sport Complex.dwg

