

THE SCHOOL BOARD OF VOLUSIA COUNTY FLORIDA 200 North Clara Avenue Deland, Florida 32720

DELAND HIGH SCHOOL BASEBALL FIELD LIGHTING VCS Project NO. 2347965

800 NORTH HILL AVE. DELAND, FLORIDA 32724

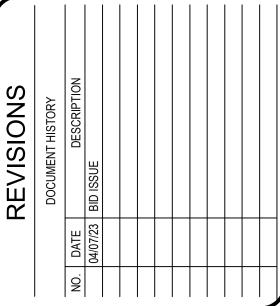
SCHOOL BOARD MEMBERS

Jamie M. Haynes Anita Burnette Ruben Colon Carl G. Persis Jessie Thompson

CHAIRMAN VICE CHAIRMAN **MEMBER MEMBER MEMBER**

Carmen J. Balgobin

SUPERINTENDENT



Maitland, FL 32751

ERT. OF AUTH. No. 5096 FAX (407) 740-0365

Adrian Baus 12/09/2022 **COVER SHEET**

G001

DESCRIPTION OF WORK

ADDING BASEBALL FIELD LIGHTING TO THE EXISTING BASEBALL FIELD AS SHOWN ON THESE DRAWINGS AND DESCRIBED IN

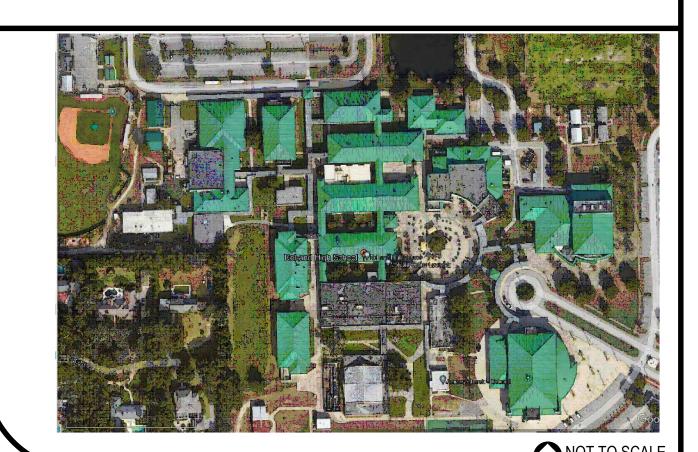
Engineer's Statement of Compliance

To the best of my knowledge, these drawings and the project manual are complete and comply with

BUILDING DATA

B. LEGAL DESCRIPTION D. CONSTRUCTION TYPE E. RISK CATEGORY F. AUTOMATIC SPRINKLER G. BUILDING AREA H. BUILDING HEIGHT OCCUPANT LOAD

LOCATION MAP



ENGINEERS & CONSULTANTS

407-740 -5020 Adrian Baus abaus@matern.net http://matern.net



GENERAL NOTES, SYMBOL LEGEND, AND ABBREVIATIONS NONE 1" = 30' PARTIAL SITE PLAN - ELECTRICAL - RENOVATION 1" = 20'-0" **DETAILS** NONE **DETAILS** NONE NONE **DETAILS POWER RISER DIAGRAM AND SCHEDULES**

SHEET NAME

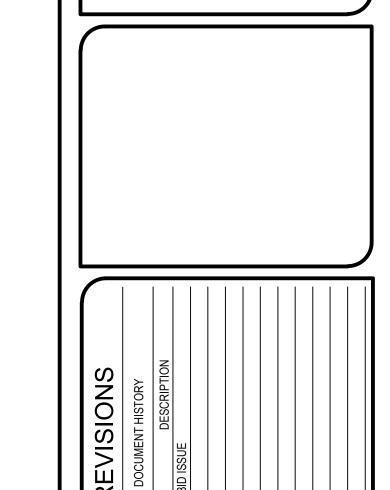
CONSTRUCTION DOCUMENTS - 12/09/2022

		SYMBOL LEGEND			
SYMBOL	DESCRIPTION	DESIGN SELECTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	REMARKS
궁	POLE WITH MOUNTING ARM AND CUT-OFF LIGHT FIXTURE. BOXES INDICATE NUMBER OF FIXTURES AND ORIENTATION	SEE FIXTURE SCHEDULE			
\hookrightarrow	POLE WITH MOUNTING ARM AND FLOOD LIGHT FIXTURE.	SEE FIXTURE SCHEDULE			
	WALL OUTLET BOX AND SECURITY LOCKING KEY SWITCH, 20 AMP, SINGLE POLE, WITH S.S. PLATE, PROVIDE TWO KEYS	P&S #PS20AC1-KL-55-717	DEVICE: HUBBELL HBL1221RKL PLATE: S12RKL		d
	FLUSH WALL OUTLET BOX AND 20 AMP SINGLE POLE SWITCH, WITH DIE CAST WEATHERPROOF COVER	DEVICE: P&S #PS20AC1 PLATE: P&S #CA1-G	DEVICE: HUBBELL #HBL1221 PLATE: P&S #CA1-G	DEVICE: LEVITON #1221-2	a, d
\$wpL	FLUSH WALL OUTLET BOX AND 20 AMP SINGLE POLE SWITCH, WITH LOCKING STAINLESS STEEL WEATHERPROOF COVER. MOUNT OUTLET BOX HORIZONTALLY.	DEVICE: P&S #20AC1 PLATE: P&S #WPH-1L	DEVICE: HUBBELL #HBL1221 PLATE: P&S #WPH-1L	DEVICE: LEVITON #1221-2	a, d
\$wp	CAST IRON ZINC PLATED SURFACE MTD. OUTLET BOX AND 20 AMP SINGLE POLE SWITCH, WITH COPPER FREE CAST ALUMINUM WEATHERPROOF COVER	DEVICE: P&S #PS20AC1 BOX AND PLATE: APPLETON #FS/FD/FSK-WT2	DEVICE: HUBBELL #HBL1221 BOX AND PLATE: APPLETON #FS/FD/FSK-WT2	DEVICE: LEVITON #1221-2	a, d, e, f, g
WPG	CAST IRON PLATED SURFACE MTD. OUTLET BOX AND 20 AMP WEATHER RESISTANT GFCI DUPLEX RECEPTACLE WITH CAST ALUMINUM WEATHERPROOF IN USE COVER	P&S #2095TRWR WITH APPLETON #FS—ID AND THOMAS & BETTS #CKMUV OR INTERMATIC #WP1010MC	HUBBELL #GFR5362S APPLETON #FS-ID AND HUBBELL #WP26M COVER	LEVITTON #W7899-TR APPLETON #FS-ID AND THOMAS & BETTS #CKMUV OR INTERMATIC #WP1010MC	a, c, d, e f, g
\square_{WP}	SURFACE MTD. WEATHERPROOF JUNCTION BOX AND COVER, AS NOTED ON PLANS	HOFFMAN			d, g, h
	CAST IRON ZINC PLATED SURFACE MTD. OUTLET BOX AND WEATHERPROOF BLANK PLATE	APPLETON #FS-ID WITH #DS-100G COVER			a, d, e, f, g, h
□ _{FG}	FLUSH GRADE PULLBOX OR MANHOLE AS NOTED.	BROOKS	A.C. MILLER	HUGHES	d, j
•	PUSHBUTTON, AS NOTED, MOUNTED AT 48" TO TOP				d
•s	FLUSH SHUNT-TRIP BUTTON, LABEL "EMERGENCY MAIN DISCONNECT", MOUNTED AT 48" TO TOP	SQUARE "D" #K-15	ASCO #124200		d
	METER, AS NOTED				
×	MAGNETIC MOTOR STARTER, MOTOR CONTROLLER OR CONTACTOR, AS NOTED	SQUARE "D"	G.E. / SIEMENS	EATON-STAINLESS	g, i
	DISCONNECT SWITCH, SIZE AS NOTED	SQUARE "D"	G.E. / SIEMENS	EATON-STAINLESS	g, i
	120/208V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	SQUARE "D"	G.E. / SIEMENS	EATON-STAINLESS	i
₽	TRANSFORMER	SQUARE "D"	G.E. / SIEMENS	EATON-STAINLESS	i
	LIGHTING CONTROL OR DIMMER PANEL — SURFACE MOUNTED				
	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. SLASH MARKS INDICATE NUMBER OF CONDUCTORS (GROUND WIRE NOT SHOWN). TWO CONDUCTORS PLUS GROUND REQUIRED (UNLESS OTHERWISE NOTED OR MARKED)				
/->	BRANCH CIRCUIT CONDUIT CONCEALED BELOW SLAB OR UNDERGROUND				
7	BRANCH CIRCUIT CONDUIT EXPOSED				
	HOME RUN WIRING. ONE CIRCUIT PER ARROW HEAD				
	CONDUIT CAPPED OFF				
	CONDUIT CONTINUED				
0	CONDUIT RUN UP				
•	CONDUIT RUN DOWN				
-	CONDUIT SEAL-OFF FITTING	CROUSE HINDS	APPLETON		е
—G—	GROUND WIRE, CONCEALED				
——II	GROUND OR GROUND ROD AS NOTED				

- 1) ALL DEVICES TO BE GREY WITH SMOOTH METAL #302 S.S. PLATES UNLESS OTHERWISE NOTED.
- 2) DASHED ITEM DENOTES "EXISTING".
- 3) "R" BY DEVICE DENOTES EXISTING TO BE REMOVED COMPLETELY.
- "H" BY DEVICE DENOTES DEVICE TO BE MOUNTED HORIZONTALLY.
- 5) MOUNT SWITCHES AT 48" AFF TO TOP.
- 6) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 7) ALL ITEMS NOTED ON THE LEGENDS DO NOT NECESSARILY APPEAR ON PLANS.
- a) U.L. LISTED FOR WET LOCATION IN CLOSED POSITION.
- b) SUPPORT OUTLET BOX FROM STRUCTURE WITH (1) 3/8" ALL THREADS MINIMUM. BOXES LARGER THAN 25 SQUARE INCHES SHALL BE SUPPORTED WITH (2) 3/8" ALL THREADS MINIMUM.
- c) U.L. LISTED FOR WET LOCATION IN OPEN POSITION WITH ATTACHMENT PLUG INSERTED.
- d) JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICE FILL PER N.E.C.
- e) THREADED CONDUIT HUBS SHALL BE SIZED AND CONFIGURED AS REQUIRED FOR APPLICATION.
- f) IF WITHIN 30 MILES OF THE COAST LINE, COPPER FREE CAST ALUMINUM OUTLET BOXES SHALL BE USED FOR EXTERIOR APPLICATIONS.
- g) PROVIDE KINDORF MTG. RACK FOR FREE STANDING APPLICATIONS. KINDORF SHALL BE PVC
- COATED FOR EXTERIOR APPLICATIONS. ALL CUT ENDS ARE TO BE SEALED.
- h) WHEN SURFACE JUNCTION BOX SYMBOL IS COMBINED WITH DEVICE SYMBOL, PROVIDE APPROPRIATE SURFACE PLATE FOR OUTLET APPLICATION.
- i) MAINTAIN WORKING CLEARANCES IN STRICT ACCORDANCE WITH N.E.C. COORDINATE EXACT LOCATION OF EQUIPMENT WITH ALL DISCIPLINES (I.E. STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION, KITCHEN, MILLWORK, ETC.) PRIOR TO ROUGH—IN TO MAINTAIN CLEARANCES.
- j) OUTLET BOX SHALL BE SIZED PER SYSTEM INSTALLER REQUIREMENTS.

GENERAL NOTES

- 1. NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.
- 2. 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 0-100 FEET, ARE TO HAVE #12 MINIMUM BRANCH CIRCUIT WIRING THROUGHOUT CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC).
- 3. VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
- 4. READ SPECIFICATIONS.
- 5. SEE RISER DIAGRAMS AND BUILDING PLANS.
- 6. ALL EMPTY CONDUITS ARE TO HAVE PULL-STRINGS PROVIDED IN THEM. A PHENOLIC OR BRASS NAMEPLATE SHALL BE ATTACHED TO EACH END INDICATING THE LOCATION OF BOTH ENDS OF CONDUIT AS FOLLOWS: THIS END = "LOCATION," OTHER END = "LOCATIONS."
- 7. WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARILY REPRESENTATIVE OF EXACT PLACEMENT. THE ROUTINGS SHOWN ARE PROPOSED CONDUIT ROUTINGS. CONTRACTOR TO COORDINATE ALL ROUTING WITH OTHER TRADES PRIOR TO BID. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND ROUTING OF CONDUIT PRIOR TO BID. CONTRACTOR IS RESPONSIBLE FOR RELOCATING CONDUIT FROM THE PROPOSED ROUTING SHOWN TO THE ROUTING REQUIRED TO FACILITATE INSTALLATION PER SPECIFICATIONS AND APPLICABLE CODES, COMPLETE WITH ALL COORDINATION AND EXISTING CONDITIONS TAKEN INTO ACCOUNT.
- 8. SPLICES IN POWER AND LIGHTING OUTLET BOXES SHALL BE KEPT TO A MINIMUM, PULL CONDUCTORS THROUGH TO DEVICES, EQUIPMENT CABINETS/PANELBOARDS. SPLICING IN WIREWAYS IS NOT PERMITTED UNLESS SPECIAL WRITTEN PERMISSION IS GRANTED BY
- 9. NO SPLICES SHALL BE MADE IN COMMUNICATIONS OUTLET BOXES OR PULL BOXES (I.E., FIRE ALARM, COMPUTER, TELEPHONE, ETC.) UNLESS SPECIFIC WRITTEN APPROVAL HAS BEEN GIVEN BY ENGINEER. PULL CABLES THROUGH TO EQUIPMENT/TERMINAL CABINETS.
- 10. NO SPLICES SHALL BE MADE IN UNDERGROUND (OR FLUSH) IN-GRADE PULL BOXES UNLESS ENGINEER HAS GIVEN SPECIFIC ACCEPTANCE.
- 11. CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE. CONTRACTOR SHALL COMPLY FULLY WITH FLORIDA STATUTE 403.7186 REGARDING MERCURY CONTAINING DEVICES AND LAMPS. LAMPS, BALLASTS AND OTHER MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH ALL DEP AND EPA GUIDELINES APPLICABLE AT TIME OF DISPOSAL. CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.
- 12. EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS, AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
- 13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON PLANS OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE COMPLETION OF THIS WORK. THE CONTRACTOR SHALL LOCATE ALL UTILITIES (BOTH KNOWN AND UNKNOWN) IN AREA OF WORK PRIOR TO EXCAVATION WITH THE USE OF ELECTRONIC LOCATOR/TRACER DEVICES AND EQUIPMENT SUITABLE FOR SUCH USE. REFLECT LOCATED UTILITIES ON AS-BUILT DOCUMENTS.
- 14. ALL EXISTING ELECTRICAL IS NOT SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID.
- 15. PROVIDE NEW TYPED PANEL DIRECTORIES FOR ALL EXISTING AND NEW PANELBOARDS FOR PANELBOARDS ASSOCIATED WITH CONTRACT WHETHER SHOWN ON PLANS OR NOT REGARDLESS IF SCHEDULES/CIRCUITRY HAS BEEN CHANGED.
- 16. PROVIDE NEW PHENOLIC LABELS (PER SPEC'S) ON ALL (2) TWO POLE AND (3) THREE POLE CIRCUIT BREAKERS WITHIN ALL EXISTING AND NEW PANELBOARDS ASSOCIATED WITH CONTRACT WHETHER SHOWN ON PLANS OR NOT REGARDLESS IF SCHEDULES/CIRCUITRY HAS BEEN CHANGED.
- 17. ALL CONCRETE, WALL PATCHING, CEILING REPAIR, WALL FINISHES, AND OTHER GENERAL WORK REQUIRED FOR INSTALLING ELECTRICAL SYSTEMS SHALL BE REPAIRED TO "LIKE NEW/ORIGINAL CONDITION." (COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BID.)
- 18. ALL PATCHES OR CEILING PLATES SHALL BE PATCHED OR PAINTED AS DIRECTED BY ENGINEER.
- 19. PAINT ALL EXPOSED CONDUIT, BOXES, ETC. TO MATCH WALL SURFACE.
- 20. DASHED ITEMS INDICATE EXISTING TO REMAIN.
- 21. "R" ADJACENT TO DEVICE INDICATES EXISTING TO BE REMOVED COMPLETE.
- 22. NEW UNDERGROUND RACEWAYS ARE TO BE HAND DUG. ROUTE UNDER EXISTING WALKWAYS AS REQUIRED BY OWNER.
- 23. ALL ITEMS REMOVED AND NOT RE-USED SHALL BE IMMEDIATELY TURNED OVER TO OWNER AS THEY ARE MADE AVAILABLE BY RENOVATION. REMOVE ITEMS FROM JOB SITE AND DELIVER TO OWNERS STORAGE LOCATION(S) AS DIRECTED BY PROJECT MANAGER. DISCARD COMPLETE ITEMS WHICH OWNER ELECTS TO REFUSE.
- 24. WORK TO BE PERFORMED IN STRICT COMPLIANCE WITH ESTABLISHED WORK SCHEDULE BEING SET FORTH BY OWNER/TENANT. COORDINATE ALL WORK. THE CONTRACTOR SHALL FURNISH ADEQUATE FORCES, CONSTRUCTION PLANT, AND EQUIPMENT, AND SHALL WORK SUCH HOURS, INCLUDING NIGHT SHIFTS, OVERTIME OPERATIONS, SUNDAY, AND HOLIDAYS IN ACCORDANCE WITH THE OWNERS OPERATIONAL SCHEDULE. IF THE CONTRACTOR FALLS BEHIND PROGRESS REQUIRED IN THE OPERATIONAL SCHEDULE, THE CONTRACTOR SHALL TAKE SUCH STEPS AS MAY BE NECESSARY TO IMPROVE HIS PROGRESS, AND THE OWNER MAY REQUIRE HIM TO INCREASE THE NUMBER OF SHIFTS AND/OR OVERTIME OPERATIONS, DAY OF WORK AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AT NO ADDITIONAL COST TO THE OWNER UNDER THIS CONTRACT. (IT SHALL BE UNDERSTOOD THAT SEVERAL BID PACKAGES MAY BE CONSTRUCTED BY VARIOUS CONTRACTOR/SUB-CONTRACTORS WITHIN THE SAME WORK SPACE SIMULTANEOUSLY.)
- 25. USE OF MC CABLE IS NOT ACCEPTABLE.
- 26. MINIMUM CONDUIT SIZE IS 3/4" EXCEPT FOR FIXTURE WHIPS NOT EXCEEDING 6 FEET IN LENGTH AND FINAL EQUIPMENT CONNECTIONS NOT EXCEEDING 6 FEET IN LENGTH ARE PERMITTED TO BE 1/2".



130 Candace Drive

Maitland, FL 32751

ENG. BUS. No. EB-0005096 PHONE (407) 740-5020

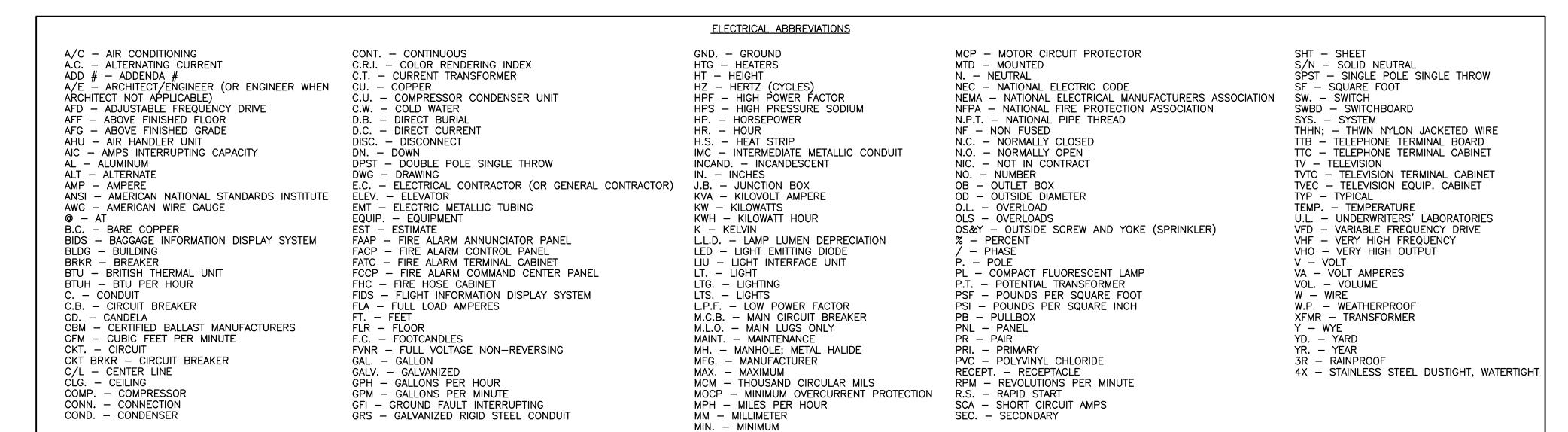
CERT. OF AUTH. No. 5096 FAX (407) 740-0365

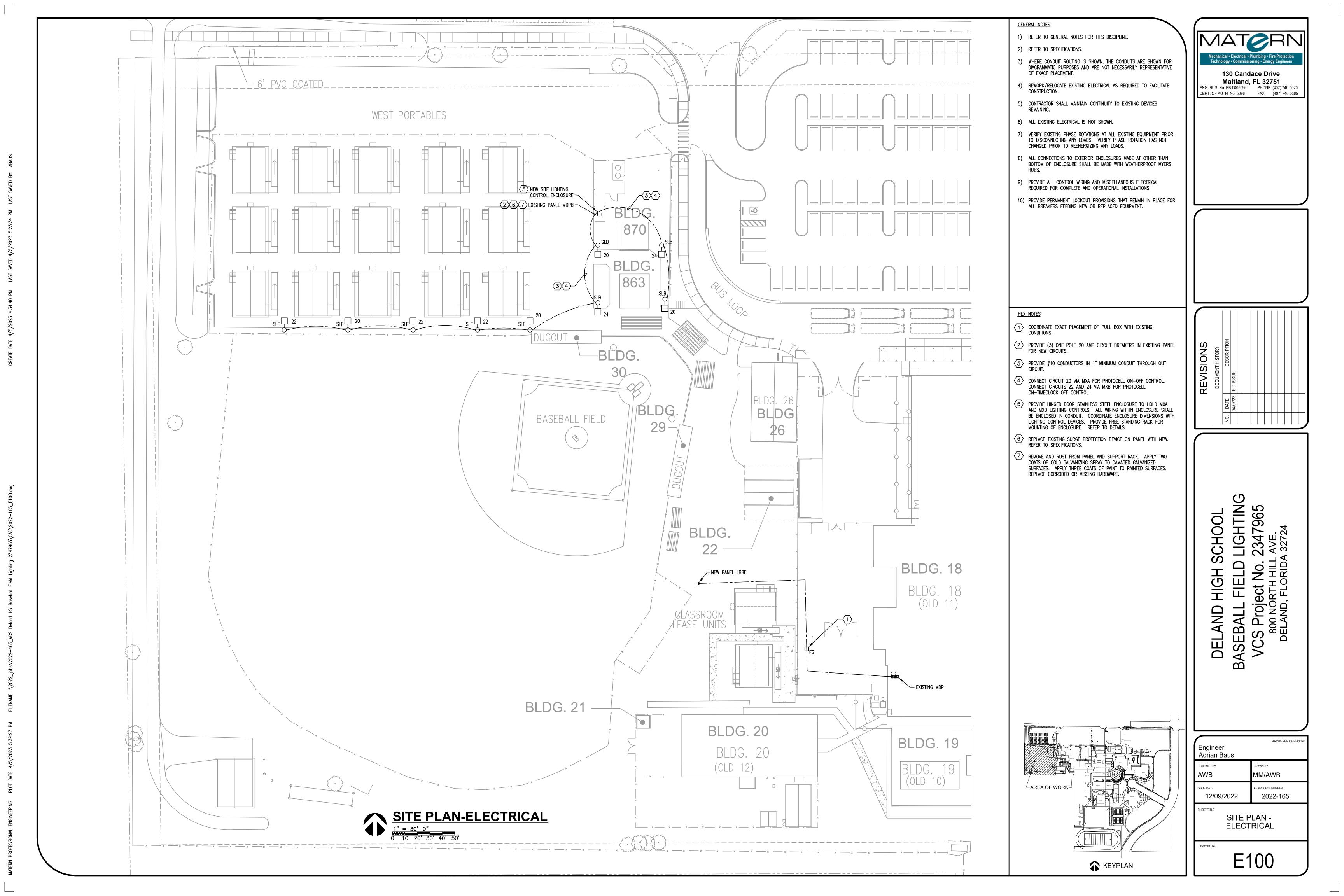
96 H \approx 0 1GI 34: 3272 0 2 0 t び Φ . 10 AL _ 8 ₹ \triangleleft $\mathbf{\Omega}$ S

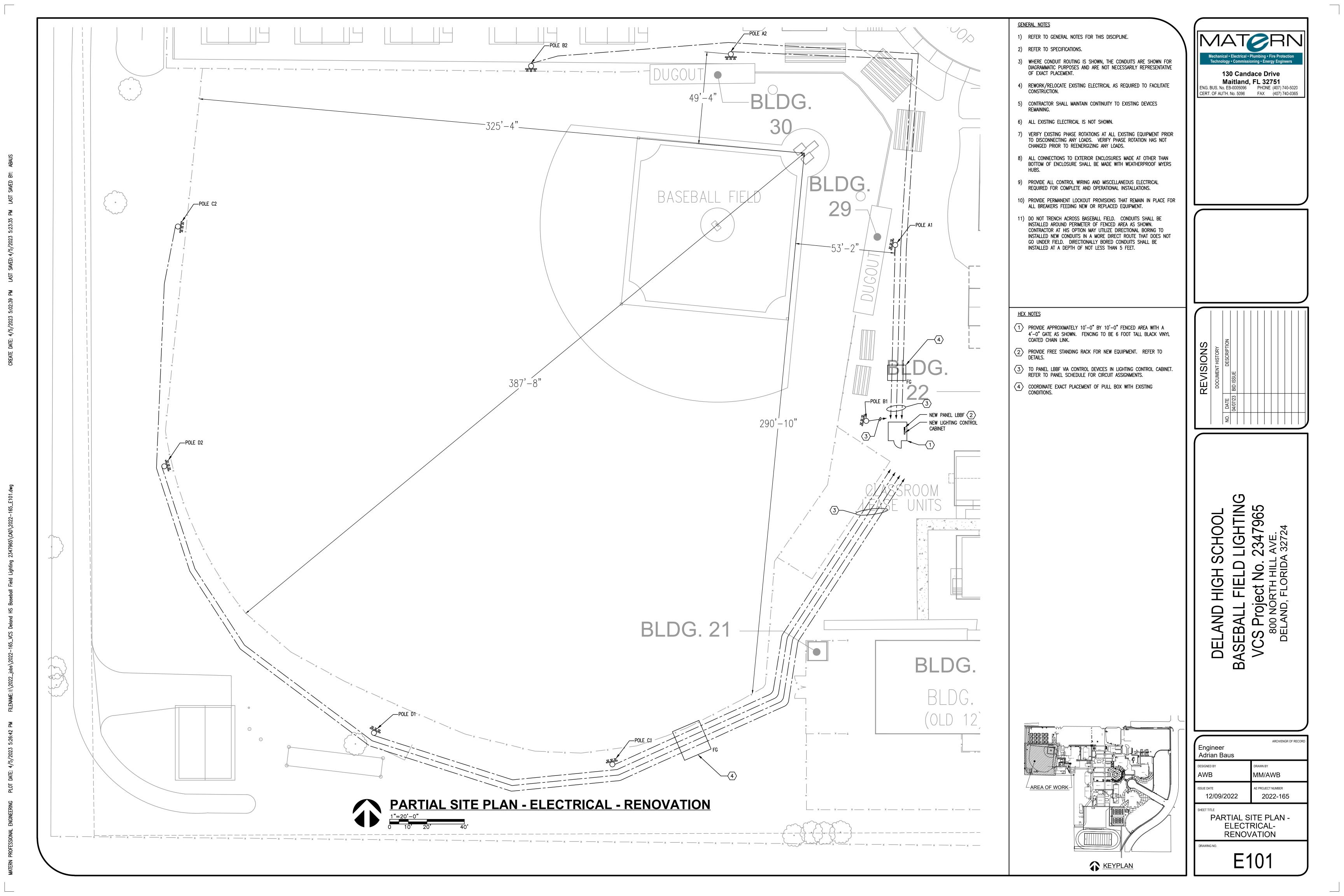
MM/AWB
ne project number 2022-165

GENERAL NOTES. SYMBOL LEGEND AND ABBREVIATIONS

E001







TLC-BT-575 LED	LED 5700K - 75 CRI	575 WATTS	3.4	52,000	>120,000
CALCULATON GRID SUMMAI	RY				
GRID NAME	CALCULA	TION METRIC	AVERAGE	MINIMUM	MAXIMUM
INFIELD	HORIZONTAI	LILLUMINANCE	52	36	63
OUTFIELD	HORIZONTAI	LILLUMINANCE	30.9	23	46
					1
<u>GENE</u>	ERAL NOTES:				
				2	<u></u>
1.	ALL STEEL COMPONENTS				
	BE HOT DIPPED GALVAN	IIZED.		\wedge	
2.	PROVIDE EXTENSIONS AS	S RECHIRED			
2.	I NOVIDE ENTENDIONS A	O IVEROUVED.		*	
3.	INCREASE SIZE OF PULI	LBOX IF NECESSARY FOR			
	SPECIFIC INSTALLATION.		6"		
			1 / /	~~ /	\ ////

4. PULLBOXES TO BE PRECAST WITH VERTICAL

FIELD FABRICATED PULLBOXES ARE NOT

HUGHES, MACK, OR EQUAL.

ACCEPTABLE.

6. SUBMIT SHOP DRAWING(S).

AND HORIZONTAL REBARS, BROOKS, A.C. MILLER,

COMMUNICATIONS CONDUITS ENTERING PULLBOX

SHALL BE ALIGNED ON OPPOSITE WALLS OF

8. GROUT AROUND CONDUIT ENTRIES TO PREVENT

(*) = BOX SIZE = 36"W MIN x 36"L MIN X 36"D MIN

A TOTAL OF FIVE (5) FLUSH GRADE HANDHOLES AS SHOWN IN THIS FLUSH GRADE HANDHOLE DETAIL - 'PBD2' SHALL BE INCLUDED IN BID. BOXES SHALL BE USED

DURING CONSTRUCTION. ANY BOXES NOT USED IN THE COURSE OF CONSTRUCTION

WITH APPROVAL OF ENGINEER TO ADDRESS ROUTING CHALLENGES THAT ARISE

PULLBOX AT THE SAME ELEVATION.

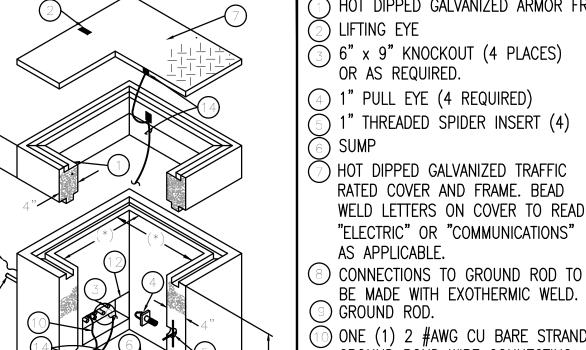
SAND INTRUSION INTO PULLBOX.

SHALL BE TURNED OVER TO THE OWNER.

				DACE	PALL FIELD DOLF /FI	VTURE COUEDING					
POLE	DECRIPTION	#LUMINAIRES/POLE	LUMINAIRE MODEL	POLE HEIGHT	FIXTURE GROUP MOUNTING HEIGHT	CONTACTOR	FLA	CONTACTOR SIZE	CIRCUIT SIZE	ZONE	PANEL /CKT
A1	BASEBALL	2	MUSCO TLC-LED-900		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C1	17.90	30	25	1	LBBF-1:3:5
		2	MUSCO TLC-LED-1200		70'						
A2	BASEBALL	2	MUSCO TLC-LED-900		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C2	17.90	30	25	1	LBBF-7:9:11
		2	MUSCO TLC-LED-1200		70'						
B1	BASEBALL	1	MUSCO TLC-LED-1200		80'						
		2	MUSCO TLC-BT-575	80'	15.5'	СЗ	34.80	60	45	1	LBBF-13:15:17
		5	MUSCO TLC-LED-1500		80'						
B2	BASEBALL	1	MUSCO TLC-LED-1200		80'						
		2	MUSCO TLC-BT-575	80'	15.5'	C4	34.80	60	45	1	LBBF-19:21:23
		5	MUSCO TLC-LED-1500		80'						
C1	BASEBALL	3	MUSCO TLC-LED-1200		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C5	14.90	30	20	1	LBBF-2:4:6
C2	BASEBALL	3	MUSCO TLC-LED-1200		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C6	14.90	30	20	1	LBBF-8:10:12
D1	BASEBALL	3	MUSCO TLC-LED-1200		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C 7	14.90	30	20	1	LBBF-14:16:18
D2	BASEBALL	3	MUSCO TLC-LED-1200		70'						
		1	MUSCO TLC-BT-575	70'	15.5'	C8	14.90	30	20	1	LBBF-20:22:24
TOTAL		42					165.00				

LUMINAIRE DESCRIPTION								
TYPE	SOURCE	WATTAGE	MAX AMPS	LUMENS	L90	L80	L70	QUANTITY
TLC-LED-1500	LED 5700K - 75 CRI	1410 WATTS	8.4	181,000	>120,000	>120,000	>120,000	10
TLC-LED-1200	LED 5700K - 75 CRI	1170 WATTS	6.9	150,000	>120,000	>120,000	>120,000	18
TLC-LED-900	LED 5700K - 75 CRI	880 WATTS	5.2	104,000	>120,000	>120,000	>120,000	4
TLC-BT-575 LED	LED 5700K - 75 CRI	575 WATTS	3.4	52,000	>120,000	>120,000	>120,000	10

GRID NAME	CALCULATION METRIC	AVERAGE	MINIMUM	MAXIMUM	MAX/MIN	ZONES OPERATING	# FIXTURES OPERATING
INFIELD	HORIZONTAL ILLUMINANCE	52	36	63	1.78	1	42
OUTFIELD	HORIZONTAL ILLUMINANCE	30.9	23	46	2.03	1	42



() HOT DIPPED GALVANIZED ARMOR FRAME

3 6" x 9" KNOCKOUT (4 PLACES)

(5) 1" THREADED SPIDER INSERT (4)) HOT DIPPED GALVANIZED TRAFFIC

RATED COVER AND FRAME. BEAD WELD LETTERS ON COVER TO READ "ELECTRIC" OR "COMMUNICATIONS"

BE MADE WITH EXOTHERMIC WELD.

ONE (1) 2 #AWG CU BARE STRANDED GROUND BOND WIRE CONNECTING ALL GROUND RODS TOGETHER. GROUND WIRE TO BE 6" DIRECTLY ABOVE CONDUIT.

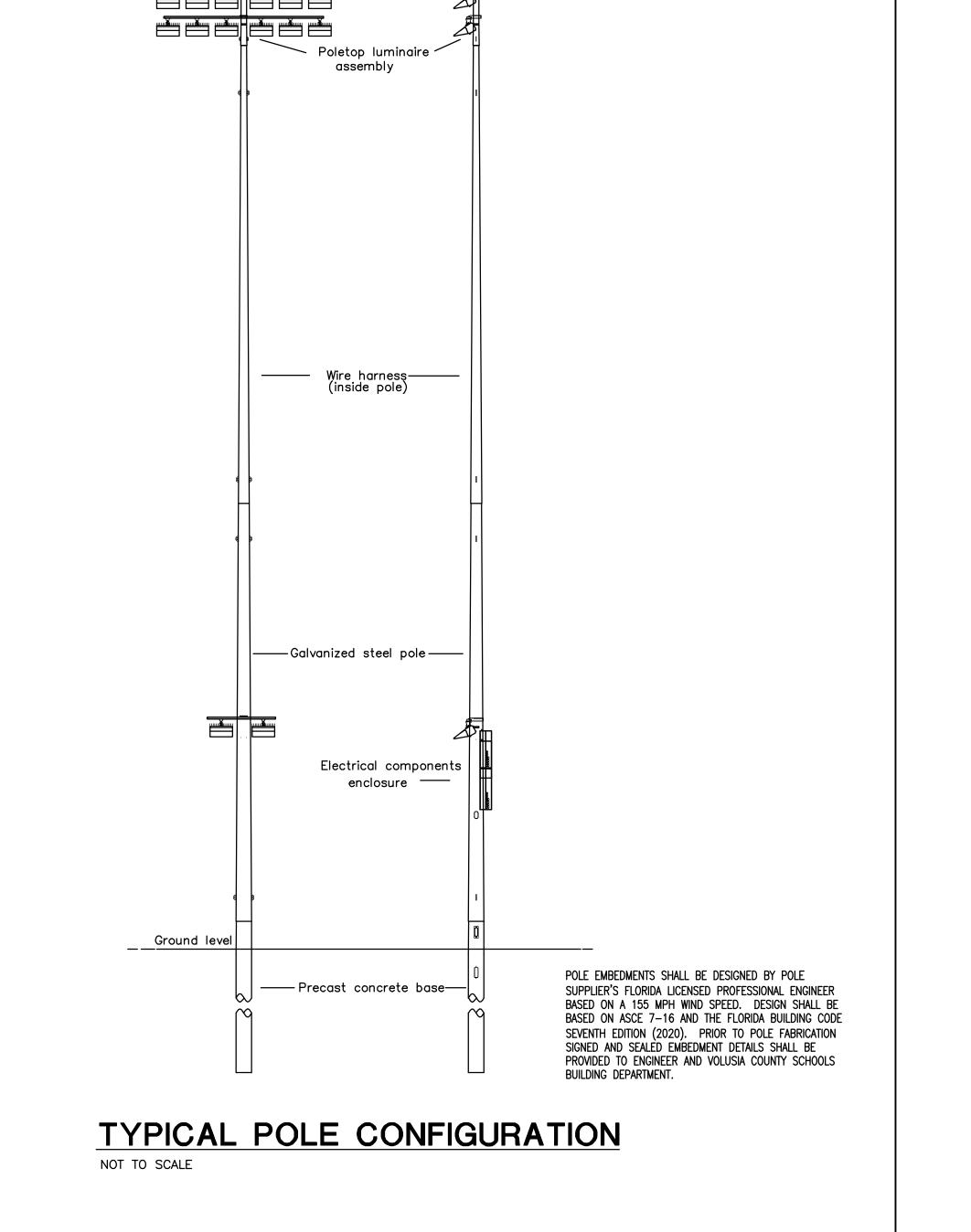
18" BED OF CRUSHED ROCK FOR DRAINAGE.

(12) SEAL ALL CONDUIT ENDS. (3) CONDUITS.

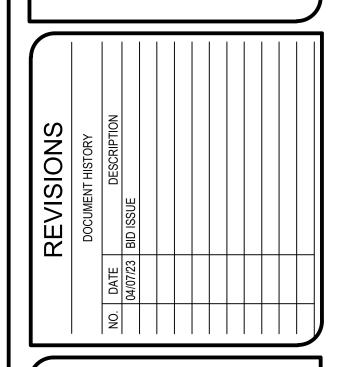
PULL BOX COVER GROUNDED WITH #6 STRANDED INSULATED CONDÜCTOR FROM PULL BOX COVER TO ARMOR FRAME THEN TO GROUND ROD. SEE SPECIFICATIONS.

FLUSH GRADE HANDHOLE DETAIL - 'PBD2'

REV. 6/29/2017



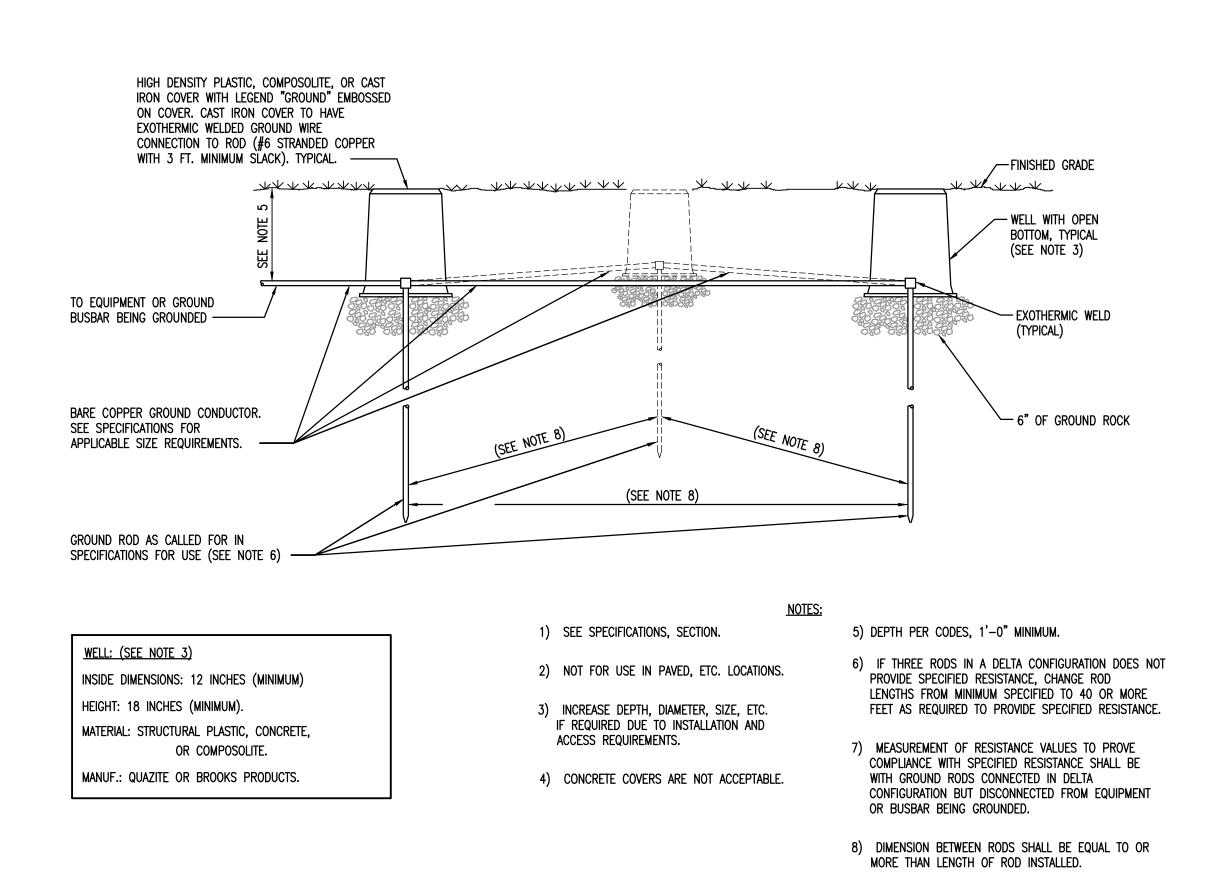




LIGHTING 2347965 LAVE. A 32724 BASEBALL FIELD L
VCS Project No. 2
800 NORTH HILL A
DELAND, FLORIDA 3 DELAND

Engineer Adrian Baus	ARCH/ENGR OF RECORD					
ESIGNED BY	DRAWN BY MM/AWB					
sue date 12/09/2022	AE PROJECT NUMBER 2022-165					
DETAILS						
F501						





GROUND WELL DETAIL (MAIN SERVICE) FOR GRASSY UNPAVED NON-TRAFFIC AREAS

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

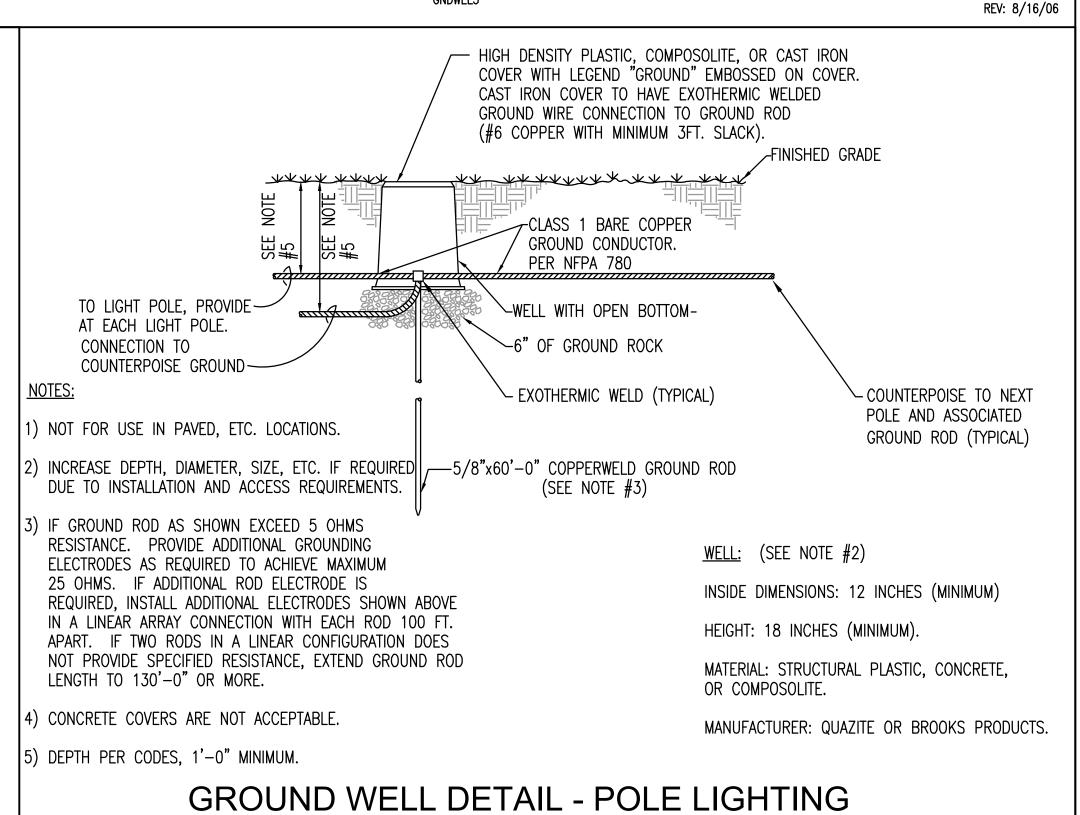
ANSI Z535.4-2011, PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR

THE DESIGN OF SAFETY SIGNS AND LABELS FOR APPLICATION TO PRODUCTS.

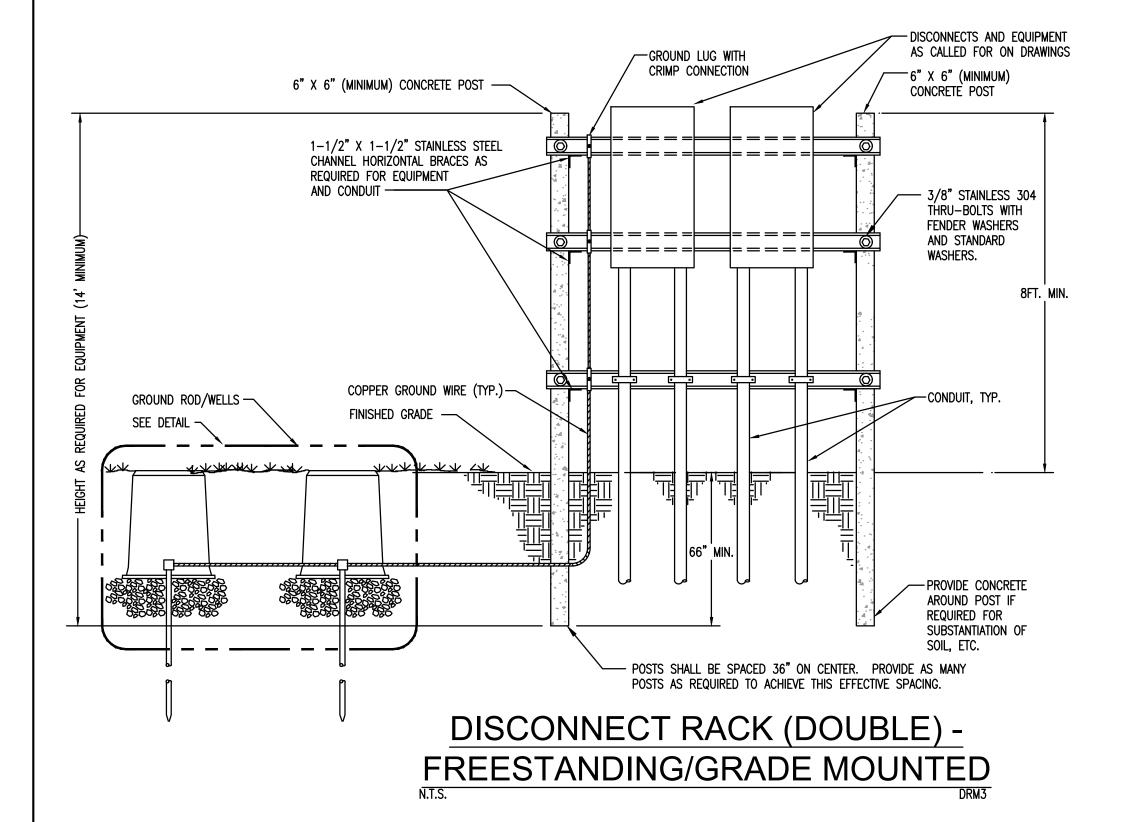
"ARC FLASH AND

SHOCK HAZARD" SIGN

PROVIDE/INSTALL SIGN ON ALL EQUIPMENT PER ANSI, NEC, AND OSHA.



GNDWEL4 MODIFIED



CHILLER CH-1 **HEAT TAPE**

20 AMP 120V 1PH 2W **FED FROM 1L1-73 LOCATED IN** BUILDING 1 ROOM 01-142

BLACK LAMACOID WITH WHITE CORE

GENERAL NOTES:

- 1. EQUIPMENT NAMEPLATES SHALL BE PROVIDED FOR ALL PANELS, SWITCHES AND LOADS.
- 2. NAMEPLATES SHALL COMPLY WITH NEC REQUIREMENTS AND CLEARLY IDENTIFY THE LOAD SERVED, THE SOURCE AND THE LOCATION OF THE SOURCE.
- NAMEPLATES SHALL BE COLOR CODED PER SPECIFICATIONS AND EXISTING BUILDING CONVENTIONS.

TYPICAL NAMEPLATE

LIGHTING 2347965 LAVE. A 32724 SCHOOL BASEBALL FIELD L VCS Project No. 2 800 NORTH HILL A DELAND, FLORIDA **DELAND**

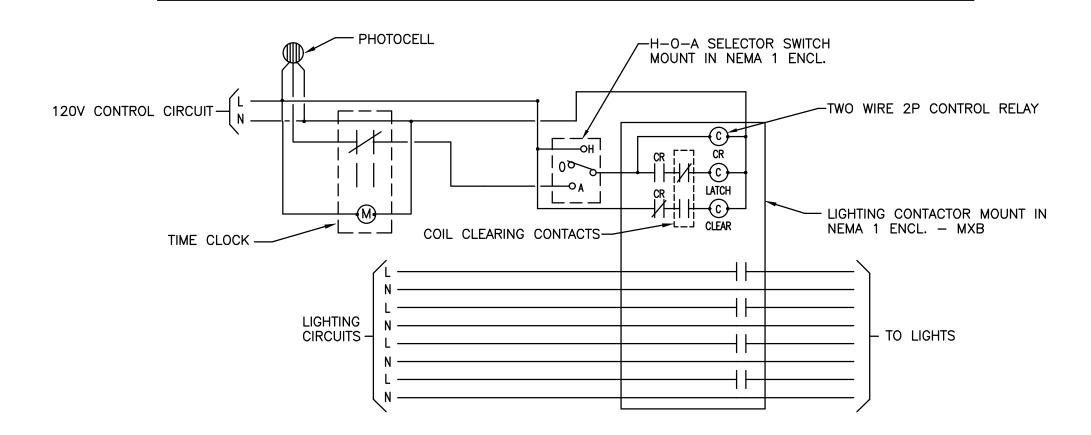
130 Candace Drive Maitland, FL 32751 ENG. BUS. No. EB-0005096 PHONE (407) 740-5020

CERT. OF AUTH. No. 5096 FAX (407) 740-0365

Engineer Adrian Baus	ARCH/ENGR OF RECORD						
DESIGNED BY AWB	DRAWN BY MM/AWB						
12/09/2022	AE PROJECT NUMBER 2022-165						
SHEET TITLE							
DETAILS							
DRAWING NO.							

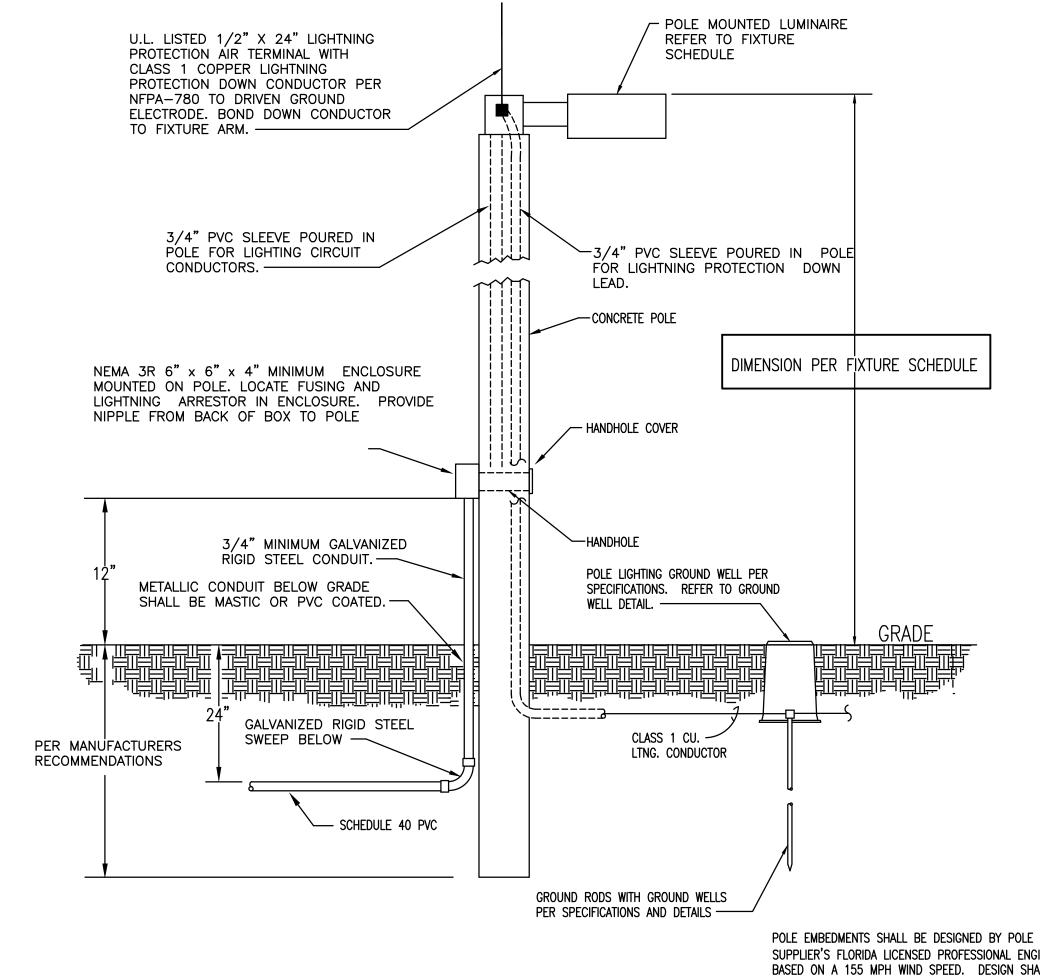
DEVICE	DESIGN SELECTION	APPROVED SUBSTITUTE	APPROVED SUBSTITUTE	VOLTAGE	#CONTACTS REQ			
PHOTOCELL	TORK #2101 (2104)	PARAGON #CW201-00 (CW201-27)	PRECISION #T-15 (T-168)	120V(277)				
TIME CLOCK	TORK #220L (W222L)	PARAGON #7218-00 (7218-27)	PRECISION #2D7218-00 (SD7218-20)	120V(277)	2-N.O. 2-N.C.			
HOA SEL. SW.	SQ."D" #KS43B 8 #KA-1	G.E. #CR2940UB202B	ALLEN BRADLEY #800TT-J2A	600V MAX.	I-N.O. 1-N.C.			
CONTACTOR	SQ."D" #SMG SERIES WITH CONTROL RELAY	G.E. #CR160MB SERIES WITH CONTROL RELAY	ALLEN BRADLEY #702LP—BA SERIES WITH CONTROL RELAY	120V(277)	4-N.O.			
() INDICATES CAT # FOR 277V. SELET DEVICE TO MATCH CONTROL CIRCUIT VOLTAGE.								
NOTE: LIGHTING CONTACTOR SHALL BE MECHANICALLY HELD AND HAVE 30 AMP CONTINUOUS RATING FOR TUNGSTEN & BALLAST LIGHTING								

AND RESISTIVE HEATING LOADS.



PHOTOCONTROL TIME CLOCK SCHEMATIC - MXB LCS9-MODIFIED

PROVIDE, INSTALL & CONNECT ADDITIONAL CONTACTS AND/OR CONTACTORS COMPLETE WITH ENCLOSURES AS REQUIRED PER APPLICATION, SEE ELECTRICAL DRAWINGS TO DETERMINE EXACT NUMBER OF DEVICES. SEE ELECTRICAL DRAWINGS FOR ACTUAL CIRCUIT NUMBERS. PROVIDE MINIMUM OF 2 ADDITIONAL/SPARE CONTACTS.



SUPPLIER'S FLORIDA LICENSED PROFESSIONAL ENGINEER BASED ON A 155 MPH WIND SPEED. DESIGN SHALL BE BASED ON ASCE 7-16 AND THE FLORIDA BUILDING CODE SEVENTH EDITION (2020). PRIOR TO POLE FABRICATION SIGNED AND SEALED EMBEDMENT DETAILS SHALL BE PROVIDED TO ENGINEER AND VOLUSIA COUNTY SCHOOLS BUILDING DEPARTMENT.

BASE DETAIL - CONCRETE LIGHT POLE

NOTE: EMBEDMENT OF POLE SHALL BE PER DETAIL BY STRUCTURAL ENGINEER.

LIGHTING FIXTURE SCHEDULE VCS - DELAND HS DESCRIPTION **DESIGN SELECTION** VOLTS CCT WATTAGE LUMENS LAMP SUBSTITUTION SUBSTITUTION HUBBELL LIGHTING # LEOTEK LIGHTING # ONE (1) ARM MOUNTED LED SHOEBOX LUMINAIRE, TYPE V **ASL1 160L-115 4K7 5QW UNV MAF DBT** DISTRIBUTION, DARK BRONZE COLOR, MOUNT 20'-0" AFG SEMINOLE POLES # 15,632 LITHONIA/ACUITY# 120 4000K 110 TO DIRECT BURIED CONCRETE POLE WITH 155 MPH WIND PRE-CAST SPECIALTIES # TYPE II-0 28FT LOADING BASED ON EMBEDMENT IN SAND (NOTE 9 & 10) (NOTE 9 & 10) **HUBBELL LIGHTING #** LEOTEK LIGHTING # ONE (1) ARM MOUNTED LED SHOEBOX LUMINAIRE, TYPE IV **ASL1 160L-100 4K7 4W UNV MAF DBT** DISTRIBUTION, DARK BRONZE COLOR, MOUNT 20'-0" AFG SEMINOLE POLES # LITHONIA/ACUITY# 11,787 TO DIRECT BURIED CONCRETE POLE WITH 155 MPH WIND TYPE II-0 28FT PRE-CAST SPECIALTIES # LOADING BASED ON EMBEDMENT IN SAND (NOTE 9 & 10) (NOTE 9 & 10)

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

(1) CONTRACTOR SHALL CAREFULLY COORDINATE THE LIGHTING FIXTURE TRIM TYPES WITH THE TYPE OF CEILING WHERE THE LIGHTING FIXTURES ARE TO BE INSTALLED. MODIFY FIXTURE CATALOG NUMBER AS REQUIRED TO COORDINATE FIXTURE WITH CEILING.

(3) PROVIDE MANUFACTURER'S POINT BY POINT PHOTOMETRIC ANALYSIS FOR SITE LIGHTING WITH SUBMITTALS 10 DAYS PRIOR TO BID FOR APPROVAL BY DESIGN ENGINEER.. PROVDIE EMBEDMENT DETAILS FOR SAND

(4) CONTRACTOR, AT HIS OPTION, MAY USE A U.L. LISTED FLEXIBLE WIRING SYSTEM FOR LIGHTING FIXTURE BRANCH CIRCUITRY ABOVE ACCESSIBLE LAY-IN CEILINGS. ALL HOMERUNS, CONNECTIONS TO LIGHT SWITCHES, AND BRANCH CIRCUITRY FOR ALL OTHER CEILING CONDITIONS SHALL BE IN A CONVENTIONAL RACEWAY SYSTEM PER SPECIFICATIONS.

(5) WHEN FIXTURE MODEL NUMBER DIFFERS FROM FIXTURE DESCRIPTION, CONTRACTOR IS TO SUBMIT RFI REQUESTING CLARIFICATION PRIOR TO SHOP DRAWING SUBMITTAL AND PRIOR TO ORDERING OF FIXTURE. WHERE CONTRACTOR DOES NOT REQUEST CLARIFICATION PRIOR TO BID, CONTRACTOR SHALL PROVIDE THE MOST EXPENSIVE OPTION BETWEEN A FIXTURE THAT MATCHES THE DESCRIPTION AND A FIXTURE THAT MATCHES THE MODEL NUMBER. AFTER BID, CONTRACTOR SHALL SUBMIT RFI REQUESTING CLARIFICATION SO PROPER FIXTURE GETS SUBMITTED, PROVIDED AND INSTALLED.

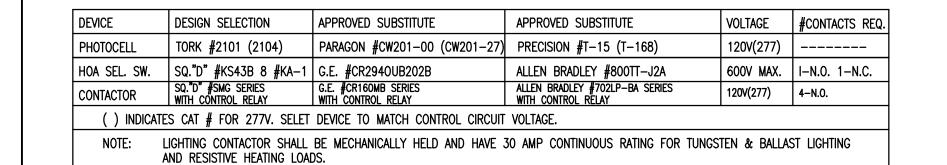
(6) MOUNT LINEAR FIXTURES TOGETHER, END TO END, WHERE SHOWN IN CONTINUOUS ROWS.

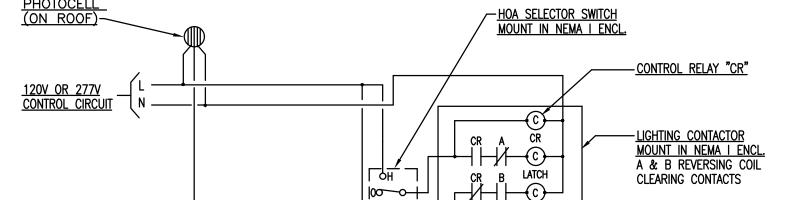
(7) MANUFACTURER SHALL PROVIDE A WARRENTY AGAINST LOSS OF PERFORMANCE AND DEFECTS IN MATERIALS AND WORKMANSHIP FOR THE LUNINAIRS FOR A PERIOD OF 10 YEARS AFTER ACCEPTANCE OF THE LUMINAIRES. WARRANTY SHALL COVER ALL

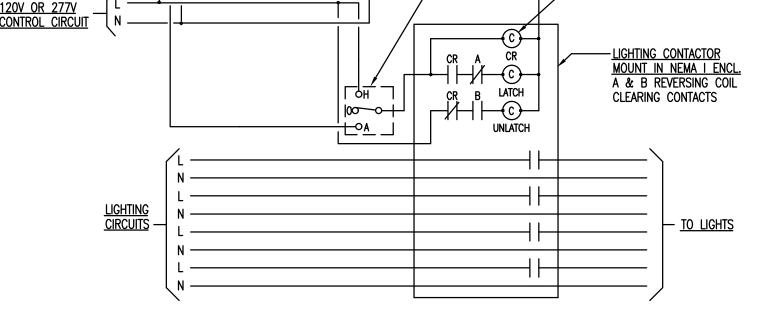
(8) AT TIME OF PURCHASE, ALL APPROVED MANUFACTURERS MUST BE USING CREE, PHILLIPS, SAMSUNG, BRIDGELUXE LED'S, NO OTHER LED MANUFACTURERS ARE PERMITTED.

(9) PROVIDE SEPARATE SLEEVE IN CONCRETE POLES FOR LIGHTNING PROTECTION DOWN CONDUCTOR.

(10) PROVIDE MANUFACTURER'S POINT BY POINT PHOTOMETRIC ANALYSIS FOR SITE LIGHTING WITH SUBMITTALS.







PHOTOCONTROL CONTACTOR MXA SCHEMATIC - MXA

NOTE: PROVIDE, INSTALL & CONNECT ADDITIONAL CONTACTS AND/OR CONTACTORS COMPLETE WITH ENCLOSURES AS REQUIRED PER APPLICATION, SEE ELECTRICAL DRAWINGS TO DETERMINE EXACT NUMBER OF DEVICES. SEE ELECTRICAL DRAWINGS FOR ACTUAL CIRCUIT NUMBERS. PROVIDE MINIMUM OF 2 ADDITIONAL/SPARE CONTACTS.

ARCH/ENGR OF RECOR Engineer Adrian Baus ESIGNED BY AWB MM/AWB E PROJECT NUMBER 12/09/2022 2022-165 DETAILS E503

96/ 34 VE <u>D</u> 2 HGH ひ Proj A $\mathbf{\Omega}$ DEL/ S

REVISIONS

130 Candace Drive

Maitland, FL 32751

ENG. BUS. No. EB-0005096 PHONE (407) 740-5020 CERT. OF AUTH. No. 5096 FAX (407) 740-0365

FEEDER SCHEDUIDELAND HS - BASEBALL FIELD LIGHTING DATE:						4/5/2023	COPYRIGHT: ME, LLC 2009VERSION: A8d5R1 REV: 1-7-2021					1
FEEDER FEEDING	OCP AMP SIZE	VOLTS	FEEDER AMPACITY	FEEDER VOLTAGE DROP (%)	WIRE/PHASE	NEUTRAL WIRE	GROUND WIRE	EXTRA NEUTRAL	FEEDER MATERIAL	PARALLEL RUNS	CONDUIT SIZE (IN)	SHORT CIRCUIT AMPS AT PANEL
LBBF	250	208	255	2%	#4/0	#4/0	#1		COPPER	2	3.5	10249
POLE A1	30	208	40	2%	#8	#8	#8		COPPER	1	1.25	
POLE A2	30	208	30	2%	#3	#3	#3		COPPER	1	1.5	
POLE B1	45	208	52	1%	#6	#6	#8		COPPER	1	1.25	
POLE B2	45	208	50	2%	#1/0	#1/0	#1		COPPER	1	2.5	
POLE C1	30	208	30	2%	#4	#4	#4		COPPER	1	1.5	
POLE C2	30	208	30	2%	#2/0	#2/0	#2/0		COPPER	1	2.5	
POLE D1	30	208	30	2%	#3	#3	#3		COPPER	1	1.5	
POLE D2	30	208	30	2%	#1	#1	#1		COPPER	1	2.5	

GENERAL NOTES:

1) CONDUIT SIZE IS BASED ON 2017 N.E.C. FOR EMT, IMC, RMC, FLEXIBLE METAL, AND SCHED 40 PVC. IF ANY OTHER TYPE OF CONDUIT/TUBING IS USED, THE CONTRACTOR SHALL RESIZE CONDUIT AND SIZE AS REQUIRED TO COMPLY WITH THE N.E.C..

2) USE CABLE REDUCERS AT TERMINATIONS AND/OR AT/IN JUNCTION BOX NEAR TERMINATIONS AS REQUIRED TO COORDINATE OVERSIZED PHASE OR NEUTRAL CONDUCTORS WITH TERMINATION LUG SIZE OR PROVIDE TERMINATION/LUGS SIZED FOR FEEDERS.

3) CONTRACTOR IS TO MEGGER TEST ALL FEEDERS PER SPECIFICATIONS.

WHERE DISCONNECT SWITCH (DISC SW) IS INCLUDED IN THE NAME UNDER "FEEDER FEEDING", PROVIDE DISC SW TO MEET ALL ELECTRICAL CHARACTERISTICS PER THIS SCHEDULE, INCLUDING SCCR RATING. PROVIDE FUSE IN FUSIBLE SWITCHES OR PROVIDE UPSTREAM CIRCUIT BREAKER, WHERE NON-FUSED SWITCHES ARE USED, AS REQUIRED BY DISCONNECT SWITCH MANUFACTURER FOR SHORT CIRCUIT AMPS SHOWN.

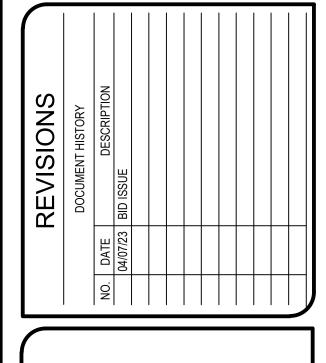
<u>GENERAL NOTES</u>

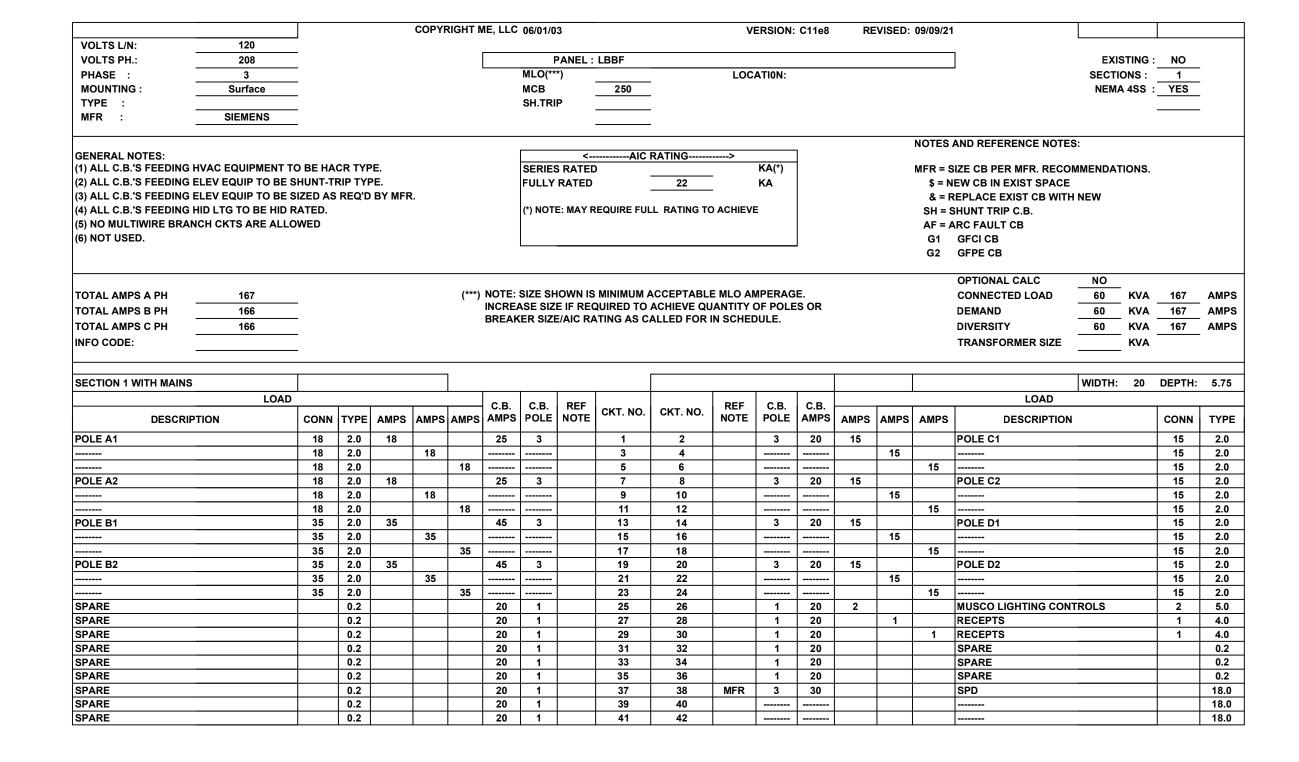
- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- 2) REFER TO SPECIFICATIONS.
- 3) WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARILY REPRESENTATIVE OF EXACT PLACEMENT.
- ALL CONNECTIONS TO EXTERIOR ENCLOSURES MADE AT OTHER THAN BOTTOM OF ENCLOSURE SHALL BE MADE WITH WEATHERPROOF MYERS
- 5) PROVIDE ALL MISCELLANEOUS ELECTRICAL REQUIRED FOR COMPLETE AND OPERATIONAL INSTALLATIONS.
- 6) PROVIDE PERMANENT LOCKOUT PROVISIONS THAT REMAIN IN PLACE FOR ALL BREAKERS FEEDING NEW OR REPLACED EQUIPMENT.

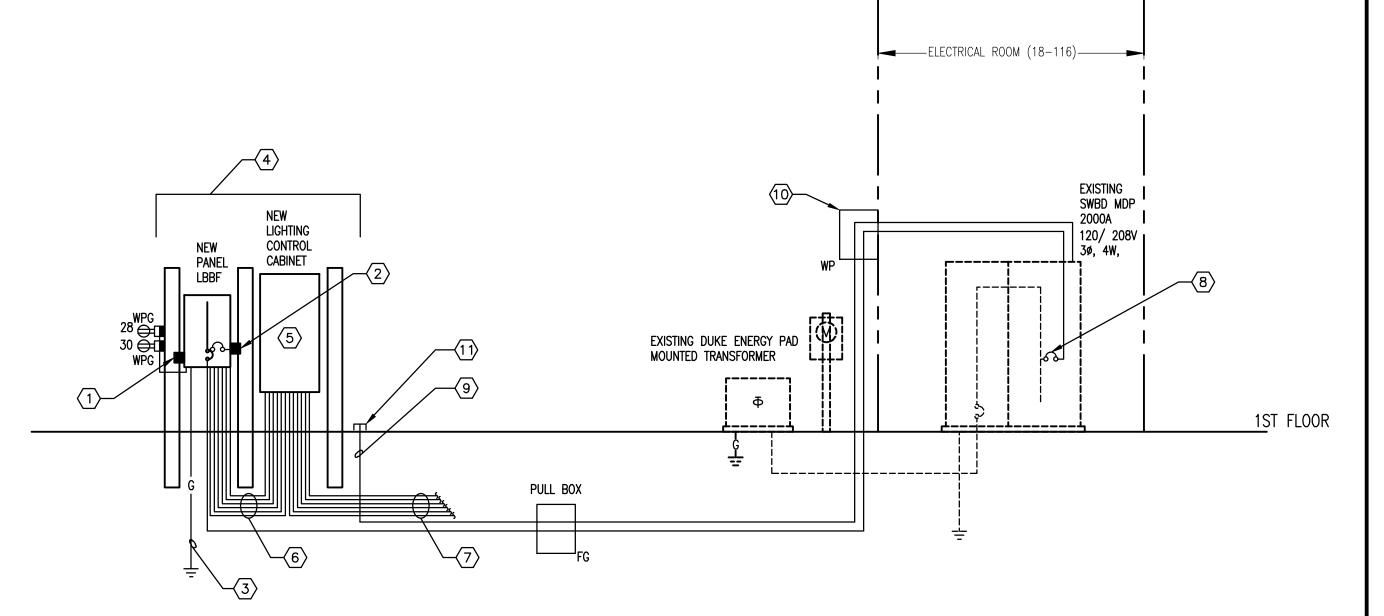


HEX NOTES

- 1 LIGHTNING ARRESTOR.
- 2 Surge suppression device. See specifications.
- 3 #3/0 COPPER GROUND WIRE TO (THREE) 80' X 5/8" COPPERWELD DRIVEN GROUND RODS.
- 4 MOUNT EQUIPMENT ON FREE STANDING RACK. REFER TO DETAILS.
- MUSCO LIGHTING CONTROL CABINET WITH CONTACTORS AND CONTROLS FOR LIGHTS.
- 6 LIGHTING CIRCUITS RUNNING FROM PANEL TO CONTROL CABINET.
- 7 LIGHTING CIRCUITS OUT TO POLES.
- 8 PROVIDE 3 POLE 250 AMP BREAKER IN EXISTING SWITCHBOARD.
- 9 Two runs of 3.5" spare conduit for future.
- PROVIDE STAINLESS STEEL PULL BOX ON EXTERIOR OF BUILDING. SIZE PER NEC.
- 11) TURN CONDUITS UP AT RACK AND CAP.







POWER RISER DIAGRAM

DELAND HIGH SCHOOL
BASEBALL FIELD LIGHTING
VCS Project No. 2347965
800 NORTH HILL AVE.
DELAND, FLORIDA 32724

Engineer Adrian Baus	ARCH/ENGR OF RECORD
DESIGNED BY AWB	DRAWN BY MM/AWB
12/09/2022	AE PROJECT NUMBER 2022-165
SHEET TITLE	

POWER RISER DIAGRAM AND SCHEDULES

DRAWING NO.

E601