# SAFETY DEFICIENCIES RENOVATION AT BASEBALL AND SOFTBALL FIELDHOUSES AT WOLFSON HIGH SCHOOL NO. 224

# SCHOOL BOARD MEMBERS

SUPERINTENDENT OF SCHOOLS - DR. DIANA GREENE DISTRICT 1 : MS. CHERYL GRYMES

DISTRICT 2 : DISTRICT 3 : DISTRICT 3 : DISTRICT 4 : DISTRICT 5 : DISTRICT 6 : DISTRICT 7 : MS. CHERYL GRYMES MS. ELIZABETH ANDERSEN MS. ASHLEY SMITH JUAREZ MR. DARRYL WILLIE

MR. WARREN JONES

- MS. CHARLOTTE JOYCE
- MS. LORI HERSHEY

### DRAWING INDEX

G-001 COVER SHEET LS-1 LIFE SAFETY

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- A5.1 DETAILS
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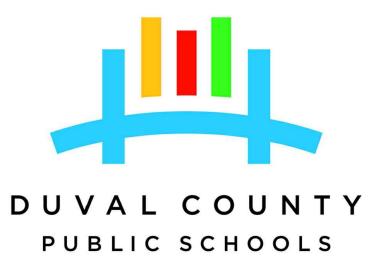
- S0.1 DESIGN CRITERIA AND GENERAL NOTES
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- E4.2 FIRE ALARM RISER DIAGRAM, NOTES, AND SCHEDULES



DUVAL COUNTY PUBLIC SCHOOLS JACKSONVILLE, FLORIDA

DCSB PROJECT NO. M-83680	PRO
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BHIDE & HALL ARCHITECTS, P.A.	ME
1329-C KINGSLEY AVENUE, ORANGE PARK, FLORIDA 32073	
PHONE (904) 264-1919	HAI 3030
LIC. # AAC-000569	JAC Phor
BH PROJECT NO. 15054	Cert
PERMIT SET	
APRIL 22, 2020	REF
OBCE COMMENTS }	
AND ADDENDA 1 & 2	

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### **PROJECT CONTACTS:**

WNER UVAL COUNTY PUBLIC SCHOOLS ACILITIES DESIGN & CONSTRUCTION 01 PRUDENTIAL DRIVE, 5TH FLOOR ACKSONVILLE, FL 32207

### RCHITECT

HIDE & HALL ARCHITECTS, P.A. 329-C KINGSLEY AVE RANGE PARK, FL 32073 none: (904) 264-1919 ERT. LIC. # AAC-000569

### TRUCTURAL ENGINEER

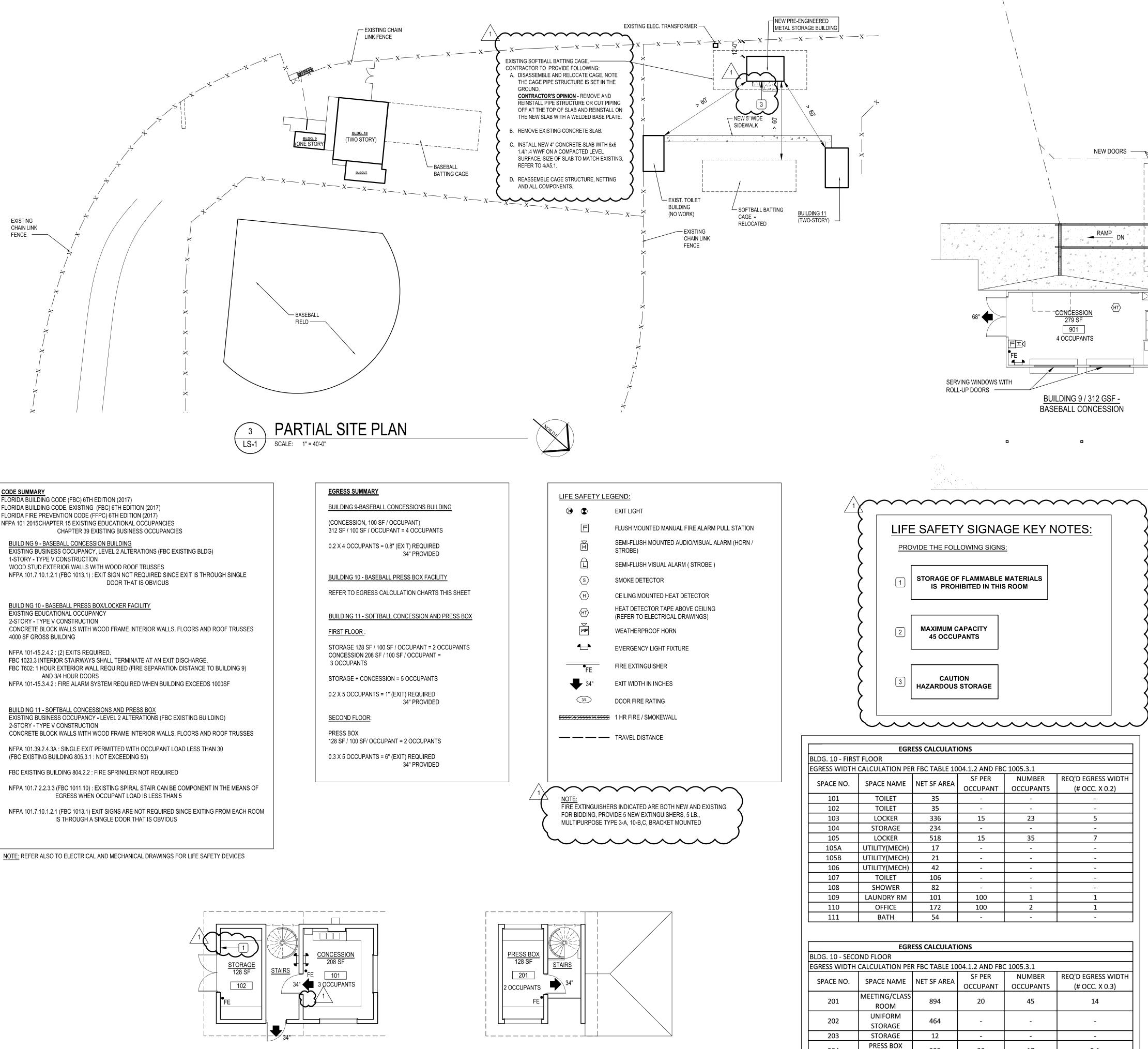
M. HILL ENGINEERING INC. 540 SUNBEAM CENTER DRIVE, SUITE 1 ACKSONVILLE, FL 32257 none: (904) 280-8244 ert. Lic. # 52225

# IECHANICAL AND ELECTRICAL NGINEER

ADDAD ENGINEERING 30 HARTLEY ROAD, SUITE 290 ACKSONVILLE, FL 32257 none: (904) 262-5066 ert. of Authorization No. 4000

EFER TO SHEET A2.1 FOR PROJECT SCOPE

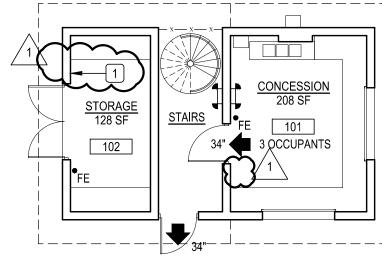
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SAFETY DEFICIENCIES AT BASEBALL AND SOFTBALL	FIELDHOUSES AT WOLFSON HIGH SCHOOL NO. 224	7000 POWERS AVENUE JACKSONVILLE, FLORIDA 32217						
Architect Robert McVeigh		License No. AR0011549						
PERM	COM.							
DATE D.B. C.B. JOB NO. PI	D.B. DMD							



#### CODE SUMMARY

FLORIDA BUILDING CODE, EXISTING (FBC) 6TH EDITION (2017 FLORIDA FIRE PREVENTION CODE (FFPC) 6TH EDITION (2017) NFPA 101 2015CHAPTER 15 EXISTING EDUCATIONAL OCCUPANCIES

NOTE: REFER ALSO TO ELECTRICAL AND MECHANICAL DRAWINGS FOR LIFE SAFETY DEVICES

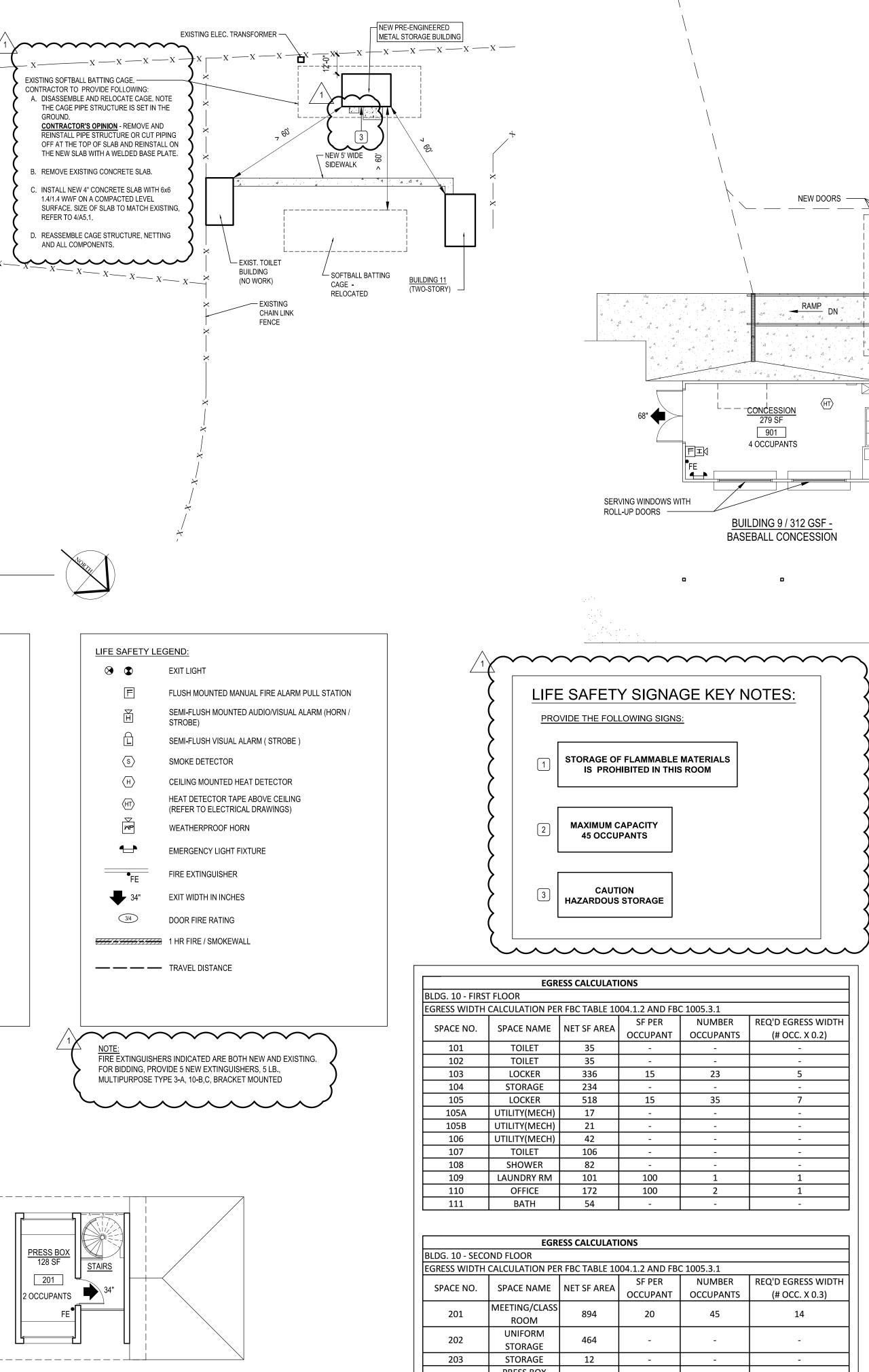


FIRST FLOOR PLAN

**BUILDING 11** 

SCALE: 1/8" = 1'--0"

4 LS-1



204

205

206

207

VIEWING

STORAGE

TOILET

MECHANICAL

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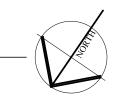
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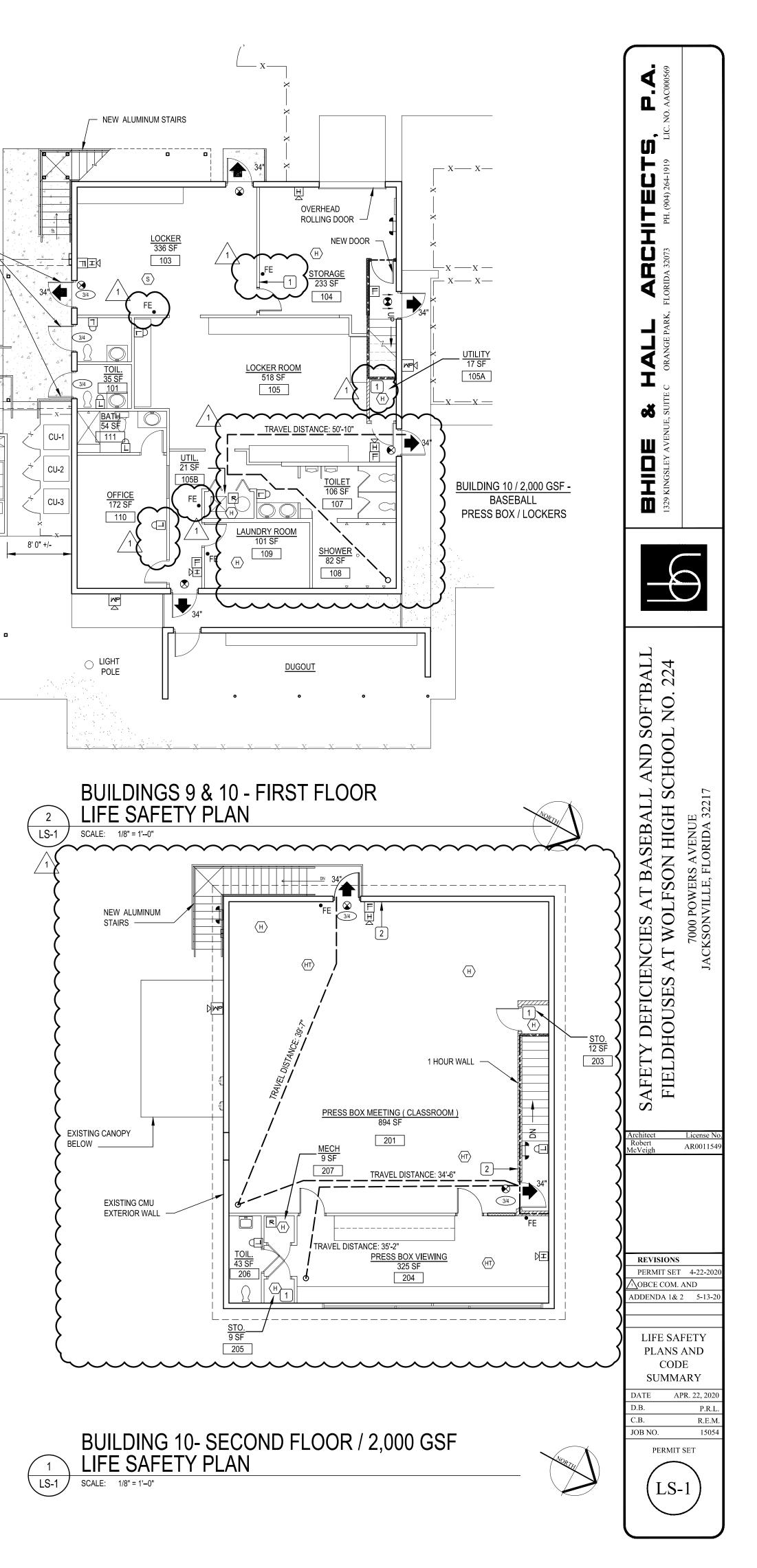
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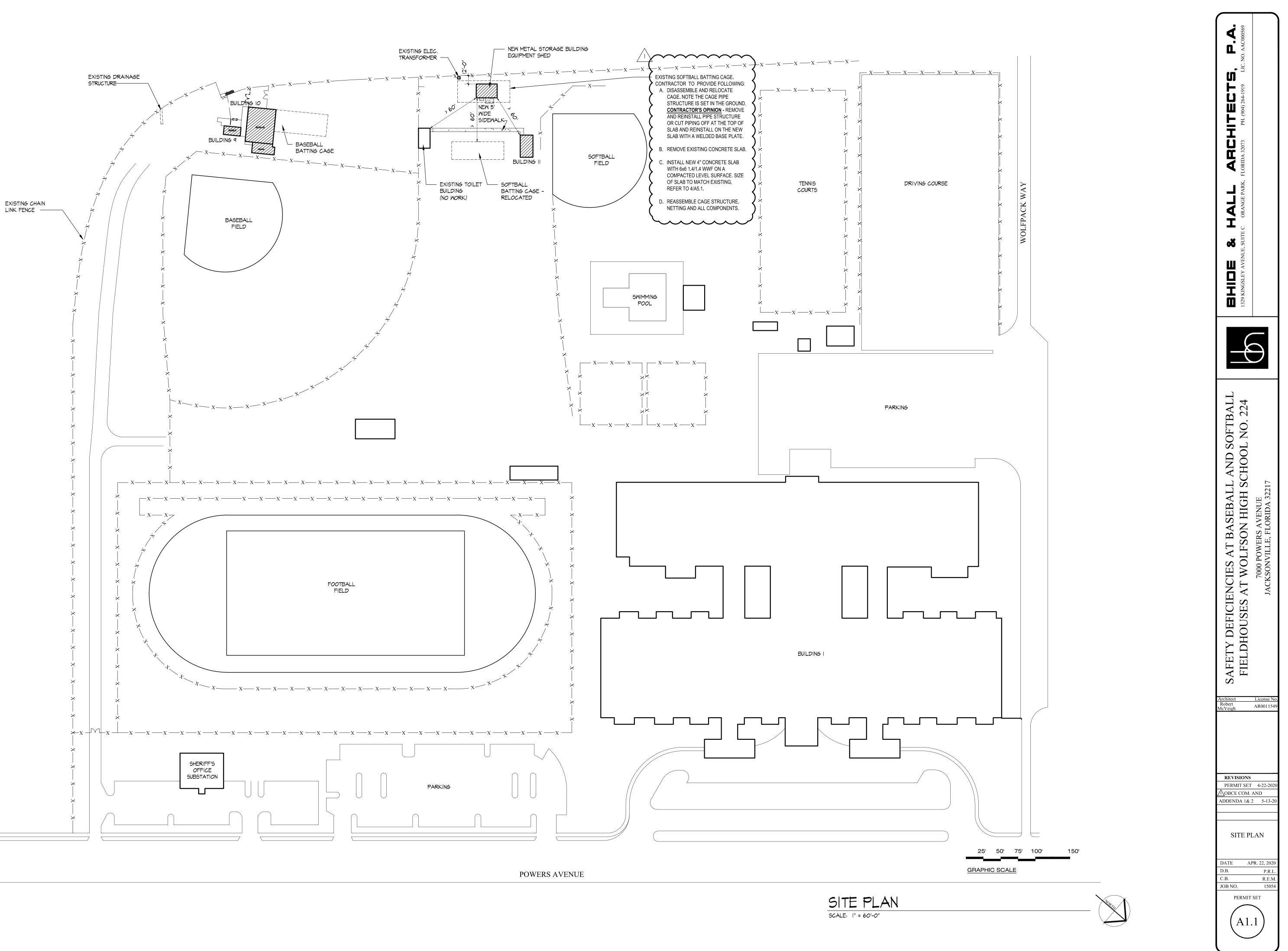
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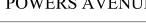
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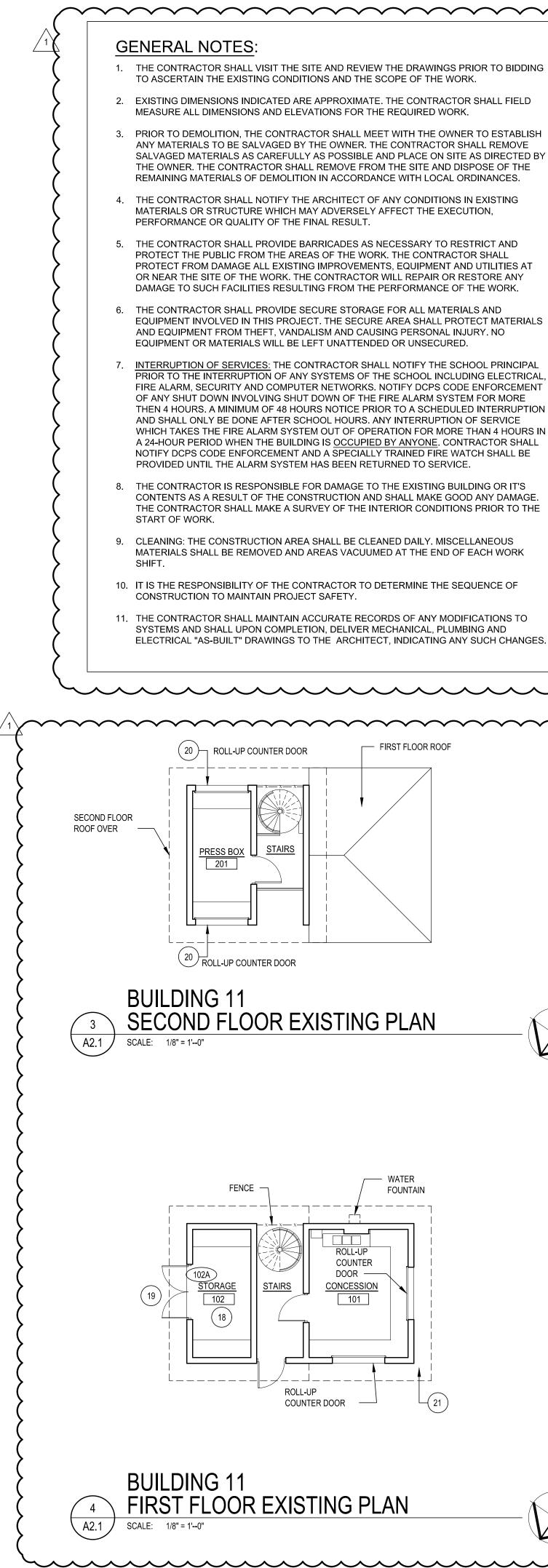
SECOND FLOOR PLAN





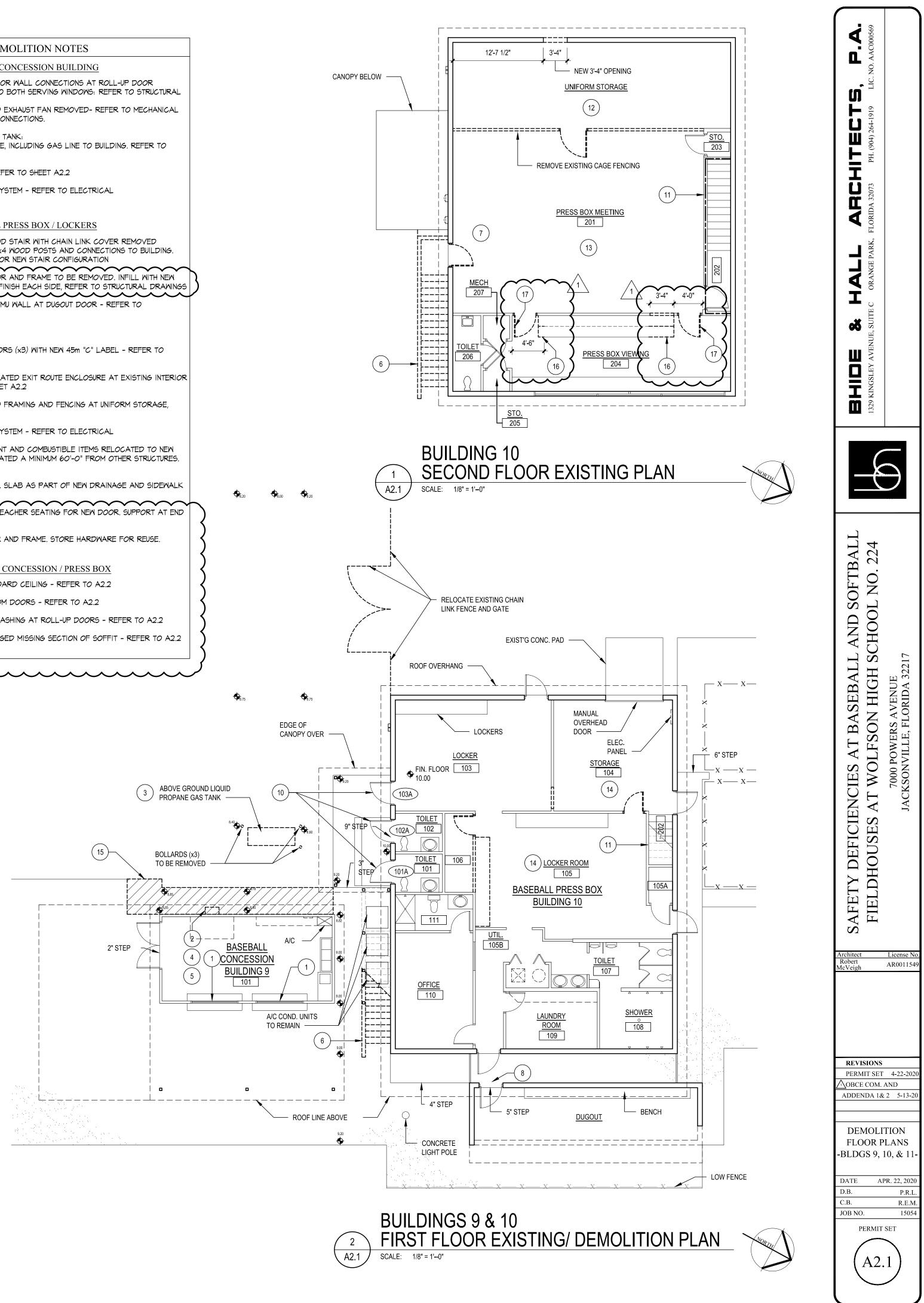


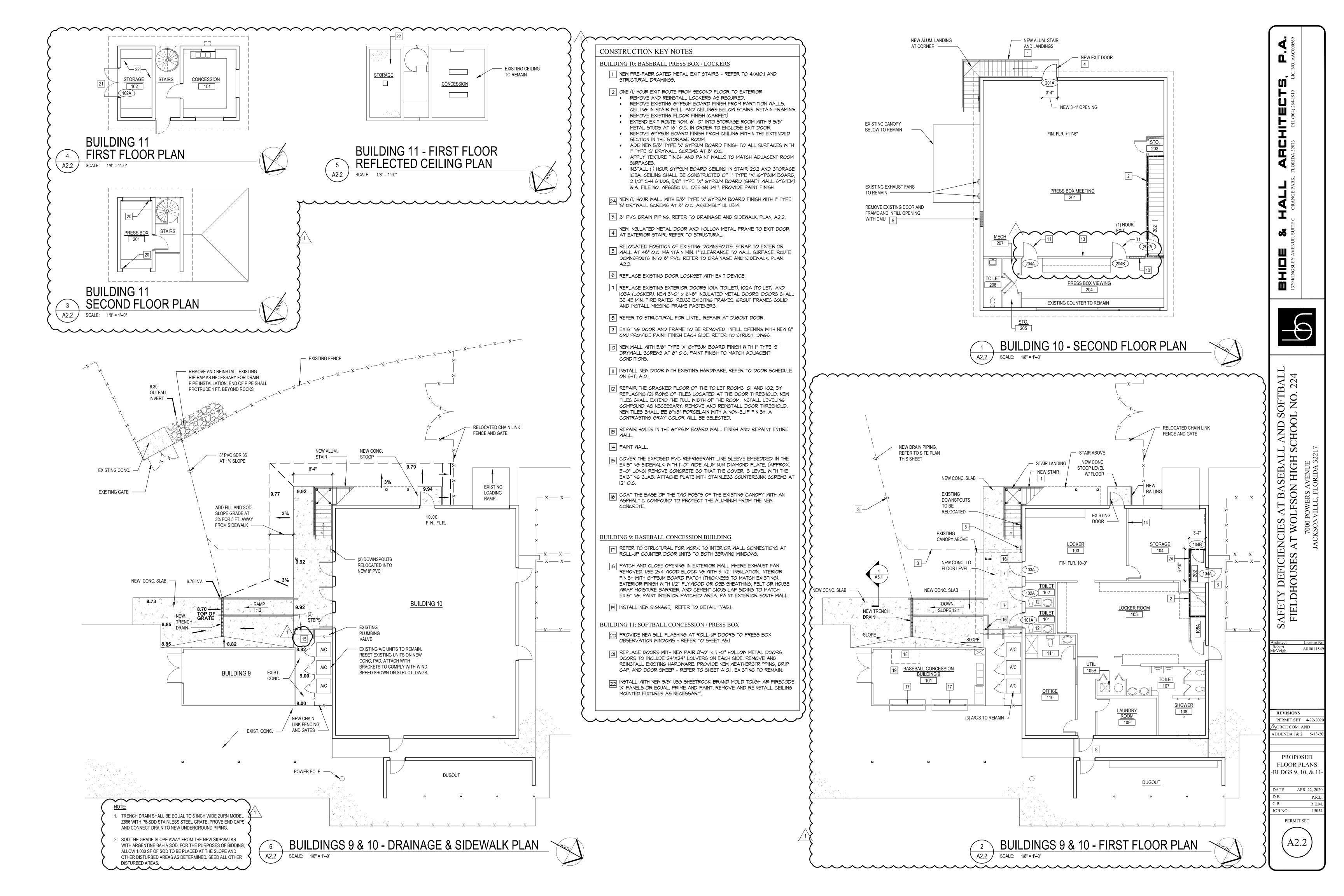


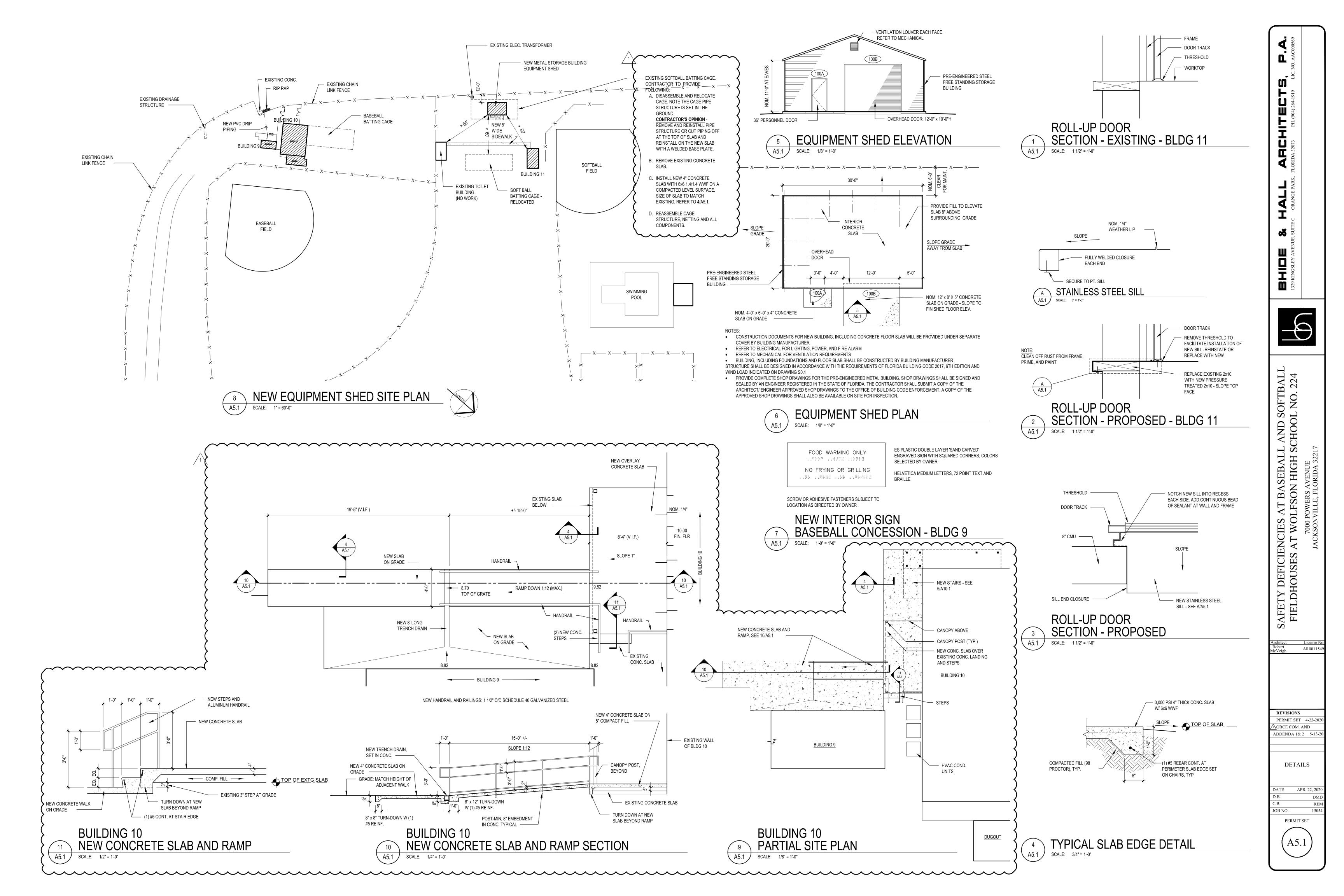


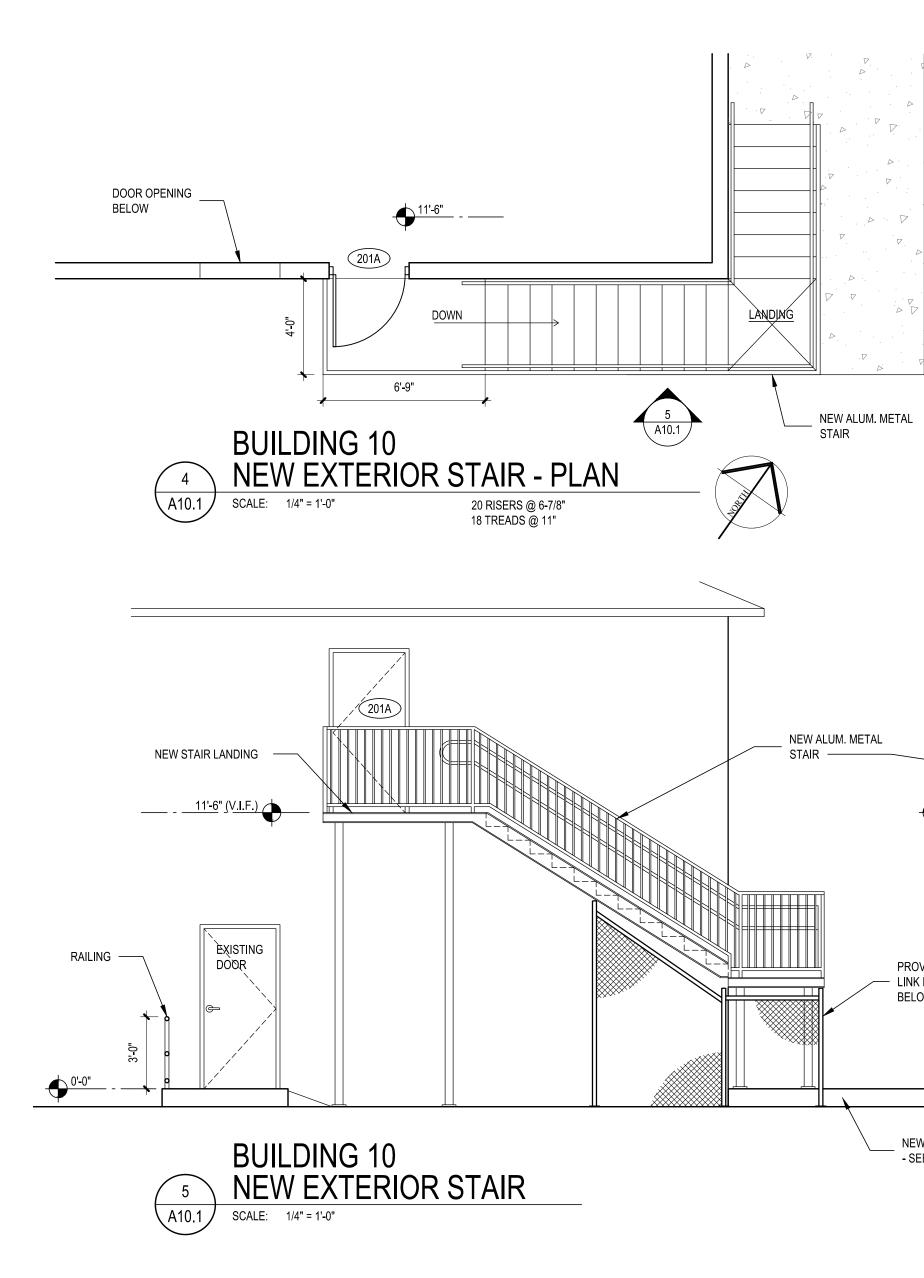
		PROJECT
DRAWINGS PRIOR TO BIDDING OF THE WORK.	<	BUILDING 9
CONTRACTOR SHALL FIELD	5	
UIRED WORK. TH THE OWNER TO ESTABLISH		
NTRACTOR SHALL REMOVE ACE ON SITE AS DIRECTED BY SITE AND DISPOSE OF THE	$\langle \rangle$	(3) ABOVE 6
ITH LOCAL ORDINANCES.		REMOVE MECHANI
CONDITIONS IN EXISTING T THE EXECUTION,	5	
SARY TO RESTRICT AND E CONTRACTOR SHALL		5 PROVIDE
QUIPMENT AND UTILITIES AT REPAIR OR RESTORE ANY	$\langle \rangle$	BUILDING 1
ORMANCE OF THE WORK. ALL MATERIALS AND		6 EXISTING COMPLET REFER TO
A SHALL PROTECT MATERIALS ERSONAL INJURY. NO		(7) EXISTING
UNSECURED. TIFY THE SCHOOL PRINCIPAL		8" CMU F
HOOL INCLUDING ELECTRICAL, Y DCPS CODE ENFORCEMENT LARM SYSTEM FOR MORE		(a) NOT USEE
A SCHEDULED INTERRUPTION TERRUPTION OF SERVICE	{	
N FOR MORE THAN 4 HOURS IN <u>NYONE</u> . CONTRACTOR SHALL NED FIRE WATCH SHALL BE	5	
D TO SERVICE.		STAIRS -
L MAKE GOOD ANY DAMAGE. R CONDITIONS PRIOR TO THE		SECOND
DAILY. MISCELLANEOUS	5	(13) PROVIDE
THE END OF EACH WORK	5	STORAGE REFER TO
MINE THE SEQUENCE OF		(15) REMOVE WORK. R
DF ANY MODIFICATIONS TO NICAL, PLUMBING AND		16 REMOVE AND FINI
DICATING ANY SUCH CHANGES.		
~~~~~		BUILDING 1
		IB INSTALL
LOOR ROOF		
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BU	OJECT SCOPE / DEMOLITION NOTES
$\overline{)}$	ADD TO EXISTING INTERIOR WALL CONNECTIONS AT ROLL-UP DOOR
$\bigcirc$	COUNTER. DOOR UNITS TO BOTH SERVING WINDOWS: REFER TO STRUCTURAL
2	EXISTING WALL MOUNTED EXHAUST FAN REMOVED- REFER TO MECHANICAL AND ELECTRICAL FOR CONNECTIONS.
3	ABOVE GROUND LP GAS TANK: REMOVE TANK COMPLETE, INCLUDING GAS LINE TO BUILDING. REFER TO MECHANICAL DRAWINGS
4	POST NEW SIGNAGE - REFER TO SHEET A2.2
5	PROVIDE FIRE ALARM SYSTEM - REFER TO ELECTRICAL
<u>BU</u>	ILDING 10: BASEBALL PRESS BOX / LOCKERS
6	EXISTING EXTERIOR WOOD STAIR WITH CHAIN LINK COVER REMOVED COMPLETE, INCLUDING 4x4 WOOD POSTS AND CONNECTIONS TO BUILDING. REFER TO SHEET A2.2 FOR NEW STAIR CONFIGURATION
	EXISTING EXTERIOR DOOR AND FRAME TO BE REMOVED. INFILL WITH NEW 8" CMU PROVIDE PAINT FINISH EACH SIDE, REFER TO STRUCTURAL DRAWINGS
8	REPAIR FOR LINTEL IN CMU WALL AT DUGOUT DOOR - REFER TO STRUCTURAL
٩	NOT USED
(10)	REPLACE EXTERIOR DOORS (x3) WITH NEW 45m "C" LABEL - REFER TO SHEET A2.2
	PROVIDE ONE (1) HOUR RATED EXIT ROUTE ENCLOSURE AT EXISTING INTERIOR STAIRS - REFER TO SHEET A2.2
(12)	REMOVE EXISTING WOOD FRAMING AND FENCING AT UNIFORM STORAGE, SECOND FLOOR.
EI	PROVIDE FIRE ALARM SYSTEM - REFER TO ELECTRICAL
(14	EXISTING LAWN EQUIPMENT AND COMBUSTIBLE ITEMS RELOCATED TO NEW STORAGE BUILDING LOCATED A MINIMUM 60'-0" FROM OTHER STRUCTURES. REFER TO SHEET AI.I
(15)	REMOVE EXISTING CONC. SLAB AS PART OF NEW DRAINAGE AND SIDEWALK WORK. REFER TO A2.2.
6	REMOVE SECTION OF BLEACHER SEATING FOR NEW DOOR. SUPPORT AT END AND FINISH
7	REMOVE EXISTING DOOR AND FRAME. STORE HARDWARE FOR REUSE.
<u>BU</u>	ILDING 11: SOFTBALL CONCESSION / PRESS BOX
B	INSTALL NEW GYPSUM BOARD CEILING - REFER TO A2.2
Iq	REPLACE STORAGE ROOM DOORS - REFER TO A2.2
20	PROVIDE SEALS AND FLASHING AT ROLL-UP DOORS - REFER TO A2.2
21	REPAIR/REPLACE DAMAGED MISSING SECTION OF SOFFIT - REFER TO A2.2









		$\overline{}$
	DOOR SCHEDULE	AC000569
	NAME     DOOR     FRAME     DETAILS     BANK     ROOM NAME     REMARKS       NAME     N     H     THK     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H     H	<b>CTS, P</b> 264-1919 LIC. NO. AA
	BUILDING 10           101A         3'-0"         6'-8"         13/4"         F         IM         P         F1         HM         P         -         -         HW.01         45M         TOLET         NEW DOOR NEXISTING FIRE RATED FRAME           102A         3'-0"         6'-8"         13/4"         F         IM         P         F1         -         P         -         -         HW.01         45M         TOLET         NEW DOOR NEXISTING FIRE RATED FRAME           102A         3'-0"         6'-8"         13/4"         F         IM         P         F1         -         P         -         -         HW.01         45M         TOLET         NEW DOOR NEXISTING FIRE RATED FRAME           103A         3'-0"         6'-8"         13/4"         F         IM         P         F1         -         P         -         -         HW.01         45M         LOCKERS         NEW DOOR NEXISTING FIRE RATED FRAME           104A         -         -         -         -         -         HW.02         -         STAIR EXIT         NEW DOOR ND FRAME           104B         2'-8"         6'-8"         13/4"         F         HM         P         2/41.0         2/41.0.1	<b>HALL ARCHITE</b> ORANGE PARK, FLORIDA 32073 PH. (904) 2
	BUILDING 11         102A       PR 3'-0"       7'-0"       1 3/4"       F/LVR       HM       P       -       P       2/A10.1       2/A10.1        HW.05       -       STORAGE       EXISTING FRAME	, suite c
	NEW PRE-ENGINEERED EQUIPMENT SHED           100A         3'-0"         7'-0"         1 3/4"         F         HM         P         -         -         HW.07         EQUIPMENT SHED         PROVIDED BY METAL BUILDING MANUFACTURER         MANUFACTURER         PROVIDED BY METAL BUILDING MANUFACTURER         PROVIDED BY METAL BUILDING MANUFACTURER         PROVIDED BY METAL BUILDING	<b>BHIDE</b> 1329 KINGSLEY AVENUE
NEW CONC. SLAB	NOTE:       FIELD VERIFY ALL OPENING DIMENSIONS PRIOR TO ORDERING DOORS.         Image: Constraint of the co	TBALL D. 224
	EXTERIOR WITCH INTERIOR REFER TO 1/A10.1 NOTE 2 (FOR DOOR 201A) CAULK	AT BASEBALL AND SC LFSON HIGH SCHOOL POWERS AVENUE VILLE, FLORIDA 32217
SEAL GUTTER AT EXISTING DOWNSPOUTS	SEALANT H.M. FRAME WITH 3 ANCHORS MIN. PER JAMB NOTE 2	TY DEFICIENCIES DHOUSES AT WO JACKSON
	2       A10.1         SCALE:       1 1/2" = 1'-0"	SAFETY D FIELDHO
DOWNSPOUTS RELOCATED INTO NEW 8" PVC	BUILDING 10 PROPOSED EXTERIOR DOOR TO PRESS BOX MEETING ROOM	Architect License No Robert AR0011549 McVeigh
PROVIDE CHAIN LINK FENCING BELOW STAIR GRADE	5/8" GYPSUM BOARD EACH SIDE OF 3 5/8" METAL STUD FRAMING DOOR AS SCHEDULED CAULK ALL SIDES H.M. FRAME WITH 3 ANCHORS MIN. PER JAMB COUR AS SCHEDULED COUR AS	REVISIONS PERMIT SET 4-22-2020 △OBCE COM. AND ADDENDA 1& 2 5-13-20 DOOR TYPES, SCHEDULES, AND DETAUS
- SEE 6/A2.2 BUILDING 10 NEW EXTERIOR STAIR 6 A10.1 SCALE: 1/4" = 1'-0"	BUILDING 10 3 A10.1 SCALE: 1 1/2" = 1"-0"	AND DETAILS          DATE       APR. 22, 2020         D.B.       DMD         C.B.       REM         JOB NO.       15054         PERMIT SET       (A10.1)

### **GENERAL NOTES**

#### . GENERAL INFORMATION

- 1. THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR THE CONSTRUCTION MEANS AND METHOD, TECHNIQUES, PROCEDURES OR SEQUENCES OR THE ACTS OF OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK OR FOR THE FAILURE FOR ANY OF THEM TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 2. IF THE DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT RESTRICTIONS AND REQUIREMENTS SHALL GOVERN.
- 3. PLAN NOTES, DETAILS AND SECTIONS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES. TYPICAL DETAILS AND SECTIONS NOT CUT ON THE PLANS SHALL APPLY UNLESS NOTED OTHERWISE.
- 4. CONTRACTORS ARE REQUIRED TO COORDINATE THEIR RESPECTIVE WORK WITH ALL OTHER DISCIPLINES TO AVOID ANY CONFLICTS DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE STRUCTURAL DRAWINGS WITH ALL OTHER CONSTRUCTION DOCUMENTS.
- 5. LOCATION, SIZES AND QUANTITY OF ALL OPENINGS MAY NOT BE COMPLETELY INDICATED ON THE STRUCTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL OPENINGS WITH ALL OTHER DISCIPLINES PRIOR TO ANY FABRICATION.
- 6. CONTRACTORS ARE REQUIRED TO VERIFY EXISTING CONDITIONS PRIOR TO ANY FABRICATION OR CONSTRUCTION. IF EXISTING CONDITIONS ARE DIFFERENT THAN SHOWN, NOTIFY A/E IMMEDIATELY FOR MODIFICATIONS TO THE DRAWINGS.
- 7. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, SHORING, UNDERPINNING, ETC. THE A/E IS NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR SAFETY PROCEDURES DURING CONSTRUCTION.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING THAT IS REQUIRED DURING CONSTRUCTION TO KEEP THE STRUCTURE SAFE AND PLUMB UNTIL THE ENTIRE STRUCTURE IS COMPLETE. ANY BRACING INDICATED OR CALLED FOR ON THESE DRAWINGS ARE DESIGNED FOR THE FINAL AND COMPLETED STRUCTURE ONLY.
- 9. GENERAL CONTRACTOR MUST REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER.
- 10. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSION AND CONDITIONS OF EXISTING STRUCTURE AND SITE THAT ARE AFFECTED BY NEW WORK PRIOR TO ANY ERECTING OR FABRICATION OF NEW STRUCTURAL STEEL. 11. CONTRACTOR TO SHORE EXISTING STRUCTURE AS NEEDED DURING CONSTRUCTION.

#### 2. DESIGN CRITERIA

- 1. BUILDING CODE: THE FLORIDA BUILDING CODE 2017, 6TH EDITION.
- 2. DESIGN CODES: (LATEST EDITION, U.N.O.):
  - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10) - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-13)
  - SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS (ANSI/AISC 360-10)
  - AMERICAN CONCRETE INSTITUTE (ACI 318–14)
  - CONCRETE REINFORCING STEEL INSTITUTE (CRSI) - STRUCTURAL WELDING CODE (ANSI/AWS D1.1)
- DESIGN LOAD CRITERIA:

WIND LOAD CRITERIA:

- ULTIMATE DESIGN WIND SPEED - NOMINAL DESIGN WIND SPEED
- RISK CATEGORY
- ENCLOSURE CLASSIFICATION - WIND EXPOSURE CATEGORY

INTERNAL PRESSURE COEFFICIENT

Vult = 136 MPH (3 SECOND GUST) Vasd = 106 MPH

- ENCLOSED
- ±0.18

### ULTIMATE DESIGN PRESSURES (PSF) FOR COMPONENTS AND CLADDING SURFACES

ZONE	WALL SURFACES				
EFFECTIVE WIND AREA	4	5			
10 S.F. OR LESS	+45,-48	+45,-60			
50 S.F.	+43,-46	+43,-55			
100 S.F.	+40,-44	+40,-50			
500 OR LARGER	+38,-42	+38,-46			

 $\frac{\text{NOTES}}{1. \quad a^{"}} = 4'-6".$ 

- 2. THE PROPOSED STRUCTURE IS NOT LOCATED WITHIN A WIND BORNE DEBRIS AREA.
- 3. DESIGN PRESSURE VALUES FOR OTHER EFFECTIVE TRIBUTARY AREAS SHALL BE LINEARLY
- 4. THE DESIGN WIND PRESSURE VALUES PROVIDED ARE ULTIMATE AND SHALL BE USED WITH LOAD
- COMBINATIONS PER ASCE 7-10, CHAPTER 2.

INTERPOLATED BETWEEN VALUES SHOWN.

5. ULTIMATE WIND PRESSURE AT METAL STAIRS: +25, -56.

#### **3. EARTHWORK/FOUNDATION NOTES**

- 1. BUILDING FOUNDATION DESIGN BASED ON NET ASSUMED SOIL BEARING PRESSURE OF 1,500 PSF FOR FOOTINGS.
- 2. BUILDING FOUNDATION SHALL BE PLACED ON FIRM, UNDISTURBED NATURAL SOILS OR ON ENGINEERED FILL MATERIAL. FOR AREAS REQUIRING ENGINEERED FILL, THIS MATERIAL SHALL CONSIST OF CLEAN GRANULAR FILL COMPACTED AND PLACED IN LIFTS AS RECOMMENDED BY THE SOILS ENGINEER ON SITE. SOIL BEARING PRESSURE OF ENGINEERED FILL TO BE FIELD VERIFIED BY THE SOILS ENGINEER ON SITE PRIOR TO CONSTRUCTION.
- 3. UNDERCUTTING OF THE SOIL FOR FOUNDATION AND/OR PLACEMENT MAY BE REQUIRED. THE STRUCTURAL DRAWINGS MAY NOT INDICATE THE ENTIRE SCOPE OF UNDERCUTTING, FILL, BAD SOIL OR ROCK REMOVAL THAT MAY BE REQUIRED TO ATTAIN THE DESIGN SOIL BEARING PRESSURES. IT IS THE CONTRACTOR'S RESPONSIBILITY, BEFORE BIDDING, TO ASSESS THE EXTENT OF EXCAVATION AND COMPACTION THAT MAY BE REQUIRED TO MEET THE DESIGN CRITERIA.
- 4. IF DEWATERING IS REQUIRED, SUMPS SHALL NOT BE PLACED WITHIN THE FOUNDATION EXCAVATION.

#### 4. CONCRETE

- 1. ALL CONCRETE, UNLESS OTHERWISE NOTED IN SCHEDULES OR DETAILS, SHALL HAVE A MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH OF 3000 PSI. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF).
- 2. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED. FOR SURFACE FINISHES AND OTHER REQUIREMENTS, REFER TO THE CONCRETE SPECIFICATIONS.
- 3. DETAILS OF FABRICATION OF REINFORCEMENT, HANDLING AND PLACEMENT OF THE CONCRETE, CONSTRUCTION OF FORMS AND PLACEMENT OF REINFORCEMENT, NOT OTHERWISE COVERED BY THE PLANS AND SPECIFICATIONS, SHALL COMPLY WITH THE LATEST ADDITION OF THE A.C.I. CODE AND C.R.S.I. REQUIREMENTS.
- 4. PROVIDE ¾" CHAMFERS ON ALL EXPOSED EDGES OF CONCRETE AND THE EXPOSED CORNERS OF BEAMS, GIRDERS AND COLUMNS UNLESS OTHERWISE SHOWN OR NOTED.
- 5. ALL MISCELLANEOUS ITEMS TO BE INSTALLED IN ANY CONCRETE WORK, SUCH AS PIPES, ELECTRICAL CONDUITS, DOVETAIL ANCHOR SLOTS, RELETS, ETC., SHALL BE PROPERLY LOCATED, INSTALLED AND CHECKED PRIOR TO PLACEMENT OF CONCRETE, REFER TO ARCHITECTURAL AND MEP DRAWINGS FOR THE EXACT EXTENT AND LOCATION OF THESE ITEMS THAT ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.

#### **5. REINFORCING STEEI**

- 1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ADDITION OF ACI 315, ACI 318, AND CRSI.
- 2. REINFORCEMENT SHALL HAVE DEFORMED SURFACES IN ACCORDANCE WITH ASTM A615 WITH MINIMUM YIELD STRENGTH OF 60.000 PSI.
- 3. ALL REINFORCING STEEL SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE.
- 4. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE PROTECTION (CLEAR COVER) UNLESS OTHERWISE NOTED: - SURFACES NOT FORMED AND IN CONTACT WITH SOIL ..... 3" - FORMED SURFACES IN CONTACT WITH SOIL OR WEATHER ...... 2"
- 5. REINFORCING STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL CAREFULLY CHECK AND "APPROVED" BEFORE STAMP SUBMITTING TO THE EOR. NO SPLICES OR OTHER DETAILS ARE TO BE ADDED WITHOUT SUBMITTAL.

#### 6. STRUCTURAL STEEL

- 1. DETAILS FOR DESIGN. FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST A.I.S.C. STANDARDS UNLESS OTHERWISE NOTED OR SPECIFIED.
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING U.N.O. ON THE STRUCTURAL DRAWINGS: - CHANNELS, ANGLES, PLATES, BARS ..... . ASTM A36 (Fy=36 KSI)
- 3. ALL STRUCTURAL BOLTS (INCLUDING WASHERS AND NUTS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 OR A490. ALL BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION U.N.O. BOLTING OF STRUCTURAL STEEL SHALL CONFORM TO THE PROVISIONS OF RCSC "SPECIFICATIONS" FOR STRUCTURAL JOINTS USING ASTM A325 AND A490 BOLTS.
- 4. MINIMUM SIZE OF BOLTS SHALL BE 1/2" DIAMETER, AND EACH CONNECTION SHALL HAVE A MINIMUM OF 2 BOLTS WITH ONE HARDENED WASHER PER BOLT.
- 5. PERMANENT MACHINE BOLTS, USING AN APPROVED TYPE OF SELF ANCHORING HEX NUT, MAY BE USED FOR SUCH MINOR CONNECTIONS AS SHELF ANGLES, CLOSURES, ETC.
- 6. EXPANSION BOLTS SHALL BE A MINIMUM OF  $\frac{3}{4}$ " DIAMETER (HILTI KWIK BOLT II OR APPROVED EQUAL) WITH A MIN. EMBEDMENT OF 31/4" INTO CONCRETE AND 51/4" INTO GROUT FILLED CONCRETE MASONRY UNITS, U.N.O..
- 7. EPOXY ANCHOR BOLTS SHALL BE A MINIMUM OF HILTI RE500-SD (OR APPROVED EQUAL). MINIMUM EMBEDMENT SHALL BE 12" TIMES BARS DIAMETER U.O.N. FOLLOW ALL WRITTEN MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
- 8. WELDED CONNECTIONS FOR STEEL MEETING ASTM A992 OR A572 SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES. OTHER WELDED CONNECTIONS TO BE MADE WITH REGULAR E70XX ELECTRODES.
- 9. WELDS NOT OTHERWISE NOTED ON DRAWINGS SHALL BE CONTINUOUS FILLET WELDS. THE MINIMUM SIZE SHALL BE ¼", (MIN. 2" AT 12" O.C.) OR AS REQUIRED BY THE AISC SPECIFICATIONS, WHICHEVER IS LARGER.
- 10. MINIMUM THICKNESS OF ALL CONNECTION MATERIAL SHALL BE  $\frac{5}{6}$ " U.O.N.

#### 7. WOOD FRAMING

- 1. ALL WOOD MEMBERS EXPOSED TO EARTH OR IN CONTACT WITH CONCRETE MASONRY OR EARTH SHALL BE TREATED WITH A PRESERVATIVE SUITABLE FOR THE SITE.
- 2. EXPOSURE CONDITIONS. MIN. OF PRESSURE TREATED IS REQUIRED. IF ACQ TREATMENT IS PROVIDED ON THE MEMBERS THEN ALL NAILS AND SCREWS ARE REQUIRED TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION MEETING ASTM A 153 CLASS C OR ASTM B695.
- 3. ALL EXPOSED EXTERIOR HARDWARE TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION MEETING ASTM A 153, CLASS C OR ASTM B695.
- 4. ALL FRAMING CONNECTORS AND HARDWARE NOTED ON DRAWINGS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE OR APPROVED EQUAL.
- 5. ATTACH BASE PLATES TO SLAB WITH A MINIMUM OF A SIMPSON 1/2" x 4-1/2" TITEN SCREWS AT 32" O.C. SPACING UP TO 10' PLATE, 16" O.C. UP TO 16' PLATE, WITH (1) SCREW WITHIN 4" OF EACH SIDE OF PLATE BREAKS AT LOAD BEARING AND SHEAR WALLS.
- 6. THE NUT AT THE DOUBLE TOP PLATE SHALL RECEIVE A FINAL TIGHTENING AFTER THE ROOF SYSTEM IS INSTALLED.
- 7. WOOD FRAMING SHALL BE IN ACCORDANCE WITH FBC EXCEPT AS NOTED WITHIN THESE PLANS.
- 8. ALL MANUFACTURED LUMBER SHALL BE PRESSURE TREATED TO A SERVICE LEVEL 3 TREATMENT FOR EXTERIOR CONDITIONS, U.O.N.
- 9. SYP#2 SHALL BE USED FOR ALL HEADERS AND TOP PLATES AND ALL CONVENTIONALLY FRAMED MEMBERS. SYP#2 PRESSURE TREATED SHALL BE USED FOR ALL SILL PLATES, U.O.N.
- 10. HEADER STUDS AND CRIPPLES SHALL BE NAILED AT 6" ON CENTER SPACING W/ 12D NAILS STAGGERED. A MIN. OF (1) CRIPPLE AND (1) KING STUD SHALL BE PROVIDED AT END OF EACH HEADER U.O.N.
- 11. HEADERS EXCEEDING 48" PROVIDE SIMPSON SST-SPH4/6 OR SST-LSTA18 STRAPS FROM HEADER TO DOUBLE TOP PLATE AT 32" ON CENTER SPACING, 1/2" DIAM. ANCHOR BOLT OR 1/2"x7" EPOXY ANCHOR SHALL BE INSTALLED IF HEADER IS GREATER THAN 5'-0".
- 12. ATTACH HEADERS OR BEAMS TO POST WITH (2) SIMPSON CS20 FLAT STRAPS WITH (7) 10d x 11/2" NAILS TO HEADERS/BEAM AND (7) 10d x 11/2" NAILS TO POST U.O.N. ON PLANS. NOTCH HEADERS/BEAMS UNDER TOP PLATES AND BEAR ON JACK STUDS OR USE SIMPSON HUC410 HANGER WITH (8) 16d NAILS TO WALL, (8) 16d NAILS TO HEADER.
- 13. ANCHOR POST TO FOUNDATION WITH A MINIMUM OF SIMPSON ABU POST BASE WITH (1) §" THREADED ROD SET 7" INTO THE FOUNDATION AND (12) 16D NAILS TO POST OR USE (1) SIMPSON HTT16 HOLD-DOWN WITH (1) & THREAD ROD SET 7" INTO FOUNDATION (18) 16D NAILS INTO POST, TYPICAL U.N.O. ON PLANS.
- 14. ENGINEERED LUMBER SHALL BE A MINIMUM OF THE FOLLOWING ALLOWABLE STRESSES:
  - 2.0E-LVL E = 2,000,000 PSI
  - Fb = 2950 PSI Fv = 285 PSI
  - Fc (PERPENDICULAR) = 750 PSI
- 15. MULTI-PLY ENGINEERED (LVL OR PARALLAM) BEAM CONNECTION SHALL BE AS FOLLOWS U.O.N. ON PLANS: (2)PLY 1 3/4" WIDTH BEAMS - (3)ROWS - 16d .162 x 3 1/4" NAILS @ 12" O.C. SPACING (3)PLY 1 3/4" WIDTH BEAMS - (3)ROWS - 16d .162 x 3 1/4" NAILS @ 12" O.C. SPACING EA. SIDE (4)PLY 1 3/4" WIDTH BEAMS - (3)ROWS - SIMPSON 1/4" x 6" SDS SCREWS @ 12" O.C. SPACING
  - EA. SIDE THE TOP AND BOTTOM NAILS OR SCREWS SHALL BE PLACED 2" FROM TOP OR BOTTOM OF BEAM AND CENTER ROW OF FASTENERS TO BE PLACED IN THE MIDDLE OF THE BEAM.
- 16. PRE-FABRICATED WOOD TRUSSES SHALL COMPLY WITH NDS AND ANSI/TPI 1-2014. THE DESIGN OF PRE-FABRICATED WOOD TRUSSES AND ASSOCIATED CONNECTIONS SHALL BE DESIGNED BY A SPECIALITY ENGINEER REGISTERED IN THE STATE OF FLORIDA. DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL AND BEAR THE SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER. DESIGN CRITERIA SHALL BE CLEARLY LABELED WITH RATED LOAD CAPACITY OF ALL TRUSS TO TRUSS CONNECTOR, REACTIONS, SIZES OF ALL MEMBERS, DEAD, LIVE AND WIND LOADINGS WITH SPECIFIED SPACING.
- 17. JOBSITE HANDLING AND ERECTION AND TEMPORARY TRUSS BRACING DURING INSTALLATION OF TRUSSES SHALL BE CLEARLY LABELED AND COMPLY WITH TPI/WTCA BCSI 1.
- 18. PROVIDE CONTINUOUS LATERAL BOTTOM CHORD TRUSS BRACING W/ A MIN. OF SYP#2 2X4'S AT 4'-0" ON CENTER, ATTACH w/(3)-16d .148x3/4" COMMONS EA.TRUSS MEMBER TYP. U.O.N.
- 19. ALL PRE-FABRICATED TRUSSES SHALL BE FASTENED TO THEIR SUPPORTING MEMBERS I.E. WALLS, BEAMS WITH CONNECTOR PER UPLIFT INDICATED ON TRUSS DRAWINGS. SEE SCHEDULE FOR CONNECTOR VALUES.

- CURRENT EDITION.

#### 9. ROOFING & WATERPROOFING

ABBREVIATIONS										
AB	- ANCHOR BOLT	к	_	KIP(s)						
ALT	- ALTERNATE	KIP(s)	_	1000 POUNDS						
APPROX	- APPROXIMATELY	KLF		KIPS PER LINEAR FOOT						
ARCH	- ARCHITECT	KJ		CONSTRUCTION JOINT						
ARCH'L	– ARCHITECTURAL	L		ANGLE						
	- BOTTOM OF	LG								
B/										
BC	- BOTTOM CHORD	LLH		LONG LEG HORIZONTAL						
BLDG	- BUILDING	LLV		LONG LEG VERTICAL						
BM	– BEAM	LP		LOW POINT						
BOTT	– BOTTOM	LW		LONG WAY						
BRG	– BEARING	MFR	-	MANUFACTURER						
C/C	<ul> <li>CENTER TO CENTER</li> </ul>	MAS	-	MASONRY						
CIP	– CAST IN PLACE	MO	-	MASONRY OPENING						
CJ	<ul> <li>CONTRACTION JOINT</li> </ul>	MAT'L	_	MATERIAL						
CL	<ul> <li>CENTERLINE</li> </ul>	MAX	_	MAXIMUM						
CLR	- CLEAR	MECH'L		MECHANICAL						
CMU	- CONCRETE MASONRY UNIT	MTL		METAL						
COL	- COLUMN	MIN		MINIMUM						
CONC	- CONCRETE	MISC		MISCELLANEOUS						
CONFIG	- CONFIGURATION	NS		NEAR SIDE						
CONFIG		NIC		NOT IN CONTRACT						
CONTR	- CONTRACTOR	NTS		NOT TO SCALE						
CTR	- CENTER	OC		ON CENTER						
DBL	– DOUBLE	OH		OPPOSITE HAND						
DET	- DETAIL	OPNG		OPENING						
DIA	- DIAMETER	PAF	-	POWDER ACTUATED FASTENERS						
DIM	- DIMENSION	PART	_	PARTITION						
DN	- DOWN	PART'L	_	PARTIAL						
DR	- DOOR/DRAIN	PCJ	_	PRECAST CONCRETE JOIST						
DWG	- DRAWING	PL		PLATE						
EA	– EACH	PLF		POUNDS PER LINEAR FOOT						
EE	– EACH END	PSF		POUNDS PER SQUARE FOOT						
EF	– EACH FACE	PSI		POUNDS PER SQUARE INCH						
EJ	- EXPANSION JOINT	PT		POST TENSIONED/PRESSURE TREATED						
EL	- ELEVATION	R		RISER/RADIUS						
ELEV	- ELEVATION/ELEVATOR	REG	-	REGULAR						
ENGR	– ENGINEER	REINF	-	REINFORCING						
EOR	<ul> <li>ENGINEER OF RECORD</li> </ul>	REM	_	REMAINDER						
EOS	– EDGE OF SLAB	REQ'D	_	REQUIRED						
EQ	– EQUAL	REV	_	REVISED/REVISION						
EW	– EACH WAY	RM	_	ROOM						
EXIST	- EXISTING	RO	_	ROUGH OPENING						
EXP	- EXPANSION	RQMTS		REQUIREMENTS						
EXT	- EXTERIOR	SCHED	_	SCHEDULE						
FIN	– FINISH	SECT	_	SECTION						
FLR	- FLOOR	SIM		SIMILAR						
FND	- FOUNDATION	SIM		SLOPE						
FOM										
	- FACE OF MASONRY	SOG		SLAB-ON-GRADE						
FS	- FAR SIDE	SP		SPIRAL						
FT	- FOOT	SQ		SQUARE						
FTG	- FOOTING	SS		STAINLESS STEEL						
GA	– GAGE	STD		STANDARD						
GALV	<ul> <li>GALVANIZED</li> </ul>	STL		STEEL						
GC	<ul> <li>GENERAL CONTRACTOR</li> </ul>	STRUCT'L	_	STRUCTURAL						
GT	– GIRDER TRUSS		_	SHEARWALL/SHORT WAY						
HC	- HOLLOW CORE	Τ/	_	TOP OF						
HCP	- HOLLOW CORE PLANK	тв		TIE BEAM						
HDG	- HOT DIPPED GALVANIZED	тс	_	TIE COLUMN/TOP CHORD						
HG	- HIP GIRDER	TEMP		TEMPERATURE						
HK	- HOOK	TJ		TIE JOIST						
HORIZ	– HORIZONTAL	T/0		THRU OUT						
HP	- HIGH POINT	TR								
HS	- HIGH STRENGTH	TYP		TYPICAL						
IJ	- ISOLATION JOINT	UON		UNLESS OTHERWISE NOTED						
INFO	- INFORMATION	VERT		VERTICAL						
INT	- INTERIOR	W/		WITH						
ססו	– IRREGULAR	W/O		WITHOUT						
				WOOD						
JR	– JAMB REINFORCING	WD		WOOD						
	<ul> <li>JAMB REINFORCING</li> <li>JOINT</li> </ul>	WD WP WWR	_	WOOD WORK POINT WELDED WIRE REINFORCEMENT						

#### 8. TREATED WOOD

1. LUMBER AND TIMBER SHALL CONFORM TO THE SOUTHERN PINE INSPECTION BUREAU "STANDARD GRADING RULES",

2. ALL LUMBER AND TIMBER SHALL BE DRESSED S4S AND GRADE STAMPED BY AN AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE'S BOARD OF REVIEW AND MANUFACTURED IN ACCORDANCE WITH PS 20. LATEST REVISION. PROVIDE NOMINAL SIZES AS INDICATED ON DESIGN PLANS. WANES ARE NOT ACCEPTABLE IN EXPOSED MATERIAL.

3. ALL EXTERIOR WOOD, NO. 2 SOUTHERN YELLOW PINE K.D. AFTER TREATMENT. TREATMENT SHALL BE IN ACCORDANCE WITH AWPA STANDARDS FOR MCQ .40P/CF. FOR ABOVE GROUND, .60P/CF. FOR PERMANENT FOUNDATION USE.

4. CUT SURFACES OF TREATED WOOD SHALL BE TREATED WITH PRESERVATIVE IN ACCORDANCE WITH AWPA STANDARD M4. COPPER NAPHTHENATE SOLUTION SHALL BE BRUSHED INTO ALL BOLT HOLES.

1. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE DESIGN OF THE ROOF COVERING SYSTEM AND FLASHING AND VALLEY MATERIAL. CLAY AND TILE SHALL BE INSTALLED PER THE CONCRETE AND CLAY ROOF TILE INSTALLATION MANUAL AND THE MANUFACTURER'S RECOMMENDATIONS. STANDING SEAM METAL ROOFS SHALL COMPLY WITH ASTM E1514 AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

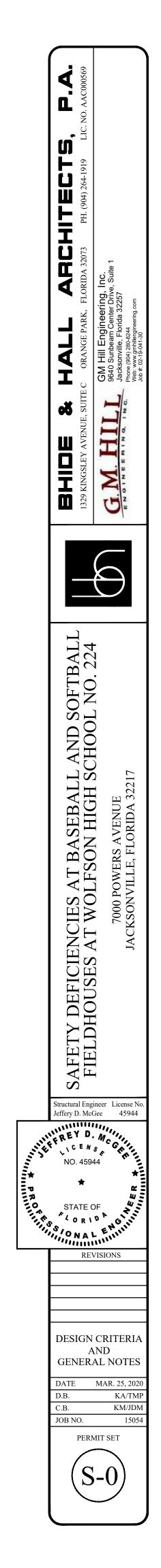
2. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL WATERPROOFING AND FLASHING.

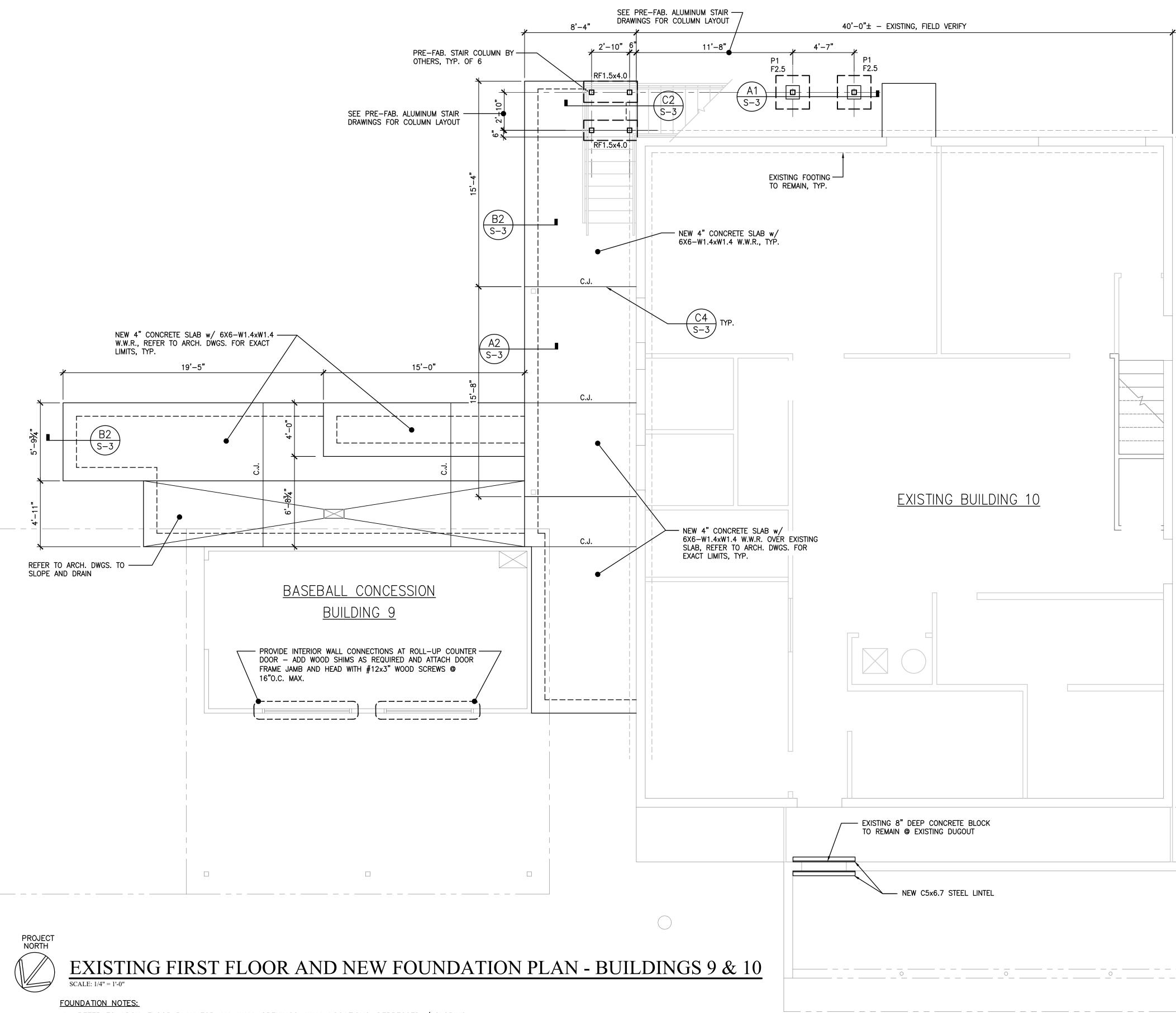
#### **10. SUBMITTALS**

CONTRACTOR SHALL SUBMIT THE FOLLOWING FOR APPROVAL PRIOR TO FABRICATION AND ERECTION: CONCRETE MIX DESIGNS AND ACCESSORIES. STEEL REINFORCEMENT SHOP DRAWINGS

SPECIALTY ENGINEERED STEEL STAIR SHOP DRAWINGS AND CALCULATIONS.

4. TESTING LAB RESULTS FOR SOIL DENSITY AND CONCRETE COMPRESSIVE STRENGTH.



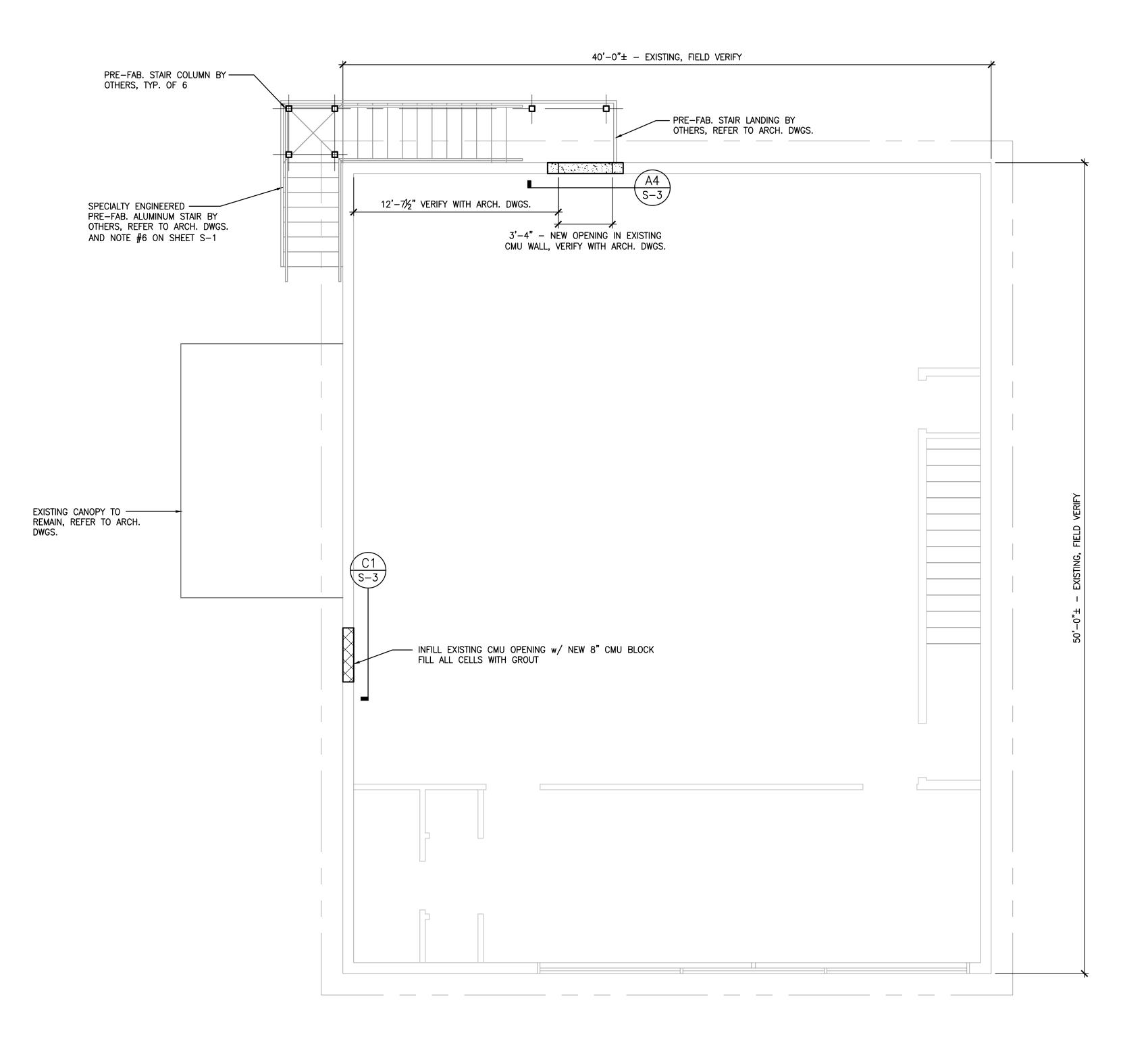




- 1. REFER TO ARCH. FLOOR PLAN FOR ALL WALL OPENINGS, WALL LOCATIONS, DEPRESSED / SLOPING SLABS, ELEVATIONS & DIMS.
- 2. REFER TO SHEET S3.1 FOR SECTIONS AND DETAILS.
- 3. FOOTINGS & FOUNDATIONS SHALL BE IN ACCORDANCE WITH FBC CHAPTER 18. AND ASSUMED ALLOWABLE PRESSURE 1,500 PSF. T/NEW FTG. -1'-0", TYP. U.N.O.
- 4. REFER TO SHEET SO.1 FOR ADDITIONAL GENERAL NOTES & DESIGN CRITERIA.
- 5. THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS TECHNIQUES, PROCEDURES OR SEQUENCES. FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 6. MOMENT TRANSFER TO FOUNDATIONS FROM PRE-FAB. ALUMINUM STAIR IS NOT PERMITTED.

	F
MARK	
F2.5	2'-6" x 3
RF1.5x4.0	1'-6" x - MIN
P1	14" x 14

	50-0'± - EXSING. FILD VERIFY		Restant       Rel CIENCIES AT BASEBALL AND SOFTBALL         Random Cience       Rel Cience         RELDHOUSES AT WOLFSON HIGH SCHOOL NO. 224       RHIDE & HALL       ARCHITECTS, P.A.         Restant       Render Rel Cience       Random Released       In rol
o			Jeffery D. McGee     45944       Image: Construction of the second
FOOTING size	AND PEDESTAL SCH	EDULE remarks	EXISTING FIRST FLOOR AND NEW FOUNDATION PLAN
2'-6" x 2"-6" x 1'-0"	(3)#5 EACH WAY, TOP & BOTTOM		BLDGS. 9 AND 10           DATE         MAR. 25, 2020
l'-6" x 4'-0" x 1'-0" MIN. DEPTH	(4)#5 LONG WAY, TOP & BOTTOM & #4 @ 12"O.C. TRANSVERSE, TOP AND BOTTOM	REFER TO SECTION C2/S-3	D.B. KA/TMP C.B. KM/JDM
4" x 14" x 1'-4" MIN.	TOP AND BOTTOM           REFER TO DETAIL B5/S3.1		JOB NO. 15054 PERMIT SET
			$\left( S^{-1} \right)$

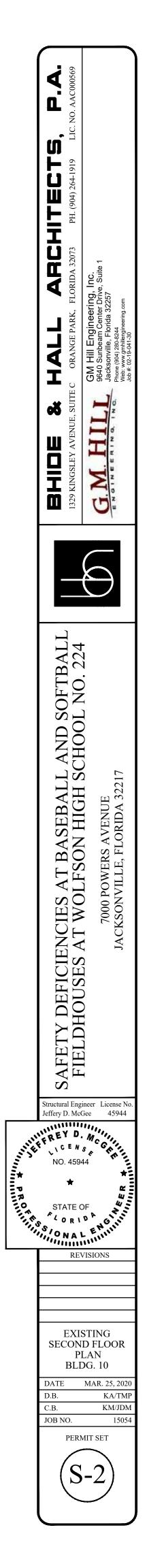


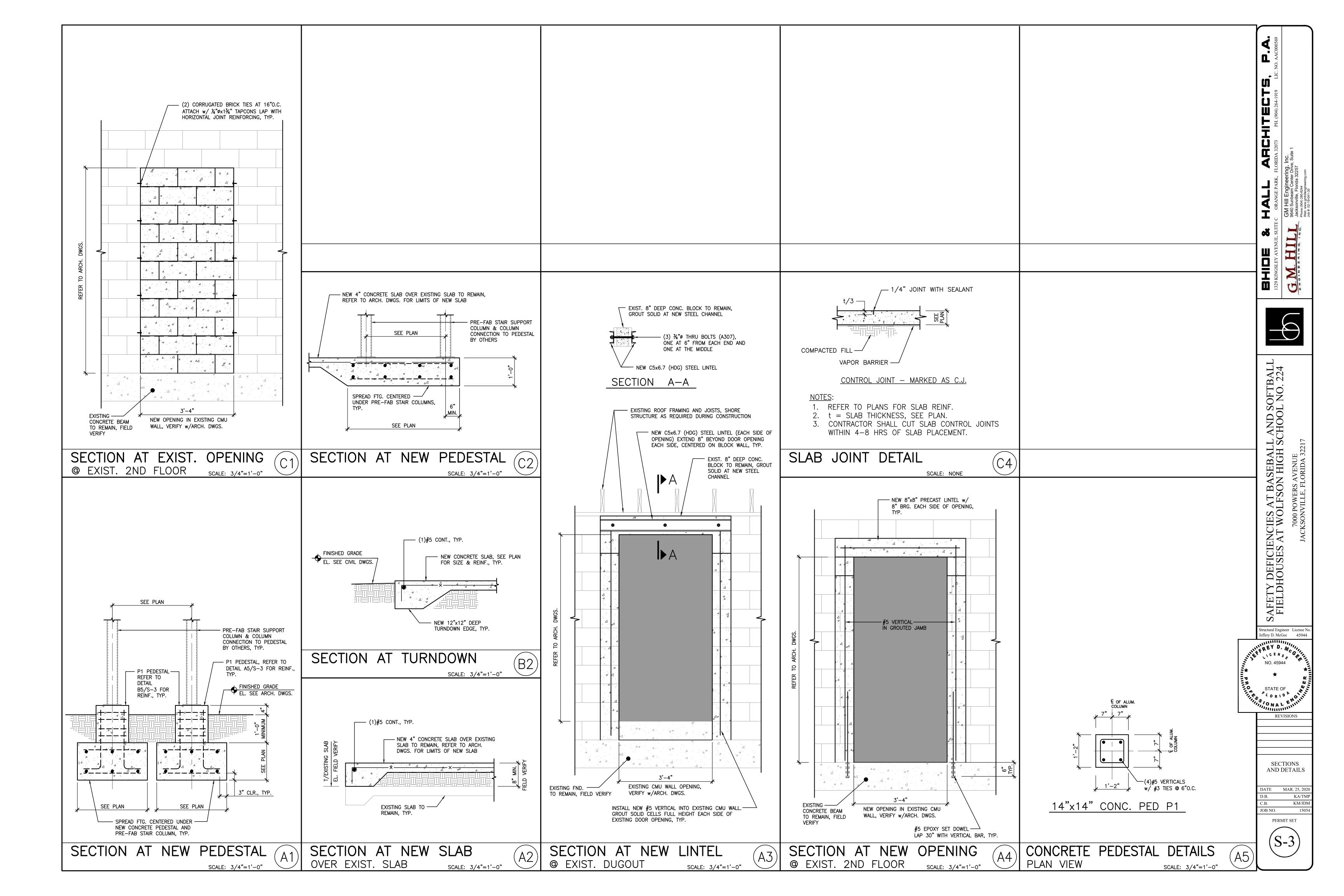




<u>NOTES:</u> 1. REFER TO SHEET S—1 FOR NOTES.

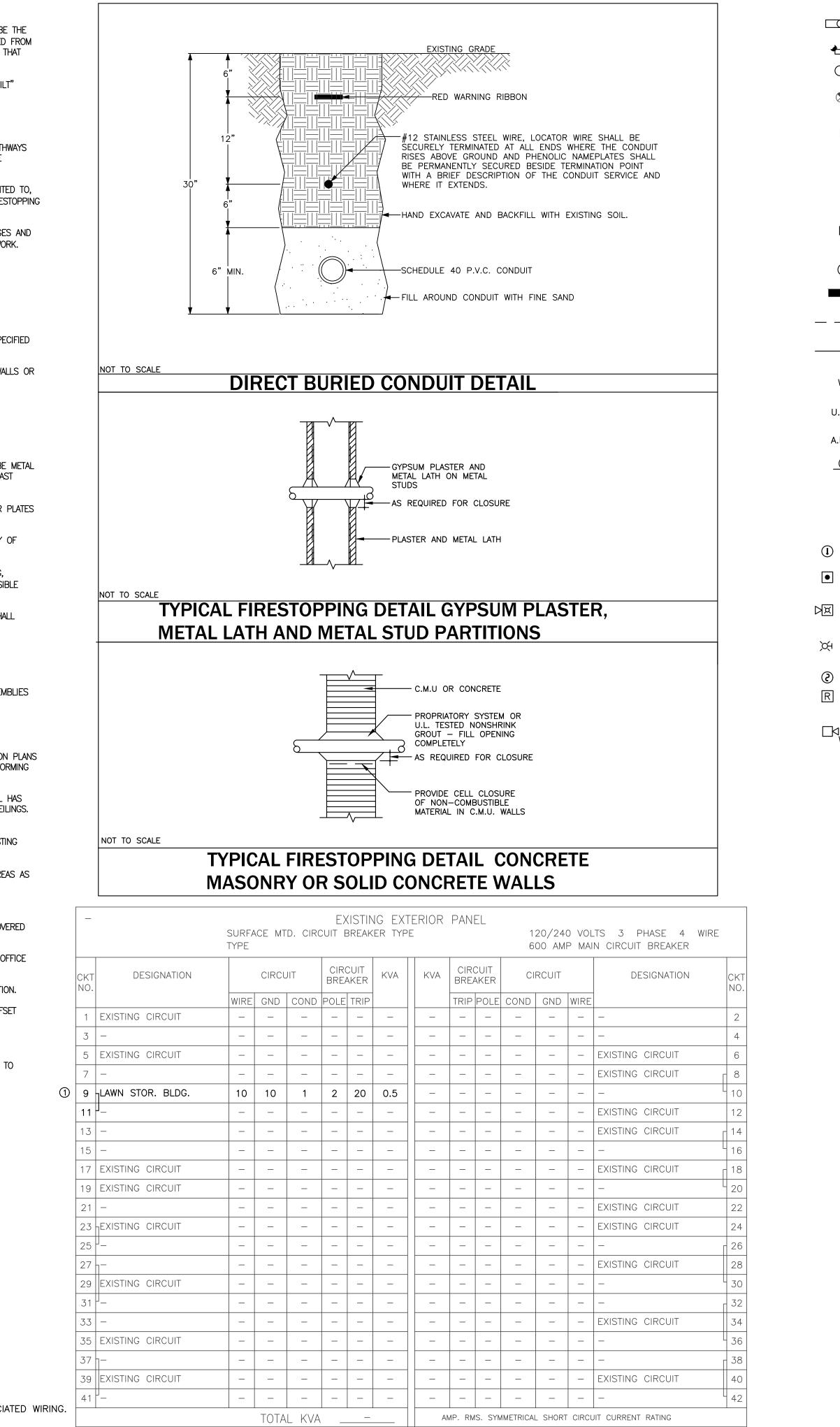
# EXISTING SECOND FLOOR PLAN - BUILDING 10 SCALE: 1/4" = 1'-0"





### **GENERAL NOTES:**

- 1. THE CONTRACTOR SHALL NOT TAKE POSSESSION OF OR DISPOSE OF ANY SALVAGEABLE ITEMS IN ASSOCIATION WITH THE WORK. ALL SALVAGEABLE ITEMS SHALL BE THE OWNER'S PROPERTY AT HIS OPTION. ALL UNSALVAGEABLE EQUIPMENT AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ALL EQUIPMENT, DEVICES, WIRES, AND CABLES SHALL BE TURNED OVER TO CCSD PERSONNEL. CONTRACTOR SHALL PROVIDE DOCUMENTATION VERIFYING THAT ALL REQUIRED MATERIALS WERE TURNED OVER TO THE PROPER CCSD PERSONNEL.
- 2. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ANY MODIFICATIONS TO EXISTING SYSTEMS AND SHALL UPON COMPLETION, DELIVER "AS-BUILT" DRAWINGS TO THE OWNER, INDICATING ANY SUCH CHANGES.
- 3. CONTRACTOR MAY NOT RE-USE ANY EXISTING WIRING. WHERE FEEDERS ARE ABANDONED, WIRE SHALL BE PULLED OUT AND ALL EXPOSED SECTIONS OF CONDUITS REMOVED. ALL CONCEALED CONDUITS SHALL BE CAPPED AT POINT OF CONCEALMENT.
- 4. CONTRACTOR MAY REUSE EXISTING CONDUIT SYSTEMS. DEVICE BOXES MUST BE IN THE CORRECT LOCATION IN ORDER TO BE REUSED. CONDITION OF EXISTING PATHWAYS MUST BE DEEMED ACCEPTABLE AND COMPLY WITH PROJECT SPECIFICATIONS AND APPLICABLE CODES IN ORDER TO BE REUSED. REMOVE ALL ABANDONED SURFACE MOUNTED CONDUIT. UNUSED CONDUITS STUBBING UP FROM FLOOR SHALL BE CUT FLUSH WITH FLOOR AND CAPPED.
- 5. WHEN NECESSARY, THE CONTRACTOR SHALL PROVIDE ALL WORK REQUIRED TO PROVIDE COMPLETE CONDUIT SYSTEMS AND RUNS. THIS INCLUDES, BUT IS NOT LIMITED TO, ALL MATERIALS, INSTALLATION HARDWARE, DRILLING OF WALLS/BEAMS, TRENCHING, MOUNTING HARDWARE, LABOR, PAINTING, REPAIRING OF EXISTING SURFACES, FIRESTOPPING AND ACCESSORIES.
- 6. CONTRACTOR SHALL VISIT SCHOOL SITE PRIOR TO PREPARING HIS BID AND DETERMINE THE EXTENT OF EXISTING EQUIPMENT AND WIRING TO ACCOMMODATE CHANGES AND ADDITIONS. ALL THE NECESSARY REROUTING, RELOCATING AND/OR REMOVAL OF EXISTING EQUIPMENT, WIRING, ETC. SHALL BE INCLUDED IN THE SCOPE OF THIS WORK. ANY VARIATION FROM EXISTING CONDITIONS SHALL BE INCLUDED UNDER THIS CONTRACT.
- 7. RESTORE DISTURBED CEILINGS/WALLS TO ORIGINAL CONDITION. FINISH AND PAINT DAMAGED AREAS. PAINT SHALL MATCH EXISTING.
- 8. REPLACE DAMAGED CEILING TILES. NEW CEILING TILES SHALL BE SAME TYPE AND QUALITY OF EXISTING TILES.
- 9. PAINT ALL INTERIOR AND EXTERIOR, EXPOSED CONDUITS SAME COLOR AS SURFACE.
- 10. NEW DEVICES SHALL BE MOUNTED AT HEIGHTS AS SHOWN ON LEGEND AND MOUNTING DETAILS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH SPECIFIED MOUNTING HEIGHTS.
- 11. WHEN POSSIBLE, CONDUITS SHALL BE CONCEALED IN WALLS, ABOVE CEILING SPACE, OR UNDERGROUND. EXPOSED CONDUITS WILL BE PERMITTED ON CONCRETE WALLS OR ON CEILINGS WITH NO CAVITY. FOR INTERIOR BRANCH PATHWAYS FEEDING INDIVIDUAL DEVICES, WIREMOLD SHALL BE UTILIZED FOR EXPOSED LOCATIONS.
- 12. ALL EXTERIOR JUNCTION BOXES SHALL BE NEMA-3R AND EITHER PVC OR WEATHERPROOF GASKETED STEEL. PAINT SAME COLOR AS SURFACE.
- 13. IF NECESSARY, MODIFY EXISTING WALL OPENINGS TO ACCOMMODATE NEW EQUIPMENT OR PANEL LOCATIONS.
- 14. UPDATE PANEL BOARD DIRECTORIES TO REFLECT TYPE AND LOCATION OF ADDED CIRCUITS. NEW DIRECTORIES SHALL BE TYPED OR MACHINE GENERATED.
- 15. ALL DEVICE BOXES SHALL BE CONCEALED IN WALL OR CEILING. FOR EXISTING CONCRETE WALLS, PROVIDE SURFACE BOXES. ALL EXPOSED DEVICE BOXES SHALL BE METAL WIREMOLD OR EQUAL. STAMPED BOXES WILL NOT BE ACCEPTABLE FOR EXPOSED LOCATIONS. SURFACE MOUNTED BOXES FOR FIRE ALARMS SHALL BE RED. USE CAST METAL BOXES (GASKETED) FOR EXTERIOR DEVICES.
- 16. PROVIDE BLANK METAL COVER PLATES FOR ALL ABANDONED RECESSED BOXES. COVER PLATES SHALL BE COMPLETELY SOLID WITH NO OPENINGS OR GAPS. COVER PLATES SHALL COMPLETELY COVER EXISTING OPENINGS. COVER PLATES SHALL HAVE WHITE FINISH.
- 17. PROVIDE NEW CEILING TILES AT ALL LOCATIONS WHERE EXISTING CEILING MOUNTED DEVICES ARE REMOVED. NEW CEILING TILES SHALL BE SAME TYPE AND QUALITY OF EXISTING TILES.
- 18. IF EXISTING HOLES OR OPENINGS IN WALLS AND/OR CEILINGS ARE UTILIZED FOR CONDUIT ROUTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PATCHING, CAULKING, FINISHING, OR OTHER MODIFICATIONS REQUIRED TO COMPLETELY REPAIR HOLE OR OPENING IN WALL AND/OR CEILING. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIRESTOPPING REQUIRED TO RE-ESTABLISH THE FIRE RESISTANCE RATING OF THE BARRIER.
- 19. DRAWINGS SHOW APPROXIMATE LOCATION OF DEVICES. THE EXACT LOCATION SHALL BE DETERMINED AT BUILDING SITE BY OWNER REPRESENTATIVES. THE OWNER SHALL RESERVE THE RIGHT TO RELOCATE ANY DEVICE TO A DISTANCE NOT EXCEEDING 15' FROM THE LOCATION ON THE DRAWING DURING ROUGH-IN. WORK SHALL BE ACCOMPLISHED AT NO ADDITIONAL COST TO OWNER.
- 20. REPAIR CABINETS, WALLS, AND SHELVES DAMAGED BY CONTRACTOR OPERATION.
- 21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SEALING ALL NEW PENETRATIONS IN FIRE RATED ASSEMBLIES, BOTH VERTICAL AND HORIZONTAL, IN ACCORDANCE WITH SECTION 705 OF THE FLORIDA BUILDING CODE, WHICH REQUIRES THAT ALL INSTALLATIONS OF PENETRATIONS THROUGH FIRE RATED ASSEMBLIES OR FIRE STOP SYSTEMS SHALL BE AS TESTED BY ASTM E 119 & ASTM E 814.
- 22. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATELY SIZED BOXES, OF APPROPRIATE DEPTH, FOR BOTH RECESSED AND SURFACE MOUNTED INSTALLATIONS. VERIFY BOXES CAN ACCOMMODATE BOTH DEVICES AND WIRING PRIOR TO INSTALLATION.
- 23. CONTRACTOR SHALL USE OFFICIAL SCHOOL FISH NUMBERS FOR ALL LABELING AND IDENTIFICATION. OFFICIAL FISH NUMBERS SUPERSEDE ROOM NUMBERS SHOWN ON PLANS AND ACTUAL ROOM NUMBERS PHYSICALLY LOCATED THROUGHOUT THE FACILITY. COORDINATE WITH CCSD PERSONNEL FOR OFFICIAL FISH NUMBERS PRIOR TO PERFORMING ANY LABELING.
- 24. ALL EXISTING SYSTEMS SHALL REMAIN INTACT AND FULLY OPERATIONAL UNTIL ALL NEW SYSTEMS HAVE BEEN TESTED, INSPECTED, AND APPROVED. ONCE APPROVAL HAS BEEN OBTAINED, CONTRACTOR SHALL PROCEED WITH DEMOLITION WORK. REMOVE ABANDONED CABLES, CONDUITS, EQUIPMENT, AND DEVICES. REPAIR WALLS AND CEILINGS. AFTER DEMOLITION IS COMPLETE, THE CONTRACTOR SHALL BE REQUIRED TO REQUEST A PATHWAY INSPECTION TO VERIFY SEALING OF PENETRATIONS, ETC.
- 25. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL SIDEWALKS AND PAVEMENT CUT OR DAMAGED DURING CONSTRUCTION. PATCH / REPAIR TO MATCH EXISTING CONDITION.
- 26. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LANDSCAPE AND AREAS OF GRASS DISTURBED DURING CONSTRUCTION. REPLACE SOD AND/OR SEED AREAS AS REQUIRED.
- 27. ALL EXISTING EQUIPMENT, PANELS, DEVICES, WIRES, AND ABANDONED CONDUIT SHOULD BE REMOVED BY THE COMPLETION OF THE PROJECT.
- 28. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ENGINEER OF ANY ITEMS OF NON-COMPLIANCE, WHETHER IT IS THE RESULT OF NEW WORK OR IS AN UNCOVERED EXISTING CONDITION.
- 29. WHEN POSSIBLE CONTRACTOR SHALL ROUTE CONDUITS FOR DEVICES INSIDE WALL IN LIEU OF PROVIDING SURFACE MOUNTED RACEWAY IN ALL ADMINISTRATIVE OR OFFICE AREAS. WHEN EXPOSED RACEWAYS ARE NECESSARY IN THESE AREAS, THE CONTRACTOR SHALL UTILIZE WIREMOLD IN LIEU OF CONDUIT.
   30. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COVER AND PROTECT EXISTING ELECTRONICS, EQUIPMENT, AND SCHOOL PROPERTY DURING CONSTRUCTION.
- 31. CONTRACTOR SHALL INCLUDE IN BASE BID NEEDED MODIFICATIONS TO CREATE PATH FOR NEW RACEWAYS. EXISTING CONDITIONS MAY REQUIRE CONTRACTOR TO OFFSET NEW RACEWAYS OVER EXISTING PIPING IN ORDER TO PROVIDE INDICATED ROUTING.
- 32. PROVIDE MINIMUM 12" SERVICE LOOPS IN ALL PULL BOXES.
- 33. UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40. STUB-UPS (INCLUDING ELLS) SHALL BE RIGID GALVANIZED STEEL CONDUIT. PROVIDE ASPHALTUM COATING TO COVER STEEL CONDUIT AND ELLS IN CONTACT WITH EARTH OR CONCRETE.
- 34. USE OF PLASTIC ANCHORS IS PROHIBITED. DO NOT USE PLASTIC ANCHORS FOR SECURING PANELS, CONDUITS, OR ANY COMPONENTS.



### **ELECTRICAL LEGEND:**

0	LED LIGHTING FIXTURE – SURFACE MOUNTED.
➡	EMERGENCY LIGHTING FIXTURE. DO NOT SWITCH.
0	SURFACE MOUNTED LIGHTING FIXTURE.
$\bigotimes$	EXISTING EXIT LIGHT.
5	WALL MOUNTED OCCUPANCY SENSOR – PASSIVE INFRARED WALL SWITCH, 120/277 VOLT, WATT STOPPER #PW-101-1, IVORY WITH IVORY COVERPLATE. 46" MOUNTING HEIGHT, U.N.O.
\$	TOGGLE SWITCH – SINGLE POLE – QUIET TYPE 20 AMP, 120/277 VOLT, HUBBELL NO. HBL12211 WITH NO. NP11 COVERPLATE – 46" MOUNTING HEIGHT, U.N.O.
\$ <sub>EXP</sub>	MOTOR RATED CLASS 1, DIV 2, TOGGLE SWITCH – SINGLE POLE – 20 AMP, 120/277 VOLT, 46" MOUNTING HEIGHT, U.N.O.
Ш <sub>WP</sub>	DUPLEX RECEPTACLE WITH GROUNDING FAULT INTERRUPTER, 20 AMP, 120 VOLT, 3 WIRE GROUNDING. HUBBELL #GFR53625GI WITH ML500G COVERPLATE, 18" MOUNTING HEIGHT, U.N.O.
J	JUNCTION BOX SIZE PER NEC.
	LIGHTING AND/OR POWER PANELBOARD.
	WIRING IN CONDUIT, RUN CONCEALED IN SLAB OR UNDERGROUND.
	WIRING IN CONDUIT, RUN CONCEALED ABOVE CEILING OR IN WALLS.
WP	DENOTES WEATHERPROOF
J.N.O.	UNLESS NOTED OTHERWISE.
4.F.F.	ABOVE FINISHED FLOOR.
	MOTOR, FAN, PUMP OR AIR CONDITIONING UNIT CONNECTION PER NEC.

### FIRE ALARM LEGEND

NEW CEILING MOUNTED HEAT DETECTOR. MATCH EXISTING.

NEW FLUSH MOUNTED MANUAL FIRE ALARM PULL STATION, 46 INCH MOUNTING HEIGHT. MATCH EXISTING NEW SEMI-FLUSH MOUNTED FIRE ALARM AUDIO/VISUAL WARNING DEVICE, 80-96 INCH MOUNTING HEIGHT. 110 INDICATES 110 CANDELA STROBE. UTILIZE 75 CANDELA IN SMALL ROOMS AND CORRIDORS. USE 110 CANDELA IN ROOMS LARGER THAN 30' IN WIDTH OR LENGTH. MATCH EXISTING.

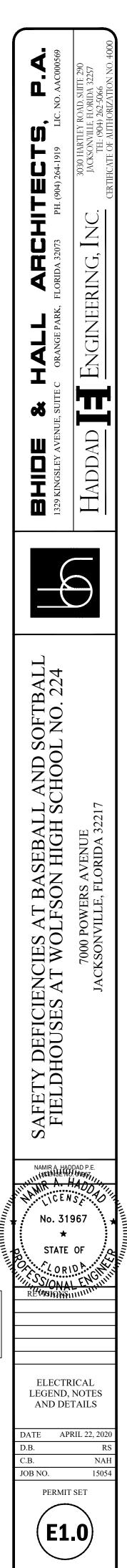
NEW SEMI-FLUSH FIRE ALARM VISUAL WARNING DEVICE, WALL MOUNTED. 80-96 INCH MOUNTING HEIGHT. (FROM FLOOR TO BOTTOM OF DEVICE). MATCH EXISTING

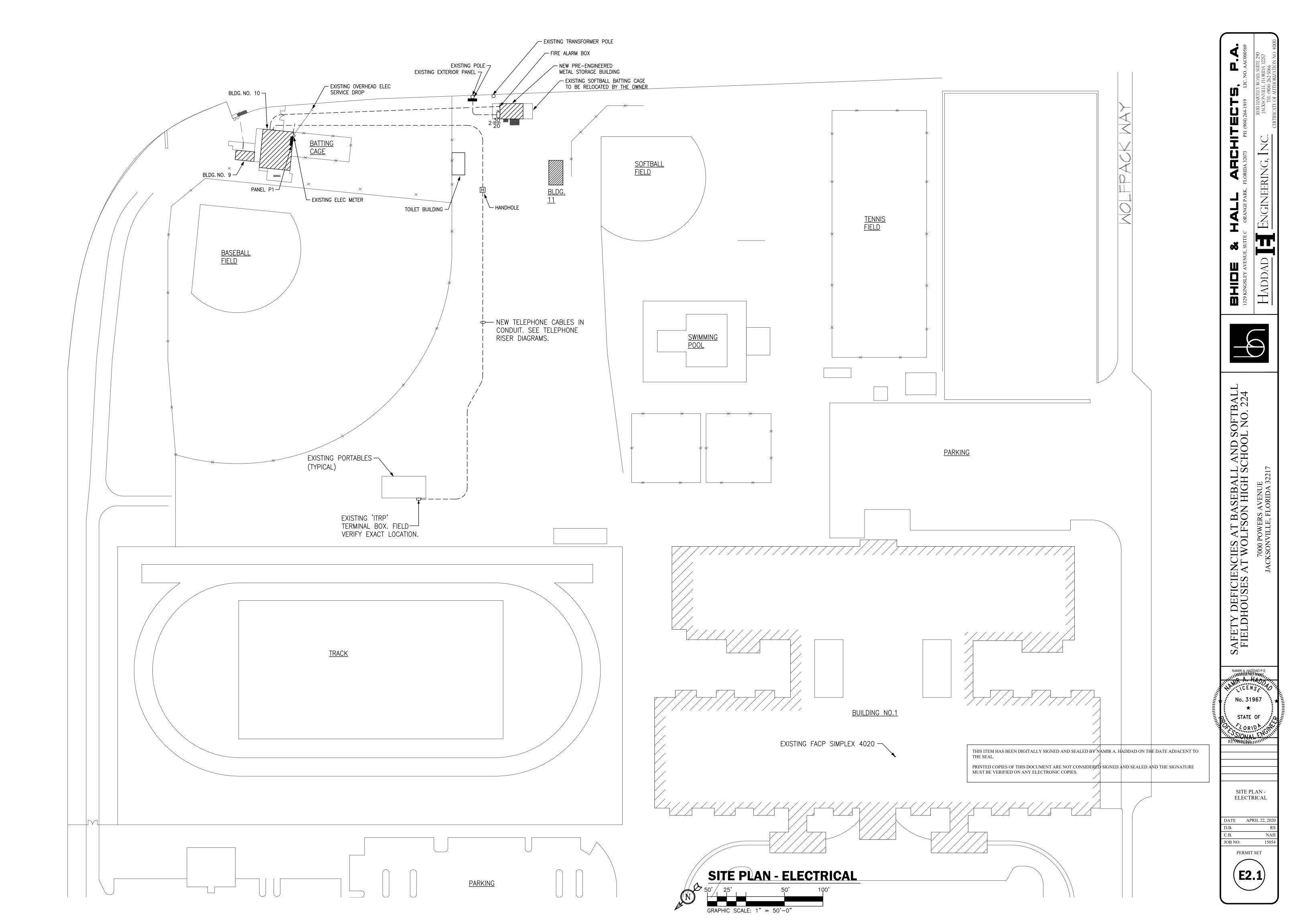
CEILING MOUNTED SMOKE DETECTOR.

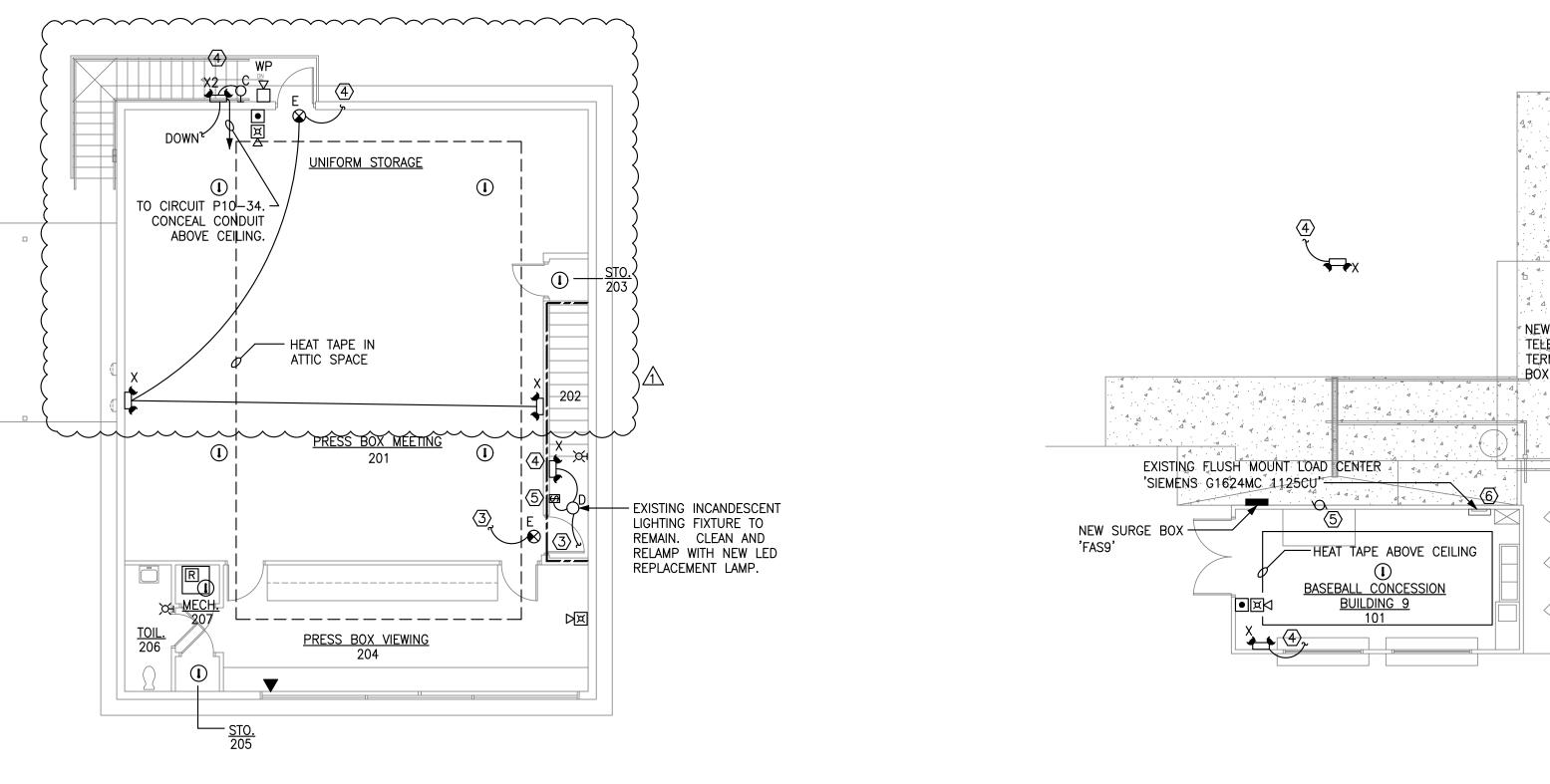
AIR CONDITIONING/HEAT PUMP SHUT DOWN RELAY.

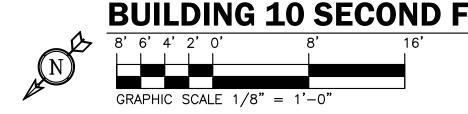
HORN, WEATHERPROOF, 90" MOUNTING HEIGHT. PROVIDE WHEELOCK WP KIT. FOR DEVICES WITHOUT PROTECTION OF OVERHANG, PROVIDE CUSTOM FABRICATED SHIELD TO MOUNT DIRECTLY OVER DEVICE. CAULK SHIELD TO WALL FOR WATER TIGHT INSTALLATION. IN THESE LOCATIONS, CONTRACTOR SHALL ROUTE CONDUITS TO ENTER BOTTOM OF DEVICE. DEVICE SHALL NOT BE EQUIPPED WITH A STROBE. MANUFACTURER SHIELD MAY BE PROVIDED IN LIEU OF CUSTOM SHIELD IF AVAILABLE.

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			ACE MT TYPE		CUIT E		w Pan Er typ	NEL'P e	10'					_TS 3 PHASE 4 WIRE IN CIRCUIT BREAKER	3
CKT NO.	DESIGNATION		CIRCU	JIT		CUIT AKER	KVA	KVA	CIRCUIT BREAKER		CI	RCUIT		DESIGNATION	CK
		WIRE	GND	COND	POLE	TRIP			TRIP	POLE	COND	GND	WIRE		
1	1ST FL AC-1				2	50			60	2				COND. UNIT. NO.1	2
3															4
5	2ND FL AC-2				2	50			60	2				COND. UNIT. NO.2	6
7															48
9	EXISTING CIRCUIT				2	30			30	2				EXISTING CIRCUIT.	<u>ا ا</u>
11															12
13	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	14
15	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	16
17	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	18
19	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	20
21	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	22
23	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	24
25	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	26
27	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT.	28
29	EXISTING CIRCUIT				1	20			20	1				EXISTING CIRCUIT. GFI	30
31	SPARE				1	20			20	1				EXISTING CIRCUIT. GFI	32
33	SPARE				1	20		0.9	20	1	1/2	12	12	EXTERIOR WALKWAY LTG	34
35	SECURITY PANEL	12	12	3/4	1	20	0.4		20	1				SPARE	36
37	FIRE ALARM CONTROL PNL	12	12	3/4	1	20	0.4		20	1				SPARE	38
39	SPACE								20	1				SPARE	40
41	SPACE								20	1				SPARE	42

### PANEL NOTES

1 PROVIDE LOCK AND PAINT RED.

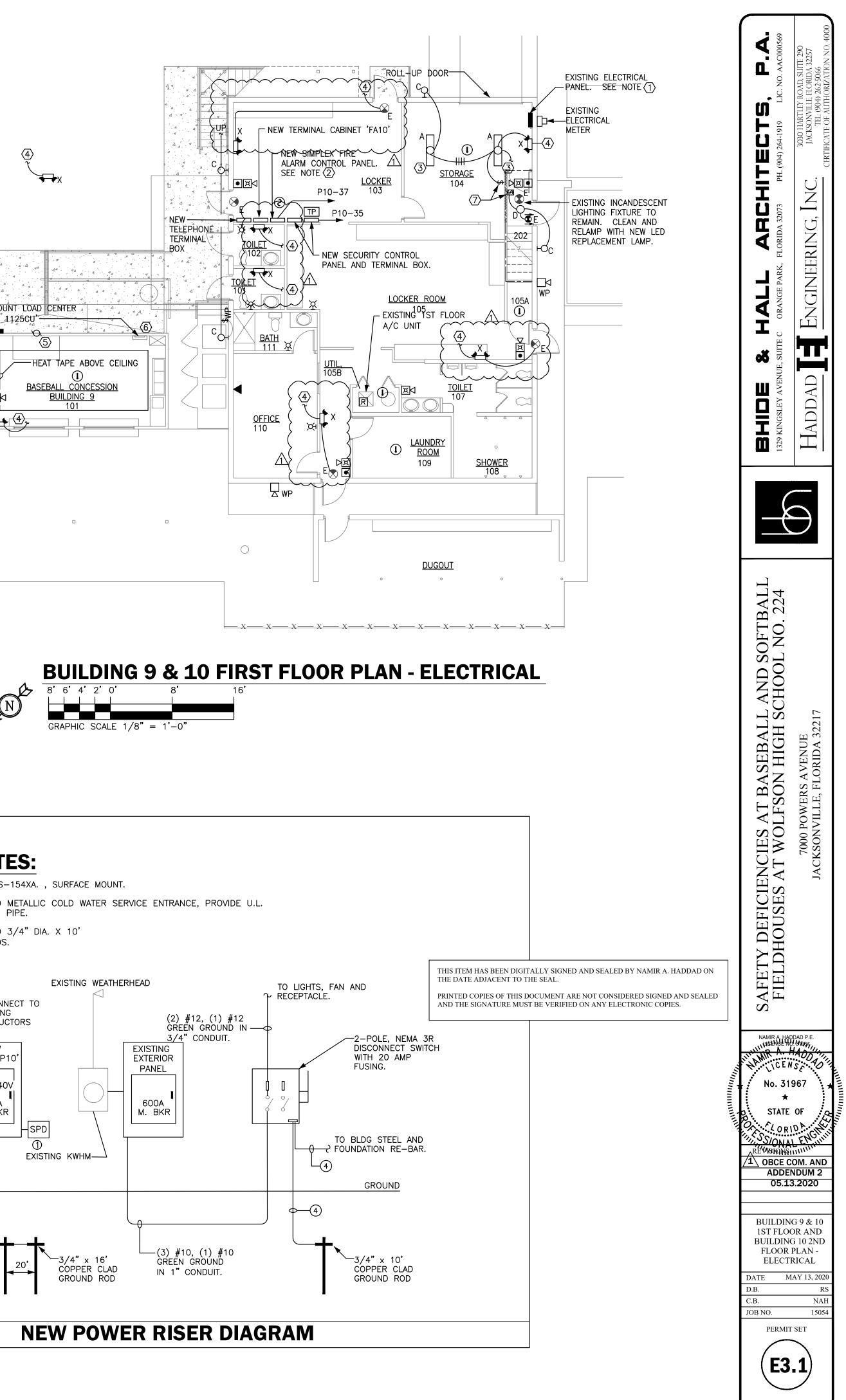
2 PROVIDE GFI BREAKER.

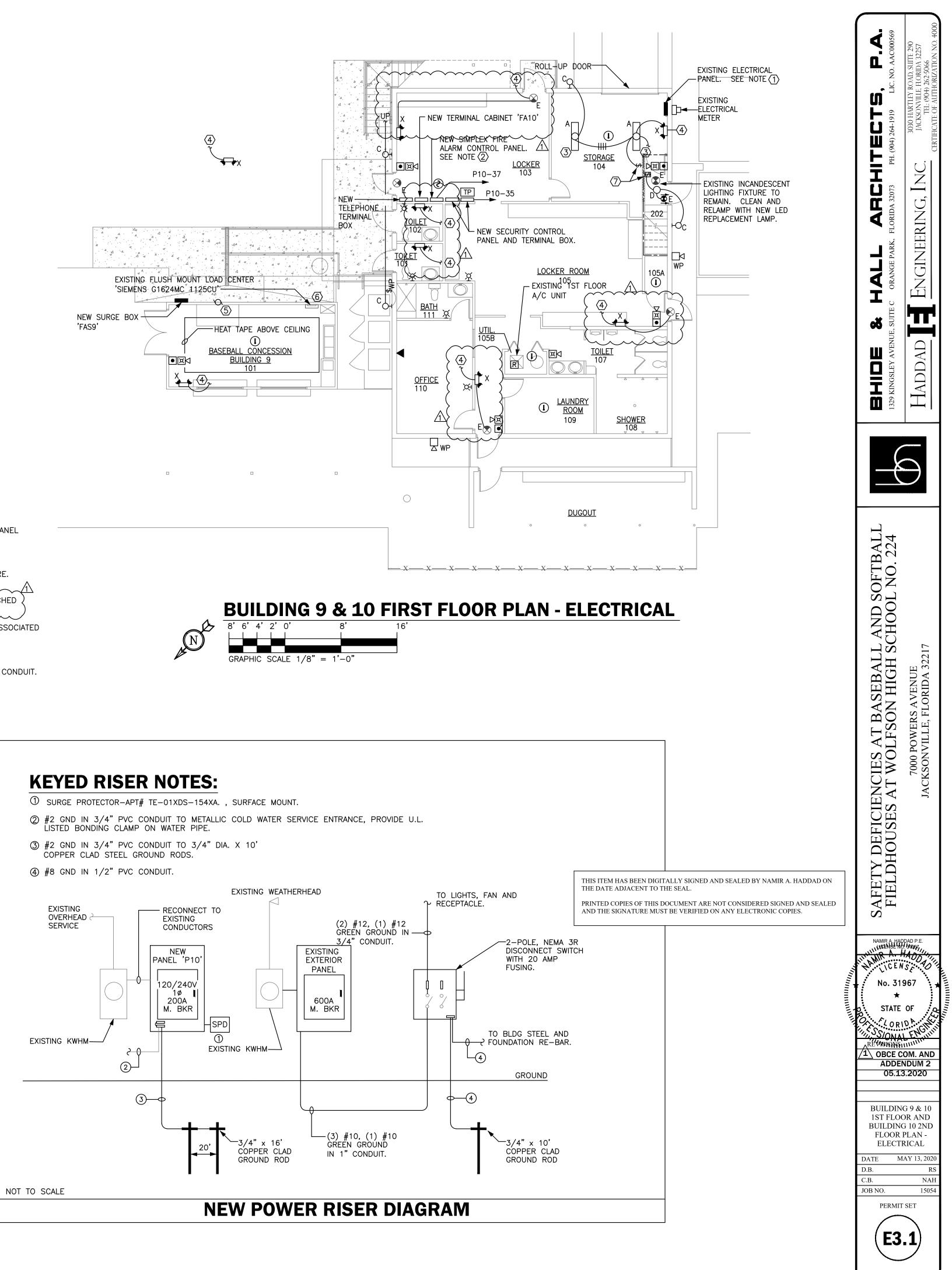
[3] TRACE ALL CIRCUITS AND PROVIDE UPDATED PANEL DIRECTORY THAT ACCURATELY INDICATES TYPE AND LOCATION OF LOADS. EXAMPLE: "RECEPTACLE ROOM 202". DO NOT LABEL BREAKERS AS 'EXISTING CIRCUIT'.

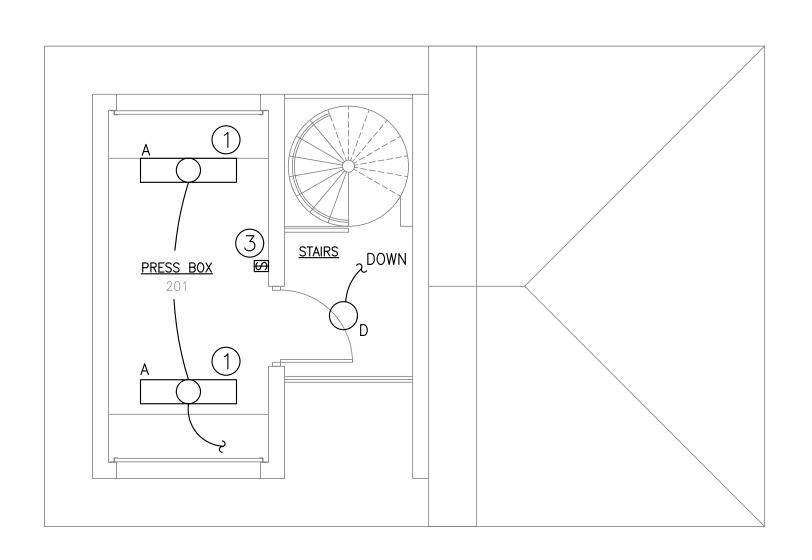
# **BUILDING 10 SECOND FLOOR PLAN - ELECTRICAL**

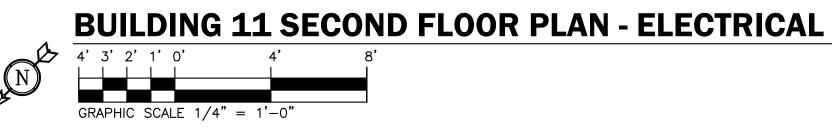
### **NOTES:**

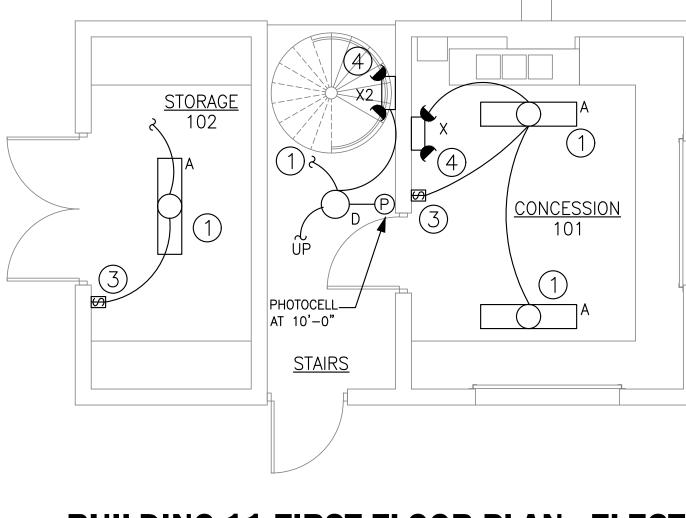
- (1) REPLACE EXISTING LOAD CENTER WITH NEW PANEL P10. SEE PANEL SCHEDULE FOR DESCRIPTION.
- $\langle 2 \rangle$  see fire alarm riser diagram.
- $\langle 3 \rangle$  REPLACE EXISTING INCANDESCENT FIXTURE WITH NEW LED FIXTURE.
- RECONNECT TO EXISTING LIGHTING CIRCUIT.
- 4 CONNECT NEW EMERGENCY LIGHTING FIXTURE TO LOCAL UNSWITCHED . ROOM LIGHTING CIRCUIT WITH 3 #12 IN 1/2" CONDUIT.
- ····· (5) EXHAUST FAN TO BE REMOVED. REMOVE SWITCHING AND ALL ASSOCIATED CONDUCTORS BACK TO PANEL. LABEL BREAKER AS SPARE.
- 6 PROVIDE NEW TYPED DIRECTORY.
- $\langle 7 \rangle$  CONNECT TO EXISTING LIGHTING CIRCUIT. 3 #12 WIRES IN 1/2" CONDUIT.

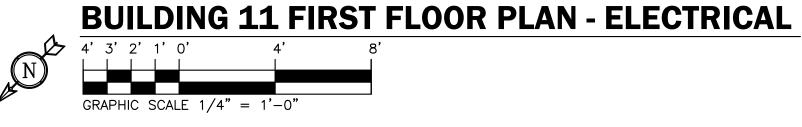






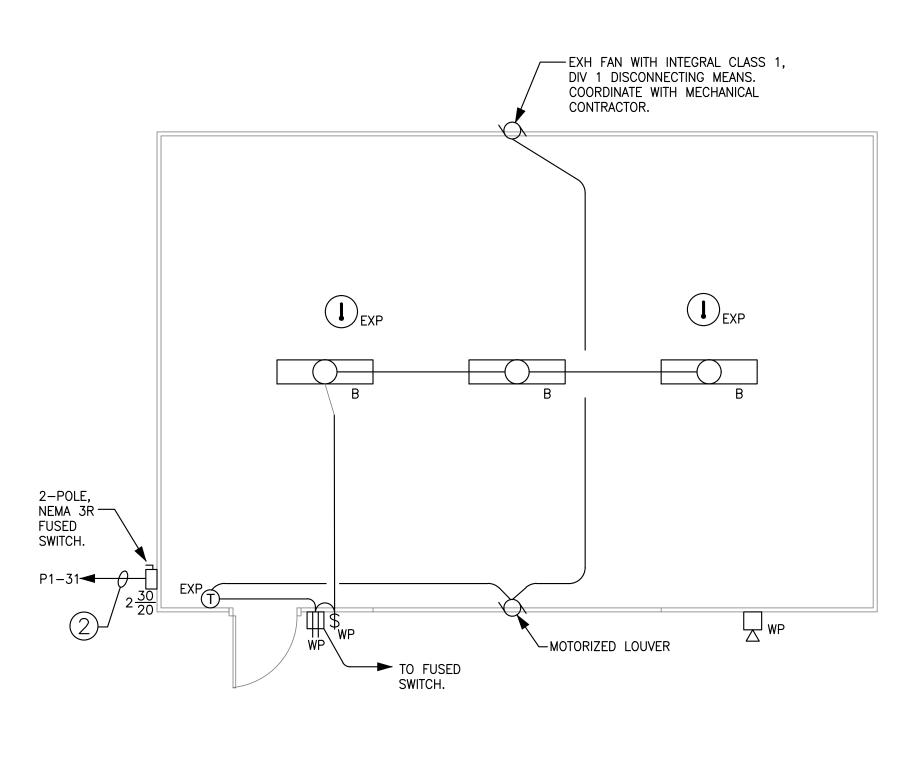


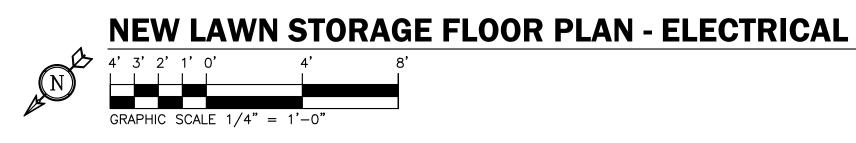




### NOTES

- () REMOVE EXISTING FLUORESCENT FIXTURE AND REPLACE WITH NEW SURFACE MOUNTED VAPORTIGHT LED. RECONNECT TO EXISTING CONDUCTORS (TYPICAL).
- ② EXTEND 1"C BELOW GRADE TO PANEL 'P10' WITH (2)#8 AND (1)#8 GREEN GROUND. REDUCE CONDUCTOR TO #12 AT STORAGE BUILDING.
- ③ REMOVE EXISTING TOGGLE SWITCH AND REPLACE WITH NEW WALL MOUNTED OCCUPANCY SENSOR AND COVERPLATE. RECONNECT TO EXSTING CONDUCTORS.
- ④ CONNECT NEW EMERGENCY LIGHTING FIXTURE TO LOCAL UNSWITCHED ROOM LIGHTING CIRCUIT.

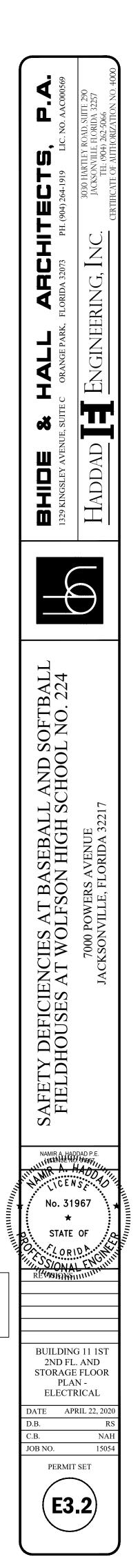


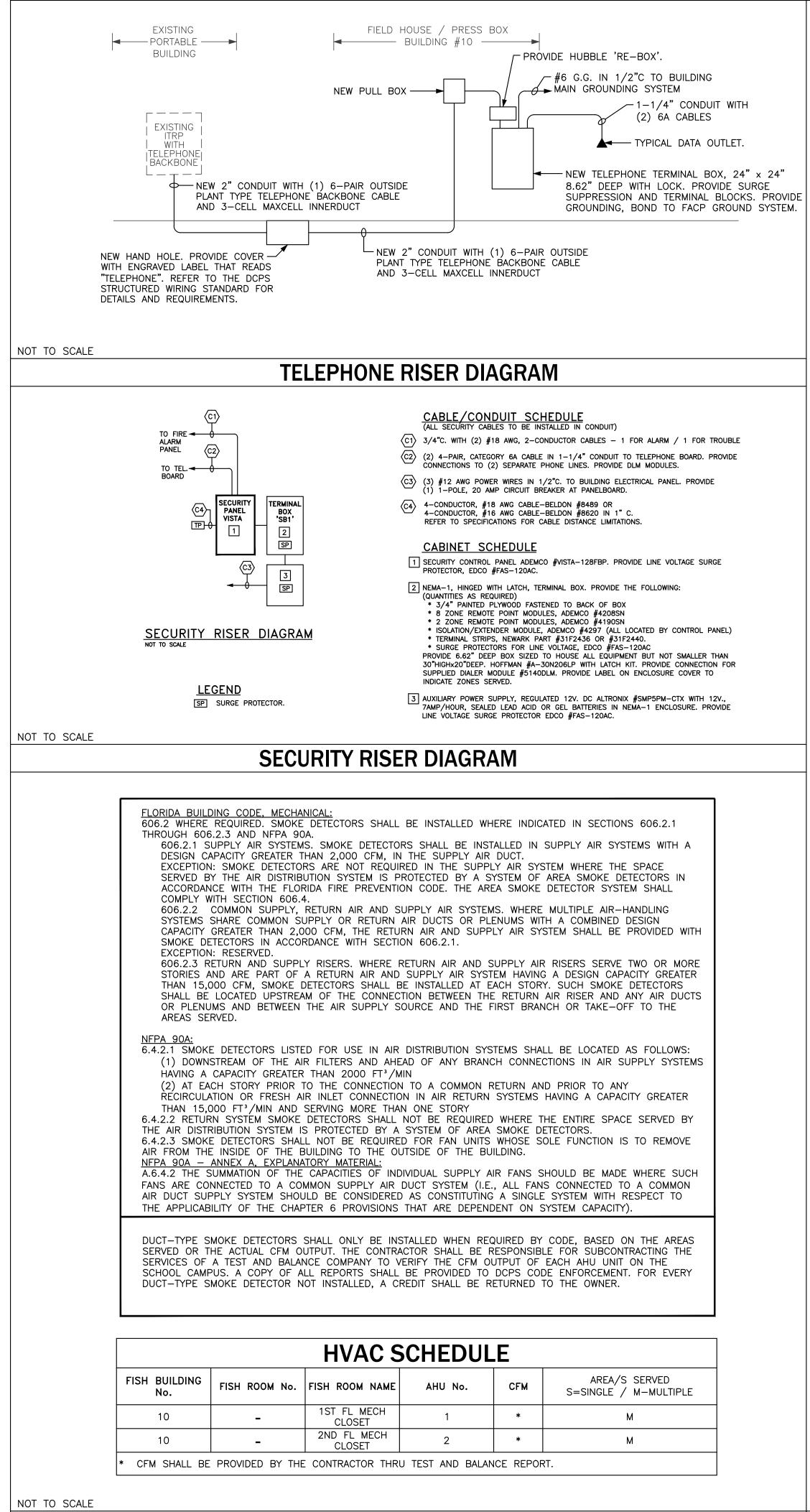


	LIGHTING FIXTURE SCHEDULE												
			LI	IGHT SO	URCE		VOLTO	MOUNTING	DEMARKS				
TYPE	MANUFACTURER	CATALOUGE NUMBER	TYPE/TEMP	WATTS	LUMENS	QUAN.	VOLTS	HEIGHT	REMARKS				
A	METALUX	4SLWP-4040-ND-UNV	4000K	40	4000	-	120/277	CEILING	SURFACE MOUNTED LED WRAPAROUND				
В	DECO	DWX-LED-45-4000K-UNV	4000K	45	4050	-	120/277	CEILING	LED CLASS 1, DIV 2 IP66 5				
C	LUMARK	XTOR3BWPC1	4000K	26	2284	-	120	12	LED WALL PACK – PHOTOCELL				
D	DECO	D534-LED-30-47-UNV	4700K	30	3810	-	120/277	CEILING	SURFACE LED				
E	EXITRONIX	502WB-WH-DR-DL-AT-M C				-	120/277	7'-6"	LED EXIT SIGN (SINGLE OR DOUBLE FACE AS REQUIED)				
X	EMERGI-LITE	EL-2-LED	_	3.6	_	-	120	7'-6"	2-HEAD EMERGENCY UNIT				
X2	EMERGI-LITE	W-SVI18-2-LA	_	4.0	_	-	120	7'-6"	2-HEAD EMERGENCY UNIT WET LABELED				

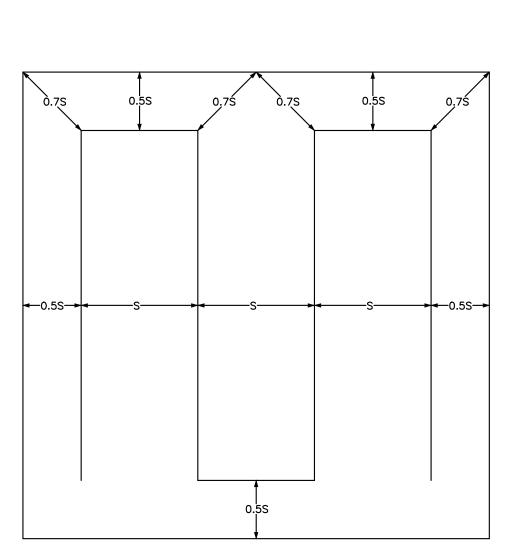
)	Η	Ε	D	U	L	Ε	

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### HVAC SCHEDULE





HEAT TAPE TEMPERATURE	-
<b>REQUIREMENTS</b> (*)	

ALARM TEMPERATURE	MAX AMBIENT TEMPERATURE (**)	LISTED SPACING (S)	HEAT TAPE COLOR
150°F (69°C)	100°F (38°C)	50 FT.	RED
190°F (88°C)	150°F (66°C)	50 FT.	WHITE
220°F (105°C)	175°F (79°C)	25 FT.	GREY
280°F (138°C)	200°F (93°C)	50 FT.	PURPLE
356°F (180°C)	221°F (105°C)	50 FT.	BLUE

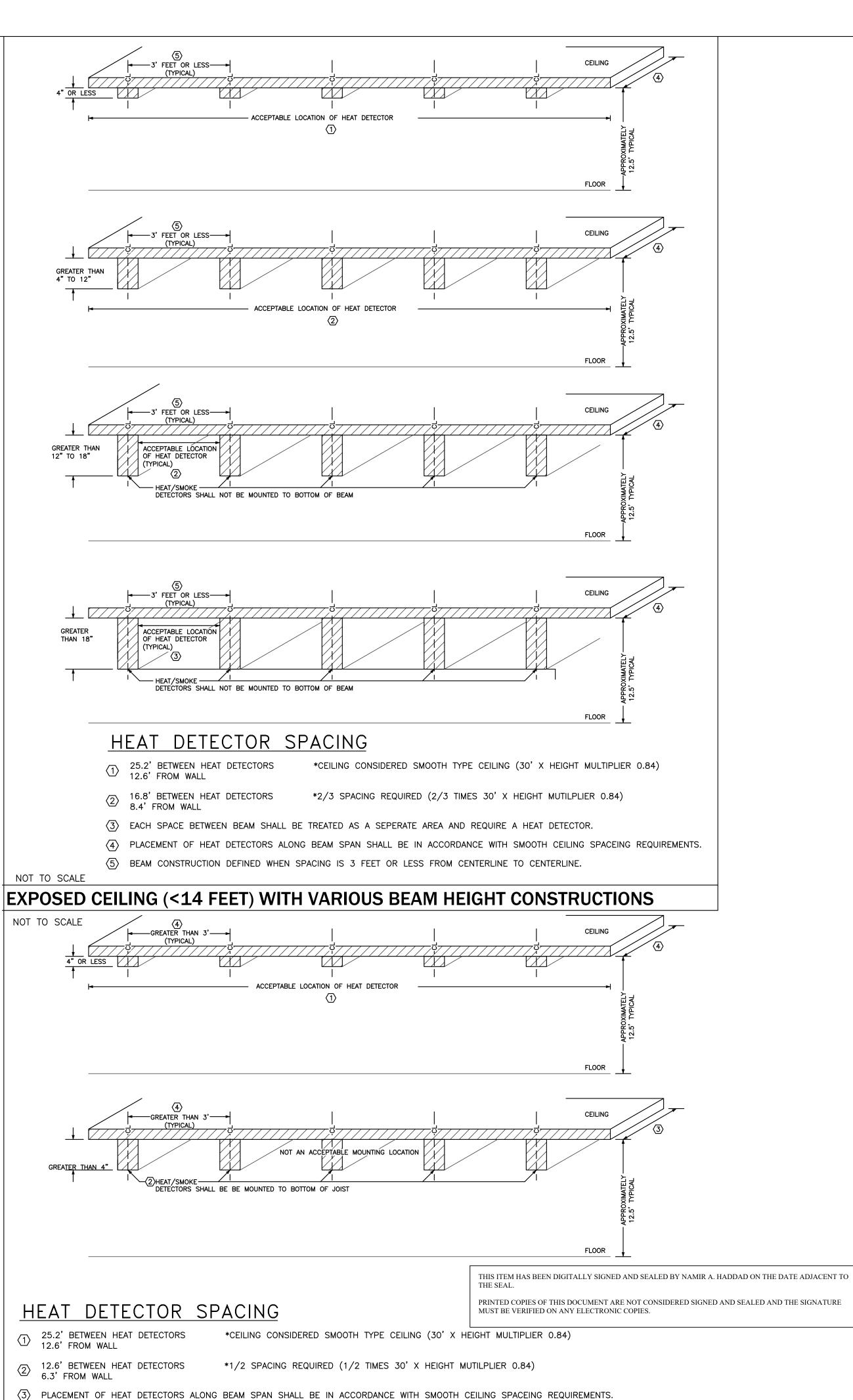
\* HEAT TAPE LISTED TEMPERATURE/SPACING AND COLOR BASED ON PROTECTOWIRE(C) LINEAR HEAT DETECTOR TYPE EPC.

\*\* 72 NFPA REQUIRES THE MINIMAL TEMPERATURE DIFFERENCE BETWEEN ALARM TEMPERATURE AND AMBIENT TEMPERATURE OF 20°F(11°). HOWEVER SELECTION OF HEAT TAPE SHALL BE BASED ON THE LOWEST POSSIBLE MAX AMBIENT TEMPERATURE TO MINIMIZE RESPONSE TIME. CONTRACTOR IS RESPONSIBLE TO MEASURE AMBIENT TEMPERATURE AND SUBMIT SELECTED HEAT TAPE TO BE USED FOR APPROVAL AT EACH NOTED LOCATION ON DRAWINGS.

		N BA		PACING N CEILING
	6 HEIGHT IOVE	UP TO AND INCLUDING		MULTIPLY LISTED SPACING BY
m	ft	m	ft	ft
0	0	3.05	10	1.00
3.05	10	3.66	12	0.91
3.66	12	4.27	14	0.84
4.27	14	4.88	16	0.77
4.88	16	5.49	18	0.71
5.49	18	6.10	20	0.64
6.10	20	6.71	22	0.58
6.71	22	7.32	24	0.54
7.32	24	7.93	26	0.46
7.93	26	8.54	28	0.40
8.54	28	9.14	30	0.34

NOT TO SCALE

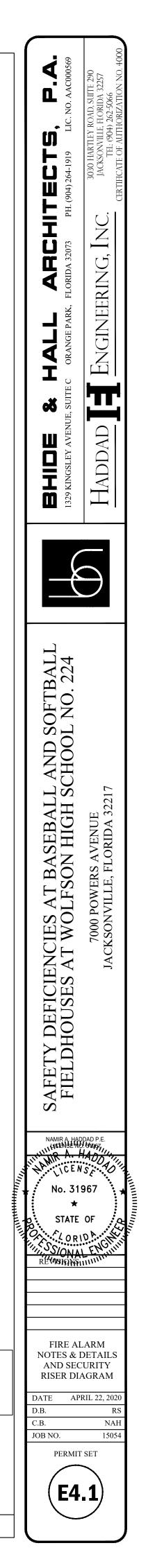
#### HEAT TAPE AND HEAT DETECTOR SPACING REQUIREMENTS



 $\langle 4 \rangle$  SOLID JOIST CONSTRUCTION DEFINED WHEN SPACING IS GREATER THAN 3 FEET FROM CENTERLINE TO CENTERLINE.

## EXPOSED CEILING (<14 FEET) WITH VARIOUS SOLID JOIST HEIGHT CONSTRUCTIONS



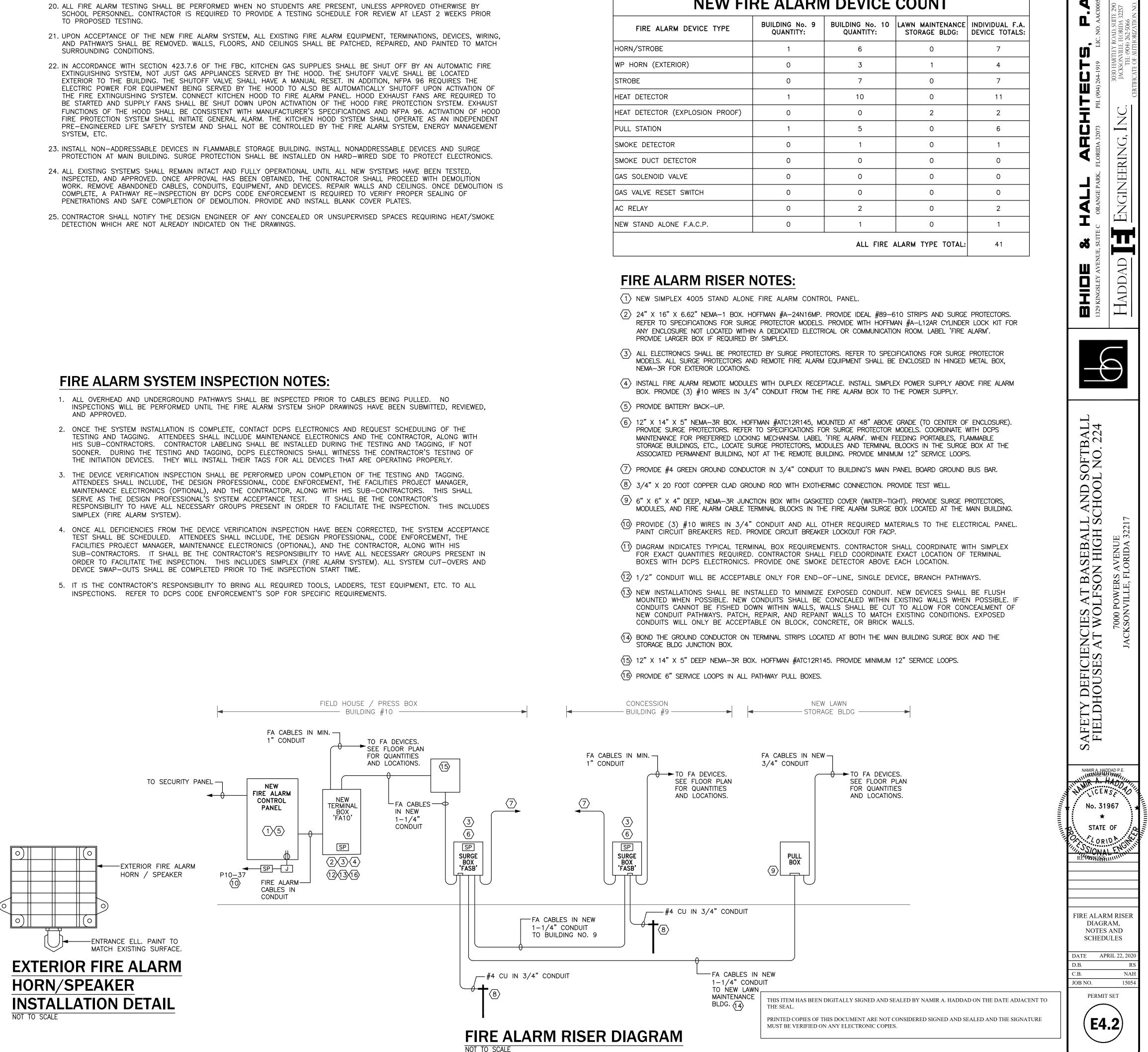


#### FIRE ALARM SYSTEM NOTES:

- 1. PROVIDE DETAILED SHOP DRAWINGS AND PRODUCT DATA SUBMITTALS. PRODUCT DATA SHALL BE SUBMITTED ON ALL EQUIPMENT, MATERIALS, AND PARTS PLANNED TO BE UTILIZED. EACH PRODUCT DATA PAGE SHALL BE MARKED TO INDICATE EVERY ITEM PROPOSED FOR USE. PAGES WITHOUT ITEMS CALLED OUT SHALL NOT BE ACCEPTED. SHOP DRAWINGS SHALL BE DETAILED AND INCLUDE ALL EQUIPMENT LOCATIONS, DEVICE LOCATIONS, AND ROUTING OF BOTH TRUNK AND BRANCH PATHWAYS. EXISTING AND NEW PATHWAYS SHALL BOTH BE IDENTIFIED, INCLUDING CONDUIT SIZE AND MATERIAL (PVC, EMT, ETC.). TYPE AND QUANTITY OF WIRES SHALL BE CLEARLY IDENTIFIED. SHOP DRAWINGS SHALL INCLUDE COMPREHENSIVE WIRING DIAGRAMS AND WIRING TERMINATION DETAILS. THE SHOP DRAWINGS SHALL ALSO PROVIDE A FIRE ALARM DEVICE SCHEDULE INDICATING THE TYPE AND QUANTITY OF EACH FIRE ALARM DEVICE. SHOP DRAWINGS SHALL BE SUBMITTED TO APPLICABLE CODE ENFORCEMENT PERSONNEL AND/OR FIRE MARSHALL FOR REVIEW AND APPROVAL AFTER THEY HAVE BEEN APPROVED BY THE EOR AND PRIOR TO INSTALLATION OR ISSUANCE OF A FIRE ALARM SYSTEM PERMIT. APPROVED FIRE ALARM SHOP DRAWINGS SHALL BE KEPT AT THE SITE ALONG WITH THE PERMIT DRAWINGS FOR INSPECTION PURPOSES. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING APPROVED SHOP DRAWINGS AND PRODUCING AS-BUILT DRAWINGS THAT ACCURATELY DEPICT THE ACTUAL FINAL INSTALLATION. THIS INCLUDES FINAL ROUTING, CABLING, EQUIPMENT / DEVICE LOCATIONS, ETC. AS-BUILT DRAWINGS SHALL BE PROVIDED TO THE ENGINEER OF RECORD IN BOTH PDF AND DWG FORMAT.
- 2. PROVIDE MAPS OF SCHOOLS' FLOOR PLANS SHOWING ALL FIRE ALARM DEVICES AND ADDRESSES. DRAWING SCALE SHALL BE  $1/16^{\circ} = 1^{\circ} - 0^{\circ}$  PLOTTED ON 11" x 17" SHEETS. ALL NUMBERS AND LETTERS SHALL BE A MINIMUM OF  $1/8^{\circ}$  HIGH. DRAWINGS SHALL BE FRAMED/PROTECTED WITH PLEXIGLASS AND WALL MOUNTED ON THE NEAR THE FIRE ALARM PANEL. HADDAD ENGINEERING WILL PROVIDE CAD FILES OF SCHOOLS' FLOOR PLANS. THE CONTRACTOR SHALL CHANGE THE DRAWINGS' SCALES, ADD ADDRESSES, MODIFY THE DRAWINGS PER AS-BUILT CONDITIONS, PLOT THE DRAWINGS, AND MOUNT THE FRAMED THE MAP DRAWINGS.
- 3. PROVIDE LABELS FOR ALL FIRE ALARM DEVICES (ONE LABEL FOR EACH FIRE ALARM DEVICE). CONTRACTOR LABELING SHALL BE INDEPENDENT OF ANY LABELING PROVIDED BY SCHOOL PERSONNEL. LABELS SHALL BE CLEARLY VISIBLE FROM THE GROUND AND IDENTIFY IDNET CIRCUIT AND DEVICE ADDRESS. LABELING SHALL ALSO INCLUDE SOURCE OF AC POWER. LABELING ON PULL STATIONS SHALL BE POSITIONED ALLOW FOR VISIBILITY WITH PROTECTIVE COVERS IN PLACE.
- 4. AT COMPLETION OF FIRE ALARM SYSTEM PROGRAMMING, PROVIDE (3) COPIES OF THE PROGRAM PRINT OUT. INCLUDE PRINT OUTS AS PART OF OPERATION AND MAINTENANCE MANUAL.
- 5. PROVIDING THE NECESSARY QUANTITY OF CONTROL PANELS. EXTENDER PANELS, AND OTHER ASSOCIATED HARDWARE AND/OR ACCESSORIES AS REQUIRED TO SUPPORT THE TOTAL NUMBER OF DEVICES.

6.	ALL FIRE ALARM WIRING SHALL BE	COLOR CODED	IN ACCORDANCE	TO THE FO	OLLOWIN	IG TABLE:		
	FIRE ALARM WIRING COLOR CODE	FUNCTION:	<u>COLOR</u>					
	NOTIFICATION		2-CONDUCTOR	, #14AWG,	SOLID,	TWISTED,	UNSHIELDED (YELLOW JACKI	ET)
	RUI/N2 COMMUNICATION		. 2-CONDUCTOR	, #18AWG,	SOLID,	TWISTED,	SHIELDED (RED JACKET)	
	MAPNET/IDNET		2-CONDUCTOR	, #18AWG,	SOLID,	TWISTED,	SHIELDED (RED JACKET)	
	24vdc POWER						, , , ,	
	RELAY		. ORANGE-BROW					
	AUDIO		. 2-CONDUCTOR	, #18AWG,	SOLID,	TWISTED,	SHIELDED (BLUE JACKET)	
	VISUAL/SIGNAL	• • • • • • • •	. WHITE-PURPLE	#12				
	ZONE		YELLOW-BLUE	#14				

- 7. FIRE ALARM SYSTEM COMPONENTS SHALL BE SIMPLEX. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE MANUFACTURER TO PROVIDE SHOP DRAWINGS AND FINAL TESTING. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE COMPLETE SYSTEM INCLUDING BUT NOT LIMITED TO PANELS, DEVICES, WIRING, CONDUITS, SURGE PROTECTION, BOXES, TESTING AND EQUIPMENT TO FORM COMPLETE OPERABLE FIRE ALARM SYSTEM. FOR EXISTING SYSTEMS, THE CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER TO PROVIDE ALL REQUIRED UPGRADES TO EXISTING PANEL, INCLUDING ADDITIONAL CARDS, BATTERIES, ETC. ANY NEW NOTIFICATION DEVICES MUST BE SYNCED TO EXISTING NOTIFICATION DEVICES. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT TO ALLOW FOR REQUIRED SYNCING.
- 8. PROVIDE SURGE PROTECTION FOR ALL FIRE ALARM CABLES LEAVING OR ENTERING A BUILDING, EXCLUDING BUILDINGS WITH NON-ADDRESSABLE DEVICES SUCH AS PORTABLES, SHEDS, ETC.
- 9. FIRE ALARM DUCT MOUNTED SMOKE DETECTORS, SHUTDOWN RELAYS, TEST SWITCHES, AND DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATORS ARE SHOWN DIAGRAMMATICALLY. VERIFY EXACT LOCATION AND AIR SAMPLING TUBE REQUIREMENTS FOR EACH AIR HANDLING UNIT PRIOR TO INSTALLATION. SAMPLING TUBES SHALL BE INSTALLED THROUGH THE WIDTH OF THE DUCT. NOT THE DEPTH. SAMPLING TUBES SHALL BE SIZED PER APPLICABLE CODES AND STANDARDS. LOCATE DUCT DETECTOR ON SUPPLY AIR DUCT OF EACH AIR HANDLING UNIT OR ROOF TOP A/C UNIT. WHEN POSSIBLE, LOCATE REMOTE INDICATOR IN THE CORRIDOR OUTSIDE THE ASSOCIATED MECHANICAL ROOM. OTHERWISE, MOUNT IN EASILY VISIBLE LOCATION WITHIN ROOM AS CLOSE AS POSSIBLE TO DOOR. UTILIZE DWYER INSTRUMENTS #475-00-FM TESTER OR EQUAL. PROVIDE REQUIRED TUBES. HOSES & STOPPERS. DETECTORS IN DUCT SYSTEMS SHALL BE ACCESSIBLE FOR SERVICING BY PROVIDING NEW ACCESS DOORS OR PANELS IN THE DUCTWORK. THE LOCATION OF ALL DETECTORS IN DUCT SYSTEMS SHALL BE PERMANENTLY AND CLEARLY IDENTIFIED AND RECORDED.
- 10. FIRE ALARM DEVICES LOCATION
- 10.1. LOCATE SMOKE DETECTORS AT DOUBLE SMOKE DOORS WITHIN 5 FEET OF DOORWAY
- 10.2. LOCATION OF FIRE ALARM DEVICES IN CLASSROOMS ARE APPROXIMATE. FIELD VERIFY LOCATION TO AVOID CONFLICT WITH ALL WALL CABINETS, MARKER BOARDS, AND WALL MOUNTED EQUIPMENT. LOCATE DEVICES AS REQUIRED TO ACCOMMODATE SPECIFIED MOUNTING HEIGHT.
- 10.3. HORN/STROBE DEVICES MUST BE MOUNTED BETWEEN 80" AND 96" A.F.F. LOCATIONS INDICATED MAY BE SHIFTED AS REQUIRED, PROVIDED THAT NO 75 CANDELA DEVICE IS LOCATED MORE THAN 22'-6" FROM EITHER ADJACENT WALL. 110 CANDELA DEVICES MAY NOT BE LOCATED MORE THAN 27' FROM EITHER ADJACENT WALL. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING OR MODIFYING ANY EXISTING FURNISHINGS AS NECESSARY TO COMPLY WITH THESE REQUIREMENTS. COORDINATE WITH PROJECT ENGINEER PRIOR TO PERFORMING ANY WORK ON EXISTING FURNISHINGS.
- 10.4. LOCATION OF HEAT DETECTORS SHALL BE MINIMUM OF 6'-O" AWAY FROM HOODS OR STEAM GENERATING EQUIPMENT HEAT DETECTORS LOCATED NEAR HOODS, KILNS, OR OTHER SIGNIFICANT HEAT GENERATING EQUIPMENT SHALL BE FIXED TEMPERATURE TYPE, RATED FOR 200 DEGREES. INSTALL NON-ADDRESSABLE DEVICES IN PORTABLES, SHEDS, AND FLAMMABLE STORAGE BUILDINGS.
- 10.5. ALL FIRE ALARM PULL STATIONS MUST BE LOCATED WITHIN 5 FEET OF DOORS. FOR LOCATIONS SURROUNDED BY WINDOWS AND/OR GLASS, THE CONTRACTOR SHALL CONSTRUCT A CUSTOM BACKPLATE TO MOUNT THE DEVICE TO THE FRAMING. BACKPLATE SHALL BE METAL WITH NO SHARP EDGES. BACKPLATE SHALL BE SIZED TO ACCOMMODATE A STOPPER II COVER. GAUGE OF METAL SHALL BE OF SUFFICIENT THICKNESS TO PROVIDE SECURE/STATIONARY MOUNTING.
- 10.6. VISIBLE SIGNAL APPLIANCES ARE REQUIRED TO BE PROVIDED WITHIN 15 FEET OF THE END OF ALL CORRIDORS, INCLUDING INTERSECTIONS AND TEES.
- 10.7. THE LOCATION OF THE FIRE ALARM ANNUNCIATOR PANEL SHALL NOT BE CHANGED WITHOUT PRIOR APPROVAL FROM THE DESIGN ENGINEER.
- 11. PROVIDE SHUTDOWN RELAY AT ALL AHU'S AND SUPPLY FANS. ACTIVATION OF FIRE ALARM SYSTEM SHALL SHUT DOWN ALL AHU'S AND SUPPLY FANS. NOT ALL LOCATIONS ARE SHOWN ON THE PLANS. FIELD LOCATE ALL AHU'S AND SUPPLY FANS EQUIPMENT SHUTDOWN SHALL BE PROGRAMMED TO OPERATE ON A BUILDING BY BUILDING BASIS. CAMPUS-WIDE SHUT DOWN OF EQUIPMENT WILL NOT BE ACCEPTED.
- 12. WHERE FIRE ALARM EQUIPMENT IS REQUIRED, INCLUDING EXPANDER/BOOSTER PANEL LOCATIONS, PROVIDE A SMOKE DETECTOR AT EACH LOCATION.
- 13. PROVIDE AND INSTALL STOPPER II PROTECTIVE COVERS ON ALL MANUAL FIRE ALARM PULL STATIONS.
- 14. THE FACILITY SHALL HAVE AN OPERABLE FIRE ALARM SYSTEM AT ALL TIMES, EXCEPT FOR COORDINATED AND PRESCHEDULED INTERRUPTIONS. FIRE ALARM INTERRUPTIONS SHALL BE LIMITED TO 3 HOURS IN A 24 HOUR PERIOD. FOR FIRE ALARM SYSTEMS OUT OF SERVICE LONGER THAN 3 HOURS, PROVIDE AN APPROVED FIRE WATCH. FIRE WATCH INDIVIDUAL SHALL BE EXPERIENCED IN HANDLING EMERGENCIES, PROFICIENT IN THE USE OF FIRE EXTINGUISHERS, AND EQUIPPED WITH A CELL PHONE. FIRE WATCH SHALL HAVE PRIOR APPROVAL FROM APPLICABLE CODE ENFORCEMENT PERSONNEL AND/OR FIRE MARSHAL.
- 15. ALL UNDERGROUND CABLES SHALL BE WEST PENN AQUASEAL CABLES OR EQUAL. PROVIDE GAUGE AND PAIR/CONDUCTOR COUNT PER MANUFACTURER REQUIREMENTS.
- 16. PROVIDE ALL CONNECTIONS REQUIRED BETWEEN ACCESS CONTROL/SECURITY SYSTEMS AND THE FIRE ALARM SYSTEM. FINAL INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LIFE SAFETY CODES.
- 17. PROVIDE NEW SERVICE OPENINGS IN ALL AIR DUCTS ADJACENT TO EACH FIRE DAMPER, SMOKE DAMPER, AND DUCT SMOKE DETECTOR. 17.1. ACCESS FOR FIRE AND SMOKE DAMPERS SHALL BE LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A
- LABEL HAVING LETTERS NOT LESS THAN 0.5 INCH (12.7 MM) IN HEIGHT READING: FIRE/SMOKE DAMPER, SMOKE DAMPER, OR FIRE DAMPER. ACCESS DOORS IN DUCTS SHALL BE TIGHT FITTING AND SUITABLE FOR THE REQUIRED DUCT CONSTRUCTION. 17.2. SMOKE DAMPERS SHALL CLOSE UPON ACTUATION OF A LISTED SMOKE DETECTOR OR DETECTORS INSTALLED IN
- ACCORDANCE WITH SECTIONS 907.10 AND 907.11 OF THE FLORIDA BUILDING CODE AND SECTION 607 OF THE MECHANICAL FLORIDA BUILDING CODE. 17.3. WHEN REQUIRED. LOCATE REMOTE INDICATORS IN CORRIDORS.
- 17.4. A STATE LICENSED MECHANICAL CONTRACTOR SHALL BE UTILIZED TO PERFORM ALL MODIFICATIONS OR INSTALLATIONS RELATED TO DUCTWORK OR MECHANICAL EQUIPMENT.
- 18. PROVIDE WIRING IN CONDUIT, TRANSFORMERS, RELAYS AND ALL REQUIRED MATERIALS TO CONNECT SMOKE DAMPERS TO AHU CONTROL CIRCUIT OR FIRE ALARM SYSTEM. AHU 'ON' SHALL OPEN SMOKE DAMPERS. SHUTTING DOWN AHU SHALL CLOSE DAMPERS. NEW SYSTEM SHALL MATCH EXISTING SYSTEM WITH USE OF PAM RELAYS AND AUXILIARY POWER. FIELD VERIFY SMOKE DAMPER VOLTAGE, AVAILABLE POWER AT AHU CONTROL CIRCUIT OR MOTOR STARTER, AND LOCATION OF EQUIPMENT. LABEL CEILING GRID WITH IDENTIFIER. IN ADDITION, PROVIDE RED "DOT" STICKERS AT EACH LOCATION TO HELP VISIBILITY.
- 19. CONTRACTOR PERFORMING FIRE ALARM WORK MUST BE QUALIFIED AS REQUIRED BY FLORIDA STATUTES CHAPTER 489 AND RULE CHAPTER 61G6 OF FLORIDA ADMINISTRATIVE CODE. DESIGNATED PERSONNEL MUST HAVE FIRE ALARM SYSTEM AGENT IDENTIFICATION CARD IN THEIR POSSESSION AT ALL TIMES.



# **NEW FIRE ALARM DEVICE COUNT**

ALARM DEVICE TYPE	BUILDING No. 9 QUANTITY:	BUILDING No. 10 QUANTITY:	LAWN MAINTENANCE STORAGE BLDG:	INDIVIDUAL F.A. DEVICE TOTALS:
OBE	1	6	0	7
(EXTERIOR)	0	3	1	4
	0	7	0	7
CTOR	1	10	0	11
CTOR (EXPLOSION PROOF)	0	0	2	2
ION	1	5	0	6
TECTOR	0	1	0	1
CT DETECTOR	0	0	0	0
NOID VALVE	0	0	0	0
RESET SWITCH	0	0	0	0
	0	2	0	2
D ALONE F.A.C.P.	0	1	0	1
		ALL FIRE A	LARM TYPE TOTAL:	41

I. MECHANICAL GENERAL PROVISIONS PART 1 GENERAL

WORK INCLUDED:

A. FURNISH ALL MATERIALS, EQUIPMENT, ACCESSORIES, LABOR, SUPERVISION AND ALL RELATED ITEMS NECESSARY TO COMPLETE THE SCOPE OF THE WORK AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

B. THE FOLLOWING DATA WAS USED FOR THE THERMAL LOAD CALCULATIONS FOR THIS BUILDING: -- INDOOR DESIGN: SUMMER 75 DB @ 50% RH -- OUTDOOR DESIGN: 95 DEG. FdB/ 77 DEG. FwB IN SUMMER AND 32 DEG. F IN WINTER.

CODES AND STANDARDS:

A. ALL MECHANICAL SYSTEMS, AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE LOCAL BUILIDING CODE. ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND ALL APPLICABLE SECTIONS OF THE FOLLOWING STANDARDS, LATEST EDITION: "ASHRAE", "AMCA", "ANSI", "ARI", "ASME", "ASTM", "CTI", "NFPA", "SMACNA", "UL".

B. THE ABOVE STANDARDS AND CODES ARE USED AS A MINIMUM DESIGN CRITERIA AND NO REDUCTIONS WILL BE PERMITTED, EVEN IF ALLOWED BY APPLICABLE CODES, WITHOUT WRITTEN PERMISSION BY ENGINEER. DRAWINGS: A. IN GENERAL, MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL AND ALL OTHER ASSOCIATED PLANS AND SHALL BE CONSTRUED AS ONE SET OF DOCUMENTS. DUCTWORK AND PIPING OFFSETS, BENDS AND TRANSITIONS OF EQUIVALENT SIZE WILL BE REQUIRED IN ORDER TO PROVIDE A COMPLETE, FUNCTIONAL MECHANICAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. PLANS SHALL NOT BE SCALED.

B. AS-BUILT DRAWINGS AND RECORDS: CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS TO THE ARCHITECT/OWNER AT THE COMPLETION OF THE PROJECT REFLECTING THE ACTUAL CONDITION OF THE MECHANICAL SYSTEM INSTALLATION AND ANY DEVIATION FROM THE ORIGINAL CONSTRUCTION DOCUMENTS. MAINTAIN A COMPLETE SET OF MECHANICAL PRINTS FOR INDICATING ALL CHANGES. USE COLORS TO MAKE CHANGES AT THE TIME OF EXECUTION. DELIVER SET TO ARCHITECT PRIOR TO ISSUANCE OF FINAL PAYMENT AND/OR CERTIFICATE OF OCCUPANCY. ELEVATIONS, INVERTS AND DIMENSIONED LOCATIONS OF UNDERGROUND WORK SHALL BE INDICATED, DIMENSION TO PERMANENT REFERENCES.

#### SUBMITTALS:

A. SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL 7 (SEVEN) COPIES, INCLUDING MANUFACTURER SUBMITTAL DATA SHEET (MSDS) OF ALL EQUIPMENT, MATERIALS, DEVICES, ACCESSORIES AND FINISHES AS SPECIFIED BY THE ENGINEERING CONSTRUCTION DOCUMENTS. REVIEW OF EQUIPMENT AND MATERIAL SUBMITTAL SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH PLANS, SPECIFICATIONS AND CODE REQUIREMENTS. ANY SUBSTITUTIONS SHALL BE PRE-APPROVED BY ARCHITECT AND OWNER AND SHALL BE CONTRACTOR'S RESPONSIBILITY TO INSURE FULL COMPLIANCE WITH THE ORIGINAL DESIGN PER PLANS AND SPECIFICATIONS.

B. MANUFACTURER'S MANUALS: SUBMIT MANUALS FOR APPROVAL AS INDICATED. MANUALS SHALL INCLUDE OPERATING AND MAINTENANCE INSTRUCTIONS, PARTS LISTS. MANUFACTURERS' AND LOCAL SUPPLIERS ADDRESSES AND PERTINENT DESCRIPTIVE DATA. MANUALS SHALL BE LOOSE-LEAF BOUND AND INDEXED.

#### PERMITS AND FEES:

A. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND NECESSARY ACCESSORIES (I.E. WIRING, CONTROLS, DEVICES, ETC.) AND SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND ALL OTHER INCIDENTAL COSTS AND SERVICES NECESSARY FOR THE INSTALLING AND TESTING OF A COMPLETE OPERABLE AND SERVICEABLE MECHANICAL SYSTEM.

#### MANUFACTURER'S WARRANTY:

A. CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS, ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS. ANY REPAIRS REQUIRING SYSTEM SHUT DOWN WILL BE DONE DURING NON-OPERATIONAL PERIODS OR AS AGREED WITH OWNER.

#### CONTRACTOR'S GUARANTEE:

A. ALL WORK AND MATERIALS TO BE PROVIDED UNDER THESE PLANS AND SPECIFICATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF BENEFICIAL OCCUPANCY.

B. CONTRACTOR SHALL PROVIDE MAINTENANCE AND OPERATION MANUAL ON ALL MECHANICAL EQUIPMENT AND SYSTEMS. AND TRAINING TO THE OWNER'S PERSONNEL AS NECESSARY OR REQUIRED FOR PROPER OPERATION.

PART 2 PRODUCTS

#### MATERIALS:

A. ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY OF U.S. MANUFACTURING WHENEVER POSSIBLE. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, PRODUCT APPROVALS, RULES AND ORDINANCES. ALL EMPLOYED INSTALLING PROCEDURES, METHODS AND TECHNOLOGIES SHALL CONFORM TO ESTABLISHED INDUSTRY STANDARDS AND GOOD ENGINEERING PRACTICE. ANY DAMAGED EQUIPMENT SHALL BE REPLACED OR RESTORED TO ITS ORIGINAL CONDITION WITH NO ADDITIONAL COST TO THE OWNER.

B. ALL MECHANICAL EQUIPMENT AND MATERIALS SHALL BE RATED FOR THE REQUIRED SERVICE, PRESSURES, TEMPERATURES, VOLTAGE, ETC. AND SHALL BE CERTIFIED AND/OR LISTED WHERE APPLICABLE. PROVIDE ALL NECESSARY ACCESSORIES, CONTROLS, TRANSFORMERS, VALVES, CONNECTIONS, GAUGES, ETC. FOR PROPER OPERATION AND SERVICE.

C. SUBSTITUTIONS MUST BE REQUESTED IN CONFORMANCE WITH GENERAL CONDITIONS PER ARCH. SPECIFICATIONS.

D. ALL HARDWARE AND ACCESSORY FITTINGS SHALL BE OF A TYPE DESIGNED, INTENDED OR APPROPRIATE FOR USE AND COMPLEMENT ITEMS WITH WHICH THEY ARE USED, AND SHALL HAVE CORROSION PROTECTION SUITABLE FOR ATMOSPHERE IN - ACROSS THE LINE VOLTAGE STARTING BELOW 25 HP WHICH THEY ARE INSTALLED. ALL SUCH HARDWARE SHALL BE U.S. STANDARD SIZES.

E. EQUIPMENT OF A SIMILAR NATURE SHALL BE IDENTICAL AND FIT ALLOTTED SPACE PROVIDED.

F. STORE AND PROTECT ALL MATERIALS FROM DAMAGE. MATERIALS SHALL NOT BE STORED DIRECTLY ON GROUND OR FLOOR AND SHALL BE KEPT CLEAN AND DRY. FREE FROM DETERIORATION BY ELEMENTS. DAMAGED MATERIALS SHALL NOT BE INSTALLED.

G. ALL EQUIPMENT AND MATERIALS SHALL BE SET LEVEL, PROPERLY ALIGNED, SECURED FIRMLY IN PLACE AND BOLTED TOGETHER WHERE IN SECTIONS, AND INSTALLED COMPLETE.

H. ALL OUTSIDE EXPOSED, VISIBLE MECHANICAL EQUIPMENT AND DEVICES SUCH AS GRILLES, PIPING, ETC. SHALL BE PAINTED TO MATCH SURROUNDING TEXTURES AND COLOR AS REQUIRED BY ARCHITECT AND/OR OWNER. PAINT ALL OUTSIDE EXPOSED MECHANICAL EQUIPMENT WITH CORROSION PROTECTIVE PAINT WHENEVER NECESSARY OR REQUIRED, ALL EXPOSED FASTENERS SHALL BE STAINLESS STEEL OR CADMIUM PLATED. ALL FASTENING DEVICES SHALL BE MADE UP TIGHT.

I. FOLLOW INSTALLATION DIRECTIONS AND RECOMMENDATIONS OF MATERIAL AND EQUIPMENT MANUFACTURERS.

J. MATERIALS DAMAGED DURING INSTALLATION SHALL BE REPAIRED TO A NEW

# MECHANICAL SPECIFICATIONS

CONDITION OR SHALL BE REPLACED. FINISHES ON EQUIPME SCRATCHED OR MARRED SHALL BE TOUCHED UP TO MATCH SHALL BE COMPLETELY REFINISHED.

K. ALL ENCLOSURES, ACCESS PANELS, CABINETS, FIXTURES EXPOSED EQUIPMENT OR ACCESSORIES SHALL BE FACTORY EXCEPT AS INDICATED ON DRAWINGS.

L. GROUP MOUNTED ITEMS SHALL BE SIMILAR IN FINISH AI PART 3 EXECUTION

**GENERAL:** 

A. CONTRACTOR MUST COMMENCE HIS WORK AS SOON AS E SUFFICIENTLY ADVANCED IN CONSTRUCTION LAYOUT.

B. LOCATIONS OF EQUIPMENT AND PIPING MAY BE SHOWN ( POSITIONS. CONTRACTOR SHALL BE GUIDED BY ARCHITECTUR CONDITIONS EXISTING AT JOB, CORRELATING THIS WORK WITH SHALL CAREFULLY EXAMINE ANY EXISTING CONDITIONS, EXIST PREMISES AND COMPARE THE CONTRACT DOCUMENTS WITH

C. LOCATION OF ELECTRICAL OUTLETS, PIPING, DUCTS, CEILIN SHALL BE COORDINATED BEFORE MATERIAL OR EQUIPMENT THERE WILL BE NO INTERFERENCE. IN CASE ANY INTERFER ARCHITECT/ENGINEER WILL DECIDE WHICH EQUIPMENT SHALI COST TO OWNER, REGARDLESS OF WHICH EQUIPMENT WAS

D. CONTRACTOR SHALL CHECK ALL ELECTRICAL CONTROL CO EQUIPMENT FURNISHED UNDER THIS SECTION OF THE SPECI PROPER OPERATION OF EQUIPMENT.

E. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS AND EQUIPME ANY DISCREPANCIES TO THE ATTENTION OF ARCHITECT AND

F. SUBMITTAL OF BID SHALL INDICATE THE CONTRACTOR HAS REQUIRED ALLOWANCE IN HIS BID. NO ALLOWANCE SHALL BI RESULTING FROM CONTRACTOR'S FAILURE TO VISIT JOB SITE DRAWINGS.

G. LAYOUT: WORK LINES AND ESTABLISHED HEIGHTS SHAL ACCORDANCE WITH PLANS AND SPECIFICATIONS. SET ALL SL AND/OR INSERTS BEFORE CONCRETE IS POURED.

H. ALL MATERIALS AND LABOR REGARDING SITE WORK, STRU PROOFING, PAINTING, WALL AND ROOF OPENINGS, CUTTING, DONE BY THE GENERAL CONTRACTOR.

WATERPROOFING: WHERE WORK MUST PIERCE WATERPRO DONE WITH CARE AND AFTER ITEM PIERCING WATERPROOFING PLACE, THE OPENING MADE FOR THIS PURPOSE SHALL BE ABSOLUTELY WATERPROOF.

J. BALANCING: ALL SYSTEMS UNDER THIS SECTION SHALL BEFORE FINAL ACCEPTANCE TO ACHIEVE OPTIMUM PERFORM ALL WATER SYSTEMS SHALL BE FREE FROM WATER HAMMER WORK.

K. PROVIDE CONNECTIONS TO ALL EQUIPMENT FURNISHED CONTRACTORS, INCLUDING MATERIALS AND NECESSARY APPU COMPLETE THE INSTALLATION.

L. ALL OPENINGS IN BUILDING STRUCTURES FOR PASSING DUCTWORK, PIPING, ETC, SHALL BE 1/2" LARGER ON ALL FOR FIRE-STOPPING) THAN OUTSIDE DIMENSIONS OF PASSIN VOIDS SHALL BE FILLED WITH FIRE RETARDANT MATERIAL AS "PYROSAFE", "THERMOFIRE", "3M" OR OTHER APPROVED MAN

M. CONTRACTOR SHALL UNDERCUT DOORS 1/2" (MAX. 50 REQUIRED VENTILATION FOR UTILITY ROOMS, STORAGE ROOM TOILETS, ETC. WHEN TRANSFER GRILLES OR DUCTS ARE NOT

II. HEATING, VENTILATION AND AIR CONDITIONING

PART 1 GENERAL

WORK INCLUDED:

A. GENERAL REQUIREMENTS: THE GENERAL CONDITIONS AN HEREBY MADE A PART OF THIS SECTION OF THE SPECIFICAT

B. WORK INCLUDED: THIS SECTION IS INTENDED TO DESCR OF AIR CONDITIONING, VENTILATING, AND ALL COMPONENTS SHALL MEET REQUIREMENTS OF APPLICABLE CODES AND RE COMPLETE IN EVERY RESPECT.

PROVISIONS:

A. THE FOLLOWING CODES AND REGULATIONS SHALL, IN AD ABOVE, APPLY TO WORK AND SYSTEMS COVERED BY THIS 1. NFPA 90A & 90B - AIR CONDITIONING AND VENTILA

FD. 2. NFPA 91 - BLOWER AND EXHAUST SYSTEMS, LATEST

- NFPA 101 LIFE SAFETY CODE, LATEST ED. NFPA 703 – FIRE RETARDANT TREATMENTS OF BUILD NFPA 255 - BUILDING MATERIALS TEST OF SURFACE
- CHARACTERISTICS.
- MECHANICAL REFRIGERATION CODE. 7. ASTM. E8475 - METHOD OF TEST FOR SURFACE BUR
- OF BUILDING MATERIALS
- 8. UL 723.

B. ALL THERMOSTATS SHALL BE INSTALLED AS INDICATED ( REQUIRED/APPROVED BY OWNER AND ENGINEER. ALL THERM INSTALLED AS PER THE A.D.A. CODE REQUIREMENTS WHERE

C. PROVIDE HIGH EFFICIENCY MOTORS WITH MATCHING NON SWITCH TYPE COMBINATION MOTOR STARTERS (AS COORDINA CONTRACTOR) AS FOLLOWS, UNLESS OTHERWISE RECOMMENT EQUIPMENT MANUFACTURER:

- OVERLOAD PROTECTION - 1/3 HP AND ABOVE FOR ALL PHASES WHERE SPECIFIED. ALL STARTERS SHALL HAVE PHASE LOSS AND UNBALALNCE PROTECTION.

D. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120-208 VOLT PANELS AND 42" CLEARANCE IN FRONT OF ANY 240-480 VOLT PANELS WITH ADEQUATE SIDE CLEARANCE PER NEC REQUIREMENTS.

E. PROVIDE MIN. 10'-O" CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ANY EXHAUST OPENINGS, EQUIPMENT, ETC., COORDINATE WITH PREVAILING WIND DIRECTION FOR THE DESIGN AREA.

F. FOR ALL EXHAUST FANS PROVIDE BACK-DRAFT DAMPERS WITH TIGHT SEAL IF NOT OTHERWISE SPECIFIED ON SCHEDULES AND PLANS.

G. ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATORS AS SPECIFIED ON SCHEDULES AND PLANS OR AS RECOMMENDED BY MANUFACTURER FOR NORMAL OPERATION WITHIN PRESCRIBED NOISE AND VIBRATION LIMITS.

H. PROVIDE FLEXIBLE CONNECTORS BETWEEN DISTRIBUTION SYSTEM AND AIR OR WATER MOVING EQUIPMENT: AHU'S, FANS, PUMPS, ETC.

I. OUTDOOR INSTALLED EQUIPMENT SHALL COMPLY WITH ALL LOCAL NOISE REGULATIONS AND ORDINANCES. IT SHALL NOT EXCEED A NOISE LEVEL OF 65 DECIBELS AS MEASURED RADIALLY 30 FEET FROM THE EQUIPMENT IN ALL

IENT WHICH HAVE BEEN H ORIGINAL FINISH OR	DIRECTIONS. IF REQUIRED, PROVIDE ACOUSTIC PRODUCT DELIVERY, STORAGE AND HANDLING						
S AND ALL OTHER PAINTED OR FINISHED	A. DELIVERY: DELIVER PRODUCTS TO JOB SITE IN THEIR OF LABELED WITH THE MANUFACTURER'S NAME A						
AND COLOR.	SPECIFICATION NUMBER, TYPE, AND CLASS AS B. STORAGE: STORE PRODUCTS IN AN APPROVED DRY ARE AND FROM EXPOSURE TO THE ELEMENTS. K						
BUILDING HAS	C. HANDLING: HANDLE PRODUCTS IN A MANNER THAT WILL AND DAMAGE TO PRODUCTS.						
ON DRAWINGS IN CERTAIN RAL DETAILS AND TH THAT OF OTHERS AND STING PIPING AND EXISTING CONDITIONS.	PART 2 – PRODUCTS <u>FIRE DAMPERS</u> PROVIDE FIRE DAMPERS CONFORMING TO THE						
ING DIFFUSERS, ETC. IS INSTALLED SO THAT RENCE DEVELOPS, THE IL BE RELOCATED AT NO INSTALLED FIRST.	LISTED, LABELED AND RATED 1–1/2 HOURS. VIBRATION PROOF AND SECURED WITH CLINCH BOLTS AND LOCK NUTS. ALL FIRE DAMPERS AIR STREAM (TYPE B FIRE DAMPERS) EXCEPT DAMPERS LOCATED AT WALL GRILLES. THESE						
ONNECTIONS OF CIFICATIONS TO INSURE	EXHAUST FANS E. GENERAL: PROVIDE DIRECT DRIVE PROPELLI SIZES, ARRANGEMENTS, AND TYPES AS INDICA						
BIDDING, ORDERING, ENT AND SHALL BRING ENGINEER.	AND SPECIFIED. F. COMPLETE FAN UNITS: PROVIDE FACTORY E FANS, EACH CONSISTING OF A HOUSING, FAN SUPPORTS, MOTOR, AND ACCESSORIES SPECIF						
S INCLUDED ALL BE MADE FOR ANY ERROR E AND TO REVIEW	G. HOUSINGS: PROVIDE HEAVY GAUGE ALUMINU FASTENERS OF STAINLESS STEEL. ALL OTHER CHROMATE TREATED STEEL TO PREVENT CORF						
LL BE IN STRICT LEEVES, ANCHORS, BOLTS,	H. FIN: ALUMINUM BLADE PROPELLER WITH GA CORROSION RESISTANT FASTENERS.						
RUCTURAL STEEL, WEATHER PATCHING, ETC. SHALL BE	I. MOTORS: PROVIDE EACH FAN WITH AN EXP INDUCTION MOTOR WITH BALL OR SLEEVE BEA						
ROOFING, IT SHALL BE NG HAS BEEN SET IN SEALED AND MADE	<ul><li>J. PROVIDE NON-FUSED DISCONNECT SWITCH MOUNTING.</li><li>G. PROVIDE ACCESSORIES AS SCHEDULED.</li></ul>						
BE FULLY BALANCED IANCE CHARACTERISTICS.	PART 3 – EXECUTION A. INSTALL ALL EQUIPMENT, ACCESSORIES AN ACCORDANCE WITH MANUFACTURERS PUBLISHI						
R UPON COMPLETION OF BY OWNER OR OTHER URTENANCES REQUIRED TO	TESTING AND BALANCING: GENERAL:						
OF MECHANICAL SIDES (OR AS REQUIRED NG ELEMENT. INTERSTITIAL S MANUFACTURED BY NUFACTURER. CFM) TO PROVIDE MS, ELECTRICAL ROOMS,	A. MECHANICAL CONTRACTOR SHALL PROVIDE OF ALL MECHANICAL EQUIPMENT (AHU'S, FAN QUANTITIES AND FLOW RATES AS NOTED ON SUBMITTED T & B REPORT SHALL BE IN ACC COUNCIL STANDARDS INCLUDING, BUT NOT LIN QUANTITIES AND SHALL BE SIGNED AND SEAL PROFESSIONAL ENGINEER. CONTRACTOR SHAN ACCESSORIES AS NECESSARY FOR FINAL BAL						
DT PROVIDED.	OPERATION TO THE SATISFACTION OF OWNER B. TESTING AND BALANCING OF AIR CONDITION SECTION SHALL NOT BE PERFORMED UNTIL A INSTALLED INCLUDING CONTROL DEVICES.						
ND PROVISIONS ARE ATIONS.	C. AFTER COMPLETION OF TESTS, 7 COPIES PROCEDURES, METHODS AND RECORDED RESU ARCHITECT/ENGINEER.						
RIBE A COMPLETE SYSTEM THEREOF. SYSTEMS EGULATIONS AND SHALL BE	AIR BALANCING: A. THE CONTRACTOR SHALL PERFORM THE F SYSTEM IN ACCORDANCE WITH THE FOLLOWING SUBSTANTIATING DATA).						
DDITION TO THOSE LISTED SECTION. ATION SYSTEMS, LATEST T ED.	B. SYSTEM COMPONENT CAPACITY: RECORD TO DEMONSTRATE CAPACITY UNDER ACTUAL C SPEED, TO OBTAIN A SUITABLE OPERATING BA DATA FOR EACH PIECE OF EQUIPMENT, TO PE PERFORMANCE.						
T ED. DING MATERIALS. E BURNING	INSTRUCTIONS TO OWNER:						
IRNING CHARACTERISTICS	A. THE AIR CONDITIONING SUB CONTRACTOR SYSTEMS ARE FUNCTIONAL DURING THE HEAT ACCORDANCE WITH THE INTENT OF THE PLAN INSTRUCT THE OWNER OR HIS REPRESENTATION						
ON PLANS OR AS MOSTATS SHALL BE APPLICABLE.	AIR DISTRIB						
AFFLICABLE. N- FUSIBLE DISCONNECT ATED WITH ELECTRICAL	MARK TYPE FACE SIZE BO						
IDED BY MOTOR OR	A LOUVER SEE DWGS.						

C INSULATION.

DRIGINAL UNOPENED CONTAINERS CLEARLY AND BRAND DESIGNATION, REFERENCED AS APPLICABLE.

EA: PROTECT FROM CONTACT WITH SOIL KEEP PRODUCTS DRY AT ALL TIMES.

PREVENT BREAKAGE OF CONTAINERS

E REQUIREMENTS OF NFPA 90A AND UL PROVIDE FUSIBLE LINKS 165°F. CHED "S" HOOKS OR STAINLESS STEEL SHALL HAVE THE BLADES OUT OF THE PT FIRF DAMPERS SHALL BE TYPE.

LER SIDEWALL FANS OF QUANTITIES. CATED ON THE DRAWINGS, AS SCHEDULED

DESIGNED. ASSEMBLED. AND TESTED N. SHAFT. BEARINGS. STRUCTURAL IFIED OR SCHEDULED.

NUM HOUSINGS WITH EXTERNAL PARTS SHALL BE ZINC PLATED AND RROSION.

GALVANIZED STEEL FAN PANELS AND

PLOSION-PROOF SQUIRREL CAGE EARINGS, CONFORMING TO NEMA MG 1

COMPLETE WITH FACTORY WIRING AND

AND MATERIALS IN HED RECOMMENDATIONS.

DE AN INDEPENDENT TEST AND BALANCE NS. ETC.). TO ACHIEVE THE DESIGN THE PLANS AND SCHEDULES. THE CORDANCE WITH THE AIR BALANCE MITED TO, AIR AND WATER FLOW LED BY A STATE REGISTERED ALL PROVIDE ALL DEVICES AND ANCING OF ALL SYSTEMS FOR PROPER AND ENGINEER.

FIONING SYSTEMS AS DESCRIBED IN THIS ALL SYSTEM COMPONENTS HAVE BEEN

OF A TEST REPORT INCLUDING SULTS SHALL BE DELIVERED TO THE

FOLLOWING TEST AND BALANCE OF THE NG REQUIREMENTS (PROVIDE WRITTEN

) AND CALCULATE ALL DATA NECESSARY OPERATING CONDITIONS, AND ADJUST FAN BALANCE FOR EACH SYSTEM. RECORD PERMIT EVALUATION OF TOTAL SYSTEM

SHALL DEMONSTRATE THAT ALL TING AND COOLING SEASONS, IN FULL NS AND SPECIFICATIONS, AND SHALL TIVE IN THE OPERATION OF THE SYSTEMS.

### BUTION SCHEDULE

А	LOUVER	SEE DWGS.	SURFACE	RUSKIN	ELF6375DFL	1, 2
MARK	TYPE	FACE SIZE	BORDER TYPE	MANUFACTURER	MODEL NO.	NOTES
		_				

. BASIS OF DESIGN FLORIDA PRODUCT APPROVAL #FL6068. . PROVIDE 6" DEEP PLENUM FULLY SIZED OF LOUVER. INSULATE SIMILAR TO DUCTWORK. FABRICATION.

ADDITIONAL COST TO THE OWNER.

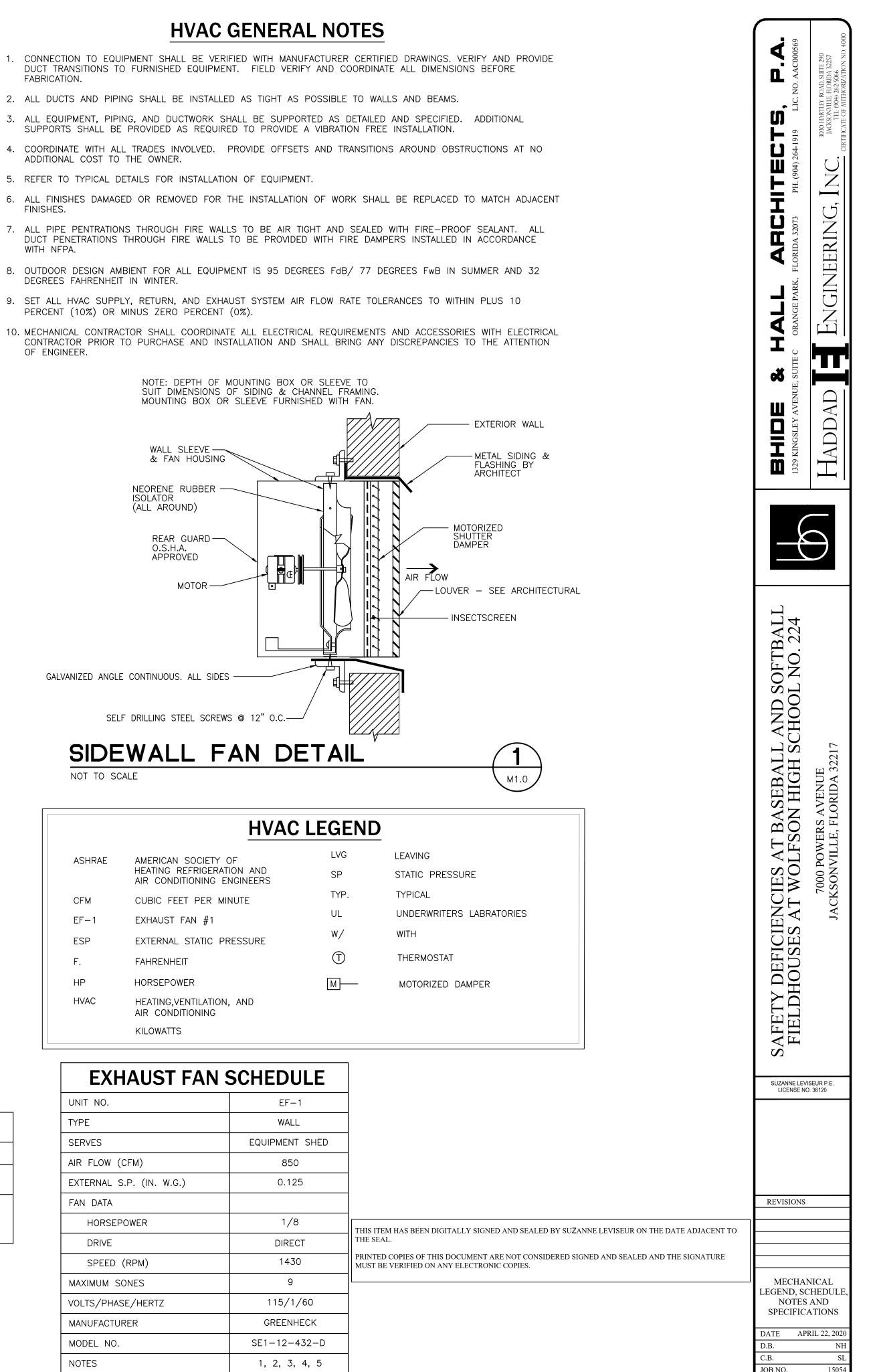
FINISHES

WITH NFPA.

DEGREES FAHRENHEIT IN WINTER.

OF ENGINEER.

ISOLATOR



15054

PERMIT SET

M1.0

ASHRAE	AMERICAN HEATING AIR CONI
CFM	CUBIC FE
EF-1	EXHAUST
ESP	EXTERNAL
F.	FAHRENH
HP	HORSEPO
HVAC	HEATING, AIR CONI
	KILOWATT

UNIT NO.
TYPE
SERVES
AIR FLOW (CFM)
EXTERNAL S.P. (IN. W.
FAN DATA
HORSEPOWER
DRIVE
SPEED (RPM)
MAXIMUM SONES
VOLTS/PHASE/HERTZ
MANUFACTURER
MODEL NO.
NOTES
NOTES:
1. PROVIDE WITH: BACKDF GUARD.
2. ACCEPTABLE ALTERNAT CARNES, OR ACME.
3. PROVIDE EXPLOSION P CONTROL.
4. FAN, MOTOR, AND ALL EXPLOSION PROOF.
5. PART OF ALTERNATE N

RAFT DAMPER, WALL HOUSING, AND TE MANUFACTURERS: LOREN COOK, PROOF LINE VOLTAGE THERMOSTAT FOR ASSOCIATED CONTROLS TO BE NO. 1

