

# DEANE BOZEMAN SCHOOL COVERED PAVILION ENCLOSURE RENOVATION

# **BAY COUNTY SCHOOL DISTRICT**

PLICABLE CODES:		
<ul> <li>FLORIDA BUILDING CODE, BUILDING</li> <li>FLORIDA BUILDING CODE, MECHAN</li> <li>FLORIDA BUILDING CODE, FUEL GA</li> <li>FLORIDA BUILDING CODE, PLUMBIN</li> <li>FLORIDA BUILDING CODE, ACCESSI</li> <li>FLORIDA FIRE PREVENTION CODE (</li> <li>NFPA 101 LIFE SAFETY CODE - 2023</li> <li>NATIONAL ELECTRICAL CODE (NEC</li> <li>STATE REQUIREMENTS FOR EDUCA</li> </ul>	G (FBC, B) - EIGHTH (2023) EDITION ICAL (FBC, M) - EIGHTH (2023) EDITION S (FBC, FG) - EIGHTH (2023) EDITION G (FBC, P) - EIGHTH (2023) EDITION BILITY - EIGHTH (2023) EDITION FFPC) - EIGHTH (2023) EDITION EDITION ) - 2023 EDITION ATIONAL FACILITIES - 2014 EDITION	
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METHOD OF STRUCTURAL FIRE-PR OF PROJECT AREA	OOFING	
SELF-PROTECTING RATED MEMBRANE ASSEMBLY SPRAYED ON OTHER	NO NO N/A	
RATING: EXTERIOR BEARING WALLS EXTERIOR NON-BEARING WALLS COLUMNS ROOF ASSEMBLY	N/A N/A N/A N/A	
NEW CONSTRUCTION NEW BUILDING HEIGHT AND ARE OVERALL BUILDING HEIGHT OVERALL BUILDING HEIGHT OVERALL BUILDING AREA	A: ONE (1) STORY 25'-0" 3,600 SQ. FT.	
NEW CONSTRUCTION TYPE: OVERALL BUILDING	FBC TYPE IIB	
SPRINKLERED	YES	
CONSTRUCTION MATERIALS FLOOR PARTITIONS EXTERIOR WALLS STRUCTURE	STEEL/CONCRETE N/A STEEL/METAL STEEL	
PRINCIPAL OCCUPANCY: EDUCATIONAL	YES	
ACCESSORY OCCUPANCIES: ASSEMBLY BUSINESS	N/A N/A	

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Clemons, Rutherford & Associates Inc.

2027 Thomasville RoadTallahassee,Florida32308PlannersInterior DesignersConstruction Managers

# **INDEX OF DRAWINGS**

T1.1 COVER SHEET & INDEX OF DRAWINGS

# STRUCTURAL

S1.1 FOUNDATION & SCHEMATIC ROOF FRAMING PLANS & SECTION

# **ARCHITECTURAL**

A1.0 CAMPUS PLANA1.1 COVERED PLAY PLAN, ELEVATION & SECTIONS

# **MECHANICAL**

M0.1 GENERAL NOTES, LEGEND AND SCHEDULESM0.2 SCHEDULESM1.1 FLOOR PLAN



CONTROLS

ICO.1 GENERAL NOTES, LEGENDS AND SCHEDULES ICO.2 SCHEDULES AND DETAILS IC1.1 CONTROLS

# **ELECTRICAL**

E0.1 GENERAL NOTE E1.0 SITE PLAN E1.1 FLOOR PLANS

# **TELECOMM**

T0.1GENERAL NOTET1.0SITE PLANT1.1FLOOR PLANS

## FIRE ALARM FE0.1 GENERAL NOTE FE1.1 FLOOR PLAN

E0.1 GENERAL NOTES, LEGEND AND SCHEDULES

TO.1 GENERAL NOTES, LEGEND AND SCHEDULES

FE0.1 GENERAL NOTES, LEGENDS AND SCHEDULES





**STATEMENT OF COMPLIANCE** 'TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND

THE PROJECT MANUAL FOR THE ADDITIONS ON DEANE BOZEMAN'S SCHOOL CAMPUS, ARE COMPLETE AND COMPLY WITH THE FLORIDA BUILDING CODE 2023, THE STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF) 2014'



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# GENERAL STRUCTURAL NOTES

# GENERAL

- NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, ENGINEER OR SUPPLIER OR ANY OF THEIR CONSULTANTS, AGENTS OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS, NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD OR ANY OF THE STRUCTURAL ENGINEER OF RECORD'S CONSULTANTS, AGENTS, OR EMPLOYEES ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- THE GENERAL CONTRACTOR SHALL VERIFY THE DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCY.
- MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE EIGHTH EDITION (2023) FLORIDA BUILDING CODE.
- THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL WORKS WITH THE STRUCTURAL CONTRACT DOCUMENTS. ARCHITECT/STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES OR OMISSIONS.
- THE CONTRACTOR SHALL NOTIFY IN WRITING THE STRUCTURAL ENGINEER OF RECORD OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS.
- 6. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS SEE THE ARCHITECTURAL.
- STRUCTURAL CONTRACT DRAWINGS SHALL NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR ANY MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR.
- REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION OR ASSOCIATION TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE EDITION OF THE REFERENCED CODE INDICATED IN THE BUILDING CODE NOTED ABOVE.
- 9. ANY CONTRACTOR INTENDING TO SUPPORT EQUIPMENT, PIPING, DUCT WORK, CRANES OR OTHER ITEMS WHICH SUBJECT THE ROOF OR FLOOR SYSTEMS TO CONCENTRATED LOADINGS NOT SPECIFICALLY INDICATED ON THESE STRUCTURAL DRAWINGS, MUST SUBMIT SHOP DRAWINGS, WEIGHTS, AND PROPOSED SUPPORT LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO ERECTION. ANY CONTRACTOR WHO ERECTS EQUIPMENT WITHOUT OBTAINING SUCH APPROVAL WILL BE REQUIRED EITHER TO REMOVE IT AND SUBMIT SHOP DRAWINGS OR STAND THE COST OF REQUIRED REINFORCEMENT OF MEMBERS.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE PERFORMANCE OF THE CONTRACT. THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDER OF PUBLIC AUTHORITIES (ESPECIALLY OSHA) BEARING ON SAFETY OF PERSONS OR PROPERTY OR THEIR PROTECTION FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL NOT LOAD OR PERMIT ANY PART OF THE CONSTRUCTION SITE TO BE LOADED SO AS TO ENDANGER ITS SAFETY.
- IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE, UNLESS APPROVED BY JOHNSON AND ASSOCIATES ENGINEERING IN WRITING.
- THIS BUILDING IS DESIGNED AS AN ENCLOSED STRUCTURE. ALL EXTERIOR COMPONENTS (DOORS, WINDOWS, ETC.) MUST BE DESIGNED TO WITHSTAND THE WIND LOADINGS SPECIFIED FOR THE DESIGN OF COMPONENTS AND CLADDING IN THE APPLICABLE BUILDING CODE.
- 13. THE CONTRACT DOCUMENT DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE SPECIFICATIONS AND/OR CODE OF PRACTICE FOR AIGC, ACI, SJI, OR OTHER STANDARDS.

# STRUCTURAL METALS

- STRUCTURAL STEEL SHALL CONFORM TO ASTM A512 GRADE 50 EXCEPT ANGLES, CHANNELS, PLATES, RODS, ETC SHALL CONFORM TO ASTM A36 AND STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B (Fy=46ksi). ANCHOR BOLTS SHALL CONFORM TO ASTM A1554 GRADE 36.
- BOLTED CONNECTIONS SHALL BE NON-SLIP CRITICAL BEARING TYPE CONNECTIONS (THREADS EXCLUDED FROM THE SHEAR PLANE) USING 3/4" DIAMETER A-325 BOLTS. SLOTTED HOLES ARE PERMITTED ONLY WHERE THE DIRECTION OF THE LOAD IS NORMAL TO THE AXIS OF THE SLOT. BOLTED CONNECTIONS FOR TRUSS JOINTS, HANGERS AND DIAGONAL BRACING (AS OCCURS) SHALL BE SLIP CRITICAL.
- 3. USE PREQUALIFIED WELDED JOINTS PER AISC AND THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY. NON QUALIFIED JOINTS SHALL BE QUALIFIED BY THE FABRICATOR PRIOR TO FABRICATION.
- 4. SHOP PAINT FOR STRUCTURAL STEEL SHALL BE TNEMEC 10-99, APPLY TO STRUCTURAL STEEL TO A MINIMUM DRY FILM THICKNESS OF 2.5 MILS. DO NOT PAINT STEEL TO BE FIRE-PROOFED WITH SPRAYED ON CEMENTITIOUS MATERIALS. DO NOT PAINT STEEL SURFACES TO BE EMBEDDED IN CONCRETE.

COLD FORMED STEEL FRAMING

- I. ALL COLD FORMED STEEL FRAMING SHALL BE MADE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS AND SHALL BE MANUFACTURED BY UNIMAST INCORPORATED (OR APPROVED EQUAL).
- 2. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) ASPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, 1986 EDITION, WITH 1989 ADDENDUM.
- 3. ALL STRUCTURAL MEMBERS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A653-94 AND SHALL BE ZING COATED MEETING ASTM A924. STRUCTURAL MEMBERS SHALL BE FORMED FROM THE FOLLOWING GRADE OF MATERIAL:
- YIELD STRENGTH: 33,000 psi (33 ksi) FOR ALL 20-GA. AND 18-GA. MEMBERS, 50,000 psi (50ksi) FOR 16-GA., 14-GA, AND 12-GA. MEMBERS.
- 4. FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR BY WELDING. SCREWS AND WELDS SHALL BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYPING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED-UP WITH ZINC-RICH PAINT.

5. SPLICES IN FRAMING COMPONENT SHALL NOT BE PERMITTED.

STRUCTURAL SUBMITTALS

- I. FURNISH ONE ELECTRONIC COPY OF ALL SHOP DRAWINGS AND SUBMITTALS. SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL SUBMITTAL REQUIREMENTS
- AND PROCEDURES. 3. REPRODUCTION OF CONTRACT DOCUMENTS FOR ERECTION AND/OR SHOP DRAWINGS WILL NOT BE PERMITTED.
- 4. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR MEANS, METHOD, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION. SEE SPECIFIC PROVISIONS IN THE CONTRACT DOCUMENTS DEALING WITH THE APPROPRIATE DESIGN RESPONSIBILITIES OF CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS.



# STRUCTURAL SUBMITTALS (CONT.)

- 5. IN THE EVENT THAT JOHNSON & ASSOCIATES ENGINEERING REVIEWS SUBMITTALS (AS A COURTESY TO THE CONTRACTOR TO REDUCE THE TIME PRIOR TO THE START OF FABRICATION) WHICH HAVE NOT FIRST BEEN REVIEWED AND APPROVED BY THE CONTRACTOR, SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM REVIEW AND APPROVE ALL SUCH SUBMITTALS, NOR WILL IT CREATE RESPONSIBILITY OR LIABILITY ON THE PART OF JOHNSON & ASSOCIATES ENGINEERING AS TO THE CONTENTS, ACCURACY OR COMPLETENESS OF SUCH SHOP DRAWINGS EXCEPT AS MAY BE SPECIFICALLY DESCRIBED IN THESE GENERAL NOTES. CONTRACTOR IS SOLELY RESPONSIBLE FOR REVIEW AND APPROVAL OF SHOP DRAWINGS AND OTHER SUBMITTALS, AND CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL REQUIREMENTS OF THE WORK OF THE CONTRACTOR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS
- 6. THE SER REVIEW OF SUBMITTALS WILL BE MADE FOR LIMITED PURPOSES AND IS SUBJECT TO THE LIMITATIONS AND DISCLAIMERS SET FORTH IN THESE GENERAL NOTES. THE JOHNSON AND ASSOCIATES ENGINEERING REVIEW DOES NOT INVOLVE OR INCLUDE:
  - A. REVIEW OF SUBMITTAL DIMENSIONS AND QUANTITIES.
  - B. ACCEPTANCE OR ASSUMPTION OF ANY RESPONSIBILITY TO REVIEW, ANALYZE OR EVALUATE ANY SUBMITTALS INCLUDING SHOP DRAWINGS PROVIDED TO JOHNSON AND ASSOCIATES ENGINEERING OR ACCEPTANCE OR ASSUMPTION OF ANY PART OF CONTRACTOR'S RESPONSIBILITIES (WHICH INCLUDE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND APPROVE SUBMITTAL), WHETHER OR NOT THE JOHNSON AND ASSOCIATES ENGINEERING REVIEW WAS MADE PRIOR TO THE REVIEW AND APPROVAL OF THE CONTRACTOR.
  - C. ANALYSIS, VERIFICATION OR SUBSTANTIATION OF EQUIPMENT OR SYSTEM INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS.
  - D. REVIEW, EVALUATION OR APPROVAL OF PROJECT SAFETY

PRECAUTIONS OR SAFETY TRAINING.

- E. REVIEW, EVALUATION OR APPROVAL OF CONSTRUCTION MEANS,
- METHODS, TECHNIQUES, PROCEDURES OR SEQUENCES.

JOHNSON AND ASSOCIATES ENGINEERING REVIEW OF A SPECIFIC ITEM DOES NOT INCLUDE OR INDICATE OR CONSTITUTE REVIEW OF A GROUP OR AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

THE CONTRACTOR MUST NOTIFY JOHNSON AND ASSOCIATES ENGINEERING, IN WRITING, RELATIVE TO ANY DEVIATION FROM THE CONTRACT DOCUMENTS, WHICH APPEARS IN THE SHOP DRAWINGS, SAMPLES, AND PRODUCT DATA. APPROVAL OF THE SUBMITTAL CONTAINING SUCH DEVIATION DOES NOT CONSTITUTE APPROVAL OF THE DEVIATION. APPROVAL OR REJECTION OF THE DEVIATION WILL ONLY BE PROVIDED BY JOHNSON AND ASSOCIATES ENGINEERING IN A SEPARATE WRITTEN COMMUNICATION TO THE CONTRACTOR. JOHNSON AND ASSOCIATES ENGINEERING IS NOT RESPONSIBLE FOR DISCOVERY OF DEVIATIONS NOT COMMUNICATED BY THE CONTRACTOR.

STRUCTURAL SUBMITTALS: WALL GIRTS AND METAL PANELS

SPECIALTY DESIGN ENGINEER.

- 1. THE FOLLOWING SUBMITTALS MUST BE MADE TO THE STRUCTURAL ENGINEER OF RECORD:
  - A. ERECTION DRAWINGS, FABRICATION DRAWINGS, COMPONENT DETAILS, AND CONNECTION DETAILS.
  - B. CALCULATIONS FOR ALL COMPONENTS SIZED BY THE FABRICATOR'S
- THE STRUCTURAL SUBMITTALS FOR THE WALL GIRTS AND METAL PANELS SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE SPECIALTY DESIGN ENGINEER LICENSED IN THE PROJECT STATE (DELEGATED ENGINEER).
- 3. THE PROJECT STRUCTURAL ENGINEER OF RECORD WILL REVIEW THE SUBMITTALS FOR INDICATION THAT HIS INTENT HAS BEEN UNDERSTOOD AND THAT THE SPECIFIED CRITERIA HAVE BEEN USED.

## <u>DESIGN LOADS</u>

WIND LOADING CRITERIA (PER ASCE 1-22)

	BUILDING RIGK CA BASIC WIND SPEE EXPOSURE CATEC INTERNAL PRESSU	ATEGORY D: V(l &ORY: IRE COEFF.: GC	= 4LT) = pí =	: 111 : 148 MPH : C : +/- Ø.18
	COMPONEN		NG (WAL	LS)
	LOCATION	TRIBUTARY AREA	DESIG PRESSU	N WIND RE (PSF)
		< 10 SF.	53	PSF
	WALL (EDGE ZONE) 5	10 - 20 <del>SF</del> .		PSF
		20 - 50 SF.	50	PSF
		50 - 100 SF.	47	PSF
		$\geq$ 100 SF.	43	PSF
		< 10 <del>S</del> F.	43	PSF
	WALL	10 - 20 <del>S</del> F.	43	PSF
	(INTERIOR ZONE)	20 - 50 SF.	40	PSF
	(4)	50 - 100 SF.	40	PSF
		$\geq$ 100 SF.	37	P9F

COMPONENTS AND CLADDING PRESSURES SHOWN IN THE TABLES ABOVE ARE STRENGTH DESIGN (ULTIMATE) PRESSURES PER THE ASCE 1-22. USE OF THESE PRESSURES FOR ALLOWABLE STRESS DESIGN (ASD) SHALL BE IN ACCORDANCE WITH THE LOAD COMBINATIONS SHOWN IN THE ASCE 1-22.

## PREENGINEERED SYSTEMS

- THE DESIGN OF PREENGINEERED SYSTEMS SPECIFIED IN THE CONTRACT DOCUMENTS WHICH ARE DESIGNED/ENGINEERED BY OTHERS IS THE SOLE RESPONSIBILITY OF THE SUPPLIER AND ITS DESIGN ENGINEER, LICENSED IN THE PROJECT STATE. SUBMITTALS OF SUCH SYSTEMS TO THE STRUCTURAL ENGINEER OF RECORD SHALL BE REVIEWED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS WITH REGARD TO THE ARRANGEMENT, AND/OR SIZES OF MEMBERS SHOWN ON THE CONTRACT DOCUMENTS AND TO INSURE CORRECT INTERPRETATION OF THE DESIGN INFORMATION INCLUDED IN THE CONTRACT DOCUMENTS. SUCH REVIEW BY THE STRUCTURAL ENGINEER OF RECORD SHALL NOT IMPLY ANY RESPONSIBILITY FOR THE ACTUAL DESIGN OF SUCH SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONAL ACCURACY AND CONFORMANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS.
- SEE SPECIFIC SECTIONS OF GENERAL NOTES ABOVE AND SPECIFICATIONS FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND ITS LICENSED ENGINEER.
- 3. THE CONTRACT DOCUMENT DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE SPECIFICATIONS AND/OR CODE OF PRACTICE FOR AISC, ACI, SJI OR OTHER STANDARDS.
- ERECTION, BRACING AND FORMWORK
- THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, FORMWORK, SHORING, AND TEMPORARY SUPPORTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

## JOB SITE SAFETY

THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND FOR CONFORMANCE WITH THE HEALTH AND SAFETY PROVISIONS REQUIRED BY ANY REGULATORY AGENCIES. THE STRUCTURAL ENGINEER OF RECORD HAS NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR, OR THEIR EMPLOYEES WITH THEIR WORK OR ANY HEALTH OR SAFETY PRECAUTIONS.



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# FIRESTOP SCHEDULE OF THROUGH PENETRATION SYSTEMS. BASIS OF DESIGN: HILTI, INC.

ΤΥΡΕ ΟΕ ΡΕΝΕΤΒΔΝΤ	F-RATING	CONCRETE FLOORS	CONCRETE OR BLOCK WALLS	GYPSUM WALLS		<b>—</b> ]	CAP	
	(HR)	BASIS OF DESIGN UL SYSTEM				Ŷ	ELBOW TURNED UP	
CIRCULAR BLANK OPENINGS	1	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090		CP 680 CP 618 ES-ONE MAX CES- BI		ELBOW TURNED DOWN	
(0000-0999)	2	F-A-0006, C-AJ-0055, C-AJ-0090	C-AJ-0055, C-AJ-0090			<b>o</b>	TEE. OUTLET UP	
METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020	W-L-1054, W-L-1058, W-L-1164, W-L-1506	CP 680, FS-ONE MAX, CP 606, CFS-			
(1000-1999)	2	C-AJ-1226, F-A-1028, F-A-1017	C-AJ-1226, W-J-1067, W-J-1020, W-J-1248	W-L-1054, W-L-1058, W-L-1164, W-L-1506	S SIL GG, CFS-D, MINERAL WOOL			
	4	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098,	C-AJ-2109. C-AJ-2098. C-AJ-2167.				NEW PIPE	
NON-METALLIC PIPE OR	1	C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2342	C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	CP 680, CP 643N, MINERAL WOOL,		EXISTING PIPE TO REMAIN	
CONDUIT (I.E. PVC, CPVC, ABS_ERP_ENIT) (2000-2000)	2	C, 99) 2	F-A 2053 F-A 2025 C-A.I-2109 C-A.I-2098 C-A.I-2271	C-A.I-2109 C-A.I-2098 C-A.I-2167		CP 644, FS-ONE MAX, CFS-S SIL SL. CFS-S SIL CG. CP 648		EXISTING PIPE TO BE REMOVED
ADS, FRP, ENT) (2000-2999)			2	C-AJ-2167, C-BJ-2021, C-AJ-2371, C-AJ-2342	C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128		
INSULATED PIPES (5000-5999)	1	1	F-A 5015, F-A 5017, C-AJ-5090,	C-A.I-5090 C-A.I-5091 C-A.I 5061 W-I-5042 W-I -5028 W-I -5029	W-I -5028, W-I -5029, W-I -5047			SANITARY VENT PIPING
		C-AJ-5091, C-AJ-5090, C-AJ-5048			CP 680. FS-ONE MAX. MINERAL WOOL	— · — · —	COLD WATER SUPPLY PIPING	
	2	2 F-A 5015, F-A 5017, C-AJ-5090, C-A J-5091, C-AJ-5091, C-AJ-5091, C-AJ-5091, C-AJ-5061, W-J-5042 W-L-5028, W-L-5029, W-L-5047		SS	STORM SEWER PIPING			
		0-70-0031, 0-70-0030				C	(COOLING COIL) CONDENSATE DRAIN PIPING	
MIXED PENETRANTS	1	C-AJ-8099, C-AJ-8056, C-AJ-8143	C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143	W-L-1095, W-L-8013	-	нв дти	HOSE BIBB	
(8000-8999)	2	C-AJ-8099, C-AJ-8056, C-AJ-8143, C-AJ-8252	C-AJ 8099, C-AJ-8056, W-J-8007, C-AJ-8143, C-AJ-8252	W-L-1095, W-L-8013	FS-ONE MAX, CFS-BL, CP 620, CP 618	WH <b>_</b>	WALL HYDRANT	
NOTEO						WB	WATER HAMMER ARRESTER - SEE DETAIL THIS SHEE	
NOTES:						WCO ه۰۰	WALL CLEAN OUT - SEE DETAIL _/P	
1. JOBSITE CONDITIONS	OF EACH THR	ROUGH-PENETRATION FIRESTOP SYSTEM MUST MEET	ALL DETAILS OF THE UL-CLASSIFIED SYSTEM SEI	LECTED.		СО ө	CLEAN OUT - SEE DETAIL _/P	
2. IF JOBSITE CONDITION	IS DO NOT MA	ATCH ANY UL-CLASSIFIED SYSTEMS IN THE SCHEDULE	ES ABOVE, CONTACT FIRESTOP MANUFACTURER	FOR ALTERNATIVE SYSTEMS OR ENGINEER	R JUDGMENT DRAWINGS.			

LUMBING FIXTURE SCHEDULE

FIXTURE DESIGNATION	FIXTURE DESCRIPTION
EWC-23	ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION, FILTERED, HIGH-LOW, BARRIER-FREE, TYPE 304 STAINLESS STEEL BASIN, BRUSHED FINISH, VANDAL-RESISTANT BUBBLER, STAINLESS STEEL CABINET AND APRON, LEAD-FREE WATERWAYS, SELF CONTAINED SYSTEM (R-134A REFRIGERANT) DELIVERS MIN. 8 GPH OF 50°F WATER @ 80°F. INLET WATER AND 90°F AMBIENT AIR, 120V/1PH. BOTTLE FILLING STATION: ELECTRONIC SENSOR ACTIVATED WITH AUTOMATIC 20-SECOND SHUT-OFF TIMER AND BOTTLE COUNTER. DELIVERS MIN. 1 GPM FLOW RAT WITH LAMINAR FLOW. ANTI-MICROBIAL PLASTIC COMPONENTS.
NOTES:	
1	SUPPLY STOPS: CHROME-PLATED-BRASS, ONE-QUARTER TURN, BALL-TYPE OR COMPRE
2	FLEXIBLE CONNECTIONS: ASME A112.18.6 BRAIDED- OR CORRUGATED-STAINLESS STEEL

# WATER HAMMER ARRESTERS

GROUPED FIXTURES	LONG RUNS
TABLE 1 - FOR GROUPED FIXTURES	TABLE 2 - WATER PRESSURES UP TO 65 P.S.I.G. TABLE 2A - WATER PRESSURES 65 P.S.I.G. TO 85 P.S.
P.D.I. UNITS AA A B C D E F	P.D.I. WATER HAMMER ARRESTERS P.D.I. WATER HAMMER ARRESTE
FIXTURE UNITS         1-3         1-11         12-32         33-60         61-113         114-154         155-330	LENGTH NOMINAL PIPE DIAMETER LENGTH NOMINAL PIPE DIAMETER
	OF PIPE (FT.) 1/2" 3/4" 1" 1-1/4" 1-1/2" 2" OF PIPE (FT.) 1/2" 3/4" 1" 1-1/4" 1-1/2"
RULE 1 - MULTIPLE FIXTURES NOT EXCEEDING 20 FT.	
MAIN OR UP TO 20 FT.	
POINT OF	120         0         0         1         1         11         120         0         1         11         11           150         D         E         F         DF         FF         FFF         150         E         F         F         DF         FI
SELECTION METHOD: USING TABLE 1, SIZE UNIT "X" FOR THE TOTAL FIXTURE UNITS OF BRANCH LINE. RULE 2 - MULTIPLE FIXTURES EXCEEDING 20 FT. POINT OF RELIEF OVER 20 FT. MAIN OR RISER SELECTION METHOD: SIZE UNIT "X" AND UNIT "Y" SO THE SUM OF THE RATINGS IS EQUAL TO OR GREATER THAN TOTAL FIXTURE UNITS OF BRANCH LINE.	NOTE: LOCATE WHA AS CLOSE AS POSSIBLE TO POINT OF CLOSURE S COUTLET SELECTION METHOD: USING EITHER TABLE 2 OR 2A (BASED ON SYSTEM PRESSURE), SIZE UNIT "X" BASED ON SI OF PIPE AND LENGTH OF RUN.
COMBINATION OF RULE 1 AND RULE 2 MAIN OR RISER UP TO 20 FT. OVER 20 FT. POINT OF RELIEF W -BRANCH 1	GENERAL NOTE: PROVIDE WATER HAMMER ARRESTERS IN ACCORDANCE WITH STANDARD PDI-WH201
SELECTION METHOD:         USING TABLE 1, SIZE UNIT "X" FOR BRANCH 1 BASE ON RULE 1. SIZE UNITS "Y"         AND "Z" BASED ON RULE 2.	

3. WHERE MORE THAN ONE APPLICABLE UL-CLASSIFIED SYSTEM IS LISTED IN THE SCHEDULES, CHOOSE THE UL SYSTEM WHICH IS MOST ECONOMICAL FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM.

4. COORDINATE WORK WITH OTHER TRADES TO ENSURE THAT PENETRATION OPENING SIZES ARE APPROPRIATE FOR PENETRANT LOCATIONS, AND VICE-VERSA.

5. ALL THROUGH-PENETRATION FIRESTOPS SHALL BE PROVIDED BY ONE MANUFACTURER. APPROVED MANUFACTURES: HILTI, RECTORSEAL, 3M, STL.

		MOUNTING		ROUGH-IN PIPE SIZES					
	COMPLIANT	METHOD	(A.F.F.)	COLD WATER SUPPLY	HOT WATER SUPPLY	FIXTURE TRAP	FIXTURE DRAIN	MODEL NUMBER	(SEE SCHEDULE)
	YES	WALL SURFACE	SPOUT: 32"	1/2"	N/A	1-1/4"	2"	ELKAY: LZSG8WSSK OR APPROVED EQUAL	

, FLEXIBLE HOSE RISE

MIN. I.E. = 36" B.F.F.	MINIMUM INVERT ELEVATION BELOW REFERENCE
	POINT OF CONNECTION, NEW TO EXISTING
$\rightarrow$	POINT INDICATED LIMIT OF DEMOLITION
$\rightarrow$	POINT OF CONNECTION, PLUMBING TO CIVIL



## THIS CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS. FIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION. HE SHALL BE HELD RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED THEREWITH. BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART. THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK. CONSTRUCTION MANAGER/GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK OF ALL SUBCONTRACTORS TO AVOID INTERFERENCES. ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES. ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS. COORDINATE AND SEQUENCE ALL DEMOLITION, CLEANING AND CONSTRUCTION WORK. SUBMIT A COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE. HE SHALL PROVIDE SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE 0. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON-SITE STORAGE OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF ALL DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS 2. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE OWNER AT COMPLETION OF CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS. PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES". 4. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF. 5. PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING, MARKER BOARDS, BULLETIN BOARDS OR OTHER WALL MOUNTED FURNISHINGS. 6. NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING THE EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED FOR ENTRY INTO THE BUILDING AND EQUIPMENT ROOMS. . PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED. 3. SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE. ATTACHMENTS SHALL BE TO STRUCTURAL SYSTEMS ONLY. 9. ALL ROOF MOUNTED EQUIPMENT SHALL BE SECURED TO STRUCTURE TO RESIST A 130 MPH WIND 20. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE, SMOKE, AND ACOUSTICAL WALL 1. BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. 22. CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS. 3. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS. . THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER WILL MAKE ALL REASONABLE EFFORTS TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. COORDINATE ALL WORK WITH THE OWNER'S DESIGNATED REPRESENTATIVE. 25. EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED. PROVIDE THE REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFETY. 26. REMOVE AND REPAIR OR RE-INSTALL EXISTING CEILING ASSEMBLIES AS REQUIRED. REPLACE ANY ASSEMBLIES DAMAGED OR SOILED DURING CONSTRUCTION. 7. PROVIDE PROPER PROTECTIVE MEASURES TO PROTECT EXISTING FURNITURE, CARPET AND FINISHES DURING THE COURSE OF CONSTRUCTION. TAKE CARE NOT TO DAMAGE EXISTING SURFACES. REPAIR TO MATCH EXISTING CONDITIONS AS REQUIRED. 28. SEAL ALL HOLES IN WALLS, CEILINGS, FLOORS, ETC. TO MATCH EXISTING ADJACENT SURFACES WHERE EQUIPMENT, CONDUIT AND/OR PIPING ARE REMOVED. 29. ALL EXISTING EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER. DISPOSE OF ALL MATERIALS AND EQUIPMENT SHOWN TO BE REMOVED IN ACCORDANCE WITH LOCAL REGULATIONS. 0. REPLACE ALL SIDEWALKS OR PAVEMENT DAMAGED BY OR DURING CONSTRUCTION OF THIS PROJECT. MATCH ADJACENT SURFACE. 1. REMOVE ALL SHRUBBERY, PLANTS, ETC, WHICH INTERFERE WITH WORK UNDER THIS CONTRACT. REPLANT AND/OR REPLACE ALL PLANTS, SHRUBBERY, ETC. AT COMPLETION OF JOB. ALL DISTURBED AREAS OF SOIL SHALL BE RESODDED. REPLACEMENT OF REPLANTING TO BE GUARANTEED FOR . ITEMS REMOVED AND SAVED FOR REUSE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL IDENTIFY ANY DEFECTIVE MATERIALS PRIOR TO DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO MATERIALS AT PROJECT COMPLETION NOT IDENTIFIED PRIOR TO DEMOLITION. 33. RELOCATE, AS REQUIRED, ANY EXISTING WIRE AND CONDUIT WHICH INTERFERES WITH INSTALLATION OF THE NEW WORK. 34. REMOVE ALL ELECTRICAL EQUIPMENT (CONDUIT. POWER & CONTROL WIRING, DISCONNECT SWITCHES, STARTERS, ETC.) RELATED TO EQUIPMENT BEING REMOVED OR REPLACED. 35. CONTRACTOR SHALL COMPLY WITH "TRENCH SAFETY ACT" (FLORIDA STATUTE 553 PART III) AND OSHA STANDARD 29 CFR 1926.650 SUBPART P FOR ALL UTILITY TRENCHES IN EXCESS OF 5 FEET DEEP. CONTRACTOR SHALL INDICATE WITHIN HIS BID RESPONSE A REFERENCE TO THE TRENCH SAFETY STANDARD AND A SEPARATE LINE ITEM COST OF COMPLIANCE WITH STANDARD. 6. HAZARDOUS MATERIALS (ASBESTOS, PCBs, MERCURY, ETC.) MAY BE ENCOUNTERED ON SITE. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY, ABATE, AND DISPOSE OF ALL HAZARDOUS MATERIALS IN A SAFE AND APPROVED MANNER IN ACCORDANCE WITH LOCAL REGULATIONS. PLUMBING NOTES INSTALL ALL WORK IN ACCORDANCE WITH THE FLORIDA PLUMBING CODE AND LOCAL PLUMBING

- CODES. WHERE CONFLICTS OCCUR BETWEEN CODES AND BETWEEN THE CONSTRUCTION DOCUMENTS AND CODES, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN. ALL MISCELLANEOUS EQUIPMENT TO BE FURNISHED UNDER OTHER SECTIONS OF THE
- SPECIFICATIONS THAT REQUIRE PIPING OR DUCT CONNECTIONS SHALL BE RECEIVED AND SET WITH ROUGH-IN AND FINAL CONNECTIONS MADE UNDER THESE SECTIONS. PRESSURE TEST ALL WATER PIPING SYSTEMS AT 150% OF NORMAL WORKING PRESSURE.
- 4. ALL COPPER PRESSURE PIPE SHALL BE SOLDERED ENTIRELY WITH LEAD-FREE SOLDER. 5. INSTALLATION OF EQUIPMENT AND PIPING SHALL PROVIDE CONVENIENT ACCESS FOR MAINTENANCE. 6. ALL FLOOR DRAINS AND FLOOR SINKS SHALL HAVE MINIMUM 3" DRAIN LINES, DEEP SEAL TRAPS AND AUTOMATIC TRAP PRIMERS (MANUFACTURER: PRECISION PLUMBING PRODUCTS).
- WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ACCORDANCE WITH PDI-WH201. 8. ALL HOSE BIBBS, SILL COCKS AND/OR FAUCETS WITH HOSE CONNECTIONS SHALL HAVE A VACUUM . GRAVITY FLOW SYSTEMS HAVE SPACE PRIORITY FOR SLOPING PIPES, HOWEVER SLOPE MUST BE STARTED AT HIGHEST POINT POSSIBLE.
- 0. ALL WATER PIPING SUBJECT TO FREEZING SHALL BE FREEZE PROTECTED. THIS INCLUDES ALL PIPING IN UNHEATED SPACES SUCH AS EQUIPMENT ROOMS, CHASES, ATTICS, SOFFITS, CRAWL SPACES, EXTERIOR WALLS, CEILINGS, ETC. 1. INSULATE EXTERIOR ABOVE GRADE WATER PIPING WITH CELLULAR GLASS. SEE SPECS. 12. DO NOT LOCATE FLOOR DRAINS/SINKS UNDER EQUIPMENT. COORDINATE EXACT LOCATION OF
- DRAINS/SINKS WITH EQUIPMENT FURNISHED. ALL PLUMBING VENTS SHALL BE 2" MINIMUM, UNLESS NOTED OTHERWISE. 14. PROVIDE ACCESS PANEL AT EACH LOCATION WHERE A VALVE OR OTHER DEVICE REQUIRING SERVICE IS LOCATED ABOVE AN INACCESSIBLE CEILING OR INSIDE A WALL. ACCESS PANEL SHALL BE FIRE
- RATED IF INSTALLED IN A FIRE RATED CEILING OR WALL. 5. PROVIDE ALL LOW VOLTAGE WIRING AND CONDUIT NECESSARY FOR CONNECTION PRESSURE SWITCHES. BOTTLE CHANGE OVER ALARM, ETC. TO MASTER ALARM STATION AT NURSE STATION. 6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE THOROUGHLY CLEANED, GREASED, LUBRICATED AND
- ALL ACCESSIBLE PARTS PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- 17. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE, SOIL STACK OR RAIN LEADER, WHETHER SHOWN ON THE DRAWINGS OR NOT. ANY PIPE THAT PASSES UNDER A FOOTING OR THROUGH A FOUNDATION WALL SHALL BE PROVIDED WITH A RELIEVING ARCH, OR A PIPE SLEEVE. SLEEVE SHALL BE BUILT INTO THE FOUNDATION WALL. THE SLEEVE SHALL BE TWO PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH THE WALL. 9. LOCATIONS OF EXISTING BELOW GRADE OR CONCEALED UTILITIES ARE BASED ON REFERENCE MATERIALS PROVIDED TO THE ENGINEER AND HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL
- LOCATE CONCEALED ELEMENTS AND NOTIFY ENGINEER IF VARIANCES BETWEEN THESE DOCUMENTS AND ACTUAL FIELD CONDITIONS EXIST AND MAY MATERIALLY AFFECT THE DESIGN INTENT.

# DRAWING INDEX **GENERAL NOTES, LEGENDS & SCHEDULES** FLOOR PLAN











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PIPING AND FITTINGS

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# E STATUTES, JURISDICTION.

## CCUPANCY - 2017 R QUALITY - 2019 RESIDENTIAL

HOSE - 2019 ENANCE OF WATER-

IG AND VENTILATION ING AND AIR KHAUST SYSTEMS - 2020

SIBILITY STANDARDS CONCERNING THE

S WITH THE ENGINEER DDITITION NECESSARY

## NER, ANY LABOR, L APPLICABLE LAWS,

ABLE CODES, THE UMENTS ARE MORE

# HVAC NOTES

- TRAP AIR CONDITIONING CONDENSATE AND RUN TO SAFEWASTE AT LOCATION SHOWN ON PI ANS
- COORDINATE LOCATION OF ALL EQUIPMENT. DUCTWORK AND PIPING INSTALLATIONS WITH ELECTRICAL TO PROVIDE THE REQUIRED CLEARANCES AROUND ALL ELECTRICAL PANELS, SWITCHGEAR, ETC. INSTALLATION OF EQUIPMENT, DUCTWORK AND PIPING SHALL PROVIDE CONVENIENT ACCESS FOR REMOVAL OF FILTERS AND FOR MAINTENANCE.
- DUCT SIZES GIVEN ARE SHEET METAL SIZES. COORDINATE EXACT LOCATIONS OF AIR DISTRIBUTION EQUIPMENT WITH THE LIGHTING LAYOUT. . PROVIDE NEW AIR FILTERS IN EACH UNIT REQUIRING FILTERS WHEN THE PROJECT IS READY FOR TEST AND BALANCE. DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION. REPLACE FILTERS DURING CONSTRUCTION ACCORDING TO FILTER MANUFACTURER'S RECOMMENDATIONS. SEAL ALL OPEN ENDS OF DUCT WORK DURING CONSTRUCTION.
- VACUUM CLEAN THE INTERIOR OF ALL HVAC EQUIPMENT AND DUCTWORK. PROVIDE FLEXIBLE DUCT CONNECTIONS AT EACH EQUIPMENT CONNECTION. OUTSIDE AIR INTAKES SHALL NOT BE LOCATED ANY CLOSER THAN 15 FEET FROM ANY CHIMNEY OR EXHAUST OUTLET OR PLUMBING VENT TERMINAL. 10. INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIV. 29) IN SUPPLY TRUNK DUCT
- BEFORE ANY TAKE-OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY GREATER THAN 2000 CFM AND WHERE INDICATED ON PLANS. I. WHERE DUCT MOUNTED SMOKE DETECTORS ARE REQUIRED, PROVIDE DUCT ACCESS DOORS TO ALLOW VIEWING AND SERVICING. PROVIDE CEILING/WALL ACCESS PANELS WHERE
- INSTALLED IN INACCESSIBLE LOCATIONS; ACCESS PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL. 12. IT IS RECOMMENDED THAT DUCTWORK BE FABRICATED FROM FIELD MEASUREMENTS TAKEN AS THE BUILDING STRUCTURE AND SPACE COMPETING SYSTEMS ARE PROGRESSIVELY INSTALLED. THE DUCTWORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS IS DIAGRAMMATIC AND DOES NOT NECESSARILY INCLUDE ALL MODIFICATIONS REQUIRED TO AVOID THESE INTERFERENCES. BEFORE FABRICATING ANY DUCTWORK, CHECK THE PHYSICAL CONDITIONS AT THE JOB SITE AND MAKE CHANGES IN CROSS SECTIONS, ROUTING, OFFSETS AND SIMILAR ITEMS WHETHER SPECIFICALLY INDICATED OR NOT. VERIFY THAT SUFFICIENT CLEARANCES ARE AVAILABLE FOR INSTALLING DUCTWORK, PIPING, LIGHT FIXTURES, CEILING SYSTEMS AND TO PROVIDE EQUIPMENT SERVICE. COSTS REQUIRED TO CHANGE DUCTWORK TO FIT THE SPACE AVAILABLE
- AND AVOID INTERFERENCES CAUSED BY SPACE COMPETING SYSTEMS SHALL BE BORNE BY THE CONTRACTOR. NO ADDITIONAL REMUNERATION WILL BE PAID BY THE OWNER. 13. APPLY EXTERNAL INSULATION TO SINGLE WALL SUPPLY DUCTS, RETURN DUCTS AND OUTSIDE AIR DUCTS PER SPECIFICATIONS. DOUBLE WALL DUCTS AND DUCTS INDICATED ON PLANS TO HAVE INTERNAL DUCT LINER SHALL NOT RECEIVE EXTERNAL INSULATION.
- 14. MINIMUM PIPE SIZE FOR COOLING COIL CONDENSATE SHALL BE 3/4". 15. SECTIONS OF PIPE STORED ON SITE OR PLACED IN TRENCHES SHALL HAVE EACH OPEN END COVERED AT ALL TIMES EXCEPT WHILE MAKING CONNECTIONS. IF DEBRIS IS FOUND INSIDE PIPE, IT SHALL BE COMPLETELY REMOVED PRIOR TO ASSEMBLY.
- 16. COORDINATE LOUVER AND DEVICE LOCATIONS WITH WALL STRUCTURAL REINFORCEMENT. SEE STRUCTURAL DRAWINGS FOR LOCATION OF LINTELS, BOND BEAMS AND REINFORCING. 17. COORDINATE ALL DUCT TEST WITNESSING WITH LOCAL MECHANICAL INSPECTOR. 18. DUCT CONSTRUCTION, INCLUDING SHEET METAL THICKNESSES, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS, AND HANGERS AND SUPPORTS, SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE DUCT."
- 19. HVAC TEST AND BALANCE SERVICES WILL BE CONTRACTED BY THE ENGINEER AND COORDINATED BY THE PROJECT MANAGER.

# **GENERAL NOTES**

- DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS. . FIELD VERIFY DIMENSIONS AND CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE
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- 1. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT
- IS MADE. 12. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE ARCHITECT AT COMPLETION OF CONSTRUCTION. 13. CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS,
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- OR OTHER WALL MOUNTED FURNISHINGS. 16. NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING THE EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED FOR ENTRY INTO THE BUILDING AND EQUIPMENT ROOMS. 17. SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE.
- 18. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE, SMOKE, AND ACOUSTICAL WALL ASSEMBLIES.
- 19. BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. 20. CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED
- ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS. 21. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM
- DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS. 22. EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED, PROVIDE THE
- REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFETY. 23. REMOVE AND REPAIR OR RE-INSTALL EXISTING CEILING ASSEMBLIES AS REQUIRED. REPLACE ANY
- ASSEMBLIES DAMAGED OR SOILED DURING CONSTRUCTION. 24. PROVIDE PROPER PROTECTIVE MEASURES TO PROTECT EXISTING FURNITURE. CARPET AND FINISHES DURING THE COURSE OF CONSTRUCTION. TAKE CARE NOT TO DAMAGE EXISTING SURFACES. REPAIR TO MATCH EXISTING CONDITIONS AS REQUIRED. 25. SEAL HOLES IN WALLS, CEILINGS, FLOORS, ETC. TO MATCH EXISTING ADJACENT SURFACES WHERE EQUIPMENT, CONDUIT AND/OR PIPING ARE REMOVED.
- 26. REPLACE SIDEWALKS OR PAVEMENT DAMAGED BY OR DURING CONSTRUCTION OF THIS PROJECT. 27. REMOVE ALL SHRUBBERY, PLANTS, ETC. WHICH INTERFERE WITH WORK UNDER THIS CONTRACT. REPLANT AND/OR REPLACE ALL PLANTS, SHRUBBERY, ETC. AT COMPLETION OF JOB. ALL DISTURBED AREAS OF SOIL SHALL BE RESODDED. REPLACEMENT OF REPLANTING TO BE GUARANTEED FOR ONE YEAR.
- 28. RELOCATE, AS REQUIRED, ANY EXISTING WIRE AND CONDUIT WHICH INTERFERES WITH INSTALLATION OF THE NEW WORK.

# **ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR	HC	HEATING COIL
AHAP	AS HIGH AS POSSIBLE	HOAS	HIGH PERCENTAGE
AHU	AIR HANDLING UNIT	HP	HORSEPOWER
BD	BALANCING DAMPER	IN	INCHES
BHP	BRAKE HORSEPOWER	MCA	MINIMUM CIRCUIT A
BOD	BOTTOM OF DUCT	MOCP	MAXIMUM OVERLOA
BTUH	BRITISH THERMAL UNITS PER HOUR	N/A	NOT APPLICABLE
С	CONDENSATE	OA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	RA	RETURN AIR
DN	DOWN	RAG	RETURN AIR GRILLE
EA	EXHAUST AIR	RAR	RETURN AIR REGIST
F	FEET	REF	REFRIGERANT
°Fdb	DEGREES FAHRENHEIT DRY BULB	RPM	REVOLUTIONS PER
°Fwb	DEGREES FAHRENHEIT WET BULB	SA	SUPPLY AIR
FPM	FEET PER MINUTE	SF	SUPPLY FAN
		SP	STATIC PRESSURE
		SQ FT	SQUARE FEET

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# DRAWING INDEX

M0.1	GENERAL NOTES, LEGENDS & SCHEDULES
M0.2	SCHEDULES
M1.1	FLOOR PLAN
M5.1	DETAILS - HVAC



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# **HIGH PERCENTAGE OUTDOOR AIR UNIT - PACKAGED**

DESIGNATION		
AIR FLOW RATE	ES	
	TOTAL SUPPLY AIR	CFM
	MINIMUM SUPPLY AIR	CFM
	OUTSIDE AIR	CFM
	EXHAUST AIR	CFM
FILTER SECTIO	N	
	DAMPERS	
		MBTUH
	SENSIBLE COOLING CAPACITY	MBTUH
	AIR ENTERING COOLING COIL	°Fdb - °Fwb
	AIR LEAVING COOLING COIL	°Fdb - °Fwb
	EER / IEER	BTU / W-HR
	CONDENSATE DRAIN SIZE	IN.
HEATING DATA	- HEAT PUMP	
	HEATING CAPACITY	MBTUH
	AIR ENTERING HEATING COIL	°F
	AIR LEAVING HEATING COIL	°F
	СОР	W / W
HEATING DATA	- ELECTRIC	
	HEATING CAPACITY - # OF STAGES	kW - #
	AIR ENTERING HEATING COIL	°F
		°F
		1
SUPPLY FAN SI		
	FAN TYPE	
	FAN QUANTITY	#
	EXTERNAL STATIC PRESSURE	IN. WG
	MAXIMUM TOTAL STATIC PRESSURE (INCLUDING DIRTY FILTER)	IN. WG
	DIRTY FILTER ALLOWANCE	IN. WG
	FAN MOTOR HORSEPOWER (PER FAN)	HP - BHP
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - BHP
	VARIABLE FREQUENCY DRIVE	
EXHAUST FAN	SECTION	
	FAN TYPE	
		#
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - RHP
	VARIABLE FREQUENCY DRIVE	
UNIT DATA		
	COMPRESSOR QUANTITY	# - #
	WEIGHT	LBS
	ELECTRICAL CHARACTERISTICS	V / PH
	MCA / MOCP (CIRCUIT #1) NOTE 2	AMPS
MANUFACTURE	ER	
MODEL NUMBE	R	
NOTES:		
1 2	PROVIDE ONE (1) MODULATING COMPRESSOR.	
2 3	PROVIDE SPACE TEMPERATURE SENSOR FOR TEMPERATURE AND DEV	POINT CONTROL.
4	PROVIDE SUPPLY AIR TEMPERATURE SENSOR.	
5 6	PROVIDE OUTSIDE AIK TEMPERATURE AND HUMIDITY SENSORS. PROVIDE SUCTION PRESSURE TRANSDUCER.	
7	PROVIDE DISCONNECT SWITCH.	

7 8

9

PROVIDE UNIT WITH MODULATING HOT GAS REHEAT

PROVIDE UNIT MOUNTED CONTROL PANEL EQUAL TO TRANE TD7 PANEL.



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# SYMBOLS, NOTES, ABBREVIATIONS, ETC.

FIRST - LETTER	SUCCEEDI	NG - LETTE
MEASURED OR INITIATING VARIABLE	READOUT OR PASSIVE FUNCTION	
YSIS	ALARM	
NER, COMBUSTION	USER'S CHOICE (*)	USER'S
R'S CHOICE (*)		CONTRO
R'S CHOICE (*)	DIFFERENTIAL	
ſAGE	SENSOR (PRIMARY ELEMENT)	
V RATE, FLOW		
	GLASS, VIEWING DEVICE	
D (MANUAL)		
RENT (ELECTRICAL)	INDICATE	
ER		
, SCHEDULE		
EL	LIGHT (PILOT)	
STURE, HUMIDITY		
R'S CHOICE (*)	USER'S CHOICE (*)	USER'S
R'S CHOICE (*)	ORIFICE, RESTRICTION	
SSURE, VACUUM	POINT (TEST) CONNECTION	
NTITY	INTEGRATE / TOTALIZE	
ATION	RECORD	
ED, FREQUENCY		SWITCH
PERATURE		TRANSM
TIVARIABLE	MULTIFUNCTION	MULTIFU
ATION, MECHANICAL ANALYSIS	•	VALVE,
GHT, FORCE	WELL, PROBE	
KE, FIRE	UNCLASSIFIED	UNCLAS
NT, STATE, OR PRESENCE		RELAY,
TION, DIMENSION		DRIVER IFIED FII
	SSURE, VACUUM SSURE, VACUUM SSURE, VACUUM SSURE, VACUUM STITY ATION ED, FREQUENCY PERATURE TIVARIABLE ATION, MECHANICAL ANALYSIS SHT, FORCE KE, FIRE IT, STATE, OR PRESENCE TION, DIMENSION USED, EXPLANATION IS SHOWN	SSURE, VACUUM       POINT (TEST) CONNECTION         NTITY       INTEGRATE / TOTALIZE         ATION       RECORD         ED, FREQUENCY       .         PERATURE       .         TIVARIABLE       MULTIFUNCTION         ATION, MECHANICAL ANALYSIS       .         SHT, FORCE       WELL, PROBE         KE, FIRE       UNCLASSIFIED         IT, STATE, OR PRESENCE       .         TION, DIMENSION       .         USED. EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYM

# **GENERAL INSTRUMENT / FUNCTION SYMBOLS**

# CONTROL DEVICE / INSTRUMENT

## XX = VARIABLE OR FUNCTION YY = MODIFIER OR SETPOINT ## = INSTRUMENT NUMBER

INPUT / OUTPUT PARAMETER XY X = ANALOG (A) OR DIGITAL (D) Y = INPUT (I) OR OUTPUT (O)

EXAMPLES:



LOW LOW TEMPERATURE SWITCH CO2 GTE 01 GAS TRANSMITTER & ELEMENT FOR CO2

# ELECTRICAL COMPONENTS & CONTROLLER (SHOWN IN DIAGRAMS)

VFD	VARIABLE FREQUENCY DRIVE (PROVIDED BY OTHERS) - S DETAIL A/
STR	MOTOR STARTER (PROVIDED BY OTHERS) - SEE WIRING I
CNT	MOTOR RATED CONTACTOR (PROVIDED BY DIV. 25) - SEE
$\begin{array}{c} - \textcircled{O} \rightarrow \\ - \vdash \rightarrow \end{array}$	RELAY (NORMALLY OPEN)
$\begin{array}{c} - \bigcirc - \\ - \end{matrix} \\ + \end{matrix} \\ + \end{matrix} \\ \end{array}$	RELAY (NORMALLY CLOSED)
	POWER ENERGY MONITOR
BE	TRANSFORMER
) X	PILOT LIGHT
	NETWORK COMMUNICATION LINK TO BAS
M	ELECTRIC MOTOR

# FIRESTOP SCHEDULE OF THROUGH PEN

	F-RATING	CONCRETE FLOORS
TIFE OF FENERIANT	ANT         F-RATING (HR)         CONCRE 000000000000000000000000000000000000	
CIRCULAR BLANK OPENINGS	1	F-A-0006, C-AJ-0055, C-AJ-0090
(0000-0999)	TYPE OF PENETRANT       F-RATING (HR)         RCULAR BLANK OPENINGS (0000-0999)       1         RCULAR BLANK OPENINGS (0000-0999)       2         ETAL PIPES OR CONDUIT (1000-1999)       1         NON-METALLIC PIPE OR ONDUIT (I.E. PVC, CPVC, 3S, FRP, ENT) (2000-2999)       1         SINGLE OR BUNDLED CABLES (3000-3999)       2         CABLE TRAY (4000-4999)       1         CABLE TRAY (4000-4999)       1	F-A-0006, C-AJ-0055, C-AJ-0090
METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1028, F-A-1017
(1000-1999)	2	C-AJ-1226, F-A-1028, F-A-1017
	1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2342
CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT) (2000-2999)	2	F-A 2053, F-A 2025, C-AJ-2109, C-AJ-2098, C-AJ-22 C-AJ-2167, C-BJ-2021, C-AJ-2371, C-AJ-2342
	1	F-A-3007, C-AJ-3095, C-AJ-3180, C-AJ-3283
(3000-3999)	2	F-A-3007, C-AJ-3095, C-AJ-3334, F-A-3060
CABLE TRAY	1	C-AJ-4034, C-AJ-4035
(4000-4999)	2	C-AJ-4034, C-AJ-4035
	1	C-AJ-8099, C-AJ-8056, C-AJ-8143
MIXED PENETRANTS (8000-8999)	2	C-AJ-8099, C-AJ-8056, C-AJ-8143, C-AJ-8252

NOTES:

1. JOBSITE CONDITIONS OF EACH THROUGH-PENETRATION FIRESTOP SYSTEM MUST MEET ALL DETAILS OF THE UL-CLASSIFIED SYSTEM SELECTED.

2. IF JOBSITE CONDITIONS DO NOT MATCH ANY UL-CLASSIFIED SYSTEMS IN THE SCHEDULES ABOVE, CONTACT FIRESTOP MANUFACTURER FOR ALTERNATIVE SYSTEMS OR ENGINEER JUDGMENT DRAWINGS.

C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143

C-AJ 8099, C-AJ-8056, W-J-8007,

C-AJ-8143, C-AJ-8252

W-L-1095, W-L-8013

W-L-1095, W-L-8013

FS-ONE MAX, CFS-

BL, CP 620, CP 618

3. WHERE MORE THAN ONE APPLICABLE UL-CLASSIFIED SYSTEM IS LISTED IN THE SCHEDULES, CHOOSE THE UL SYSTEM WHICH IS MOST ECONOMICAL FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM.

4. COORDINATE WORK WITH OTHER TRADES TO ENSURE THAT PENETRATION OPENING SIZES ARE APPROPRIATE FOR PENETRANT LOCATIONS, AND VICE-VERSA.

5. ALL THROUGH-PENETRATION FIRESTOPS SHALL BE PROVIDED BY ONE MANUFACTURER. APPROVED MANUFACTURERS: HILTI, RECTORSEAL, 3M, STL.

	APPLICABI	LE CODES		GENERAL NOTES
	PERFORM WORK IN ACCO ORDINANCES, CODES, AN	RDANCE WITH THE FOLLOWING CODES AND AN D REGULATIONS OF GOVERNMENTAL AUTHORI	NY APPLICABLE STATUTES, TIES HAVING JURISDICTION.	DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALL CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMEN     EIELD VERIES ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS LINABLE
OUTPUT FUNCTIOI	1. <u>ASHRAE</u> a. STANDARD 15 b. STANDARD 55 c. STANDARD 62.1 d. STANDARD 90.1	SAFETY STANDARD FOR REFRIGERATION S THERMAL ENVIRONMENTAL CONDITIONS F VENTILATION STANDARD FOR ACCEPTABL ENERGY STANDARD FOR BUILDINGS EXCE BUILDINGS - 2019	SYSTEMS - 2019 OR HUMAN OCCUPANCY - 2017 E INDOOR AIR QUALITY - 2019 PT LOW RISE RESIDENTIAL	<ol> <li>PIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABLE THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WR ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, H RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED THEREWITH.</li> <li>BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINAND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OF</li> </ol>
OICE (*)	2. <u>ASME</u> a. ASME A17.1 b. ASME A17.3	SAFETY CODE FOR ELEVATORS AND ESCA SAFETY CODE FOR EXISTING ELEVATORS A	LATORS - 2019 AND ESCALATORS - 2020	<ul> <li>OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR ON PART.</li> <li>4. THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNECTION PERMITS, CERTIFICATES, CERTI</li></ul>
	3. OCCUPATIONAL SAFE	TY AND HEALTH REGULATIONS (OSHA).		SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK. 5. CONSTRUCTION MANAGER/GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COC OF ALL SUBCONTRACTORS TO AVOID INTERFERENCES. 6. ALL WORK SHALL COMPLY WITH APPLICABLE OS HA AND F PA REGULATIONS AND G
	4.         NATIONAL FIRE CODES           a.         NFPA 1           b.         NFPA 13           c.         NFPA 14           d.         NFPA 25	S UNIFORM FIRE CODE - 2021 (FLORIDA EDIT STANDARD FOR THE INSTALLATION OF SPI STANDARD FOR THE INSTALLATION OF STA STANDARD FOR THE INSPECTION, TESTING BASED FIRE PROTECTION SYSTEMS - 2020	ION) RINKLER SYSTEM - 2019 ANDPIPE AND HOSE - 2019 G AND MAINTENANCE OF WATER-	<ol> <li>ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND G</li> <li>ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCL DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATIN REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS.</li> <li>COORDINATE AND SEQUENCE ALL DEMOLITION, CLEANING AND CONSTRUCTION WORK</li> </ol>
	e. NFPA 30 f. NFPA 30A g. NFPA 31 h. NFPA 52 i. NFPA 54 i. NFPA 70	FLAMMABLE AND COMBUSTIBLE LIQUIDS C CODE FOR MOTOR FUEL DISPENSING FACI STANDARDS FOR OIL BURNING EQUIPMEN VEHICULAR GASEOUS FUEL SYSTEMS COE NATIONAL FUEL GAS CODE - 2020	CODE - 2021 ILITIES AND REPAIR GARAGES - 2021 T - 2020 DE - 2019	<ul> <li>COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION C</li> <li>9. THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE. HE SHALL SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COWORK.</li> <li>10. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTE</li> </ul>
	k. NFPA 72 I. NFPA 90A m. NFPA 90B	NATIONAL FIRE ALARM AND SIGNALING CO STANDARD FOR THE INSTALLATION OF AIR SYSTEMS - 2021 STANDARD FOR THE INSTALLATION OF WA	DE - 2019 CONDITIONING AND VENTILATION RM AIR HEATING AND AIR	SECURITY OF ALL EQUIPMENT AND MATERIALS. 11. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND CONSTRUCTION SITE OF ALL DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL 12. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE OWNER AT COMPLE
OICE (*)	n. NFPA 91 o. NFPA 92 p. NFPA 96 q. NFPA 101	CONDITIONING SYSTEMS - 2021 STANDARD FOR THE INSTALLATION OF BLC STANDARD FOR SMOKE CONTROL SYSTEM STANDARD FOR VENTILATION CONTROL AI COMMERCIAL COOKING OPERATIONS - 202 LIFE SAFETY CODE - 2021 (FLORIDA EDITIO	DWER AND EXHAUST SYSTEMS - 2020 //S - 2018 ND FIRE PROTECTION OF 21 N)	<ul> <li>CONSTRUCTION.</li> <li>13. CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP I PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACT WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PR SAMPLES".</li> <li>14. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM</li> </ul>
	5. <u>FLORIDA BUILDING CC</u> a. BUILDING CODE b. EXISTING BUILDING c. ENERGY CONSER d. MECHANICAL COD	DDE, 2023 EDITION G CODE VATION CODE		OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ ENGINEER'S APPROVAL OF SHOP PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS S INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME O THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIO DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/EN
	e. PLUMBING CODE f. FUEL GAS CODE g. ACCESSIBILITY CO	DE		APPROVAL THEREOF. 15. PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WAL DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING, MARKER BOARDS, BULLE OTHER WALL MOUNTED ELIPPIISHINGS
MPER, LOU	JVER 6. <u>FLORIDA STATUTES</u> a. CHAPTER 471 b. CHAPTER 533.80	ENGINEERING BUILDING CONSTRUCTION STANDARDS; FL ENFORCEMENT	ORIDA BUILDING CODE -	<ol> <li>PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRE</li> <li>SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE. ATTACHN TO STRUCTURAL SYSTEMS ONLY.</li> <li>CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE, SMOKE, AND ACOUSTICAL ASSEMBLIES</li> </ol>
MPUTE, CO CTUATOR, CONTRO	ONVERT UNCLASS - L ELEMENT 7. <u>FLORIDA ADMINISTRA</u> a. CHAPTER 6A-2 b. CHAPTER 9B-7 c. CHAPTER 61C-5 d. CHAPTER 61G15-3-	TIVE CODE EDUCATIONAL FACILITIES FLORIDA BUILDING COMMISSION HANDICAI FLORIDA ELEVATOR SAFETY CODE 8 RESPONSIBILITY RULES OF PROFESSIONA	PPED ACCESSIBILITY STANDARDS L ENGINEERS CONCERNING THE	<ol> <li>CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RAPENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYING SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS.</li> <li>CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES.</li> </ol>
	e. CHAPTER 69A-3 f. CHAPTER 69A-47 g. CHAPTER 69A-58 h. CHAPTER 69A-60	DESIGN OF MECHANICAL SYSTEMS FIRE PREVENTION - GENERAL PROVISIONS UNIFORM FIRE SAFETY STANDARDS FOR E FIRE SAFETY IN EDUCATIONAL FACILITIES THE FLORIDA FIRE PREVENTION CODE	SELEVATORS	<ul> <li>MATERIAL SUPPLIERS AND MANUFACTURERS.</li> <li>21. EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED, PRO' REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFE'</li> <li>22. SEAL ALL HOLES IN WALLS, CEILINGS, FLOORS, ETC. TO MATCH EXISTING ADJACENT S EQUIPMENT, CONDUIT AND/OR PIPING ARE REMOVED.</li> </ul>
	8. ADA ACCESSIBILITY G RESOLVE, IN WRITING, AN PRIOR TO BIDDING. AFTER FOR COMPLIANCE WITH A	UIDELINES FOR BUILDINGS (ADAAG) Y CODE VIOLATION DISCOVERED IN CONTRACT R AWARD OF THE CONTRACT, MAKE ANY CORRE PPLICABLE CODES AT NO ADDITIONAL COST TO	DOCUMENTS WITH THE ENGINEER ECTION OR ADDITITION NECESSARY OWNER.	INSTRUMENTATION AND CONTROL NOTES
	THE CONTRACTOR SHALL MATERIALS, SERVICES, AF ORDINANCES, RULES, ANI	. INCLUDE IN THE WORK, WITHOUT EXTRA COST PPARATUS, AND DRAWINGS REQUIRED TO COM D REGULATIONS.	T TO THE OWNER, ANY LABOR, IPLY WITH ALL APPLICABLE LAWS,	<ol> <li>THE INTENT OF THE INSTRUMENTATION AND CONTROL DRAWINGS IS TO PROVIDE A C OPERATIONAL SYSTEM IN ACCORDANCE WITH THE SEQUENCE(S) OF OPERATION. THI POINTS LISTS, AND SEQUENCES OF OPERATION INCLUDED HEREIN DESCRIBE THE INT SEQUENCES OF OPERATION FOR SYSTEMS AND MAJOR COMPONENTS BUT DO NOT D THE OPERATION OF MINOR COMPONENTS, BELAYS, SWITCHES, WIRING, OR OTHER SN</li> </ol>
	WHERE THERE IS CONFLIC CODES SHALL GOVERN, E STRINGENT.	CT BETWEEN THE CONTRACT DOCUMENTS AND XCEPT WHERE THE REQUIREMENTS OF THE CO	D THE APPLICABLE CODES, THE DNTRACT DOCUMENTS ARE MORE	<ul> <li>REQUIRED FOR THE PROPER OPERATION OF THE CONTROL SYSTEM. THE CONTRACT PROVIDE ALL NECESSARY COMPONENTS AND/OR WIRING TO ACHIEVE THE SEQUENCI</li> <li>PROVIDE ALL CONTROL WIRING, CONDUIT, RELAYS, AND ELECTRICAL WORK REQUIRE PART OF THE INSTRUMENTATION AND CONTROL SYSTEM UNLESS NOTED OTHERWISE COMPLY WITH REQUIREMENTS OF DIVISIONS 26, 27, AND 28 DRAWINGS AND SPECIFIC/</li> </ul>
R	SEQU	IENCE OF OPERATION D	EFINITIONS	<ol> <li>COORDINATE ALL WORK WITH OTHER TRADES INVOLVED. INTERFACE EQUIPMENT AN BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.</li> <li>COORDINATE BUILDING OCCUPANCY SCHEDULES (OCCUPIED AND UNOCCUPIED) WITH OWNER.</li> </ol>
	ENABLE ALLOW AN OF START REQUIRE AN DISABLE PREVENT AN STOP REQUIRE AN PROVE COMMAND EC	PERATION TO START OPERATION TO START OPERATION FROM STARTING OPERATION TO STOP QUAL STATUS		<ol> <li>COORDINATE INSTALLATION LOCATION OF ALL CONTROL DEVICES, INCLUDING BUT NO SENSORS, METERS, SWITCHES, VALVES, DAMPERS, ETC. COORDINATE AND ENSURE DEVICES ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS, INCLUDING DOWNSTREAM DIAMETERS FOR FLOW METERS, PROPER ORIENTATION TO PREVENT M INTRUSION, AND DISTANCES FROM AIR OUTLETS TO ENSURE PROPER TEMPERATURE</li> <li>LOCATE THERMOSTATS AND OTHER WALL-MOUNTED CONTROL DEVICES REQUIRING (</li> </ol>
	100% MAXIMUM CO 0% MINIMUM CO	MMAND OR FULLY OPEN MMAND OR FULLY CLOSED		<ul> <li>MONITORING OR ADJUSTMENT AT AN ELEVATION 4'-0" ABOVE FINISHED FLOOR, IN ACC ADA REGULATIONS.</li> <li>PROVIDE ACCESS PANEL AT EACH LOCATION WHERE A VALVE, DAMPER, OR OTHER D SERVICE IS LOCATED ABOVE AN INACCESSIBLE CEILING OR INSIDE A WALL. ACCESS F</li> </ul>
ER	CONTROL	DEVICES (SHOWN ON FL	OOR PLANS)	<ul> <li>CONSTRUCTION SHALL BEAR UL LABEL. COORDINATE ACCESS PANEL LOCATION WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.</li> <li>PROVIDE DUCT ACCESS DOOR AT EACH AIRFLOW MEASURING STATION.</li> <li>CONTROLLED SYSTEMS SHALL AUTOMATICALLY RESET ON EMERGENCY POWER AND</li> </ul>
e wiring	(T) (H) (TH)	ROOM THERMOSTAT/TEMPERATURE SENSO ROOM HUMIDISTAT/HUMIDITY SENSOR COMBINATION TEMPERATURE AND HUMIDIT	Y SENSOR	<ul> <li>9. CONTROLLED SYSTEMS SHALL AUTOMATICALLY RESET ON EMERGENCY POWER AND NORMAL POWER, UNLESS NOTED OTHERWISE. PROVIDE TIME DELAYS ON RESTART, J TO STAGGER THE START OF EQUIPMENT SO THAT ALL MOTORS DO NOT ATTEMPT TO SAME TIME.</li> <li>10. SAFETTES SHALL BE HADDWIDED UNLESS NOTED OTHERWISE.</li> </ul>
TAIL B/		CARBON DIOXIDE SENSOR VARIABLE FREQUENCY DRIVE (PROVIDED B)	Y OTHERS)	<ul> <li>10. SAFETIES SHALL BE HARDWIRED UNLESS NOTED OTHERWISE.</li> <li>11. WHERE VFD'S ARE LOCATED DIRECTLY UNDER PIPING, PROVIDE GALVANIZED SHEET I SHIELDING AT 18" ABOVE VFD'S SLOPED 1% FROM THE MOUNTING SURFACE TOWARD THE DRIVES, AND EXTENDING TO 12" BEYOND EACH DRIVE FACE.</li> </ul>
/IRING DE	TAIL C/			
	PEM	POWER ENERGY METER		
	MECHANICA	AL COMPONENTS (SHOW	/N IN DIAGRAMS)	
		FAN		COMMISSIONING NOTES
				1. THE BUILDING MECHANICAL SYSTEMS ARE EXEMPT FROM COMMISSIONING REQUIRE ACCORDANCE WITH THE FLORIDA BUILDING CODE - ENERGY CONSERVATION, SECTION (
		X = COOLING (C), HEATING HOT WA COIL REFRIGERANT (R), HEAT PIPE (HP), RUN-AROUND LOOP (RL), GAS HEA	TER (H), STEAM (S), ELECTRIC HEATING (EH), TING (GH), HOT GAS REHEAT(HG)	COMMISSIONING". THE TOTAL MECHHANICAL EQUIPMENT CAPACITY IS LESS THAN 480 M CAPACITY AND 600 MBH HEATING CAPACITY.
				DRAWING INDEX
				IC0.1     GENERAL NOTES, LEGENDS & SCHEDULES       IC0.2     SCHEDULES AND DETAILS
NETR	ATION SYSTEMS. BAS	SIS OF DESIGN: HILTI, INC	<b>C.</b>	IC1.1  COVERED PAVILION PLAN
	CONCRETE OR BLOCK WALLS BASIS OF DESIGN UL SYSTEM	GYPSUM WALLS	HILTI PRODUCTS	
	C-AJ-0055, C-AJ-0090 C-AJ-0055, C-AJ-0090		CP 680, CP 618, FS- ONE MAX, CFS- BL	
	C-AJ-1226, W-J-1067, W-J-1020 C-AJ-1226, W-J-1067, W-J-1020, W-J-1248	W-L-1054, W-L-1058, W-L-1164, W-L-1506 W-L-1054, W-L-1058, W-L-1164, W-L-1506	CP 680, FS-ONE MAX, CP 606, CFS- S SIL GG, CFS-D, MINERAL WOOL	
3, 42	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	CP 680, CP 643N, MINERAL WOOL,	
J-2271, 42	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	SL, CFS-S SIL CG, CP 648	
3	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	CP 680, CP 653, FS-ONE MAX. CP	
)	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167, W-J-3189	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	618, CP 606, CFS-D, CFS-CC	
	W-J-4027, C-AJ-4034, C-AJ-4035 W-J-4027, C-AJ-4034, C-AJ-4035	W-L-4011, W-L-4019, W-L-4081 W-L-4011, W-L-4019, W-L-4081	CFS-BL, FS-ONE MAX, CP 620, CP 618	





		SINGLE Z
		INTE RELI
CINI		
1	GE	
	a.	THE SYSTEM SHALL BE CONTROLLED BY A SEPARATE, STAND-ALONE APPLICATION SPECIFIC CONTROLLER (ASC) PROVIDED AND CONFIGURED BY THE EQUIPMENT MANUFACTURER. THE ASC SHALL MONITOR AND CONTROL THE UNIT IN A STAND-ALONE MODE. (TRANE IS THE BASIS OF DESI MANUFACTURER. ADJUSTMENTS TO THE ASC SETPOINTS AND FUNCTIONS ARE PERFORMED VIA T TRANE TD7 CONTROL PANEL MOUNTED IN THE AIR HANDLING UNIT, <u>HOAS-1</u> .)
	b.	THE ASC SHALL RESIDE ON A SUB-NETWORK OF THE PROGRAMMABLE APPLICATION CONTROLLER
	C.	ALL SET-POINTS, TIME DELAYS, DEAD-BANDS, RESET LIMITS, SELECTABLE POINTS, AND OBJECTS SHALL BE AVAILABLE TO THE USER VIA DYNAMIC GRAPHICS OR TEXT-BASED INTERFACE WITHOUT REQUIRING THE USER TO EDIT THE APPLICATION PROGRAM.
2.	RU	I CONDITIONS
	a.	SPACE TEMPERATURE AND HUMIDITY SET-POINTS:
		<ol> <li>PROVIDE OCCUPIED SPACE TEMPERATURE COOLING (74°F, ADJ) AND HEATING (70°F, ADJ) S POINTS. PROVIDE UNOCCUPIED SPACE TEMPERATURE COOLING (80°F, ADJ) AND HEATING F, ADJ) SET-POINTS.</li> <li>PROVIDE AN OCCUPIED SPACE HUMIDITY SET-POINT (55%, ADJ). PROVIDE AN UNOCCUPIED SPACE HUMIDITY SET POINT (2001, ADJ).</li> </ol>
	b.	OCCUPIED MODE: ENABLE THE UNIT BASED ON AN OCCUPIED TIME SCHEDULE (MON-FRI = 7:00 AM 6:00 PM / SAT - SUN = OFF. ADJ).
		1) <u>COOLING MODE:</u> IF THE SPACE TEMPERATURE RISES ABOVE THE OCCUPIED SPACE COOLI
		SET-POINT PLUS A DEAD-BAND, THEN INITIATE COOLING MODE. 2) <u>HEATING MODE:</u> IF THE SPACE TEMPERATURE FALLS BELOW THE OCCUPIED SPACE HEATING
		<ul> <li>SET-POINT MINUS A DEAD-BAND, THEN INITIATE HEATING MODE.</li> <li><u>DEHUMIDIFICATION MODE:</u> IF THE SPACE HUMIDITY RISES ABOVE THE SPACE HUMIDITY SET POINT, THEN INITIATE DEHUMIDIFICATION MODE UNTIL SPACE HUMIDITY IS BELOW SET-POIL MINUS A DEAD-BAND (5%, ADJ) OR SPACE TEMPERATURE FALLS A DEADBAND (2 DEG F,AD, BELOW COOLING SET-POINT</li> </ul>
	C.	UNOCCUPIED MODE : THE UNIT IS OFF AND ASSOCIATED OUTSIDE AIR DAMPER IS CLOSED.
		<ol> <li><u>TEMPERATURE CONTROL:</u> DURING UNOCCUPIED HOURS, RESET THE COOLING AND HEATIN TEMPERATURE SET-POINTS EQUAL TO THE RESPECTIVE UNOCCUPIED TEMPERATURE SET POINTS. IF THE SPACE TEMPERATURE EITHER RISES ABOVE THE UNOCCUPIED COOLING SI POINT OR FALLS BELOW THE UNOCCUPIED HEATING SET-POINT, THEN ENABLE THE SUPPL' FAN AND TEMPERATURE CONTROL UNTIL THE SPACE TEMPERATURE IS BELOW SET-POINT MINUS A DEAD-BAND (3°F, ADJ) FOR COOLING MODE AND ABOVE SET-POINT PLUS A DEAD-E (3°F, ADJ) FOR HEATING MODE.</li> <li><u>TENANT OVERRIDE:</u> DURING UNOCCUPIED HOURS, IF THE OVERRIDE BUTTON IS ACTIVATED THE SPACE SENSOR, THEN INITIATE AN OCCUPIED MODE OF OPERATION FOR A MINIMUM T DELAY (2 HOURS, ADJ).</li> <li><u>DEHUMIDIFICATION MODE:</u> DURING UNOCCUPIED HOURS, RESET THE DEHUMIDIFICATION SET POINT TO THE UNIOCCUPIED SET POINT IE THE SPACE HI MIDITY PISES ABOVE THE SET</li> </ol>
		POINT, THEN INITIATE DEHUMIDIFICATION MODE UNTIL SPACE HUMIDITY IS BELOW SET-POIN MINUS A DEAD-BAND (5%, ADJ) OR SPACE TEMPERATURE FALLS A DEADBAND (2 DEG F, AD, BELOW COOLING SET-POINT.
3.	SU a.	PLY FAN <u>START / STOP:</u> START / STOP OF THE SUPPLY FANS SHALL BE CONTROLLED THROUGH THE H-O-A SWITCH ON THE MOTOR STARTER. ENABLE THE SUPPLY FAN[S] BASED ON AN OCCUPIED TIME SCHEDULE AND UNOCCUPIED OVERRIDES.
	b.	<u>STATUS:</u> SUPPLY FAN OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH. UPON FAILUF THE BAS SHALL ANNUNCIATE ONE OF THE FOLLOWING ALARMS:
		<ol> <li><u>FAN FAILURE:</u> IF THE FAN IS COMMANDED ON, BUT THE STATUS IS OFF.</li> <li><u>FAN IN HAND MODE:</u> IF THE FAN IS COMMANDED OFF, BUT THE STATUS IS ON.</li> </ol>
	C.	<u>SPEED:</u> PROGRAM A MINIMUM SPEED (30%) AND A RAMP TIME (60 SEC) INTO THE VFD. COORDINAT MINIMUM SPEED SET-POINT IN VFD WITH THE TAB CONTRACTOR TO ENSURE SUPPLY AIRFLOW RA IS MAINTAINED DURING ALL MODES. FAN SPEED SHALL FUNCTION AS FOLLOWS:
		1) <u>COOLING:</u> MODULATE FAN SPEED TO AS REQUIRED TO MEET SPACE THMPERATURE
		<ul> <li>SETPOINT.</li> <li><u>HEATING:</u> MODULATE FAN SPEED TO 50% FAN REMAIN AT 50% CONSTANT SPEED.</li> <li><u>DEHUMIDIFICATION:</u> MODULATE FAN SPEED TO AS REQUIRED TO MEET SPACE TEMERATURE SETPOINT.</li> </ul>
4. F	RET	JRN DAMPER: DAMPER MODULATES IN UNISON WITH OUTSIDE AIR DAMPER.
5.	0U <sup>-</sup>	SIDE AIR DAMPER
5.	OU <sup>-</sup> a. <u>(</u> b. c. 3	SIDE AIR DAMPER <u>CCUPIED MODE:</u> MODULATE DAMPER TO MAINTAIN OUTSIDE AIRFLOW SETPOINT. I <u>NOCCUPIED MODE:</u> CLOSE DAMPER. UPPLY FAN OFF: CLOSE DAMPER.

# 6. COMPRESSORS

d. <u>SUPPLY FAN OFF:</u> COMPRESSORS OFF. e. COOLING MODE: STAGE THE COMPRESSORS IN SEQUENCE TO MAINTAIN A SUPPLY AIR TEMPERATURE

SETPOINT OF 55 DEG. F. (ADJUSTABLE). f. <u>HEATING MODE:</u> OFF g. DEHUMIDIFICATION MODE: STAGE THE COMPRESSORS IN SEQUENCE TO MAINTAIN A

DEHUMIDIFICATION COIL SUCTION TEMERATURE SETPOINT OF 40-45DEG. F. (ADJUSTABLE). 7. HOT GAS REHEAT VALVE

a. <u>SUPPLY FAN OFF:</u> HOT GAS REHEAT VALVE CLOSED. b. COOLING MODE: HOT GAS REHEAT VALVE CLOSED.

c. DEHUMIDIFICATION MODE: HOT GAS REHEAT VALVE MODULATES TO MAINTAIN SPACE TEMPERATURE d. <u>HEATING MODE:</u> HOT GAS REHEAT VALVE CLOSED.

8. ELECTRIC REHEAT

a. SUPPLY FAN OFF: HEATER OFF. b. <u>COOLING MODE:</u> HEATER OFF.

c. DEHUMIDIFICATION MODE: STAGE/MODULATE ELECTRIC HEAT TO MAINTAIN THE SPACE TEMPERATURE COOLING SET-POINT. IF HOT GAS REHEAT CANNOT MAINTAIN SPACE TEMPERATURE SETPOINT ALONE. d. HEATING MODE: STAGE/ MODULATE ELECTRIC HEAT, TO MAINTAIN THE SPACE TEMPERATURE HEATING SET-POINT (70°F, ADJ).

9. SAFETIES

a. <u>SMOKE DETECTOR(S)</u>: SMOKE DETECTOR(S) ARE PROVIDED BY OTHERS BUT SHALL BE WIRED IN SERIES WITH THE START COMMAND ON THE MOTOR CONTROLLER TO OVERRIDE ALL CONTROLS AND SHUT DOWN THE AIR HANDLER UNIT UPON DETECTION OF SMOKE. b. FLOAT SWITCH: PROVIDE A FLOAT SWITCH IN THE AUXILIARY DRAIN PAN WIRED IN SERIES WITH THE START COMMAND ON THE MOTOR CONTROLLER TO OVERRIDE ALL CONTROLS AND SHUT DOWN THE SPLIT SYSTEM UPON DETECTION OF A HIGH WATER LEVEL IN THE DRAIN PAN. MONITOR STATUS OF SWITCH AT BAS.

# SINGLE ZONE VAV PACKAGED AIR HANDLER (RTU)

SPEED STATUS STATUS

NOTES:



# SINGLE ZONE VAV PACKAGED AIR HANDLER (RTU) SCHEMATIC

SZVAV PACKAGED AIR HANDLING UNIT			POINT TYPE				CONTROL TYPE			EQUIP. SCHEM.	
POINT DESCRIPTION	UNITS	ANA IN	LOG OUT	DIG IN	ITAL OUT	INTEG. POINT	Ρ	I	D	DESIG. DESIG.	NOTES
SUPPLY FAN START/STOP	ON/OFF				1					YC-01	1
SUPPLY FAN STATUS	ON/OFF			1						IS-01	1
SUPPLY FAN SPEED	%		1				x	x		SCT-01	1
COMPRESSOR STATUS	ON/OFF			2						YS-02,03	2
VARIABLE SPEED COMPRESSOR SPEED	%		1							SC-01	
OUTSIDE AIR DAMPER POSITION	% OPEN		1				x	x		FCV-01	
UNIT ALARM	ON/OFF			1						YA-01	
HOT GAS REHEAT VALVE POSITION	% OPEN		1				x	x		TCV-01	
ELECTRIC HEAT (SCR)	%		1							YY-01	
SMOKE DETECTOR	NORMAL / ALARM			2						XS-01,02	1
FLOAT SWITCH	NORMAL / ALARM			1						LS-01	1
SUPPLY AIR TEMPERATURE SET-POINT ADJUST	DEG F		1							TCT-01	
EVAPORATOR SUCTION TEMPERATURE SETPOINT ADJUST	DEG F		1							TCT-O2	
TENANT OVERRIDE	ON/OFF			1						HS-01	
SPACE TEMPERATURE	DEG F	1								TTE-01	
SPACE HUMIDITY	RH	1								MTE-01	
SPACE TEMPERATURE SETPOINT ADJUST	DEG F		1							TCT-01	
SUPPLY AIR TEMPERATURE	DEG F	1								TTE-02	
POINTS (SUB-TOTAL)	#	3	8	8	1		1	<u> </u>			
POINTS (TOTAL WITH SPARE)	#	4	9	9	2						

1 HARDWIRE TO VFD, MOTOR STARTER, OR MOTOR CONTACTOR. SEE DETAILS SHEET IC001.

2 NUMBER OF POINTS VARIES DEPENDING ON NUMBER OF COMPRESSORS.REFER TO SCHEDULES

## LONE APPLICATION SPECIFIC IPMENT MANUFACTURER. THE ASC MODE. (TRANE IS THE BASIS OF DESIGN FUNCTIONS ARE PERFORMED VIA THE NIT, <u>HOAS-1</u>.)

## 74°F, ADJ) AND HEATING (70°F, ADJ) SET-E COOLING (80°F, ADJ) AND HEATING (65° 5%, ADJ). PROVIDE AN UNOCCUPIED

# SIDE AIR DAMPER IS CLOSED.

, RESET THE COOLING AND HEATING E UNOCCUPIED TEMPERATURE SET-BOVE THE UNOCCUPIED COOLING SET-T-POINT, THEN ENABLE THE SUPPLY EMPERATURE IS BELOW SET-POINT ABOVE SET-POINT PLUS A DEAD-BAND

E OVERRIDE BUTTON IS ACTIVATED AT E OF OPERATION FOR A MINIMUM TIME RESET THE DEHUMIDIFICATION









LIGHTING FIXTURE SCHEDULE	ELECTRICAL GENERAL NOTES	GENERAL NOTES
	ELECTRICAL CENERAL NOTES  Whith the List operation for the therefore and the second and the control of the second and the sec	CENERAL NOTES      Instrumentary of the accomment with the Local action by the Commentary of the action of th

	L	IGHTING FIXTURE SCHEDULE			ELECTRICAL GEN	IERAL NOTES	GENERAL NOTE	S
L COORDINATE FIXTURE TYPE WITH ARCE MED EQUAL TO THOSE SPECIFIED SHALL STRIM REQUIRED FOR CEILING TYPE INST CY BATTERIES FOR FIXTURES WHERE SHO URER DY-R-SA-AT HBF-90-40K-120-V01-DL-PM1-VDIN FIRESTOP SCHEEL TYPE OF PENETRANT (000-0399) 2 METAL PIPES OR CONDUIT (1000-1999) 2 METAL PIPES OR CONDUIT (1000-1999) 2 MIXED PENETRANTS (2000-8399) 2 MIXED PENETRANTS (2000-8399) 2 NOTES: 1. JOBSITE CONDITIONS OF EACH THF 2. IFJ.0BSITE CONDITIONS DO NOT MU 3. WHERE MORE THAN ONE APPLICAE 4. COORDINATE WORK WITH OTHER T 5. ALL THROUGH-PENETRATION FIRES TING AND APPLIANCE MAIN MERE MORE THAN ONE APPLICAE 4. COORDINATE WORK WITH OTHER T 5. ALL THROUGH-PENETRATION FIRES TING AND APPLIANCE MIXED PENETRANTS (200-8399) 2 NOTES: 1. JOBSITE CONDITIONS DO NOT MU 3. WHERE MORE THAN ONE APPLICAE 4. COORDINATE WORK WITH OTHER T 5. ALL THROUGH-PENETRATION FIRES TING AND APPLIANCE AMP RATING 12 NEMA: 20 SERVING REC COVERED PLAY 20 SPACE	L HITECTURAL FINISH SCHED L BE SUBMITTED FOR APPF TALLED. HOWN ON PLANS.	IGHTING FIXTURE SCHEDULE         ULE(6), ARCHTECT SHALL CONFIRM FINISH OF ALL FIXTURES IN GUES         INTERNET ALL CONFIRM FINISH OF ALL FIXTURES IN GUES         INTERNET ALL CONFIRM FINISH OF ALL FIXTURES IN GUES         INTERNET ALL CONFIRM FINISH OF ALL FIXTURES IN GUES         SW       LOUGH PENETRATION SYSTEMS. BASIS         SOUGH PENETRATION SYSTEMS. BASIS         FLOORS       CONCRETE OR BLOCK WALLS         BASIS OF DESIGN UL SYSTEM       BASIS OF DESIGN UL SYSTEM         BCS, CAL-0030       CAL-2005, CAL-0030       CAL-2015, CAL-0038         CAL-2128, W-J-1087, W-J-1020       CAL-2128, W-J-1087, W-J-1020         D28, FA-1017       CAL-1228, W-J-1087, W-J-1020         CAL-2129, CAL-2008, CAL-2167, CAL-2342       CAL-2010, CAL-2008, CAL-2167, CAL-2342         D30, CAL-3017, CAL-2342       CAL-2108, CAL-3167, CAL-2342         D30, CAL-3024, CAL-22108, CAL-2168, CAL-2167, CAL-2342       CAL-2108, CAL-3028, W-B4007, CAL-3143         CAL-2108, CAL-3028, CAL-2017, CAL-2342       CAL-3008, CAL-3056, W-L5007, CAL-3143         CAL-3143, CAL-8252       CAL-3056, CAL-3143       CAL-3008, CAL-3056, W-L5007, CAL-3143         CAL-3143, CAL-8252       CAL-3058, W-B3007, CAL-3143       CAL-3058, W-B3007, CAL-3143         CAL-3143, CAL-3242       CAL-3058, W-B3007, CAL-31	TAPUBLIC AREAS.         Ge       DESCRIF         THERMOPLASTIC EXIT SIGN. UNIVERSA TV         INTERMOPLASTIC EXIT SIGN. UNIVERSA TV         S OF DESIGN: HILTI, INC         GYPSUM WALLS         """         W-L-1054, W-L-1058, W-L-1164, W-L-1506         W-L-1054, W-L-1058, W-L-1164, W-L-1506       W-L-1095, W-L-2075, W-L-2128         W-L-2078, W-L-2075, W-L-2128         W-L-1095, W-L-2075, W-L-2128       W-L-1095, W-L-8013         ELECTED.         RFOR ALTERNATIVE SYSTEMS OR ENGINEER CONMICAL FOR EACH THROUGH-PENETRA IONS, AND VICE-VERSA.         ALTERNATIVE SYSTEMS OR ENGINEER CONMICAL FOR EACH THROUGH-PENETRA IONS, AND VICE-VERSA.         ALTERNATIVE SYSTEMS OR ENGINEER CONMICAL FOR EACH THROUGH-PENETRA IONS, AND VICE-VERSA.         ALTERNATIVE SYSTEMS OR ENGINEER CONMICAL FOR EACH THROUGH-PENETRA IONS, AND VICE-VERSA.         ALTERNATIVE SYSTEMS OR ENGINEER CONMICAL FOR EACH THROUGH-PENETRA IONS, AND VICE-VERSA.         Basis       CKT BREAKER       SERVING         WILL       Y       DISCON BREAKE         WILL       SPACE       IONS AND VICE VERSA.         I       20       SPARE         I       20       SPARE <t< td=""><td>PTION         NL MOUNTING. SELF-TESTING.         INT FIXTURE WITH FROSTED LENS         COLOR: BLACK.         C         HILTI PRODUCTS         CP 680, CP 618, FS-ONE MAX, CFS- BL         CP 680, CP 643N, MINERAL WOOL,         CP 680, CP 643N, CFS-S SIL         SL, CFS-S SIL CG, CP 648         JUDGMENT DRAWINGS.         TION FIRESTOP SYSTEM.         RS         ID PNL     <td>ELECTRICAL GEN      WIRING SHALL BE COPPER, TYPE     ELECTRICAL NON-METALLIC SCHE     STEEL CONDUIT (RSC) SHALL BE     STEEL CONDUIT (RSC) SHALL BE     STEAL CONDUIT (RSC) SHALL BE     METAL CONDUIT SHALL BOND AND O     PROVIDE A GROUNDING CONDUC     RECEPTACLES AND POWER BRAN      LIGHTING FIXTURES SHALL BE SEE      THE CONTRACTOR SHALL BOD AND C     PROVIDE A GROUNDING CONDUC     RECEPTACLES AND POWER BRAN      LIGHTING FIXTURES SHALL BE SEE      THE CONTRACTOR SHALL BOD AND C     CONDUIT SHALL BE SIZED AS REC      CONDUT SHAL SWITCH BOARD      NE SIGNOTED ONE</td><td>INTERNATIVE VIEW AND A CONTROL OF A STATE OF</td><td>GENERAL NOTE           O         INSTALLALL WORK IN ACCO PREVENTION CODE, THE NA RULES AND REGULATIONS C OCCUR BETWEEN CODES AN REQUIREMENTS SHALL GOV SED           INSTALL ALL WORK IN ACCO (BLE CONTRACT, REFENT CO ARCO SED         DESCONTRACT, REFENT CO ARCO CONTRACT, REFENT CO ARCO CONTRACT REFENT CO ARCO CONTRACT OR SHALL BE HE ADD SATSY HIMSELF AS T TO THE ARCHITECT. 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C         HILTI PRODUCTS         CP 680, CP 618, FS-ONE MAX, CFS- BL         CP 680, CP 643N, MINERAL WOOL,         CP 680, CP 643N, CFS-S SIL         SL, CFS-S SIL CG, CP 648         JUDGMENT DRAWINGS.         TION FIRESTOP SYSTEM.         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IF CON CONTRACTOR SHALL BE HE SUBSEQUENTLY BE MADE IN OMISSION ON CONTRACTOR STREP           REF         THE CONTRACTOR SHALL BE HE CONSTRUCTION MANAGER S SUBCONTRACTORS TALL DO ARCHITECTORS TALL DAMCER SIGNS AND COMPLY SATED           REF         THE CONTRACTOR SHALL BE CONSTRUCTION MANAGER S SUBCONTRACTORS TALL DAMCER SIGNS AND OTHER REGULATIONS. PROVIDE SA CONSTRUCTION MANAGER S SUBCONTRACTORS TALL DAMCER SIGNS AND OTHER REGULATIONS. PROVIDE SA CONSTRUCTION MANAGER S SUBCONTRACTORS SHALL BI DAMCER SIGNS AND OTHER REGULATIONS. 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	PANEL '9L' 277/480V, 30 (1254) 400A 3#1, #80 ARTIAL RI E: NONE CENERAL NOTES 1. SHORT CIRCU INFORMATION FO 2. PROVIDE ARC EQUIPMENT DES ELECTRONIC CO	PANEL 9P 120/2004, 30 12/2004, 30 2004 2004 2004 2004 2004 2004 2004 20	PANEL 'CP-NL1' 120/208V, 10 AFC: 504A	COVERED PLAY	J#     ZON EQU       RC #     DIG CON       M     #IN #IN APP       S     30A Th HOME       WIRE     UOW       UOW     HOME       WIRE     UOW       STARTER NEMA SIZE     UOW       WIRE     UOW       WIRE     UOW       WIRE     UOW       WIRE     UOW <td< td=""><td>ES; ENGRAVED ON/OFF. WATTSTOPPER; LMSW-10x-ENG1 OR A IAL. TAL 10A, ON/OFF/1-10 VOLT DIMMING ROOM CONTROLLER. # INI TROLLED ZONES, PROVIDE 1 OR 2 RELAYS AS REQUIRED FOR TROLED ZONES, WATTSTOPPER; IND SERIES OR APPROVED E TAL OCCUPANCY SENSOR - CELING MOUNTED, DUAL TECHNOL DICATES CONTROLLED ZONES, WATTSTOPPER; LMDC-100 OR ROVED EQUAL. DICATES CONTROLLED ZONES, WATTSTOPPER; LMDC-100 OR ROVED EQUAL. DICATES CONNECT SWITCH. PROVIDE 1, 2 OR 3 POLE AS SSARY TO MATCH CONTROLLED CIRCUIT. IN CONDUIT - CONCEALED IN WALL OR CELING. RUN TO PANEL - ARROW INDICATE NUMBER OF CIRCUITS, SHOI SUNDICATE NUMBER OF PHASE CONDUCTORS, LONG SLASH M ATE NEUTRAL CONDUCTORS), LONG SLASH MARK WITH HOOK IN GROUND WIRE; WHERE NOT SHOWN GROUND WIRE IS STILL 1 HEEDER, LIGHTING, RECEPTACLE, AND POWER BRANCH CIR IMARKS INDICATE 2 CURRENT CARRYING CONDUCTORS AND C THERE SHALL BE NO SHARED NEUTRALS BETWEEN MULTIPLE 1 RICAL PANEL - 120/208 VOLT RICAL PANEL - 120/208 VOLT RICAL PANEL - 277/480 VOLT TON BOX - 4" SQUARE (UNO) WNECT SWITCH - SEE DRAWING OR MECHANICAL EQUIPMENT S ZE NATION DISCONNECT SWITCH &amp; MAGNETIC MOTOR STARTER - I OL (SEPARATE ITEMS ACCEPTABLE IN PLACE OF COMBINATIC NG FOR SIZE * SIZES WILL BE INDICATED AS FOLLOWS:</td><td>PPROVED       HOMERUINS AND NEW CIRC         CATES       CONTRACTOR SHALL UPOI REMODELED AREA(S) ARE         GUAL.       . CONTRACTOR SHALL MAKE         ACCOMMODATE NEW WALL       INTERFERENCES MAY OCC         CONNECTION REQUIREMEN       8. ALL EXISTING LIGHT FIXTUR         PROVIDE NEW BALLASTS A       9. ALL EXISTING LIGHT FIXTUR         PROVIDE NEW BALLASTS A       4. COORDING TO EPA REQUIRED         RT SLASH       ACCORDING TO EPA REQUIRED         CHEDULE       WHEN         IND - SEE       DRAWING INDEX         WNN       MOUNT         STYPE, SE.       DRAWING SINDEX         E0.1       GENERAL NC         E1.0       SITE PLAN         E1.1       FLOOR PLAN</td><td>JIT BREAKERS ADEQUATE FOR THE LOAD CONNECTED. I COMPLETION OF WORK, ENSURE ALL EXISTING CIRCUITS V PROPER WORKING CONDITION. ALL NECESSARY ADJUSTMENTS TO ELECTRICAL DEVICES S AND CELINGS. BECAUSE OF THE ANTURE OF THE JOB, JR. CLOSE COORDINATION BETWEEN TRADES IS REQUIR TS BEFORE ROUGH-IN. ES BEING REMOVED &amp; REINSTALLED SHALL BE CLEANED VD LAMPS AS NEEDED FOR ALL EXISTING FIXTURES. LAMPS SHALL BE CAREFULLY STORED, PACKAGED, AND I REMENTS. ALL FEES ASSOCIATED WITH LEGAL DISPOSAL DR BY THE CONTRACTOR. K TES, LEGENDS &amp; SCHEDULES S</td></td<>	ES; ENGRAVED ON/OFF. WATTSTOPPER; LMSW-10x-ENG1 OR A IAL. TAL 10A, ON/OFF/1-10 VOLT DIMMING ROOM CONTROLLER. # INI TROLLED ZONES, PROVIDE 1 OR 2 RELAYS AS REQUIRED FOR TROLED ZONES, WATTSTOPPER; IND SERIES OR APPROVED E TAL OCCUPANCY SENSOR - CELING MOUNTED, DUAL TECHNOL DICATES CONTROLLED ZONES, WATTSTOPPER; LMDC-100 OR ROVED EQUAL. DICATES CONTROLLED ZONES, WATTSTOPPER; LMDC-100 OR ROVED EQUAL. DICATES CONNECT SWITCH. PROVIDE 1, 2 OR 3 POLE AS SSARY TO MATCH CONTROLLED CIRCUIT. IN CONDUIT - CONCEALED IN WALL OR CELING. RUN TO PANEL - ARROW INDICATE NUMBER OF CIRCUITS, SHOI SUNDICATE NUMBER OF PHASE CONDUCTORS, LONG SLASH M ATE NEUTRAL CONDUCTORS), LONG SLASH MARK WITH HOOK IN GROUND WIRE; WHERE NOT SHOWN GROUND WIRE IS STILL 1 HEEDER, LIGHTING, RECEPTACLE, AND POWER BRANCH CIR IMARKS INDICATE 2 CURRENT CARRYING CONDUCTORS AND C THERE SHALL BE NO SHARED NEUTRALS BETWEEN MULTIPLE 1 RICAL PANEL - 120/208 VOLT RICAL PANEL - 120/208 VOLT RICAL PANEL - 277/480 VOLT TON BOX - 4" SQUARE (UNO) WNECT SWITCH - SEE DRAWING OR MECHANICAL EQUIPMENT S ZE NATION DISCONNECT SWITCH & MAGNETIC MOTOR STARTER - I OL (SEPARATE ITEMS ACCEPTABLE IN PLACE OF COMBINATIC NG FOR SIZE * SIZES WILL BE INDICATED AS FOLLOWS:	PPROVED       HOMERUINS AND NEW CIRC         CATES       CONTRACTOR SHALL UPOI REMODELED AREA(S) ARE         GUAL.       . CONTRACTOR SHALL MAKE         ACCOMMODATE NEW WALL       INTERFERENCES MAY OCC         CONNECTION REQUIREMEN       8. ALL EXISTING LIGHT FIXTUR         PROVIDE NEW BALLASTS A       9. ALL EXISTING LIGHT FIXTUR         PROVIDE NEW BALLASTS A       4. COORDING TO EPA REQUIRED         RT SLASH       ACCORDING TO EPA REQUIRED         CHEDULE       WHEN         IND - SEE       DRAWING INDEX         WNN       MOUNT         STYPE, SE.       DRAWING SINDEX         E0.1       GENERAL NC         E1.0       SITE PLAN         E1.1       FLOOR PLAN	JIT BREAKERS ADEQUATE FOR THE LOAD CONNECTED. I COMPLETION OF WORK, ENSURE ALL EXISTING CIRCUITS V PROPER WORKING CONDITION. ALL NECESSARY ADJUSTMENTS TO ELECTRICAL DEVICES S AND CELINGS. BECAUSE OF THE ANTURE OF THE JOB, JR. CLOSE COORDINATION BETWEEN TRADES IS REQUIR TS BEFORE ROUGH-IN. ES BEING REMOVED & REINSTALLED SHALL BE CLEANED VD LAMPS AS NEEDED FOR ALL EXISTING FIXTURES. LAMPS SHALL BE CAREFULLY STORED, PACKAGED, AND I REMENTS. ALL FEES ASSOCIATED WITH LEGAL DISPOSAL DR BY THE CONTRACTOR. K TES, LEGENDS & SCHEDULES S

	ELECTRICAL GENERAL NOTES	GENERAL NOTES
S: JR SHALL COORDINATE FIXTURE TYPE WITH ARCHITECTURAL FINISH SCHEDULE(S). ARCHITECT SHALL CONFIRM FINISH OF ALL FIXTURES IN GUEST/PUBLIC AREAS. RES DEEMED EQUAL TO THOSE SPECIFIED SHALL BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH SPECIFICATIONS. JUNTING TRIM REQUIRED FOR CEILING TYPE INSTALLED. HERGENCY BATTERIES FOR FIXTURES WHERE SHOWN ON PLANS. IUFACTURER REQUAL) CATALOG NUMBER QUY DESCRIPTION LLI PX-R-SA-AT SW LED COLOR TEMPERATURE VOLTAGE DESCRIPTION LLI PX-R-SA-AT SW LED 120-277V THERMOPLASTIC EXIT SIGN. UNIVERSAL MOUNTING. SELF-TESTING. IRADE HBF-90-40K-120-V01-DL-PM1-VDIM-FL-WG-[EM] 90 LED 12800 70 4000K 120-277V 12" DIAMETER HIGHBAY PENDANT MOUNT FIXTURE WITH FROSTED LENS AND WIRE GUARD. IMPACT RESISTANT, COLOR: BLACK. FIRESTOP SCHEDIII F OF THROIIGH PENETRATION SYSTEMS BASIS OF DESCRIPT. UNIVERSAL	<ol> <li>WIRING SHALL BE COPPER, TYPE THHN/THWN-2 IN RACEWAY UNLESS NOTED OTHERWISE. RIGID ELECTRICAL NON-METALLIC SCHEDULE 40 PVC SHALL BE USED IN SLABS AND BELOW GRADE ; RIGID STEEL CONDUIT (RSC) SHALL BE USED WHERE EXPOSED TO PHYSICAL DAMAGE; ELECTRICAL METALLIC TUBING (EMT) MAY BE USED ELSEWHERE WHERE APPROVED BY N.E.C. AND LOCAL CODES. FLEXIBLE METAL CONDUIT (FMC) SHALL BE STEEL AND SHALL BE USED TO CONNECT MOVEABLE EQUIPMENT AND/OR SUBJECT TO VIBRATION; LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) SHALL BE USED OUTDOORS OR WHERE SUBJECT TO MOISTURE.</li> <li>CONDUIT SHALL BE STRAPPED IN ACCORDANCE WITH REQUIREMENTS OF N.E.C.</li> <li>CONTRACTOR SHALL BOND AND GROUND SYSTEMS AND EQUIPMENT PER ARTICLE 250 OF N.E.C. PROVIDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH ARTICLE 250-122 N.E.C. ON ALL RECEPTACLES AND POWER BRANCH CIRCUITS.</li> <li>LIGHTING FIXTURES SHALL BE SECURELY FASTENED AND SUPPORTED PER N.E.C.</li> <li>THE CONTRACTOR SHALL BE SECURELY FASTENED AND SUPPORTED PER N.E.C.</li> <li>CHE CONTRACTOR SHALL BE SECURELY FASTENED AND SUPPORTED PER N.E.C.</li> <li>CONDUIT SHALL BE SIZED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.</li> <li>CINCUIT BREAKERS SHALL BE SECOMMENDED BY THE EQUIPMENT MANUFACTURER.</li> </ol>	<ol> <li>INSTALL ALL WORK IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2023, THE FL PREVENTION CODE, THE NATIONAL ELECTRICAL CODE 2020 EDITION, AND ALL CODES RULES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION AT THIS SITE. WHE OCCUR BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS, THE MOST RESTRIC REQUIREMENTS SHALL GOVERN.</li> <li>DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTAL CONTRACT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS FIELD VERIFY ALL DIMENSIONS AND ALL CONDITIONS. IF THE CONTRACTOR IS UNABL THE CONTRACT DOCUMENTS, CONTRACTOR IS RESPONSIBLE TO REQUEST CLARIFIC. TO THE ARCHITECT. IF CONTRACTOR PROCEEDS WITH ANY WORK BEFORE OBTAININ CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFICIENCIES ASSOCIATED TH</li> <li>BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAM AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH CONTRACTOR SUBSEQUENTLY BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FO OMISSION ON CONTRACTOR'S DAPT</li> </ol>
TYPE OF PENETRANT (0000-0999)         F-RATING (HR)         CONCRETE FLOORS         CONCRETE OR BLOCK WALLS         GYPSUM WALLS         HILTI PRODUCTS           CIRCULAR BLANK OPENINGS         1         F-A-0006, C-AJ-0055, C-AJ-0090          CP 680, CP 618, FS-ONE MAX, CFS- BL           (0000-0999)         2         F-A-0006, C-AJ-0055, C-AJ-0090          CP 680, CP 618, FS-ONE MAX, CFS- BL           (0000-0999)         1         C-AJ-1226, FA-1028, FA-1017         C-AJ-1226, W-J-1067, W-J-1020         W-L-1054, W-L-1058, W-L-1164, W-L-1506         CP 680, CP 6430, FS-ONE MAX, CFS- SL           (1000-1999)         2         C-AJ-1226, FA-1028, FA-1017         C-AJ-1226, W-J-1007, W-J-1220         W-L-1054, W-L-1058, W-L-1164, W-L-1506         S SIL GG, CFS-D, MMAX, CFS- SL           NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT) (2000-2999)         1         F-A2053, F-A2025, C-AJ-2109, C-AJ-2342         C-AJ-22167, C-AJ-2342         W-L-2076, W-L-2075, W-L-2128         CP 680, CP 643N, MINERAL WOOL, CP 644, FS-ONE MAX, CFS-SIL SL, CFS-S SIL CG, CP 648           MIXED PENETRANTS (8000-8999)         1         C-AJ-209, C-AJ-209, C-AJ-209, C-AJ-209, C-AJ-209, C-AJ-209, C-AJ-809, C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143         W-L-2076, W-L-2075, W-L-2128         CP 680, CP 643N, MINERAL WOOL, CP 644, FS-ONE MAX, CFS-SIL CG, CP 648           MIXED PENETRANTS (8000-8999)         1         C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8049, C-AJ-8056, W-J-8007, C-AJ-8143 <t< td=""><td><ul> <li>BIT ON THE ALAMINATED PLASTIC NAMEPLATE IDENTIFYING EACH NEW PANELBOARD, MOTOR STARTER AND DISCONNECT SWITCH. LETTERING SHALL BE 1/2" MINIMUM AND SHALL IDENTIFY EQUIPMENT SERVED, FEEDER ORIGINATION AND CIRCUIT NUMBER. SECURE NAMEPLATE WITH SCREWS TO EQUIPMENT TO BE IDENTIFIED. PLASTIC TAPE IS NOT APPROVED.</li> <li>A 120V/20A GFI RECEPTACLE SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR-CONDITIONING, AND REFRIGERATION EQUIPMENT. THE RECEPTACLE SHALL BE LOCATED ON THE SAME LEVEL AND WITHIN 25 FT OF THE HEATING, AIR-CONDITIONING, AND REFRIGERATION EQUIPMENT. THE RECEPTACLE SHALL BE LOCATED ON THE SAME LEVEL AND WITHIN 25 FT OF THE HEATING, AIR-CONDITIONING, AND REFRIGERATION EQUIPMENT. THE OUTLET SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE EQUIPMENT DISCONNECTING MEANS.</li> <li>DEVICE MOUNTING HEIGHTS INDICATED SHALL BE TO DEVICE CENTER LINE.</li> <li>RELOCATE, AS REQUIRED, ANY EXISTING WIRE AND CONDUIT WHICH INTERFERES WITH INSTALLATION OF THE NEW WORK.</li> <li>EXTERIOR DEVICES SHALL BE WEATHER PROOF ENCLOSURES AND GFI RATED IN ACCORDANCE WITH N.E.C. INSTALLER REQUIRED TO VERIFY PRIOR TO ORDERING MATERIALS.</li> <li>EACH FEEDER, UNGROUNDED CONDUCTOR, AND GROUNDED CONDUCTOR SHALL BE IDENTIFIED BY PHASE OR LINE AND SYSTEM AT ALL TERMINATION, CONNECTION, AND SPLICE POINTS. IDENTIFICATION MEANS SHALL BE 1/8-INCH THICK PLASTIC WITH BLACK BACKGROUND AND 1/4-INCH HIGH WHITE LETTERS ATTACHED WITH CONTACT TYPE PERMANENT ADHESIVE. SEE FIGURE BELOW FOR TYPICAL LABEL DESIGN.</li> </ul></td><td><ol> <li>THE CONTRACTOR SHALL PAY FOR ALL INSPECTION PERMITS, CERTIFICATES, CONNE SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH CONTRACTOR'</li> <li>CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR COORDINATING WORK OF AL SUBCONTRACTORS TO AVOID INTERFERENCES.</li> <li>ALL WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND O ERECT AND MAINTAIN ALL REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INC DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATIN REGULATIONS. 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	PHASE A       BLACK       PHASE A       BROWN         PHASE C       BLUE       PHASE C       ORANGE         PHASE C       BLUE       PHASE C       VELLOW         NEUTRAL       WHITE       NEUTRAL       GRAY <b>ABBREVIATIONS</b> AFC     AVAILABLE FAULT CURRENT         AFC       AVAILABLE FAULT CURRENT         AFG       ABOVE FINISHED FLOOR         CONDUT       CONTACTOR         DISC       DESCONNECT         DN DOWN       E         ELECTRIC WATER COLER       E         EXENTING ELECTRICAL DEVICE TO REMAIN         GFL       GROUND FAULT INCERRUPTER BREAKER         GFL       GROUND FAULT INTERRUPTER BREAKER         GFL       GROUNDING BAR         PNI       ELECATE CONTROLE         NI       NICHT IGATU FANDARE <td< td=""><td><ol> <li>CONTRACTORS USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACT COMPLED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DR. DATA AND SAMPLES".</li> <li>THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FR REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECTURINGIERS AP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRA SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITTEN APPROVAL TO THE S DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ER OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS ARCHITECT/ENGINEER'S APPROVAL THEREOF.</li> <li>ENTRY AND REMOVAL OF EQUIPMENT FROM THE BUILDING SHALL BE THE RESPONSIB CONTRACTOR. CONTRACTOR SHALL REPAIR ANY DAMAGED MATERIALS TO THEIR OR SURFACES SHALL BE REPAIRED TO MATE. THE ANT, ORDERLY APPEARANCE.</li> <li>ALL EXTERIOR STRUCTURES INCLUDED, BUT NOT LIMITED TO, THE GENERATOR AND G FENCEWALL SHALL BE INSTALLED TO RESIST 140 MPH WIND LOAD.</li> <li>CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE AND SMOKE WALL ASSEM ACOUSTICAL WALLS.</li> <li>BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINE SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE INSTALLED BY THIS CONTRACTOR.</li> <li>CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE AND SMOKE WALL ASSEM ACOUSTICAL WALLS.</li> <li>BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINE SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE INSTALLED BY THIS CONTRACTOR.</li> <li>CONTRACTOR SHALL FURNISH UL, APPROVED DRAWINGS FOR EACH TYPE OF FIRE R PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS FOR EACH TYPE OF FIRE PENETRATION BY DUCTS. PIPES OR CONDUITS. SEE SPECIFICATIONS.</li> <li>THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER. WILL M REASONABLE EFFORTS TO ASSIST THE CONTRACTION. THE OWNER WILL M REASONA</li></ol></td></td<>	<ol> <li>CONTRACTORS USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACT COMPLED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DR. DATA AND SAMPLES".</li> <li>THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FR REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECTURINGIERS AP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRA SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITTEN APPROVAL TO THE S DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ER OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS ARCHITECT/ENGINEER'S APPROVAL THEREOF.</li> <li>ENTRY AND REMOVAL OF EQUIPMENT FROM THE BUILDING SHALL BE THE RESPONSIB CONTRACTOR. CONTRACTOR SHALL REPAIR ANY DAMAGED MATERIALS TO THEIR OR SURFACES SHALL BE REPAIRED TO MATE. THE ANT, ORDERLY APPEARANCE.</li> <li>ALL EXTERIOR STRUCTURES INCLUDED, BUT NOT LIMITED TO, THE GENERATOR AND G FENCEWALL SHALL BE INSTALLED TO RESIST 140 MPH WIND LOAD.</li> <li>CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE AND SMOKE WALL ASSEM ACOUSTICAL WALLS.</li> <li>BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINE SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE INSTALLED BY THIS CONTRACTOR.</li> <li>CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL FIRE AND SMOKE WALL ASSEM ACOUSTICAL WALLS.</li> <li>BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINE SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE INSTALLED BY THIS CONTRACTOR.</li> <li>CONTRACTOR SHALL FURNISH UL, APPROVED DRAWINGS FOR EACH TYPE OF FIRE R PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS FOR EACH TYPE OF FIRE PENETRATION BY DUCTS. PIPES OR CONDUITS. SEE SPECIFICATIONS.</li> <li>THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER. WILL M REASONABLE EFFORTS TO ASSIST THE CONTRACTION. THE OWNER WILL M REASONA</li></ol>
NMAN WARNANG WA	INDICATES FACE(S) OF EXIT LIGHT (POWERED EXIT SIGNS SHALL BE WIRED         'UNSWITCHED')         I       DENOTES WALL MOUNTED DEVICE         S       SINGLE-POLE TOGGLE SWITCH - 120277 VOLT, 20 AMP, MOUNT 48' AFF         B#       DIGTAL ONOFF WALL SWITCH = MOLCATES CONTROLLED ZONES, MOUNT 48' AFF, MATCH OUANTITY OF SWITCHES TO NUMBER OF CONTROLLED ZONES, ENGRAVED ONOFF, WAITSTOPPER, LMSW-10x-ENGI OR APPROVED EGUAL         RC       #         DIGTAL 10, ONOFF/10 VOLT DIMING ROOM CONTROLLED ZONES, MOUNT 48' AFF, MATCH OUANTITY OF 28 RELAYS AS REQUIRED FOR CONTROLLED ZONES, WAITSTOPPER; 110 SERIES OR APPROVED EQUAL         MI       DIGTAL 0. COLPANCY SENSOR - CELLING MOUNTED DUAL TECHNOLOCY. # INDICATES CONTROLLED ZONES, WAITSTOPPER; 110 SERIES OR APPROVED EQUAL         S       DIGTAL COCUPANCY SENSOR - CELLING MOUNTED DUAL TECHNOLOCY. # INDICATES CONTROLLED CIRCUIT.         WIRE IN CONDUIT - CONCEALED IN WALL OR CELLING.         HOMERUN TO PAREL - ARROW INDICATE NUMBER OF CIRCUITS. SHORT SLASH MARK(S) INDICATE NUMBER OF CIRCUITS. SHORT SLASH MARK(S) INDICATE NUMBER OF PHASE CONDUCTORS. LONG SLASH MARK WITH HOOK INDICATES INDICATE NEUTRAL CONDUCTORS). LONG SLASH MARK WITH HOOK INDICATES INDICATE NEUTRAL CONDUCTORS). LONG SLASH MARK WITH HOOK INDICATES INDICATES NUMBER OF CONDUC WIRE, WHERE NOT SHOW TO CONDUC WIRE SITUL REQUIRED IN EACH FEDER, UGHTING, RECEPTACLE, AND POWER BRANCH CIRCUIT. NO SLASH MARKS NORCATE 2 UNERT CARRY MOR CONDUNUNG IS SITUL REQUIRED IN EACH FEDER, UCHNING, RECEPTACLE, AND FOW CONDUNG WIRE SITUL REQUIRED IN EACH FEDER. LARDWING ON MECHANICAL EQUIPMENT SCHEDULE FOR SIZE         VECUIPMENT SIZES WILL BE INDICATED AS FOLLOWING THER	<ol> <li>WIRING AND CONDUIT TO ELECTRICAL DEVICES DEINIG REMOVED SHALL BE REMOVE NEAREST JUNCTION BOX. ANY DEVICES DOWNSTREAM FROM THESE POINTS SHALL CONTRACTOR SHALL REMOVE ALL ELECTRICAL WORK FROM PARTITIONS AND WALL CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL LIGHTING FXTURES SHOWN HO WORK INCLUDES REVENING TO THE FITURES. SWITCHES AND RECEPTACLES. CON EXISTING CIRCUITS SHALL BE MADE EXCEPT WHERE OVERLOADING OCCURS; IN WHI CONTRACTOR SHALL PROVIDE A NEW HOMERUN TO CLOSEST AVAILABLE PANEL AN CONTRACTOR SHALL, UPON COMPLETION OF WORK, ENSURE ALL EXISTING CIRCUIT REMODELED AREA(S) ARE IN PROPER WORKING CONDITION.</li> <li>CONTRACTOR SHALL WOR CIRCUIT SEESSARY ADJUSTMENTS TO ELECTRICAL DEVICE ACCOMMODATE NEW WALLS AND CELINIGS. BECAUSE OF THE NATURE OF THE JOB INTERFERENCES MAY OCCUR. CLOSES COORDINATION BETWEEN TRADES IS REQUIR CONNECTION REQUIREMENTS BEFORE ROUGHAIN.</li> <li>ALL EXISTING LIGHT FIXTURES BEING REMOVED &amp; REINSTALLED SHALL BE CLEMED PROVIDE NEW BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL EXISTING LIGHT FIXTURES BEING REMOVED &amp; REINSTALLED SHALL BE CLEMED PROVIDE NEW BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL EXISTING LIGHT FIXTURES BEING REMOVED &amp; REINSTALLED SHALL BE CLEMED PROVIDE NEW BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> <li>ALL REMOVED BALLASTS AND LAMPS AS NEEDED FOR ALL EXISTING FIXTURES.</li> </ol>
		DRAWING INDEX         E0.1       GENERAL NOTES, LEGENDS & SCHEDULES         E1.0       SITE PLAN         E1.1       FLOOR PLANS









# **RENOVATION GENERAL NOTES**

- EXISTING CONDITIONS ARE TAKEN FROM SITE SURVEY AND AS-BUILT DRAWINGS WHEN AVAILABLE AND ARE NOT GUARANTEED ACCURATE IN ALL CIRCUMSTANCES. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND EXISTING CONDITIONS PRIOR TO DEMOLITION OR CONSTRUCTION OF NEW WORK.
- 2. EXISTING DEVICES ARE SHOWN SHADED. ALL OTHER DEVICES ARE NEW.

# **RENOVATION KEYNOTES**

- $\langle 1 \rangle$  CUT AND PATCH EXISTING SIDEWALK AS NEEDED TO RUN NEW CONDUIT.
- PROVIDE A NEW 90A, 3-POLE BREAKER IN AVAILABLE SPACE IN EXISTING CUTLER HAMMER POW-R-LINE SWITCHBOARD. PROVIDE NEW TYPE WRITTEN UPDATED PANEL SCHEDULE TO REFLECT CHANGES. PROVIDE 2" EMT CONDUIT FROM 4MPD THROUGH WALL TO 18" x 18" x 4" PULL BOX MOUNTED 8' - 0" ABOVE GRADE. PROVIDE 2" RSC CONDUIT DOWN WALL FROM PULL BOX TO BELOW GRADE AND TRANSITION TO SCH 40
- MATCH SURROUNDING SURFACES. SEE RISER DIAGRAM FOR WIRE SIZES. PROVIDE 1" EMT CONDUIT FROM PANEL '9P' THROUGH WALL TO 18" x 18" x 4" PULL BOX MOUNTED 8' - 0" ABOVE GRADE. PROVIDE 2" RSC CONDUIT DOWN WALL FROM THE PULL BOX TO BELOW GRADE AND TRANSITION TO SCH 40 PVC. ROUTE TO PANEL CP-NL1 AS SHOWN ON SITE PLAN. TO THE PRIMARY SIDE DISCONNECT FOR T-CP. PAINT
- ALL EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES. SEE RISER DIAGRAM FOR WIRE SIZES. DEMOLISH EXISTING 100A/2P SPARE BREAKERS IN SPACES 30,32 AND PROVIDE NEW 30A/2P BREAKER TO FEED PANEL 'CP-NL1'. PROVIDE NEW TYPE WRITTEN UPDATED PANEL SCHEDULE TO REFLECT CHANGES.
- 6 24x24x18 POLYMER CONCRETE HANDHOLE WITH TIER T22 HEAVY DUTY LID WITH "ELECTRIC" MARKING. OLDCASTLE POYLER MODEL #2424 OR APPROVED EQUAL.

![](_page_14_Picture_13.jpeg)

![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_2.jpeg)

- PROVIDE UNSWITCHED LIGHTING CIRCUIT SERVING NORMAL FIXTURES IN SAME SPACE TO EMERGENCY BATTERY PACKS AND EXIT SIGNS. UNSWITCHED LEG MAY RUN IN SAME CONDUIT AS SWITCHED EMERGENCY
- 5. DEVICES SHALL BE POWERED FROM PANEL CP-NL1, UNO. DEVICES ARE LABELED WITH CIRCUIT NUMBER

- 2 WALL MOUNTED COMMUNICATION PANEL WITH 2 SPD DUPLEX RECEPTACLES. SEE TELECOM PLANS FOR MORE

![](_page_15_Picture_16.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_16_Figure_1.jpeg)

![](_page_16_Figure_2.jpeg)

![](_page_16_Figure_6.jpeg)

![](_page_16_Picture_7.jpeg)

![](_page_17_Figure_0.jpeg)

# **RENOVATION GENERAL NOTES**

. EXISTING EQUIPMENT IS SHOWN FOR REFERENCE. INFORMATION IS TAKEN FROM EXISTING DRAWINGS AND

- > ROUTE 1 1" CONDUIT FROM EXISTING FROM EXISTING COMMUNICATIONS CLOSET 418E OVERHEAD AS SHOWN
- > APPROXIMATE LOCATION OF 12" x 12" x 4" PULL BOX ABOVE CEILING. INSTALL OVER ACCESSIBLE SECTION OF
- > STUB CONDUIT OUT WALL AND TRANSITION TO RSC, TURN DOWN WALL AND TERMINATE INTO 12" x 12" x 4" NEMA 4X PULL BOX MOUNTED 18" ABOVE GRADE. RUN RSC FROM PULL BOX TO BELOW GRADE AND TRANSITION TO SCH 40 PVC AND ROUTE TO HANDHOLE AS SHOWN ON SITE PLANS. SEAL ALL CONDUIT PENETRATIONS AND
- 12x12x12 POLYMER CONCRETE HANDHOLE WITH TIER T22 HEAVY DUTY LID WITH "COMMUNICATIONS" MARKING.
- > FIBER BACKBONE: 6 STRAND TIGHT BUFFERED, OS2 SINGLE MODE OFNP FIBER SPLICED TO PIGTAIL CASSETTES AT NEW FIBER PATCH PANEL IN COMMUNICATIONS PANEL. TERMINATE AT EXISTING FIBER PATCH PANEL IN COMMUNICATION CLOSET 418E IN EXISTING SCHOOL BUILDING. IF EXISTING PATCH PANEL DOES NOT HAVE ANY MORE CAPACITY THEN PROVIDE NEW CASSETTE OR PATCH PANEL TO MATCH EXISTING EQUIPMENT.

![](_page_17_Picture_12.jpeg)

7/22024 1 41:29 PM Autodesk Docs://23-190 BCSD Deane Bozeman Covered Play/23-190 BCSD Deane Bozeman Covered Play MEP Central R23.rvt

![](_page_18_Figure_1.jpeg)

![](_page_18_Figure_2.jpeg)

# KEYNOTES

- 1 NEMA 4X STAINLESS STEEL ENCLOSURE, 24" x 36" x 10" DEEP, WITH METAL BACKPANEL AND KEYLOCK HANDLE. HOFFMAN; CSD362410SS/CP3624/CWHK OR APPROVED EQUAL.
- 2 SURFACE MOUNT FIBER OPTIC ENCLOSURE WITH 6 SINGLE MODE TYPE 'LC' FIBER OPTIC CONNECTORS.
- PANDUIT; CBXF6BL-AY/6 x CMDSLCZBL.
   8 CHANNEL NETWORK SURGE PROTECTOR. ROUTE UTP CABLES THROUGH SPD FOR ALL EXTERIOR
- MOUNTED EQUIPMENT. DITEK; DTK-WN8NETS.
- (4) 12 PORT CATEGORY 6 PUCHDOWN PATCH PANEL. PROVIDE WITH WALL MOUNT BRACKET. PANDUIT; DP12688TGY/WB89D.
- (5) 2 SCREW D-RING CABLE MANAGEMENT. PANDUIT; CMVDR1.
- 6 4' SQUARE METAL BACKBOX WITH 2 120 VOLT, 20 AMP, 3 POLE GROUNDING TYPE SURGE SUPPRESSION POWER RECEPTACLES. HUBBELL; HBL5360SA OR APPROVED EQUAL.
- T DIN RAIL MOUNTED INDUSTRIAL NETWORK SWITCH WITH 8 x 1GB RJ45 POE+ PORTS, AND 4 x 1GB SFP UPLINK PORTS. EXTREME NETWORKS; 16804. PROVIDE 1 x 1GB SINGLE MODE TYPE 'LC' TRANSCEIVER. EXTREME NETWORK; 10052H.
- (8) DIN RAIL MOUNTED INDUSTRIAL POWER SUPPLY 480W, 48VDC. MEAN WELL; SDR-480-48.
- (9) 2000 BTU, NEMA 4X, SIDE MOUNTED AC UNIT WITH BUILT IN THERMOSTAT. HOFFMAN; T200216G155.
- (10) 400W ENCLOSURE HEATER WITH BUILT IN THERMOSTAT. HOFFMAN; CAH4001B
- (11) 850VA, 120VAC UPS WITH 9 NEMA 5-15R RECEPTACLES. APC; BE850G2 OR APPROVED EQUAL.
   (12) HORIZONTAL U/UTP DISTRIBUTION CABLES TO EACH DEVICE. TERMINATE AT BOTH ENDS WITH PLUG. PROVIDE 12" SERVICE LOOP AT CABINET. IDENTIFY CABLE AT EACH END WITH SELF-ADHESIVE WRAP AROUND LABEL.
- (13) BUNDLE AND TRAIN CABLES NEATLY INSIDE ENCLOSURE.
- 14 PROVIDE 1/16" THICK PLASTIC NAMEPLATE ENGRAVED WITH PANEL NAME. NAMEPLATE SHALL HAVE 1" WHITE LETTERS AND BLACK BACKGROUND.
- (15) SINGLE MODE, OS2, OFNP FIBER OPTIC LC PATCH CORD TO FIBER ENCLOSURE.
- (16) DIN3 RAIL KIT. HOFFMAN; CDR3P12 OR APPROVED EQUAL.
- (17) 5-15P, 14 AWG OPEN END POWER CORD. TERMINATE OPEN END ON POWER SUPPLY.
- (18) U/UTP PATCH CABLES. PROVIDE QUANTITY TO MATCH DEVICE COUNT.

# SCALE: 2" = 1'-0"

# **RENOVATION GENERAL NOTES**

- . SEE SCHEDULES ON SHEET T0.1 FOR DEVICES AND WIRING TYPES, UNO.
- 2. SEAL ALL CONDUIT PENETRATIONS THROUGH RATED AND EXTERIOR WALLS.
- 3. PAINT ALL EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES.

# **RENOVATION KEYNOTES**

- WALL MOUNTED NEMA 4X COMMUNICATIONS PANEL. SEE DETAIL A/T1.1 FOR MORE DETAILS. SEE SITE PLAN FOR INCOMING SERVICE.
- PROVIDE 40" WIDE IP SCROLLING BANNER WITH SPEAKERS, FLASHERS, CALL SWITCH INPUTS, AND WIRE GUARD. VALCOM; VL550F/V-WGVL550. MOUNT 2' ABOVE DOOR FRAME. COORDINATE DATA DROP LOCATION TO BE CONCEALED BEHIND BANNER PER BANNER INSTILLATION INSTRUCTIONS.
- TWO BUTTON CALL SWITCH WITH EMERGENCY AND NORMAL CALL BUTTONS AND VOLUME CONTROL. VALCOM; V-2970. ROUTE CONTROL WIRES FOR CONTROL SWITCH TO CALL SWITCH INPUTS ON SCROLLING BANNER.

![](_page_18_Figure_31.jpeg)

![](_page_18_Figure_32.jpeg)

![](_page_18_Picture_33.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_19_Figure_1.jpeg)

	CONCRETE OR BLOCK WALLS BASIS OF DESIGN UL SYSTEM	GYPSUM WALLS	HILTI PRODUCTS	SPACE TYPE	SOUND LEVEL ABOVE AVERAGE	SOUND LEVEL ABOVE MAX. SOUND LEVEL	MINIMUM SOUND LEVEL	MEA
	C-AJ-0055, C-AJ-0090 C-AJ-0055, C-AJ-0090		CP 680, CP 618, FS-ONE MAX, CFS- BL	GENERAL (EXCEPT AS LISTED BELOW)	AMBIENT (dB) 15	(dB) 5	(dBA) N/A	5 FT
	C-AJ-1226, W-J-1067, W-J-1020 C-AJ-1226, W-J-1067, W-J-1020, W-J-1248	W-L-1054, W-L-1058, W-L-1164, W-L-1506 W-L-1054, W-L-1058, W-L-1164, W-L-1506	CP 680, FS-ONE MAX, CP 606, CFS- S SIL GG, CFS-D, MINERAL WOOL	<u>NOTES:</u> 1. TOTAL SOUND PRESSURE LEVEL 2. SEE TABLE "AVERAGE AMBIENT S	. SHALL NOT EXC SOUND LEVELS" F	EED 110 dB. FOR TYPICAL AM	IBIENT SOUND	LEVELS
.098, I-2342	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	CP 680, CP 643N, MINERAL WOOL,			SOUND	LEVEL	S
	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	W-L-2078, W-L-2075, W-L-2128	CP 644, FS-ONE MAX, CFS-S SIL SL, CFS-S SIL CG, CP 648					
3283	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396		EDUCATIONAL OCCUPANCIES PLACES OF ASSEMBLY				+
6060	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167, W-J-3189	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396	618, CP 606, CFS-D, CFS-CC	WINDOWLESS BUILDINGS <u>NOTES:</u> 1. THE SOUND LEVELS ABOVE ARE 2. ACTUAL SOUND LEVEL MEASURE	INTENDED FOR D	ESIGN GUIDANG	CE PURPOSES.	
EM MUST	MEET ALL DETAILS OF THE UL-CLASSIFIED S DULES ABOVE. CONTACT FIRESTOP MANUE	SYSTEM SELECTED. FACTURER FOR ALTERNATIVE SYSTEMS OR ENGI	NEER JUDGMENT DRAWINGS.	SPEECH INTE	LLIGIBI			:ME
N THE SCI	EDULES, CHOOSE THE UL SYSTEM WHICH	IS MOST ECONOMICAL FOR EACH THROUGH-PEN NT LOCATIONS, AND VICE-VERSA.	ETRATION FIRESTOP SYSTEM.	SPACE TYPE		MINIMUM	INTELLIGIBILIT VALUE	γ
	RER. APPROVED MANUFACTURERS: HILTI,	RECTORSEAL, 3M, STI.		GENERAL (EXCEPT AS LISTED BELOW) NOTES: 1. 90% OF ALL MEASUREMENT LOC	ATIONS WITHIN E	0.45 S	STI (0.65 CIS) ALLY DISTINGU	JISHED S
			MIN. 4" FROM SIDEWALL	MINIMUM AND AVERAGE INTEL	LIGIBILITY VALUE		PLIAN	CE
		<u> </u>	MIN. 4" FROM CEILING	MAXIMUM ROOM SIZE (I	FT. x FT.)		MINIMUM F	REQUIRI
D CEILING OR CEILIN	TO RE	MOTE CEILING MOUNTED		20 x 20				
AN 96")		DICATOR DO NOT PLACE DETECTOR	CEL HAN WAY	30 x 30				
BLE	DIFFUSER			40 x 40				
Æ		MOUNTED		45 x 45				
				50 x 50				
			< <u> </u>	55 x 55				
			INTED	60 x 60				
	5'-0" MAX. TO	MAGNETIC	DOOR	63 x 63				
IE	EXIT DOOR	HOLDER	FINISHED WALL	68 x 68				
			отн	70 x 70				
		MINUS 3"		80 x 80				
<u>•</u>				90 x 90				
				100 x 100				
IAL /	/ IAH			110 x 110				
				120 x 120				
UN-	Ч Ч		тн	130 x 130				
	TOP C	MINUS 5 5/8	3	NOTES: 1. MINIMUM REQUIRED LIGHT OUTPO	UT BASED ON ON	e light per RC	DOM.	
	484 484 484 484 484 484 484 484 484 484	FLOOR MC MAGNETIC HOLDER	DUNTED DOOR FINISHED FLOOR					
· · · · ·	4 - A	4	41 1	1				

		· · · · · · · · · · · · · · · · · · ·
TS	APPLICABLE CODES	GENERAL NOTES
TS URED URED URED SIGNAL TYPE AFF 3-PULSE TEMPORAL  AVERAGE AMBIENT SOUND LEVEL (dBA)  45 55 40  45 55 40  55 40  55 50 50 50 50 50 50 50 50 50 50 50 5	APPLICABLE CODES           FEFORE WORK IN ACCORDANCE WITH THE FOLLOWING CODES AND ANY APPLICABLE STATUTES. ONDAWAGE, CODES, AND REQUIRING OF GARDEMENTA. AUTHORITIES HAND & LINESDOTION.           10.0000/0000/0000/0000/0000/0000/0000/0	GENERAL NOTES           1. DRAWINGS ARE DIAGRAMMATIC, NOLCATHE OF WORK TO BE FURMISHED AND INSTALL CONTRACT REFER TO ABCHIEGUTURAL DATA STRUCTURAL DAWINGS FOR DIMENSIO DE FLEU VERY DIMENSIONA SAN DOCIMIONS, IF HE CONTRACTOR NUMERIC TO NE CONTRACT OCCUMENTS, HE S RESPONSIBLE TO REQUEST CUMPICATION NUMERICATION IN BESTONES: FOR DEPECIDENCE SANCONTED THEREWITI.           2. PELD VERY END DEPECIDENCE SANCONTED THEREWITI. BESTONES: FOR DEPECIDENCE DESTING CONTRACTOR NUMERICATION NUMERI IN DATASETS FOR DEPECIDENCE DESTING CONTRACTOR SHULL BE ESPONSIBLE TO EXAMINATION AND ASTRY THIS CONNECTION ON BEHAL OF THE CONTRACTOR NUMERICATION NUMERI IN DATASETS THIS CONNECTION ON BEHAL OF THE CONTRACTOR SHULL BE ESPONSIBLE FOR DATA OF DESTINATION AND ASTRY THE CONTRACTOR SHULL BE ESPONSIBLE FOR DATA OF DESTINATION ON MARGINE DEPECAUTIONS FOR SHULL BE ESPONSIBLE FOR DATA OF SUBCONTRACTORS TO AVOID EPECENTION SHOW THIS AND CHART OF DESTINATION ON MARGINE DEPECAUTIONS OF OWNER THAN CHART DATA DESTINATION ON THE OPECAUTION SHOW THIS AND CHART OF DESTINATION ON DESTINATION ON DEASTRUCTURE DATA DESTINATION ON THE DEPECAUTION OF NO SHOULD PROVIDED TO THE OPECAUTION OF NOT SUBCONTRACTORS TO AVOID SHOT THE PROVIDE SHOULD PROVIDED TO THE OPECAUTION OF CONTRACTORS SHOULD SHOULD PROVIDE DATA THAN DESTINATION OF DEPECAUTION OF THE DATA DATA DESTINATION OF DEPECAUTION OF NO SHOULD PROVIDED TO THE OPECAUTION DESTINATION OF DEPECAUTION OF THE DATA DATA DATA DATA DESTINATION OF DEPECAUTION OF THE DATA DATA DATA DATA DATA DESTINATION OF DEPECAUTION OF THE DATA DATA DATA DATA DATA DATA DATA DATA
	<ul> <li>b. A CONTRACTOR CERTIFIED UNDER CHAPTER 633, FLORIDA STATUES, SHALL DESIGN AND PROVIDE THE FIRE ALARM SYSTEMS APPROVED BY THE APPLICABLE NFPA CODES AND BY THE AUTHORITY HAVING JURISDICTION.</li> <li>c. THE PROJECT INVOLVES THE ALTERATION OF A TOTAL OF 20 OR FEWER INITIATION AND NOTIFICATION DEVICES.</li> <li>2. PRIOR TO INSTALLATION, THE FIRE ALARM CONTRACTOR SHALL PROVIDE FIRE PROTECTION SYSTEM LAYOUT DOCUMENTS, INCLUDING DESIGN CALCULATIONS, SUBMITTED TO THE ENGINEER OF RECORD AND AUTHORITY HAVING JURISDICTION, INCLUDING THE FOLLOWING AS APPLICABLE, BUT NOT LIMITED TO: <ul> <li>a. FIRE ALARM SYSTEM WORKING PLANS, INCLUDING FIRE ALARM SYSTEM LAYOUT, DEVICE IDENTIFICATION, AND MOUNTING HEIGHT ELEVATIONS.</li> <li>b. FIRE ALARM SYSTEM RISER DIAGRAM.</li> <li>c. SEQUENCE OF OPERATION IN AN INPUT/OUTPUT MATRIX FORM OR NARRATIVE.</li> <li>d. BATTERY CAPACITY AND DE-RATING CALCULATIONS.</li> <li>e. VOLTAGE DROP CALCULATIONS FOR NOTIFICATION APPLIANCE CIRCUITS.</li> <li>f. LINE RESISTANCE CALCULATIONS.</li> <li>g. DESIGN CALCULATIONS.</li> </ul> </li> </ul>	<ol> <li>CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RAPENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYER SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS.</li> <li>CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES MATERIAL SUPPLIERS AND MANUFACTURERS.</li> <li>THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER WILL MAREFFORTS TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. COORDINATE WO OWNER'S DESIGNATED REPRESENTATIVE.</li> <li>EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED, PROVE REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFET</li> <li>REMOVE AND RE-INSTALL EXISTING CEILING TILE AS REQUIRED. REPLACE ANY TILE DASOILED DURING CONSTRUCTION.</li> <li>PROVIDE PROPER PROTECTIVE MEASURES TO PROTECT EXISTING FURNITURE, CARPED DURING THE COURSE OF CONSTRUCTION. TAKE CARE NOT TO DAMAGE EXISTING SUF TO MATCH EXISTING CONDITIONS AS REQUIRED.</li> </ol>
	<ul> <li>g. DESIGN CALCULATIONS FOR SELECTING THE SPACING AND SENSITIVITY OF DETECTION DEVICES.</li> <li>h. DESIGN CALCULATIONS FOR SELECTING THE SPACING AND AUDIBLE/VISIBLE CHARACTERISTICS OF NOTIFICATION APPLIANCES.</li> <li>i. PRODUCT DATA WITH SPECIFIC SYSTEM COMPONENTS IDENTIFIED.</li> <li>j. ANY ADDITIONAL INFORMATION REQUIRED TO COMPLY WITH CHAPTER 7 "DOCUMENTATION" IN NFPA 72.</li> <li>3. SIZE BATTERIES TO PROVIDE A MINIMUM MARGIN OF SAFETY OF 20% ABOVE THE CALCULATED AMP- HOUR CAPACITY REQUIRED.</li> </ul>	<ul> <li>24. SEAL HOLES IN WALLS, CEILINGS, FLOORS, ETC. TO MATCH EXISTING ADJACENT SURFAEQUIPMENT, CONDUIT AND/OR PIPING ARE REMOVED.</li> <li>25. REPLACE SIDEWALKS OR PAVEMENT DAMAGED BY OR DURING CONSTRUCTION OF TH</li> <li>26. CONTRACTOR SHALL COMPLY WITH "TRENCH SAFETY ACT" (FLORIDA STATUTE 553 PAF STANDARD 29 CFR 1926.650 SUBPART P FOR ALL UTILITY TRENCHES IN EXCESS OF 5 FE CONTRACTOR SHALL INDICATE WITHIN HIS BID RESPONSE A REFERENCE TO THE TREN STANDARD AND A SEPARATE LINE ITEM COST OF COMPLIANCE WITH STANDARD.</li> <li>ABBREVIATIONS</li> </ul>
	FIRE ALARM CONTROL UNITS & PANELS         FACP       FIRE ALARM CONTROL PANEL         FATC       FIRE ALARM TERMINAL CABINET         FIRE ALARM INITIATING DEVICES         F       MANUAL FIRE ALARM PULL STATION         F       MANUAL FIRE ALARM PULL STATION         System SMOKE DETECTOR - WALL MOUNT ("X" = TYPE, PHOTOELECTRIC IF OMITTED).         AS = AIR SAMPLING       BR = BEAM RECEIVER         BT = BEAM TRANSMITTER	AFFABOVE FINISHED FLOORGGROUNDAFGABOVE FINISHED GRADEGRCGALVANIZED RIGID CONAHJAUTHORITY HAVING JURISDICTIONIMCINTERMEDIATE METALLAIMADDRESSABLE INPUT MODULELANLOCAL AREA NETWORKAIOADDRESSABLE INPUT/OUTPUT MODULENECNATIONAL ELECTRICALANSIAMERICAN NATIONAL STANDARDSNFPANATIONAL FIRE PROTECTAOMADDRESSABLE OUTPUT MODULENISNOT IN SCOPEAWGAMERICAN WIRE GAUGEPNLELECTRICAL PANELBICSIBUILDING INDUSTRY CONSULTINGRELRELOCATE EXISTING DESERVICE INTERNATIONALRSCRIGID STEEL CONDUITCDCANDELASPDSURGE PROTECTIVE DECISCOMMON INTELLIGIBILITY SCALESTISPEECH TRANSMISSIONCLGDEVICE LOCATED ON CEILINGSTIPASPEECH TRANSMISSIONCNTCONTRACTORPUBLIC ADDRESSFUBLIC ADDRESS
	PA = SERVING PRE-ACTION SPRINKLER SYSTEM         SYSTEM SMOKE DETECTOR - DUCT MOUNT         FIRE ALARM NOTIFICATION APPLIANCES         Image: Provide the system         Im	dB       DECIBELS       TIA       TELECOMMUNICATIONS         dBA       DECIBEL AMPS       ASSOCIATION         DISC       DISCONNECT       TP       TAMPER PROOF DEVICI         DN       DOWN       TYP       TYPICAL         EIA       ELECTRONIC INDUSTRIES ALLIANCE       UNO       UNLESS NOTED OTHER         EMT       ELECTRICAL METALLIC TUBING       UTP       UNSHIELDED TWISTED-         EC       ELECTRICAL CONTRACTOR       WP       WEATHER PROOF         FIRE ALARM NOTES         1.       INSTALL ALL WORK IN ACCORDANCE WITH ALL CODES, ORDINANCES, RULES, AND REG
	Image: ADDRESSABLE INPUT MODULE         Image: ADDRESSABLE OUTPUT MODULE         Image: ADDRESSABLE INPUT/OUTPUT MODULE ("#" INDICATES TOTAL NUMBER OF INPUTS AND OUTPUTS 2.1F OMITTED)         Image: Image: ADDRESSABLE INPUT/OUTPUT MODULE ("#" INDICATES TOTAL NUMBER OF INPUTS AND OUTPUTS 2.1F OMITTED)         Image: Image	<ol> <li>INSTALL ALL WORK IN ACCORDANCE WITH ALL CODES, ORDINANCES, RULES, AND REG THE AUTHORITY HAVING JURISDICTION AT THIS SITE. WHERE COVERLICTS OCCUR BET AND THE CONSTRUCTION DOCUMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHAL THE CONSTRUCTION DOCUMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHAL ALL DUCT SMOKE DETECTORS SHALL BE FURNISHED BY DIVISION 29, INSTALLED IN THE DIVISION 23, AND WIRED TO ADMPER ACTUATOR AND FIRE ALARM SYSTEM BY DIVISION COORDINATE INSTALLATION WITH DIVISION 23, DUCT SMOKE DETECTORS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS, SEE HVAC DRAWIN LOCATIONS OR INSTALL WHERE DIRECTED BY THE ENGINEER. EXACT PLACEMENTS HA APPROVED BY THE FIRE ALARM SYSTEM SUPPLIER.</li> <li>PROVIDE REMOTE TEST AND ALARM SYSTEM SUPPLIER.</li> <li>PROVIDE REMOTE TEST AND ALARM WINDICATORS FOR DUCT DETECTORS LOCATED IN READLY VISIBLE AND ACCESSIBLE ABOVE CELINGS, OR AS INDICATED ON THE DRAWIN SMOKE DAMPERS AND COMBINISTION FIRE/SMOKE DAMPERS ARE PROVIDED BY DIVISIO (LIGHT FXTURES AND HVAC DIFFUSERS TAKE PRECEDENCE: ADD ADDITIONAL DETECT NOTIFICATION APPLIANCES AS REQUIRED TO MAINTAIN COVERAGE REQUIREMENTS.</li> <li>VISIBLE NOTIFICATION APPLIANCES WITHIN THE SAME ROOM OR WITHIN THE SAME FIE SHALL FLASH IN SYNCHRONIZATION PER NRPA 72.</li> <li>ALLERTSRID REVISORY, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITT APPROVED CENTRAL STATION, REMOTE SUPERVISING STATION, OR PROPRIETARY SUJ STATION AS DEFINED BY INPA 72.</li> <li>ALARM, SUPERVISORY, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITT APPROVED CENTRAL STATION, REMOTE SUPERVISING STATION, OR PROPRIETARY SUJ STATION AS DEFINED BY INPA 72.</li> <li>ALLERM, SUPERVISORY, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITT APPROVED CENTRAL STATION, REMOTE SUPERVISING STATION, OR PROPRIETARY SUJ STATION AS DEFINED ATTERED BY INPA 72.</li> <li>ALLERM, SUPERVISORY, AND TROUBLE SIGNAL SHALL BE PROVIDED WITH THE APPROVED CENTRAL STATION, REMOTE SUPERVISING STATION, OR PROPRIETARY SUJ STATION AS DEFINED ATTERED</li></ol>
		DRAWING INDEX         FE0.1       GENERAL NOTES, LEGENDS & SCHEDULES         FE1.1       FLOOR PLAN

![](_page_19_Picture_4.jpeg)

[22:024 1:40:2] PM Autodesk Docs://23-190 BCSD Deane Bozeman Covered Plav/23-190 BCSD Deane Bozeman Covered Plav MEP Central R23,rvt

![](_page_20_Figure_1.jpeg)

FIRST FLOOR PLAN - FIRE PROTECTION

# FIRE ALARM GENERAL NOTES

DOCUMENT REQUIREMENTS" SECTIONS ON SHEET FE0.1

- 1. PROVIDE AUDIBLE NOTIFICATION FOR ALL REGULARLY OCCUPIED SPACES IN ACCORDANCE WITH "AUDIBLE NOTIFICATION REQUIREMENTS", "SPEECH INTELLIGIBILITY REQUIREMENTS", AND "SYSTEM LAYOUT
- 2. WHERE VISUAL ONLY NOTIFICATION DEVICES ARE INDICATED, CONTRACTOR MAY SUBSTITUTE AUDIBLE/VISUAL NOTIFICATION DEVICES INSTEAD TO MEET BOTH AUDIBLE AND VISUAL NOTIFICATION REQUIREMENTS IN ACCORDANCE WITH LAYOUT DOCUMENTS AND CALCULATIONS.
- 3. PROVIDE CEILING MOUNTED DEVICES IN ALL SPACES WITH FINISHED CEILINGS, UNLESS NOTED OTHERWISE. PROVIDE WALL MOUNTED DEVICES IN SPACES WITH NO CEILING. COORDINATE DEVICES WITH OTHER DEVICES ON CEILINGS AND WALLS.

# **KEYNOTES**

- 1 PROVIDE NEW ADDRESSABLE NOTIFICATION DEVICE TO MATCH EXISTING FIRE ALARM SYSTEM. 2 EXTEND EXISTING ADDRESSABLE FIRE ALARM NOTIFICATION CIRCUIT FROM NEAREST CIRCUIT WITH AVAILABLE
- CAPACITY TO NEW NOTIFICATION DEVICES IN COVERED PLAY WITH 2#16 TWISTED PAIR CONDUCTORS.
- CAPACITY TO NEW INITIATION DEVICES IN COVERED PLAY WITH 2#16 TWISTED PAIR CONDUCTORS.
- CEILING OR PROVIDE ACCESS PANEL AS NECESSARY.
- STUB 1" CONDUIT OUT WALL AND TRANSITION TO RSC, TURN DOWN WALL AND TERMINATE INTO 12" x 12" x 4" NEMA 4X PULL BOX MOUNTED 18" ABOVE GRADE. RUN RSC FROM PULL BOX TO BELOW GRADE AND TRANSITION TO SCH 40 PVC AND ROUTE TO HANDHOLE AS SHOWN ON SITE PLANS. SEAL ALL CONDUIT PENETRATIONS AND PAINT ALL EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES. RUN BOTH INITIATION CIRCUIT AND NOTIFICATION CIRCUIT IN SAME CONDUIT TO COVERED PLAY
- APPROXIMATE STUB UP LOCATION. TRANSITION FROM SCH 40 PCV TO EMT ABOVE GRADE AND TERMINATE INTO 12" x 12" x 4" PULL BOX. FROM PULL BOX SPLIT INTO TWO SEPARATE 3/4" CONDUITS, ONE FOR INITIATION AND ONE FOR NOTIFICATION AND EXTEND TO DEVICES SHOWN ON PLANS. PAINT ALL CONDUIT AND PULL BOXES WITHIN COVERED PLAY RED.
- (7) CUT AND PATCH EXISTING SIDEWALK AS NEEDED TO RUN NEW CONDUIT.

![](_page_20_Figure_15.jpeg)

![](_page_20_Picture_16.jpeg)